

INTEGRATED TOURISM
MASTER PLAN
[DRAFT]

PREPARATION OF MASTER PLAN & DETAILED STRATEGY FOR
TAMIL NADU INTEGRATED TOURISM PROMOTION PROJECT

FEEDBACK INFRA (P) LIMITED
TOWNLAND CONSULTANTS LIMITED



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This volume captures 61 master plans. Sites have been clustered into 4 Sections – which denote the central theme of the sites.

- I. Hotels – Total 12 master plans | merged into 9 sites (out of 295 sites)
- II. Other Temples – Total 37 master plans | merged into 31 sites (out of 295 sites)
- III. Weekend Destinations – Total 6 master plans (out of 295 sites)
- IV. Standalone Sites – Total 6 master plans (out of 295 sites)

Before going deeper into master plan for each site, a summary of the central theme on the Trail is presented. The sequence of Sections and Master Plans comprised herein is presented below.

S. No.	Site Name	District	Page no.
Hotels			
1	HTN, Melmaruvathur	Chengalpattu	I-1
2	HTN, Kanchipuram	Kanchipuram	I-11
3	HTN, Sriperumbudur	Kanchipuram	I-25
4	HTN, Thiruthani	Tiruvallur	I-37
5	HTN, Nagapattinam	Nagapattinam	I-49
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7	HTN, Thanjavur I	Thanjavur	I-71
8	HTN, Thanjavur 2	Thanjavur	I-83
9	HTN, Kumbakonam	Thanjavur	I-93
10	HTN I, Rameshwaram	Ramanathapuram	I-103
11	HTN II, Rameshwaram	Ramanathapuram	I-117
12	HTN, Kanyakumari	Kanyakumari	I-119
Other Temples			
1	Marundeeshwarar Temple, Thiruvannamiyur	Chennai	II-1
2	Kesarwadi Jain Temple (Puzhal Kesarvadi Tirth)	Chennai	II-17

S. No.	Site Name	District	Page no.
3	Tirumoolanathar Temple, Puzhal	Chennai	II-31
4	Thirukazhukundram	Chengalpattu	II-47
5	Chitragupthar Temple	Kanchipuram	II-65
6	Vallakottai Murugan Temple, Sriperumbudur	Kanchipuram	II-77
7	Kamakshi Amman Temple	Kanchipuram	II-89
8	Thiru Mukkoodal Appan Venketesa Perumal Temple	Kanchipuram	II-103
9	Ramanujar temple - Sriperumpudur	Kanchipuram	II-117
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14	Mangadu Amman temple	Tiruvallur	II-187
15	Masilamaneeswarar temple - Thirumullaivayil	Tiruvallur	II-203
16	Thiruverkadu Amman Temple	Tiruvallur	II-219
17	Vedhapureeswarar Temple	Tiruvallur	II-233

S. No.	Site Name	District	Page no.
18	Varadaraja Perumal Temple, Poonamallee	Tiruvallur	II-247
19	Pilgrim Centre, Poonamallee	Tiruvallur	II-259
20	Periyapalayathamman Temple	Tiruvallur	II-271
21	Andal Kuppam Murugan temple	Tiruvallur	II-283
22	Siruvapuri Murugan Temple	Tiruvallur	II-295
23	Thirumalai Jain Temple (Polur)	Tiruvannamalai	II-307
24	Arahanthgiri Jain Math	Tiruvannamalai	II-321
25	Thirunarunkondai (Jain Circuit)	Villupuram	II-337
26	Vakkarakaliamman Temple, Thiruvakkarai	Villupuram	II-349
27	Thiruvonnainallur Kripapuriswarar temple	Villupuram	II-359
28	Vadalur Ramalinga Adigalar Sabai	Cuddalore	II-371
29	Sri Viruthagiriswarar Temple, Virudhachalam	Cuddalore	II-385
30	Sri Rajagopala Swamy Temple, Mannargudi	Thiruvarur	II-399
31	Thiyagarajar temple - Thiruvaiyaru	Thanjavur	II-413
32	Mahalingeswarar Temple, Thiruvaidaimarudur	Thanjavur	II-429
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34	Thirumazhisai Temple	Tiruvallur	II-457
35	Thirumanancheri	Nagapattinam	II-471
36	Swayambunathaswamy Temple, Peralam	Thiruvarur	II-483
37	Kumari Amman (Bagavathi Amman Temple)	Kanyakumari	II-495
Weekend Destinations			
1	Mudhaliarkuppam Boat House and Eco Resort, Chengalpattu	Chengalpattu	III-1
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3	Gudiyam Caves	Tiruvallur	III-35
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5	Kodiveri Falls and Park, Erode	Erode	III-63
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2	Nagore Dargah, Nagapattinam	Nagapattinam	IV-17
3	Fossil Excavation, Ariyalur	Ariyalur	IV-31
4	Natteri Brahmedesam, Tiruvannamalai	Tiruvannamalai	IV-47
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6	Mahendravadi Caves, Ranipet	Kanchipuram	IV-77

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- **Environmental Regulations**
 - Environmental Clearance Mandate
 - Coastal Regulation Zones
 - Forest Regulations
 - Tamil Nadu Eco-Tourism Policy
 - Wetlands (Conservation and Management) Rules
 - Regulation of Trekking Rules
 - Tamil Nadu Forest Act 1882
 - Tamil Nadu Hill Area (PT) Act 1955
 - Tamil Nadu Forest and Wildlife Areas (Regulation of Trekking) Rules, 2018
 - The Indian Forest Act, 1927
 - Wildlife Protection Act, 1972 (Wildlife Protection Rules)
 - Forest Conservation Act, 1980 (Forest Conservation Rules)
 - Environment Protection Act 1986 (Environment Protection Rules), including ESA Notification

- Biological Diversity Act 2002 (Biological Diversity Rules)
- The Scheduled Tribes and Other Traditional Forest Dwellers Act, 2006
- **Heritage Regulations**
 - Ancient Monuments, Archaeological Sites and Remains Act
 - TN Ancient and Historical Monument and Archaeological sites and remains Act and Rules, 1971
 - TNHRCE Rules, 1959
 - National Policy for Conservation of the Ancient Monuments, Archaeological Sites and Remains (NPC – AMASR)
- **Development Control Regulations**
 - Tamil Nadu Combined Development and Building Rules, 2019
 - Tamil Nadu Hilly Areas Special Building Rules, 1981
 - Tamil Nadu District Municipalities (Hill Stations) Building Rules, 1993
- **Other Relevant Guidelines**
- Adventure Tourism Guidelines
- Guidelines of Adopt A Heritage Project
- Guidelines for the Promotion of Wellness and Medical as Niche Tourism Products
- Policy for development and promotion of Caravan and Caravan camping parks
- Relevant International Union for Conservation of Nature (IUCN) guidelines on forests, biodiversity, protected areas, world heritage, etc.
- COVID-19 Guidelines
 - WTTC Global Protocols for the New Normal
 - System for Assessment, Awareness & Training for Hospitality Industry Guidelines by MoT, GoI

Schemes & Programmes

Tourism Initiatives in Tamil Nadu

- **Central Government Tourism Schemes**
 - PRASAD (Pilgrimage Rejuvenation and Spiritual Augmentation Drive)
 - Swadesh Darshan Scheme
 - Other Central Financial Assistance
 - Promotion of Less Known Tourist Destinations

- **State Government Tourism Projects**
 - Special Tourism Zone – Madurai
 - Rural Tourism Hub - Karaikudi
 - Culture Tourism Hub - Mahabalipuram
 - Tourism and Hospitality Training Centre - Nilgiris
 - Development of Heritage locations and destinations
 - Infrastructure Development Investment Program for Tourism (IDIPT)
- **Human Resource Development**
 - Hunar se Rozgaar Yojana
 - Capacity Building
 - Guide Training
- **Tourism Products**
 - Eco Tourism
 - Rural Tourism
 - Medical Tourism
 - Heritage Tourism
 - Adventure Tourism
- **Activities of Departments of Art & Culture, Museums & Archaeology**

Other Central Schemes and Programs

- Viability Gap Scheme for Revenue Generating Tourism Project
- Support to Public Private Partnerships in Infrastructure (Viability Gap Funding)
- Central Financial Assistance to Information Technology (IT)
- Scheme for Organizing Fair & Festival and Tourism Related Events
- Adopt a Heritage: “Apni Dharohar, Apni Pehchaan” project development of tourist friendly destinations
- Development of Way-side Amenities / Toilet Development
- Champion Sectors in Services Scheme
- Market Research- Professional Services Scheme
- Scheme of Capacity Building for Service Providers (CBSP)
- Green Skill Development Program
- Central Financial Assistance to Institutes
- Overseas Promotion and Publicity including Marketing Development Assistance

- MDA Scheme for Medical Tourism/Wellness Tourism Service Providers
- Financial Assistance to Institutes / Central Universities for Organizing research related events
- National Handicrafts Development Programme (NHDP)
 - Ambedkar Hastshilp Vikas Yojana
 - Mega Cluster Scheme
 - Marketing Support & Services
 - Research & Development
- Craftsmen Training Scheme
- Crafts Instructor Training Scheme (CITS)
- Scheme of Financial Assistance for Promotion of Art and Culture
- Scheme of Scholarship and Fellowship for Promotion of Art and Culture
- Museum Grant Scheme
- Scheme for “Safeguarding the Intangible Cultural Heritage and Diverse Cultural Traditions of India”

Case Studies

Case Studies of Organization Structure

- Hampi World Heritage Area Management Authority (HWHAMA)
- Jaipur Smart City Limited (JSCL)
- Singapore Tourism Board (STB)

Case Studies of Other State Tourism Policies and Initiatives

- Madhya Pradesh Tourism
- Kerala Tourism
- Rajasthan Tourism
- Odisha Tourism
- Karnataka Tourism

Glossary

ALOS	Average Length of Stay
AR	Augmented Reality
ASEAN	Association of Southeast Asian Nations
bn	Billion
CAGR	Compound Annual Growth Rate
CSR	Corporate Social Responsibilities
CY	Current Year
Cr	Crore
DoT	Department of Tourism, Culture and Religious Endowments, Govt. of Tamil Nadu
DBFOT	Design Build Finance Operate Transfer
EPC	Engineering, Procurement and Construction
F&B	Food and Beverages
FAITH	Federation of Associations in Indian Tourism & Hospitality
FAR	Floor Area Ratio
FTAs	Foreign Tourist Arrivals
FY	Financial year
G2G	Government to Government
GDP	Gross Domestic Product
Gol	Government of India
GoTN	Government of Tamil Nadu
ICCA	International Congress and Convention Association
HVT	High Value Tourist
ICT	Information and Communications Technology
ITAs	International Tourist Arrivals
KPI	Key Performance Indicator
L	Lakh
LCCs	Low-Cost Carriers
LTC	Leave Travel Concession
MICE	Meetings Incentives Conferences Events
m	Meter

mn	Million
MoT	Ministry of Tourism
MoU	Memorandum of Understanding
NRI	Non-Resident Indians
OEM	original Equipment Manufacturer
OTAs	Online Travel Agents
OMT	Operate Maintain Transfer
PPP	Public Private Partnership
TN	Tamil Nadu
tn	Trillion
ROMT	Refurbish Operate Maintain Transfer
Sqft	Square Feet
Sqm	Square Meters
TTDC	Tamil Nadu Tourism Development Corporation
TNIDB	Tamil Nadu Infrastructure Development Board
TNIFMC	Tamil Nadu Infrastructure Fund Management Corporation
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNWTO	United Nations World Tourism Organization
VFR	Visiting Friends Relatives
VR	Virtual Reality
WEF	World Economic Forum
WTTC	World Travel and Tourism Council
ZD	Zero Date

INTRODUCTION & CONTEXT-SETTING

1 Introduction & Context-Setting

1.1 About the Mandate

The state of Tamil Nadu is endowed with rich natural and cultural attractions, ranging from its temple towns and heritage sites to hill stations, waterfalls, and national parks. The state also boasts of some of the grandest examples of Dravidian architecture, such as the famous Shore Temple of Mamallapuram, the Brihadeeswarar Temple of Thanjavur, the Madurai Meenakshi Amman Temple, and the Srirangam Ranganathaswamy Temple. Today, Tamil Nadu is the second largest economy in the country, with a GSDP of ~USD 250 billion and is also India's most urbanized state, with almost 50% of its population living in urban areas.

Tourism as a service sector is a key contributor to the growth story of Tamil Nadu. The geographical, cultural, and environmental diversity of Tamil Nadu have positioned it as the most visited state in India by both domestic and foreign tourists. Nevertheless, tourist expectations are constantly changing. Tamil Nadu should benchmark its growth not just with India but other leading tourism destinations in the region. To retain and further its leading status in India, it is imperative that Tamil Nadu Tourism evolve, in order to adequately cater to the next generation of tourists.

In this context, the Government of Tamil Nadu (GoTN) wishes to harness the plentiful tourism resources of the State and provide a tourism-led thrust to the local economy. Development of the tourism sector was specifically identified as one of the goals of the "Vision Tamil Nadu 2023", a programme outlining the road map for growth in all major sectors of the state economy. The Government of Tamil Nadu has also envisioned a Tamil Nadu Integrated Tourism Promotion Project (TNITPP) to integrate all the tourism destinations of the State into an integrated network, to further enable convergence of all tourism products and services into a well-knit framework capable of competing at international platform. Tamil Nadu Infrastructure Fund Management Corporation (TNIFMC) and Department of Tourism have, on behalf of Government of Tamil Nadu and with support from other departments of the GoTN, taken lead to conceptualize and implement the TNITPP programme.

Further, TNIFMC ("**the Client**") has, through a competitive bidding process, appointed a consortium of **Feedback Infra (P) Limited** and **Townland Consultants (P) Limited** as the 'Consultant' / 'Advisor' for preparation of detailed strategy for and master plan for Tamil Nadu Integrated Tourism Promotion Project ("**the Project**").

1.2 Consultants' Scope of Work

To achieve the above objectives, the Consultant is tasked with the following:

A. Preliminary Analysis

- Appraisal of available documents and plans.
- Benchmarking of Tamil Nadu on the global tourism map.
- Categorization and prioritization of sites.
- Appraisal of the ongoing government schemes.

B. Baseline Analysis

- Spatial analysis including mapping of physical characteristics of sites.
- Theme-based categorization of sites.
- Qualitative and quantitative analysis of development potential at sites.

C. Strategy Formulation

- Overall vision for development.
- Regulatory framework.
- Marketing and Branding.
- Prioritization of all 295 sites for phased development and selection of sites for Phase-I development.

D. Master Planning

- Tourism master plan, including concept plan, project structuring and implementation plan, for each of the 295 sites;
- To be taken up as per Tourism Trails for ease of implementation.
- Planning of 295 sites shall be done in 6 phases – each with 45-50 sites.

Note – In addition to the tourism-related interventions at the individual sites, it is important for the local government to undertake civic and urban development at the sites and the larger towns. Such civic and urban development entails utility management (waste disposal, electrification, covered drainage), cleanliness, hygiene, urban design improvements, urban beautification, improvement in mobility of key tourist zones, etc. This might not get sufficient focus under the scope of TNITPP but are significant for comprehensive development of the sites and improvement of overall tourism quality.

E. Financial Viability Assessment and Project Structuring

- Preliminary financial viability assessment for the sites;
- Recommendation on viable implementation model;
- Project structuring to ensure project viability (via cross-subsidisation of high-viability projects with low-viability projects) and involvement of private sector interest.

1.3 Timelines & Deliverables

Sl. No.	Deliverables	Pertaining to	Status
1.	Inception Report	295 sites	Completed on 18 th June 2020
2.	Baseline Analysis Report-1	157 sites	Completed on 7 th Sept 2020
3.	Baseline Analysis Report - 2	138 sites	Completed on 23 rd Oct 2020
4.	Draft Detailed Strategy Report	295 sites	Completed on 12 th Dec 2020
5.	Final Detailed Strategy Report	295 sites	Completed on 12 th Feb 2021
6.	Tourism Master Plan Phase IA	50 Sites	Submitted
7.	Tourism Master Plan Phase IB	50 Sites	Submitted
8.	Tourism Master Plan Phase IIA	50 Sites	This Report
9.	Tourism Master Plan Phase IIB	50 Sites	Draft due by 29 th May 2021

Sl. No.	Deliverables	Pertaining to	Status
10.	Tourism Master Plan Phase IIIA	50 Sites	Draft due by 23 rd June 2021
11.	Tourism Master Plan Phase IIIB	45 Sites	Draft due by 18 th July 2021

This deliverable is the output for Tourism Master Plan Phase IIA.

1.4 Recap of Tourism Strategy

A detailed strategy has already been prepared for the Tamil Nadu Integrated Tourism Promotion Project.

The vision outlined in the tourism strategy is **to evolve Tamil Nadu into the most desirable experiential destination in Asia**, by leveraging its people, vibrant living cultures, diverse natural locations, ancient traditions and history.

Tamil Nadu has so far been sold on its ancient history – its temples and monuments. However, unlike other destinations, history is not a thing of the past here – it is alive in the Tamil people, traditions, arts & crafts, and festivals. Tamil Nadu, therefore, has all the necessary ingredients to develop into the most **attractive and diverse experiential destination**.

Tamil Nadu could position itself as **“The land where Stories never end”**, with unique tourism offerings articulated around the following:

- Diverse natural locations
- A long unbroken history, kept alive by ancient traditions
- Unforgettable experiences
- Many undiscovered spots
- Vibrant living cultures
- Assortment of cuisines

Essentially, need is to highlight the memories a Tourist can create and live-in rather than what the Tourist can just see.

1.4.1 Key Objectives of TNITPP

With the above backdrop, the strategic objectives of the TNITPP programme have been outlined as below:

- To position Tamil Nadu as a unique tourism brand on the global map.
- To create tourism-led socio-economic growth in the State.
- To attract High Value Tourists (both foreign and domestic), who are:
 - Long-stay tourists
 - High-spending tourists
 - Expect high quality and service levels and are willing to pay a premium for these.
- To enable longer stay of tourists within Tamil Nadu, which further translates into higher spending by tourists in Tamil Nadu.
- To create memory-worthy tourist experiences in Tamil Nadu.
- To attract private investment and FDI in tourism.
- To create employment opportunities for community / locals in tourism sector.
- To improve livelihood of communities by involving them in tourism value chain.
- To mitigate the impact of (mass) tourism on the natural environment and the built cultural heritage.
- To showcase Tamil Nadu's diverse historic, natural and cultural assets in a sustainable manner.
- To achieve a greater variety in tourism attractions, facilities and accommodation.
- To leverage technology and new media to enhance tourists' experience of Tamil Nadu.

1.4.2 Target Tourists

Today, global destinations are becoming resistant to mass tourism. The aim of promoting tourism is primarily the downstream socio-economic benefits it endows on the destination, in terms of revenues and employment in the local economy, rather than the tourist numbers it is able to attract.

For this reason, destinations today are targeting the growth of tourism sector earning, not tourist footfalls. Tamil Nadu should similarly target the high-paying, low-volume segment of the market, or the **High Value Tourist (HVT)**.

Such High Value Tourists are:

- **Long-stay tourists**
- **High-spending tourists**
- **Expect high quality and service levels and are willing to pay a premium for these.**

High Value Tourists can be segmented into 3 broad buckets:

- **Foreign tourists** – Strategy Report has outlined specific foreign target markets (or countries) which:
 - Are most relevant markets (in terms of sheer size of their outbound tourists who visit similar tourism destinations in Asia) - China, Germany, France and Russia
 - Are markets where Tamil Nadu performs well but needs to be strengthened or sustain its position – UK, USA, Australia and Malaysia
 - Are potential markets with some strategic connection with Tamil Nadu, which can be leveraged – Korea and East European countries.
- **High spending Domestic tourists** - Indians are among the most sought-after tourist markets for South-east Asian countries. With ~26 mn Indians travelling internationally (2018), India is the 2nd largest outbound market in the Asia Pacific region. With increasing disposable incomes and international exposure, Indians' propensity to travel has grown in the last decade. These largely comprise young, urban Indians from Tier-I and Tier-II cities.
- **Niche tourists** – With prior associations with Tamil Nadu.
 - **Resident Expatriates** living in Chennai and surroundings tend to look out for weekend / holiday getaways. These are high-spending tourists and easily tappable.
 - **Tamil diaspora** like Malaysia, Singapore, USA, UAE etc. These visit Tamil Nadu once every 1-2 years and like to re-visit their roots and childhood memories. These are to a large extent repeat visitors who have propensity to spend a lot on activity / experience aspects.
 - **Business tourists** visiting Chennai and surrounding industrial areas.
 - **Medical tourists**, capitalising on Tamil Nadu's very well-developed healthcare infrastructure. A Confederation of Indian Industries (CII) study has reported around 40% of the medical tourists getting treated in Chennai for its high-quality treatment for bone marrow transplant, cardiac bypass, eye

surgery, hip replacement and alternative medicine treatments. These tourists can be tapped for regional tourism around the place of primary visit.

1.5 Key Considerations

1.5.1 Take-aways from the Tourism Strategy

The Tourism Strategy Report identified that Tamil Nadu tourism needs to work across 4 broad roadmaps:

- a) **Outreach**
- b) **Visitor Facilitation**
- c) **Interlinked Trails**
- d) **Creating experiences**

While Points a), b) and d) above have to be taken up by the GoTN as policy level programmes, Point c) has direct implication on the master planning.

Interlinked Trails

As envisaged in the tourism strategy, an integrated network of tourism sites may be created, packaged into Tourism Trails.

The sites in a Tourism Trail will have a common purpose which may be of interest to a pre-determined set of target visitors. The target visitors (tourists or pilgrims) may be attracted to travel to each of the sites covered in the trail as part of a single tour.

As suggested in the tourism strategy report, the tourism trails shall have following components:

- **Flagship Hubs:** These are existing cities / towns with available basic infrastructure to act as initiation points or halting points or end points in a tourism trail. Tourism trails will be stitched around these Flagship Hubs so as to ensure that existing infrastructure of towns can be leveraged and if needed easily upgraded to ensure seamless journey of a High Value Tourist through these trails.

These Flagship Hubs will fulfil requirement of:

- Good quality accommodation

- Connectivity (air, road, rail)
- Technology (wifi hubs)
- Tourist help desks
- Basic necessities (ATMs, Money Exchange)

Example of Flagship Hubs are Chennai, Cuddalore, Trichy, Thanjavur and Madurai.

Infrastructure in some of these flagship hubs need improvement to match the quality expectations of the proposed tourism vision. This will be taken up and suggested as part of tourism trail.

- **Anchor Sites:** These are tourism sites within the Tourism Trail and having highest potential for attracting High Value Tourists. Such Anchor Sites will be master planned in order to act as:
 - Information points for entire Trail
 - Hubs with best in class tourist amenities and highest level of tourist convenience & comfort.
 - Well designed and Instagram-able / picture-worthy sites.
- **Other Sites:** These are other tourism sites of relevance to the Tourism Trail but which might not have high potential to interest a High Value Tourist and hence need not be taken up for significant development. However, a basic standard of tourist amenities will be suggested here so as to ensure tourist convenience & comfort.
- **Transformational Projects:** 11 categories of transformational projects were suggested in the tourism strategy report. These projects are suggested as privately-led capital projects which can act as magnets to High Value Tourists and will help in improving tourist footfall as well as creating quality experiences as part of Tourist Trails.

These transformation projects may or may not be located on one of the 295 sites (being master planned as part of the TNITPP). However, a suggested location for each of these transformational project is identified as part of the integrated master plan for the Trail.

The transformational projects identified in the tourism strategy are:

- Cruise & Ferry Tourism
- Cultural / Heritage Rail Journeys
- Niche Accommodation (Destination Resorts, Homestays, Heritage Hotels etc.)
- Community-centric Parks
- Weekend Tourism Hubs/ Caravan Tourism
- Focus Tourism Hubs
- Themed Experience Circuits
- Monetization of GoTN properties
- Convention Centre
- Golf Resorts
- Niche transport (heli-tourism, sea-planes etc.)

1.5.2 Strategic considerations

As identified in the approved tourism strategy, the following considerations shall be taken for development of each master plan.

- **Privately-driven and Publicly-enabled** – To make tourism development in the state sustainable in the long-run, a pragmatic approach has been taken.
 - While tourism in TN requires push from the state govt., it is understood that undue pressure cannot be put on govt. resources.
 - Further, it has been realised that creating “experiences” and providing high level of services isn’t possible without the involvement of the private sector.
 - Thus, while basic amenities, trunk infrastructure and civil infrastructure at the sites are suggested to be developed by the public sector / government; “experiences” and commercially viable large projects are proposed to be taken up private sector participation (in any form – with or without capital investment by private sector).
- **Phased Development** – The development of tourism sites would be phased, with the aim of realizing the benefits from tourism development in shortened time frame and with less capital requirements.
 - Tourist destinations along the existing, popular Tourist Trails and high potential Standalone Tourist Attractions, would be developed foremost, leveraging on their popularity and potential to attract larger High Value Tourist footfalls.

- **Community Involvement** – Local communities would form an integral part of tourism development in Tamil Nadu, developing a mutually benefitting relationship between tourists and locals.
 - Community integration would ensure that the benefits of tourism development, economic as well as infrastructure improvements, are shared with the locals.
 - At the same time, it will enhance the tourism experience by authentically showcasing Tamil Nadu’s unique communities, lifestyles, and diverse cultural resources.
 - Thus, the community would be integrated in master plan proposals, not only as tourism features but also as enablers who provide valuable services.
- **Regulatory compliance & Stakeholder alignment** – Master planning proposals at a tourism site would be governed by various development restrictions, including regulatory and social constraints.
 - In Tamil Nadu and across India, different government departments have issued various regulations and compliance requirements. The proposed development would have to comply with the applicable regulations.
 - During the Baseline Analysis Stage, inputs from interactions with government and private stakeholders were taken. The master plan would be developed in consultation with relevant stakeholders.

1.5.3 Planning Considerations

The following planning considerations formed the base towards master planning of tourism sites:

- **Environmental sustainability** – In most places in Tamil Nadu, tourism and recreation numbers have only started to grow rapidly in the last decade and the real impact on the environment of rampant tourism development may have not yet been felt across the State. Various Hill Stations in India, like Ooty however are already buckling under the volume of traffic, piles of litter and cheap commercialization, threatening the eco-systems in the most vulnerable natural areas across the region. To avoid any more serious detrimental impact that unchecked tourism development can have on a place, all major tourism developments in Tamil Nadu will need to start following highest standards of

Sustainability and Environmentally friendly planning, design and operations & maintenance. Some of its aspects are highlighted below and will be discussed also further in this report.

- **Pedestrianisation and Traffic Calming** - Within Temple Towns, Hill Stations and other heritage areas of Tamil Nadu, it's important to bring back the quality of the original historic streetscapes. Currently, the unchecked growth of these areas over the years and traffic is detrimental to the tourist's experience. With tourists being attracted to the cultural heritage of cities and towns so often to be found in the older most congested areas, this is one of the most serious issues that needs addressing just like most tourist cities around the world have already tackled, before this will put of the international traveller from coming to India.
- **Heritage Conservation** - With so much heritage buildings and structures being lost to rapid commercialization, it's high time that Heritage Protection is taken more seriously. This can be taken care of by improving the general Planning Guidelines of existing urban areas, including addition of more Area Specific Urban Design and Landscape Design Guidelines for historic areas with large concentrations of heritage buildings and streetscapes.
- **Concentrating New Tourism Development in Tourism Hubs** - One important step towards development of a more sustainable approach to handling the growth in the tourism sector is to plan for large scale Tourism Nodes with a concentration of resorts, leisure and tourist attractions along the coastal and lakeside areas around the State. Focusing on concentration of development in particular Hubs, opens up the opportunity to be more restrictive of development in nearby natural countryside areas, which can then retain their natural character and stay undisturbed by haphazard tourism development.
- **Water and Solid Waste Management** - Some destinations popular with tourists and local residents, like some of Tamil Nadu's hills station and beach areas, have not been able to keep up with the rapid growth in terms of the capacity of the local utilities and services, like power, solid waste management, water supply, etc. Not only is the local environment suffering because of it, it also seriously threatens its value as a tourist attraction.

Increased carrying capacity of all vital services and utilities are therefore essential and can only be resolved in a smart & sustainable manner.

- **Highest Sustainability Goals for Hospitality and Leisure Industry** - All major operators in the Leisure and Hospitality industry should adhere to much higher sustainability benchmarks. The government will need to set clear goals and guidelines, about the use of more locally sourced traditional building materials and the design elements (vernacular architecture) that are more adaptable to local climatic conditions for reduced reliance on air conditioning.
- **Elimination of Single-use Plastics** - The fight against the use of single-use plastics should be given a renewed push. The Tourism industry has an important stake in ridding the beaches, parks and roadsides of plastic waste and therefore should also be held accountable and asked to adhere to a zero –tolerance when it comes of the use of single-use plastics.
- **Standardisation** – Many interventions would be repeated across sites that are spread throughout the state. Standardisation of such common interventions would reap the following benefits:
 - Standardised or modularised interventions would ensure that a standard in the quality of the final design, quality of materials and smooth functioning is guaranteed everywhere, from the most visited tourist destinations to the smaller, remote or less visited sites.
 - By creating a prototype or template design that can be easily replicated (with small adjustments to its size and layout, based on local site conditions and functional requirements), an effective cost saving can be made in construction costs.
 - Further, over time, these modules are also expected to become familiar landmarks for travelling tourists throughout the state.

However, considering the varied mix of sites with differences in tourism potential, different prototypes would have to be designed to reflect:

- Varying product category – temple, natural site, cultural site, etc.
- Varying tourism potential - high HVT potential, non HVT tourist potential, only pilgrim potential, etc.

- **Diversification** – Currently, temple heritage has been Tamil Nadu tourism’s mainstay. Also, few sites like forts, beaches, hill stations, etc., are popular in Tamil Nadu. Other than this, Tamil Nadu does not really offer a diverse set of experiences. Thus, beyond catering to site-level needs, the masterplans would aim to diversify the tourism offerings in Tamil Nadu.
 - Special projects would be conceptualised and developed to grow tourism in Tamil Nadu, by tapping on new segments or creating new crowd-pulling attractions.
 - These tourism offerings would bring the less promoted aspects of Tamil Nadu to limelight.
 - Such diversified tourism products would not only attract new tourists but would also offer new experiences to repeat tourists.
 - For instance, ferry tourism could be developed and promoted in Tamil Nadu. Tamil Nadu’s rich lake resources can be used to drive quality ferry and speed boat services. Further, given the many marine attractions along the coast, Tamil Nadu can also operationalise short ferry rides to feature these.

- **Integration** – For sites that are located in the same ecosystem, an integrated master planning approach would be taken. These co-located sites and their surroundings would be planned together as a cluster.
 - A holistic vision would be needed to guide the development in such clusters, as the sites within these clusters would generally be visited by the same tourists and governed by similar drivers.
 - An integrated plan would be proposed to develop the sites within the cluster and their linkages.
 - For instance, Kanchipuram has a set of Hindu temples located within a ~2km radius. Currently, the area is served by narrow streets that face congestions and roadblocks frequently, ruining tourists’ experience. Hence, an integrated mobility plan could be developed for the cluster, proposing interventions like E-cycle trails, EV routes planned across core sites and pedestrianisation of key streets. Such interventions would eventually bring down the traffic of motorized vehicles on these streets and make them more tourist friendly.

- **Inclusion** – As temple heritage is one of the main offerings of Tamil Nadu Tourism, there is a need to develop the temple sites and make them more inclusive for non-religious tourists.
 - The intent is to develop and promote these sites beyond pilgrimage, showcasing TN’s history, heritage and monumental architecture that these temples possess.
 - Various temples of significance have integrated tourism and led the way.
 - ASI temples, owing to their significance as nationally protected monuments, are all maintained by ASI. ASI also regulates all activities and developments in and around these sites, with an aim to preserve these monuments of national importance. National Policy for the Conservation of the Ancient Monuments, Archaeological Sites and Remains (NPC-AMASR) was recently published in 2014, acknowledging the importance of tourism at these sites and promoting infrastructure development for visitor facilitation.
 - Besakih Temple in Bali is one of the largest and holiest temples of the Hindu religion in Bali. The temple is open to visitors of all faiths who can visit the smaller temples located in the temple complex, while the inner courtyards and the main shrines are reserved for pilgrims.
 - Suggested model of inclusion – respecting the religious significance & beliefs while facilitating tourists’ visits
 - Segregate core / sacred spaces from the other parts of the temple complex and restrict these to only pilgrims.
 - Permit non-pilgrim tourists to visit the peripheral / cultural spaces of the temple, keeping these spaces open outside of pooja hours as well (especially afternoon times).
 - Provide visitor amenities at or near the temple site, respecting the temple beliefs & norms and planning them accordingly.

1.6 Approach to Integrated Tourism Planning & Promotion

With the above backdrop, it is important to understand the difference between Integrated Tourism promotion, as envisaged under TNITPP for attracting High Value Tourists **v/s** Master Planning of 295 sites given under TNITPP.

- A. Integrated Tourism Promotion through identification of Tourism Trails:** It is established that Tourism in Tamil Nadu needs to be developed holistically. Anchor Sites identified with potential to attract High

Value Tourists (HVTs), both foreign and domestic, should be integrated into inviting packages or trails, which are then marketed and promoted to the HVTs.

These trails need to have the right material, right packaging, right branding, right target audience, right mix of activities and right infrastructure support to ensure that the desired effect of integrated tourism promotion is achieved.

We have attempted to create a few of such Tourism Trails which can be promoted for high-value tourism.

- B. **Master Planning of all 295 sites:** The 295 sites which need to be master planned in TNITPP include both sites packaged into Tourism Trails and other sites which are either purely pilgrim temples or are standalone sites, not necessarily capable of integration into a Tourism Trail.

Hence, for the purpose of master planning, the sites which are not part of Tourism trails are presented by putting them in other sections, like:

- Others Sites
- Hotel Sites
- Wellness Sites

- C. **Structuring of Master Plan reports:** in order to ensure that each Tourism Trail is comprehensively presented and read holistically, we have structured each report by presenting master plans packaged into Tourism Trails or other sections (as described above).

Each section will entail:

- **Executive Summary of the Tourism Trail**, showing concept of the trail, target tourists, sites covered and key highlights, tentative circuits for planning itineraries, proposed interventions, tentative CAPEX and expected socio-economic impact on communities.
- **Master Plan reports of each site covered in the Tourism Trail.**

It may be noted that some sites may be repeated across multiple Tourism Trails are hence covered in all those trails.

Details of Tourism Trails and sites covered in this report are discussed in next chapter.

TOURISM TRAILS

2 Tourism Trails

2.1 Introduction

Tourism is a significant sector in the global economy. Around 9% of global GDP and 9% of jobs currently depend on tourism. High Value Tourism is a niche sector that primarily targets High Value Tourists (HVTs), both domestic and international, who constitute a disproportionate share of the total tourist expenditure (~2% foreign tourists in India contribute 83% of India's tourism earnings). They engage in leisure travel, spend more than the average traveller on such trips, and are primarily concerned with an overall immersive experience. These experience seekers tend to have higher stay periods and have high service expectations. Studies indicate that only ~20% of HVTs will sacrifice comfort for lower price.

The role of HVTs in the overall tourism economy, thus, needs to be identified. The key benefits are listed below:

- High contribution to local economy with minimum incremental load on infrastructure.
- Trickle-down effect, i.e., interventions meeting the high standards of HVTs will eventually pull in other segments, like domestic mass tourists, budget tourists, weekend tourists, local & regional tourists.
- Conservation of natural resources, reduced pollution, preservation of fragile cultures, etc.
- Mass tourism and crowds would have negative impact on destination attractiveness in a post-COVID tourism scenario, even for domestic tourists.

For example, Australia has successfully targeted this sector with customized packages tailored to the taste of such visitors with ~1 in every 4 visitors being a HVT and spending 2 – 3x more than an average traveller. In Queensland in Australia, HVTs account for ~35% of the interstate and intrastate travellers and contribute ~63% of the total interstate tourism spend and ~71% of the total intrastate tourism spend. They have distinct key drivers for destination choice such as food and wine,

aquatic and coastal, and nature and wildlife experiences when choosing a holiday destination.

2.2 Tourism Trails

High Value Tourists (HVTs) are mostly engaged in experiential tourism wherein they can meaningfully engage with the history, people, culture, food, and environment of the destination. Tourism trails present an attractive opportunity to create such experiences. They provide a hassle free and a well-planned itinerary of interesting popular and offbeat places to visit and thus induce the travellers to spend more time and money in the region. These trails are curated to meet the needs of the target visitors.

Development of such a trail can be achieved in three stages – Intensive planning, Construction of the trail and Ongoing maintenance, management and marketing.

The planning of the trail needs to be done keeping the following primary factors in mind.

- Identification of interesting and unique features in the area – history, food & produce, natural features, the culture, local flora and fauna, industry, recreation, adventure etc.
- Identification of the kind of trail experience to be created - multi day drives or walk trails to short around the town heritage walks. Physical activities like hiking etc can also be involved based on the characteristics of the region.
- Determination of the theme and concept of the trail and evaluate its overall feasibility.
- Identification of stakeholders – organizations to pool resources for creation, promotion and maintenance of the trail, other relevant stakeholders.

- Resource Planning – Based on the trail experience, appropriate route planning and mapping, key features and locations for activities, and learning, funding needed.

The trails would, therefore, cater to different physical abilities, time availability, budgets, activities, ages, and interests.

2.3 Need for Tourism Trail in Tamil Nadu

Tamil Nadu has great inherent potential to be developed into a high value tourism destination. With ~4000 years of continuous cultural history, Tamil Nadu is known for its remarkable temple architecture, rich tradition of music, dance, festivals, folk arts, and fine arts, and has numerous hill stations, waterfalls, national parks, local cuisine and wildlife.

Despite such a unique and versatile set of offerings, the state is still perceived as a “Land of Temples and Heritage Sites”. The tourism product it currently offers is a sub-set of what it could potentially develop. The state has the potential to benchmark itself to the most unique, exotic, and experiential destinations from across the world with unique themes and destination-based tourist trails articulated around the following:

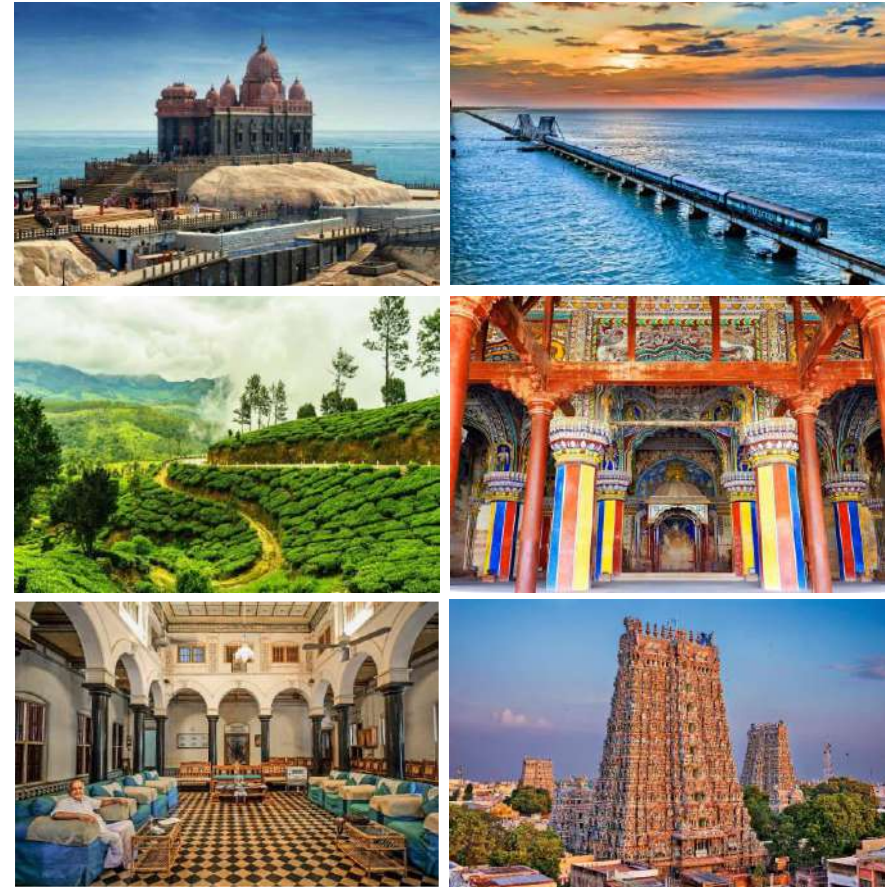
- Diverse natural locations
- A long unbroken history, kept alive by ancient traditions
- Unforgettable experiences
- Many undiscovered spots
- Vibrant living cultures
- Assortment of cuisines

2.3.1 Storyline of marketing

As reflected above, Tamil Nadu needs to be promoted as **“The Land Where Stories never End”**.

Tamil Nadu has traditionally marketed itself around its **“Sites”** – Temples, Hill Stations, Beaches. The marketing and promotion strategy now needs to be redefined to promote **“Experiences”** and **“Stories”** – City walk about temples | Ziplining in Hills | Cruises along the coast | Night in Caravan along the ECR Road etc.

Essentially, the marketing and promotions should highlight the memories a Tourist can create and live-in rather than what the Tourist can just see.



2.4 Proposed Tourism Trails

Based on our study of Tamil Nadu's tourism potential, this section proposes some of the most alluring trails which can be of interest to the High Value Tourists and Pilgrims visiting Tamil Nadu.

The vivid colours of Tamil Nadu's tourism offerings can be clubbed together into various Trails.

The following Tourism Trails were shown in Volume A and Volume B submitted earlier:

- I. The Ramayana Trail**
- II. The Buddha Trail**
- III. The Gopuram trail**
- IV. The Coastal Trail**
- V. The Chola Trail**
- VI. The Colonial Trail**
- VII. The Handicrafts of Tamil Nadu Trail**
- VIII. The Divya Desam Trail**
- IX. The Navgraha Trail**
- X. The Pancha Bhootha Trail**
- XI. The Arupadai Veedu Trail**

MASTER PLANS

3 Master Plan Reports

This volume captures 61 master plans. Sites have been clustered into 4 Sections – which denote the central theme of the sites.

- I. Hotels – Total 12 master plans | merged into 9 sites (out of 295 sites)
- II. Other Temples – Total 37 master plans | merged into 31 sites (out of 295 sites)
- III. Weekend Destinations – Total 6 master plans (out of 295 sites)
- IV. Standalone Sites – Total 6 master plans (out of 295 sites)

Before going deeper into master plan for each site, a summary of the central theme on the Trail is presented. The sequence of Sections and Master Plans comprised herein is presented below.

S. No.	Site Name	District	Page no.
Hotels			
1	HTN, Melmaruvathur	Chengalpattu	I-1
2	HTN, Kanchipuram	Kanchipuram	I-11
3	HTN, Sriperumbudur	Kanchipuram	I-25
4	HTN, Thiruthani	Tiruvallur	I-37
5	HTN, Nagapattinam	Nagapattinam	I-49
6	HTN, Thirukkadaiyur	Mayiladuthurai	I-61
7	HTN, Thanjavur I	Thanjavur	I-71
8	HTN, Thanjavur 2	Thanjavur	I-83
9	HTN, Kumbakonam	Thanjavur	I-93
10	HTN I, Rameshwaram	Ramanathapuram	I-103
11	HTN II, Rameshwaram	Ramanathapuram	I-117
12	HTN, Kanyakumari	Kanyakumari	I-119

S. No.	Site Name	District	Page no.
Other Temples			
1	Marundeeshwarar Temple, Thiruvanmiyur	Chennai	II-1
2	Kesarwadi Jain Temple (Puzhal Kesarvadi Tirth)	Chennai	II-17
3	Tirumoolanathar Temple, Puzhal	Chennai	II-31
4	Thirukazhukundram	Chengalpattu	II-47
5	Chitragupthar Temple	Kanchipuram	II-65
6	Vallakottai Murugan Temple, Sriperumbudur	Kanchipuram	II-77
7	Kamakshi Amman Temple	Kanchipuram	II-89
8	Thiru Mukkoodal Appan Venketesa Perumal Temple	Kanchipuram	II-103
9	Ramanujar temple - Sriperumpudur	Kanchipuram	II-117
10	Trilokyanatha Jain Temple, Thiruparithukundram	Kanchipuram	II-131
11	Kundrathur Murugan Temple	Kanchipuram	II-145

S. No.	Site Name	District	Page no.
12	Trisakthi Temples – Melur Near Manali, Thiruvottiyur & Avadi	Tiruvallur	II-159
13	Trisakthi Temples – Melur Near Manali, Thiruvottiyur & Avadi	Tiruvallur	II-173
14	Mangadu Amman temple	Tiruvallur	II-187
15	Masilamaneeswarar temple - Thirumullaivayil	Tiruvallur	II-203
16	Thiruverkadu Amman Temple	Tiruvallur	II-219
17	Vedhapureeswarar Temple	Tiruvallur	II-233
18	Varadaraja Perumal Temple, Poonamallee	Tiruvallur	II-247
19	Pilgrim Centre, Poonamallee	Tiruvallur	II-259
20	Periyapalayathamman Temple	Tiruvallur	II-271
21	Andal Kuppam Murugan temple	Tiruvallur	II-283
22	Siruvapuri Murugan Temple	Tiruvallur	II-295
23	Thirumalai Jain Temple (Polur)	Tiruvannamalai	II-307
24	Arahanthgiri Jain Math	Tiruvannamalai	II-321
25	Thirunarunkondai (Jain Circuit)	Villupuram	II-337
26	Vakkarakaliamman Temple, Thiruvakkarai	Villupuram	II-349
27	Thiruvonnainallur Kripapuriswarar temple	Villupuram	II-359
28	Vadalar Ramalinga Adigalar Sabai	Cuddalore	II-371
29	Sri Viruthagiriswarar Temple, Virudhachalam	Cuddalore	II-385
30	Sri Rajagopala Swamy Temple, Mannargudi	Thiruvarur	II-399

S. No.	Site Name	District	Page no.
31	Thiyagarajar temple - Thiruvaiyaru	Thanjavur	II-413
32	Mahalingeswarar Temple, Thiruvudaimarudur	Thanjavur	II-429
33	Vedaranyam Sivan Kovil	Nagapattinam	II-443
34	Thirumazhisai Temple	Tiruvallur	II-457
35	Thirumanancheri	Nagapattinam	II-471
36	Swayambunathaswamy Temple, Peralam	Thiruvarur	II-483
37	Kumari Amman (Bagavathi Amman Temple)	Kanyakumari	II-495
Weekend Destinations			
1	Mudhaliarkuppam Boat House and Eco Resort, Chengalpattu	Chengalpattu	III-1
2	Silver Beach, Cuddalore	Cuddalore	III-17
3	Gudiyam Caves	Tiruvallur	III-35
4	Kodiyampalayam Beach	Mayiladuthurai	III-51
5	Kodiveri Falls and Park, Erode	Erode	III-63
6	Eraiamman Padithurai to Viravalai Boating, Kanyakumari	Kanyakumari	III-77
Standalone Sites			
1	Drive-inn Restaurant, Chennai	Chennai	IV-1
2	Nagore Dargah, Nagapattinam	Nagapattinam	IV-17
3	Fossil Excavation, Ariyalur	Ariyalur	IV-31
4	Natteri Brahmedesam, Tiruvannamalai	Tiruvannamalai	IV-47
5	Uthiramerur Inscription (Vaikunta Perumal Temple)	Chengalpattu	IV-63
6	Mahendravadi Caves, Ranipet	Kanchipuram	IV-77

HOTELS



Hotel industry is one of the fastest-growing sectors in the travel & tourism industry and is truly justified as one of the key elements in the development of any region's tourism. The presence of sufficient number of quality hotels also adds value and punches it within the region's economy.

The role of accommodation is substantial in the experience of a destination/ trip. It not only renders comfort & relaxation, but also offers safety & security to travellers who are unaware/ new to the region. It also helps tourists in exploring their desired destinations better and enhances the overall tourism experience.

Tamil Nadu Tourism Development Corporation (TTDC)

TTDC, at present, owns hotel properties across Tamil Nadu. While TTDC itself operates some of these properties, some have been given on lease to private operators.

49 Assets of TTDC have been identified for development under this Project. These include:

- Various Hotel Tamil Nadu properties
- Restaurants
- Various hotels given on lease to private operators

These properties are located in various parts of Tamil Nadu, and vary a lot in terms of:

- Located in extremely popular tourist hubs like Ooty and Mamallapuram, to far flung locations like Ulundurpet and Melmaruvathur.
- Large properties like Beach Resort Complex, Mamallapuram (~47 acres) to small sites like HTN Coonoor, Cortallam, Madurai, etc. (<1 acre).
- Well-developed properties like the property at Ranipet to dilapidated development like HTN Pitchavaram, Nagapattinam, Sathanur Dam, etc.

Summary

Sites & their Tourism Potential

All footfalls are in '000s per annum

D = Domestic / Pilgrim | HVT = High Value Tourist (domestic & foreign)

S. No.	Site	District	Site	Product Type	Proposals	Estimated CAPEX (INR Cr.)	Hotel Keys	Private sector involvement
1	15	Chengalpattu	HTN, Melmaruvathur	Hotel	Development of the site into a medium scale hotel, utilizing available vacant land	6 - 7	15	PPP
2	31A	Kanchipuram	HTN, Kanchipuram	Hotel	Development of site into an upscale hotel with enhanced amenities	60	50	PPP
3	32	Kanchipuram	HTN, Sriperumbudur	Hotel	Refurbishment and addition of event & conference facilities	3.4 - 4	-	PPP
4	41	Tiruvallur	HTN, Thiruthani	Hotel	Development of a wayside amenity	12 - 15	25	PPP
5	76	Nagapattinam	HTN, Nagapattinam	Hotel	Development of unused site to a restaurant with capacity 50-60 pax	1.7	5	PPP
6	79A	Mayiladuthurai	HTN, Thirukkadaiyur	Hotel	Development of estaurant with outdoor dining area (~60-80 pax) and Façade renovation	5.6	10	PPP
7	126A	Thanjavur	HTN, Thanjavur 1	Hotel	Refurbishment and Façade renovation	3.4	32	PPP
8	126B	Thanjavur	HTN, Thanjavur 2	Hotel	Refurbishment and tourist information desk	5.3 - 5.4	53	PPP
9	127	Thanjavur	HTN, Kumbakonam	Hotel	Refurbishment and augmentation of wellness offerings	1.4	14	PPP
10	256A	Ramanathapuram	HTN I, Rameshwaram	Hotel	Development of site into a destination resort with meditation areas	50	120	PPP
11	256B	Ramanathapuram	HTN II, Rameshwaram	Hotel	No tourism interventions proposed	-	-	-
12	289	Kanyakumari	HTN, Kanyakumari	Hotel	Renovation & Reuse of exiting buildings, additions of hotel rooms & cottages	45	85	PPP

Reference Case Studies

Mentioned below are case studies of brownfield Government hospitality projects executed/ bid out / implemented in India. The objective of this note is to study various development models taken up across such projects in the past, especially tenure / concession periods.

The transactions for brownfield assets can be divided into two categories:

- Brownfield assets given on lease / license / PPP-OMT basis and requiring minimal refurbishment
- Brownfield assets given on lease / license / PPP-OMT basis and requiring significant refurbishment / redevelopment

Project Structure

- Asset given by Government authority to private player on as-is where-is basis
- Private player to operate and maintain the asset, with refurbishments (if any)
- All operational responsibilities vest with the private player

Tenure

- Typically, 30/ 33-year lease / license in case of minor / no refurbishments
- Longer tenures of 60 / 90 years in case of significant refurbishments / redevelopments

Pay-outs to Authority

- In cases where the asset is operational and is expected to have strong cash-flows, revenue share (with minimum guarantee) is a favoured pay-out model. Most hotel transactions are worked out on percentage share of gross revenue (with minimum guarantee) + One-time upfront payments.
- In case of projects with multiple revenue streams and asset-classes, where auditing of the Gross Revenue may be difficult or in cases where the cash flows are expected to be on the lower side, transactions are worked out on Annual Lease / Concession Payments to the Authority

Property	Details	Tenure
O&M with minor / no refurbishments		
Hotel Taj Mansingh, Delhi (2018; 290 keys)	<ul style="list-style-type: none"> • Authority – NDMC • Concessionaire – Tata Group's Indian Hotels Company limited (IHCL) • License Agreement • Responsibilities – O&M (with or without refurbishment) • Payments – Upfront Fee + Revenue Share (with MG) 	33 years
The Lalit Ashok, Bangalore (2001; 180-keys)	<ul style="list-style-type: none"> • Owner – M/s Kumarakruppa Frontier Hotels (P) Limited (ITDC company) • Concessionaire – Bharat Hotels / Lalit Suri Group • Lease and Management Agreement • Responsibilities – O&M (with or without refurbishment) • Payments – Upfront Fee + Annual Payments 	30 years
3 7, Shaheed Bhagat Singh Road (Earlier known as The Connaught) (85 keys)	<ul style="list-style-type: none"> • Authority – NDMC • Concessionaire – IHCL • Lease and Management Agreement • Responsibilities – O&M (with refurbishment) • Payments - Upfront Fee + Revenue Share (with MG) 	33 years
The Lalit Resort & Spa, Bekal (2004; 45 keys)	<ul style="list-style-type: none"> • Owner – Bekal Resorts • Concessionaire – Bharat Hotels / Lalit Suri Group • Lease Deed 	30 years
Hotel Leela, Mumbai Airport (1994)	<ul style="list-style-type: none"> • Authority – AAI • Concessionaire – Leela Ventures • Lease Deed • Payments – Lease rent + royalties (with MG) 	30 years
Hotel Juhu, Mumbai (2002)	<ul style="list-style-type: none"> • Authority – Hotel Corporation of India • Concessionaire – Tulip Hospitality Services Pvt. Ltd. 	29 years

Property	Details	Tenure
	<ul style="list-style-type: none"> • Lease Deed • Payments – Lease rent + Upfront Lease Premium 	
Hotel Sahara, Mumbai Airport (2002; 354 keys)	<ul style="list-style-type: none"> • Authority – Hotel Corporation of India • Concessionaire – Batra Hospitality • Lease Deed • Payments – Lease rent + Upfront Lease Premium 	29 years
O&M with significant refurbishments / CAPEX		
Hotel Ashok, New Delhi (550 keys) (In process)	<ul style="list-style-type: none"> • Authority – ITDC • Concessionaire – To be decided • PPP – OMD • Responsibilities – Refurbishment + O&M • Payments – Upfront + Revenue Share (with MG) 	30+30 years
12 hotel assets in Aero city, Delhi (2002-2010)	<ul style="list-style-type: none"> • Authority – DIAL • Concessionaire – 12 different concessionaires • Lease and Development Agreement • Payments – Upfront Fee + Annual License Fee 	30+30 years

1. Hotel Tamil Nadu, Melmaruvathur

Site Details

District:	Chengalpattu
Name of Site:	Hotel Udhayam
Site No:	Site 15 of 295
Site Use:	Hotel
Category:	F (Hotel)
Location:	12.4349, 79.8329
Land Area:	0.86 acres
Capacity:	10 rooms
Operator:	Mr. G. Radhakrishnan
Site Ownership:	TTDC
Occupancy:	Undisclosed (low occupancy of hotel)
Site Revenues:	INR 13 lakhs (FY20)
Connectivity:	
a. Railway station:	1 km (Melmaruvathur)
b. Airport:	75 km (Chennai)
c. Highway:	Abutting NH-32
Trails featured on:	Nil (Hotel)

Hotel Tami Nadu, Melmaruvathur is a TTDC-owned hotel given out on franchise to a private player. The franchise agreement is for the period 2007 – 2022. It is a low occupancy small hotel with the restaurant block popular amongst the locals and tourists. The major drawbacks for the hotel are its decor (quality of beds, fittings, furniture) and lack of visibility due to highway construction in the front. Given its proximity to Adhiparasakthi Temple, the city's main tourist attraction and large amount of vacant land available, it has ample potential to be developed as a preferred accommodation for visitors by improving the quality of interiors and developing space for recreational activities.

Existing Condition

Location

Hotel Udhayam is located in the heart of the Melmaruvathur city. It is located adjacent to the Grand Southern Trunk Road. The property is about 1 km from the Melmaruvathur Lake and Melmaruvathur Railway Station. It is in close proximity to the city's main attraction – Adhiparasakthi Advervana Bathrakali Temple.

Existing Layout

The 30,000 sq. ft. rectangle shaped plot is located abutting the Grand Southern Trunk Road. At present there is ample amount of vacant land available within the site with low development around.

Existing Uses

As per the existing layout, most of the site is vacant. The built structure occupies a small portion of the site, housing the restaurant and 3 hotel blocks. The Site is being used for various functions, as listed below:

- **Hotel** –
 - Hotel block 1 – This is situated towards the left end after entering the premises. This block houses the 2 deluxe rooms and a staff room.

- Hotel block 2 – This is also present towards the left before block1. This block has 2 AC rooms and 2 non ac rooms. The second floor of this building is a conference room
- Hotel block 3 – This is towards the right end and opposite to block1. This has 4 deluxe rooms, reception, guest house and a vacant area that once was a restaurant.
- **Accommodation** – The accommodation has 10 rooms in total equipped with bottled drinking water (charged). Each of the rooms have private bathrooms with a supply of hot and cold running water.
 - Ordinary Room – Tariff INR 500
 - Deluxe Room – Tariff INR 900
 - Deluxe A/c – Tariff INR 1,200
- **Restaurant/Bar** – Udhayam veg restaurant – This is owned and operated by the franchise owner. This is located immediately to the left after entering.
- **Car Parking** – Parking is being done in the open area present.
- A non-operation bar

Operating Performance

- Lease Agreement
 - Period of lease – 2007-2022
 - Initial lease payment – INR 7.5 lakhs (2007)
 - Current lease payment – INR 13.1 lakhs (2020)
 - Escalation – 15% every 3 years
 - Due Payment details – INR 35,88,503
- Occupancy
 - Hotel – low occupancy
 - Restaurant – high occupancy
- Peak season – November to March
- Revenue fell by 60% after closure of bar

Master Planning Considerations

Applicable Regulations

Tamil Nadu Combined Development and Building Rules, 2019 – The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land.

Key Sensitivities

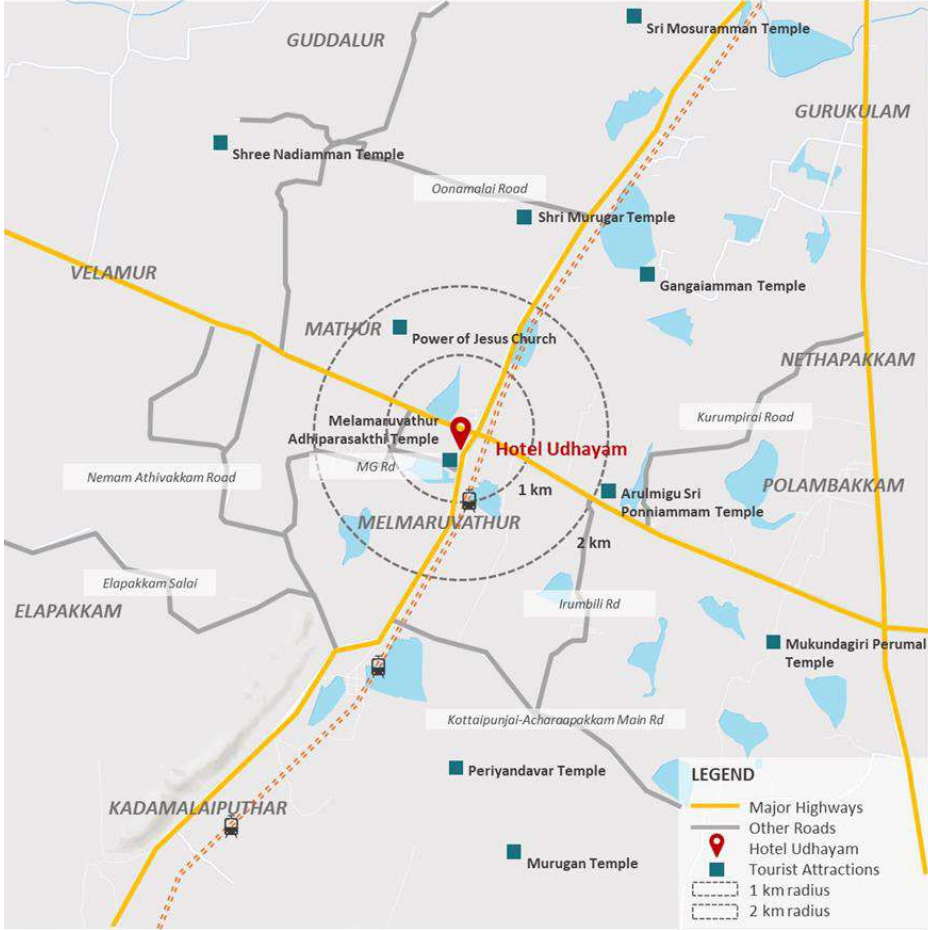
The site does not hold any environment or social sensitivities to address in master planning.

Key Issues to Address

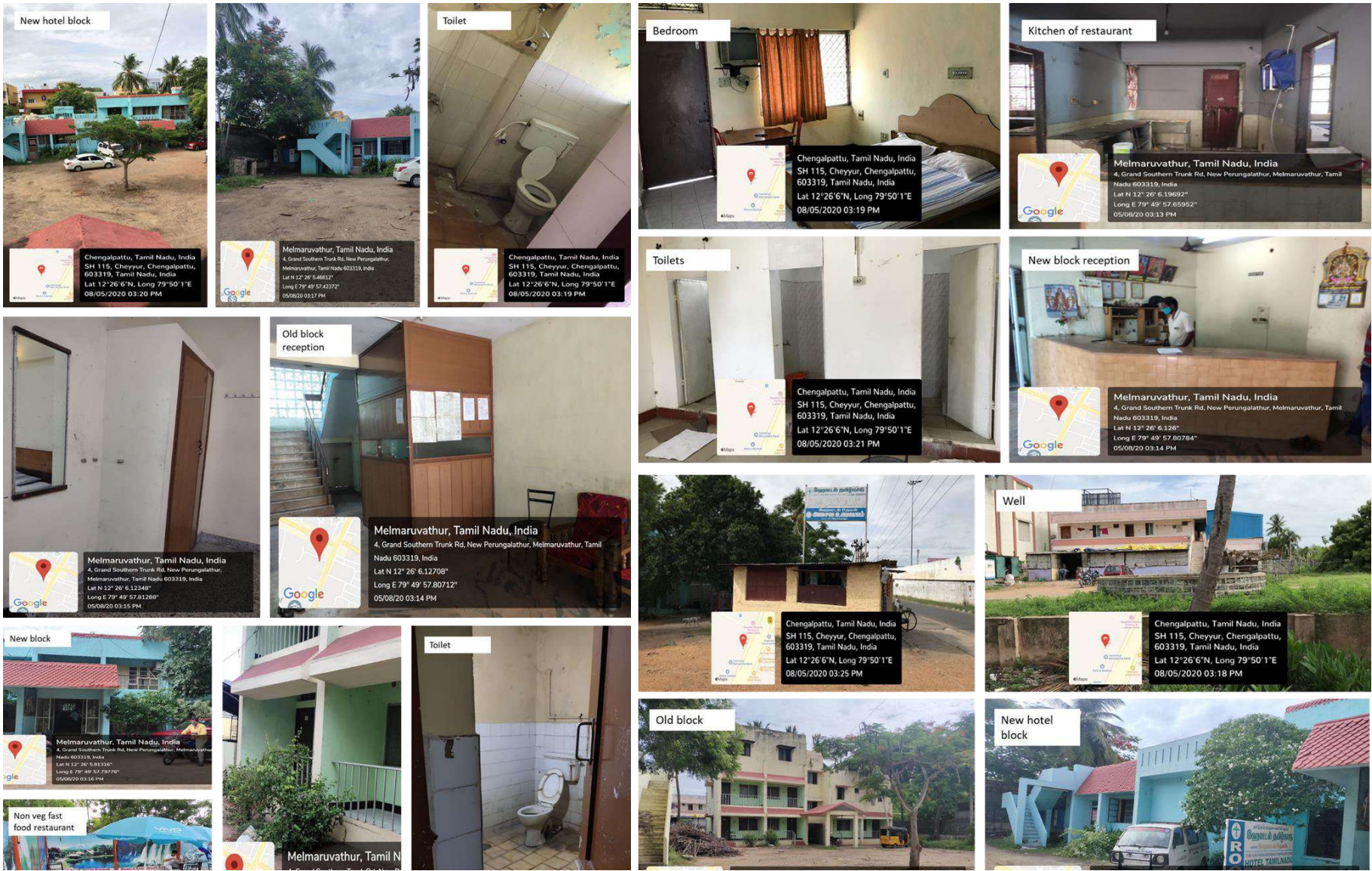
Baseline Stage are summarised below along the 6A Framework:

1. **Attraction** – The main point of attraction within the hotel is the restaurant which generates maximum revenue for the site. Other than this, the hotel is also located just 500m from Adhiparasakthi Temple which gets close to 30 lakh visitors annually.
 2. **Accessibility & Mobility** – The site enjoys excellent connectivity as located along the Grand Southern Trunk Road (NH32 Chennai-Theni highway). It is accessible from all sides through the service lane.
 3. **Amenities** – The hotel facilities are worn out and need to be upgraded.
 - The interiors lack modernised and aesthetic design.
 - The toilets are in poor condition.
 - The open area in the site is not well maintained.
 - The restaurant capacity and menu is limited.
 - The site lacks adequate dustbins, streetlights and working CCTV.
- Parking** – The Site has no designated parking area. Vehicles are parked in the vacant portions of the site, but no paving or shading is provided.
4. **Awareness** – The site scores low on awareness due to limited visibility by the elevated highway. Also, the hotel is not visible from the opposite side of the road and cannot be booked through online travel aggregator websites. Only the in-house restaurant attracts locals, tourists for its quality of food.
 5. **Activities** – Other than the restaurant, there are no other activities within the Site.
 6. **Accommodation** – Melmaruvathur has limited options for accommodation with few lodges and budget hotels in the town with an average tariff of INR 1500.

Figure 1-1: Location and Existing Layout



Site Pictures



Vision for the Site

- Hotel Tamil Nadu, Melmaruvathur is strategically located within walking distance of the main attraction: the Adhiparasakthi Temple. Moreover, the hotel Site is located next to the Grand Southern Trunk Road providing excellent connectivity. This is also a setback to the site, as it has drastically reduced the visibility of the hotel for the tourists.
The current hotel has an old-fashioned layout, décor, architecture with lack of amenities and underutilized space within plot.
- Considering the locational advantage and popularity of the restaurant, and the limitation of being old and worn-out, the hotel can be developed into an overnight destination stop for pilgrims and a community space for the locals with renovation and improvements on the site.
- The vision is to develop the site into a medium scale hotel utilizing the available open land based on the local needs of the people and upgrade and improve the hotel interiors with modern amenities and fitouts.
- **Target Visitor** – Given the reasons as stated above, the Site has ample potential to become a preferred hotel for the regional tourists visiting the main temple of the city and local community.

Proposed Master Plan

Master Plan Concept

- Considering the potential of the Site as not just a Hotel for visitors to the Temple but as a recreational space for the local community, the following are the objectives of master planning at this Site:
 - **Improving pilgrims' experience** at the Adhiparasakthi temple – through provisions of overnight accommodation facility.
 - Developing **open green spaces** at the Site by providing landscaped gardens and lawns.
 - Developing **community hall** for celebrating local festivals and marriages purposes.
 - **Improving tourist footfall** through appropriate marketing and promotion.

Hard Interventions

1. **Development of a Community Hall** – The town does not offer facilities for community gathering and functions. Therefore, a community hall for 100 pax will

be an ideal development at the site. This will also pull in higher footfall and revenue for the site and engage the local community for holding marriages and celebrations. The front lawn can also be included with the community hall for bigger functions. The community hall will be developed by demolishing the closed bar and existing old hotel blocks 1 & 2. It will be a ground only structure, with a slanted roof depicting the local style of construction.

Infrastructure Created: ~220 sqm building

2. **Expansion of Hotel block**

Presently, the hotel consists of 3 buildings with 10 rooms spread across the site with inadequate facilities and amenities. Therefore, the new hotel block on the opposite side of the restaurant building can be expanded up to G+2 with rooms up to 15 keys. The other two old hotel buildings will be demolished and vacated for other uses. The rooms in the expanded building will be both AC and Non-AC with provision of all basic amenities.

Infrastructure Created: ~515 sqm expansion on higher floors

3. **Renovation of Restaurant block**

The restaurant block on the entrance is famous for its food among the locals. It is an important source of revenue for the hotel. Therefore, the restaurant block should be renovated and upgraded with modern furniture and fit outs. The menu spread of the restaurant should be expanded with addition of various vegetarian cuisines and outdoor seating should be provided.

Infrastructure Created: ~160 sqm building

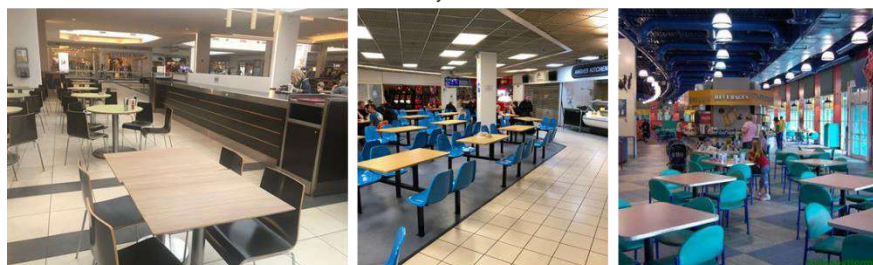
4. **Parking** – A designated parking space must be developed for accommodating maximum number of vehicles with good lighting and pavement. This will be near the entrance of the site with a holding capacity of 18 cars.

5. **Site Boundary** – Construction of boundary wall on the front side of the site will protect it from trespassers and locals' illegal activities. An inviting gate will also be constructed along with the boundary wall on the front side.

Infrastructure Created: ~60m in length



Community Hall



Renovation – Restaurant

Soft Interventions

1. **Promotion** – The hotel must be popularized and promoted to the locals and tourists visiting Adhiparasakthi Temple as a one-day accommodation. This can be done through diversifying marketing using online platforms and social media. Creating connections with tour group companies and temple authorities in the town by providing incentives to stay overnight.

2. **Landscaped Garden** – Owing to the site available land, landscaped garden or lawn can be developed with adequate recreational spaces around. This can be complimented with paved pathways and seating arrangements for guests and tourists to spend time. The garden can also be combined with the community hall for large gatherings and functions.

Infrastructure Created: ~2000 sqm of garden

3. **Children Playground** – A small children playground will be developed near the landscaped garden with provisions of swings and sandpit areas.

Infrastructure Created: ~220 sqm of garden

4. **Hotel Interiors and Amenities** – The interiors of the hotel and rooms should be upgraded and improved. This will be implemented through renovation of fit-outs and provision of modern facilities. There should be improved upkeep of the rooms and regular housekeeping should be enforced.



Lawn



Children Playground



Room Interiors

Trunk Infrastructure

As the Site has excellent connectivity, no trunk infrastructure interventions are required.

Please refer to Design Guidelines mentioned in Glossary of Interventions regarding amenities and urban design.

Projects Identified

#	Project Component	Scale
1	Development of Community Hall	220 sqm
2	Expansion of Hotel block	515 sqm
3	Renovation of Restaurant block	160 sqm
4	Restaurant Outdoor Seating (4)	60 sqm
5	Site Boundary	60 m
6	Parking	18 ECS
7	Landscaped Garden	2000 sqm
8	Children Playground	220 sqm

Feasibility Assessment

The following considerations have been accounted for the cost projections of proposed interventions at this site:

- Feasibility of the cashflows projected here are accounted only for the additional components master planned.
- The current operating & maintenance cost of the site have not been considered.

Capital Expenditures

The cost of the different project components proposed in the masterplan is calculated basis the current market price considering the appropriate escalations.

#	Project Component	Cost (INR Lakh)
1	Development of Community Hall	80
2	Expansion of Hotel block	500
3	Renovation of Restaurant block	35
4	Parking (Paved Yard)	10
5	Site Boundary	5
6	Entrance Gate	2
7	Landscaped Garden	5
8	Children Playground	5
Total		INR 6-7 Cr

Revenues - Proposed projects

(Note: The following considerations are applicable to the below mentioned revenue modules.

- The estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)
 1. **Event space** – Significant revenue have been estimated from ~100 events per annum.
 2. **F&B** – Revenue from restaurant.

The total revenues from the project are estimated as INR 3-3.5 Cr per annum.

Assessment

Considering typical benchmarks for such projects, the profit margin in any year is expected to be ~30% of gross revenue.

Hence, on a 15–20-year concession, the project pre-tax IRR is estimated as ~19-20% which is sufficient for making the project viable on PPP basis.

Phasing & Funding Agencies

The project may be given out on PPP basis where the private player would be required to refurbishment, upgrade and expand the project facilities, operate, and maintain for 30 years tenure.

The project is considered viable and will yield sufficient returns to the private player, resulting in sufficient revenue sharing with the TTDC.

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 30,000¹ man-days of construction labour (*spread across 1-2 years of implementation*)

During Operations: Jobs created during operations will entail:

- Entire O&M team (including housekeeping, admin, sales, booking, catering, civil etc.) = 13 man – days per day²
- Retail and F&B spaces = 6 man-days per day³

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 75,100 man - days.

Increased tourist footfall

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%

- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and suppliers will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

¹ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
 - Assumed cost of labour assumed for computation = INR 700 per day

- Cumulative labour man-days = 30% * CAPEX / 700

² As per World Bank thumb rule, 12 man-days per day for 10-key 4-star hotel and 20 man-days for 10-key 5-star hotel.

As per HVS Report, in typical India hotels, manpower to room ratio for 4/5 star hotels is 2.11-2.70, for mid-market 1.52 and for budget hotels 0.72. We have assumed 2 for our computation.

³ Assuming average 2.5 persons per kiosk / shop

Figure 1-2: Proposed Master Plan – Hotel Tamil Nadu, Melmaruvathur



2. Hotel Tamil Nadu, Kanchipuram

Site Details

District:	Kanchipuram
Name of Site	Hotel Tamil Nadu
Site No:	Site 31A of 295
Site Use:	Hotel, Restaurant & Bar
Category:	F (Hotel)
Location:	12.8380, 79.7122
Land Area:	1.0 acre (Old Block), 1.6 acres (New Block)
Capacity:	22 rooms
Operator:	TTDC
Site Ownership:	TTDC
Occupancy:	33% (FY20)
Site Revenues:	INR 164.29 lakhs (FY20)
Connectivity:	
a. Railway station:	2 km (Kanchipuram)
b. Airport:	60 km (Chennai)
c. Highway:	1 km from SH-38
Trails featured on:	Nil (Hotel)

Hotel Tamil Nadu, Kanchipuram is operational since 1986. It is located in the heart of the temple city and in proximity to major attractions of the city. Apart from its location, the hotel does not stand out amongst other budget hotels. Though the hotel has immense potential to be developed into an upscale hotel due to its locational proximity, its décor is outdated, key features are missing, and the rooms require renovation.

Existing Condition

Location

The hotel is located in eastern Kanchipuram, in close proximity to several prominent tourist landmarks like Muthu Mariammam Kovil Temple, Shri Ekambareswarar Temple, Kailasanathar Temple, Kamakshi Amman Temple etc. Its surroundings have high density residential development and is easily accessible by abutting Railway road.

Existing Layout

The 1.6-acre irregular shaped plot is located on the western side of Railway Road, Shanmuga Nagar. At present there are several building structures located in the south-eastern portion of the Site. The Site is set within open grounds and has a 390 m boundary wall.

Existing Uses

At present, majority of the site is vacant. The built structure occupies a small portion of the site, housing the TTDC restaurant. The Site is being used for various functions, as listed below:

- **Hotel** – This is housed in a G+1 floor building, with the BUA of the Old Block of 1 acre built in 1986 and a New Block of 1.60 acres being built in 1990 as an annexe building.
- **Accommodation** – This consists of 22 keys with the following Room Categories:
 - Double Room (4 no.) – 250 sqft

- Deluxe Room (16 no.) – 450 sqft
- Family 4 Bedroom (1 no.) – 600 sqft
- Family 8 Bedroom (1 no.) – 750 sqft
- **Restaurant/Bar** – The Ground floor houses a 28-seater restaurant and the annexe building houses a 40-seater bar
- **Car Parking** – The Site has a capacity for 20-25 cars.
- A **Government Museum** is located on Site containing mostly a small collection of historic antiquities with tickets.
- **Children’s Playground** on Site.

Operating Performance

- Revenue – INR 1.64 crores (FY20)
- Net Profit – INR 12.84 lakhs (FY20)
- Occupancy - 33% (FY20)
- Pricing - INR 1300 (Non A/c Family Room) - INR 3200 (A/c Family Room)

A broader study of the operating performance of the hotel shows that it has:

- Performance well in the non-room category of revenues like restaurant.
- Performance poorly in room category of revenues (~33% occupancy).
- The room pricing seems reasonable for the budget category.
- EBIDTA (earnings) margin of the hotel seems low (~8%) as compared to market average of 20-30%, largely because of low operational efficiencies.
- The hotel is marginally profit making. Given the location, the hotel has far better potential to act as one of the most preferred stay destinations in Kanchipuram.

Master Planning Considerations

Applicable Regulations

1. **Tamil Nadu Combined Development and Building Rules, 2019** – As per Kanchipuram Master Plan, site lies in a Mixed-use Residential and Heritage Zone. The permissible uses include:

Residential Buildings | Parks, play grounds, farms, gardens | Public Utility Buildings | Swimming Pool, Daily or weekly markets | Hotels, Restaurants, Hostels, Dormitories, Boarding and Lodging houses | Retail establishments and

shops, Departmental stores, Taxi stands and car parking multi-level parking | Religious buildings.

2. **Height Restrictions** - Heritage Zone height restrictions of ~13 m. (roughly up to 4 storeys) are applicable for the developments around the site.

Key Sensitivities

The site does not hold any environment or social sensitivities to address in Master Planning.

Key Issues to Address

Baseline Stage are summarised below along the 6A Framework:

1. **Attraction** – There is nothing within the site that adds to its attraction value from a tourism perspective. The Site’s attraction value would be derived from its location and its proximity to the following:
 - **Temples** – With Kanchipuram being a Holy City, there are 9 main temples that have been identified as Tourist Sites that are located between >3 km to <1 km away from the Site.
 - **Nathapettai Lake** – Famous for its seasonal bird watching and sightseeing, Nathapettai Lake is spread over 250 hectares and is located 2.5 km to the east of the Site.
2. **Accessibility & Mobility** – The site enjoys easy access from all major locations in Kanchipuram and transport hubs of Chennai city, via all major modes such as buses (public and private), trains, autos, and taxis / private cars. No interventions are required to augment accessibility at the site.

Parking – The Site has a designated parking area with about 20-25 car spaces. Vehicles are parked on paved areas in the foreground of the building structure.
3. **Amenities** – The hotel facilities are worn out and needs to be upgraded. The surroundings of the Site have good level of amenities with paved footpaths, adequate streetlights, and public toilets at walking distance.
 - The interiors lack modernised and aesthetic design.
 - The restaurant capacity is limited.

- Only the regular portions of the Site are frequently maintained and landscaped. Rest of the site is left unattended.

4. Awareness – With Kanchipuram being a Holy City and the Site being located in proximity to many of these temples as well as railway stations, many visitors and pilgrims are aware of the Hotel. But the hotel lacks up to date social media marketing platforms.

5. Activities – The only activities currently provided at the site are that of a Children’s Playground and a Government Museum showcasing mostly a small selection of historical antiquities. The government museum is not well kept and does not attract much tourists as it has non-immersive exhibits.

6. Accommodation – Being in Kanchipuram, the site enjoys good supply and variety of accommodation options within 5 km. But there are no other accommodation facilities in walking distance of the Hotel because it lies largely within residential community.

Market Offerings

The hotel has the following room categories -

Category	Number of rooms	Tariff (excl. tax) *
Double Room	4	INR 1600
Deluxe Room	16	INR 2400
Family 4 Bedroom	1	INR 1300
Family 8 Bedroom	1	INR 3200

*With complimentary breakfast

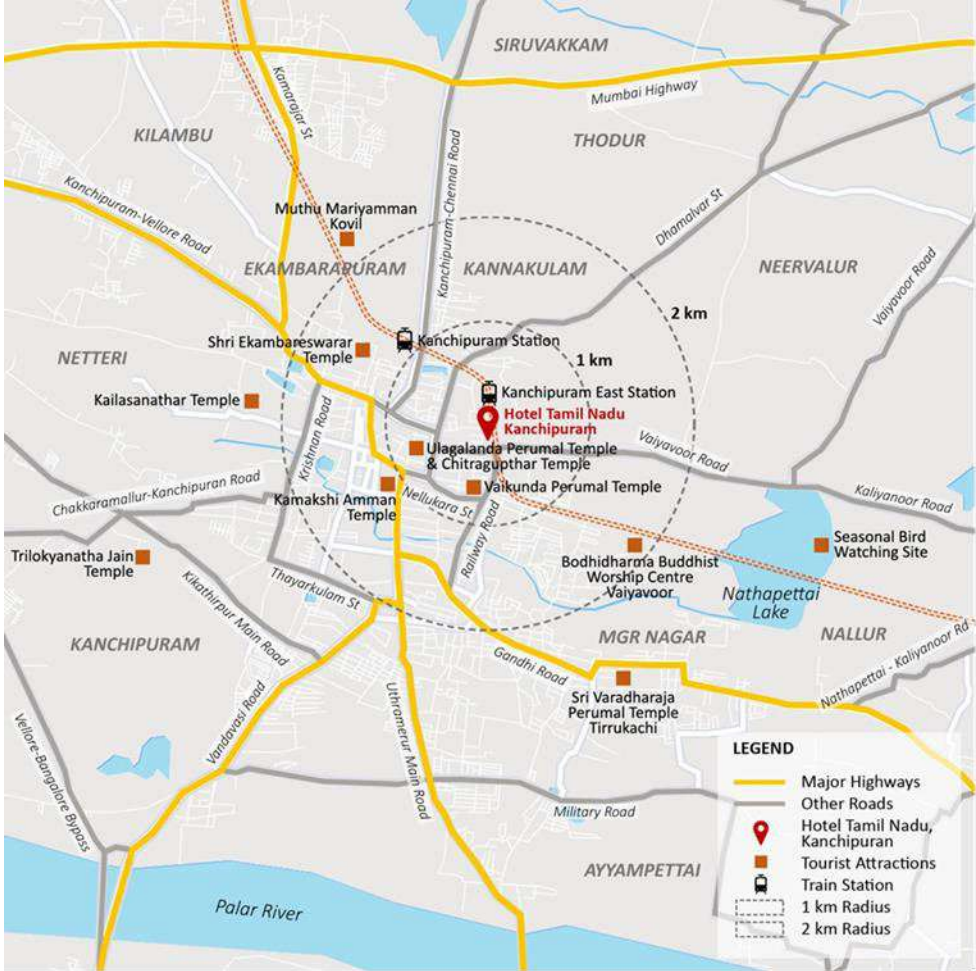
- Discounts – 10%-25% (for group bookings)
- Discounts – 20% (senior citizens)

The tariffs for hotels within a ~5 km range are given below.

Hotel/ Resort	Category	Tariff (INR) ⁴
Hotel SSK Grand	3	3000
Regency by GRT Hotel	3	3500
Pine Tree Hotel	Budget	2500
Nitheesh Residency	Budget	2000
Hotel Ramco Regency	Budget	1700

⁴ For standard double AC room

Figure 2-1: Location and Existing Layout



Site Pictures





Figure 2-2: Land Uses Regulation Zone at the Site



Vision for the Site

- Hotel Tamil Nadu, Kanchipuram is strategically located within walking distance of some of the main Temples in Kanchipuram. The current hotel with its old fashioned layout, décor, architecture, lack of amenities and underutilization of the plot, doesn't do justice to the Site's strategic location and large grounds with beautiful old trees and is a missed opportunity to catch the International Tourist Market.
- Considering the above, the hotel should be redeveloped into an Upscale (4 Star equivalent) hotel, with the amenities that go with such a facility- like a large swimming pool, well maintained gardens, spa etc. Currently the premium hotel market is underserved in Kanchipuram, leaving almost all High Value Tourists with no other option than to come to Kanchipuram only as a day trip from Chennai or Mamallapuram. However, since the Temples in Kanchipuram are closed between 12 to 4 pm, this is very inconvenient for Tourists travelling a few hours in the morning and afternoon, leaving all Tourists with nowhere to go during most of the afternoon. A 4 Star hotel in Kanchipuram would solve this problem, with Tourists being able to return to their hotel for a rest between 12 to 4 pm.
- The Government Museum currently at the Site is not very visible as located at the back of the TTDC hotel, therefore doesn't get much footfall. A government museum at this location will not be compatible with a modern upscale hotel. Therefore, it is proposed, the collection in the museum is shifted to one of the Interpretation Centres that are planned at Ekambareswarar Temple and Varadharaja Perumal Temple in the city. Here the collection will be guaranteed to be seen by many visitors.
- **Target Visitor** – Given the reasons as stated above, the Site has ample potential to become a preferred hotel for the higher segment of the domestic and foreign tourists market. To entice this part of the Tourist market to travel to Kanchipuram despite its inconvenient temple opening hours, Kanchipuram will need to have at least one good premium hotel accommodation with the required amenities (swimming pool, spa facilities) to relax during the day.

Proposed Master Plan

Masterplan Concept

- Considering the huge (commercial) potential of the Site as an Upscale (4-star equivalent) hotel destination, all the old and out-dated hotel buildings are to be demolished to make way for a much more suitable hotel layout, that makes the most of the orientation towards the ample green cover of large mature trees at the heart of the Site.
- The hotel design is recommended to follow a contemporary Modern Design style that is popular with international travellers. Use of a modern design vocabulary with a strong focus on sustainability, offering a unique Sense-Of-Place, by using traditional architectural elements in the layout and design of the hotel.
- The modern traveller expects to be offered at their hotel, a unique and relaxing experience that allows them to spend as much time outdoors as possible, with a focus on indoor spaces which seamlessly flow into ample outdoor rooms and covered spaces. Comprehensive landscaping is therefore an important part of the redevelopment of the Site into a hotel of International Standards. Extensive landscaping that would be required will focus on planting of trees, shrubs and grasses, hard landscaping, lighting, and ample seating offering different settings for al-fresco eating areas, play areas, meditation, and yoga gardens etc.

Hard Interventions

- 1. Upscale (4-star equivalent) Hotel** – 3 different wings of 3 floors housing all hotel rooms, making the most of the Site and the ample green cover. The 3 wings are linked with 1 storey corner buildings housing the entrance lobby, reception, back of house facilities, restaurant/bar, etc.

Infrastructure created – 7000 sqm built up area

- 2. Hotel Amenities**

- The Hotel will offer one large restaurant indoor with also an al-fresco dining area outside.
- Most important amenity of the Hotel is a large Swimming Pool
- The hotel will also have a Wellness Centre, with Gym and Spa



Modern Tropical Hotel Design with a focus on seamless indoor-outdoor spaces

3. Landscape Gardens

- The large green cover at the Site should be used to its advantage to create a peaceful garden with a focus on outdoor relaxation, meditation, yoga, wellness
- Pathways allow guests to have peaceful walks in the grounds and small gazebos hidden among the trees as spaces for meditation.

Landscaped area: 4000 sqm soft landscaping and 1000 sqm hard landscaping

Soft Interventions

- 1. Outdoor Fairs & Exhibitions** – The local Corporation or the Tourism Department could organise various events at the hotel lawn – such as themed bazaars, small-scale concerts, bonfire, fairs, community events etc. This would help to popularise the hotel to other segments of visitors.
- 2. Promotion** – The Tourism Department must promote and advertise the hotel's attributes and luxury facilities at various tourist destinations in Kanchipuram, Chennai and Mamallapuram.
- 3. EV & EC Stop** – The proposed 4-star hotel is a part of the holistic temple trail proposed in the Kanchipuram city connecting all important religious destinations. Therefore, an EV & EC Shuttle service stop is proposed at the site near the entrance. This shall facilitate and ease movement across all sites for the tourists avoiding traffic jams near temples.

Trunk Infrastructure

As the Site has excellent connectivity, no trunk infrastructure interventions are required.

Please refer to Design Guidelines mentioned in Glossary of Interventions regarding amenities and urban design.



Use of the large green cover at the Site to create a peaceful garden with focus on relaxation, meditation, yoga, wellness

Projects Identified

#	Project Component	Scale
1	Upscale (4 Star Equivalent) Hotel- Main Building + Resort Amenities	7000 sqm BUA
2	Landscape Garden <ul style="list-style-type: none"> ● Soft Landscaping ● Hard Landscaping 	4000 sqm 1000 sqm
3	EV stop	1
4	EC stop	1
Total		

Feasibility Assessment

The following considerations have been accounted for the cost projections of proposed interventions at this site:

- Feasibility of the cashflows projected here are accounted only for the additional components master planned.
- The current operating & maintenance cost of the site have not been considered.

Capital Expenditures

The cost of the different project components proposed in the masterplan is calculated basis the current market price considering the appropriate escalations.

#	Project Component	Cost (INR Lakhs)
1	Upscale (4 Star Equivalent) Hotel- Main Building + Resort Amenities	6,175
2	Landscape Garden <ul style="list-style-type: none"> ● Soft Landscaping ● Hard Landscaping 	3.5 7.0
3	EV stop	20
4	EC stop	0.20
Total		~ INR 60 Cr.

Revenues - Proposed projects

(Note: The following considerations are applicable to the below mentioned revenue modules.

1. *The revenues considered here are in addition to all the existing revenue currently accrued.*
2. *The estimated revenue projections are pegged at Y5 (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)*

1. **Hotel** – Significant revenue envisaged with proposed hotel operating at 60% occupancy
2. **EV Stop** – Revenues also envisaged from operations of EV stop proposed at the site.

The total revenues to the site from the proposed capital projects is projected at an estimated **INR 2.85 CR at Y5 with majority of the revenue realised from the Hotel operations.**

Phasing & Funding Agencies

The development of the projects is to be taken up by TTDC and the implementation of these can be carried out as follows:

1. The implementation of the Technology package (i.e., Smart-App integrations, Virtual guides, NFC tags, etc.) at the site would be taken up by the SPV provisioned by the tourism department.
2. **EV stops** can be given on lease/licence basis to the private operator
3. **Hotel** can be given on PPP model.

From implementation perspective, the project can be given out on PPP which requires the private operator to design, build, furnish, operate, and transfer It to the authority after a concession period of 30 years. Further, the detailed feasibility needs to be conducted to understand the suitable implementation models.

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 2.65L⁵ man-days of construction labour (spread across 1-3 years of implementation)

During Operations: Jobs created during operations will entail:

- Entire O&M team (including housekeeping, admin, sales, booking, catering, civil etc.) = 127 man – days per day⁶

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 6.65L man - days.

Increased tourist footfall

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%

⁵ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day

- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

○ Assumed cost of labour assumed for computation = INR 700 per day

- Cumulative labour man-days = 30% * CAPEX / 700

⁶ As per World Bank thumb rule, 12 man-days per day for 10-key 4-star hotel and 20 man-days for 10-key 5-star hotel.

As per HVS Report, in typical India hotels, manpower to room ratio for 4/5 star hotels is 2.11-2.70, for mid-market 1.52 and for budget hotels 0.72. We have assumed 2 for our computation.

Figure 2-3: Proposed Master Plan – Hotel Tamil Nadu, Kanchipuram



- 1 Entrance Lobby
- 2 Main Building with Restaurant/Hotel Rooms
- 3 Hotel Rooms
- 4 Back of House
- 5 Swimming Pool
- 6 Ai Fresco Dining
- 7 Lawn

3. Hotel Tamil Nadu, Sriperumbudur

Site Details

District:	Kanchipuram
Name of Site:	Hotel Tamil Nadu
Site No:	Site 32 of 295
Site Use:	Restaurant
Category:	F (Hotel)
Location:	12.9629, 79.9452
Land Area:	~1.24 acre
Built-up Area:	12,000 sqft
Keys Available:	None
Operator:	Mr. A. Prakash
Site Ownership:	TTDC
Occupancy:	Nil (Non-Operational)
Peak Occupancy:	Nil (Non-Operational)
Site Revenues:	The site is Non-Operational
Connectivity:	
a. Railway station:	30 km (Kanchipuram)
b. Airport:	35 km (Chennai)
c. Highway:	Abutting NH-48
Trails featured on:	Nil (Hotel)

Hotel Tamil Nadu, Sriperumbudur is a franchise-operated restaurant. The restaurant is currently not in operation due to an ongoing legal dispute with TTDC. The restaurant's building has been constructed by the franchisee. It is suitably located near the town's major attractions, abutting the town's major arterial road granting it ample potential to attract tourists coming to Sriperumbudur or passing through the town. Scope of interventions and master planning activities for this site includes the development of a small-scale resort with facilities for events and small conferences, which the other market players in the vicinity are failing to provide.

Existing Condition

Location

The restaurant is located in Sriperumbudur on the corner of NH 48 and Perumalpatti-Kottamedu Road and is close to several tourist landmarks are Sri Ramanujar Temple (~500 m), Rajeev Gandhi Memorial (~500 m), Sriperumbudur Lake (~700 m). The site owing to its location on a highway from Chennai (~40 km) to Kanchipuram (~35 km), is easily accessible from both cities via good quality roads.

Existing Layout

The Site is a 1.24-acre corner plot located on the junction of NH 48 with a good frontage area to the highway and Perumalpatti-Kottamedu Road. The Site itself is accessed from Perumalpatti-Kottamedu Road. At present, there is one main building structure and several smaller ones located within the middle of the Site.

- The hotel (opposite to the entry in the corner edge of the road) - It is a G+1 floor (partial) building; however, the building is being used as a restaurant only.
- The Site has a parking capacity for 4-5 cars adjacent to the restaurant block

Existing Uses

At present, the property is a restaurant, not a hotel. The TTDC owned property was given on a franchise basis to M/S Arya Nivas to operate. Currently, the restaurant is not operational, and the franchise deal is under dispute. A court case is ongoing due

to an illegal sub-license given out by the franchisee, and as a result, the premises are sealed by the court.

Operating Performance

- The site is currently non-operational and therefore no financial statements are available to review the performance of the hotel. However, the site was given out on lease, the terms of which are as follows:
 - **Lease Period** – 2016 – 2021
 - **Initial lease payment** – INR 7 lakhs per annum
 - **Lease escalation** - 5% escalation every year

Master Planning Considerations

Applicable Regulations

1. Tamil Nadu Combined Development and Building Rules, 2019

The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land.

- #### 2. Height Regulations
- AAI height restrictions allow the construction of buildings up to ~115 m. (up to 35 floors) above mean sea level in the temple complex and surrounding areas.

Key Sensitivities

There are no specific environmental/social sensitivities to be addressed at the site.

Key Issues to Address

The key issues at the site identified at the Baseline Stage are summarised below along the 7A Framework:

1. **Attraction** – The site in itself and its current condition have minimal attraction value aesthetically. The Site's attraction value would be derived from its location and its proximity to the following:
 - **Sri Ramanujar Temple** – The largest Hindu temple in the area which is less than 500 m away from the Site to the north.
 - **Rajeev Gandhi Memorial** – A commemorative statue and park to mark the spot where former PM Rajeev Gandhi was assassinated. Located ~400 m away directly to the south of the Site.

- **Sriperumbudur Lake** – A lake located <500 m to the west of the Site.

2. **Accessibility** – The Site enjoys excellent accessibility. The site can be reached from all parts of Sriperumbudur. The Site is on the corner of Highway 57 and the Chennai-Bangalore route of Perumalpatti-Kottamedu Road (4 lanes good quality road) The site directly does not have any rail access; however, it can be reached easily from Chennai (~40 km) and Kanchipuram (~35 km). The nearest air access for both domestic and international flights is at Chennai International Airport (~36 km).

Parking - There are 4-5 designated parking areas. Vehicles are parked on paved areas in the foreground of the building structure. At the moment when the restaurant was functional, the site parking seemed sufficient due to less activity around the site. However, if there are more activity points developed at the site, parking requirements will have to be served separately.

Internal Circulation – The site currently comprises one main building and hence no means of internal circulation are developed. Further, if the parts of the site are developed, there will be a requirement for the means of internal circulation.

3. **Amenities** – The condition of visitor amenities present at the site is poor. Of all the facilities present at the site:
 - The Site has a partial boundary wall abutting the perimeter.
 - Most of the Site is unattended in terms of landscaping and space development.
 - The site also does not have technological provisions such as Wi-Fi, or CCTV (for site monitoring), or online/card payment mechanism.
 - The hotel site does not have accommodation facilities.
 - The condition of cleanliness at the site surrounding is meagre. No measures/efforts have been taken up for the same.
4. **Awareness** – Owing to the site location on the corner of a highway and the prominent Chennai-Bangalore route of Perumalpatti-Kottamedu Road, it is highly visible from passing traffic. The site also has a good road frontage area which is currently underutilized.

5. Activities – The only activity currently provided at the site is that of a restaurant. Most of the land parcel is non utilized and vacant.

6. Accommodation – There are no other accommodation facilities within walking distance of the Site. However, there are several accommodation facilities available in ~1 km to 3 km of the hotel surroundings, ranging from budget lodges to 3 – star hotels within the price range of INR 1000 – INR 2500 per night.

Market Offerings

The hotel site is currently a non-operational restaurant. It does not offer any accommodation facilities.

The tariffs for hotels within a ~5 km range are given below.

Hotel/ Resort	Category	Tariff (INR)
Hotel Stay Inn	3 star	2,000
Sathyam Grand Resort	3 star	3,500
Amritha Residency	4 star	1,200
Hotel Rayyan	2 star	2,000
Sign Inn Apart Hotel	2 star	2,900
Oyo CHN 1632 Annai Arul Residency	3 star	1,500

Figure 3-1: Competitive resorts near the site



Figure 3-2: Location and Existing Layout



Site Pictures



Vision for the Site

- The currently non-operational hotel site is strategically located along the Chennai – Bengaluru Highway. Most areas of the hotel land are vacant, amidst an industrial area of Sriperumbudur. The site is also within 500 m of major tourist spots in Sriperumbudur.
- The hotel is situated amidst mixed markets of a budget to 3-star accommodation options. The potential can be enhanced by leveraging the good road frontage area available and development of other businesses as well as event amenities which can be appreciated by the industrial working population as well as the residents.
- The Site is largely undeveloped and the tourist facilities and attraction points in comparison to the site’s significance are minimal, which makes the site less knowledgeable. The already established restaurant facilities are in poor condition and need an up-gradation. The location of the site can be leveraged and developed into a suburban hotel cum event space.
- **Target Visitor** – Given the reasons stated above, the Site has the potential to become an event destination for the higher segment of the city residents as well as a small conference space which can be utilized by the industrialist in the region.

Proposed Master Plan

Approach to Masterplanning

- The Site area will consist of a large event space, which can be rented out for private events like birthday parties, engagement, receptions, etc. with 2 supporting cottages, 1 refurbished restaurant block, 1 conference block for industrial meetings, and a banquet hall. all along pedestrian-friendly pathways and landscaping, and a pool.
- The approach to the entire development should be done in a Sustainable and Eco-Friendly manner. Part of that vision is the focus on creating a comprehensively master-planned business cum event environment. Restaurant, as it is in the current fashion, can be the face of the site along with

its entry location, while the rest of the amenities can be situated in the later side of the site away from the road’s chaos and noise.

- The design of the entire development is recommended to follow a Modern architectural style that is popular with business travellers as well as develop organically spread event areas, facilitating the utilization of space for events.
- Sriperumbudur is majorly an industrial town with factories of Hyundai, Nissan, BMW, etc. From a tourist’s perspective, the town does not have a lot to offer. Places of interest include the Rajiv Gandhi Memorial and Vallakotai Murugan Temple. However, being situated towards the outer edge of the city it can be designed to provide both meetings as well as event spaces which otherwise lack in the city.

Hard Interventions

- 1. Refurbishment of Hotel Block and Waiting area** – The existing restaurant block from the exterior seems to be in a good condition. However, due to a long non-operational phase, the interiors are degrading. It must be upgraded and modernized. It must have the following facilities:
 - Welcoming Entryway
 - A full-service Bar
 - Dining Area
 - Kitchen and Service Area
 - Concealed and Clean Restrooms

Infrastructure Created: Refurbishment and rearrangement of internal spaces in the Restaurant (~7,600 sqft built-up area)

- 2. Conference / Meeting Room** – Owing to its location in Sriperumbudur, where many industries like Hyundai, BMW, etc. are situated, setting up facilities that none other hotel sites provide can be beneficial.
 - The conference hall thus can be developed with best-in-class technological interventions such as Videoconferencing, room displays, and writing surfaces such as whiteboard or chalkboards.
 - It must be equipped with modern privacy standards and acoustics measures.

Infrastructure Created: ~1200 sqft built-up area



Restaurant Interior Upgradation



Conference Rooms



3. Event Space – A later section of the site can be developed as an open event lawn with two supplementary cottages supporting small events such as birthday parties, wedding receptions, small get-togethers, office parties, etc.

Infrastructure Created: ~600 sqm of landscaped event space

4. Banquet Hall – An additional facility of Banquet halls can encourage an additional revenue generation mechanism. The banquet halls along with conference rooms can support small conference meetings, as a stand-alone identity can support numerous indoor events.

Infrastructure Created: ~1000 sqft of built-up area

5. Landscaped Spaces and Pool – The dispersed components of the hotel site can be connected via pedestrian-friendly pathways and landscaping areas. A part of the landscaping area near the restaurant can also be utilized as a restaurant waiting area with a setup of small children’s play area.

Infrastructure Created: ~75 sqm of Pool, ~0.2 acres of landscaping area connected via ~378 sqm of paved pathways



Outdoor event spaces



Contemporary style banquet halls



Landscape Design

6. Entry and Exit Area Redesigning – An appealing landscaped entry and exit areas create good impressions about the quality of hotel space. It can portray a good image to the potential users of the space and attract higher footfalls to space.

- The entry and exit points can be separated by a landscaping island, which on the inner side can have a small scale water fountain or waterfall, and on the outer side, a backlit site name board for better visibility.
- The entry and exit areas can be developed at the existing entry location right in front of the restaurant block.

Infrastructure Created: Site Entry Landscaping Area, with LED Name boards

7. Site Boundary – The site can be bounded by a heightened wall and a landscaped boundary can be developed on both the side of the wall using creepers which look like the soft site boundary.

Infrastructure Created – a 3 m. high site boundary wall enclosing with creepers.

Soft Interventions

- 1. Private Events** – Private entities can organize various events at the hotel site – such as office parties, wedding reception, birthday parties, private weddings, community events, etc. This would help to popularise the site to other segments of visitors.
- 2. Conference** – The spaces developed within the site can be utilized for industry conferences and meetings.
- 3. Affiliations** – The site can be developed in affiliation to a well-known hotel chain, it can help in the marketing of the site.
- 4. Tie-ups** with event management industries and also major industrial chunks in Sriperumbudur, can popularise the space for events and popularise it among the higher employees of the industry
- 5. Marketing** - Diversify marketing using online platforms and social media.; Approach social media marketing companies.; Create better connections with surrounding manufacturing hubs. (have partnerships with corporates in the area).



Site Entrance Design



Creeper Walls for site boundary

Amenities Plan

- 1. Street lighting** – ~126 m of paved pathway inside the hotel site and ~300 m of the site boundary must be equipped with working streetlights and small foot lamps for visitor safety and facilitation.
- 2. Toilets Block** – ~1 unit of the identified toilet block must be equipped at the site for the site employees
- 3. Parking** – ~540 sqm of the area towards the east of the restaurant can be developed into paved parking spaces for the site visitors. The design of the space can be as per the guidelines specified.

Trunk Infrastructure

The site has good connectivity, no trunk infrastructure interventions are required

Please refer to Design Guidelines in Glossary of Interventions regarding amenities and urban design.

Projects Identified

#	Project Component	Scale
1	Refurbishment of Existing Building	~7,600 sqft
2	Event Space	~600 sqm
3	Conference Hall	~1200 sqft
4	Banquet Hall	~1000 sqft
5	Paved pathways	~378 sqm
6	General Landscaping	~0.2 acres
7	Pool	~75 sqm
8	LED Name Board	~1 unit
9	Entrance Design Area	~40 sqm
10	Site entry/exit gates	~2
11	Site Boundary (with Creepers)	~300 m
12	Rope lighting along the internal paths	~126 m
13	Street Lighting	~300 m
14	Paved Parking Area	~540 sqm
15	Toilet Block	~1 unit

Feasibility Assessment

The following considerations have been accounted for the cost projections of proposed interventions at this site:

- Feasibility of the cashflows projected here are accounted only for the additional components master planned.
- The current operating & maintenance cost of the temple have not been considered.

Capital Expenditures

The cost of the different project components proposed in the masterplan is calculated basis the current market price considering the appropriate escalations.

#	Project Component	Cost (INR Lakhs)
1	Refurbishment of Existing Building	200
2	Event Space	12
3	Conference Hall	60
4	Banquet Hall	25

#	Project Component	Cost (INR Lakhs)
5	Paved pathways	10
6	General Landscaping	20
7	Swimming Pool	10
8	LED Name Board	5
9	Entrance Design Area	10
10	Site entry/exit gates	3
11	Site Boundary (with Creepers)	20
12	Rope lighting along the internal paths	5
13	Street Lighting	5
14	Paved Parking Area	10
15	Toilet Block	20
Total		INR 3.5-4 Cr

Revenues - Proposed projects

(Note: The following considerations are applicable to the below mentioned revenue modules.

- The estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase) and are subject to the current market prices.
 1. **Event space** – Significant revenue have been estimated from ~100 events per annum
 2. **F&B** – Revenue from restaurant
 3. **Conference & Banquet Halls** – Revenue is anticipated from ~100 events per annum organized in conference and banquet hall each.
 4. **Parking** – Another source of revenue from parking tickets

Assessment

Overall, on a 15-year concession, the project is expected to yield a pre-tax project IRR of ~26% which is significantly viable. This will also allow the private player to give revenue share to TTDC.

Phasing & Funding Agencies

The project may be given out on PPP basis where the private player would be required to refurbishment, upgrade the project facilities, operate and maintain for 15-20 years tenure.

The project is considered viable and will yield sufficient returns to the private player, resulting in sufficient revenue sharing with the TTDC.

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 17,150⁷ man-days of construction labour (*spread across 1-2 years of implementation*)

During Operations: Jobs created during operations will entail:

- Entire O&M team (including housekeeping, admin, sales, booking, catering, civil etc.) = 10⁸

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as 42, 900 man - days.

Increased tourist footfall

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and suppliers will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area. Some of which include Thanjavur Gold Painting artisans.

⁷ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day

- Assumed cost of labour assumed for computation = INR 700 per day
 - Cumulative labour man-days = 30% * CAPEX / 700

⁸ As per World Bank thumb rule, 12 man-days per day for 10-key 4-star hotel and 20 man-days for 10-key 5-star hotel.
As per HVS Report, in typical India hotels, manpower to room ratio for 4/5 star hotels is 2.11-2.70, for mid-market 1.52 and for budget hotels 0.72. We have assumed 2 for our computation.

Figure 3-3: Proposed Master Plan – Hotel Tamil Nadu, Sriperumbudur



- | | | | |
|------------------------|--------------------------|----------------------------|---------------------------------|
| 1 Site Entrance | 3 Restaurant | 5 Banquet Hall | 7 Event Space + Cottages |
| 2 Parking Area | 4 Conference Hall | 6 Lawn Waiting Area | |

4. Hotel Tamil Nadu, Thiruthani

Site Details

District:	Tiruvallur
Name of Site:	Hotel Tamil Nadu
Site No:	Site 41 of 295
Site Use:	Restaurant
Category:	F (Hotel)
Location:	13.2096, 79.6000
Land Area:	~2.5 acres (1.2 acres for restaurant)
Built-up Area:	5,000 sqft (old block), 5,201 sq. ft. (Restaurant & Kitchen)
Keys Available:	Nil
Operator:	TTDC
Occupancy:	Undisclosed
Site Ownership:	TTDC
Peak Season:	November
Site Revenues:	INR 71.16 lakhs (FY20)
Connectivity:	
a. Railway station:	4 km (Thiruthani)
b. Airport:	85 km (Chennai)
c. Highway:	Abutting NH-716
Trails featured on:	Nil (Hotel)

Hotel Tamil Nadu, a property operated by TTDC in Thiruthani, is suitably located on the Chennai - Tirupati Highway. Abutting the national highway leading to Tirupati,

the hotel enjoys excellent visibility to the highway travellers. Situated on the outskirts of Thiruthani, the hotel currently is merely a highway pit stop with a small restaurant. The property does not provide any accommodation facilities.

Given its location on the Tirupati highway and its proximity to Thiruthani, the property has high potential to attract larger crowds. Hence, the proposed interventions for the site are carried out considering an overall revamp of the site to attract the un-tapped market. The intervention also considers the hotel's location and its proximity to various temple sites nearby. The intent is to create a prominent wayside facility with quality accommodation facilities, a restaurant, a designated area for highway retail and other activities.

Existing Condition

Location

Hotel Tamil Nadu is easily accessible to nearby cities via NH-716. Located on the outskirts of Thiruthani, the hotel is ~60 km from Tirupati and ~80 km from Chennai. Situated on a busy highway, the hotel lies in proximity to multiple tourist sites like Thiruthani Murugan Temple (~3 km away), Arulmigu Thiruthani Amman Temple (~3 km away), Arulmigu Subramanya Swami Koil (~4 km away), and Nallatur veer Anchaneyar Temple (~7 km away).

Existing Layout

This site spans over an area of ~2.54 acre, abutting the Chennai-Tirupati National Highway on the eastern side. At present, the site consists of only a small restaurant that is accessed by the highway travellers. Additionally, the hotel also has a car parking space at the front of the hotel along with two toilet blocks.

Existing Uses

The TTDC hotel property presently is only being operated as a restaurant. It doesn't provide any accommodation facilities to the travellers. However, the restaurant is occasionally being used as an event space for hosting small events. The restaurant is also used as a pit stop for TTDC tour buses.

The site has the following uses:

- **F&B** - The hotel consists of several independent building structures that are being used as a restaurant & associated facility. There is no provision of an accommodation facility. The restaurant has a capacity of 80 people
- **Parking**- The site has a parking space at the entrance with a capacity of 20 cars.

Operating Performance

- The revenue of the hotel in FY 2020 was ~INR 71.16 lakhs, with a net profit of ~INR 12.61 lakhs. The revenue split is as follows:
 - F&B – 99.4%
 - Others – 0.5%

Master Planning Considerations

Applicable Regulation

1. **Tamil Nadu Combined Development and Building Rules 2019** - The land parcel lies outside the development control area of any master plan.

Key Sensitivities

There are no specific environmental/social sensitivities to be addressed at the site.

Key Issues to Address

The key issues at the site, identified at the Baseline Stage are summarised below along the 6A Framework:

1. **Attraction** – Situated on a popular route to Tirupati, the hotel's locations adds great value to its advantage. The hotel has wide frontage on the Chennai-Tirupati highway and is easily accessible to highway travellers. However, at present the hotel only functions as a small restaurant with lack of amenities and thus receives low footfalls.
2. **Accessibility** – The site is well connected to nearby major cities like Tirupati and Chennai via NH-716. The major modes of transport that the visitors use to access the hotel are TTDC buses, private cars, and hired taxis. The nearest railway station to the site is Ponpadi railway station (~4km), while the nearest airport is Chennai International Airport (~70 km away).

Parking - The site has parking capacity for only 20 cars, which deems to be insufficient. There is no designated parking provided for vehicles and is currently being done on vacant land.

Internal Circulation – There are no dedicated footpaths present on the site.
3. **Amenities** – The present amenities provided at the site are in a need of improvement and proper maintenance:
 - The hotel currently doesn't provide any accommodation facility and is only being used as a restaurant
 - The interiors & fit-outs of the restaurant could use an upgrade
 - The site has parking capacity for only ~20 cars
 - There are only two toilet blocks for the travellers which are not properly maintained
 - The site has no retail shops nearby
 - The areas around the buildings do not have adequately maintained landscapes.
 - Majority of the Site is not walled but is mostly fenced. There is no CCTV surveillance on Site.
4. **Awareness** – The restaurant is well known for the quality of food and beverages it serves to its visitors. Additionally, due to its convenient access on a busy tourist route, it has a lot of potential to attract higher footfalls.
5. **Activities** – The site currently houses only a restaurant block and an unpaved space for parking. There are no other commercial or retail activities located at the site. Additionally, the lack of activities at the site, being in a secluded area, makes the site a bit unsafe especially after sunset.
6. **Accommodation** – The site does not have any onsite accommodation facility. The other accommodation facilities are available in Thiruthani, ~7 km from the site

Market Offerings

The region lacks quality accommodation facilities in the vicinity, especially for high value tourists. Considering the traffic on the route between Chennai and Tirupati and nearby famous temples, there is a need to develop a quality accommodation facility for travellers.

The tariffs for hotels within a ~10 km range are given below.

Hotel/ Resort	Category	Tariff (INR) ⁹
Regency Tiruttani by GRT hotels	3 Star	3300
Sri Lakshmi Resident (OYO)	Budget	1600
Indra Regency	Budget	1900
Hotel Mayura	Budget	1500
PSR Guest House	Budget	1600
SMR Star residency	Budget	900
Wego Garden	Budget	800
Kartikeyan Cottage	Budget	1800
AVS Moahal	Budget	1500

Figure 4-1: Competitive Hotels near the site

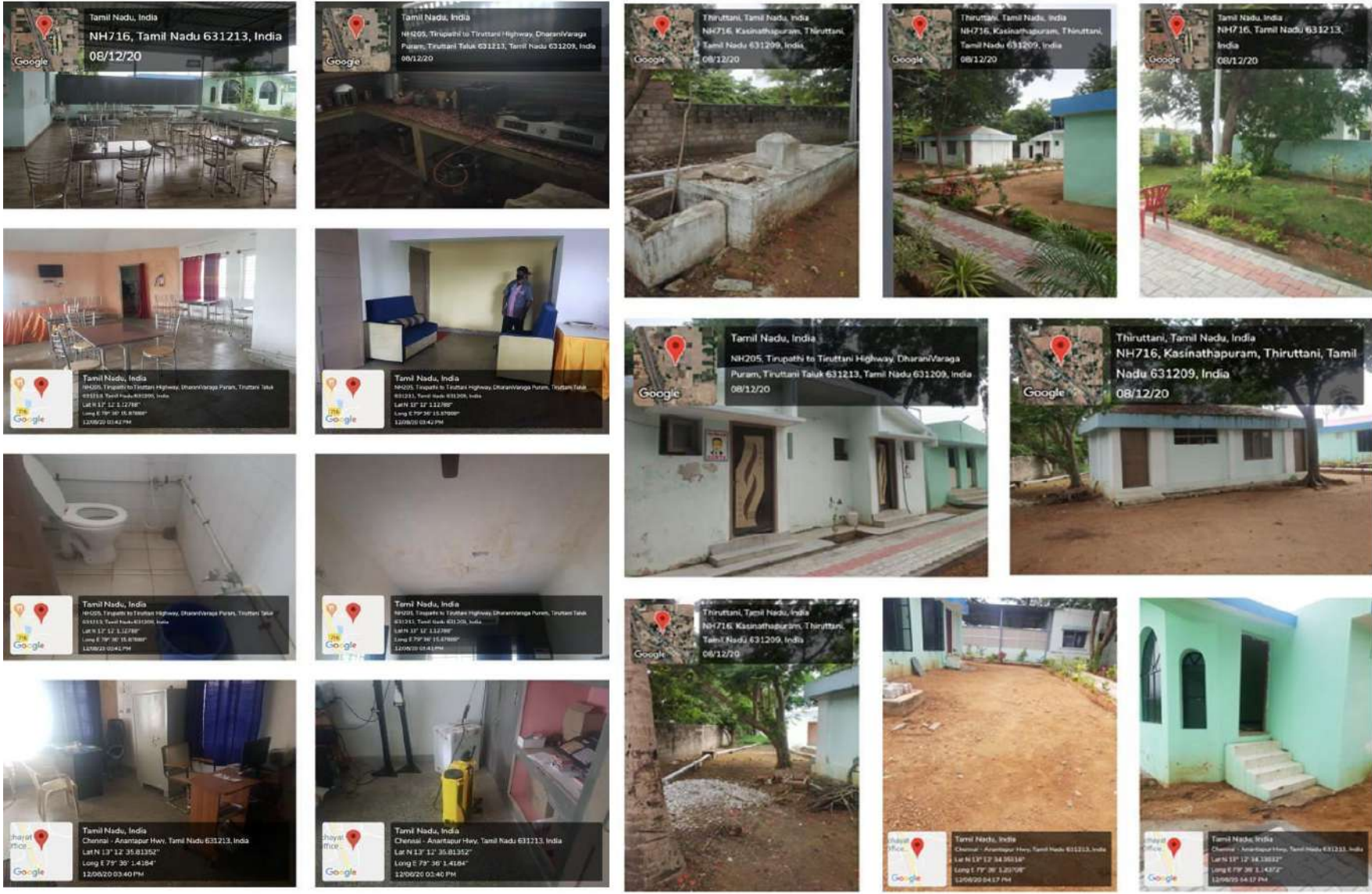


⁹ For standard double AC room

Figure 4-2: Location and Existing Layout



Site Pictures



Vision for the Site

- Hotel Tamil Nadu, Thiruthani is located on the Chennai-Tirupati Highway, and thereby enjoys a good visibility amongst passing travellers. However, currently the hotel is only being operated as a restaurant and has no provision of any accommodation facility. Despite being located on the route to Tirupati, the restaurant doesn't receive very high footfalls due to its unappealing structure, limited offerings & unkept surroundings. Additionally, being situated in a secluded area with lack of any activity, the hotel's surroundings seem very unsafe.
- Considering the high potential of the site because of its prime location and easy access, the hotel is being proposed as a wayside amenity or a Highway Pitstop. The site would be developed as a highway hotel with quality F&B and comfortable accommodation. The site would also have other amenities like highway retail, kids play area, open seating, etc. to encourage travellers to spend more time at the development. With not many good quality way side amenities around the site, the site can be branded as a pilot facility for all ongoing travellers.
- **Target Visitor** – Given the reasons as stated above, the Site has ample potential to become a preferred hotel for:
 - **Highway Users:** The highway travellers form a huge potential target for the proposed wayside amenity.
 - **Domestic tourists:** To entice this part of the tourist market, tourists need to be offered a quality dining experience and a comfortable accommodation with all basic facilities. The retail shops and other facilities would enhance the liveliness of the site.
 - **Locals:** The interest of the locals could be captured by housing landscaped open areas and event spaces along with the serving good quality food.

Proposed Master Plan

Approach to Master Planning

- Considering the vision to develop the site as a prominent wayside amenity that entices the visitors to make a pitstop at the facility, it is recommended that the site be designed in such a way that it offers the quality amenities and high level of services.
- The existing restaurant and other built structures would be demolished to make way for a much more suitable hotel layout with a restaurant and a few retail

shops. The hotel building is recommended to be developed having a façade that opens to a beautiful open space and has minimum visibility of the highway. The ground floor of the hotel block would have a restaurant on one side and a few retail outlets on the other. The 1st and 2nd floor of the hotel above the restaurant would house few keys.

- The site would also have a beautifully designed open plaza that would house open seating areas, kids' play area and retail kiosks
- A portion of the site would be developed as a petrol pump or a fuel station with an office block.

Hard Interventions

1. Main Building – Accommodation, restaurant and Retail shops

The main hotel building (2 story) would house accommodation facilities on the 1st and 2nd floor along with a restaurant and a retail space at the ground floor.

Infrastructure created – Hotel and restaurant block of ~560 sqm built up area, and retail of 350 sqm built up area

2. Open area/Plaza – Outdoor seating, kids play area and retail kiosks

The main hotel building opens up to a beautiful open garden or plaza with proper landscaping and pathways. This area would include an outdoor seating area, a kids' play area and a designated space for a few kiosks. This outdoor space would also display a focal water feature / fountain.

Infrastructure created – ~700 sqm built up area

3. Petrol Pump – Fuel station and office block

A Petrol Pump is proposed at one end of the site which includes a few fuel stations and an office block. This would have direct access from the national highway.

Infrastructure created – Fuel station of ~680 sqm built up area, office block of ~30 sqm built up area and soft landscaping of ~420 sqm



Site Outdoors

Soft Interventions

1. Site maintenance & cleanliness – Most travellers or tourists expect to be offered an easy and comfortable stay/visit at a hotel facility, especially at a highway wayside facility. Hence, the premise of the hotel has to be well maintained and cleaned regularly to provide the experience the travellers look for.

2. Private Events – Small gatherings or private events can be organized at the hotel site – such as birthday parties, family gathering, social events etc. This would help to popularise the site to other segments of visitors.



Outdoor event spaces

Amenities Plan

- 1. Signages (Package 1)** – Package 1 signage is proposed to feature in Tamil, English and Hindi. Directional signage should be installed.
- 2. Parking** – A designated parking space will be developed for accommodating vehicles, with good lighting and pavements. This will be located near the site entrance, with a holding capacity of ~20 cars and 6 buses.

3. **Landscaping** – Proper landscaping is required to create comfortable spaces, and to enhance visual perception. Introducing a new landscape within the hotel facility should put greater emphasis on the use of local flora, and should, as far as possible, be the least maintenance-oriented and be self-sustainable
4. **Safety & Security** – Fire Extinguishers, Sand Buckets, Emergency Exits, etc, should be planned and installed at the site, with a monitoring control room within the main building.
5. **Lighting** – The entire Site will need a comprehensive Lighting Plan, with an emphasis on different types of lighting and levels of brightness befitting the variety in spaces at the hotel (car parks, vehicular road, pedestrian pathways, gardens, petrol pump etc.).
6. **Other Amenities** – Amenities like toilets and drinking water stations would be planned and developed as a part of the main hotel building.

Trunk Infrastructure

As the Site has excellent connectivity, no trunk infrastructure interventions are required.

Please refer to Design Guidelines mentioned in Glossary of Interventions regarding amenities and urban design.

Projects Identified

#	Project Component	Scale
1	Restaurant	~550 sqm
2	Hotel	25 keys
3	Retail	~350 sqm
4	Parking	~850 sqm
5	Landscaping (Way Side Hotel)	~700 sqm
6	Fuel Station	~680 sqm
7	Landscaping (Fuel Station)	~420 sqm
8	Signage	Package 1

Feasibility Assessment

The following considerations have been accounted for the cost projections of proposed interventions at this site:

- Feasibility of the cashflows projected here are accounted only for the additional components master planned.
- The current operating & maintenance cost of the Site has not been considered.

Capital Expenditures

The cost of the different project components proposed in the masterplan is calculated basis the current market price considering the appropriate escalations.

#	Project Component	Cost (INR Lakhs)
1	Restaurant	250
2	Hotel	800
3	Retail	70
4	Parking	15
5	Open area/Plaza – Outdoor seating, kids play area and retail kiosks	10
6	Fuel Station with Office	50
7	Signage	1
Total		INR 12-15 Cr

Revenues - Proposed projects

(Note: The following considerations are applicable to the below mentioned revenue modules.

- *The revenues considered here are in addition to all the existing revenue currently accrued by the Site.*
- *The estimated revenue projections are pegged at Y5 (exit of short-term Y0-Y5 phase) and are subject to the current market prices.*

1. **Restaurant** – The restaurant would serve tourists as well as travellers who stop at Project Site during their journeys and would generate revenue from sale of F&B.

2. **Hotel** – A 25 key hotel would generate healthy revenue stream from its hospitality services.
3. **Retail** – A small retail area of 350 sqm is also envisaged at the Site which would generate rental revenues.
4. **Parking** – The parking facility would be pay-to-use and generate minor revenue from sale of parking tickets.
5. **Fuel Station** – The fuel station would complete the set of revenue-generating interventions.

Assessment

Given the strategic location of the site, the project is deemed to be viable and commercially feasible on PPP mode, where revenue sharing with the government may be possible.

Phasing & Funding Agencies

The development of the projects is recommended to be taken up on PPP model based on NHAI's wayside amenities model.

The entire Project Site can be given out to a private party and the Authority would earn revenues based on various models such as lease rental, concession fees, revenue share and/or a mix of these. The specific model can be selected based on a detailed feasibility of the Project.

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 64,300¹⁰ man-days of construction labour (*spread across 1-2 years of implementation*)

During Operations: Jobs created during operations will entail:

- Entire O&M team (including housekeeping, admin, sales, booking, catering, civil etc.) = 18 man – days per day¹¹
- Retail and F&B spaces = 14 man-days per day¹²

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 1.60L man - days.

Increased tourist footfall

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Cumulative labour man-days = 30% * CAPEX / 700

¹⁰ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
 - Assumed cost of labour assumed for computation = INR 700 per day

¹¹ As per World Bank thumb rule, 12 man-days per day for 10-key 4-star hotel and 20 man-days for 10-key 5-star hotel.

As per HVS Report, in typical India hotels, manpower to room ratio for 4/5 star hotels is 2.11-2.70, for mid-market 1.52 and for budget hotels 0.72. We have assumed 2 for our computation.

¹² Assuming average 2.5 persons per kiosk / shop

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

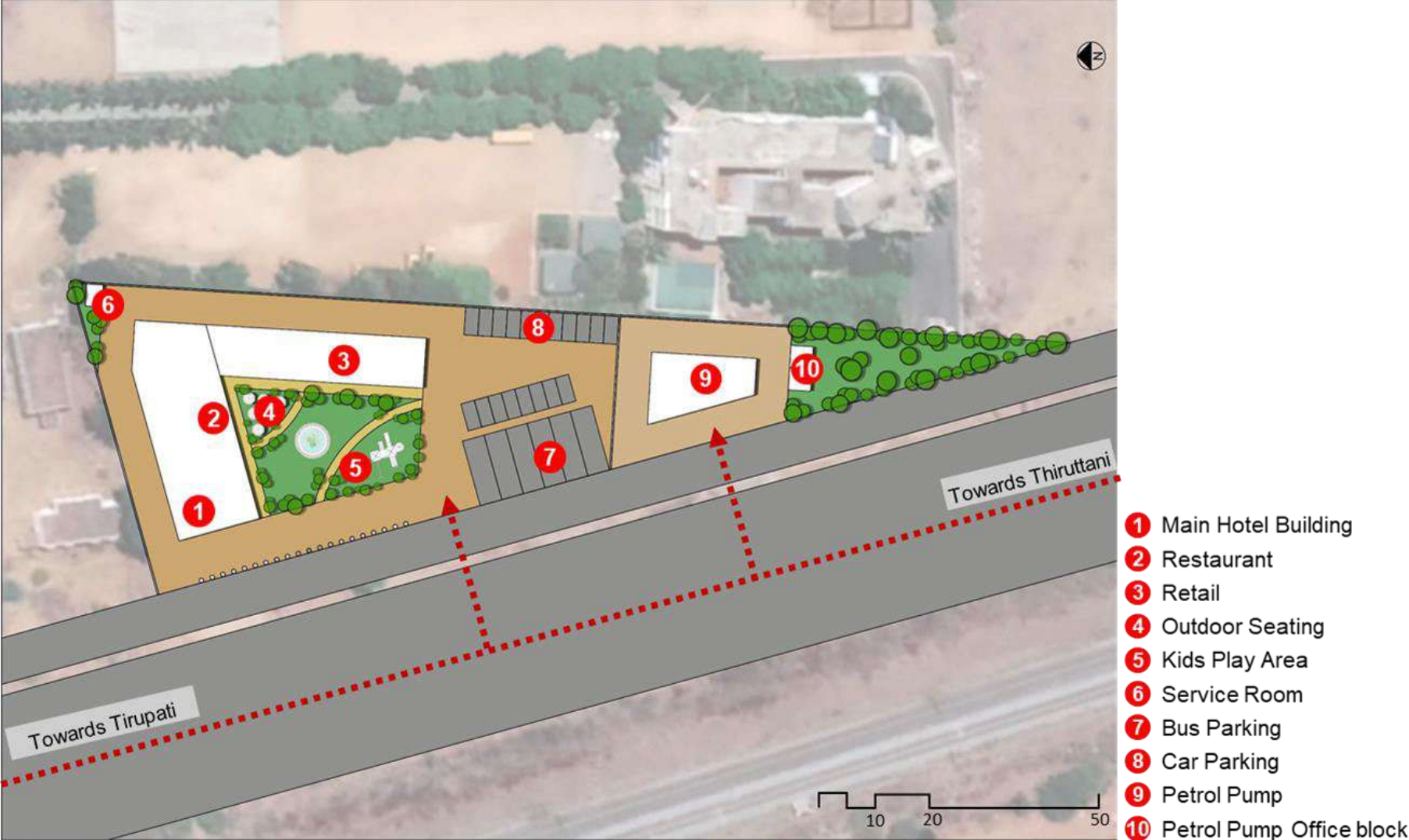
This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and suppliers will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

Figure 4-3: Proposed Master Plan – Hotel Tamil Nadu, Thiruthani



5. Hotel Tamil Nadu, Nagapattinam

Site Details

District:	Nagapattinam
Name of Site	Hotel Tamil Nadu
Site No:	Site 76 of 295
Site Use:	Hotel
Category:	F (Hotel)
Location:	10.7594, 79.8485
Land Area:	1.28 acres
Capacity:	18 rooms
Operator:	TTDC
Site Ownership:	TTDC
Occupancy:	NA
Site Revenues:	NA
Connectivity:	
a. Railway station:	300 m (Nagapattinam)
b. Airport:	124 km (Tiruchirappalli)
c. Highway:	NH 83
Trails featured on:	Nil (Hotel)

Hotel Tamil Nadu, Nagapattinam is located about 100 meters away from the Nagapattinam junction railway station. The hotel is in a prime location with all the transport amenities and a wide range of retail shops in its surroundings. It also overlooks the sea and has a park adjacent to it. The hotel has been non-functional since 2012 leading to structural deterioration. Major renovation/construction is required to resurrect the hotel to functional capacity, or the land can also be handed over for logistics.

Existing Condition

Location

The Site is located to the east of the Nagapattinam railway station on Akkaraipettai Poigainallur Road. The hotel enjoys great accessibility to the nearby tourist places and is located well within the town limits. It is also in close proximity to several prominent tourist landmarks like Soundararaja Perumal Temple (~1 km), Nagapattinam beach (~6 km), Tsunami Memorial (~6 km) and Nagore Sharif Dargah Khadar Vali (~9 km).

Existing Layout

The Site is a 1.28-acre plot located on the southern side of Chennai-Nagapattinam highway. The Site is accessed from Akkaraipettai Poigainallur road. At present there is one main building structure with G+2 floors located in the middle of the Site, and the other structures within the site include:

- Main Building (1130 sqm)
- Generator rooms
- Staff Room and other ancillary structures
- Compound walls cover all 4 sides.

The structures collectively occupy an area of 0.14 acre and the remainder 1.14 acre is vacant.

Existing Uses

At present, the majority of the Site is vacant, and the existing building is non-functional and in deteriorated condition. The property is an abandoned building requiring renovation. It currently hosts a security guard. The Site was once used for the following:

- **Hotel** – The building is a 3 storied structure with an octagonal-shaped atrium in the centre opening to the sky in the roof.
- **Accommodation** – The hotel had 18 keys when it was operational till the year 2012.
- **Restaurant/Bar** – The hotel used to house a 40-seater bar.
- **Conference hall** – The hotel also had a mini conference hall with 30 pax.
- **Car Parking** – The Site has a parking capacity of 10 cars within its compound.

Operating Performance

Financial performance – Financial information is not available since the hotel has not been operational since 2012.

Master Planning Considerations

Applicable Regulations

1. Tamil Nadu Combined Development and Building Rules, 2019 – As per Nagapattinam Master Plan, the site area lies in a Commercial zone. The permissible uses include:

Public/ Semi-Public Use – Art Galleries | Museums | Public Libraries Auditoriums & Theatres | Exhibitions | Fairs & Festive grounds | Educational Institutions | Govt./Quasi Govt./Private Offices and Institutions | Social and Cultural Institutions | Religious buildings | Health institutions | Public & Semi-public open spaces | Public utilities | Residential and commercial spaces | Bus and Railway stations | Parking lots including multilevel parking | Cinema theatres | Kalyana mandapams | Community/Assembly halls | Waterfront Developments | Circuses/Fairs. Etc

2. CRZ Regulations - As per CZMP Map, the site lies in CRZ-II. These are ecologically sensitive areas In CRZ - II region.

- a. CRZ II Region – Construction of buildings on the landward side of the existing road, or on the landward side of existing authorized fixed structures | desalination plants | reconstruction of authorized buildings without a change in land-use | temporary tourism facilities, etc.
- b. The new CRZ 2018 de-freezes the FSI/FAR (frozen in 2011 regulations) and permits FSI for construction projects as prevailing on the date of this Notification, amendable with relevant permissions and approvals.

Key Sensitivities

- 1. Non-Competitive opportunity** – As the highway runs between the hotel site and city, it reduces the site visibility to local and regional tourists.
- 2. Access** – The access to the site is narrow and congested with heavy good and freight movement happening at the port.
- 3. Goods & freight movement** – Due to proximity of the port and harbour area, there is excessive goods & freight movement around the site, discouraging tourist to stay at this location.
- 4. Height restrictions** – As the site lies within CRZ zone, any sea facing structure is difficult to be constructed.
- 5. Lease agreement** – The Land area on which the Hotel is built is registered to the Railways department and the power of land usage is granted to TTDC. The construction of the site concluded in 1989. The hotel was tendered out for to the following proprietors:
 - Mr. Shakeel Ameen from 22nd September 1989 to 4th August 2009
 - Mr. Muthu Krishnan from 4th August 2009 to 26th March 2012
 - Control taken over by TTDC from 26th March, 2012. TTDC plans to have this hotel franchised.

The change in proprietorships was triggered by payment defaults by both the above-mentioned proprietors. TTDC had tried to tender out the Hotel Tamil Nadu, Nagapattinam franchise multiple times but there were no takers because of the condition of the building.

Therefore, for any kind of development and renovation, the lease agreement will be studied in detail.

Key Issues to Address

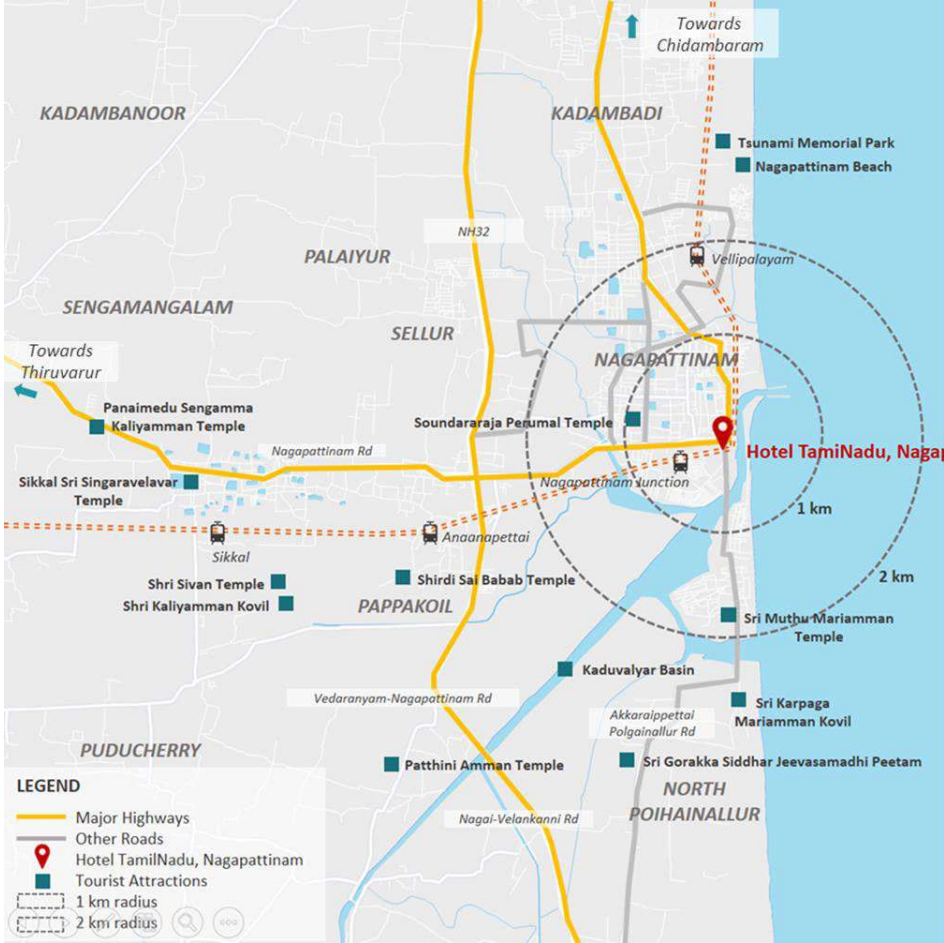
Baseline Stage are summarised below along the 6A Framework:

1. **Attraction** – The Hotel is within the Nagapattinam town with easy accessibility to the nearby tourist sites. Its attraction value would be derived from its location and its proximity to the sea. The site is adjacent to a port with Sowriraja Perumal Temple, Nagore Dargah, Our Lady of Lourdes Church, Nagapattinam beach tourist sites
2. **Accessibility** – The site enjoys excellent connectivity as located along the Chennai-Nagapattinam Highway. It is a 2-lane wide road with auto, taxis, and bus stops within walking distance. The Hotel is in walking distance from the Nagapattinam Junction railway station – 300 m, which provides excellent connectivity to various important cities of Tamil Nadu.
3. **Amenities** – The hotel has been non-operational since 2012. The amenities around the site are average with provision of few basic services like, pharmacies, clinics, petrol, and police stations. There are no paved footpaths and shaded areas at present outside the hotel and also, since it is located very close to the Nagapattinam International harbour, the trucks waiting for shipments are parked out on the streets adjoining the hotel for long period of time.
4. **Awareness** – The hotel used to receive a good number of tourists during the 90's and the early 2000's, because Nagapattinam Junction railway station was the last point of railway access to Velankanni. People visiting Velankanni used to make Nagapattinam as their base and visit the nearby places of worship by other means of transport and return back to Nagapattinam. With the opening of Velankanni railway station the visitors shifted their base to the hotels in and around Velankanni.
5. **Activities** – The activities that was previously provided at the Hotel were that of a bar, accommodation and a park behind the hotel which is also currently closed. Immediately around the Site, close to the Nagapattinam junction railway station on the Chennai-Nagapattinam highway there is a wide range of food outlets

including food stalls, restaurants with indoor/outdoor seating, as well as markets and retail shops.

6. **Accommodation** – There are multiple other hotels in close proximity to the railway station with an average tariff - (Double Bed with AC – 1500-2000).

Figure 5-1: Location and Existing Layout



Legends:
 1 – Hotel building
 2 – Entrance

Site Pictures

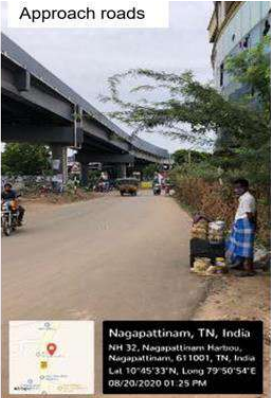
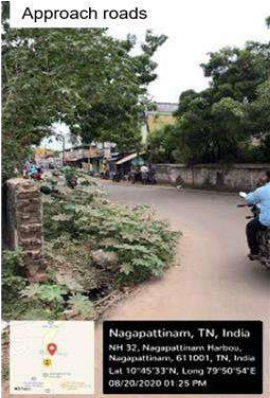
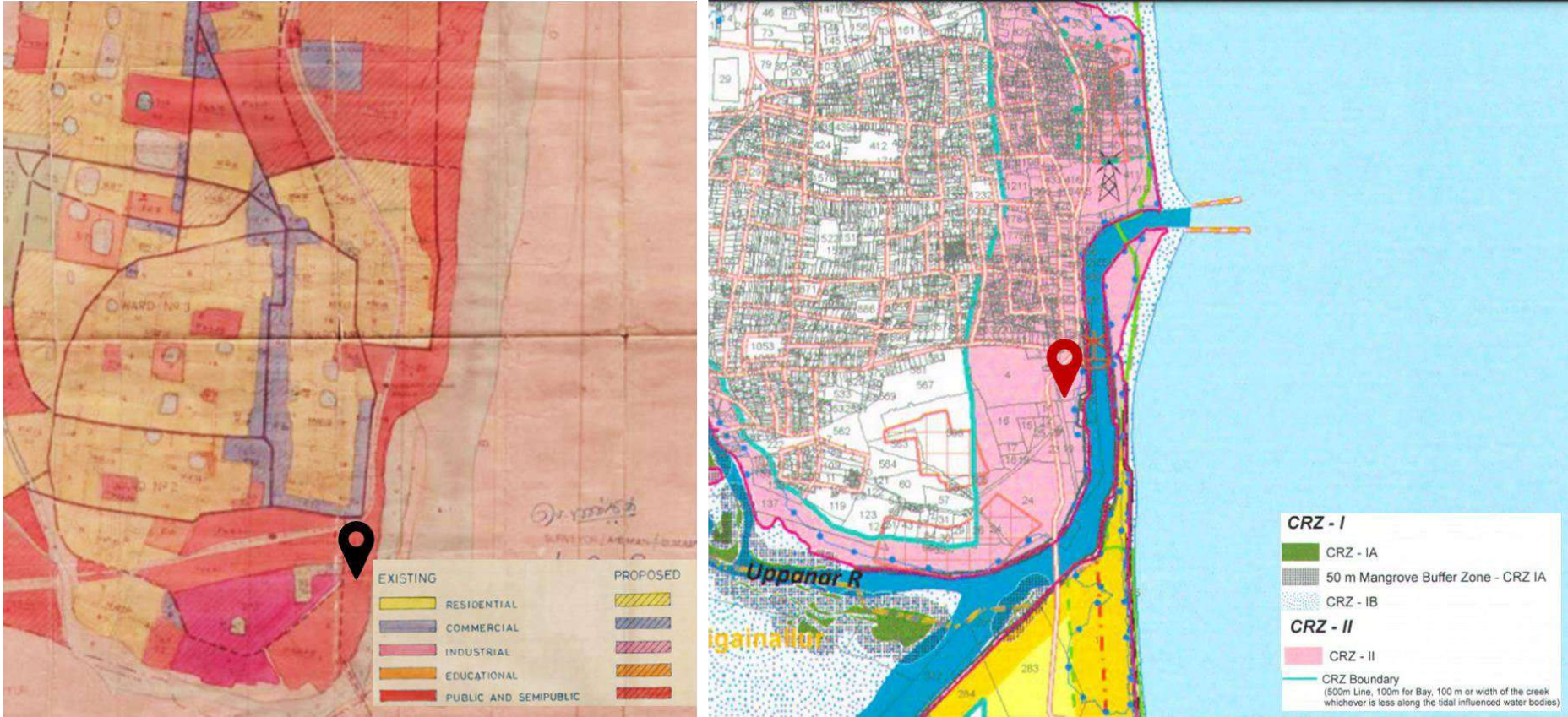


Figure 5-2: Land-use and Coastal Regulations for the site



Vision for the Site

- Hotel Tamil Nadu, Nagapattinam is located near the shipment harbour. It is majorly flocked by ship labourers who use the site to idle their time. Moreover, the location of the hotel is liable to few sensitivities and limitations like adjacent to highway, much reducing the visibility, heavy good and freight movement around the site etc which have to be taken into consideration.
- Considering the locational conditions and key sensitivities, it is viable to either create a small accommodation facility for business events or use the space as a logistics hub.
- **Target Visitor** – Given the reasons as stated above, the Site has limited potential to become a preferred hotel for the regional tourists visiting the tourist sites of the city due to lack of visibility, but it has ample potential to be accepted by the ship users and business visitors for conducting events and conferences.

Proposed Master Plan

Master Plan Concept

As the site is currently abandoned, the existing building will be demolished, and fresh construction will take place. Considering the various sensitivities associated with the site, two feasible options are proposed.

Option 1 - It details on developing a budget hotel on site as per the ongoing existing use. This hotel will be a business hotel catering to visitors using the adjacent port for meetings and conferences with minimal rooms. The hotel will have a developed restaurant block that is projected to receive high footfall based on the extensive usage of port area by cruise and ship drivers. Though the hotel will not be able to leverage the advantages of the site like development of a high-rise sea view hotel due to height restrictions around.

Option 2 – This option is more viable and beneficial from revenue generation aspects. As the land is adjacent to the port area of Nagapattinam, it has high good and freight movement activities around. Therefore, the site can be handed over to any third-party logistics company for shipment purposes. The site can have a developed warehouse, shed or shipment yard supporting the use. Prior to the transfer of land on lease to any party, the existing lease conditions with the railway authorities will be studied and analysed in detail.

The interventions required for **option 1** are as detailed below –

Hard Interventions

1. Hotel Block

The existing hotel block will be demolished, and a small 5 room rest house will be developed at site. This will be a G only structure with both AC and Non-AC rooms. The rooms will be connected through a corridor and have modern interiors and fitouts.

Infrastructure Created: ~240 sqm BUA.

2. New Restaurant block

A new restaurant block near the entrance of the site abutting the highway will be developed. This will provide larger visibility to the restaurant area attracting higher footfall from the local people. It will be an important source of revenue for the hotel; therefore, the restaurant block will be developed with modern furniture and fit outs with a small outdoor seating area. The menu spread of the restaurant will also be expanded with addition of various vegetarian cuisines.

Infrastructure Created:

- *Restaurant block – 65 sqm (30 pax)*

3. Development of an Event Hall – As the site will be taken up for business purposes by people visiting the port, a medium event hall with open grounds will be a feasible development. The hall will be used for conducting events, fairs, and necessary displays. This will also pull in higher footfall and revenue for the site and engage the local community. The front lawn can also be included with the hall for bigger events. It will be a ground only structure, with a slanted roof depicting the local style of construction.

Infrastructure Created: ~200 sqm building.

4. Open grounds – Owing to the site available land, open ground with soft landscaping can be developed with adequate lighting around. This can be complimented with paved pathways for easy circulation. The garden can also be combined with the event hall for large gatherings and expos.

Infrastructure Created: ~1700 sqm of garden + 550 sqm of general landscaping.

5. **Parking** – A designated parking space must be developed for accommodating maximum number of vehicles with good lighting and pavement. This will be behind the proposed hotel block for 10 cars.
Infrastructure Created: ~10 ECS.
6. **Paved Walkway** – A paved footpath of 3m width will developed around the proposed buildings for ease of movement of guests and access to the blocks. This will be developed of paver stones enhancing and uplifting the entire ambience of the site and segregating built up and softscape at site.
Infrastructure Created: ~160 m in length and 3 m in width.

Soft Interventions

1. **Private Events** – Small gatherings or private events can be organized at the site – such as functions, exhibitions, fairs & expos. This would help to popularise the site to other segments of visitors and develop it as a preferred choice for visitors coming down to the port area.
2. **Promotion** – The hotel must be popularized and promoted to the locals and port visitors.
 - This can be done through diversifying marketing tactics using online platforms and social media.
 - Creating connections with tour group companies and port authorities in the town by providing incentives to stay overnight.
 - Tie-ups with event management companies, can popularise the space for events and popularise it among the higher employees of the industry.

Trunk Infrastructure

As the Site has excellent connectivity, no trunk infrastructure interventions are required.

Please refer to Design Guidelines mentioned in Glossary of Interventions regarding amenities and urban design.

Projects Identified

#	Project Component	Scale
1	Hotel Block (5 keys)	240 Sqm BUA
2	Restaurant Block (30 pax)	65 Sqm BUA
3	Event Hall	200 Sqm
4	Open Grounds	1700 Sqm
5	Street Lighting	260 m
6	Footpath	160 m
7	Parking	10 ECS
8	General Landscaping	550 Sqm

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in Glossary of Interventions.

#	Project Component	Cost (INR Lakhs)
1	Restaurant Block (60 pax)	29
2	Event hall	54
3	Open Grounds	1
4	Footpath	3
5	Parking	5
6	Streetlighting	4
7	Hotel Block	75
8	General Site Landscaping	1
Total		INR 170 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- a) Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- b) Revenues have been escalated at 5% y-o-y
- c) Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

The following assumptions are considered for the proposed hotel and restaurant space:

1. Average room rate – INR 2500 per key
2. Average Occupancy – 80%
3. Non-room revenues - ~150%¹³ of room revenues
4. Number of keys - ~5

Basis the above, peak un-escalated revenue is estimated at ~INR 1 Cr per year.

Feasibility Assessment

Most of the professionally operated hotels have an operating margin of ~25-35%. Given that the hotel can be given out on PPP and would have upgraded infrastructure, an operating margin of 30% of gross revenue is assumed. The project is estimated to achieve a pre-tax pre-Authority pay-out IRR of ~21% over a 30-year period. This is considered sufficient for making the project viable for private participation, as the operator would have sufficient cashflows to pay to the Authority and realise profit.

¹³ Given the location of the property, the hotel is expected to cater to the business visitors of the Nagapattinam port. Also given the proximity to the sea, railway station and the port, the hotel is positioned to earn a larger revenue share from the restaurants and the event space.

¹⁴ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.

Structuring and Implementation

From implementation perspective, the property can be given to a suitable private player identified by the TTDC for renovation on PPP. The contractor can avail the option to operate and maintain the property for a period of 30 years and pay TTDC in the form of annual licence fees / revenue share. Further, the detailed feasibility needs to be conducted to understand the suitable implementation models.

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 7,300¹⁴ man-days of construction labour (spread across 1-3 years of implementation)

During Operations: Jobs created during operations will entail:

- Entire O&M team (including housekeeping, admin, sales, booking, catering, civil etc.) = 10 man – days per day¹⁵

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 18,300 man - days.

- As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
- Assumed cost of labour assumed for computation = INR 700 per day
 - Cumulative labour man-days = 30% * CAPEX / 700

¹⁵ As per World Bank thumb rule, 12 man-days per day for 10-key 4-star hotel and 20 man-days for 10-key 5-star hotel.

As per HVS Report, in typical India hotels, manpower to room ratio for 4/5 star hotels is 2.11-2.70, for mid-market 1.52 and for budget hotels 0.72. We have assumed 2 for our computation.

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As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

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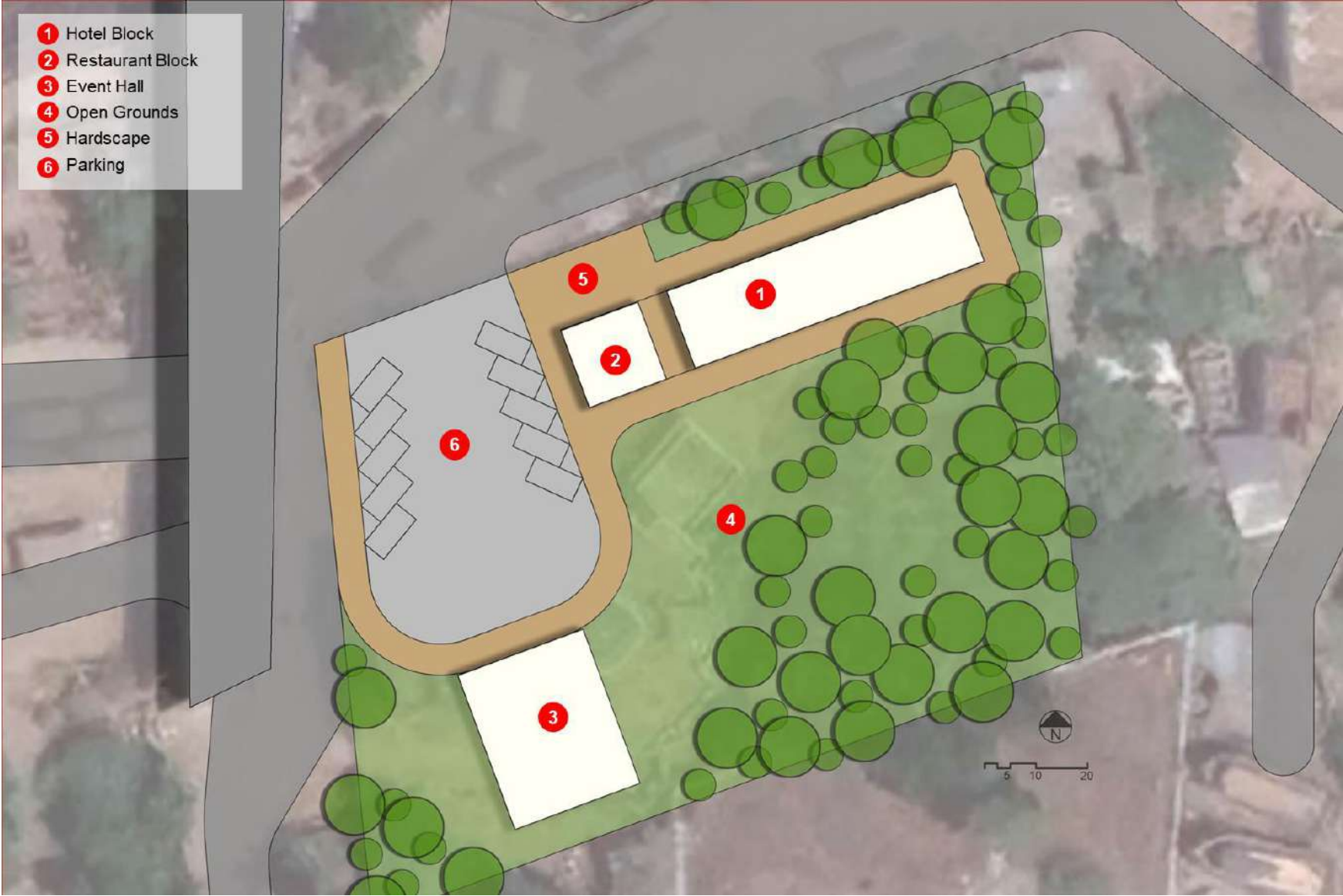
This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into a 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and suppliers will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

Figure 5-3: Proposed Master Plan – Hotel Tamil Nadu, Nagapattinam



6. Hotel Tamil Nadu, Thirukkadaiyur

Site Details

District:	Mayiladuthurai
Name of Site	Hotel Tamil Nadu
Site No:	Site 79A of 295
Site Use:	Hotel
Category:	F (Hotel)
Location:	11.0775, 79.7994
Land Area:	1.5 acres
Capacity:	11 rooms
Operator:	TTDC
Site Ownership:	TTDC
Occupancy:	60 – 70% (2019)
Site Revenues:	INR 33.37 lakhs (2019)
Connectivity:	
a. Railway station:	~25 km (Mayiladuthurai)
b. Airport:	~115 km (Pondicherry)
c. Highway:	Abutting NH-32
Trails featured on:	Nil (Hotel)

The Hotel Tamil Nadu, Thirukkadaiyur is a budget hotel operated by TTDC since 2016. It is located on the Chennai-Nagapattinam highway. The hotel largely caters to the guests who come for the marriage ceremonies held in the nearby Amirthakadewarar Abirami Temple. Given the location of the hotel on the Highway, investing on a dedicated restaurant with a broader variety of cuisines and a larger capacity would increase the revenue stream through F&B. Currently the restaurant caters to the in-house guests with little to no advertising of the restaurant. Also, the façade of the hotel looks outdated and needs to be facelifted.

Existing Condition

Location

The Site is located 1km north of Thirukkadaiyur on Chennai-Nagapattinam highway. It is within 1km to several prominent tourist landmarks to the south like Amirthakadeswarar Abirami Temple, Amirthakadeswarar Alayam Temple, Thirukkadaiyur Sri Murugan Temple, and Shastiaphapoorthi Thirukadaiyur Temple.

Existing Layout

The 1.5-acre irregular shaped plot is located on the eastern side of Chennai-Nagapattinam Highway. The Site is accessed from this road. At present there is one main building structure located along the eastern boundary. The Site is set within 61,969 sqft of open grounds and has a solid boundary wall surrounding half the plot and a wire fence around the remaining.

Existing Uses

At present, most of the Site is vacant. The built structure occupies a small portion of the eastern part of the Site, housing the TTDC Hotel. The Site is being used as listed below:

- **Hotel** – This is housed in a G+1 building, with a Plinth Area of 3,438 sqft and a Built-Up Area of 6,876 sqft.

- **Accommodation** – This consists of 11 keys with the following Room Categories with an average room size of 210 sqft.
 - Double Bedroom A/C (2 no.) – (Tariff Rs.1388)
 - Double Bedroom Non-A/C (2 no.) – (Tariff Rs.990)
 - Double Bed Deluxe Room A/C (1 no.) –(Tariff.2397)
 - 4-Bed Room A/C (4 no.) – (Tariff Rs.2554)
 - 4-Bed Room Non-A/C (2 no.) – (Tariff Rs.1994)
- **Restaurant** – The ground floor of the building contains a 20-seating capacity restaurant.
- **Car Parking** – The Site has a capacity for parking 8 cars.

Operating Performance

- Financial performance
 - Revenue – INR 33.37 lakhs (FY20)
 - Net Profit – INR (18) lakhs (FY20)
- Occupancy
 - Hotel – low occupancy
 - Restaurant – high occupancy
- Peak Season – April & August

Master Planning Considerations

Applicable Regulations

Tamil Nadu Combined Development and Building Rules, 2019 – The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land.

Key Sensitivities

The site does not hold any environment or social sensitivities to address in master planning.

Key Issues to Address

Baseline Stage are summarised below along the 6A Framework:

1. **Attraction** – The Site’s attraction value is derived from its location and proximity to the four main identified temple sites within 1km radius. This includes

Amrithakadeswarar Abirami Temple which receives an annual footfall of 5 lakhs at the temples. This places the hotel for higher occupancy and reservations during peak season. Also, as the site is along the Chennai-Nagapattinam highway, it also acts as a stopover place for passing traffic for dine-out at the hotel restaurant.

2. **Accessibility** – The site enjoys excellent connectivity as located along the Chennai-Nagapattinam Highway. It is a 2-lane wide road with auto, taxis, and bus stops within walking distance to the south of the site near the temple. However, there is no NMT stop point at the site leading the guest walk down 1km to temple site for mobility access.

3. **Amenities** –Though, the hotel facilities are worn out and need to be upgraded, it has moderate level of basic amenities present like washrooms, presentable rooms, pleasant green environment etc.

- The interiors lack modernised and aesthetic design.
- There is no children’s facility available.
- Wire boundary wall in certain areas of the site
- The open area in the site is not well maintained.
- The restaurant capacity and menu are limited.
- No paved footpaths available

Parking – The Site has an unpaved parking area with a capacity of 8 parking bays.

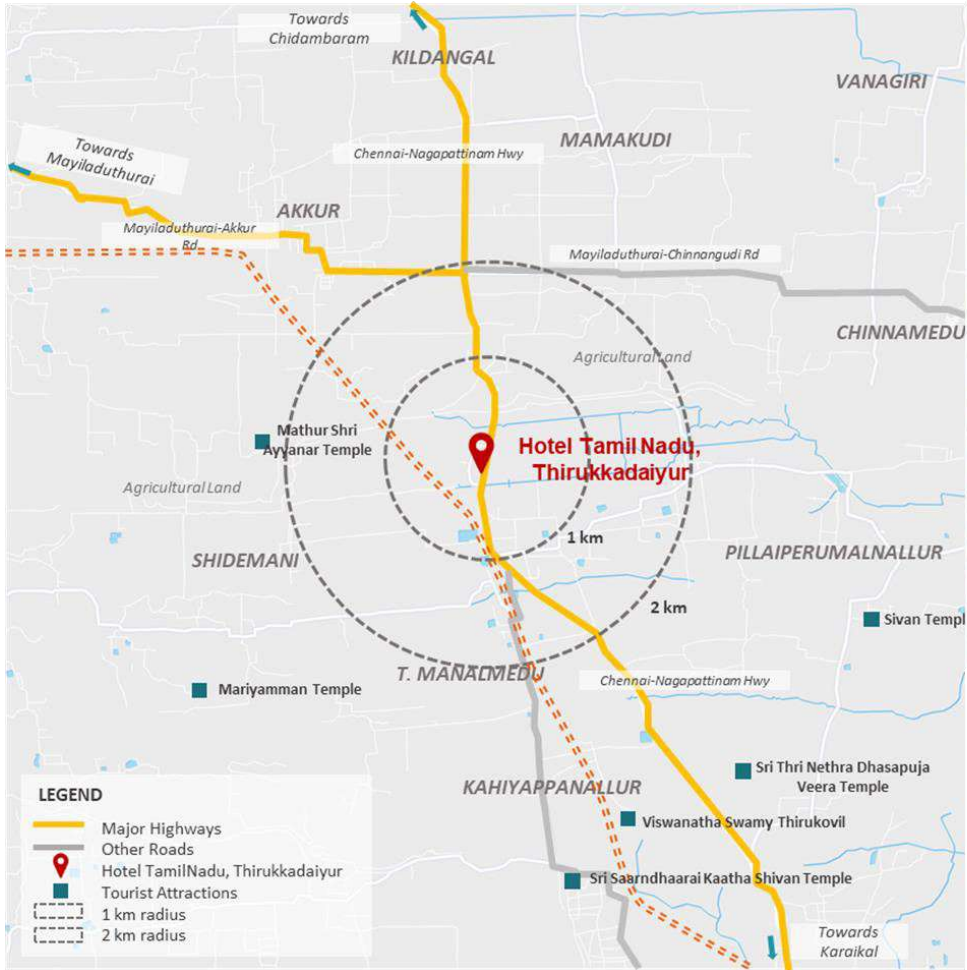
4. **Awareness** – The Site is located on Chennai-Nagapattinam Highway making the hotel highly visible from passing traffic. The hotel is also located close to Thirukkadaiyur Amrithakadeswarar Abirami Temple which is a prominent temple for 60th and 80th Marriage ceremonies that attract many guests to the hotel. The hotel lacks online marketing with no tie-ups with online travel aggregator websites.

5. **Activities** – Guests who take part in ceremonies at Thirukkadaiyur Amrithakadeswarar Abirami Temple usually make reservations at the hotel. Hotel staff will receive the hosts coming for weddings with a traditional welcome and will accommodate any recreational activities such as music and karaoke etc, as

requested by guests. Hotel staff will celebrate different festivals and National Holidays such as Independence Day, Pongal, and Diwali with guests.

6. Accommodation – There are about 10 multiple types of accommodation facilities of various standards located 1 km to the south around Thirukkadaiyur Amrithakadeswarar Abirami Temple with an average tariff ranging from INR 650 – INR 1900.

Figure 6-1: Location and Existing Layout



Legend
 1 - Hotel Entry
 2 - Parking
 3 - Hotel/Restaurant
 4 - Grounds

Site Pictures



Vision for the Site

- Hotel Tamil Nadu, Thirukkadaiyur is strategically located within walking distance of the main attraction: the Amrithakadeswarar Abirami Temple. Moreover, the hotel site is located adjacent to the Chennai-Nagapattinam Highway providing excellent connectivity. The current hotel has an old-fashioned layout, décor, architecture with lack of amenities and underutilized space within plot. The restaurant block which is a high occupancy and revenue generating source for the site has limited menu with outdated interiors.
- Considering the locational advantage and popularity of the restaurant, the hotel can be developed into an overnight destination stop for pilgrims and tourists with developed support infrastructure for conducting functions, parties, and events.
- The vision is to develop the site into a medium scale hotel utilizing the available open land, based on the tourist demand and local needs of the people. Further, the intent is to upgrade and improve the hotel interiors and exteriors with modern amenities and fitouts.
- **Target Visitor** – Given the reasons as stated above, the Site has ample potential to become a preferred hotel for the regional tourists visiting the main temple of the city and local community.

Proposed Master Plan

Master Plan Concept

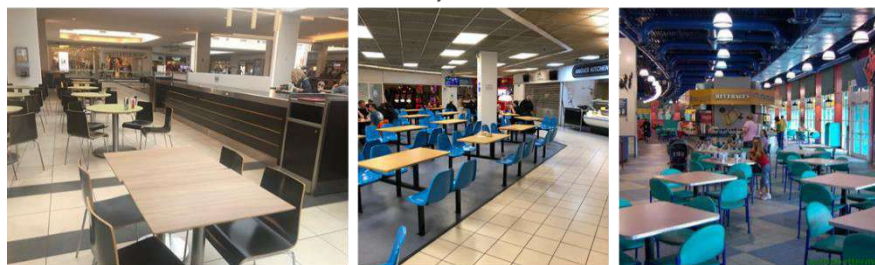
- Considering the potential of the Site as not just a Hotel for visitors to the Temple but as a support to the activities happening in the temple recreational space, the following are the objectives of master planning at this Site:
 - **Improving pilgrims' experience** at the Amrithakadeswarar Abirami Temple – through provisions of overnight accommodation facility.
 - Developing **new restaurant block** at the Site by with modern amenities and fitouts.
 - **Improving hotel amenities** through face-lifting and interior renovation.
 - Developing **community hall** for celebrating local festivals and marriages functions with lawns
 - **Improving tourist footfall** through appropriate marketing and promotion.

Hard Interventions

1. **New Restaurant block** – A new restaurant block near the entrance of the site abutting the highway will be developed. This will provide larger visibility to the restaurant area attracting higher footfall. It will be an important source of revenue for the hotel; therefore, the restaurant block will be developed with modern furniture and fit outs with a small outdoor seating area. The menu spread of the restaurant will also be expanded with addition of various vegetarian cuisines. *Infrastructure Created:*
 - *Restaurant block – 130 sqm (60 pax)*
 - *Outdoor Seating – 120 sqm (10 pax)*
2. **Development of a Community Hall** – As the hotel is taken up for reservations during festive season and marriages in the nearby temples, it can support the ancillary marriage function within its premises. Therefore, a community hall for 200 pax is proposed for public gathering and functions at site. This will also pull in higher footfall and revenue for the site and engage the local community for holding marriages and celebrations. The front lawn can also be included with the community hall for bigger functions. It will be a ground only structure, with a slanted roof depicting the local style of construction. *Infrastructure Created: ~200 sqm building (200 pax)*
3. **Paved Internal Road** – A paved internal road will be developed over the existing the road of 9m width. It will be a L shaped double lane road with drop off points at the hotel and restaurant block. This will be beautified with aisle trees and footpath on both sides developing an inviting entrance to the site. *Infrastructure Created: ~95 m in length (9 m wide) + 230m footpath (1.5 m wide)*
4. **Parking** – A designated parking space must be developed for accommodating maximum number of vehicles with good lighting and pavement. This will be behind the proposed hotel block for 20 cars. *Infrastructure Created: ~20 ECS.*
5. **Site Boundary** – Currently, part of the site has developed site boundary and part has wired boundary. Therefore, a construction of a uniform boundary wall on all sides of the site will protect it from trespassers and locals' illegal activities. *Infrastructure Created: ~325m in length.*



Community Hall



Renovation – Restaurant

6. Upgradation of Hotel Interiors and Amenities – The interiors of the hotel and rooms should be upgraded and improved. This will be implemented through renovation of fit-outs and provision of modern facilities. There should also be improved upkeep of the rooms and regular housekeeping should be enforced. *Infrastructure Created: Refurbishment and rearrangement of internal (~1,200 sqm built-up area)*

7. Face-lifting of the Hotel Façade – As the interiors of the existing hotel block will be renovated and refurbished with modern amenities and facilities, the external façade of the building will also undergo whitewashing and painting. This will improve the overall look and feel of the site and create a premium inviting ambience for the site attracting tourist to choose it as a preferred option for stay. *Infrastructure Created: 350 sqm of surface area (Front)*

8. Expansion of Hotel block- Future Development
Presently, the hotel consists of 1 building with only 11 rooms which go for full occupancy during festive days in the neighbouring temples. With better hotel

interiors and a new restaurant and community block coming up, the financial performance and footfall at the hotel is expected to increase.

Based on the analysis of the performance, if required a hotel block will be developed with 10 keys. The hotel block will have similar composition of rooms and come up behind the restaurant block. It will be a G+1 structure occupying the first floor of restaurant block as well.

Infrastructure Created: ~430 sqm BUA.



Room Interiors



Façade Upliftment

Soft Interventions

- 1. Private Events** – Small gatherings or private events can be organized at the hotel site – such as birthday parties, family gathering, social events, small marriage functions etc. This would help to popularise the site to other segments of visitors and develop it as a preferred choice for guests coming down to the town solely for marriage purposes.
- 2. Promotion** – The hotel must be popularized and promoted to the locals and tourists visiting Thirukkadaiyur Amrithakadeswarar Abirami Temple as a preferred accommodation.

- This can be done through diversifying marketing tactics using online platforms and social media.
- Creating connections with tour group companies and temple authorities in the town by providing incentives to stay overnight.
- Tie-ups with event management companies, can popularise the space for events and popularise it among the higher employees of the industry.

3. **Landscaped Lawn** – Owing to the site available land, landscaped garden or lawn can be developed with adequate recreational spaces around. This can be complimented with paved pathways and seating arrangements for guests and tourists to spend time. The garden can also be combined with the community hall for large gatherings and functions.

Infrastructure Created: ~2050 sqm of garden + 500 sqm of general landscaping.

4. **Children Playground** – A small children playground will be developed near the existing hotel building with provisions of swings and sandpit areas. This will be a developed engaging activity for the tourists.

Infrastructure Created: ~330 sqm of garden.



Lawn



Children Playground

Trunk Infrastructure

As the Site has excellent connectivity, no trunk infrastructure interventions are required.

Projects Identified

#	Project Component	Scale
1	Restaurant Block (60 pax)	130 sqm
2	Restaurant Outdoor Seating (10 pax)	120 sqm
3	Community Hall	200 sqm
4	Paved Internal Road (9m wide)	95 m
5	Footpath	230 m
6	Parking	20 ECS
7	Site Boundary	325 m
8	Upgradation of Hotel Interiors	1200 sqm BUA
9	New Hotel Block (Future Development)	430 sqm BUA
10	Façade Upliftment	350 sqm
11	Lawn	2050 sqm
12	Children Playground	330 sqm
13	General Site Landscaping	500 sqm

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in Glossary of Interventions.

#	Project Component	Cost (INR Lakhs)
1	Restaurant Block (60 pax)	59
2	Restaurant Outdoor Seating (10 pax)	4
3	Events Hall	54
4	Paved Internal Road (9m wide)	29
5	Footpath	5
6	Parking	8
7	Site Boundary	18
8	Upgradation of Hotel Interiors	33
9	New Hotel Block ¹⁶	300
10	Façade Upliftment	42
11	Lawn	4
12	Children Playground	5
13	General Site Landscaping	1
Total		561

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- Revenues have been escalated at 5% y-o-y

¹⁶ The development of the new Hotel block to be taken up in the future, basis the demand and the occupancy rate.

- Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

Existing Operating performance:

- Average room rate – INR ~2000 per key
- Average Occupancy – 60%
- Number of keys - ~11

The following assumptions are considered based on the existing performance as given above:

- Average room rate – INR 2500 per key
- Average Occupancy – 70%
- Non-room revenues - ~150%¹⁷ of room revenues
- Number of keys - ~11

Basis the above, peak un-escalated revenue is estimated at ~INR 2 Cr per year.

Feasibility Assessment

Most of the professionally operated hotels have an operating margin of ~25-35%. Given that the hotel would be given on PPP and would have upgraded infrastructure, and the fact that majority of the revenues would come from restaurant, which has higher margin, an operating margin of 30% of gross revenue is assumed. The project is estimated to achieve a pre-tax pre-Authority pay-out IRR of ~25% over a 30-year period. This is considered sufficient for making the project viable for private participation, as the operator would have sufficient cashflows to pay to the Authority and realise profit.

Structuring and Implementation

From implementation perspective, the property can be given to a suitable private player identified by the TTDC for renovation on PPP. The private player can avail the option to refurbish, operate and maintain the property for a period of 30 years and pay TTDC in the form of annual licence fees / revenue share. Further, the detailed feasibility needs to be conducted to understand the suitable implementation

¹⁷ Basis the current trends, the hotel largely caters to the events and ceremonies held at the nearby Abirami temple. Hence, the larger share of revenues to the hotel is pegged to the restaurant operations and organizing events.

models. Also, basis the occupancy in the future, the operator can develop the new hotel block of 10 keys.

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 24,100¹⁸ man-days of construction labour (*spread across 1-3 years of implementation*)

During Operations: Jobs created during operations will entail:

- Entire O&M team (including housekeeping, admin, sales, booking, catering, civil etc.) = 42 man – days per day¹⁹

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 60,350 man - days.

Increased tourist footfall

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

¹⁸ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day

- Assumed cost of labour assumed for computation = INR 700 per day

- Cumulative labour man-days = 30% * CAPEX / 700

¹⁹ As per World Bank thumb rule, 12 man-days per day for 10-key 4-star hotel and 20 man-days for 10-key 5-star hotel.

As per HVS Report, in typical India hotels, manpower to room ratio for 4/5 star hotels is 2.11-2.70, for mid-market 1.52 and for budget hotels 0.72. We have assumed 2 for our computation.

Figure 6-2: Proposed Master Plan – Hotel Tamil Nadu, Thirukkadaiyur



7. Hotel Tamil Nadu I, Thanjavur

Site Details

District:	Thanjavur
Name of Site	Hotel Tamil Nadu
Site No:	Site 126A of 295
Site Use:	Hotel
Category:	F (Hotel)
Location:	10.7811, 79.1398
Land Area:	1.2 acres
Capacity:	32 rooms
Operator:	TTDC
Site Ownership:	TTDC
Occupancy:	56% (2019)
Site Revenues:	INR 1.92 crores (FY20)
Connectivity:	
a. Railway station:	1.3 km (Thanjavur)
b. Airport:	60 km (Tiruchirappalli)
c. Highway:	3 km from NH 36
Trails featured on:	Nil (Hotel)

Hotel Tamil Nadu I, Thanjavur is a budget class hotel, located in the heart of Thanjavur city. Its prime advantage as a hospitality establishment is its proximity to transport nodes (railway station, old bus stand) and major tourist attractions such as Brihadeeshwara Temple and Maratha Palace. As a heritage property, the hotel has not aged well. Proposed interventions aim to give the hotel a facelift in terms of room décor, furnishings and fittings as well as explore modern marketing channels.

Existing Condition

Location

Hotel Tamil Nadu is in the central region of Thanjavur. It is ~500 m from Thanjavur railway station and ~5 km from New Bus Stand. The hotel is adjoining the Department of Tourism office and is near important government offices (Taluk office, Audit department, PWD, HR&CE, etc.). Several prominent tourist landmarks located nearby are Brihadeeshwara Temple (~1.2 km), Thanjavur Maratha Palace (~1.7 km), Sivaganga Poonga (~1.6 km) etc.

Existing Layout

The 1.2-acre rectangle shaped plot is located on the eastern side of the Gandhiji Road and is accessed from this road. The site constitutes of a main building block, recreation facilities and villas. It also offers parking facilities for the guests.

Existing Uses

The hotel was started in 1977 and has maintained its heritage building look over the years. Like other TTDC hotels, the tariff charged is in the affordable range. The hotel provides facilities for accommodation, F&B, and events (meetings/ marriages).

The Site is being used as listed below:

- **Hotel** – This is housed in a G+1 building with 32 rooms in mini, standard, deluxe and suite categories.
- **Accommodation** – This consists of 32 keys with the following Room Categories with an average room size of 240 sq. ft.

Category	Number of keys	Floor Area	Rack rate (per night)
Mini	6	120 sqft	INR 1150*, 1450
Standard	21	240 sqft	INR 1400*, 1800
Deluxe Double	2	240 sqft	INR 2300
Suite	2	240 sqft	INR 3200
Family (8 bed)	1	480 sqft	INR 2490

* Non-AC variant

- Above-mentioned prices include complimentary breakfast.
- Discounts applied
 - Senior citizen – 15%
 - Extended stay – 15%
- It has a restaurant and an in-house bar with a capacity of 50 pax and 40 pax respectively.
- It has an event hall for meetings and marriages.

Operating Performance

- General Occupancy
 - Rooms – 56% (FY20)
 - Events – 30% (FY20)
- Financial performance
 - Revenue – INR 1.92 crores (FY20)
 - Revenue growth – 5.2% 3y CAGR
 - Net Profit – INR 16.96 lakhs (FY20)
 - Net Profit growth – 146% 3y CAGR
 - Net Profit margin – 8.8% (FY20)

Master Planning Considerations

Applicable Regulations

1. **Tamil Nadu Combined Development and Building Rules, 2019** – As per Thanjavur Master Plan, the site area lies in a Commercial zone. The permissible uses include:

Commercial Zone: Parks, playgrounds, farms, gardens | Public Utility Buildings | Swimming Pool, Daily or weekly markets | Hotels, Restaurants, Hostels, Dormitories, Boarding and Lodging houses | Retail establishments and shops, Departmental stores, Taxi stands and car parking multi-level parking | Religious buildings | Shops, stores, markets, shopping centres | Research | Helipads | Preview theatres and dubbing theatres

Key Sensitivities

The site does not hold any environment or social sensitivities to address in master planning.

Key Issues to Address

Baseline Stage are summarised below along the 6A Framework:

1. **Attraction** – The Site’s attraction value is derived from its location and proximity to the transport hubs and important tourist landmarks of the city. This includes Brihadeeshwara temple which receives an annual footfall of 39 lakhs etc. This places the hotel for higher occupancy and reservations during peak season. The hotel also receives reservations for business meetups and local stays all-round the year.
2. **Accessibility** – The site enjoys excellent connectivity as located in the heart of the Thanjavur city. It is a 2-lane wide road with auto, taxis, and bus stops available outside the site. The hotel is within 1km of the Thanjavur railway station making it a popular choice for tourists.
3. **Amenities** – Though, the hotel facilities are worn out and need to be upgraded, it has moderate level of basic amenities present like washrooms, presentable rooms, pleasant green environment etc.
 - The interiors lack modernised and aesthetic design.
 - There is no children’s facility available
 - No area for entertainment

- The restaurant capacity and menu are limited.

Parking – The Site has a designated parking area with a capacity of 20 parking bays.

- Awareness** – The hotel sells its rooms only through TTDC’s website and walk-ins. 60% of its bookings are through walk-ins. The hotel does not have presence on travel aggregator websites (MakeMyTrip, Expedia, etc.). This deprives the website of a credible source of user feedback and review system.
- Activities** – The major activities undertaken at the hotel are meetings and marriages. The infrastructure supporting these activities are the following.
1 hall – 80 pax; charges apply per plate depending on the menu selected
The area within the site boundary is saturated and does not hold flexibility of any further development for recreational activities.
- Accommodation** – Hotel Tamil Nadu is located in the central region of Thanjavur near the with many hotels in the vicinity. For E.g., Hotel Grand Ashok, Sangam Hotel, Hotel Gnanam etc. On comparing prices and with high

market of budget accommodations like OYO, Hotel TTDC is high priced with the quality of services provided, interior fitouts. Though the hotel still is best suited due to its strategic locational proximity to the railway station.

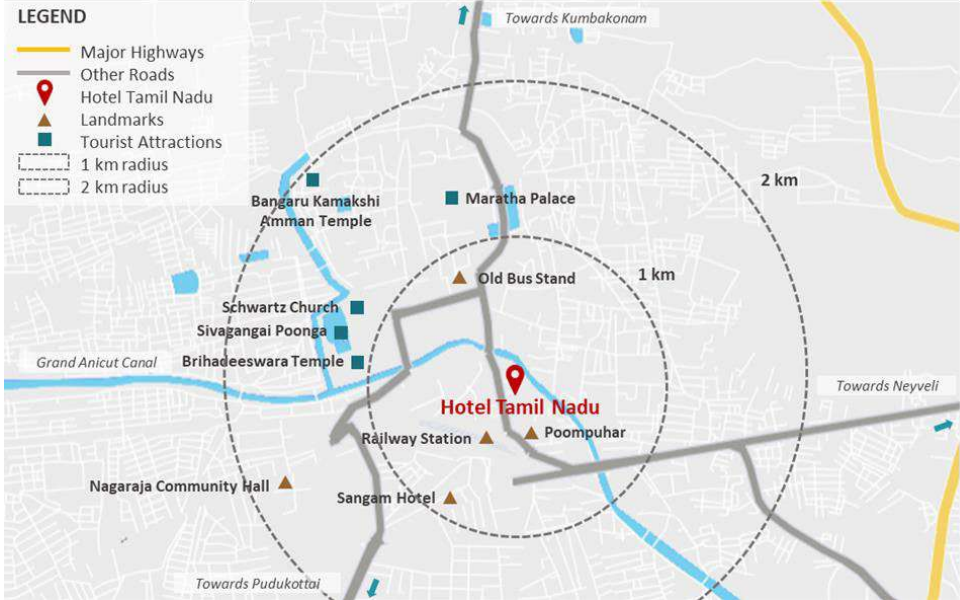
Market Offering

The region has adequate quality accommodation facilities in the vicinity, especially for high value tourists. The tariffs for hotels within a ~3 km range are given below.

Hotel Name	Category	Tariff*
Hotel Tamil Nadu 1	Budget	INR 1800
Barnabas Homestay	Budget	INR 1200
Hotel Vali	2 - star	INR 800
Oyo Hotel PLA Residency	2- star	INR 2000
Manees Residency	3 - star	INR 1100
Hotel Parisutham	3 - star	INR 3500

**Double room standard per night tariff*

Figure 7-1: Location and Existing Layout



- Legend**
- 1 – Entry
 - 2 – Restaurant
 - 3 – District Tourism Office
 - 4 – Event hall
 - 5 – Parking
 - 6 – Reception
 - 7 – Main block
 - 8 – Exit

Site Pictures

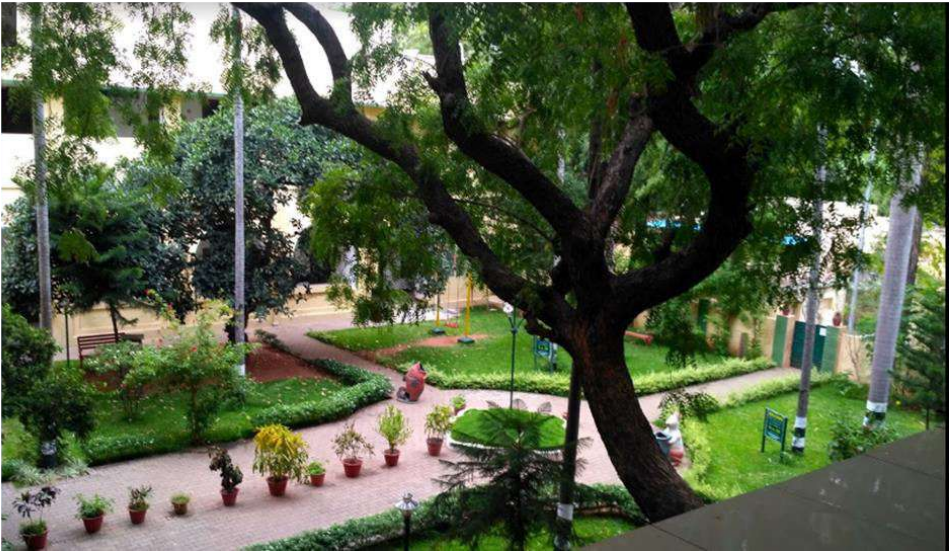
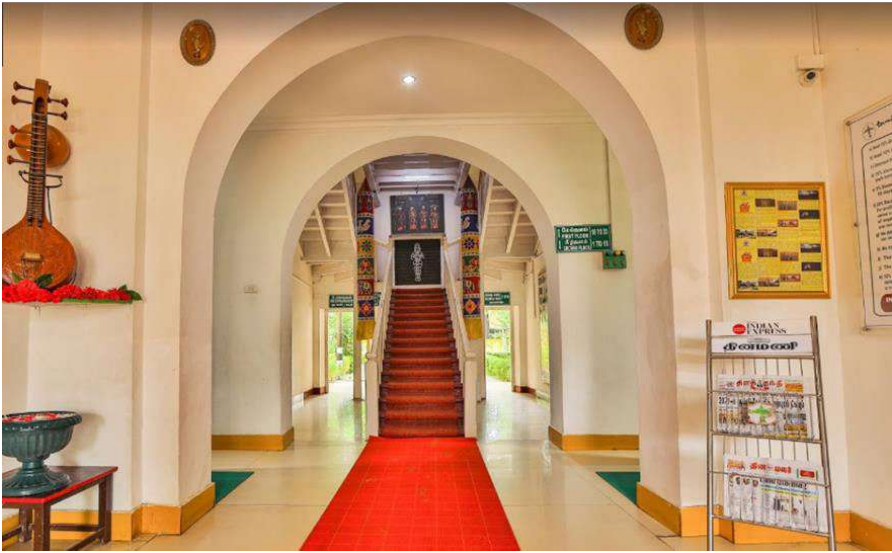




Figure 7-2: Site Land Use –Thanjavur Master Plan



Vision for the Site

- Hotel Tamil Nadu, Thanjavur is strategically located in close proximity to the Railway station and major tourist attractions of the city – Brihadeeshwara temple, Thanjavur Maratha palace. It is also adjacent to the Poompuhar handicrafts stall (authentic Thanjavur souvenirs such as bobbleheads). Moreover, the restaurant offers delicious food and the hotel offers moderate level of amenities to its guest. Though, the hotel showcases a heritage look in its façade, its interiors are worn out and outdated.
- Considering the locational advantage and popularity of the restaurant, the hotel can be developed into a preferred accommodation option for pilgrims and tourists with refurbishment and renovation of hotel interiors and façade upliftment. This will attract larger footfall of high value tourists to the site and improve annual occupancy rate.
- The vision is to develop the site into a premium hotel with improved interiors, better marketing tactics, façade upliftment and linkage with city hop on/hop off services.
- **Target Visitor** – Given the reasons as stated above, the Site has ample potential to become a preferred hotel for domestic as well as high value tourists visiting tourist attractions in and around the city along with catering to people visiting the city for business meetups.

Proposed Master Plan

Master Plan Concept

- Considering the potential of the Site as not just a Hotel for visitors to the tourist points but also to business visitors, the following are the objectives of master planning at this Site:
 - **Improving tourists' experience** at the various tourist landmarks of the city – through provisions of contemporary accommodation facility.
 - **Improving hotel amenities** through facelifting and interior renovation.
 - Integrating it as a pitstop in city tours.
 - **Improving tourist footfall** through appropriate marketing and promotion.

Hard Interventions

1. **Upgradation of Hotel Interiors and Amenities** – The interiors of the hotel and rooms should be upgraded and improved. The reception should give an

aesthetic appeal of professional hotel. This will be implemented through renovation of fit-outs and provision of modern facilities.

- Improved upkeep of the rooms with regular housekeeping
- Renovation of restaurant interiors with contemporary seating arrangement and furniture.
- Restaurant Menu should be expanded with a variety of vegetarian cuisines
- Provision of modern amenities in rooms like small bathroom, minibar, card key, Wi-Fi, bed side lamps etc.
- Enable acceptance of UPI/ E-wallets modes of payment
- Provide shuttle service to nearby transport hubs and tourist landmarks

Infrastructure Created: Refurbishment and rearrangement of interiors (~3,000 sqm built-up area)

2. **Facelifting of the Hotel Façade** – As the interiors of the existing hotel block will be renovated and refurbished with modern amenities and facilities, the external façade of the building will also undergo whitewashing and painting. This will improve the overall look and feel of the site and create a premium inviting ambience for the site attracting tourist to choose it as a preferred option for stay. The façade will be renovated keeping the existing heritage look of the hotel into place. *Infrastructure Created: ~1,500 sqm of surface area (Front)*

Soft Interventions

1. **Private Events** – Small gatherings or private events can be organized at the hotel site – such as birthday parties, family gathering, social events, small marriage functions etc in the event hall available. This would help to popularise the site to other segments of visitors and develop it as a preferred choice for guests coming down to the town solely for marriage purposes.
2. **Promotion** – The hotel must be popularized and promoted to the locals and tourists visiting various tourist landmarks in and around Thanjavur as a preferred accommodation.
 - This can be done through diversifying marketing tactics using online platforms and social media.
 - Creating connections with tour group companies and temple authorities in the town by providing incentives to stay overnight.

- Tie-ups with event management companies, can popularise the space for events and popularise it among the higher employees of the industry
- Continuous feedbacks and ratings on third party apps will develop trust in users for confident reservations.

3. **Hop on/ Hop off Services** – Hop on/ Hop off services will be started in Thanjavur city connecting all the important tourist landmarks, famous handicraft shops and transport hubs by the government. Hotel Tamil Nadu can also be incorporated as one of the stops, thus improving hotel visibility and developing it as a preferred accommodation choice.

Trunk Infrastructure

As the Site has excellent connectivity, no trunk infrastructure interventions are required.

The hotel will be taken on PPP-ROMT model with refurbishment and renovation of the existing building by handing it over to a private operator.

Projects Identified

#	Project Component	Scale
1	Refurbishment and rearrangement of interiors	3000 sqm
2	Façade Upliftment	1500 sqm



Reception Aesthetics



Contemporary Restaurant Setup



Room Interiors



Façade Upliftment- Heritage Look

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in Glossary of Interventions.

#	Project Component	Cost (INR Lakhs)
1	Refurbishment of existing keys	160
2	Façade renovation	180
Total		INR 340 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- Revenues have been escalated at 5% y-o-y
- Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

Existing Operating performance:

- Average room rate – INR 2200 per key
- Average Occupancy – 55%
- Number of keys - ~32

Given the refurbishment and face-lifting of the facade, the occupancy is expected to increase, and the hotel is expected to command higher ARR. The following assumptions are considered for year 1 after refurbishment:

- Average room rate – INR 3000 per key
- Average Occupancy – 70%²⁰
- Non-room revenues - ~40% of room revenues
- Number of keys - ~32

Basis the above, peak escalated revenue in Y5 is estimated at ~INR 4 Cr per year.

Feasibility Assessment

Most of the professionally operated hotels have an operating margin of ~25-35%. Given that the hotel would be given on PPP and would have upgraded infrastructure, an operating margin of 25% of gross revenue is assumed. The project is estimated to achieve a pre-tax pre-Authority pay-out IRR of ~30% over a 30-year period. This is considered sufficient for making the project viable for private participation, as the operator would have sufficient cashflows to pay to the Authority and realise profit.

Structuring and Implementation

From implementation perspective, the property can be given to a suitable private player identified by the TTDC for renovation on PPP. The contractor can avail the option to refurbish, operate and maintain the property for a period of 30 years and pay TTDC in the form of annual licence fees / revenue share. Further, the detailed feasibility needs to be conducted to understand the suitable implementation models.

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 14,550²¹ man-days of construction labour (spread across 1-3 years of implementation)

During Operations: Jobs created during operations will entail:

- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.

²⁰ Given the 55% occupancy rate of the existing facilities at the property, a 15% increase is projected with the proposed refurbishment.

²¹ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)

- Entire O&M team (including housekeeping, admin, sales, booking, catering, civil etc.) = 64²²

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as 36,600 man - days.

Increased tourist footfall

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

-
- As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
 - Assumed cost of labour assumed for computation = INR 700 per day
 - Cumulative labour man-days = 30% * CAPEX / 700

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area. Some of which include Thanjavur Gold Painting artisans.

²² As per World Bank thumb rule, 12 man-days per day for 10-key 4-star hotel and 20 man-days for 10-key 5-star hotel.

As per HVS Report, in typical India hotels, manpower to room ratio for 4/5 star hotels is 2.11-2.70, for mid-market 1.52 and for budget hotels 0.72. We have assumed 2 for our computation.

8. Hotel Tamil Nadu II, Thanjavur – Sangam Hotel

Site Details

District:	Thanjavur
Name of Site:	Hotel Tamil Nadu II, Thanjavur
Site No:	Site 126B of 295
Site Use:	Hotel
Category:	F (Hotels)
Location:	10.7729, 79.1351
Land Area:	1.2 acres
Capacity:	53 rooms
Operator:	M/s. Sanguchakra Hotel Pvt. Ltd.
Site Ownership:	TTDC
Occupancy:	60-65% ²³
Site Revenues:	INR 7 Cr. (FY20) ²⁴
Connectivity	
a) Railway Station:	~750 m (Thanjavur)
b) Airport:	~8 km (Thanjavur)
c) Highway:	on SH-99A

Trails featured on: **Nil (Hotel)**

Sangam hotel is a 3-star mid-segment hotel and is one of the most premium hospitality establishments in Thanjavur. It is one of the first choices of stay for upper-middle class segment of visitors and foreign tourists, received in high numbers during the peak December – May season. The hotel's proximity to major tourist attractions of Thanjavur also offers it great advantage. The hotel houses well-appointed rooms, conference hall, multi-cuisine restaurant, bar, outdoor lawns and a swimming pool. The hotel is currently franchised by TTDC to M/s. Sanguchakra Hotel Pvt. Ltd., with the agreement ending in 2024.

Existing Condition

Location

Sangam Hotel is located on Tiruchirappalli -Thanjavur road. The hotel is conveniently located ~750 m from Thanjavur railway junction and ~4 km from New Bus Stand. Several prominent tourist landmarks nearby are:

- Brihadeeswarar Temple – ~2 km
- Sacred Heart Cathedral – ~1 km
- Thanjavur Maratha Palace – ~3.5 km
- Bangaru Kamakshi Amman Temple – ~3 km

Existing Layout

Spread over an area of ~1.2 acres, the main hotel block houses 53 rooms of various categories: Executive, Deluxe, Suite and Family Room. Other than this, the hotel complex includes a restaurant, a bar and two meeting halls. For recreation, the hotel hosts a swimming pool and outdoor lawns.

²³ Received from Site Manager

²⁴ Estimated based on inputs from Site Manager

Existing Uses

The hotel provides a good mix of comfort and convenience, offering an array of amenities befitting a 3-star hotel. The accommodation (53 keys) is segregated into the following categories:

Category	Floor Area	Rack rate (per night)
Executive	~300 sq ft	INR 4,500
Business	~360 sq ft	INR 6,500
Royal Suite	~470 sq ft	INR 7,500
Villa	~470 sq ft	INR 9,000

Other than accommodation, the hotel houses F&B offerings and hosts business meetings & conferences. The infrastructure supporting these activities includes:

- 1 Restaurant (Thilanna) – 80 pax
- 1 Bar – 36 pax
- Varnam Hall – 150 pax
- Shruthi Hall – 40 pax
- Lawns – 75 pax

Operating Performance

- Lease Agreement
 - Duration – 30 years (1994 – 2024)
 - Initial Lease payment - ~3.8 lakhs per annum (1994)
 - Current Lease payment - ~7.5 lakhs per annum (2020)
 - Escalation – 15% every 3 years
 - Status – Pending case in High Court regarding payment dispute
- General Occupancy
 - Rooms – 60% – 65%
 - Events – 50%
 - Peak Months
 - Foreign – November to February
 - Domestic – March to May
- Average Length of stay
 - Domestic – 1 to 2 days
 - Foreign – 2 days
- Financial performance
 - Revenue – INR 7 crores (FY20) – *estimated*

- ARR – INR 4,800
- Occupancy – 60-65%
- Rooms revenue – 80% of total revenue - *estimated*
- Net Profit – INR 1.1 crores (FY20) – *estimated*
 - Net Profit margin – 15%

Masterplanning Considerations

Applicable Regulations

1. **Tamil Nadu Combined Development and Building Rules, 2019** – The site lies in Residential Zone, as per the Thanjavur Master Plan. The permissible uses include:

Residential Buildings | Parks, playgrounds, farms, gardens | Public Utility Buildings | Swimming Pool, Daily or weekly markets | Hotels, Restaurants, Hostels, Dormitories, Boarding and Lodging houses | Retail establishments and shops, Departmental stores, Taxi stands, and car parking multi-level parking | Religious buildings.

Key Sensitivities

There is no specific environmental/social sensitivity to be addressed at the site.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 6A Framework:

1. **Attraction** – The hotel's location, on Tiruchirappalli -Thanjavur road and in close proximity to transport hubs of the city & tourist attractions, offers great advantage and attracts visitors. Other than this, the hotel's offerings and quality services are the mainstay of the hotel. This includes range of accommodation options, recreational facilities, meeting / event spaces and F&B offerings along with services like 24*7 room service, digital payments, money exchange, etc.
2. **Accessibility & Mobility** – The site, being located on Tiruchirappalli -Thanjavur road (SH-99A), enjoys excellent road accessibility from all parts of the city. Further its proximity to transport hubs, Thanjavur railway station at a distance of ~750 m and bus stop located ~300 away, offers various locational benefits.

Parking – The site has parking capacity for ~20 cars.

3. **Amenities** – The condition of visitor amenities present at the site are befitting of a 3-star hotel
 - Accommodation – 53 well-appointed room, spread across various categories.
 - F&B – a restaurant with ~80 seating and a bar with ~36 seating capacity.
 - Amenities – Wi-Fi, safe, hair dryer, mini-fridge, coffee maker.
 - A sedan for paid transportation facility
 - Other services like money exchange, travel desk, doctor-on-call, etc.
4. **Awareness** – The hotel receives most of its booking from corporate clients. The hotel acquires new customers through word of mouth and recommendations from existing clients. It also receives 15-20% of its bookings through online booking platforms such as MakeMyTrip, Expedia and others.
5. **Activities** – Other than accommodation, major activities undertaken at the hotel are business meetings and conferences. The hotel also hosts visitors at its restaurant and bar. The restaurant features live music (sitar, veena) during dinner hours, especially on weekends and holidays.
6. **Accommodation** – Hotel Tamil Nadu II, Thanjavur is located in the central region of Thanjavur with many other accommodation options in its vicinity.

The hotel site is currently an operational hotel - with rooms for stay, restaurant and bar as its main offerings.

The tariffs for hotels within a ~2 km range are given below:

Hotel Name	Category	Tariff*
Hotel Yagappa	Budget	INR 2100
Hotel Star Residency	Budget	INR 2300
Hotel Temple Tower	Budget	INR 2300
Hotel Victoriyah	2-star	INR 2000
Lakshmi Hotel	4 -star	INR 3000
Hotel Parisutham	3 - star	INR 4000

*Standard Double Room Tariff

Figure 8-1: Competitive hotels near the site



Market Offerings

Figure 8-2: Location & Existing Layout, Sangam Hotel



Site Pictures





Figure 8-3: Land-use Zone, as per Thanjavur Master Plan



Vision for the Site

Sangam Hotel is a premium hotel, a well-developed and well-maintained TTDC property given on franchisee. The hotel's lease period is ending in 2024, after which the site will be transferred back to TTDC.

- Considering the locational advantage and state of the hotel, the intent is to run and maintain the hotel property efficiently with the involvement of a private operator.
- Further, the hotel can be promoted as a preferred accommodation option for visitors and a destination for small to large scale events.
- **Target Visitor** – Given the reasons as stated above, the Site has ample potential to become a preferred hotel for domestic as well as high value tourists visiting tourist attractions in and around the city along with catering to people visiting the city for business meetups.

Proposed Master Plan

Approach to Master Planning

The state of the current hotel building, and surroundings is satisfactory and to maintain the same private operator is suggested to be onboarded after the end of the current lease period. The upcoming operator will have to do minor refurbishments in the hotel. Other than that, the hotel property needs to be promoted and advertise itself as a preferred destination.

Hard Interventions

- 1. Refurbishment of Hotel Complex** – To match the current trends and compete with the hotels in vicinity, the hotel would need minor refurbishments and upgradations:
 - Improved upkeep of the rooms with regular housekeeping
 - Renovation of restaurant and bar interiors with contemporary seating arrangement and furniture
 - Restaurant Menu should be expanded with a variety of cuisines
 - Provision of modern amenities in rooms like minibar, card key, Wi-Fi, etc.
- 2. Development of Tourist Information Counter / Desk** – A small TIC to be developed at or near the reception area to facilitate the tourists staying at the

hotel. The desk would disseminate information on all tourist attractions nearby and connect with guides / tour operators / taxis for visitor convenience.

Soft Interventions

- 1. Expansion of hotel offerings** – The hotel should position itself as a preferred destination for hosting small gatherings or private events – such as birthday parties, family gathering, social events, small marriage functions etc. This would help to popularise the hotel to other segments of visitors and generate revenue during non-peak seasons.
- 2. Promotion** – The hotel must be popularized and promoted to the pilgrims and tourists visiting various tourist landmarks in and around Thanjavur as a preferred accommodation.
 - This can be done through diversified marketing tactics using online platforms and social media.
 - Creating connections with tour group companies in the town by providing incentives to stay overnight.
 - Tie-ups with event management companies can popularise the space for events

Trunk Infrastructure

As this site has good accessibility, it does not need any improvements in the trunk infrastructure.

The hotel will be taken on PPP-OMT model with the upcoming operator to take up refurbishment of the existing hotel complex.

Projects Identified

#	Project Component	Scale
1	Refurbishment of Existing Building	53 keys
2	Tourist Information Counter / Desk	1

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in Glossary of Interventions.

#	Project Component	Cost (INR Lakhs)
1	Refurbishment of Existing Resort Complex	530
2	Tourist Information Desk	5
Total		INR 535 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- Revenues escalated at 5%
- Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

Existing Operating performance:

- Average room rate – INR 6,000 per key
- Average Occupancy – 60%
- Non-room revenues - ~20% of room revenues
- Number of keys - ~53

The following assumptions are considered based on the existing performance as given above:

- Average room rate – INR 6000 per key²⁵
- Average Occupancy – 70%²⁶
- Non-room revenues - ~40% of room revenues
- Number of keys - ~53

Basis the above, peak escalated revenue is estimated at ~INR 14 Cr per year.

Feasibility Assessment

Most of the professionally operated hotels have an operating margin of ~25-35%. Given that the hotel would be given on PPP and would have upgraded infrastructure, and additional non-room revenues, an operating margin of 30% of gross revenue is assumed. The project, already operating at profit margin and reasonable facilities, is estimated to achieve a pre-tax pre-Authority pay-out IRR of ~50% over a 30-year period post refurbishment. This is considered sufficient for making the project viable for private participation, as the operator would have sufficient cashflows to pay to the Authority and realise profit.

Structuring and Implementation

From implementation perspective, the property can be given to a suitable private player identified by the TTDC for renovation on PPP. The contractor can avail the option to renovate, operate and maintain the property for a period of 30 years and pay TTDC in the form of annual licence fees / revenue share. Further, the detailed feasibility needs to be conducted to understand the suitable implementation models.

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 11,550²⁷ man-days of construction labour (spread across 1-3 years of implementation)

²⁵ ARR has not been increased from the current avg. room rate keeping in minf tha rack rates of hotels in vicinity

²⁶ Given the 60% occupancy rate of the existing facilities at the property, a 5% increase is projected with the proposed refurbishment.

²⁷ Estimated basis following assumptions:

During Operations: Jobs created during operations will entail:

- Entire O&M team (including housekeeping, admin, sales, booking, catering, civil etc.) = 106 man – days per day²⁸

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 29,200 man - days.

Increased tourist footfall

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

-
- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
 - Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
 - Assumed cost of labour assumed for computation = INR 700 per day

- Cumulative labour man-days = 30% * CAPEX / 700
- ²⁸ As per World Bank thumb rule, 12 man-days per day for 10-key 4-star hotel and 20 man-days for 10-key 5-star hotel.
As per HVS Report, in typical India hotels, manpower to room ratio for 4/5 star hotels is 2.11-2.70, for mid-market 1.52 and for budget hotels 0.72. We have assumed 2 for our computation.

9. Hotel Tamil Nadu, Kumbakonam – Hotel Riverside Resorts & Spa

Site Details

District:	Thanjavur
Name of Site:	Hotel Tamil Nadu, Kumbakonam
Site No:	Site 127 of 295
Site Use:	Hotel
Category:	F (Hotels)
Location:	10.9724, 79.3851
Land Area:	2.88 acres
Capacity:	14 rooms
Operator:	M/s Appu Hotels Pvt. Ltd.
Site Ownership:	TTDC
Occupancy:	60% ²⁹
Site Revenues:	INR 13 Lakhs (FY20) ¹
Connectivity	
d) Railway Station:	~4.5 km (Kumbakonam)
e) Airport:	~60 km (Thanjavur)
f) Highway:	~900m from SH-22; 2km from NH-36
Trails featured on:	Nil (Hotel)

Hotel Riverside Resort & Spa, Kumbakonam is a premium hotel catering to tourists and not just the average pilgrim. Its 14 rooms comprise of 10 double rooms and 4 cottages. The property has wellness offerings, such as spa, sauna, swimming pool and fitness centre. It is also excellently located within a ~3 km radius of

Kumbeswarar, Sarangapani and other famous temples. Though the tourist reviews suggest that the property is not as well maintained and over-charges in comparison to other properties in Kumbakonam. The hotel is currently franchised by TTDC to M/s Appu Hotels Pvt. Ltd., with the agreement ending in 2022.

Existing Condition

Location

The Hotel is ideally situated in Kondangudiillam; one of the city's most popular locales. Further, the resort complex is set along the Kaveri River, rendering it a pleasant backdrop and peaceful ambience. With its convenient location on Poompuhar Road, the hotel offers easy access to the city's must-see destinations, including:

- Shri Airavatesvara Temple – ~6 km
- Swamimalai temple – ~7 km
- Navagraha temple – ~12 km
- Vaduvur bird's sanctuary – ~45 km

²⁹ Received from Site Manager

Existing Layout and Uses

Spread over an area of ~2.88 acres, the resort houses 14 keys, with 10 AC Double Bedrooms and 4 AC Cottages. Other than rooms for accommodation, the resort complex accommodates:

- Restaurant & Bar – 36 seating capacity
- Meeting hall – 820 sq ft
- Board room - ~15 pax
- Parking - ~20 cars
- Swimming pool
- Stage
- Fitness centre
- Sauna
- Hot spring bath
- Spa

The accommodation (14 keys) is segregated into the following categories:

Category	Floor Area	Rack rate (per night)
Standard Rooms	~320 sq ft	INR 2,300
Cottages	~380 sq ft	INR 3,100

Operating Performance

- Lease Agreement
 - Duration – 15 years (2007 – 2022)
 - Escalation – 15% (every 3 years)
 - Initial lease amount – INR 16.2 lakhs p.a.
 - Current lease amount – INR 28.33 lakhs p.a.
- Financial Performance
 - Revenue – INR 13 lakhs
 - Occupancy – 60%
- Arbitration case ongoing, due to management and payment issues

Masterplanning Considerations

Applicable Regulations

Tamil Nadu Combined Development and Building Rules, 2019 – As per Rameswaram Master Plan, most of the site area lies in a Residential zone, with a part of it lying in commercial zone. The permissible uses include:

Residential Buildings | Parks, playgrounds, farms, gardens | Public Utility Buildings | Swimming Pool, Daily or weekly markets | Hotels, Restaurants, Hostels, Dormitories, Boarding and Lodging houses | Retail establishments and shops, Departmental stores, Taxi stands and car parking multi-level parking | Religious buildings | Retail | Research | Helipads | Preview theatres and dubbing theatres

Key Sensitivities

There is no specific environmental/social sensitivity to be addressed at the site.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 6A Framework:

1. **Attraction** – The main attraction of the resort is its convenient stay and wellness offerings, including swimming pool, spa, sauna and fitness centre - making it one of the most prime hotels in Kumbakonam. Further, the resort’s attraction value is augmented multi-fold by its location:
 - along the Kaveri river, rendering a peaceful and pleasant ambience
 - proximity to multiple temples that have been identified as tourist sites, lying within ~4 km from the site
2. **Accessibility & Mobility** – The resort, being located on Poompuhar Road, enjoys excellent road accessibility from all parts of the city. Further its proximity to transport hubs, Kumbakonam railway station at a distance of ~2 km and bus stand located ~1.5 km away, offers various locational benefits.

Parking – The site has parking capacity for ~20 cars.

3. **Amenities** – The resort offers quality amenities to its guests:
 - Accommodation – 14 well-appointed rooms
 - Children’s swimming pool
 - Meeting / Wedding Hall
 - Spa – offering steam and sauna bath, massages, therapy, etc

- Safety & Security – 3 guards deployed on 3 shifts and 10 CCTV cameras installed
 - Other services like valet parking, in-house laundry, money exchange, airport pick-up and drop, etc.
4. **Awareness** – This hotel is famous among families visiting Kumbakonam and international visitors. While foreign tourists comprise 30% of its guests, the rest 70% are visitors from states like Karnataka, A.P., and Tamil Nadu. The locals visit the site for its wellness offerings. The resort has representation in many online booking sites such as TripAdvisor, Agoda, goibibo, MakeMyTrip, yatra, etc.
5. **Activities** – Other than accommodation, many conferences, weddings and cultural events are hosted at the resort. The resort is also highly visited for its spa and fitness centre. Other activities at the site include photoshoots and swimming classes for children.
6. **Accommodation** – Hotel Tamil Nadu (Riverside Resorts and Spa), Kumbakonam is located in the outskirts of the town with many budget friendly as well as 4/5 star hotels in its vicinity.

Market Offerings

The hotel site is currently an operational hotel - with rooms for stay, restaurant, spa and fitness centre as its main offerings.

The tariffs for hotels within a ~2 km range are given below:

Hotel Name	Category	Tariff*
Jeeyam Residency	1 - star	INR 1500
Navagraha Homestay	2 - star	INR 1200
Hotel Vinayaga	2 - star	INR 1500
Sara Regency	3 - star	INR 2000
Poopys SET Residency	3 - star	INR 2000
DSR Madhanam Inn	3 - star	INR 2500

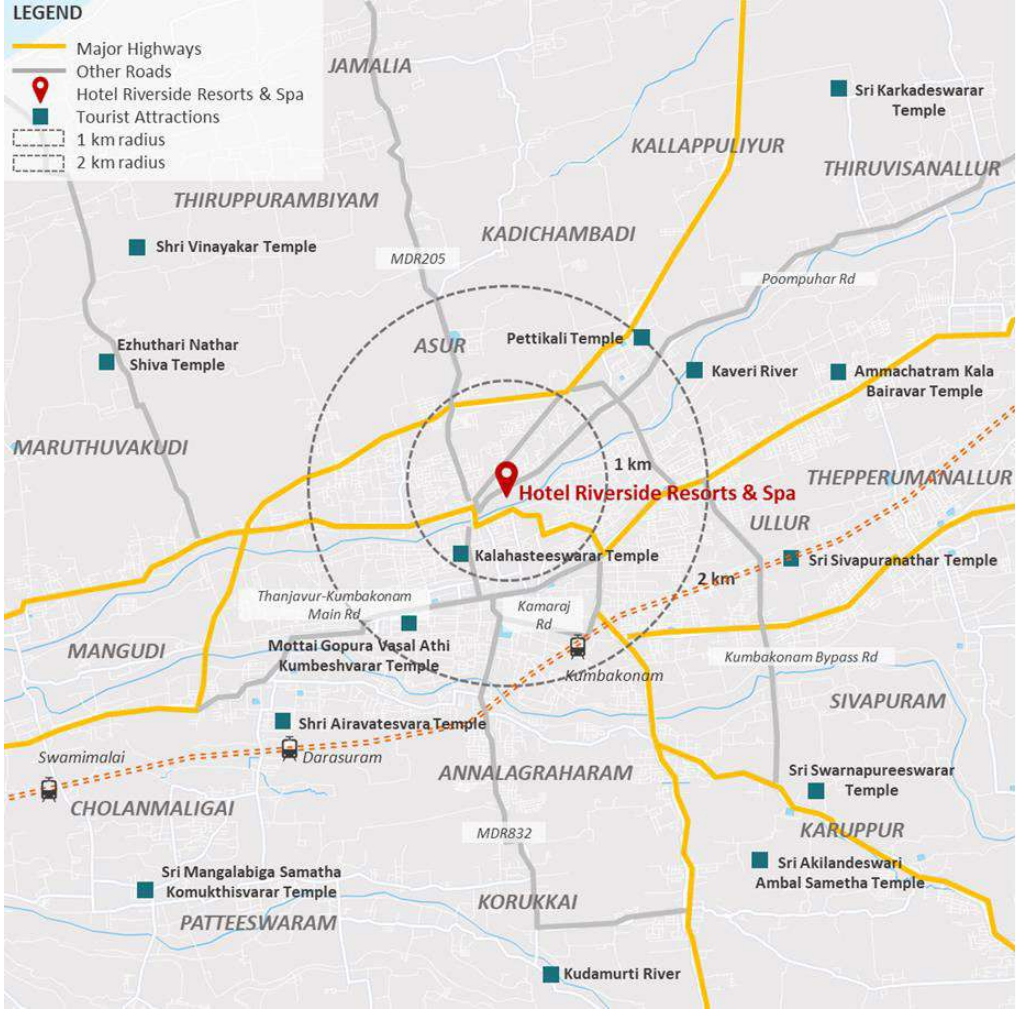
Hotel Name	Category	Tariff*
OVM Resorts	3 - star	INR 3000

*Standard Double Room Tariff

Figure 9-1: Competitive hotels / resorts near the site



Figure 9-2: Location & Existing Layout, Hotel Riverside Resorts & Spa



- 1 – Kids swimming pool
- 2 – Front office
- 3 – Restaurant
- 4 – Banquet hall
- 5 – Cafeteria
- 6 – Admin
- 7 – Standard room
- 8 – Bar
- 9 – Pool
- 10 – Fitness centre
- 11 - Cottages
- 12 - Stage

Site Pictures



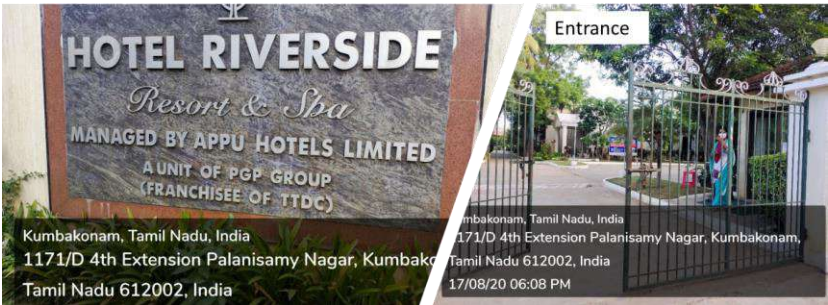
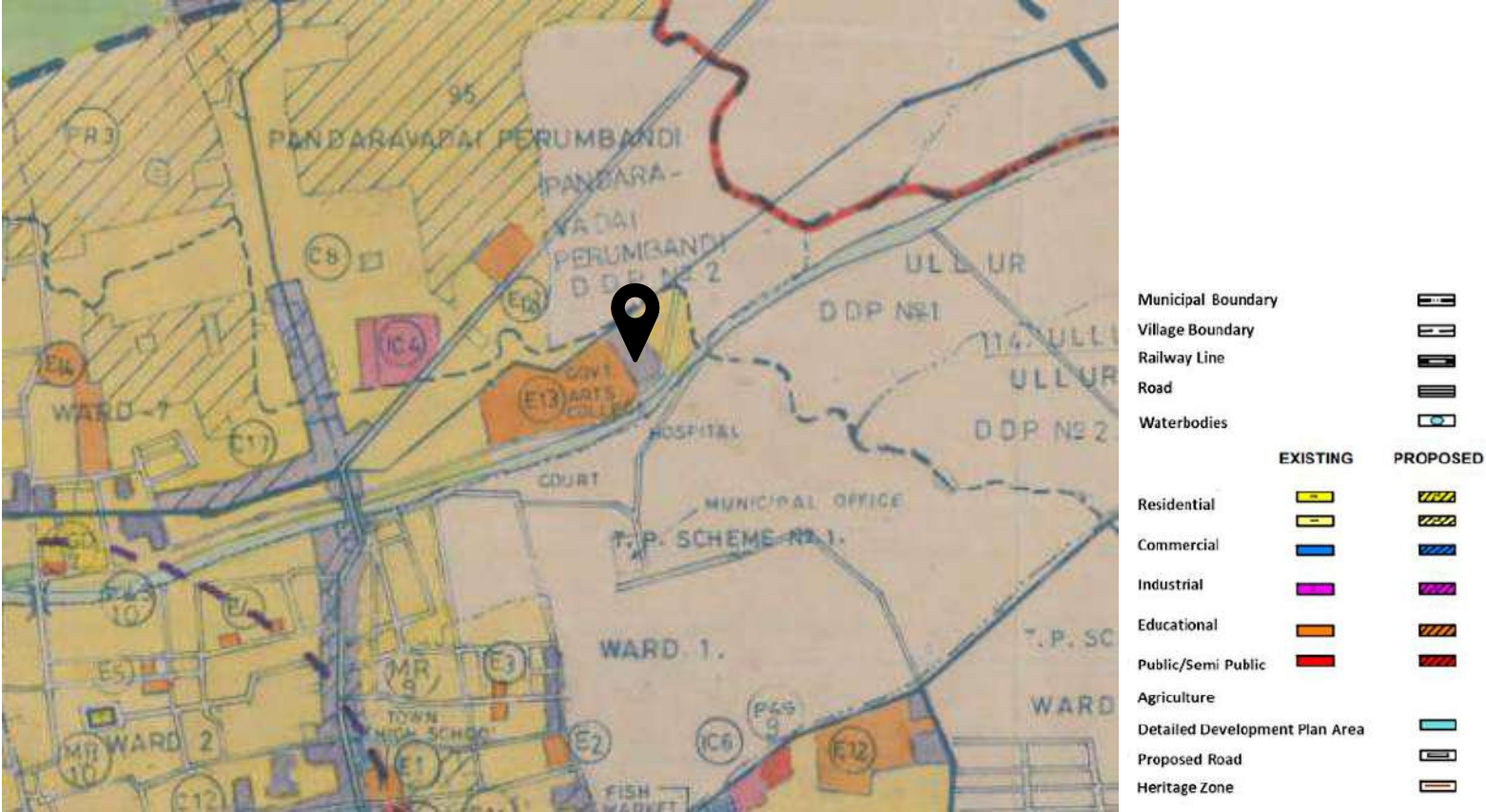


Figure 9-3: Land-use Zone, as per Kumbakonam Master Plan



Vision for the Site

Hotel Riverside Resorts & Spa is a well-developed and well-maintained TTDC property given on franchisee. The hotel's lease period is ending in 2022, after which the site will be transferred back to TTDC.

Considering the locational advantage, array of facilities and visitor engagement options, the intent is to run and maintain the hotel property efficiently with the involvement of a private operator. Further, the resort can be further promoted as an experiential destination resort with wellness offerings.

- **Target Visitor** – Given the reasons stated above, the site has ample potential to become a preferred destination for domestic as well as high value tourists visiting tourist attractions in and around the city along with catering to guests looking for event venues, rejuvenation offerings, business meetups, etc.

Proposed Master Plan

Approach to Master Planning

The state of the current hotel building and surroundings needs only refurbishment and maintenance, for which a private operator is suggested to be onboarded after the end of the current lease period. The upcoming operator will have to do refurbishment of the resort and minor additions to increase its wellness offerings. Other than that, the hotel property needs to be promoted and advertise itself as an experiential destination resort.

Hard Interventions

1. **Refurbishment of Resort Complex** – To match the current trends and compete with the similar offerings, the resort would need refurbishments and upgradations:
 - Improved upkeep of the rooms with regular housekeeping
 - Renovation of restaurant interiors with contemporary seating arrangement and furniture
 - Restaurant Menu should be expanded with a variety of cuisines
 - Provision of modern amenities in rooms like minibar, card key, Wi-Fi, etc.

Soft Interventions

1. **Expansion of wellness offerings** – The resort should position itself as a preferred destination for wellness offerings and augment its infrastructure. The intent should be to compete with such destinations not just in Tamil Nadu but also nearby states, thus increasing the catchment.
2. **Creation of experiences** – Various experiences can be created to attract and engage visitors, especially HVT and millennial tourists looking for unique experiences. The resort can link with various institutions in the town that are associated with such unique activities, such as Vedic school, kalamkari art form practitioners, pattu silk weavers, etc.
3. **Promotion** – The resort must be promoted as a destination resort amongst not only the traveller groups visiting Kumbakonam and surrounding region, but also to groups looking for wellness / rejuvenation stays
 - This can be done through diversified marketing tactics using online platforms and social media.
 - Creating connections with tour group companies
 - Tie-ups with event management companies can popularise the space for events

Trunk Infrastructure

As this site has good accessibility, it does not need any improvements in the trunk infrastructure.

The hotel will be taken on PPP with the upcoming operator to take up refurbishment of the existing hotel complex.

Projects Identified

#	Project Component	Scale
1	Refurbishment of Existing Resort Complex	14 keys

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in Glossary of Interventions.

#	Project Component	Cost (INR Lakhs)
1	Refurbishment of Existing Resort Complex	140
Total		INR 140 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- Revenues are escalated at 5%.
- Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

Existing Operating performance:

- Average room rate – INR 2600 per key
- Average Occupancy – 60%
- Number of keys - ~14

The following assumptions are considered based on the existing performance as given above:

³⁰ Given the 60% occupancy rate of the existing facilities at the property, a 10% increase is projected with the proposed refurbishment.

³¹ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour

- Average room rate – INR 3200 per key
- Average Occupancy – 70%³⁰
- Non-room revenues - ~50% of room revenues
- Number of keys - ~14

Basis the above, peak escalated revenue is estimated at ~INR 2 Cr per year.

Feasibility Assessment

Most of the professionally operated hotels have an operating margin of ~25-35%. Given that the hotel would be given on PPP and would have upgraded infrastructure, an operating margin of 25% of gross revenue is assumed. The project is estimated to achieve a pre-tax pre-Authority pay-out IRR of ~35% over a 30-year period. This is considered sufficient for making the project viable for private participation, as the operator would have sufficient cashflows to pay to the Authority and realise profit.

Structuring and Implementation

From implementation perspective, the property can be given to a suitable private player identified by the TTDC for renovation on PPP. The contractor can avail the option to refurbish, operate and maintain the property for a period of 30 years and pay TTDC in the form of annual licence fees / revenue share. Further, the detailed feasibility needs to be conducted to understand the suitable implementation models.

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 6,000³¹ man-days of construction labour (spread across 1-3 years of implementation)

- Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
- As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
- Assumed cost of labour assumed for computation = INR 700 per day
- Cumulative labour man-days = 30% * CAPEX / 700

During Operations: Jobs created during operations will entail:

- Entire O&M team (including housekeeping, admin, sales, booking, catering, civil etc.) = 28 man – days per day³²

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 15,100 man - days.

Increased tourist footfall

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

³² As per World Bank thumb rule, 12 man-days per day for 10-key 4-star hotel and 20 man-days for 10-key 5-star hotel.

As per HVS Report, in typical India hotels, manpower to room ratio for 4/5 star hotels is 2.11-2.70, for mid-market 1.52 and for budget hotels 0.72. We have assumed 2 for our computation.

10. Hotel Tamil Nadu I, Rameswaram

Site Details

District:	Ramanathapuram
Name of Site	Hotel Tamil Nadu I
Site No:	Site 256A of 295
Site Use:	Hotel
Category:	F (Hotel)
Location:	9.2912, 79.3224
Land Area:	6.65 acres
Capacity:	63 rooms
Operator:	TTDC
Site Ownership:	TTDC
Occupancy:	56% (FY20)
Site Revenues:	INR 3.08 crores (FY20)
Connectivity	
a) Railway Station:	2.5 km (Rameswaram)
b) Airport:	160 km (Madurai)
c) Highway:	1.5 km from NH-87
Trails featured on:	Nil (Hotel)

Hotel Tamil Nadu, Rameswaram is a sea facing luxury hotel strategically located near the Ramanathaswamy Temple and inaugurated in 1972. The hotel has a variety of sea facing rooms and suites with limited facilities. The major drawbacks for the hotel are its decor / fitouts (quality of beds, fittings, furniture) and in-ability to pull high-value pilgrims / tourists. Current performance of the hotel is also below par (For example - Average room rent comes to approx. INR 2,400 - as against the potential of positioning the hotel as a premium hotel with ARR >INR 5,000). Also, the development potential of the site is not fully utilized as of now.

Rameswaram is a large pilgrim destination. With increasing spending power of domestic pilgrims and high foreign tourist footfalls to the place, there is immense potential for hospitality market catering to non-pilgrim tourists and high-spending pilgrims. Given its location, the Hotel Tamil Nadu-1 thus is one of the best located sites in Rameswaram. Hence, the planning for the site is done considering the overall revamp of the site to attract the un-tapped market. The planning also considers the existing landscape of the site and strives to use it to its advantage by creating a sustainable destination focussed on wellness theme.

Existing Condition

Location

Hotel Tamil Nadu is easily accessible via National Highway 87 in Rameswaram. It is a sea facing hotel strategically located at a walking distance from the Ramanathaswamy temple. Its surroundings have high density residential development with narrow street network on the western site. Some prominent landmarks nearby are Ramanathaswamy Temple, Agnitheertham, Sri Panchmukhi Hanuman Temple etc.

Existing Layout

The 6.6-acre irregular shaped plot is located abutting the Olaikaddu Road and sea. At present there is ample amount of vacant land available within the site with low development around.

Existing Uses

At present, majority of the site is vacant. The built structure occupies a small portion of the site, housing the TTDC restaurant. The Site is being used for various functions, as listed below:

- **Hotel** –
 - Old Building block- It is a G+1 structure with Double bedrooms (AC and Non-AC) and two Suite rooms. BUA- 13,614 sqft
 - New Building block- It is a G+2 structure with Double bedrooms (AC and Non-AC) and 2 suite rooms. BUA- 4344 sqft
 - Yatri Niwas- It is a G+2 structure with non-AC rooms. BUA- 18,526 sqft
- **Accommodation** – This consists of 63 keys with the following Room Categories:
 - Triple bed – A/c (15 no.) – Tariff INR 2,600
 - Triple bed – Non-A/c (4 no.) – Tariff INR 1,900
 - Suite A/c (4 no.) – Tariff INR 5,000
 - Deluxe Double Room A/c (19 no.) – Tariff INR 2,800
 - Deluxe Double Room Non-A/c (19 no.) – Tariff INR 980
 - A/c four bedded (2 no.) – Tariff INR 2,800
- **Restaurant/Bar** – The Hotel houses an 80-seater restaurant as an annexure building
- **Car Parking** – The Site has a capacity for 20-25 cars.
- **Managers quarters and Store rooms** at the back side of the building.
- A non-operation bar and driver dormitory room
- There is also **Children’s Playground** on Site.

- Tourist Arrival
 - Domestic footfall – 28,015 (FY20)
 - International Footfall – 55 (FY20)³³
- Peak season
 - May and November
- General Occupancy
 - Rooms – 56% (on normal days)³⁴
 - Festivals – 90%
- Financial performance
 - Revenue – INR 3.08 crores (FY20)
 - Net Profit – INR 22.24 lakhs (FY20)³⁵

Master Planning Considerations

Applicable Regulations

1. **CRZ³⁶ Regulations** – As per CZMP Map, the site lies in CRZ-II (Developed Area).
CRZ-II region – Land reclamation for seaport projects, reconstruction of authorized buildings without change in land-use, temporary tourism facilities.
2. **Tamil Nadu Combined Development and Building Rules, 2019** – As per Rameswaram Master Plan, site lies in a Residential Zone. The permissible uses include:

Residential Buildings | Parks, play grounds, farms, gardens | Schools | Swimming Pool, Daily or weekly markets | Hotels, Restaurants, Hostels, Dormitories, Boarding and Lodging houses | Retail establishments and shops, Departmental stores, Taxi stands and car parking multi-level parking | Religious buildings | Government Offices etc.

Operating Performance

³³ Received from Site Manager

³⁴ Received from TTDC

³⁵ Received from TTDC

³⁶ Coastal Regulation Zone

The site does not hold any environment or social sensitivities to address in master planning. There are trees on the site. Master planning has considered minimum tree cutting.

Key Issues to Address

Baseline Stage are summarised below along the 6A Framework:

1. **Attraction** – The site has locational advantage as it is overlooking the sea and provides picturesque views from the rooms. The overall attraction value is derived from its location and proximity to important religious sites of Rameswaram like Ramanathaswamy temple, Agnitheertham, Dhanushkodi etc.
2. **Accessibility & Mobility** – The site enjoys good access from the Sannadhi street via NH 87 in Rameswaram. The Bus Stop/Auto stand within 500m of the site. The approach road is a two-laned road which is frequently congested at the temple entrance restricting ease of tourist movement for the site.
3. **Amenities** – The hotel facilities are worn out and need to be upgraded. The surroundings and exterior upkeep of the hotel and open grounds is good.
 - The interiors lack modernised and aesthetic design
 - The restaurant capacity and menu are limited.
 - The site lacks adequate dustbins, streetlights and working CCTV.
 - The children playground in front of the old block is not well kept.
 - There is constant issues of network and Wi-Fi faced by the guests.
4. **Awareness** – The Site is a sea facing property. It is within 500m walking distance from Ramanathaswamy temple which attracts high domestic as well as

Parking – The Site has a designated parking area with about 20-25 car spaces. Vehicles are parked on paved areas in the foreground of the building structure.

international tourists. The hotel sells its rooms only through TTDC’s website and walk-ins. The hotel does not have presence on travel aggregator websites (MakeMyTrip, Expedia, etc.). This deprives the website of a credible source of user feedback and review system.

5. **Activities** – Other than the restaurant and children play area, there are no other activities within the Site. Outside the Site there are local retail shops and food outlets. The hotel mainly serves tourists visiting Ramanathaswamy temple.
6. **Accommodation** – Hotel Tamil Nadu is located near Ramanathaswamy temple with +100 budget hotels in close vicinity. For E.g., Jiwan Residency, Hyatt Place, Daiwik Hotel etc. On comparing prices, Hotel TTDC is overpriced with the quality of services provided, though it is the best sited hotel due to its strategic locational proximity to the sea.

Market Offerings

The hotel site is currently an operational hotel - with rooms for stay and restaurant as its main offerings.

The tariffs for hotels near Hotel Tamil Nadu I, Rameshwaram are given below:

Hotel Name	Category	Tariff*
Jiwan Residency	3-Star	INR 2,400
Hyatt Place	4-Star	INR 4,200
Daiwik Hotel	3-Star	INR 3,800
Hotel Pearl Residency	2-Star	INR 1,600
Hotel SS Grand	3-Star	INR 2,400

*Standard Double Room Tariff

Figure 10-1: Location & Existing Layout



Site Pictures

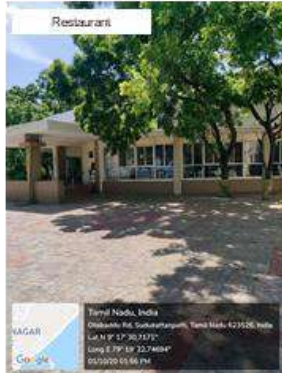
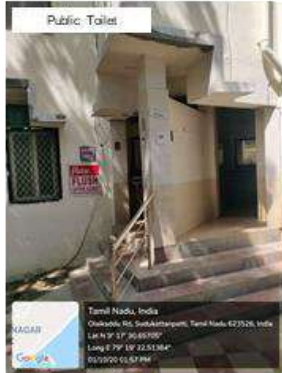
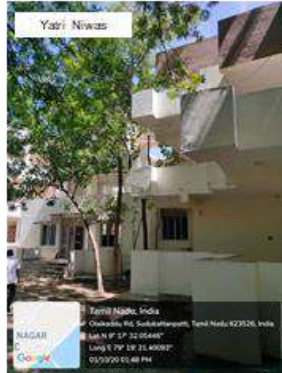
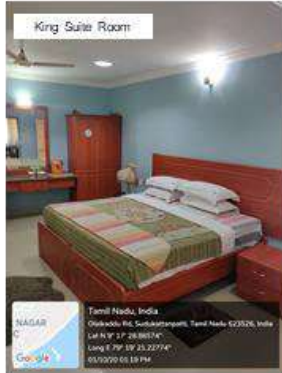
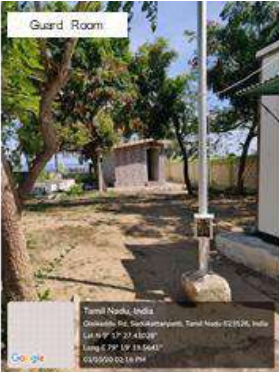
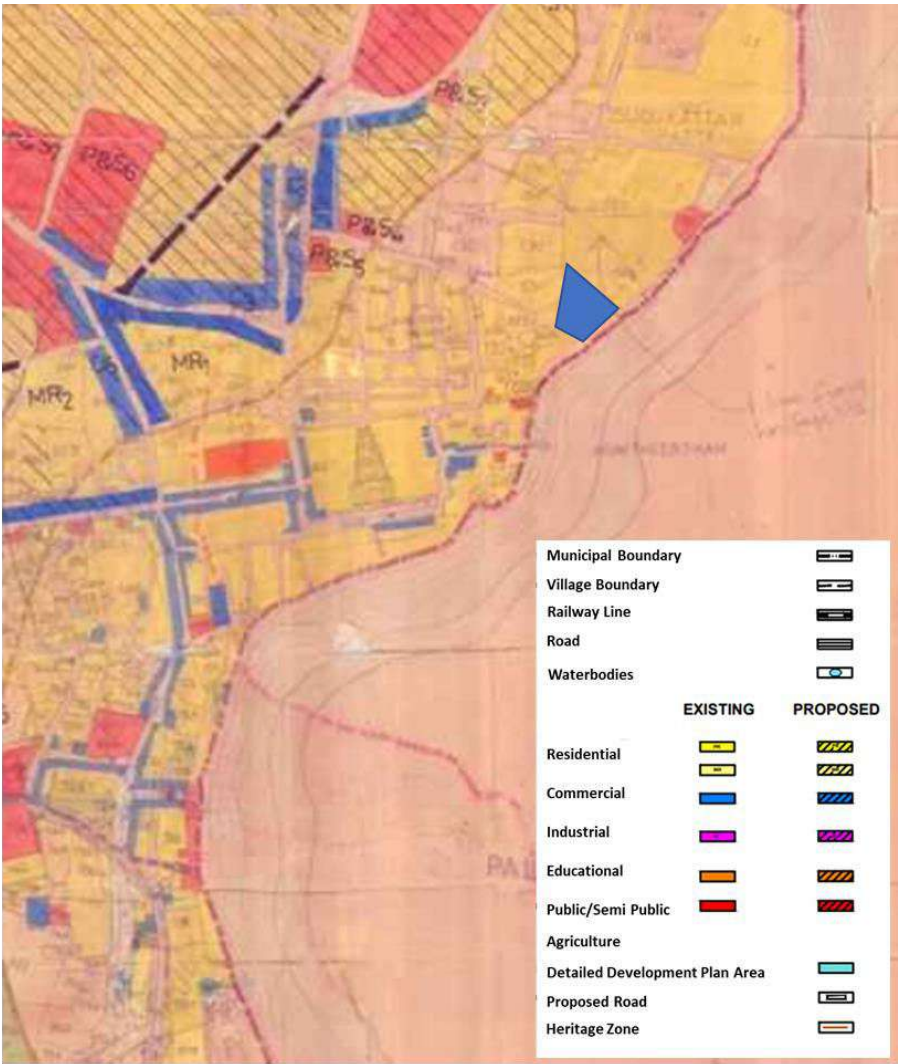
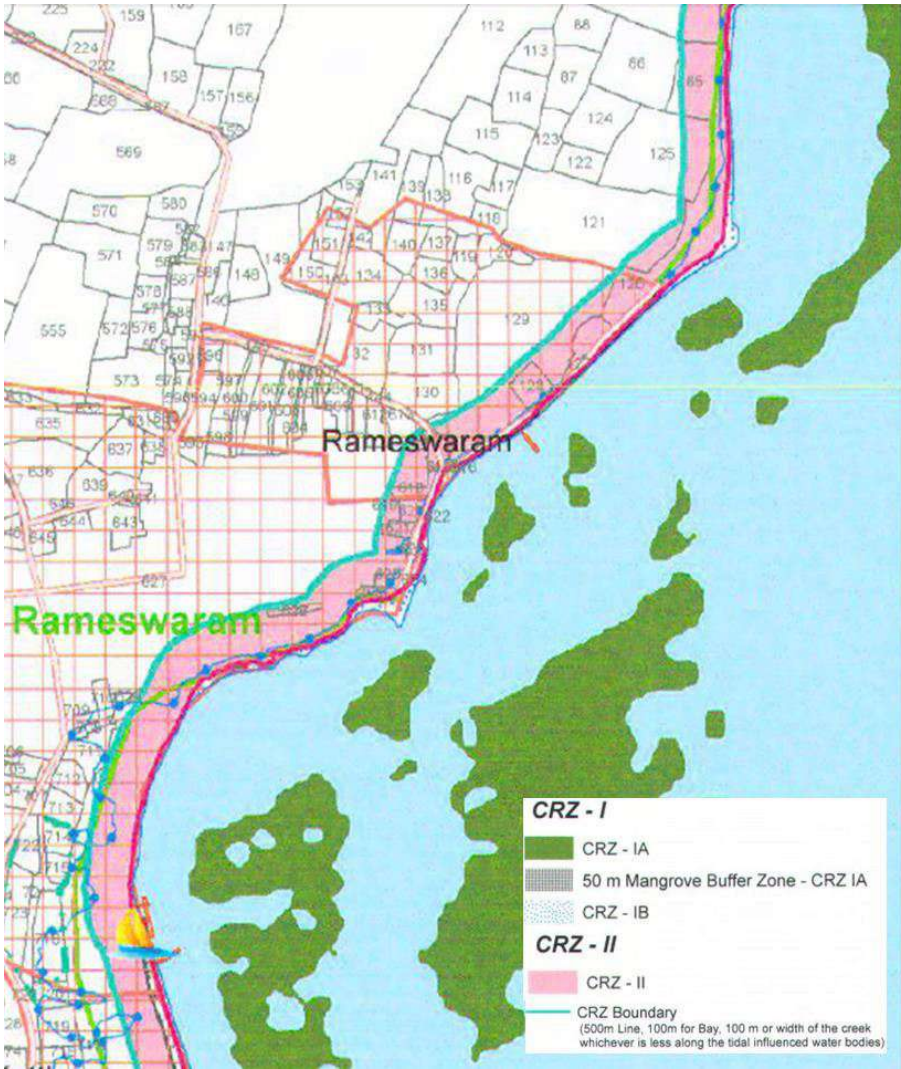


Figure 10-2: Land Uses and Coastal Regulation Zone at the Site



Vision for the Site

- Hotel Tamil Nadu, Rameswaram is strategically located within walking distance of the main attraction: the Ramanathaswamy Temple. Moreover, the hotel site is located next to the seafront with unobstructed view from its sea facing rooms across beautiful Bay. The current hotel with its old-fashioned layout, décor, architecture, lack of amenities and underutilization of the plot and views, doesn't do justice to the Site and is a missed opportunity to catch the high-value tourist market.
- Considering the favourable climate, the views on offer across the sea and the large green site available, the hotel should be redeveloped into a Resort Style-4 Star hotel, with all the amenities and facilities, like a large swimming pool, well maintained gardens, spa etc.
- The Hotel should be marketed as not just a place to stay for tourists who want to visit the Ramanathaswamy Temple, but as a destination resort, where one can relax for a few days and explore other leisure opportunities, like boating, snorkelling and diving at the Gulf of Mannar Marine National Park etc.

Currently only JKR Resort and Spa offer similar facilities. However, the location, sea views and large green grounds give this Hotel Tamil Nadu Site a unique USP, which the competition can't match. The redevelopment of the Pier and waterfront in front of the hotel as a new Water sports hub – is part of that Vision.

- **Target Visitor** – Given the reasons as stated above, the Site has ample potential to become a preferred hotel for the higher segment of the domestic and foreign tourists market. To entice this part of the Tourist market to travel all the way to this remote corner of Tamil Nadu, tourists need to be offered a luxury 4 star Hotel accommodation which makes the hotel attractive enough to stay multiple nights and to relax from the long journey.

Proposed Master Plan

Masterplan Concept

- Considering the huge (commercial) potential of the Site as not just a Hotel for visitors to the Temple but as a 4 star destination resort, all the old and out-dated hotel buildings need to be demolished to make way for a much more suitable hotel layout, that makes the most of the orientation towards the open views across the sea and the ample green cover of large mature trees at the heart of the Site.
- The newly developed hotel block on the site is retained with some refurbishment to facade.
- The hotel design is recommended to follow a contemporary Modern Tropical Design style that is popular with international travellers. Use of a modern design vocabulary with a strong focus on sustainability, offering a unique Sense-of-Place, by using traditional architectural elements in the layout and design of the hotel and making the most of the sea views.
- The modern traveller expects to be offered at their Hotel-Resort a unique, relaxing experience that allows them to spend as much time outdoors as possible, with a focus on indoor spaces which seamlessly flow into ample outdoor rooms and covered spaces. Comprehensive landscaping is therefore an important part of the redevelopment of the Site into a Resort of International Standards. Extensive landscaping that would be required will focus on planting of trees shrubs and grasses, hard landscaping, lighting, and ample seating offering different settings for al-fresco eating areas, play areas, meditation, and yoga gardens etc.

Hard Interventions

1. 4 Star Hotel – Resort – Main Building

- 3-4 floor main buildings housing the entrance lobby, reception, back of house facilities, restaurant/bar, hotel rooms etc.
- The main building is U-shaped, making the most of the site area that has the least tree cover. All rooms have a green view of the beautiful large trees. The longest wing is oriented along the seafront to give as much guests as possible a sea-facing room. This is also the preferred location for the most popular part of the hotel: the restaurant and swimming pool.

Infrastructure created – 6000 sqm built up area



Modern Tropical Hotel Design with a focus on seamless indoor-outdoor spaces

2. 4 Star Hotel – Resort – Cottages

- Scattered through the area with the dense tree cover are cottages each having with two separate units.
Infrastructure created – 1000 sqm built up area

3. 4 Star Hotel – Resort Amenities

- The Hotel will offer one large restaurant indoor with also an al-fresco dining area outside.
- The Bar of the existing hotel was closed by temple authorities as it was ‘too close’ to the Temple. Locating a bar at the far end of the Site, which will make it more than 500 meters from the Ramanathaswamy Temple, could be a possible solution. In case it is not acceptable on religious grounds, bar may be completely skipped.
- Most important amenity of the Hotel is a large Swimming Pool.
- A separate building hidden among the trees could be planned as a Wellness Centre, with Gym and Spa

4. Meditation Garden

- The large green cover at the Site should be used to its advantage to create a peaceful garden with a focus on outdoor relaxation, meditation, yoga, wellness
- Pathways allow guests to have peaceful walks in the grounds and small gazebos hidden among the trees as spaces for meditation.



Use of the large green cover at the Site to create a peaceful garden with focus on relaxation, meditation, yoga, wellness

5. Seafront Transformation into Pedestrian Friendly Waterfront Promenade and Pier

- Some land along the Olaikaddu Road in front of the Hotel could be reclaimed allowing tourists a much more comfortable walk from the main Hub (the Ramanathaswamy Temple and the Ghats) just around the corner towards the Hotel and the Pier and vice-versa.
- This area should be planned properly into an attractive pedestrian only Waterfront Promenade, with ample seating, shaded areas, palm trees and a combination of soft and hard landscaped areas.
- The Pier itself will also need to be modernised and become a proper Gateway for all kinds of Tourist Water Transport and Water sports activities in the area (snorkelling, diving etc).
- The synergy between the new Resort style Hotel and the Pier as the new Water sports hub – will help in putting Rameswaram on the map as a not just a religious destination but for a leisure holiday too.

The cost of this development is covered in separate master plan.

Soft Interventions

- 1. Promotion** – The Tourism Department may promote and advertise the hotel's attributes and luxury facilities at various tourist destinations.

Trunk Infrastructure

As the Site has excellent connectivity, no trunk infrastructure interventions are required.

Projects Identified

#	Project Component	Scale
1	4 Star Hotel – Resort	
i)	Main Building + Resort Amenities	1000 sqm BUA
ii)	Cottages	6000 sqm BUA
2	Seafront Transformation into Pedestrian Friendly Waterfront Promenade and Pier	4000 sqm



Land reclamation in front of hotel to create Boulevard



Modernisation of Pier as Gateway for range of Tourist Water Transport and Water sports

Feasibility Assessment

The following considerations have been accounted for the cost projections of proposed interventions at this site:

- Feasibility of the cashflows projected here are accounted only for the additional components master planned.
- The current operating & maintenance cost of the site have not been considered.

Capital Expenditures

The cost of the different project components proposed in the masterplan is calculated basis the current market price considering the appropriate escalations.

#	Project Component	Cost (INR Lakhs)
1	4 Star Hotel – Resort	800
2	Cottages	4000
3	Swimming Pool	20
4	Landscaping	200
Total		INR 50 Cr

Revenues - Proposed projects

The following assumptions are taken:

- Average room rate – INR 5000 per key
- Average Occupancy – 70%
- Non-room revenues - ~50% of room revenues
- Number of keys - ~120

Basis the above, peak un-escalated revenue is estimated as ~INR 22-25 Cr.

³⁷ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day

Assessment

Typical premium resorts have a profit margin of 30-35% of gross revenue.

Given this, the project is estimated to achieve a pre-tax project IRR of ~22% over a 30-year period.

This is considered as sufficient for making the project viable for private participation.

Structuring & Implementation

From implementation perspective, the land can be given to the private player for development on PPP where the operator is required to design, develop, build, and furnish with an option to operate and maintain the property for a concession period of 50 years with annual pay-outs to the authority. Further, the detailed feasibility needs to be conducted in order to understand the suitable implementation models.

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 2.15L³⁷ man-days of construction labour (spread across 1-3 years of implementation)

During Operations: Jobs created during operations will entail:

- Entire O&M team (including housekeeping, admin, sales, booking, catering, civil etc.) = 253 man – days per day³⁸

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above*

○ Assumed cost of labour assumed for computation = INR 700 per day

• Cumulative labour man-days = 30% * CAPEX / 700

³⁸ As per World Bank thumb rule, 12 man-days per day for 10-key 4-star hotel and 20 man-days for 10-key 5-star hotel.

As per HVS Report, in typical India hotels, manpower to room ratio for 4/5 star hotels is 2.11-2.70, for mid-market 1.52 and for budget hotels 0.72. We have assumed 2 for our computation.

- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 5.40L man - days.

Increased tourist footfall

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.

- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

Figure 10-3: Proposed Masterplan



- 1 Entrance Lobby
- 2 Main Building with Restaurant/Hotel Rooms
- 3 Hotel Rooms
- 4 Back of House
- 5 Cottages
- 6 Swimming Pool
- 7 Al Fresco Dining
- 8 Spa/Gym
- 9 Waterfront Promenade
- 10 Meditation Garden

11. Hotel Tamil Nadu II, Rameswaram

Site Details

District:	Ramanathapuram
Name of Site	Hotel Tamil Nadu (GOI Aviation Research Centre)
Site No:	Site 256B of 295
Site Use:	Hotel
Category:	F (Hotel)
Location:	9.3263, 78.9717
Land Area:	6.10 acres
Capacity:	NA
Operator:	GOI Aviation Research Centre
Site Ownership:	TTDC
Occupancy:	NA
Site Revenues:	NA
Connectivity	
a) Railway Station:	15 km (Ramanathapuram)
b) Airport:	140 km (Madurai)
c) Highway:	Accessible via AH-43

Trails featured on: **Nil (Hotel)**

Note- The site is primarily used by the navy as a reconnaissance station to monitor the South East Bay of Bengal, the northern Indian Ocean, the Gulf of Mannar and the Palk Strait. The entire area is protected under the National Border Security. The concerned authorities at site **Denied Access** for conducting any kind of surveys and feasibility studies. The subject was escalated and discussed with the TTDC officials

as well. No tourism interventions and proposals are feasible for the site within the existing use.

Hotel Tamil Nadu II is leased by TTDC to a GoI Aviation Research Centre, currently being operated as a part of the Indian Naval Air Station under the Indian Navy. The site authorities denied access for conducting any surveys or feasibility studies owing to National security concerns.

The lease is expected to be extended with the GoI from TTDC for the existing purposes, therefore no tourist related proposals are feasible for the site.

Existing Condition

Location

Indian naval air station is located near Uchipuli in the Ramanathapuram district, Tamil Nadu. It is 17 km away from Ramanathapuram and easily accessible via AH 43 (Madurai – Rameswaram Hwy).

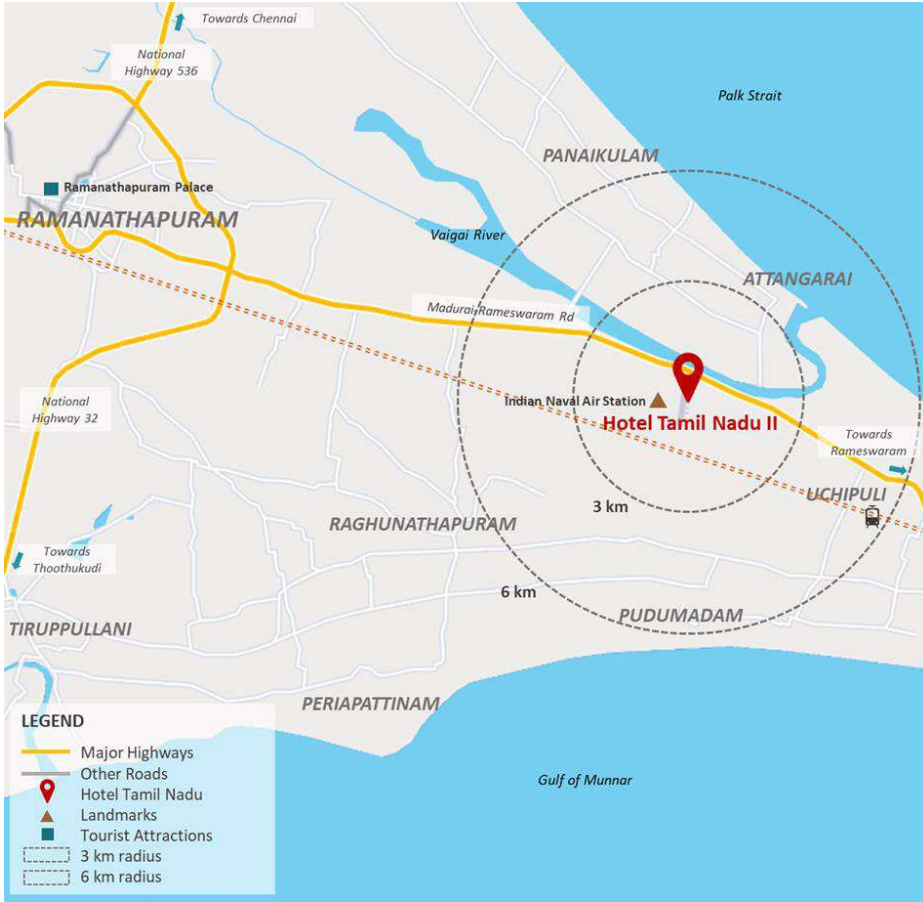
The site is remotely located with hardly any habitation around. It lies on the banks of the Vagai river and is surrounded by paddy fields on the south and salt pans in the northern side. The entire area is protected under the National Border Security.

Lease Agreement

The 6.1 acres of land is owned by TTDC and rented out on lease to GOI Aviation Research Centre at INR 54,266 per month. The period of lease is from 21.12.2006 to 20.12.2021.

The site does not hold any potential for developing a TTDC hotel in future as in the preferred scenario, the lease would be extended by TTDC to the GOI Aviation Research Centre.

Figure 11-1: Location & Existing Pictures



12. Hotel Tamil Nadu, Kanyakumari

Site Details

District	Kanyakumari
Name of Site	Hotel Tamil Nadu
Site No:	Site 289 of 295
Site Use:	Hotel
Category:	F (Hotel)
Location:	8.0806,77.5464
Land Area:	10.71 acres
Capacity:	61 rooms
Operator:	TTDC
Site Ownership:	PWD (on lease to TTDC)
Occupancy:	40% (FY20)
Site Revenues:	INR 2.26 Crore
Connectivity:	
a) Railway station:	~1.5 km (Kanyakumari)
b) Airport:	~90 km (Trivandrum)
c) Highway:	Abuts NH-44
Trails featured on:	Nil (Hotel)

Hotel Tamil Nadu Kanyakumari is primarily located in proximity to various tourist attractions in Kanyakumari. Situated on NH-44, the hotel gets immense advantage with respect to visibility and accessibility. It is a mid-segment hotel, owned and operated by TTDC. Currently, the hotel houses 61 keys, a restaurant and a bar. Situated on the southern coastline of India, the hotel offers beautiful views of the sea and has great potential to be further developed to cater to HVT tourists.

Existing Condition

Location

The hotel is well-located in Kanyakumari, in proximity to Kanyakumari Beach and various tourist attractions. Abutting NH-44 on the north and Beach road on the south of the site, the hotel is located at a distance of ~1.5 km from Kanyakumari Railway Station. Other tourist attractions located near the temple include Kamarajar Memorial Park (400m), Bagavathi Amman Temple (800m), Kanyakumari Sunset Point (2km) and Vivekananda Rock Memorial & Tiruvallur Statue (750m).

Existing Layout

Spread over an area of 10.71 acres, the hotel site houses the following-

- Main Building Block- accommodates the reception and 19 AC and 5 Non-AC double-bedrooms in a G+1 structure.
- Cape Hotel- heritage building with 9 AC double bedrooms and 1 Non-AC family (6-bedded) room
- Cottages with sea view- 3 AC deluxe cottages and 10 AC ordinary cottages
- Family room block- 5 Non-AC three-bedded rooms, 4 Non-AC four-bedded rooms and 1 Non-AC double bedroom.
- Tourist Reception Centre- houses 4 Non-AC double bedrooms
- Restaurant with a seating capacity of 40 pax.
- Bar with a seating capacity of ~20 people.
- Convention hall with a capacity to hold 60 pax
- Parking space for ~50-60 cars

- Other utility areas like pump room, generator room, etc.

Existing Uses

- **Accommodation** – The main building block 24 rooms while the Cape hotel building accommodated 10 rooms. In addition to this, there are 13 cottages and 10 family rooms.
- **Restaurant/Bar** - The hotel has a restaurant with a seating capacity of 40 people and a bar space with a capacity of 20 pax
- **Convention Hall** - The hotel premise also has a convention hall with a capacity of ~60 people

Operating Performance

- The revenue of the hotel in FY 2020 was ~INR 2.26 Cr, with a net profit of ~INR 14.32 lakhs. The revenue split is as follows:
 - F&B – 99.4%
 - Others – 0.5%

Master Planning Considerations

Applicable Regulations

1. **Tamil Nadu Combined Development and Building Rules, 2019** – The site is falling under the coastal regulation zone in the Kanyakumari Local Planning Area- Master Plan map. Therefore, all the developments should follow the rules as per the coastal regulation zone guidelines.
2. **CRZ³⁹ Regulations** – As per CZMP Map, the site lies in CRZ-II
 - a. CRZ II – It includes the areas developed up to the shoreline which fall within the Municipal limits. The site lies on the landward side. Permissible Uses: Defence and Security purposes | Construction of buildings on landward side of existing road / building | reconstruction of authorized buildings without change in land-use | Temporary tourism facilities

Key Sensitivities

There is no specific environmental/social sensitivity to be addressed at the site.

³⁹ Coastal Regulation Zone

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

1. **Attraction** – The hotel is primely located in proximity to tourist attractions like Kanyakumari Beach, Triveni Sangam, Vivekananda Rock Memorial, Tiruvallur Statue, Bagavathi Amman Temple, Kanyakumari Sunrise Point and Sunset Point. Located close to the southernmost tip of India, the hotel rooms enjoy sea-view. Further, there are a variety of stay options, ranging from Non-AC budget rooms to AC suites and deluxe cottages. Thus, the hotel presents itself as a great accommodation option. To top it all, the facilities are budget friendly and thus a great package deal.
2. **Accessibility & Mobility** – The hotel is located close to the heart of Kanyakumari and is easily accessible from all parts of the city and nearby towns. The site's location on NH-44 adds several benefits, including higher visibility and convenient accessibility. Further, the site is located in proximity to major tourist destinations of Kanyakumari. Kanyakumari Bus stand is located ~500m distance from the hotel. The hotel enjoys great rail connectivity, with Kanyakumari railway station located at a distance of ~1.5 km from the hotel. The nearest airport is Trivandrum International Airport, ~90m km away.
3. **Amenities** – The hotel has sufficient tourist infrastructure in place, however additional state-of-the-art facilities are required to cater to the needs of the HVT visitors. The site has all the basic infrastructure facilities like efficient streetlights, 23 CCTV cameras & 12 security guards, fire safety equipments, a restaurant & a bar, ramp access to a few rooms, and power backup facility. Additionally, the hotel also provides other tourist amenities like a travel desk, Tourist Facilitation Centre and a convention hall with a capacity of ~60 people.

Parking – The hotel has a parking space with a capacity of 50-60 cars.
4. **Awareness** – The hotel is well-known for its family-friendly environment and proximity to tourist attractions. The site enjoys moderate popularity among tourists. While the hotel has a large share of govt. officials as its visitors, it is

also recommended by renowned travel referral / review aggregators such as TripAdvisor, Yatra etc. In 2019, the hotel received ~17,450 visitors with a large percentage of guests originating from all over India, including the states of Gujarat, West Bengal and Maharashtra. Online booking through TTDC website can be done in advance. The hotel is advertised through TTDC sources only and receives new clients majorly through word of mouth.

5. **Activities** – The hotel offers comfortable stay facilities to its guests. Along with Non-AC and AC rooms for accommodation, the property houses a restaurant, bar, convention hall and a tourist facility centre. While the site lacks activities to engage the tourists, the hotel provides complimentary breakfast, room service and housekeeping to its visitors.
6. **Accommodation** – The hotel has ~61 keys in total, with the following room categories.

Category	No. of Rooms	Tariff (incl. tax in INR)	
		Season	Off-Season
Super Deluxe AC Cottage	3	3600	3100
Cape Hotel AC Suite Room	9	2700	2200
AC Double Room (Main Block)	19	2700	2200
AC Twin Cottage	10	2300	2000
Non-AC Double Room (Main Block)	5	1900	1400
Non-AC Double Room (TRC)	4	1700	1000
6 Beds Non-AC Family Room	1	3000	2600
4 Beds Non-AC Family Room	4	2200	1800
3 Beds Non-AC Family Room	5	1800	1400
Mini Non-AC Double Room	1	800	700
Non-AC Double Room (Main Block)	5	1900	1400

- The room booking include complimentary buffet breakfast.
- Additional Member AC- INR 400
- Additional Member Non-AC- INR 300

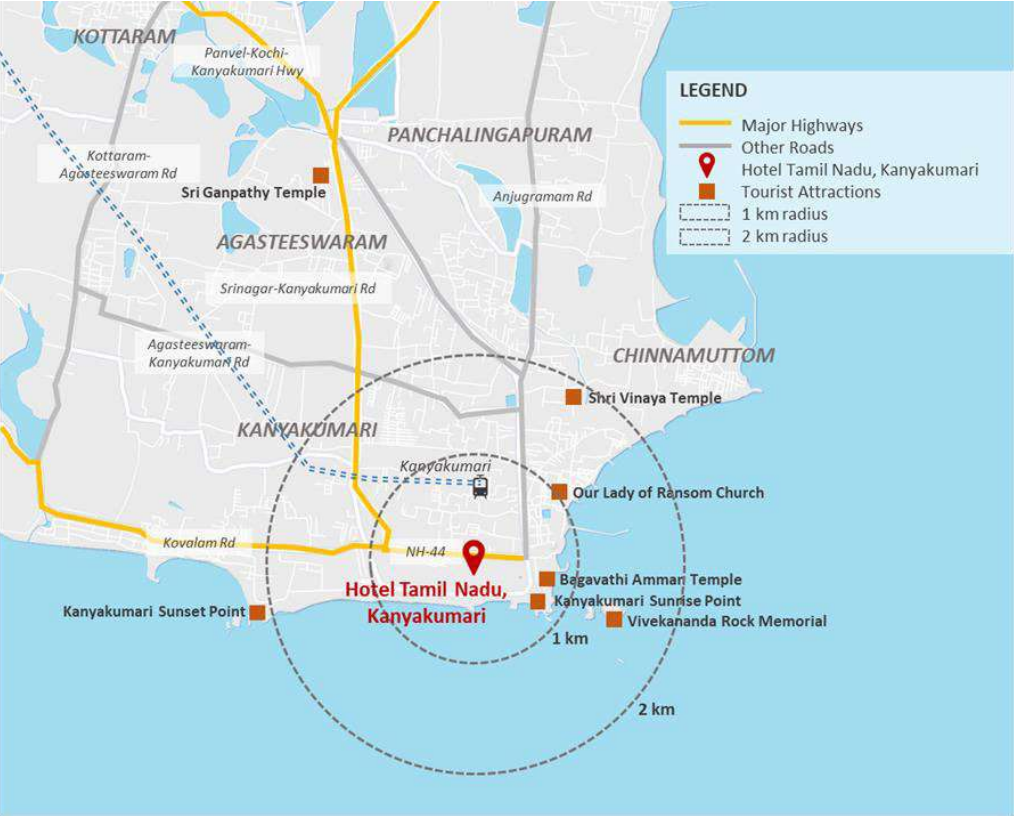
Market Offerings

The other hotels surrounding Hotel Tamil Nadu Kanyakumari are majorly 2-star/3-star hotels with room tariffs ranging from INR 1000 to INR 2,800.

The other hotels across different categories surrounding the Hotel Tamil Nadu Kanyakumari are:

Hotel Name	Category	Tariff
Hotel SunRock	Budget	650
Hotel Viswa Residency	2-star hotel	1,000
Hotel Melody Park	2-star hotel	1,050
Hotel Sun World	2-star hotel	1,400
Hotel Temple Citi	3-star hotel	1,600
Hotel Samudra	3-star hotel	1,600
Hotel Tri Sea	3-star hotel	1,600
The Gopinivas Grand	3-star hotel	1,800
Hotel Sea View	3-star hotel	2,600
Sparsa	3-star hotel	2,800
Annai Resorts & Spa	Resort	6,000

Figure 12-1: Location and Existing Layout



Site Pictures

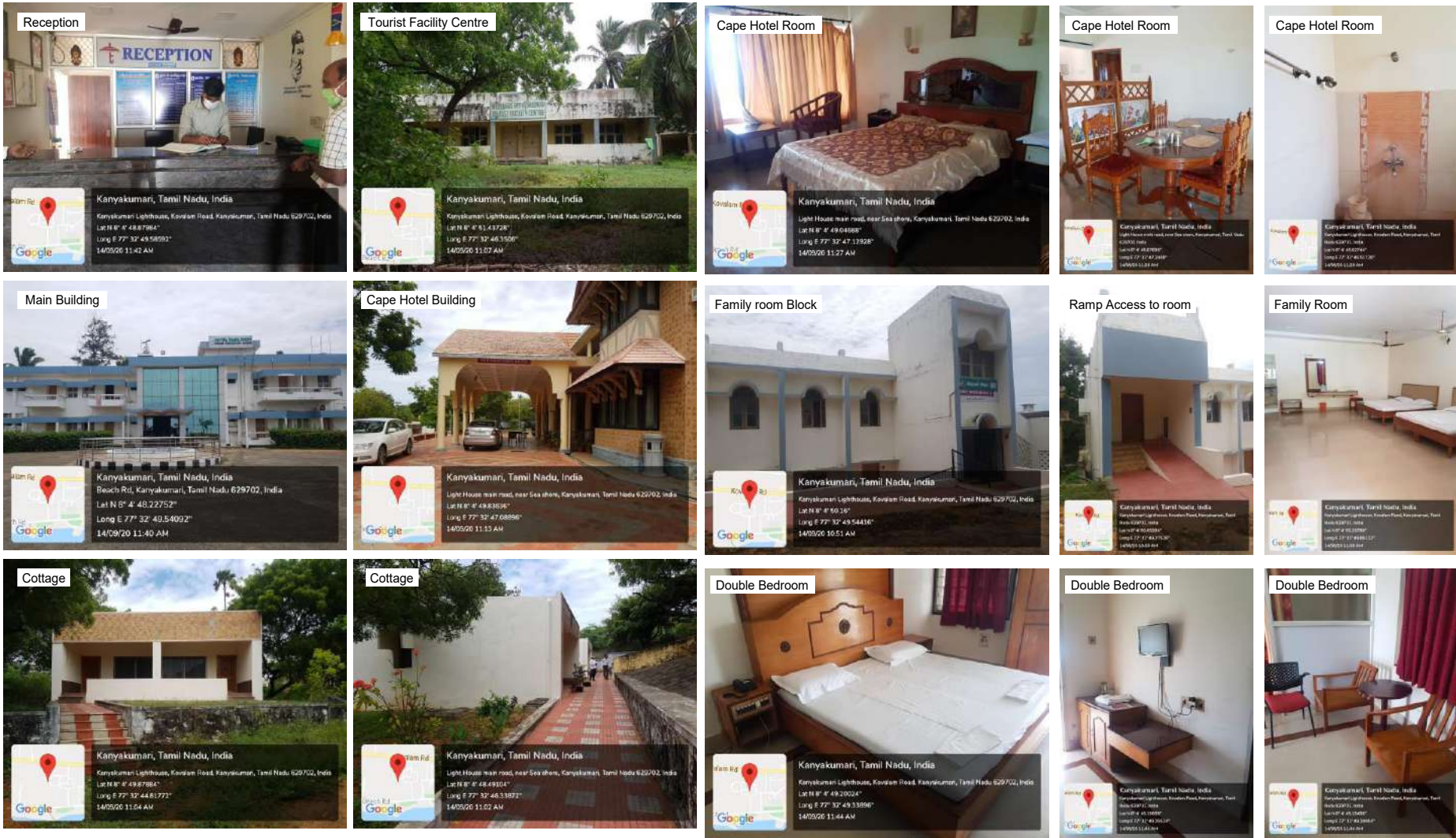
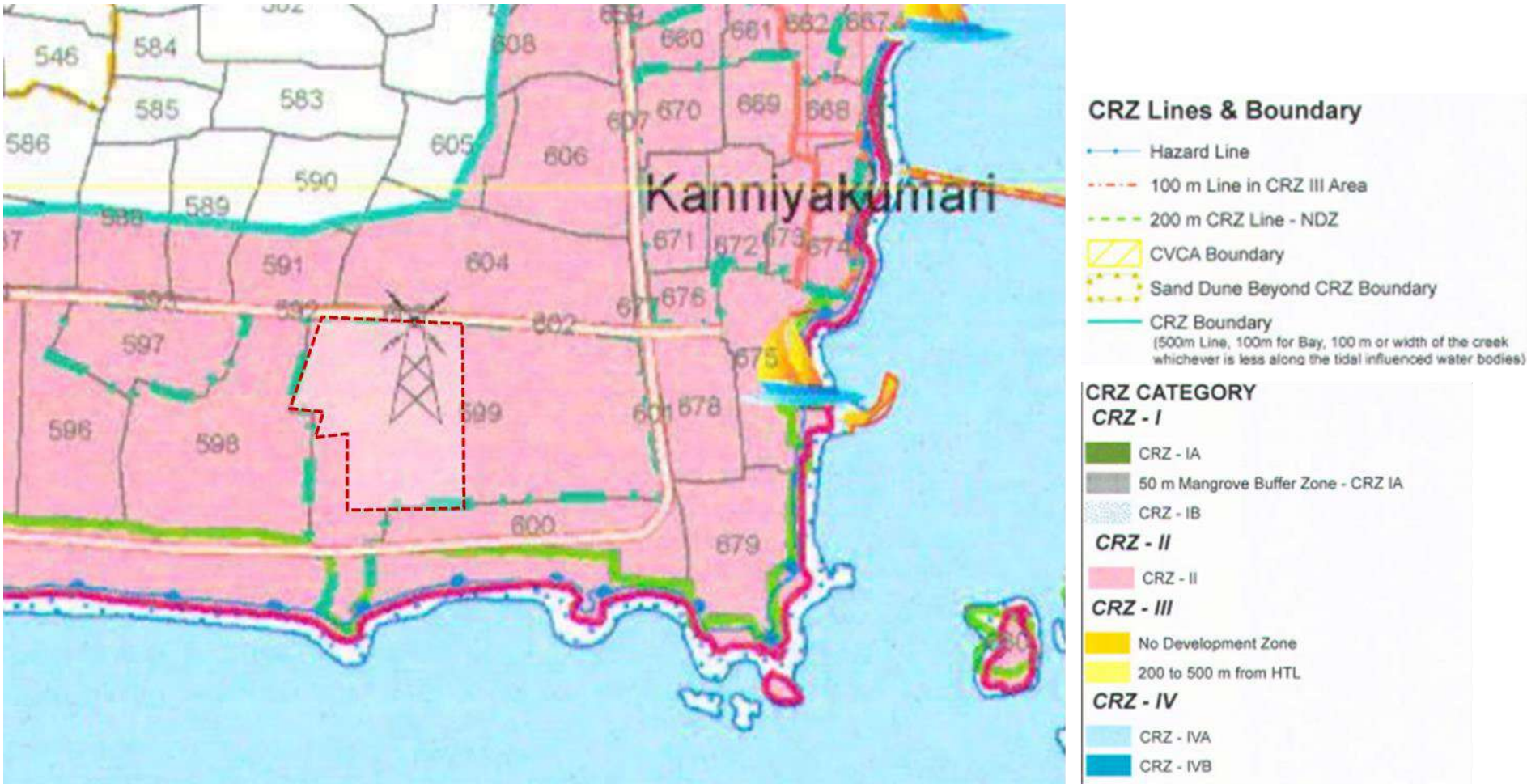


Figure 12-2: CRZ Boundary



Vision for the Site

- Hotel Tamil Nadu Kanyakumari is strategically located within walking distance of the main attractions at Kanyakumari. Moreover, the hotel site is located right next to the seafront, rendering unobstructed views of the Indian Ocean from its sea facing rooms. The hotel has the following limitations, making it a missed opportunity to tap the International Tourist Market:
 - The 1970's concrete and glass facade buildings with old fashioned layout, décor and architecture don't fit with the historic ambiance of the Cape Hotel heritage buildings.
 - The lack of regular amenities expected at a hotel (like swimming pool and outdoor dining areas etc.)
 - Underutilization of the plot and the views doing injustice to the Site
- The hotel's location, beautiful views of the sea and the vast green grounds, gives this site a distinctive USP which the competition can't match. Thus, the Hotel should be marketed as not just as a stay for tourists who want to visit the Kumari Amman Temple & other historical sites, but as a destination Resort, where one can relax for a few days and explore other leisure opportunities, like visiting the nearby beaches.
- The redevelopment of the entire stretch of public spaces along the Kanyakumari Beach with a more varied & attractive selection of recreation and leisure opportunities (that also attracts the high value tourist) is part of the vision.
- **Target Visitor** – Given the reasons as stated above, the site has ample potential to become a preferred hotel for the higher segments of the domestic & foreign tourists market. To entice this part of the tourist market to travel to the southernmost tip of India, tourists will need to be offered at least a 4 star Hotel accommodation with the required facilities which makes the hotel attractive enough to stay for multiple nights and to relax & rejuvenate.

Further, tourist groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang and elderly).

Proposed Master Plan

Approach to Master planning

- Considering the huge (commercial) potential of the Site as a 4/5 star destination Resort, all the old and out-dated 1970's buildings at the hotel (except the cottages) are to be demolished or completely refurbished to create more suitable buildings with architecture and planning that fit with the heritage character of the other buildings.
- The existing Heritage Buildings (Cape Hotel Building, the restaurant buildings and adjacent smaller buildings) give the Hotel its USP and should be renovated and reused to its best advantage. Adjacent to these buildings, a large al-fresco dining area and a hotel bar can be situated under the large trees. This is also the best location to plan a large swimming pool.
- The large open land directly overlooking the ocean can be utilized by building small cottages, each with a plunge pool. The slope of the terrain allows all cottages to have unobstructed views of the ocean.
- The area in front of the hotel along the Beach Road, which consists of a pedestrian plaza with small tourist shops, has huge commercial potential to be reimaged (in combination with the upgraded hotel) as a preferred destination for all high value tourists. This area could be planned as a space where tourists could have a drink or dine, overlooking the ocean in a higher end setting, away from the hustle and bustle of the down town area of Kanyakumari.
- The isolated Tourist Information Centre, currently located at the northern end of the plot along Kovalam Road, should be relocated next to Urban Haat and the proposed restaurants to attract higher footfalls.
- The hotel design is recommended to follow a contemporary Modern Tropical Design style that is popular with international travellers. The aim is to use a modern design vocabulary with a strong focus on sustainability, offering a unique sense-of-place and using traditional architectural elements in the layout & design of the hotel while making the most of the sea view and trees.
- At a Hotel/Resort, the modern traveller expects to be offered a unique & relaxing experience that allows them to spend as much time outdoors as possible. Comprehensive Landscaping is therefore an important part of the redevelopment of the Site as a Resort of International Standards. Extensive landscaping will focus on planting of tree, shrubs & grasses, hard landscaping, lighting and ample seating - offering different settings for al-fresco eating areas, play areas, meditation and yoga gardens, etc.

Hard Interventions

1. Renovation, Reuse Heritage Buildings (Cape Hotel Building, Restaurant etc) Cottages and Tourist Reception Centre

- The existing Heritage Buildings (Cape Hotel Building, the restaurant buildings and adjacent smaller buildings) give the Hotel its USP and should be renovated and reused to its best advantage, These buildings could be reused as hotel’s entrance lobby, reception, lounge area, restaurant, bar and the upper floors for hotel rooms.
- The cottages should be renovated to match international standards.
- The new tourist information centre lies at an isolated location and doesn’t receive much footfalls. The building could be reused as a Hotel Facility, for example as a Spa, Fitness and Wellness Centre. Its location along Kovalam road makes it an easy access for people from outside the hotel.
- *Infrastructure created – ~3,000 sqm built up area*

2. Demolish or completely refurbish 1970’s main buildings

- The architecture and floor plan layout, needs to be completely overhauled to appeal to the modern, high value tourist.
- The new building would contain 2-3 floors of hotel rooms and ancillary facilities.
- *Infrastructure created – ~4000 sqm built up area*

3. Additional Cottages with individual plunge pools

- Making the most of the large open site in the front of the plot and its gentle slope, cottages (each containing two luxury rooms with plunge pool in front) scattered around the grounds could offer maximum privacy and unobstructed views of the ocean.
- At the back of the plot, underneath the huge trees and close to the proposed swimming pool area, more cottages can be added.
- *Infrastructure created – ~1700 sqm built up area*

Figure 12-3: Refurbishment of buildings and new cottages



Renovation, reuse of Heritage Buildings



Redevelop 1970s building into appropriate 4-5 star resort architecture



New Cottages with Plunge Pools

4. Kanyakumari Tourist Facilitation and Interpretation Centre

- A new tourist information centre would be combined with the Kanyakumari Interpretation Centre (explaining some the general history of the town and the historical, cultural significance of its main attractions) and would be located near Beach Road next to the Urban Haat, to get higher footfalls
- *Infrastructure created – ~700 sqm built up area Facilitation and Interpretation Centre Type 4*

5. Redevelop area in front of Hotel with several pavilions, housing restaurants and cafes with al fresco seating areas

- The area in front of hotel along the Beach Road, which already consists of a pedestrian plaza, should be redeveloped into an attraction that is in tandem with the 4-5 star hotel development. It can be developed with multiple pavilions housing several mid to high-end cafes & restaurants with al-fresco dining and offering the scenic views of the ocean.
- *Infrastructure created – ~1400 sqm built up area*

Soft Interventions

- 1. Promotion** – The Tourism Department may promote and advertise the hotel’s attributes and luxury facilities at various tourist destinations.

Trunk Infrastructure

As the Site has direct access from the road, no trunk infrastructure interventions are required.

Project Identified

#	Project Component	Scale
1	Renovation, Reuse Heritage Buildings and new tourist information centre	3000 sqm
2	New Hotel Building (Refurbish 1970’s main buildings)	4000 sqm
3	Cottages with individual plunge pools	1700 sqm
4	Tourist Facilitation and Interpretation Centre (Type 4)	700 sqm
5	Pavilions with restaurants, Cafes with al fresco seating areas	1400 sqm

New Tourist information centre and ocean view pavilions



New Tourist Kanyakumari Tourist Information and Interpretation Centre



Ocean View Pavilions with Restaurants, Cafes and Al Fresco dining areas

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in Volume A.

#	Project Component	Cost (INR Lakhs)
1	Renovation, Reuse Heritage Buildings and new tourist information centre	1,130
2	New Hotel Building (Refurbish 1970's main buildings)	1,506
3	Cottages with individual plunge pools	1,170
4	Tourist Facilitation and Interpretation Centre (Type 4)	50
5	Pavilions with restaurants, Cafes with al fresco seating areas	630
Total		INR 45 Cr.

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- All revenues are unescalated.
- Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

⁴⁰ Pricing is pegged to the competing 5-star resort in the vicinity.

⁴¹ Given the proposed project components with dedicated restaurant and al fresco dining, the hotel is expected to generate an large non-room revenue share.

Existing Operating performance:

- Average room rate – INR ~2700 per key
- Average Occupancy – 40%
- Number of keys - ~61

The following assumptions are considered based on the existing performance as given above:

- Average room rate – INR 5000⁴⁰ per key
- Average Occupancy – 60%
- Non-room revenues - ~60%⁴¹ of room revenues
- Number of keys - ~85

Basis the above, peak un-escalated revenue is estimated at ~INR 5 Cr per year.

Feasibility Assessment

Assuming a profit margin of 35% of gross revenue, the project is estimated to achieve a pre-tax IRR of ~18% over a 30-year period. This is considered sufficient for making the project viable for private participation.

Structuring and Implementation

From implementation perspective, the property can be given to a suitable private player identified by the TTDC on PPP. The contractor can avail the option to operate and maintain the property for a period of 30 years. Further, the detailed feasibility needs to be conducted to understand the suitable implementation models.

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 2L⁴² man-days of construction labour (spread across 2 – 3 years of implementation)

⁴² Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour

During Operations: Jobs created during operations will entail:

- Entire O&M team (including housekeeping, admin, sales, booking, catering, civil etc.) = 170 man – days per day⁴³
- Retail and F&B spaces = 75 man-days per day⁴⁴

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above.*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect, and induced effects is estimated as. 5L man-days.

Increased tourist footfall

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

-
- Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
 - Assumed cost of labour assumed for computation = INR 700 per day
 - Cumulative labour man-days = 30% * CAPEX / 700

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.

⁴³ As per World Bank thumb rule, 12 man-days per day for 10-key 4-star hotel and 20 man-days for 10-key 5-star hotel.

As per HVS Report, in typical India hotels, manpower to room ratio for 4/5 star hotels is 2.11-2.70, for mid-market 1.52 and for budget hotels 0.72. We have assumed 2 for our computation.

⁴⁴ Assuming average 2.5 persons per kiosk / shop

Figure 12-4: Proposed Master Plan – Hotel Tamil Nadu, Kanyakumari



- | | |
|-------------------------------|---|
| ① Existing Heritage Buildings | ⑥ New Kanyakumari Tourist Information Center |
| ② New Hotel Buildings | ⑦ Restaurants and Cafes with al fresco terraces |
| ③ New Hotel Cottages | ⑧ Existing Kanyakumari Urban Haat |
| ④ Fitness and Wellness Spa | ⑨ Existing Public Toilet Building |
| ⑤ Swimming Pool | |



OTHER TEMPLES

TEMPLES OF TAMIL NADU

Tamil Nadu is home to more than 30,000 temples and is aptly called "The Land of Temples". The rulers of various dynasties constructed these temples over centuries. Tamil Nadu is the land where the Dravidian style of temple architecture manifested itself in a grand and magnificent way. Vimanas (Storeys) and Gopurams (towering gateway to the temple complex) best characterize the temples of Tamil Nadu. Intricately carved designs and the splendid architecture of these temples has spread over the length and breadth of Tamil land.

With almost all the temples built during historic and medieval times, a trip to these temples provides a deep insight into the brilliant architectural, sculptural, and artistic skills of the past. Standing tall as the backbone on the Tamil culture, these temples are today India's precious jewels, adding to its rich heritage and culture.

Summary

Sites & their Tourism Potential

All footfalls are in '000s per annum

D = Domestic / Pilgrim | HVT = High Value Tourist (domestic & foreign)

S. No.	Site	District	Site	Product Type	Y0 - D	Y0 - HVT	Y5 - D	Y5 - HVT	Y10 - D	Y10 - HVT	Carrying Capacity	Tourist Positioning	HVT Positioning
1	3	Chennai	Marundeeshwarar Temple, Thiruvanmiyur	Temple	1,600	100	3,720	295	6,340	500	10,830	High tourism site	Moderate HVT Potential
2	5A	Chennai	Kesarwadi Jain Temple (Puzhal Kesarvadi Tirth)	Temple	130	7	300	16	600	31	11,820	Very low tourism site	Low HVT Potential
3	5B	Chennai	Tirumoolanathar Temple ,Puzhal	Temple	50	0	185	0	510	0	3,940	Low tourism site	Low HVT Potential
4	11	Chengalpattu	Thirukazhukundram	Temple	35	10	89	34	210	81	8,030	Medium tourism site	Moderate HVT Potential
5	19B	Kanchipuram	Chitragupthar Temple	Temple	875	34	2,385	115	3,480	170	3,650	Medium tourism site	Moderate HVT Potential
6	20	Kanchipuram	Vallakottai Murugan Temple, Sriperumbudur	Temple	605	25	1,670	68	3,945	160	5,915	Medium tourism site	Moderate HVT Potential
7	23	Kanchipuram	Kamakshi Amman Temple	Temple	12,090	200	15,285	410	15,285	410	15,695	Very high tourism site	High HVT Potential
8	24	Kanchipuram	Thiru Mukkoodal Appan Venketesa Perumal Temple	Temple	6	0	22	0	61	0	5,840	Low tourism site	Low HVT Potential
9	26	Kanchipuram	Ramanujar temple - Sriperumpudur	Temple	345	40	920	140	2,175	325	11,680	Medium tourism site	Moderate HVT Potential
10	27	Kanchipuram	Trilokyanatha Jain Temple, Thiruparithukundram	Temple	200	1	470	3	950	6	2,850	Very low tourism site	Low HVT Potential

S. No.	Site	Estimated CAPEX (INR Cr)	Implementation Agency	Private Sector Projects
1	Marundeeshwarar Temple, Thiruvanmiyur	1.6	HR&CE Dept.	-
2	Kesarwadi Jain Temple (Puzhal Kesarvadi Tirth)	0.6	Shri Addeswar Jain Shwetambar Mandir Trust	-
3	Tirumoolanathar Temple ,Puzhal	0.2 – 0.3	HR&CE Dept.	-
4	Thirukazhukundram	9 – 9.2	HR&CE Dept.	-
5	Chitragupthar Temple	1	HR&CE Dept.	-
6	Vallakottai Murugan Temple, Sriperumbudur	0.4 – 0.5	HR&CE Dept.	-
7	Kamakshi Amman Temple	0.8	HR&CE Dept. , Private Operators	Kiosk Units – leased / rented, EV hub – annual lease
8	Thiru Mukkoodal Appan Venketesa Perumal Temple	0.5	HR&CE Dept.	-
9	Ramanujar temple - Sriperumpudur	0.7	HR&CE Dept.	-
10	Trilokyanatha Jain Temple, Thiruparithukundram	1	Temple Trust	-

Summary

Sites & their Tourism Potential

All footfalls are in '000s per annum

D = Domestic / Pilgrim | HVT = High Value Tourist (domestic & foreign)

S. No.	Site	District	Site	Product Type	Y0 - D	Y0 - HVT	Y5 - D	Y5 - HVT	Y10 - D	Y10 - HVT	Carrying Capacity	Tourist Positioning	HVT Positioning
11	28	Kanchipuram	Kundrathur Murugan Temple	Temple	445	4	1,645	15	4,540	41	12,045	Low tourism site	Low HVT Potential
12	35A	Tiruvallur	Arulmigu Thiyagarajaswamy Temple	Temple	795	10	2,195	28	5,180	65	19,710	Medium tourism site	Low HVT Potential
13	35B	Tiruvallur	Thiruvudai Amman Temple, Melur	Temple	695	10	1,640	24	3,300	47	19,710	Low tourism site	Low HVT Potential
14	37	Tiruvallur	Mangadu Amman temple	Temple	995	10	2,745	28	6,480	65	8,030	Medium tourism site	Low HVT Potential
15	39A	Tiruvallur	Thiruverkadu Amman Temple	Temple	1,795	7	4,945	19	11,680	46	12,850	Medium tourism site	Low HVT Potential
16	39B	Tiruvallur	Vedhapureeswarar Temple	Temple	1,795	7	4,945	19	8,870	35	8,905	Medium tourism site	Low HVT Potential
17	40	Tiruvallur	Masilamaneeswarar temple - Thirumullaivayil	Temple	1,175	48	3,210	165	7,580	390	8,030	Medium tourism site	Low HVT Potential
18	42	Tiruvallur	Varadaraja Perumal Temple, Poonamallee	Temple	800	0	1,890	0	3,800	0	5,915	Low tourism site	Low HVT Potential
19	-	Tiruvallur	Pilgrim Centre, Poonamallee	Special Project	-	-	-	-	-	-	-	High tourism site	Moderate HVT Potential
20	43	Tiruvallur	Periyapalayathamman Temple	Temple	1,805	0	4,985	0	11,770	0	13,505	Medium tourism site	Low HVT Potential
21	44A	Tiruvallur	Andarkuppam Murugan Temple	Temple	500	-	1,181	-	2,375	-	15,695	Low tourism site	Low HVT Potential

S. No.	Site	Estimated CAPEX (INR Cr)	Implementation Agency	Private Sector Projects
11	Kundrathur Murugan Temple	0.1 – 0.2	HR&CE Dept.	-
12	Arulmigu Thiyagarajaswamy Temple	0.6	HR&CE Dept.	Kiosk Units – leased / rented
13	Thiruvudai Amman Temple, Melur	8.85	HR&CE Dept.	Yatri Niwas – O&M on PPP, Community Hall, Kiosk Units – leased / rented
14	Mangadu Amman temple	5.75	HR&CE Dept.	Yatri Niwas – O&M on PPP, Community Hall, Kiosk Units – leased / rented
15	Thiruverkadu Amman Temple	1.4	HR&CE Dept.	Community Hall, Kiosk Units – leased / rented
16	Vedhapureeswarar Temple	0.4 – 0.5	HR&CE, Dept.	-
17	Masilamaneeswarar temple - Thirumullaivayil	0.8	HR&CE Dept.	Kiosk Units – leased / rented
18	Varadaraja Perumal Temple, Poonamallee	0.2	HR&CE, Dept.	-
19	Pilgrim Centre, Poonamallee	9 - 10	HR&CE Dept.	Event spaces – leased / rented
20	Periyapalayathamman Temple	0.5	HR&CE, Dept.	-
21	Andarkuppam Murugan Temple	1.5	HR&CE Dept.	Kiosk Units – leased / rented

Summary

Sites & their Tourism Potential

All footfalls are in '000s per annum

D = Domestic / Pilgrim | HVT = High Value Tourist (domestic & foreign)

S. No.	Site	District	Site	Product Type	Y0 - D	Y0 - HVT	Y5 - D	Y5 - HVT	Y10 - D	Y10 - HVT	Carrying Capacity	Tourist Positioning	HVT Positioning
22	44B	Tiruvallur	Siruvapuri Murugan Temple	Temple	500	-	1,180	-	2,375	-	15,695	Low tourism site	Low HVT Potential
23	52	Tiruvannamalai	Thirumalai Jain Temple (Polur)	Temple	165	14	370	33	730	64	98,500	Very Low tourism site	Low HVT Potential
24	54	Tiruvannamalai	Arahanthgiri Jain Math	Temple	665	70	2,290	310	6,065	820	70,900	Low tourism site	Moderate HVT Potential
25	62	Villupuram	Thirunarunkondai (Jain Circuit)	Temple	45	5	48	5	50	6	10,240	Very low tourism site	Low HVT Potential
26	64	Villupuram	Vakkarakaliamman Temple, Thiruvakkarai	Temple	130	0	145	0	155	0	78,780	Low tourism site	Low HVT Potential
27	66	Villupuram	Thiruvennainallur Kripapuriswarar temple	Temple	380	36	420	40	455	43	19,695	low tourism site	Low HVT Potential
28	68	Cuddalore	Vadalur Ramalinga Adigalar Sabai	Temple	3,300	0	3,555	0	3,785	0	2,40,275	Medium tourism site	Low HVT Potential
29	70	Cuddalore	Sri Viruthagiriswarar Temple, Virudhachalam	Temple	755	0	835	0	900	0	5,910	Low tourism site	Low HVT Potential
30	91	Thiruvarur	Sri Rajagopala Swamy Temple, Mannargudi	Temple	785	32	2,015	105	4,510	230	11,815	Medium tourism site	Moderate HVT Potential
31	115	Thanjavur	Thiyagarajar temple - Thiruviayaru	Temple	160	40	515	170	1,340	445	13,785	Low tourism site	Low HVT Potential

S. No.	Site	Estimated CAPEX (INR Cr)	Implementation Agency	Private Sector Projects
22	Siruvapuri Murugan Temple	2	HR&CE Dept.	Community Hall, Kiosk Units – leased / rented
23	Thirumalai Jain Temple (Polur)	0.2	ASI	-
24	Arahanthgiri Jain Math	8.25	Shree Kshetra Arihanthgiri Digambar Jain Management Trust	Yatri Niwas – O&M on PPP
25	Thirunarunkondai (Jain Circuit)	0.6 – 0.7	Adinath Jain Trust	-
26	Vakkarakaliamman Temple, Thiruvakkarai	0.8	HR&CE Dept.	-
27	Thiruvennainallur Kripapuriswarar temple	1.7	HR&CE Dept.	Yatri Niwas – O&M on PPP
28	Vadalur Ramalinga Adigalar Sabai	2.85	Valallar Ramalingar Gnana Sabhai	Yatri Niwas – O&M on PPP
29	Sri Viruthagiriswarar Temple, Virudhachalam	2.40	HR&CE Dept.	Yatri Niwas – O&M on PPP
30	Sri Rajagopala Swamy Temple, Mannargudi	0.6	HR&CE Dept.	-
31	Thiyagarajar temple - Thiruviayaru	0.8 – 0.9	Sri Thyagabrahma Mahotsav Sabha, PPP	Event Space – O&M on PPP

Summary

Sites & their Tourism Potential

All footfalls are in '000s per annum

D = Domestic / Pilgrim | HVT = High Value Tourist (domestic & foreign)

S. No.	Site	District	Site	Product Type	Y0 - D	Y0 - HVT	Y5 - D	Y5 - HVT	Y10 - D	Y10 - HVT	Carrying Capacity	Tourist Positioning	HVT Positioning
32	116	Thanjavur	Mahalingeswarar Temple, Thiruvudaimarudur	Temple	-	-	-	-	-	-	41,360	Low tourism site	Low HVT Potential
33	140	Nagapattinam	Vedaranyam Sivan Kovil	Temple	300	-	610	-	1,045	-	20,680	Low tourism site	Low HVT Potential
34	146	Tiruvallur	Thirumazhisai Temple	Temple	12	-	29	-	57	-	5,915	Low tourism site	Low HVT Potential
35	153	Nagapattinam	Thirumanancheri	Temple	130	-	265	-	455	-	3,940	Low tourism site	Low HVT Potential
36	156	Thiruvarur	Swayambunathaswamy Temple, Peralam	Temple	40	-	135	-	355	-	4,730	Low tourism site	Low HVT Potential
37	282A	Kanyakumari	Kumari Amman (Bagavathi Amman Temple)	Temple	3,930	37	7,840	141	11,160	300	15,755	Very High tourism site	High HVT Potential

S. No.	Site	Estimated CAPEX (INR Cr)	Implementation Agency	Private Sector Projects
32	Mahalingeswarar Temple, Thiruvudaimarudur	0.4	Sivaprakasa Desika Thiruvavaduthurai Aadheenam.	Event spaces – O&M on PPP
33	Vedaranyam Sivan Kovil	0.6	HR&CE Dept.	-
34	Thirumazhisai Temple	0.5	HR&CE Dept.	-
35	Thirumanancheri	0.3 – 0.4	HR&CE Dept.	-
36	Swayambunathaswamy Temple, Peralam	0.4	HR&CE Dept.	-
37	Kumari Amman (Bagavathi Amman Temple)	3.35	HR&CE Dept.	-

Impact

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment Opportunities

The proposed interventions are planned to:

- Increase visitor comfort and convenience to the tourist sites
 - Increase tourist footfalls at the sites
- Promote higher footfall of high-value tourists – thereby increasing overall spending at the sites.

This tourist spending will directly flow to the local economy and communities.



~265k man-days Construction Jobs



~490 man-days per day during operations jobs (incremental)
(Accommodation, Site maintenance & housekeeping, Activity Operators, Retail and F&B operators, hawkers, vendors etc.)



~665k man-days Indirect & Induced Jobs
created due to multiplier impact of construction and operations jobs

Benefitted Stakeholders



Local Weavers, Craftsmen and Artisans



Security & Maintenance Staff



Temple-ware & Souvenir Vendors



Tour Guides & Operators



Transporters (Taxi/Auto)



Hospitality Staff



Temple Workers

1. Marundeeshwarar Temple, Chennai

Site Details

District:	Chennai
Name of Site:	Marundeeshwarar Temple
Site No:	Site 3 of 295
Site Use:	Temple
Category:	A (Temple)
Location:	12.9848, 80.2605
Land Area:	~2.75 acres (Temple) ~2.5 acres (Temple Tank) ~1.71 acres (Additional Land)
Peak footfalls:	~30,000 per day (March, October – December)
Operator:	HR & CE Dept.
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom – 16.5 lakhs (2019 – 20) For – 0.5 lakh (2019 – 20)
Site Revenues:	Undisclosed
Site Orientation:	Pilgrim & Tourist
Site Potential:	High Tourism Site
HVT Potential:	Moderate HVT Potential
Connectivity:	
a. Railway Station:	~3.5 km (Indiranagar, Chennai)
b. Airport:	~13 km (Chennai)
c. Highway:	~190 m from SH 49
d. Metro Station:	~1.3 km from Thiruvanmiyur Metro Station
Trails Featured on:	Nil (Pure Pilgrim Temple)

As one of the Paadal Petra Sthalams, the temple is a 1000-year-old site. It is quite popular for its rich collection of Vedas manuscripts and is lively owing to certain small markets and tourist locations around it. However, amenities provided by the temple are poorly maintained. The temple is mostly visited by the devotees from the neighbouring states. It has the potential to be one of the regional tourist destinations and attract high-value tourists. Therefore, the scope of interventions includes modernisation of some of the buildings, maintenance of existing infrastructure, beautification of surrounding streets, and promotion of the site by effectively integrating it with other tourist destinations in proximity.

Existing Condition

Location

Marundeeshwarar Temple is located in Thiruvanmiyur, a largely residential neighbourhood in the south of Chennai. The temple complex lies ~450 m away from the Thiruvanmiyur Bus Terminus. The site is located in close proximity with Thiruvanmiyur metro station and Indiranagar railway station, which are ~1.3 km and ~3.5 km away respectively. The temple is situated in an Institutional zone with dense mixed-use development around it. There are several prominent tourist landmarks in its vicinity such as Pamban Swami Temple (~1.0 km), Shri Ashtalakshmi Temple (~2.5 km), Elliott's Beach (~2.8 km), and Kalakshetra Foundation (~1.8 km).

Existing Layout

The temple complex covers an area of 2.75 acres having two entrances, one from the East Coast Road and the other from the West Tank Street, both adorned by a 5-tiered gopuram (gateway tower). The mandapam (hall) housing the Somaskanda form of Shiva has 36 massive pillars adorned with carvings. In addition to the mandapams, there are multiple shrines and other structures located inside the temple compound. The major components of the temple include:

- The walls of the main temple shrine are engraved with mantras and hymns, which the devotees can chant while waiting in the line to worship the deity.

- The visitor's path inside the temple is very well laid out. There are trees planted on either side of the path to provide shade to the devotees.
- A small temple tank is located inside the temple premise, which is not open to the public.
- There is a 32-pillar mandapam on the northern side of the complex.
- Prasadam stall and Annadhanam area are located on the left side of the west gopuram entrance.
- Shops and other offices are on the right side of the main temple shrine while entering from the west.
- There is a small library towards the northeast end of the temple near the east entrance.
- The main temple tank outside the temple premise is used only for major events/festivals.

Existing Uses

Owing to its long history, Marundeeshwarar Temple enjoys immense popularity among locals and tourists, and therefore, large crowds visit the temple for worship on regular days. Some non-commercial events are also hosted at the temple premises, such as dance recitals, music concerts, etc. The other uses housed on the site include:

- **Retail** – A single retail shop selling worship accessories and religious books.
- **Food outlets** – A single food shop selling prasadam.
- **Office** – Offices of the administrators are also present within the complex.
- **Temple Kitchen and Annadhanam space** – Temple has its own kitchen and a dedicated space for Annadhanam where 100 people are fed every day.
- **Event Stage** – Temple has its own stage for temple functions/dance performances, etc., having a holding capacity of ~500 people, along with a light & sound system.
- **Library** – A library that has age-old Vedas, books, and manuscripts that visitors are allowed to rent and read inside the temple premise.
- **Pathshala** – Conducting teaching session about Vedas for children on weekends.

Other Land

Apart from the 2.75 acres of temple complex of 9 acres temple owned land, the temple owns the following land pockets,

- A temple tank of 2.5 acres is situated on the north-eastern side of the temple complex.

- A ~1.3-acres of the land parcel adjacent to the temple tank which is currently being used for parking. On this land parcel, ~0.35 acres of land is leased out for commercial and residential use.
- Towards the east of the above-mentioned land parcel, there is 0.06 acres of the land parcel, where a stage is built for temple programs/events.
- The whereabouts of the remaining ~2.40 acres of land are unknown.

Masterplanning Considerations

Applicable Regulations

1. **Tamil Nadu Combined Development and Building Rules, 2019** – As per the Master Plan, the temple complex lies in an Institutional Zone. The permissible uses include:

For Institutional Zone

Educational Institutions | Govt/Quasi Govt./Private Offices and Institutions | Art galleries | Museums | Public Libraries | Social and Cultural Institutions | Religious buildings | Health institutions | Public & Semi public open spaces | Public utilities | Residential and commercial spaces | Bus and Railway stations | Parking lots including multilevel parking | Cinema theatres | Kalyana mandapams | Community/Assembly halls | Waterfront Developments | Circuses/Fairs.

2. **TN HRCE Rules, 1959**

- a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions
- b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.
- c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to the religious activities and for the facilitation of Hindu pilgrim tourists.
- d. The HR& CE Dept. owned land can be leased for a period of no more than 3 years.

Key Sensitivities

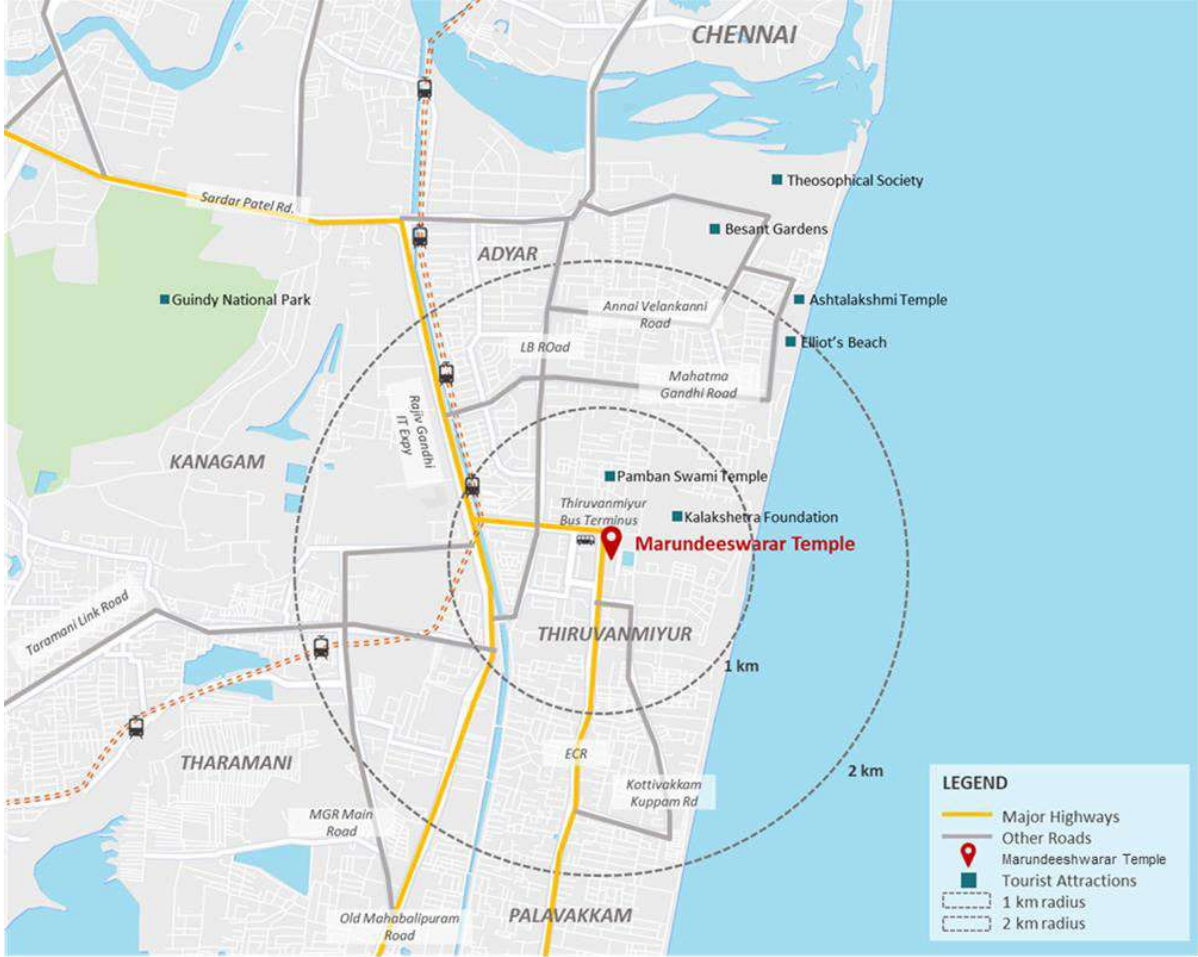
There are no specific environmental/social sensitivity to be addressed at the site.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

1. **Attraction** – The site is famous for its rich heritage and architecture which dates back 1000 years. Having two beautiful 5-tired, colourful gopurams and a huge Kulam (temple tank) magnifies the beauty of this temple. Another unique feature of this temple is a small library that houses age-old Vedas, manuscripts, and books which beautifully portrays history and culture. In addition to this, the temple is famous for hosting several events that attract many pilgrims and locals during the festive season. Apart from the temple and its facilities, the temple has other attractions in the vicinity which include, Pamban Swami Temple, Shri Ashtalakshmi Temple, Elliott's Beach, etc, and thus features on the "must-visit" list of tourist places in Chennai.
2. **Accessibility** – Being in Chennai and close to all the transportation facilities, the site has excellent accessibility. It is situated in the southern region of Chennai and is accessible via wide urban roads, for instance the western entrance of the temple is located on the ~35 m wide East Coast Road. Bus stop, cab, and auto stands are easily accessible within a ~500 m radius of the temple. The site can be accessed via Thiruvanmiyur Metro station which is ~1.3 km away from the site. The major modes of transport people use to commute to the site include autos, Ola/Uber, and taxis/ private cars.
3. **Amenities** – All the basic tourist amenities are available within and around the temple, but the condition of these amenities is quite poor. The site includes facilities of drinking water, retail shops, and safety & security, however, these need maintenance and up-gradation. The site lacks the following facilities.
 - No ticket counter at the western entrance of the temple.
 - No secure footwear stand.
 - No designated footpaths around the temple and temple tank.
 - No rest/seating facility
 - Inadequate streetlight
 - No proper signages/way findings to reach the temple
4. **Awareness** – The temple enjoys immense popularity among pilgrims and is a well-known tourist destination in Chennai. In 2019, the temple received ~7 million visitors, out of which ~3% were foreign tourists. It is recommended by renowned travel referral/review aggregators such as Lonely Planet, TripAdvisor, etc. The HR&CE department maintains a temple website with relevant information.
5. **Activities** – On weekends, the temple hosts small recitals in the temple pathshala and library. On major festivals like Shivratri, the temple arranges cultural dance/music performances on the stage located on the east side of the temple premise. On special occasions and festivals, close to 500 visitors attend these programs. In Addition to this, the temple also has an Annadhanam space and a kitchen where meals are prepared and served to approximately 100 people every day.
6. **Accommodation** – Being situated in Chennai, the temple enjoys excellent accommodation options. Within a 3 km radius of the site, a 5-star hotel, budget hotels, 3-star hotels, and 2-star hotels are available. Average room charges in the area are around INR 1,200 for a budget hotel and ~INR 4,600 for a 3-star hotel. A wider range of homestay/serviced apartment options are also available.
7. **Association with Community** – The locals around the temple are very well aware of the temple's history and significance. They are involved in different activities organised in the temple such as weekly recitals in the library and Pathshala. Moreover, the local children are enrolled in the Pathshala situated inside the temple complex, where classes teaching Vedas to the children are conducted. Earthen pots and other home-made souvenirs made by locals are sold outside the temple.

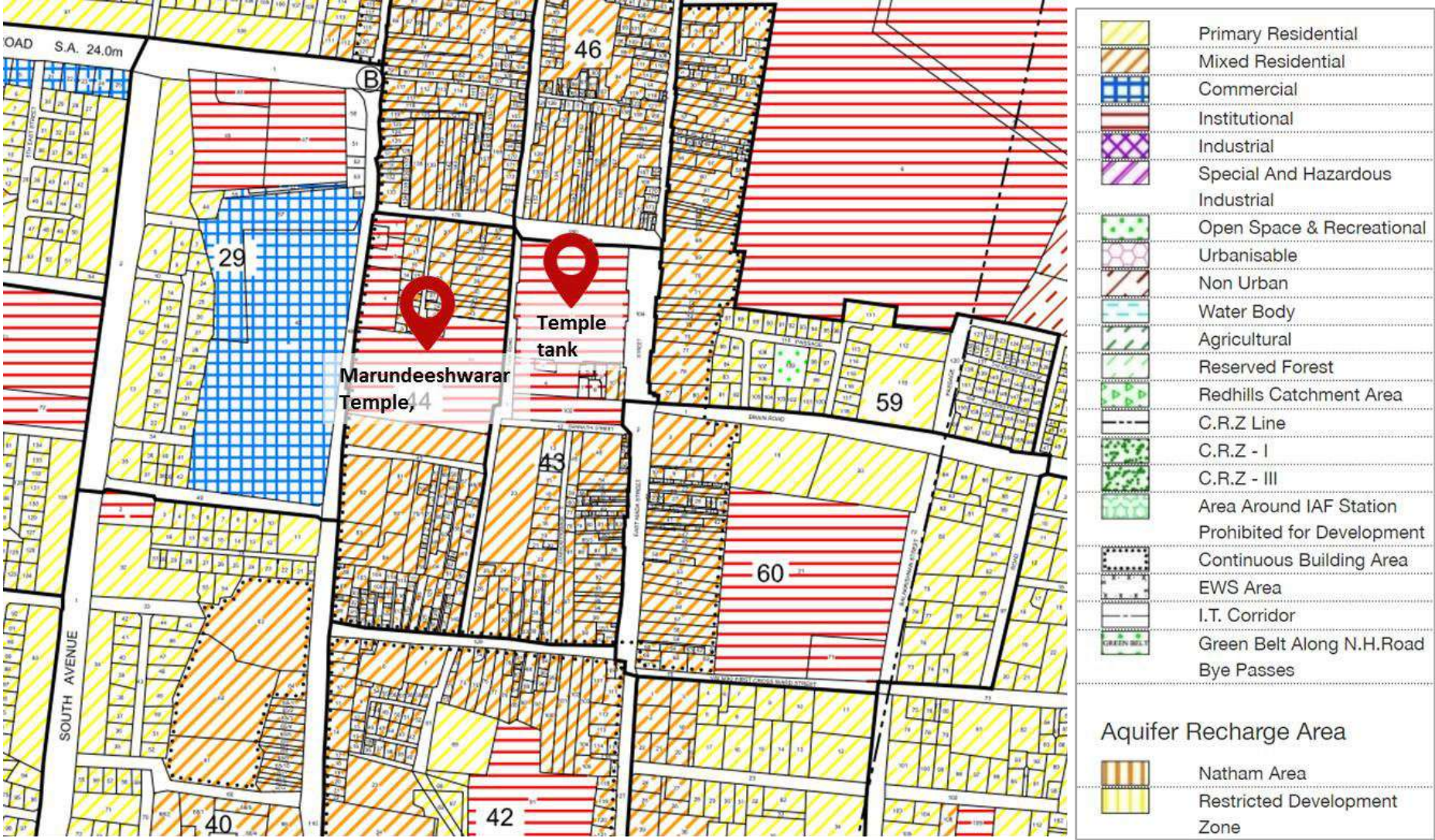
Figure 1-1: Location & Existing Layout



Site Pictures



Figure 1-2: Land Use Regulation Zone at the Site



Vision for the Site

- Marundeeshwarar Temple is over 1,000 years old. Owing to its long history, the temple enjoys immense popularity among locals and tourists. The site itself provides various facilities of housing kitchen, mandapams, administrative offices, and parking facility. However, some of the facilities within the temple are poorly maintained while some are completely missing.
- The temple has huge potential to enhance and improve the pilgrims’ experience by improving and adding the missing facilities. It has a good opportunity to provide the needed amenities because of the availability of ~1.71 acres of additional land adjacent to the eastern entrance of the temple. This land is currently used for parking and some portion of this land is leased out for the residential and commercial purposes.
- The vision for the site is to enhance the amenities outside the temple by utilizing the vacant land for setting up a facilitation center along with pay & use washrooms and designated and regulated parking. The site also aims to host visitor engaging spaces, such as a modernised library and pathshala building, landscaped gardens and retail zone along with seating areas.
- **Target Visitor** – The site currently draws a large number of pilgrims due to its religious value. Further, due to its monumental value, rich architecture, and historical importance, the site draws a good number of tourists – both foreign and domestic.
Having said that, given the location of the site and its rich historical value, there is a significant potential to increase the tourist footfalls by improving the quality of experience and amenities at the site.

The composition of visitors at the site includes all age groups of visitors and hence, facilities would need to be provided for all (especially for the children, Divyaang, and elderly).
- **Tourist Projections** – The site is categorized as a **High Tourism Site** with **Moderate HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC’s compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	1,600	3,719	6,338
High Value Tourists (HVT) (Both domestic and foreign)	100	295	503
Maximum Carrying Capacity	10.832		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Approach to Masterplanning

Given the site’s religious and architectural significance and its popularity among pilgrims and domestic tourists, the concept of the masterplan is to:

- **Improving pilgrims’ experience** at the temple – through improved basic amenities of washroom, luggage room, seating area, and parking.
- **Utilisation of vacant land** for providing landscaped gardens, new library, and Pathshala to enhance its beauty and facilities.
- **Engaging local community** by providing them space to sell home-made products.
- **Improving tourist footfall** through appropriate marketing and promotion.

Hard Interventions

1. **Tourist Information centre/ Facilitation centre** – The temple has two Indian-style toilets and two western-style toilets present within the temple premises. However, the condition of these toilets is poor. Moreover, these cannot serve visitors during peak seasons. The temple also lacks luggage room and has a free shoe stand. To cater to this, Facilitation centre type-1 with an inquiry desk, cloak/luggage room, changing room, rest/waiting area, secured/ticketed shoe stand, pay and use toilets, and drinking water kiosk is proposed to be developed for tourist convenience and ease at the site. It can be placed near the eastern

entrance of the temple. This will be developed as per the design guidelines mentioned in Glossary of Interventions.

Infrastructure Created: ~150 sqm of building area.

- 2. Paved-shaded Pathway (Parikrama) –** Paved-shaded pathway (Parikrama) around the main shrine is proposed, along with pathways connecting to all other buildings around the main shrine. This will enhance ease in walkability around the temple premises. The entire 2 m wide pathway can be paved with heat-resistant material, to make walking convenient for devotees visiting the temple in the hot climate.

Infrastructure Created: ~280 m long paved-shaded pathways.

- 3. Footpaths along with temple premises and temple tank –** As it was observed that no footpaths were leading to the temple premises, causing inconvenience to the visitors. Therefore, a 1.5 m wide footpath along the boundary wall of the temple complex and temple tank will be provided.

Infrastructure created: ~2 m wide, ~400 m long footpath construction.

- 4. New Library building –** The temple is famous for housing age-old Vedas, manuscripts, and books which beautifully portray history and culture. These historically rich documents are preserved in the library and are rented to visitors to read within the temple complex. However, the library having these documents is old and in poor condition. Moreover, it does not have any seating area to read these scripts. Therefore, a modernised library building having book stands, an indoor seating area, and galleries showcasing the script copies is proposed. This will be located on the north-east corner of the temple complex where the existing library is situated.

Infrastructure created: ~280 sqm of Library building.

- 5. New Pathshala building–** The temple houses a Pathshala where Vedas are taught to the children. The Pathshala building needs to be upgraded and therefore, a new pathshala building is proposed on the vacant land adjacent to the temple tank. This building will have classrooms, a storage room, a staff room, toilets, and a drinking water facility.

Infrastructure Created: 165 sqm of Pathshala building.



Naturally-Shaded seating area



Landscaped Garden



Public Plaza with Information Boards

6. Ticket Counter – The temple lacks a ticket counter on the western entrance located on the East Coast Road. Therefore a small ticket counter is proposed for the visitors' convenience.

Infrastructure Created: 50 sqm of the ticket counter.

7. Retail Zone – The retail zone having shops selling prasadam, temple-related souvenirs will be developed along the eastern side of the temple complex on the temple-owned vacant land. These will have a naturally shaded seating area along with them. Locals selling hand-made souvenirs and earthen pots outside the temple can be incorporated within this retail zone. This will help to enhance the community engagement and revenue of the temple. Besides clearing of vending activities from the surrounding streets resulting in unhygienic conditions due to littering.

Infrastructure created – A total of 4 retail stalls having 15 sqm of area each. Along with 3 naturally shaded seating areas.

8. Landscaped garden – The vacant open land in front of the proposed library and eastern entrance of the temple complex is proposed to be developed into landscaped gardens. These shall have paved pathways and shaded seating areas blended within the greens. Visitors can rent books from the library and can read in these gardens; thus this area will act as a relaxing space for visitors. Also, this place will also act as a holding space for pilgrims during peak seasons. The landscaping shall be done using native flora and paving material.

Infrastructure Created: ~1450 sqm of soft landscaping, ~740 sqm of hard landscaping along with 3 seating areas.

9. Boundary Wall – It was observed during the initial studies that the boundary wall of the temple is not well maintained and is broken in many parts. Moreover, the vacant land on the eastern side of the temple complex, having a parking facility completely lacks a boundary wall. Therefore, maintenance of the boundary wall of the existing temple complex is proposed, along with the construction of a new boundary wall enclosing the proposed retail zone, parking, pathshala, facilitation center, and landscaped garden. The standard masonry boundary wall of 2 m height will be provided.

Infrastructure created: 390 m long boundary wall construction.

10. Paved Public Plaza – The temple has a stage on the eastern side of the temple complex. This stage is used to host events during festivals. However, this stage

is located on the road and thus does not have any area for visitors to stand, resulting in crowding on the road. Therefore, this 0.35 acres of land is proposed for a paved public plaza which will have information boards depicting the historical and architectural significance of the temple. The events can be hosted in the proposed landscaped gardens within the temple complex.

Infrastructure Created: 160 sqm of the paved public plaza with huge information boards.

Soft Interventions

- 1. Marketing and Promotion** – To enhance the visibility of the temple, it has to be marketed well. Its location near the prominent sites like Pamban Swami Temple, Ashtalakshmi Temple, Elliot's beach, etc. shall be taken into an advantage by installing signages at appropriate places and approach roads to these sites that will result in redirecting tourists to the temple. Increasing visibility with strategies like integration with TN Assist App, etc. Marketing and Advertising at all key sites, CMBT, Chennai International Airport, and Chennai Central Railway Station will also help to enhance tourist footfall and attract high-value tourists.
- 2. Guided Tours**– A self-guided audio tour provision shall be present on the site to portray the rich history of the site. As the temple is popular among religious pilgrims and is located in the close vicinity of many prominent places. Therefore, the site shall be curated with other important sites for day tours. . Licensed guides shall be deployed to guide the visitors about the history and significance of the temple.
- 3. Cleanliness of the adjacent streets** – The surrounding streets of the temple are filled with garbage and overflowing dustbins. Therefore, an adequate number of dustbins are proposed to be installed at the appropriate position around the temple and temple tank.
- 4. Community Engagement** – The locals around the temple is very well aware of the temple's history and significance. Therefore, the local community can be incentivised to participate by involving them in various activities within and around the temple such as:
 - Appointing staff for the Library and Pathshala.
 - Organising regular events/activities and utilizing the amphitheatre & proposed landscaped area within the temple complex.

- Locally made souvenirs are proposed to be sold within the proposed retail zone.
- Training and appointed locals as guides.

Amenities Plan

- 1. Signage** – Signages can be installed on the proposed public plaza, along the approach roads and on the prominent sites within the vicinity, indicating the presence of the site. Signage Package 1 is proposed to feature for this site. Both directional signage and informational signage should be used, as per the design guidelines mentioned in Glossary of Interventions.
- 2. Parking** – It was observed on the site that the parking is done on the temple-owned vacant land outside the temple complex. The existing parking area is not designed and does not have any boundary wall resulting in unorganised and unregulated parking leading to less parking space. Therefore, a parking area is proposed with designated entry, exit, and parking space to regulate its use. It will be located on the vacant land adjacent to the temple tank. *Infrastructure created – 900 sqm Paved Parking areas with a total of 38 ECS*
- 3. Streetlight** – The site is observed to have inadequate streetlights. Therefore, streetlights along the outer periphery of the temple complex and temple tank are proposed to be installed at the appropriate distance. Sustainable means can be adopted, and the streets can be kept illuminated by deploying solar streetlights. *Infrastructure Created: 460 m long stretch will be provided with streetlight at the appropriate distance.*
- 4. Technology Interventions** – For tourist’s awareness on the site, self-audio tours are proposed, which will require technological facilities. Therefore Technology Package 1 is proposed for this site. These shall include:
 - Free WiFi
 - Compatibility with TN Assist App
 - The package shall exclude CCTV’s as there are sufficient numbers of CCTV’s on the site.

Trunk Infrastructure

As the Site has direct access from the road, no trunk infrastructure interventions are required.

Projects Identified

#	Project Component	Scale
1	Facilitation Centre (Type 1)	150 sqm
2	Paved-Shaded Pathways (2 m wide)	280 m
3	Footpath (2 m wide)	400 m
4	New Library building	280 sqm
5	New Pathshala Building	165 sqm
6	Ticket Counter (1)	50 sqm
7	Retail Zone (15 sqm of stall)	4
8	Hard Landscaping	740 sqm
9	Soft Landscaping	1450 sqm
10	Shaded Seating Area (3 near library and 3 near retail zone)	6
11	Tensile structures for seating (Type 1)	3
12	Boundary Wall (standard 2m height)	390 m
13	Paved Public Plaza	160 sqm
14	Signage Package 1	1
15	Parking (900 sqm of Paved Yard)	38 ECS
16	Streetlighting	460 m
17	Technology Package 1 (Exclude CCTV’s)	1

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in Glossary of Interventions.

#	Project Component	Cost (INR Lakhs)
1	Facilitation Centre (Type 1)	15
2	Paved-Shaded Pathways (2 m wide)	5
3	Footpath (2 m wide)	8

#	Project Component	Cost (INR Lakhs)
4	New Library building	44
5	New Pathshala Building	26
6	Ticket Counter (1)	5
7	Retail Zone (15 sqm of stall)	6
8	Hard Landscaping	1
9	Soft Landscaping	1
10	Shaded Seating Area (3 near library and 3 near retail zone)	1
11	Tensile structures for seating (Type 1)	1
12	Boundary Wall (standard 2m height)	21
13	Paved Public Plaza	2
14	Signage Package 1	1
15	Parking (900 sqm of Paved Yard)	11
16	Streetlighting	7
17	Technology Package 1	1
Total		INR 160 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.
- Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- All revenues are unescalated.
- Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

The following revenue sources are expected for the site:

- Built-up area rent** – Captures renting out of 605 sqm built-up space at INR 215 per sqm per annum.
- Kiosks** – Captures 4 kiosks to be rented out at INR 2 Lakhs per annum.
- Parking** – Capturing 38 ECS at 30% occupancy per day at INR 20 per ECS.

As discussed in note above, the following existing revenues, if any, are not considered:

- Prasadam sale
- Puja tickets
- VIP tickets
- Mass meals
- Donations and Sponsorships
- Sale of maps, guidebooks etc. (assumed to be at cost value)

Considering the above, total additional un-escalated revenues from the site in Y5 is estimated as INR 10 Lakhs.

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.
- The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.
- The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- The costs are un-escalated.

The following OPEX is expected for the site:

- Manpower Costs** – Additional manpower will be required at the site to manage the proposed interventions.
 - A **Help-desk staff** at the facilitation centre.
 - A **security personnel** for the facilitation centre and the parking.

- c. An **Administration staff** to overlook the operations of the retail zone and the learning centre.
- 2. **Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
- 3. **Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
- 4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
- 5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.
- 6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.
- 7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175* per kilolitre.
- 8. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in note above, the following existing OPEX, if any, are not considered:

- 1. Salaries and perks of existing employees
- 2. O&M cost of existing site and facilities
- 3. Regulatory fee if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as INR 45 Lakhs.

Feasibility Assessment and Implementation Plan

Though the operating expenditure incurred is more than that of the revenues earned through the proposed capital projects, the interventions planned at the temple are directed to cater to the needs of the pilgrims and to uphold the hygiene factors followed across all the sites undertaken in the cluster.

The interventions proposed at the site are largely for improving amenities and experience of visitors and hence have an associated “social cause”. Also, since leasing of spaces beyond 3 years is not allowed by HR&CE, PPP is not an option for development and implementation.

Hence, the recommended interventions will have to be implemented and funded by HR&CE itself.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Facilitation Centre	15	Y0 – Y2	HR&CE
2	Paved-Shaded Pathways (2 m wide)	5	Y0 – Y2	HR&CE
3	Footpath (2 m wide)	8	Y0 – Y2	HR&CE
4	New Library building	44	Y0 – Y2	HR&CE
5	New Pathshala Building	26	Y0 – Y2	HR&CE
6	Ticket Counter (1)	5	Y0 – Y2	HR&CE
7	Retail Zone	6	Y0 – Y2	HR&CE
8	Hard Landscaping	1	Y0 – Y2	HR&CE

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
9	Soft Landscaping	1	Y0 – Y2	HR&CE
10	Shaded Seating Area	1	Y0 – Y2	HR&CE
11	Tensile structures	1	Y0 – Y2	HR&CE
12	Boundary Wall	21	Y0 – Y2	HR&CE
13	Paved Public Plaza	2	Y0 – Y2	HR&CE
14	Signage Package 1	1	Y0 – Y2	HR&CE
15	Parking	11	Y0 – Y2	HR&CE
16	Streetlighting	7	Y0 – Y2	HR&CE
17	Technology Package 1	1	Y0 – Y2	HR&CE
Total		INR 160 L		

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 6,900¹ man-days of construction labour (*spread across 1-2 years of implementation*)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 2 man-days²
- Retail and F&B spaces = 10 man-days per day³

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above*

¹ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
 - Assumed cost of labour assumed for computation = INR 700 per day

- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 17,200 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both, increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 800 Cr. at the site⁴.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

- Cumulative labour man-days = 30% * CAPEX / 700

² Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

³ Assuming average 2.5 persons per kiosk / shop

⁴ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and suppliers will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.

Figure 1-3: Proposed Master Plan – Murandeeshwarar Temple



2. Kesarwadi Jain Temple, Puzhal

Site Details

District:	Chennai
Name of Site:	Kesarwadi Jain Temple
Site No:	Site 5A of 295
Site Use:	Temple
Category:	A (Temple)
Location:	13.1641, 80.2053
Land Area:	~3 acres (Temple)
Peak footfalls:	~1,000 per day (April-May)
Operator:	Shri Adeeswar Jain Shwetambar Mandir Trust
Site Ownership:	Shri Adeeswar Jain Shwetambar Mandir Trust
Tourist Footfall:	Dom – 1.3 lakhs (2019 – 20) For – 3,228 lakhs (2019 – 20)
Site Revenues:	Undisclosed
Site Orientation:	Pilgrim
Site Potential:	Very Low Tourism Site
HVT Potential:	Low HVT Potential
Connectivity:	
a. Railway Station:	~15 km from Chennai Railway Station
b. Airport:	~30 km from Chennai International Airport
c. Highway:	~350 m from NH16

Trails featured on: **Nil (Pure Pilgrim Temple)**

The Kesarwadi Jain temple in Puzhal is one of the ancient Jain temples in Tamil Nadu which is renowned for its unique style of idols and its antiquity. It is known for having a quiet and serene environment suitable for meditation. However, the lack of visitor engagement activities and certain restrictions on tourist entry pulls down the potential of the temple. The scope of interventions on the site includes enhancement of overall appeal of the site, introduction of meditation gardens and addition of facilities for visitor's convenience.

Existing Condition

Location

The Kesarwadi Jain temple is located in Puzhal, a quiet town a little away from the hustle and the bustle of Chennai city. The temple is located approx. 13 km North-West from central Chennai. The site is accessed via Gandhi main road connecting the temple to Chennai – Kolkata G.T. Road, ~ 200 m. from the site. The temple lies in an Institutional zone surrounded by mixed-use residential development. It has many small shrines of local prominence in the vicinity. However, the tourist destinations easily accessible within 15 km – 20 km from the temple includes Kasimedu Rock Beach (~20 km), N4 Beach (~20 km), Sri Lakshmi Narayana Temple, Chennai (~10 km), Old Light House, Chennai (~16 km) and China Rail Museum (~11 km).

Existing Layout

The temple occupies an area of about 3 acres. Constructed in an ancient architectural site, the temple has a courtyard after its main entrance, after which the main shrine is located in the east. Another temple shrine is located on the south-western side having many significant Jain deities in it. The entrance to the main Adinath temple is distinctly different than many other Jain temples in the country. The temple complex is fairly spacious and remains crowded on festival days. The temple complex houses the following:

- Dharmashala Building
- Kesarwadi shrine
- Adinath shrine
- Parshwanath shrine
- Bhaktamar Stotra shrine
- Shrimad Rajchandra shrine

Existing Uses

Owing to its historical and architectural importance, the Kesarwadi Jain Temple enjoys popularity among locals and many Jain tourists, who visit the temple to worship and meditate. Apart from participating in religious rituals, pilgrims and locals visit in significant numbers during the occasion of Karthik Purnima, Chaitra Purnima, and Vaisakh Shukla Trutiya to celebrate these festivals. The temple houses different shrines and other facilities such as:

- Administrative Offices
- A separate building block which is used as Dharamshala and Bhojanshala with a capacity to accommodate 800 pilgrims.
- Parking Facilities.

Other Land

The entry to the temple was restricted and the report is made based on secondary research and data received from the local surveys. Hence, the details about the other lands owned by the temple were not disclosed.

Masterplanning Considerations

Applicable Regulations

- 1. Tamil Nadu Combined Development and Building Rules, 2019** – As per the Master Plan, the temple complex lies in an Institutional Zone. The permissible uses include:

For Institutional Zone

Educational Institutions | Govt/Quasi Govt./Private Offices and Institutions | Art galleries | Museums | Public Libraries | Social and Cultural Institutions | Religious buildings | Health institutions | Public & Semi public open spaces | Public utilities | Residential and commercial spaces | Bus and Railway stations | Parking lots

including multilevel parking | Cinema theatres | Kalyana mandapams | Community/Assembly halls | Waterfront Developments | Circuses/Fairs.

Key Sensitivities

There are no specific environmental/social sensitivity to be addressed at the site.

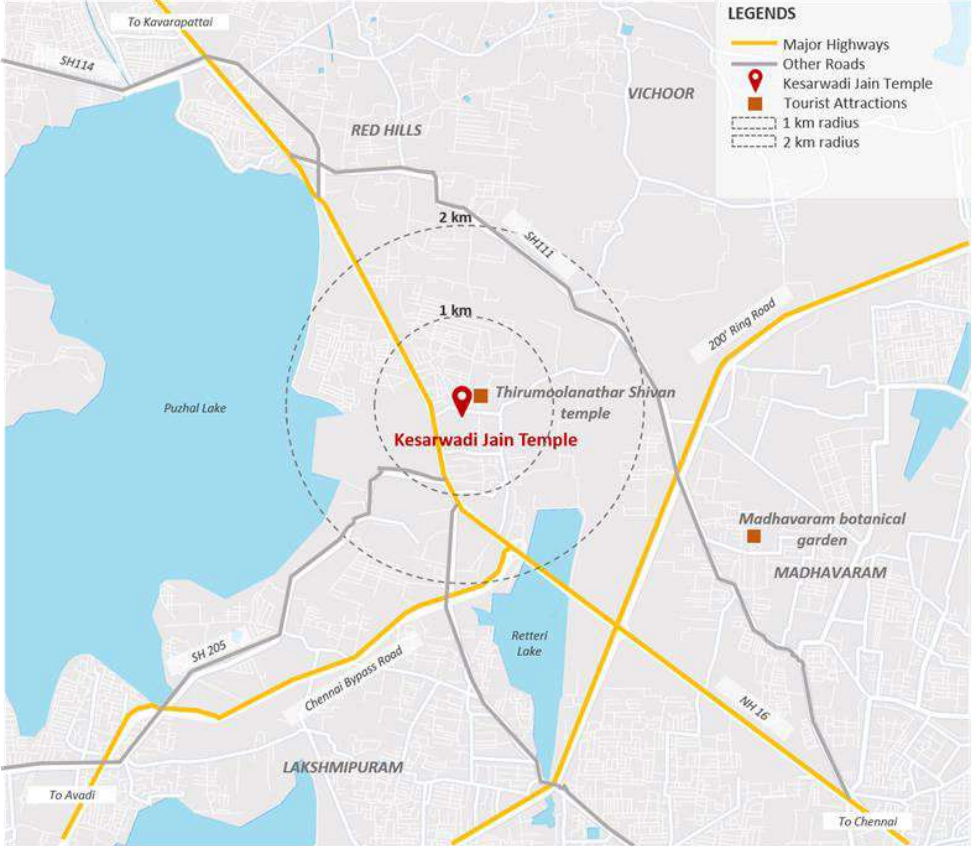
Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

- 1. Attraction** – The Kesarwadi Jain temple is a very ancient shrine in the Chennai district. The shrine is believed to be ~2500 years old. From the style of the idol, the antiquity of this shrine becomes evident. The idol is as impressive and beautiful as the one in Kesariaji Shrine (Rajasthan) and is popularly known as Kesarwadi. The temple is listed in one of the must-visit places around Chennai, by many travel bloggers and religious enthusiasts. Apart from the religious attraction, the temple has a large lake called Puzhal Lake, and hills of red clay popularly known as Redhills, which serve as an attraction to the site. Apart from this, there are no attraction points for the tourist.
 - 2. Accessibility** – The site has good accessibility. It can be accessed via Gandhi Road connecting the temple to Chennai – Kolkata G.T. Road, ~ 200 m. from the site. The approach road to the temple is quite wide and in good condition. Puzhal Bus stop is located ~200 m away from the temple. Private taxis and autos are easily available near the site. The major modes of transport people prefer to use to commute to the site include tour bus, autos/taxis, and private vehicles.
 - 3. Amenities** – Inside the temple compound, there is a newly constructed block for lodging with all facilities, which is called Dharamshala. Besides lodging facilities, a Bhojanshala for meals with an Ayambilshjala for “ayambils” is also available. The Dharamshala building has a holding capacity to serve ~800 pilgrims. Separate arrangements can be made for pilgrims in the congregation for meals. The temple is well maintained due to the recent renovation work and thus provides good amenities to its visitors.
- Parking** – Currently parking is done in the courtyard located in front of the main shrine.

- 4. Awareness** – The temple enjoys moderate popularity among tourists and Jain pilgrims. The Kesarwadi Jain temple received ~ 1.3 lakh visitors in 2019, ~2% of whom were foreign tourists. There are several travel bloggers and architecture enthusiasts who have written about the greatness of this temple. It is recommended by renowned travel referral/review aggregators such as Lonely Planet, TripAdvisor, etc. as one of the must-visit religious destinations in Chennai.
- 5. Activities** – The temple on a regular day remains lively, as a particular Stavan called Siddhachal Samaru (Remembering Siddhachal) is sung by devotees in front of the Shatrunjaya Patth. Further, many devotees use the temple space for meditation, due to its calm and serene environment. However, besides religious rituals and regular festivals, the site has no other activities in or around the temple premises to engage tourists.
- 6. Accommodation** – The Temple is located in Puzhal on the outskirts of Chennai along the Chennai Kolkata GT Road. There are 6-7 accommodation options available along the G.T. Road in the 200 m radius of the temple. However, most of the visitors visiting the temple prefer to stay in Chennai and take a one-day trip to the temple. The accommodation option along the G.T. Road varies from budget-friendly options like Oyo to 4/5-star hotels with an average cost ranging between INR 1500 – INR 3000 per night. Apart from this, the temple itself offers accommodation in a newly constructed dharmshala block having a holding capacity of ~800 devotees.
- 7. Association with Community** – The locals around the temple are very well aware of the temple's history and significance. They are involved in everyday rituals of the temple such as Siddhachal Samaru (Remembering Siddhachal) is sung by devotees in front of the Shatrunjaya Patth. Locals celebrate festivals of Karthik Purnima, Chaitra Purnima, and Vaisakh Shukla Trutiya in the temple.

Figure 2-1: Location & Existing Layout



Site Pictures

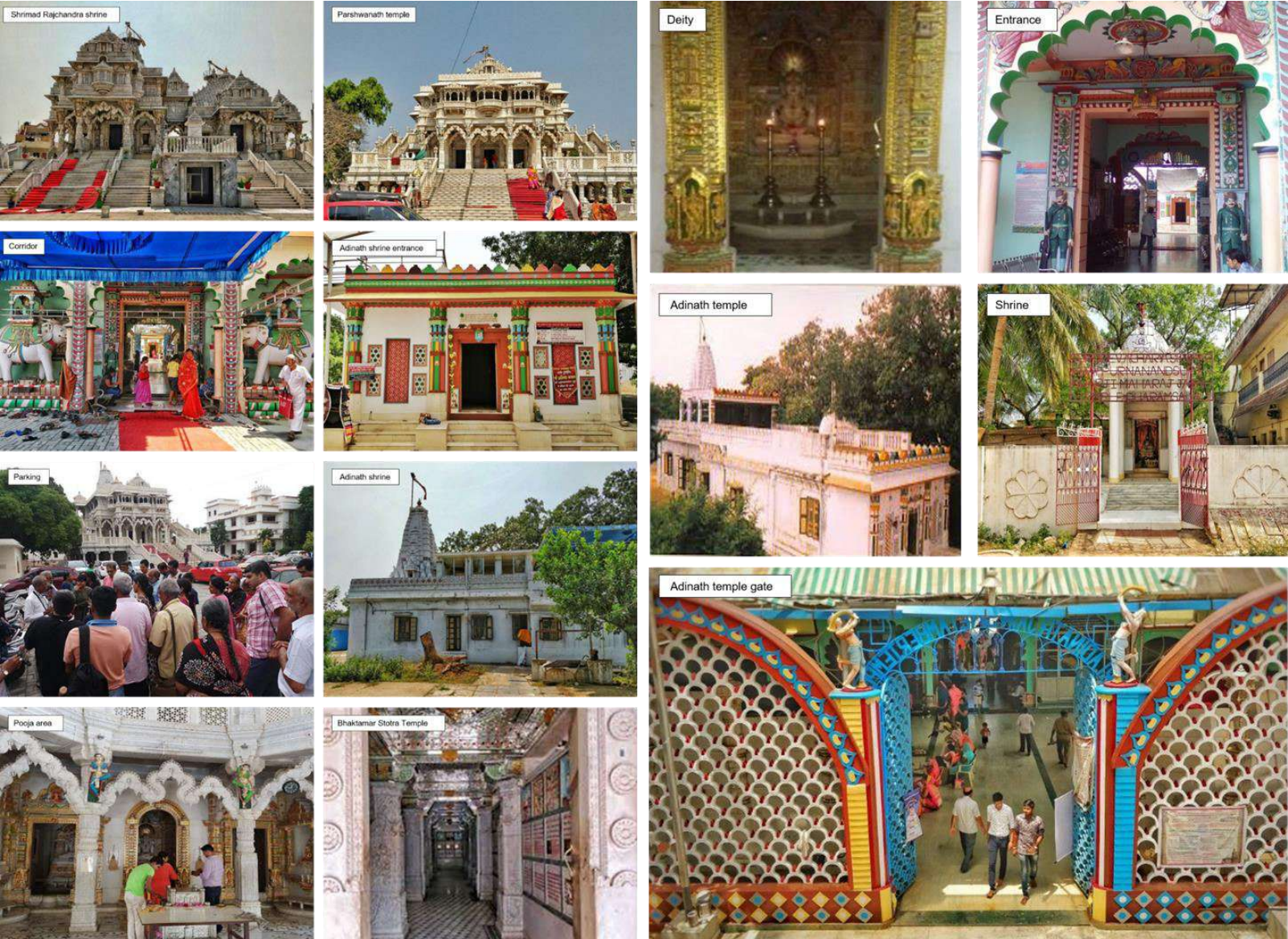
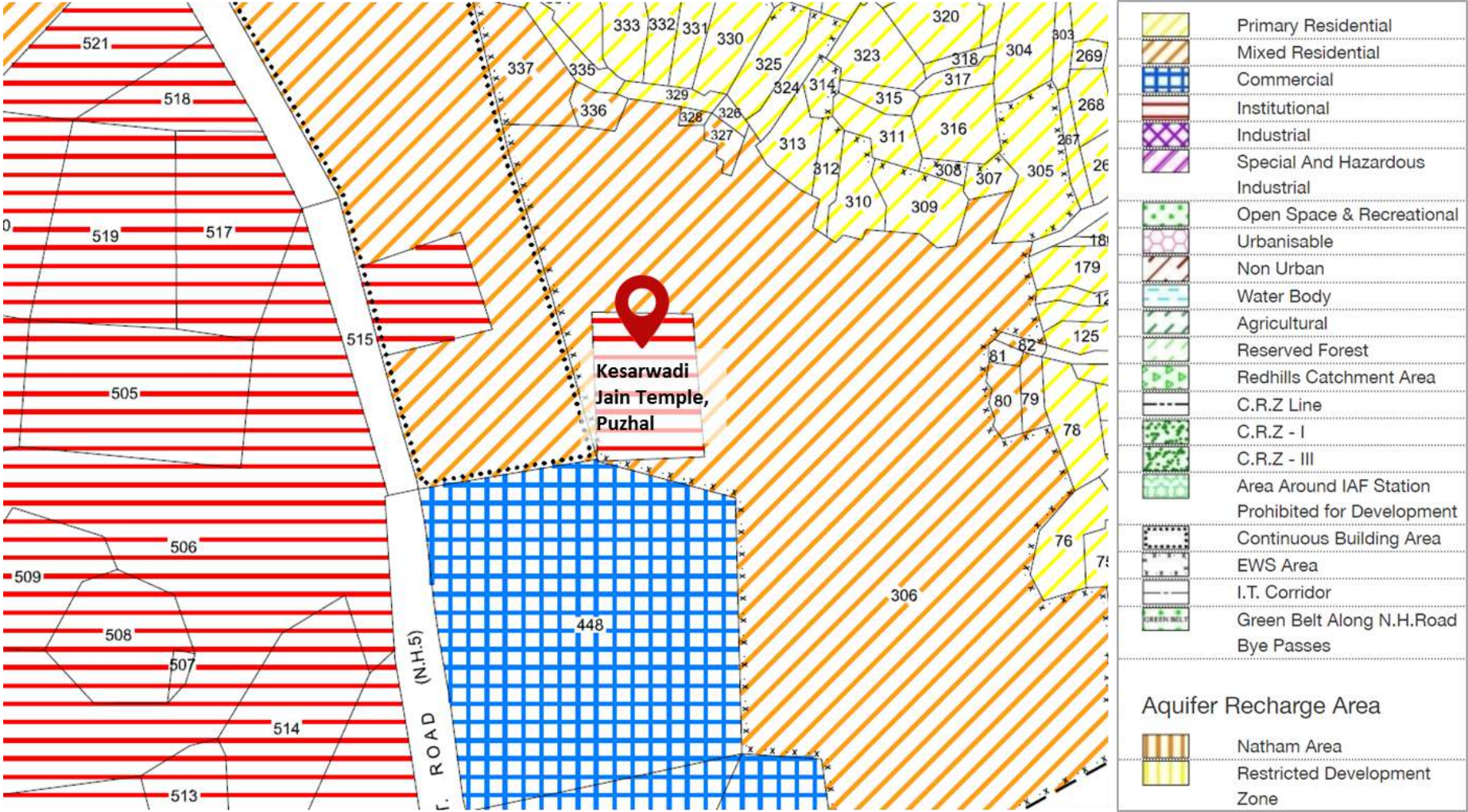


Figure 2-2: Land Use Regulation Zone at the Site



Vision for the Site

- The Kesarwadi Jain temple has beautiful architecture and is known for its calm and serene environment suitable for meditation. It has a unique style of idols present in the temple from which the antiquity of the shrine becomes evident. The shrine is well-maintained due to the efforts of Swamiji Sri Rikhavdasji, who recently carried out repairs and renovations of the temple premises. To add to the comforts and conveniences of the pilgrims visiting this shrine, he constructed Dharamshala and Bhojanshala buildings within the temple premises. This has increased the number of devotees visiting the temple.
- The temple has huge potential to improve the aesthetic appeal of the temple along with visitor's experience by utilizing the hard open surface currently being used for parking. The vision for the site is to make it aesthetically more pleasing by reducing the hard surface on the site, introducing meditation gardens for visitors' experience, and limit parking from the front courtyard. Besides, enhancing facilities by developing retail kiosks, drinking water station and pay & use toilets for visitors' convenience.
- The entry to the temple was restricted because of which the existing situation report was prepared on the basis of secondary research and data received from the local surveys. The proposals given in this report are based on this limited data/information. The proposals will be carried out and regulated only with the permission of the temple authority.
- **Target Visitor** – The site is largely a pilgrim site, with a significant footfall of Jain pilgrims from Tamil Nadu and neighbouring states, due to its rich architecture and religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.

Further, pilgrim groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang and elderly).

- **Tourist Projections** – The site is categorized as a **Very Low Tourism Site** with **Low HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the

historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	127	299	602
High Value Tourists (HVT) (Both domestic and foreign)	7	16	31
Maximum Carrying Capacity	11,817		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Approach to Masterplanning

Given the site's religious and architectural significance and its popularity among Jain pilgrims and domestic tourists, the concept of the masterplan is to:

- **Improving pilgrims' experience** at the temple – by enhancing soft landscaping and addition of basic amenities of the washroom, and drinking water station.
- **Utilisation of vacant land** within temple premises for providing meditation gardens and gazebos for relaxing and seating.
- **Engaging visitors** by providing them space to sit, meditate, and buy temple souvenirs.
- **Improving footfall** through appropriate marketing and promotion.

Hard Interventions

1. **Landscaping and designated Paved Pathways**– The temple has a lot of hard surfaces, especially on the entrance, the temple has a huge paved courtyard where cars are parked. This land can be utilised more judiciously by adding more greens and separating the parking area. This will enhance the aesthetic appeal of the temple. Therefore, landscaping along with designated paved pathways linking entrance, parking area, main shrine Dharamshala, Bhojanshala, and other small shrines is proposed. The landscaping will be done using native flora

and locally sourced pavers. The entire 2 m wide pathway will be shaded using natural shading devices to make walking convenient for devotees visiting the temple in the hot climate.

Infrastructure Created: ~750 sqm of soft landscaping and 330 m long paved-shaded pathways.

- 2. Retail Zone** – The retail zone having shops selling prasadam, temple-related souvenirs, etc. will be developed along with the Dharamshala Building on the vacant land between Dharamshala and Main Shrine building. These shops will serve the visitors daily need products while staying in Dharamshala. A drinking water station will also be incorporated in this zone.

Infrastructure created – 130 sqm of a retail zone along with drinking water station.

- 3. Meditation garden** – As the temple is famous among visitors for having a quiet environment suitable for meditation, therefore meditation garden for visitors' experience is proposed. It will be developed on the vacant open area in front of the Dharamshala. This part of the temple already has pavers and a lot of trees. Therefore, developing more greens by reducing hard surfaces and addition of gazebos in between the gardens will create a peaceful garden with a focus on outdoor relaxation, meditation, yoga, and wellness. Pathways in the garden will allow guests to have peaceful walks and access small gazebos hidden in the green as spaces for meditation.

Infrastructure Created: ~1500 sqm of meditation garden along with 4 gazebos.

Soft Interventions

- 1. Marketing and Promotion** – As it was observed that the temple has moderate awareness among pilgrims, therefore, to enhance the visibility of the temple, it has to be marketed well. Its location near the Chennai Kolkata GT Road shall be taken into an advantage by installing signages at the road to attract travelling tourists. There are some Jain temples in the vicinity, where information/directional signage of the temple can be erected. Increasing visibility with strategies like integration with TN Assist App, etc. Marketing and Advertising at all key sites, CMBT, Chennai International Airport, and Chennai Central Railway Station will also help to enhance tourist footfall and attract high-value tourists.



Landscaping and Paved Pathway



Retail shop

Meditation Garden

- 2. Guided Tours**– Self-guided audio tour provision shall be present on the site to portray the rich history of the site. As the temple is popular among Jain pilgrims and is located in the close vicinity of other small temples, Puzhal Lake, Red Hills. Therefore, the site shall be curated with these sites for day tours. Licensed guides shall be deployed to guide the visitors about the history and significance of the temple.
- 3. Community Engagement** – The locals around the temple are well aware of the temple's history and significance. Therefore, the local community can be encouraged to participate in various activities within and around the temple like utilizing the meditation garden for meditation, running the proposed retail kiosks near Dharamshala, and training and appointing them as guides in the temple.

Amenities Plan

1. **Signage** – Signages can be installed on the Chennai- Kolkatta G.T. Road, Red Hills, and other small temples in the vicinity for the outreach of the temple. Within the temple, information/directional signages shall be installed outside shrines, Dharamshala, Bhojanshala, etc. Signage Package 1 is proposed to feature for this site. Both directional signage and informational signage should be used, as per the design guidelines .
2. **Parking** – As the courtyard near the entrance is currently being utilised for parking which gives an unaesthetic look to the temple entrance. Therefore, parking is proposed to be separated from the courtyard and shall be limited to the west side of the temple complex. Parking space for 38 cars will be provided. *Infrastructure created – 1400 sqm of parking area having 38 ECS.*
3. **Pay and Use Toilet Block** – For the convenience of the visitors, ~2 units of pay and use toilets are proposed near the parking area on the west side of the temple complex. It will be a standalone unisex unit based on modern technologies and standards having paid access and automated self-cleaning. The design guidelines for Pay and Use Toilet Blocks are design guidelines.
4. **Drinking-Water Station** – For the convenience of the visitors, a drinking water station near the proposed retail zone adjacent to the Dharamshala is proposed. This will serve pilgrims visiting the temple and guests staying at the Dharamshala. A module of drinking-water station can be as per the design guidelines. *Infrastructure created – 1 drinking-water station adjacent to the retail zone.*
5. **Technology Interventions** – For tourist's awareness on the site, self-audio tours are proposed, which will require technological facilities. Therefore Technology Package 1 is proposed for this site. These shall include:
 - Free WiFi
 - Compatibility with TN Assist App
 The package shall exclude CCTV's as there are sufficient numbers of CCTV's on the site.

Trunk Infrastructure

As the Site has direct access from the road, no trunk infrastructure interventions are required.

Projects Identified

#	Project Component	Scale
1	Soft Landscaping	750 sqm
2	Pathways (2 m wide)	330 m
3	Retail Kiosk + 1 Drinking Water Station	130 sqm
4	Meditation Garden	1500 sqm
5	Gazebos	4
6	Signage Package 1	1
7	Parking Bollards (1400 sqm of paved yard)	40 ECS
8	Pay and Use Toilets (40 sqm)	2
9	Technology Package 1 (Exclude CCTV's)	1

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in design guidelines.

#	Project Component	Cost (INR Lakhs)
1	Soft Landscaping	1
2	Pathways (2 m wide)	7
3	Drinking Water Station	3
4	Retail Kiosk	3
5	Meditation Garden	10
6	Gazebos	8
7	Signage Package 1	1
8	Parking Bollards (1400 sqm of paved yard)	11

#	Project Component	Cost (INR Lakhs)
9	Pay and Use Toilets (40 sqm)	20
10	Technology Package 1 (Exclude CCTV's)	1
Total		INR 65 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- a) Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.
- b) Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- c) All revenues are unescalated.
- d) Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

The following revenue sources are expected for the site:

1. **Pay per use Toilets** – Assuming that ~15% of the visitors would use the toilets at INR 10 per person.
2. **Parking** – Capturing 40 ECS at 30% occupancy per day at INR 15 per ECS.
3. **Kiosks** – Captures 2 kiosk, each to be rented out at INR 2 Lakhs per month.

As discussed in note above, the following existing revenues, if any, are not considered:

1. Prasadam sale
2. Puja tickets
3. VIP tickets
4. Mass meals

5. Donations and Sponsorships
6. Sale of maps, guidebooks etc. (assumed to be at cost value)

Considering the above, total additional un-escalated revenues from the site in Y5 is estimated as INR 10 Lakhs.

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- a) The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.
- b) The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.
- c) The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- d) The costs are un-escalated.

The following OPEX is expected for the site:

1. **Manpower Costs** – Additional manpower will be required at the site to manage the proposed interventions.
 - a. A **security personnel** for the retail kiosks and the parking space.
 - b. An **Administration staff** to overlook the operations of the kiosks and the parking.
2. **Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
3. **Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.

5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 *percentage* of the total capital expenditure incurred.
6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.
7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175* per kilolitre.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as INR 10 Lakhs.

Feasibility Assessment and Implementation Plan

Given that the estimated additional revenue from the proposed interventions is in par with the operational expenses incurred, it can be concluded that the interventions proposed at the site are **Operationally Self-Sustainable** and therefore beneficial.

The interventions proposed at the site are largely for improving amenities and experience of visitors and hence have an associated “social cause”. Given the strict conservative protocols followed by the temple trust - Shri Addeswar Jain

⁵ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour

Shwetambar Mandir Trust, PPP is not an option for development and implementation.

Hence, the recommended interventions will have to be implemented and funded by the temple trust itself.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Soft Landscaping	1	Y0 – Y2	Temple Trust
2	Pathways (2 m wide)	7	Y0 – Y2	Temple Trust
3	Drinking Water Station	3	Y0 – Y2	Temple Trust
4	Retail Kiosk	3	Y0 – Y2	Temple Trust
5	Meditation Garden	10	Y0 – Y2	Temple Trust
6	Gazebos	8	Y0 – Y2	Temple Trust
7	Signage Package 1	1	Y0 – Y2	Temple Trust
8	Parking Bollards	11	Y0 – Y2	Temple Trust
9	Pay and Use Toilets	20	Y0 – Y2	Temple Trust
10	Technology Package 1	1	Y0 – Y2	Temple Trust
Total		INR 65 L		

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 2,800⁵ man-days of construction labour (*spread across 1-1.5 years of implementation*)

- Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 2 man-days⁶
- Retail and F&B spaces = 10 man-days per day⁷

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect, and induced effects is estimated as. 7,000 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both, increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 65 Cr. at the site⁸.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

-
- As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
 - Assumed cost of labour assumed for computation = INR 700 per day
 - Cumulative labour man-days = 30% * CAPEX / 700

⁶ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

⁷ Assuming average 2.5 persons per kiosk / shop

⁸ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

Figure 2-3: Proposed Master Plan –Kesarwadi Jain Temple



3. Arulmigu Thirumoolanathar Shivan Temple, Puzhal

Site Details

District:	Chennai
Name of Site:	Arulmigu Thirumoolanathar Shivan Temple
Site No:	Site 5B of 295
Site Use:	Temple
Category:	A (Temple)
Location:	13.1645, 80.2085
Land Area:	~1 acre (Temple) ~0.5 acres (Temple Tank)
Peak footfalls:	~2,000 per day (February, September, October)
Operator:	HR & CE Dept.
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom – 50,000 (2019 – 20) For – nil (2019 – 20)
Site Revenues:	Undisclosed
Site Orientation:	Pilgrim
Site Potential:	Low Tourism Site
HVT Potential:	Low HVT Potential
Connectivity:	
a. Railway Station:	~15 km from Chennai Railway Station
b. Airport:	~30 km from Chennai International Airport
c. Highway:	~350 m from NH16

Trails featured on: **Nil (Pure Pilgrim Temple)**

The temple is dedicated to Lord Shiva and is more than 1,300 years old. It is a small temple and lacks in providing some basic public amenities and engaging spaces to the visitors. Moreover, the temple does not score well on awareness, as very few people (majorly locals) know about the temple. Nevertheless, its major advantage stems from the fact that it is located on Chennai-Tirupati highway, which is a highly travelled route. Therefore, the scope of interventions includes, improving the visibility of the temple along the Chennai – Tirupati route and enhancing basic amenities of and temple-souvenir shop within the temple. Other than this, providing engaging spaces around the temple tank will attract visitors and enhance the activities around the temple.

Existing Condition

Location

Arulmigu Thirumoolanathar Shivan Temple is located in Puzhal, a quiet town a little away from the hustle and the bustle of Chennai city. The temple is located approx. 13 km North-West from central Chennai. The site is accessed via Gandhi main road connecting the temple to Chennai – Kolkata G.T. Road, ~ 200 m. from the site. The temple lies in a mixed-use zone surrounded by residential and commercial development. It has many small shrines of local prominence such as the Kesarwadi Jain temple and Murugan Temple in the vicinity. The prominent tourist destinations, easily accessible within 10 – 20 km from the temple includes Sri Lakshmi Narayana Temple (~10 km), China Rail Museum (~11 km), Red Hills (~14 km), Chennai Old Light House (~16 km), Kasimedu Rock Beach (~20 km), and N4 Beach (~20 km).

Existing Layout

The temple is located in a walled rectangular plot covering an area of ~1 acre. The plot contains the main temple shrine and some small shrines on the southern side of it. The layout of the temple complex is:

- The main shrine faces east with Dwajasthambam (flagpole), Palipeedam (hall), and Nandhi (Shiva's mount) facing the main sanctum.
- The Shivalinga at the temple is believed to be Swayambu, or self-manifested.
- Other small shrines are dedicated to Sornambigai, Mahendra Varaha, Brahma, Maheswari, and Narayana and are located around the sanctum within the temple.
- There are several other shrines located in the outer Prakarama or circulatory path.
- As is common at many Pallava temples, there is an underground passage at the temple. It is believed to connect Thirumullaivayil and Thiruvotriyur. However, this cannot be accessed.
- There is a large temple tank outside the temple complex, on the southern side. The stepped tank is well maintained and has an ample amount of water.

The temple is bound on all four sides by:

- South – access road (Gandhi Main road, ~7m wide) and temple tank across the road
- West – empty private land and residences
- North – Empty private land
- East - access road (Gandhi Main road, ~12m wide) and a large pond across the road

Existing Uses

The temple premises are majorly used for religious purposes. Apart from that, visitors come to celebrate Navaratri, monthly Amavasya poojas, and 10 days long Brahmotsavam in the month of February.

Other Land

Apart from the ~1 acre of the temple complex, the temple authorities also own ~0.50 acres of land on which the temple tank is constructed. This is located on the southern side of temple premises.

Masterplanning Considerations

Applicable Regulations

1. **Tamil Nadu Combined Development and Building Rules, 2019** – As per the Master Plan, the temple complex lies in a Mixed-Residential Zone. The permissible uses include:

For mixed-Residential Zone

Residential Buildings | Parks, play grounds, farms, gardens | Public Utility Buildings | Swimming Pool, Daily or weekly markets | Hotels, Restaurants, Hostels, Dormitories, Boarding and Lodging houses | Retail establishments and shops, Departmental stores, Taxi stands and car parking multi-level parking | Religious buildings.

2. TN HRCE Rules, 1959

- a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions
- b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.
- c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to the religious activities and for the facilitation of Hindu pilgrim tourists.
- d. The HR& CE Dept. owned land can be leased for a period of no more than 3 years.

Key Sensitivities

There are no specific environmental/social sensitivity to be addressed at the site.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

1. **Attraction** – The Arulmigu Thirumoolanathar Shivan Temple is a very ancient temple, built almost 1300 years ago by the Pallava dynasty. A special Abhishekam happens every new moon which is believed to cure mental illnesses. The temple tank opposite the temple complex is a beautiful place to sit and walk. It is mainly patronized by locals and a few pilgrims from North India, who come to Puzhal to visit the Kesarwadi Jain temple. Puzhal Lake and Red Hills are also located near the temple. However, these sites lack much tourist engagement, thus the temple has no major attraction sites to attract tourists.

2. Accessibility – The site has good accessibility. It can be accessed via Gandhi Road connecting the temple to Chennai – Kolkata G.T. Road, ~ 200 m. from the site. The approach road to the temple is quite wide and in good condition. Puzhal Bus stop is located ~200 m away from the temple. Private taxis and autos are easily available near the site. The major modes of transport people prefer to use to commute to the site include tour bus, autos/taxis, and private vehicles.

3. Amenities – The temple provides amenities like A drinking water station, safety & security measures, and paved surfaces for ease of movement. However, the temple lacks to provide the following:

- No toilets in or around the temple complex.
- No Retail shop for prasadam inside the temple
- No directional/information signage on the site.
- No designated footpaths
- Inadequate dustbins

Parking – The parking lot is located ~1 km away from the temple is used only during peak seasons or festivals, like Shivarathri. During regular days, there is no designated parking space, therefore, vehicles are parked along the street.

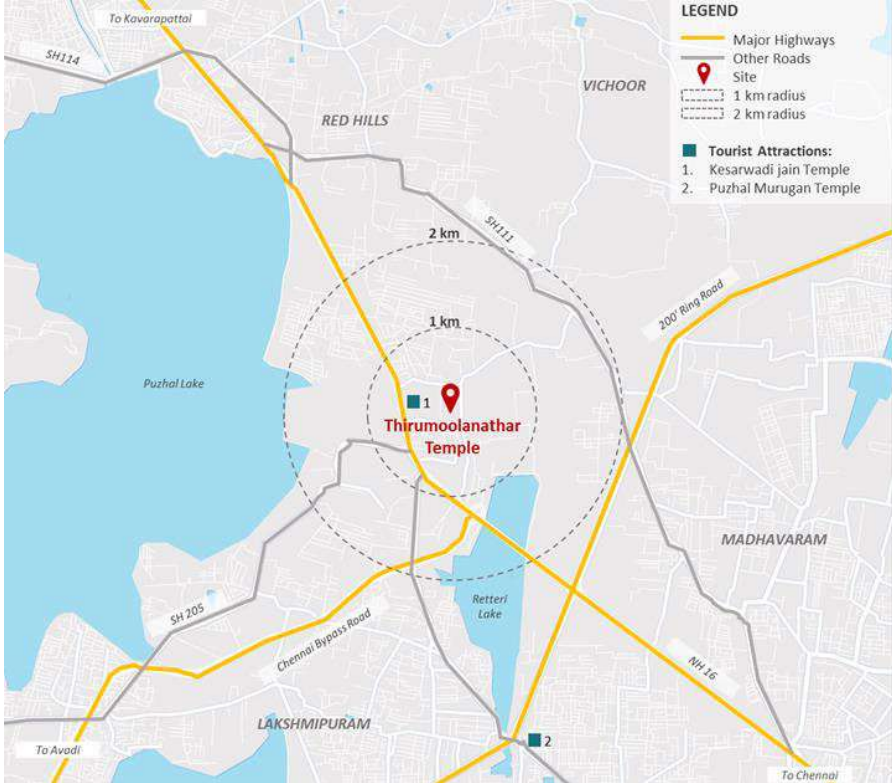
4. Awareness – The temple has low popularity. It has very little online coverage and receives very few tourists annually. There is barely any literature about the site on popular tourist websites. However, given its history and beautiful surroundings, it could be promoted.

5. Activities – On normal days, the temple and its surroundings do not offer any activities. Periodic poojas and festivals attract crowds of locals. However, the temple underperforms overall in terms of engagement.

6. Accommodation – The Temple is located in Puzhal on the outskirts of Chennai along the Chennai Kolkata GT Road. There are 6-7 accommodation options available along the G.T. Road in the 200 m radius of the temple. However, most of the visitors visiting the temple prefer to stay in Chennai and take a one-day trip to the temple. The accommodation option along the G.T. Road varies from budget-friendly options like Oyo to 4/5-star hotels with an average cost ranging between INR 1500 – INR 3000 per night.

7. Association with Community – The locals around the temple are very well aware of the temple's history and significance. They are involved in everyday rituals of the temple. Hawkers and vendors also sprawl the site during festivals and other occasions.

Figure 3-1: Location & Existing Layout.

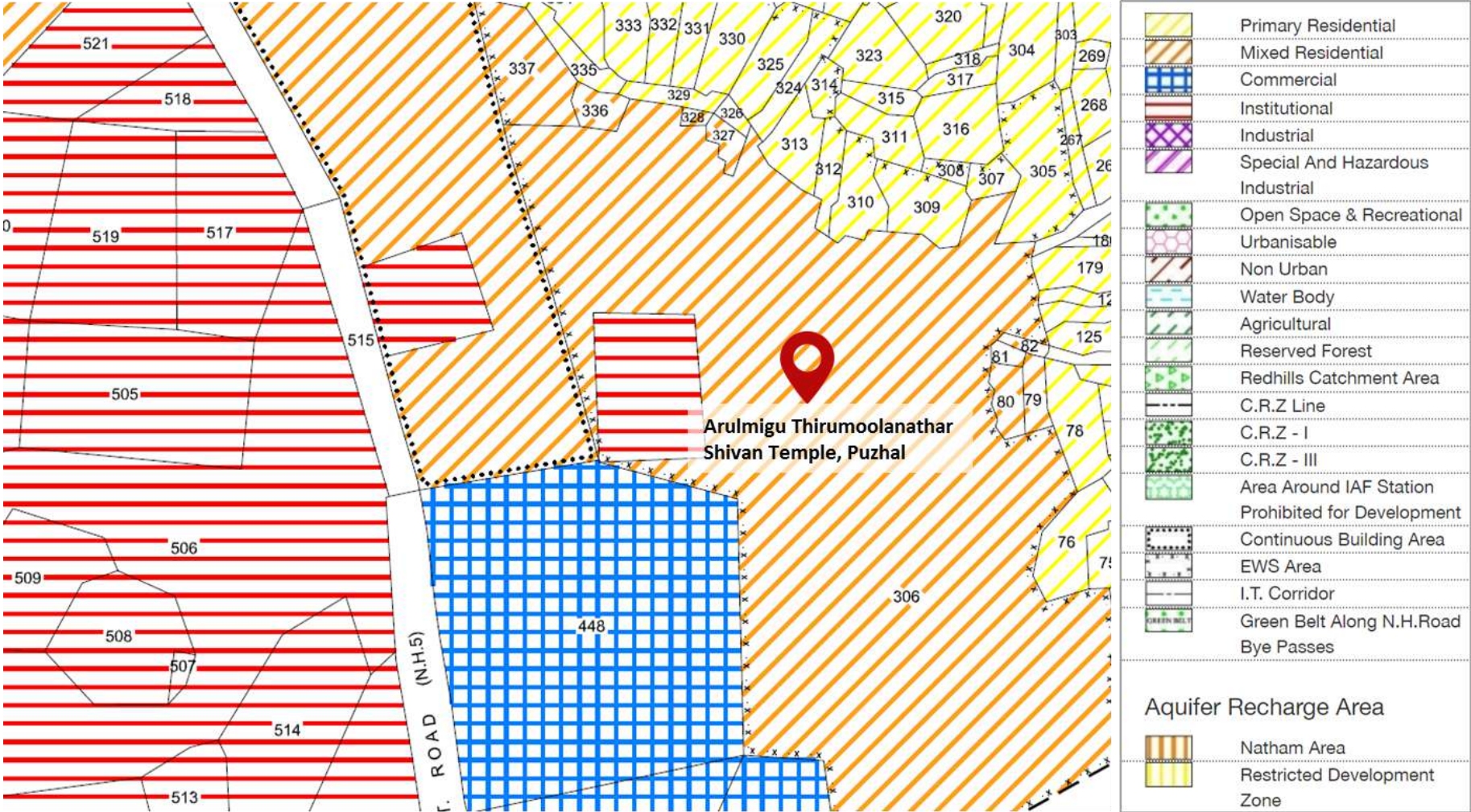


Site Pictures





Figure 3-2: Land Use Regulation Zone at the Site



Vision for the Site

- The Arulmigu Thirumoolanathar Shivan Temple is a 1300-year-old temple, built by the Pallava dynasty. The temple premises are well maintained having quiet surroundings along with a temple tank and a pond. However, the temple lacks in providing some basic facilities to pilgrims and local visitors. Moreover, the temple lacks in providing an engaging environment.
- The temple has huge opportunity to enhance its aesthetic appeal and provide facilities to its visitors as it has a huge open space available. It has a beautiful temple tank and a pond in its vicinity that can be developed to engage visitors.
- The vision for the site is to develop missing facilities of toilets, drinking water station and temple-souvenir shop. Besides this, cleaning of temple tank steps to restore its beauty and development of pond-front with paved pathways and seating area will be carried out to enhance the activities around the site.
- **Target Visitor** – The site is largely a pilgrim site, with less footfall majorly constituting of locals and pilgrims from Tamil Nadu and north India due to its religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.

Further, pilgrim groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang and elderly).

- **Tourist Projections** – The site is categorized as a **Low Tourism Site** with **Low HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC’s compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	50	186	512
High Value Tourists (HVT) (Both domestic and foreign)	0	0	0
Maximum Carrying Capacity	3.939		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at the site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Approach to Masterplanning

Given the site’s religious and architectural significance and its low popularity among pilgrims and domestic tourists, the concept of the masterplan is to:

- **Improving pilgrims’ and locals’ experience** at the temple – by enhancing soft landscaping and addition of basic amenities of the washroom, and drinking water station.
- **Utilisation of Pond** by developing pond-front to create an engaging space for pilgrims and locals.
- **Ease of convenience** of pilgrims and locals by providing them parking space, seating areas, and community toilets.
- **Improving temple visibility** through signages, day tours, appropriate marketing and promotion.

Hard Interventions

1. **Amenity Block** – The site lacks toilets, luggage room, retail shop, and drinking water facilities within the temple premises. Considering pilgrims’ and locals’ convenience, the site requires these facilities. Therefore, an amenity block is proposed which will include facilities of toilets, luggage room, one retail shop selling prasadam and temple-related souvenirs, drinking water station, and seating area. This will be located near the entrance of the temple complex, on the eastern side.

Infrastructure created: 230 sqm of building area.

2. **Landscaping and designated Paved Pathways**– The temple has a lot of hard surfaces, especially on the entrance. This land can be utilised more judiciously by adding more greens and designated pathways. This will enhance the aesthetic appeal of the temple. Therefore, landscaping along with designated paved pathways linking entrance, proposed amenity block, main temple shrine, and other small shrines within the temple complex are proposed. The landscaping

will be done using native flora and locally sourced pavers. The entire 2 m wide pathway will be shaded using natural shading devices to make walking convenient for devotees visiting the temple in the hot climate.

Infrastructure Created: ~1400 sqm of landscaping and ~100 m long paved-shaded pathways.

- 3. Development of pond-front** – The temple has a huge pond outside the temple premises, on the eastern side. This pond can be used to attract and engage pilgrims and locals. Therefore, the development of a pond-front is proposed with a focus on outdoor relaxation, natural experience, and wellness of the visitors. In this, paved walkable pathways with fencing along the pond will be developed to enhance activity around the pond. These pathways will be shaded with natural greens and will have seating areas at appropriate distances.

Infrastructure Created: ~100 m of paved-pathways along with 4 benches to sit.

- 4. Cleaning of Temple Tank steps** – The temple has a beautiful temple tank outside the temple complex, on the southern side. The water in the tank is clean, however, the steps of the tank have grown organic greenery over the years that result in an unappealing/abandoned look to the tank. Therefore, cleaning of these steps is proposed to enhance and restore the beauty of the temple tank.

Infrastructure Created: Cleaning of 850 sqm of steps.

- 5. Footpaths along the approach road** – There are no footpaths along the approach road causing inconvenience to pedestrians. Therefore, designated footpaths on both sides of the Gandhi Main road adjacent to the temple and pond are proposed.

Infrastructure Created: 2 m wide and 85 m long footpath.



Amenity Block with toilets and drinking water kiosk



Pathways along Pond



Landscaped Garden

Soft Interventions

- 1. Marketing and Promotion** – As it was observed that the temple has moderate awareness among pilgrims, therefore, to enhance the visibility of the temple, it has to be marketed well. Its location near the Chennai Kolkata GT Road and Chennai – Tirupati highway shall be taken into an advantage by installing signages at the road to attract and aware travelling tourists. There are some temples in the vicinity such as Kesarwadi Jain Temple, Murugan Temple, where information/directional signage of the temple can be erected to attract tourists to this site. Increasing visibility with strategies like integration with TN Assist App, etc. Marketing and Advertising at all key sites, CMBT, Chennai International Airport, and Chennai Central Railway Station will also help to enhance tourist footfall and attract high-value tourists.
- 2. Guided Tours**– Self-guided audio tour provision shall be present on the site to portray the history of the site. As the temple is located in the close vicinity of other small temples, Puzhal Lake and Red Hills, therefore, the site shall be curated with these sites for day tours. Licensed guides shall be deployed to guide the visitors about the history and significance of these sites.
- 3. Community Engagement** – The locals around the temple are well aware of the temple’s history and significance. Therefore, the local community can be encouraged to participate in various activities within and around the temple like utilizing the proposed pond-front development for morning & evening walks, running the proposed retail shop within amenity block, and training and appointing them as guides in the temple.

Amenities Plan

- 1. Signage** – Signages can be installed on the Chennai- Kolkatta G.T. Road, Red Hills, and other small temples in the vicinity for the outreach of the temple. Information signage on the entrance of the temple and outside various shrines within the temple shall be erected. Signage Package 1 is proposed to feature for this site. Both directional signage and informational signage should be used, as per the design guidelines mentioned in Glossary of Interventions.
- 2. Parking** – Currently the temple does not have any designated parking space resulting in on-street parking outside the temple premises. The temple has a buffer land between the temple complex and Gandhi Main Road on the eastern

side and between the temple tank and Gandhi main Road on the southern side. A designated parking space is proposed on these buffer areas. However, the land in the buffer areas is not temple-owned. Considering the unclear nature of ownership of these land parcels, it is recommended to temple authorities to take ownership of these, if it comes under private ownership. Proposing designated parking on the immediate outside of the temple premises will solve the issue of on-street parking and will enhance visitors’ convenience.

Infrastructure created – ~500 sqm of paved parking area having 18 ECS.

- 3. Community Toilet Block** – As there are no public toilets in the vicinity. Therefore to cater to this situation a community toilet block will be developed along the north-west corner of the temple tank. This community toilet will be accessible from Gandhi Main Road. The design guidelines for Community Toilet Block are mentioned in Glossary of Interventions.
Infrastructure created – 25 sqm of the community toilet block
- 4. Technology Interventions** – For tourist’s awareness on the site, self-audio tours are proposed, which will require technological facilities. Therefore Technology Package 1 is proposed for this site. These shall include:
 - Free WiFi
 - Compatibility with TN Assist App
 - The package shall exclude CCTV’s as there are sufficient numbers of CCTV’s on the site.

Trunk Infrastructure

As the Site has direct access from the road, no trunk infrastructure interventions are required.

Projects Identified

#	Project Component	Scale
1	Amenity Block	230 sqm
2	Soft Landscaping	1400 sqm
3	Hard Landscaping (2 m wide)	100 m
4	Paved Pathway along pond (2 m wide)	100 m
5	Benches (along Pond)	4
6	Cleaning of Temple Tank	850 sqm

#	Project Component	Scale
7	Footpath (2 m wide)	85 m
8	Signage Package 1	1
9	Parking (500 sqm of paved parking yard)	18 ECS
10	Community Toilet (25 sqm)	1
11	Technology Package 1 (Exclude CCTV's)	1

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in Glossary of Interventions.

#	Project Component	Cost (INR Lakhs)
1	Amenity Block	5
2	Soft Landscaping	1
3	Hard Landscaping (2 m wide)	2
4	Paved Pathway along pond (2 m wide)	2
5	Benches (along Pond)	1
6	Cleaning of Temple Tank	0 (Included in OPEX)
7	Footpath (2 m wide)	2
8	Signage Package 1	1
9	Parking (500 sqm of paved parking yard)	5
10	Community Toilet (25 sqm)	5
11	Technology Package 1 (Exclude CCTV's)	1
Total		INR 25 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.
- Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- All revenues are unescalated.
- Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

The following revenue sources are expected for the site:

- Kiosks** – Captures 1 kiosk at facilitation centre to be rented out at INR 2 Lakhs per annum.
- Parking** – Capturing 18 ECS at 40% occupancy per day at INR 20 per ECS.

As discussed in note above, the following existing revenues, if any, are not considered:

- Prasadam sale
- Puja tickets
- VIP tickets
- Mass meals
- Donations and Sponsorships
- Sale of maps, guidebooks etc. (assumed to be at cost value)

Considering the above, total additional un-escalated revenues from the site in Y5 is estimated as INR 5 Lakhs.

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.

- b) *The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.*
- c) *The expense projections are pegged at Y5 (exit of short-term Y0-Y5 phase).*
- d) *The costs are un-escalated.*

The following OPEX is expected for the site:

1. **Manpower Costs** – Additional manpower will be required at the site to manage the proposed interventions.
 - a. A **Help-desk staff** at the amenity block.
2. **Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
3. **Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.
6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.
7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.

The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of INR 175 per kilolitre.

8. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as INR 10 Lakhs.

Feasibility Assessment and Implementation Plan

Though the operating expenditure incurred is more than that of the revenues earned through the proposed capital projects, the interventions planned at the temple are directed to cater to the needs of the pilgrims and to uphold the hygiene factors followed across all the sites undertaken in the cluster.

The interventions proposed at the site are largely for improving amenities and experience of visitors and hence have an associated “social cause”.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Amenity Block	5	Y0 – Y2	HR&CE
2	Soft Landscaping	1	Y0 – Y2	HR&CE
3	Hard Landscaping	2	Y0 – Y2	HR&CE
4	Paved Pathway along pond	2	Y0 – Y2	HR&CE
5	Benches (along Pond)	1	Y0 – Y2	HR&CE
6	Cleaning of Temple Tank	0	Y0 – Y2	HR&CE
7	Footpath (2 m wide)	2	Y0 – Y2	HR&CE
8	Signage Package 1	1	Y0 – Y2	HR&CE

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
9	Parking	5	Y0 – Y2	HR&CE
10	Community Toilet (25 sqm)	5	Y0 – Y2	HR&CE
11	Technology Package 1	1	Y0 – Y2	HR&CE
Total		INR 25 L		

Impact on Communities:

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 1,200⁹ man-days of construction labour (spread across 1-2 years of implementation)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 2 man-days¹⁰

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – As discussed above
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect, and induced effects is estimated as. 2,700 man-days.

⁹ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

The increase in overall number of visitors is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 51 Cr. at the site¹¹.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.

○ Assumed cost of labour assumed for computation = INR 700 per day

- Cumulative labour man-days = 30% * CAPEX / 700

¹⁰ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

¹¹ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and suppliers will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.

Figure 3-3: Proposed Master Plan – Arulmigu Thirumoolanathar Shivan Temple



4. Thirukazhukundram

Site Details

District:	Chengalpattu
Name of Site	Thirukazhukundram
Site Use:	Temple Town
Site No:	Site 11 of 295
Category:	G (Hybrid)
Location:	12.6080, 80.0581
Population:	23,677
Site Ownership:	Panchayat
Attractions:	Arulmigu Vedagireeswarar Temple Sri Tiripura Sundari Amman Temple Rudhrakoteeswarar Temple Sangu Theertham
Site Revenues:	Undisclosed
Site Orientation:	Pilgrim & Tourist
Site Potential:	Medium Tourism Site
HVT Potential:	Moderate HVT Potential
Connectivity:	
a. Railway Station:	~15 km (Chengalpattu)
b. Airport:	~55 km (Chennai)
c. Highway:	Abutting SH 49

Trails Featured on: **Nil (Pure Pilgrim Temple)**

The town of Thirukazhukundram is centred around the Vedagireeswarar temple, located atop of a hill (~500 steps ascent). The town itself has no unique aspects except for the presence of 3 temples and 1 large temple tank. The temple tank is the subject of a festival in which a conch shell emerges out of the tank every twelve years.

The master planning for this site has been kept basic to facilitate improvement of pilgrim amenities. However, the hilltop has a good potential to be developed into an engaging pilgrim attraction. This has been factored in the planning. Further, it must be highlighted that the town also needs to upgrade its public amenities, overall cleanliness, and enhance pilgrim facilities in order to sustain high footfalls.

Existing Condition

Location

Thirukazhukundram is a panchayat town in the Chengalpattu district. The town is situated ~70 km south of Chennai city and has Chengalpattu and Mahabalipuram cities at ~14 km and ~17 km respectively. The town is well-connected by public buses to these towns/ cities. The nearest railway station is in Chengalpattu city that is ~14 km away while the nearest airport is Chennai International Airport which is ~24 km away from the town.

Existing Layout and Uses

State Highway 58 runs from north to south dividing the town having a sparse dense settlement into two halves. Another major road namely Mamallapuram Road splits from SH58 on the west side and leads towards Mahabalipuram in the east. Thirukazhukundram town is majorly known for the Vedagireeswarar Temple located atop of the Vedagireeswarar hill. But apart from this temple, the town has a few other attractions located at the foothills of the Vedagireeswarar hill such as Thirupura Sundari Amman Temple on the west of SH58, Rudrakoteeswarar Temple famous for being 1,000 years old on the south of Mamallapuram road. The town also hosts the famous festival of Laksha Deepam that is organised once in 12 years in its

famous town's holy tank Sangu Theertham located on the east side of SH58 and south of Mamallapuram road.

Master Planning Considerations

Applicable Regulations

The town does not have any development or landuse plan. It lies outside the development control area of any urban city, therefore falls under the category of unplanned land.

Key Sensitivities

There are no specific environmental/social sensitivity to be addressed at the site.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

1. **Attraction** – The town does not have much to offer to tourists which are majorly domestic religious tourists. It is a temple town with three main temples namely Vedagireeswarar Temple, Thirupura Sundari Amman Temple, Rudrakoteeswarar Temple, and a holy tank called Sangu Theertham. Of the above-mentioned temples, the Vedagireeswarar temple having 4 gopurams is the most famous. This temple sits atop a hill and is accessible by climbing 526 steps. Another popular attraction for the visitors is the festival of Laksha Deepam celebrated on Sangu Theertham when a conch emerges from this theertham after every 12 years. This phenomenon last occurred in 2011 and is expected to occur next in 2023.
2. **Accessibility** – The temple town is situated in the southern outskirts of Chennai, yet it is easily accessible from Tiruvallur Highway and Chennai-Thiruthani Highway. Thirukazhukundram can be accessed from both Mamallapuram (~15 km) and Chengalpattu (~13 km) via state highways. Public buses from Chengalpattu and Mamallapuram reach the town every 15-20 minutes. However, it does not have rail connectivity. The nearest railway station is ~14 km in Chengalpattu. The major modes of transport people use to commute to the site include Private transport (own or hired car) and Public bus. Hence, the connectivity to the town is not good for promotion of tourism.
3. **Amenities** – The town does not provide basic amenities to tourists visiting the temple. The site lacks the following amenities.
 - No tourist information centre/guides available.
 - Inadequate signages and wayfinding (tourists will have to rely on Google Maps alone).
 - Inadequate public toilets across the town.
 - Inadequate dustbins are installed across the town.
 - The theertham (including Sangu Theertham) compounded are dirty and not well maintained.
 - No secured footwear stands in temples.
 - No cloakroom/ waiting areas for tourists.
 - No shaded areas for tourists to rest outside the temples.
 - No decent restaurants for tourists.
 - No retail stores for handicrafts and souvenirs.
 - No elderly/divyaang friendly measure to reach the Vedagireeswarar temple/hill.
4. **Awareness** – The town's major pull factors are Vedagireeswarar Temple and Sangu Theertham. These sites enjoy average popularity amongst not only South Indian tourists but also North Indian tourists' en-route Kashi – Rameswaram. Yet, the town has not realized its potential as it is not part of many tour operator's itineraries. The town's attractions do not find mention in any popular travel journals.
5. **Activities** – The only activities offered by the town are temple-related. On Poornima days, lakhs of devotees visit the Vedagireeswarar Temple and undertake Girivalam (walking around the hill). During the Laksha Deepam festival, lakhs of lamps/deepam are lit in the whole town. The most popular event is the 10-day Chithirai festival, in which various dance and music programs are hosted.

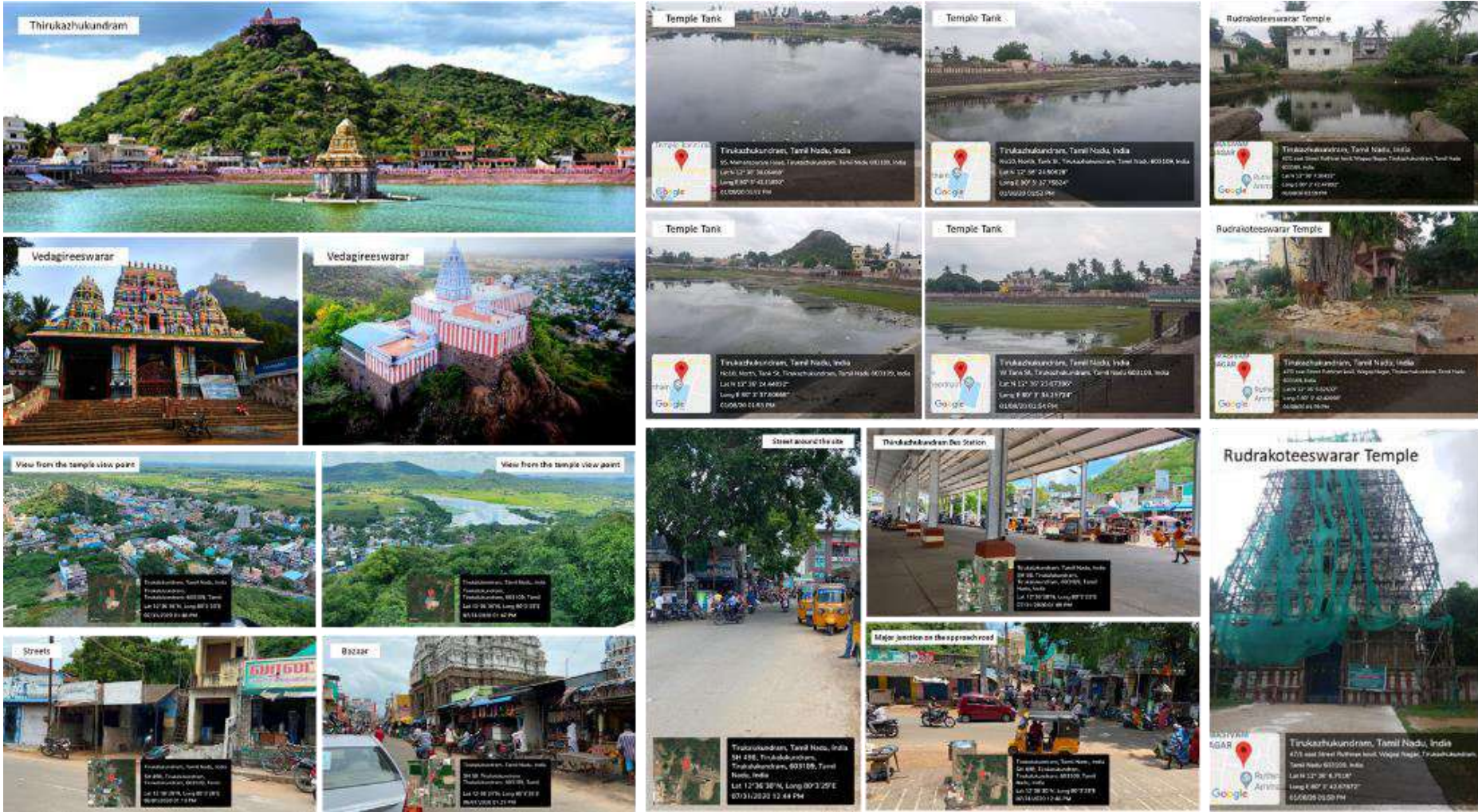
Parking – Very few parking spots available near the temples which result in on-street parking leading to congestion. Moreover, on days of Poornima, the roads become too congested with parked cars and devotees undertaking Girivalam (walking around the hill).

- 6. **Accommodation** – Thirukazhukundram has very few decent lodging facilities. Of its few accommodation establishments, the majority are dormitories and cheap lodges for devotees. Also, the town does not have much to engage tourists for more than three hours which is why tourists prefer to have accommodation in Mamallapuram or Chengalpattu.
- 7. **Association with Community** – Locals In large numbers participate in the unique festival of Laksha Deepam by lighting lamps/deepams on the steps of the Sangu Theertham, in streets, temples, and houses, lighting up the whole town. People also follow the age-old tradition of Girivalam (walking around the hill), especially during Poornima days.

Figure 4-1: Location and Existing Layout



Site Pictures





Vision for the Site

- The Thirukazhukundram town is famous for Vedagireeswarar Temple and the legend associated with the eagles visiting the temple every afternoon. The town has other religiously significant attractions such as Thirupura Sundari Amman Temple, Rudrakoteeswarar Temple and a holy tank called Sangu Theertham. Apart from this, the town does not have much to offer to the tourists. Moreover, the town lacks in providing basic tourist infrastructure of toilets, drinking water, information center, guides, cleanliness, accommodation, etc.
- The town has high potential to enhance and improve its existing infrastructure because of the availability of vacant land surrounding the Vedagireeswarar hill which is the major tourist attraction in the town. There is an opportunity to rejuvenate Sangu Theertham (holy tank) which attracts lakhs of visitors to the Laksha Deepam festival.
- The vision for the site is to develop it as a domestic pilgrim attraction and develop spaces in the town that can engage pilgrims and locals with different activities and improve their overall experience of town. This will be done by improving existing infrastructure and developing Yatri Niwas, cultural arenas, community toilet block, facilitation centre, convenient shaded pathways, and ropeway to improve accessibility. Besides, rejuvenating, and renovating temple tank and introducing interactive activities surrounding it to engage visitors are also recommended.
- **Target Visitor** – The site currently draws pilgrim due to its religious value. Further, due to its monumental value, rich architecture and historical importance, the site draws good number of tourists

Having said that, given the location of the site and its rich historical value, there is a significant potential to increase the tourist footfalls by improving the quality of experience and amenities at the site.

The composition of visitors at the site includes all age groups of visitors and hence, facilities would need to be provided for all (especially for children, Divyaang and elderly).

The site will target pilgrims that will apprehend and appreciate the religious significance, architectural beauty, and cultural values of the local setup. The target visitors to be captured here are:

- **Pilgrims:** Visiting the temples for its religious value. The idea of master planning will be to capture these tourists to also engage in other activities apart from visit to temple.
- **Tourists visiting Kovalam / Passing through ECR:** The hill is ~30 min from Kovalam beach and is 15 min inside the ECR. Hence if developed well, the hill can be captured as a weekend tourist hub from Chennai or as an extended tourist circuit from Kovalam.
- **Weekend tourists from Chennai and local urban hubs**
- **Tourist Projections** – The Temple town is categorized as a **Medium tourist site with moderate HVT potential.**
Past footfall data for the site has been received from sources like the site manager and TTDC’s compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	35	89	212
High Value Tourists (HVT) (Both domestic and foreign)	10	34	81
Maximum Carrying Capacity	8,030		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Masterplan Concept

Given that the site is popular and religiously significant, the objective is to drive pilgrim footfall and to adequately cater to the already captured traffic. Therefore, the concept for masterplan is:

- **Improving pilgrims’ experience** at the temple – through improved circulation, conveniences, and amenities.

- Developing **cultural spaces at the hilltop** by developing spaces on the vacant land.
- **Rejuvenating temple tank and steps** – This will improve tourist engagement at the site.
- **Improving pilgrim footfall** through appropriate marketing and promotion of the unique legend associated with the town.
- **Creating weekend tourism from Chennai and nearby urban hubs and capturing tourists visiting Kovalam.**

Hard Interventions

1. **Ropeway/Cable car** –Vedagireeswarar temple/hill can be accessed by climbing more than 500 steps, which makes it inaccessible for elderly, children and divyaang tourists. Moreover, tourists resist climbing steps in hot weather. Therefore, a ropeway/cable car is proposed for the convenience of the tourists. Two ropeway stations will be built, one at the foothills that will be accessible from Mamallapuram Road and another at the hilltop.

Infrastructure Created: Ropeway of 210 m length and 2 stations of 70 sqm each will be built.

2. **Shaded steps and ramp** – The steps leading to Vedagireeswarar temple and hilltop are not maintained and difficult to climb because of its existing situation. Moreover, tourists resist climbing steps in hot weather. Therefore, steps along with ramp of 3 m width will be redeveloped. The entire stair and ramp path will be shaded with canopy for the convenience of visitors.

Infrastructure Created: 300 m long staircase (3m wide) and Ramp (2m wide) having Canopy as a shading device.

3. **Yatri Niwas** – A Yatri Niwas for pilgrim accommodation will be developed on vacant land situated on the foothill of Vedagireeswarar temple on the east side of the ropeway. It will be accessed from Mamallapuram Road and hold a capacity of 25 keys which will include:

- 5 dormitories with common toilets,
- 7 non-reserved AC rooms and 3 VIP/VVIP AC rooms with attached washrooms. These rooms will be spacious with better in-house amenities.
- 10 non-AC rooms with attached washrooms.



Ropeway/ Cable car



Yatri Niwas



View Point



Meditation Garden

- Apart from rooms, it will include a community dining hall that would only serve vegetarian food and will be open for tourists and visitors to the temple on a dine-in or Ala-carte basis.

Infrastructure Created: ~700 sqm of Yatri Niwas with 25 keys and dining hall.

- 4. Facilitation Centre (Type 2)** – A facilitation centre with an inquiry desk, ticket sales counter, cloak/luggage room, changing room, rest/waiting area, audio guides, guides’ station, site galleries with large format displays and VR experience, souvenir retail, temple wares retail selling Pooja items and parsadam, shoe storage and protective foot cover distribution can be developed for tourist convenience and ease at the site. It can be placed at the entrance of the site on the foothills of Vedagireeswarar temple, on the east side of steps, and will be accessed from Mamallapuram Road. This will be developed as per the design guidelines.

Infrastructure Created: ~140 sqm of building area.

- 5. Meditation Garden** – The large green cover at the hilltop should be used to its advantage to create a peaceful garden with a focus on outdoor relaxation, meditation, yoga, and wellness. Pathways allow guests to have peaceful walks on the grounds and small gazebos hidden among the trees as spaces for meditation. Therefore, two meditation gardens with a small meditation centre each are proposed and will be located on the north and north-east side of the temple complex.

Infrastructure created: 2 meditation gardens of 135 sqm each.

- 6. Eagle Sculpture and Adventure Centre** – The history of the site associated with eagles and the hill-top location can be utilized to create an adventure hub at the till-top for tourists and pilgrims. The centre can have a huge sculpture of 2 Eagles atop the building. Further, adventure sports like ziplining, rock-climbing etc can be promoted.

Infrastructure created: 1 adventure centre building with area 200 sqm | Large eagle sculpture.

- 7. Viewpoint** – The hilltop at Vedagireeswarar hill provides spectacular views of the entire town and thus has huge potential to engage tourists. Therefore, tourist-friendly viewpoints are proposed on a hilltop that will include huge paved and fenced observatories to avoid accidents, attraction points such as photo-booth,

sunset, and sunrise point. It will have equipment such as binoculars for tourist engagement.

Infrastructure Created: 7 viewpoints of 50 sqm each.



- 8. Cultural arena** – The town lacks to engage tourists for more than 3 hours as there are no activities to engage them. Therefore, a cultural arena will be developed at the hilltop on the north-east side of the temple which will include temporary areas for cultural shows, amphitheatres, children’s play area, landscaped themed gardens, themed cafes, shaded pathways, and seating areas like gazebos, etc. This will not only enhance tourist engagement but will also increase footfall and revenue of the town.

Infrastructure Created: 4000 sqm of cultural arena.

- 9. Temple tank Rejuvenation** – The town has a huge temple tank namely Sangu Theertham where the Laksha Deepam festival is celebrated every 12 years. The tank is not maintained regularly, waste and algae can be seen floating on the water. Therefore, temple tank rejuvenation will be done including rainwater

harvesting techniques and redeveloping steps around the temple tank. Beautification and maintenance of the tank would increase the aesthetic appeal of the site. This can be further enhanced by developing tank side recreations such as shaded sit-outs, pedestrianized walkways, lawns, and a small information centre with boards signifying the tank's unique aspects. Alternatively, it could also function as an amphitheatre, and host cultural events. The shape and size of the tank are conducive to this. *Infrastructure Created: ~780 m of Paved, and fenced temple tank boundary.*

10. Amenity block – A small amenity block including a drinking water station, toilet, changing room, cloakroom, and bathroom can be developed along with the temple tank for tourist convenience and ease at the site. It can be placed on the north-east corner of the temple tank. This will be developed as per the design guidelines.

Infrastructure Created: ~60 sqm of the building area.

11. Paved shaded walkway – Paved shaded walkways are proposed linking the hilltop temple, meditation centre, souvenir shops, and viewpoints. This will enhance ease in walkability around the amenities provided on the site. The entire pathway can be shaded in canopy style, to make walking convenient for visitors visiting the temple in the hot climate.

Infrastructure Created: ~330m of paved and shaded walkway.

12. Boundary wall/ parapet wall– A boundary parapet wall will be constructed around the hilltop which will enclose the existing Vedagireeswarar temple complex and proposed viewpoint/observatories, cultural areas, and toilets to avoid any casualties/accidents on the site.

Infrastructure Created: ~390 m of boundary wall construction.

Soft Interventions

1. Marketing & Promotion – Include detailed information about this site in brochures/guidebooks being sold at other tourist sites and hotels in Tamil Nadu. Promote this site at nearby major cities/towns, namely Chengalpattu and Mamallapuram. Enable blogs and journals to creatively depict the town's legend on digital platforms. Tie-up with tour operators to include the town in their itineraries.

2. Pakshi Theertham Circuit – Vedagiriswara temple is famous for two eagles flying down each noon to the temple to partake in the sanctified food. According to the same mythology, the eagles were to bathe in Rameswaram, lunch at Thirukazhukundram, and spend the night at Kashi (Varanasi). Therefore, being part of the Pakshi Theertham circuit, the site can be marketed to a much larger audience across the country visiting Rameswaram and Kashi. The rich legend surrounding the temple can be told and creatively depicted using appropriate marketing techniques. Souvenirs relating to the eagles and the legend can be sold to tourists at the viewpoint and other attractions in the vicinity.

3. Day Tour – Day tours can be developed with QR codes, Self-Guided Audio Tours, etc. Community integration can be enhanced by appointing locals as Local Guides- trained and accredited. Tourists can be given options of a day tour of 3 to 5 hours package which will include:

- **Town tour Package** – The town tour package will include a ropeway, a visit to Vedagireeswarar Hill, Vedagireeswarar temple, hilltop attraction points, Thirupura Sundari Amman temple, Rudhrakoteeswarar temple, and Sangu Theertham.
- **Vedagireeswarar Hilltop package** – The hilltop package will include Ropeway, visit at the Vedagireeswarar Temple, Cave Temple (built by King Mahendravarman), Eagle landing area, Cave visit (used by Subbaiah Siddhar), and other proposed attraction points on the hill such as viewpoint, photo-booth point, meditation centre and cultural arena.

4. Community involvement – The locals around the temple are very well aware of the temple's history and significance. These local communities could be incentivized to participate by involving them in various activities such as selling temple-related handicrafts, coconut water and training them to be informed tourist guides.

Amenities Plan

1. Signages – Signage is proposed to feature Tamil, English, and Hindi. Package 1 set of signages are proposed to be installed at the site. It includes a Site map at entry, directional signage at 4-5 key points on the tourist path, descriptive placard on the Site's importance. All the signages at the site should be as per the design guidelines.

2. **Temple Souvenir shops** – Small souvenir kiosks can be developed on the hilltop near the proposed viewpoint and cultural arena. These retail kiosks will sell temple-related souvenirs such as Pooja items, prasadam and may include F&B shops serving vegetarian food to devotees. A total of 5 retail kiosks will be developed along with canopy style seating area for tourists to relax and enjoy the hill view. *Infrastructure Created: 5 Retail kiosks of 3 by 3 meters each with 3 shading devices for the seating area.*

3. **Parking** – Parking is proposed on the foothill near the proposed Yatri Niwas on the foothill. Ropeway stations will be planned near the parking area. This parking area will serve parking need of all the temples and a holy tank in the town. This will help to reduce congestion on narrow approach roads leading towards attraction points. This will be accessible from Mamallapuram Road with a holding capacity of 20 cars.
Infrastructure Created: Paved parking area for 20 car space.

4. **Community Toilet Block** – As there are inadequate public toilets across the town. Therefore, to cater to this situation a community toilet block will be developed on the foothills on the east side of the proposed facilitation centre and will be accessible from Mamallapuram Road. The design guidelines for Community Toilet Block are mentioned in designed guidelines.

5. **Pay and Use Toilet Blocks** – ~2 units of toilets are proposed to be provided on the hilltop near the temple complex. It will be a standalone unisex unit based on modern technologies and standards having paid access and automated self-cleaning. The design guidelines for Pay and Use Toilet Blocks are mentioned in designed guidelines.

6. **Technology Interventions (Package 2)** – As the site is large in scale and is proposed to attract a large number of tourists, therefore Package 2- Basic is proposed to feature on this site, as per the design guidelines mentioned in designed guidelines.

7. **Cleanliness** – The site premises must maintain cleanliness by adopting several volunteer programs, placement of dustbins and informative signages at regular intervals, regular space maintenance, monitor loitering of stray animals or cows, and taking disciplinary action against those responsible for waste littering.

Trunk Infrastructure

The town has poor sanitation facilities. Moreover, the approach road to all three shrines and the temple tank are narrow and congested. Therefore, the upgradation of sanitation facilities and improvement of road infrastructure can be done by the concerned development authority.

Project Identified

#	Project Component	Scale
1	Ropeway/ Cable Car	210 m
2	Ropeway Station (2* 70 sqm)	140 sqm
3	Eagle Sculpture and Adventure Centre	200 sqm
4	Shaded Steps and Ramp (3m wide steps, 2m wide ramp)	300 m
5	Yatri Niwas	700 sqm (25 keys)
6	Facilitation centre (Type 2)	140 sqm
7	Amenity Block	60 sqm
8	Meditation Garden	270 sqm
9	Cultural arena	4000 sqm
10	Viewpoint	350 sqm
11	Temple tank Rejuvenation	780 m
12	Paved Shaded Walkway (2m wide)	330 m
13	Boundary wall (parapet wall at hilltop)	390 m
14	Temple Souvenir shops (3x3m)	5
15	Shading device type 1	3
16	Signage (Package 1)	1
17	Technology Intervention (Package 2)	1
18	Paved Parking	20 ECS
19	Community Toilet Block	1
20	Pay and Use Toilet Block	2
Total		

Feasibility Assessment

The following considerations have been accounted for the cost projections of proposed interventions at this site:

- Feasibility of the cashflows projected here are accounted only for the additional components master planned.
- The current operating & maintenance cost of the temple have not been considered.

Capital Expenditures

The cost of the different project components proposed in the masterplan is calculated basis the current market price considering the appropriate escalations.

#	Project Component	Cost (Lakhs INR)
1	Ropeway/ Cable Car & Ropeway station (2 stations, 70 sqm each))	315
2	Shaded Steps (3m wide steps)	36
3	Ramp	6
4	Yatri Niwas	375
5	Facilitation Center (Type 2)	42
6	Amenity Block	5
7	Meditation Garden (2*135 sqm each)	6
8	Cultural arena	60
9	View Point (7*50 sqm each)	6
10	Temple tank Rejuvenation	13
11	Paved Shaded Walkway (2 m wide)	6
12	Boundary wall (parapet wall at hill top)	22
13	Temple Souvenir shops (3x3m)	7
14	Shading device type 1	1
15	Signage (Package 1)	1
16	Technology Intervention (Package 1)	1
17	Paved Parking	6

#	Project Component	Cost (Lakhs INR)
18	Community Toilet Block	5
19	Eagle sculpture & Adventure centre	5
20	Pay & Use Toilet block	20
Total		INR 915 L

Revenues - Proposed projects

(Note: The following considerations are applicable to the below mentioned revenue modules.

1. The revenues considered here are in addition to all the existing revenue currently accrued by the temple.
 2. The estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)
1. **Kiosks** – 5 leasable kiosk units at the proposed Facilitation centre with a rental earning of *INR 15 Lakhs*.
 2. **Parking** – About 20 additional parking spaces assuming a daily occupancy of 40%, would earn the temple an estimated revenue of *INR 1 Lakh*.
 3. **Space on Hire** – Assuming an average of an event per week, renting of the community hall for private religious events/ ceremonies would earn the temple *INR 18 Lakhs*.
 4. **Rope car** – – Assuming about an average of 50% of the visitors commuting using the proposed rope car to the Vedagireeswarar temple atop the hill, would earn the temple an estimated *INR 2 Lakhs*.
 5. **Pay per use Toilets** – Assuming about an average of 15% of the visitors using the proposed pay per use toilet, would earn the temple an estimated *INR 16 Lakhs*.
 6. **Yatri Niwas** – Assuming an average of 60% occupancy across the year at an average tariff of *INR 2200* across the ~25 keys consisting of AC, Non-AC & dormitory categories, the temple would earn a revenue of *INR 1.20 Cr*.

The total revenues to the temple from the proposed capital projects is projected at an estimated *INR 1.75 CR at Y5*.

Operating Expenditures

(Note: The following considerations are applicable to the below mentioned operational expense modules.

1. *The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.*
2. *The operations and maintenance currently undergone by the temple for its existing facilities are not considered in this section.*
3. *The expense projections are pegged at Y5 (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)*

1. **Manpower Costs** – This includes the additional personnel required to manage the proposed facilities.
 - a. **2 Help-desk staff** at the facilitation centre.
 - b. A **security personnel** each at the two rope car stations, cultural hall, facilitation centre and Yatri Niwas.
 - c. **2 Administration staff** to overlook the operations of the Rope car and Yatri Niwas operations.

The projected costs incurred is estimated at *INR 22 Lakhs*.

2. **Facility Maintenance costs** – This includes the costs incurred to maintain the cleanliness and the upkeep of the new facilities.
 - a. Maintenance of the **Open area**, which includes cleaners, gardeners, etc. for upkeep of the landscape in the temple.
 - b. Maintenance of the **Amenity block** - the cleaning of toilets, wash areas and drinking water stations.
 - c. Maintenance of the **Building facilities** – The general cleaning and upkeep of the Yatri Niwas premise and the community block.

The projected costs incurred is estimated at *INR 8 Lakhs*.

3. **Repair & Maintenance costs** – This includes the expense incurred over time for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.

The projected costs incurred is estimated at *INR 14 Lakhs*.

4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the retail kiosks, community event spaces in the temple surroundings.

The projected costs incurred is estimated at *INR 1 Lakh*.

5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.

The projected costs incurred is estimated at *INR 18 Lakhs*.

6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections of the temple.

The projected costs incurred is estimated at *INR 1 Lakh*.

7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations.

The utilities for the rental kiosks, Yatri Niwas and the community hall are pegged to the rental revenues earned from the respective sources.

The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175 per kilolitre*.

The projected costs incurred is estimated at *INR 28 Lakh*.

8. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

The projected maintenance cost is estimated at a lumpsum of *INR 50,000 per annum*.

The total operational expenditure incurred by the temple from the proposed capital projects is projected at an estimated *INR 90 Lakhs at Y5*.

Given that the estimated revenues (*INR 1.75 Cr.*) from the proposed capital expenditure projects exceeds the operational expenses (*INR 90 Lakhs*) incurred, it can be concluded that the Interventions proposed at the site are Self-Sustainable and therefore beneficial to the town and the temples within it.

Phasing & Funding Agencies

The development of the projects is to be taken up by HR & CE department (Vedagireeswarar temple) and the implementation of these can be carried out as follows:

1. The implementation of the **Technology package** (i.e., Smart-App integrations, Virtual guides, NFC tags, etc.) at the site would be taken up by the SPV provisioned by the tourism department.
2. The **kiosk units** at the facilitation centre can be leased/ rented out to private operators to host souvenir shops to display and sell temple related religious arts/ craft/ pooja items.
3. **Community hall** at the Yatri Niwas to be rented out to the devotees/ private operators to conduct ceremonies like marriage, etc. and religious events during festivals.
4. While the development of the **Yatri Niwas** be taken up the HR & CE dept. the operation and maintenance of the facility can be tendered out to private hotels operators on a 3-year retainer contract basis. This would help in maintaining a benchmark in the quality of the services rendered.
5. The development and the operations of the **Rope car** to be undertaken by the temple management as it would be a source of a major revenue and be the choice of transport to the temple atop for the pilgrims and the tourists alike.

¹² Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
 - Assumed cost of labour assumed for computation = INR 700 per day

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 39,200¹² man-days of construction labour (*spread across 2-3 years of implementation*)

During Operations: Jobs created during operations will entail:

- Yatri Niwas = 18 man – days per day¹³
- Additional personnel deployed at site (Housekeeping, management, security) = 5 Persons¹⁴
- Retail and F&B spaces = 13 man-days per day¹⁵

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – As discussed above
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect, and induced effects is estimated as. 98,130 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

- Cumulative labour man-days = 30% * CAPEX / 700

¹³ As per World Bank thumb rule, 12 man-days per day for 10-key 4-star hotel and 20 man-days for 10-key 5-star hotel.

As per HVS Report, in typical India hotels, manpower to room ratio for 4/5-star hotels is 2.11-2.70, for mid-market 1.52 and for budget hotels 0.72. We have assumed 2 for our computation.

¹⁴ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

¹⁵ Assuming average 2.5 persons per kiosk / shop

Both increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 50 Cr. at the site .

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

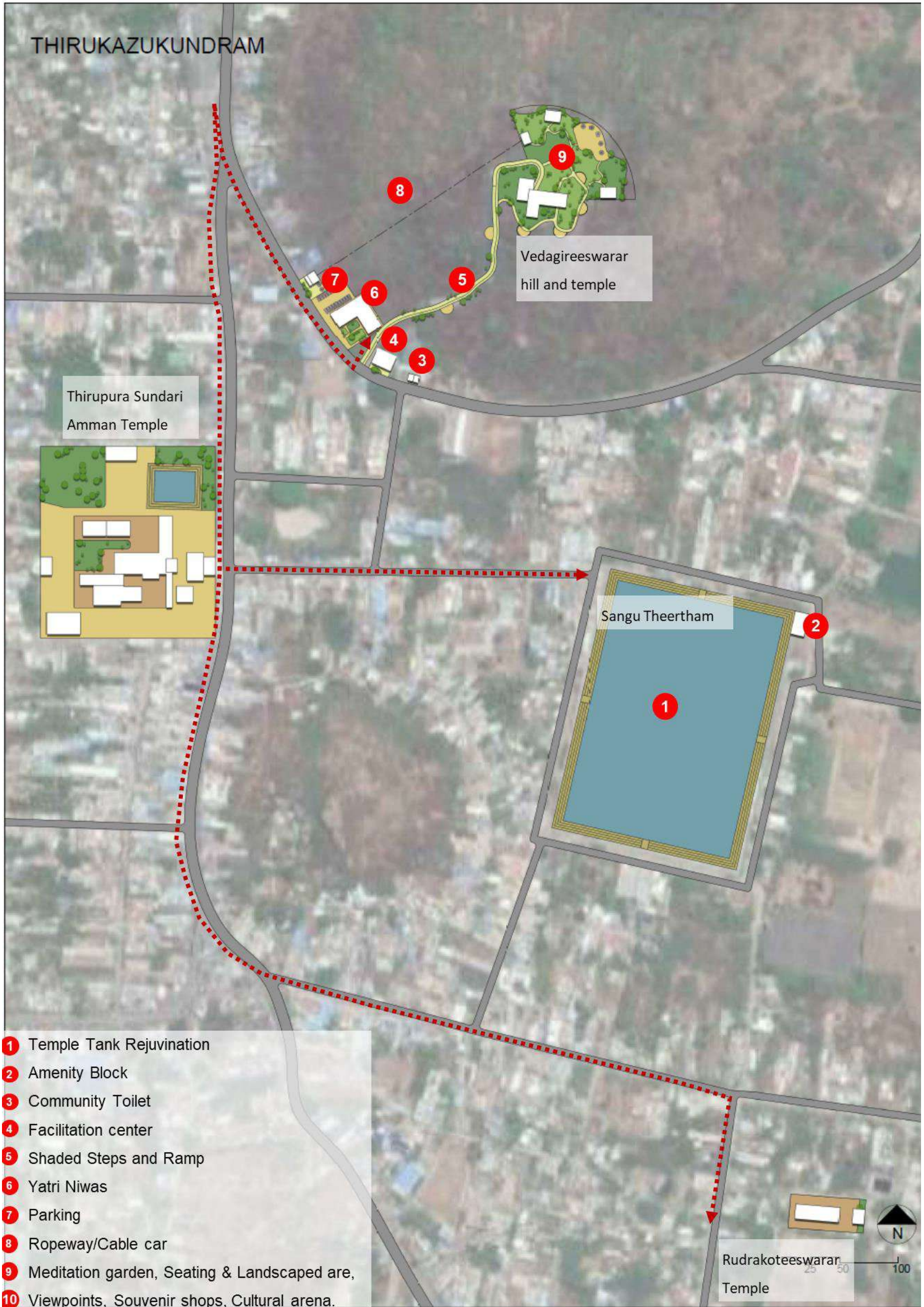
The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

Figure 4-2: Proposed Master Plan - Vedagireeswarar Hill



Figure 4-3: Proposed Master Plan - Thirukazukundram



5. Chitragupthar Temple, Kanchipuram

Site Details

District:	Kanchipuram
Name of Site	Chitragupthar Temple
Site Use:	Temple
Site No:	Site 19B of 295
Category:	A (Temple)
Location:	12.8371, 79.7047
Land Area:	0.25 acres
Peak Footfalls:	~2,000 per day (August – October)
Operator:	HR & CE Dept.
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom. – 8.90 lakhs (2019 - 20) For. – ~16,800 (2019 - 20)
Site Revenues:	Undisclosed
Site Orientation:	Pilgrim
Site Potential:	Medium Tourism Site
HVT Potential:	Moderate HVT Potential
Connectivity	
Railway Station:	~35 km (Chengalpattu)
Airport:	~60 km (Chennai)
Highway:	Along SH 58
Trails Featured on:	Nil (Pure Pilgrim Temple)

Chitragupthar Temple is a popular temple situated in the central business area of Kanchipuram town. This temple is historic, but its current attraction value rests mainly on religious factors. The temple is also famous for an archaeological discovery made in 1911, wherein two ancient “Panchaloha” (a special alloy of 5 metals) idols were discovered during some repairs at the temple. Considering its small size and less of an architectural significance compared to other temples in Kanchipuram, Chitragupthar temple does not offer anything unique to a tourist, as against a pilgrim. The temple could still reach its moderate potential by provision of basic amenities and linkage with other temples.

Existing Condition

Location

The Chitragupthar Temple is in Kanchipuram, ~80 km away from Chennai via NH-48. It is also located ~1 km away from the main bus stand and ~1.5 km away from the railway station, making accessibility easy. The temple is situated in a busy mixed-use neighbourhood surrounded with high-density development on all sides. Several prominent tourist landmarks in proximity are Ekambaranathar Temple, Kailasanathar temple, Vaikunda Perumal Temple and Ulangalandha Perumal temple.

Existing Layout and Uses

The Chitragupthar temple is a compact building occupying the entire site. It has a flat roof with a small gopuram marking the entrance on the south. There is very little open land available to the sides of the temple. The areas house some temporary sheds used for storage, offices, and toilet blocks.

Owing to their long history, the temple enjoys reasonable popularity, mainly among locals and pilgrims from South India. On most days, large crowds visit the temple for worship. The major festivals celebrated in the temple are Brahmotsavam, Pavithrautsavam and Navarathri.

Other Land Available

Additional to the temple complex, the temple does not hold any land for development.

Master Planning Considerations

Applicable Regulations

1. **Tamil Nadu Combined Development and Building Rules, 2019** – As per Kanchipuram Master Plan, site lies in a Mixed-use Residential and Heritage Zone. The permissible uses include:

Residential Buildings | Parks, playgrounds, farms, gardens | Public Utility Buildings | Swimming Pool, Daily or weekly markets | Hotels, Restaurants, Hostels, Dormitories, Boarding and Lodging houses | Retail establishments and shops, Departmental stores, Taxi stands and car parking multi-level parking | Religious buildings.

2. **Height Restrictions** - Heritage Zone height restrictions of ~13 m. (roughly up to 4 storeys) are applicable for the developments around the site.
3. **TN HRCE Rules, 1959**
 - a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions
 - b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959. The management and preservation of properties of religious institution rules.
 - c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to the religious activities and for the facilitation of Hindu pilgrim tourists.
 - d. The HR&CE Dept. owned land can be leased for a period of no more than 3 years.

Key Sensitivities

There is no specific environmental/social sensitivity to be addressed at the site.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

1. **Attraction** – The Chitragupthar temple is ancient and enjoys good popularity among locals as it is unique in being dedicated to that deity. However, this temple is clearly suited for a pilgrim market. Tourists would find little of interest here, especially when compared to the many other temples at Kanchipuram.
2. **Accessibility** – The site enjoys easy access from all major locations in Kanchipuram. Kanchipuram is ~70 km away from Chennai and enjoys good road connectivity. The town also has 2 railway stations and a major bus stand. The Chennai International Airport is a ~1.5-hour drive away from Kanchipuram.

While the town is well connected to nearby towns and cities, the internal road infrastructure is characterised by narrow and congested streets which often face traffic congestion, especially during peak seasons.

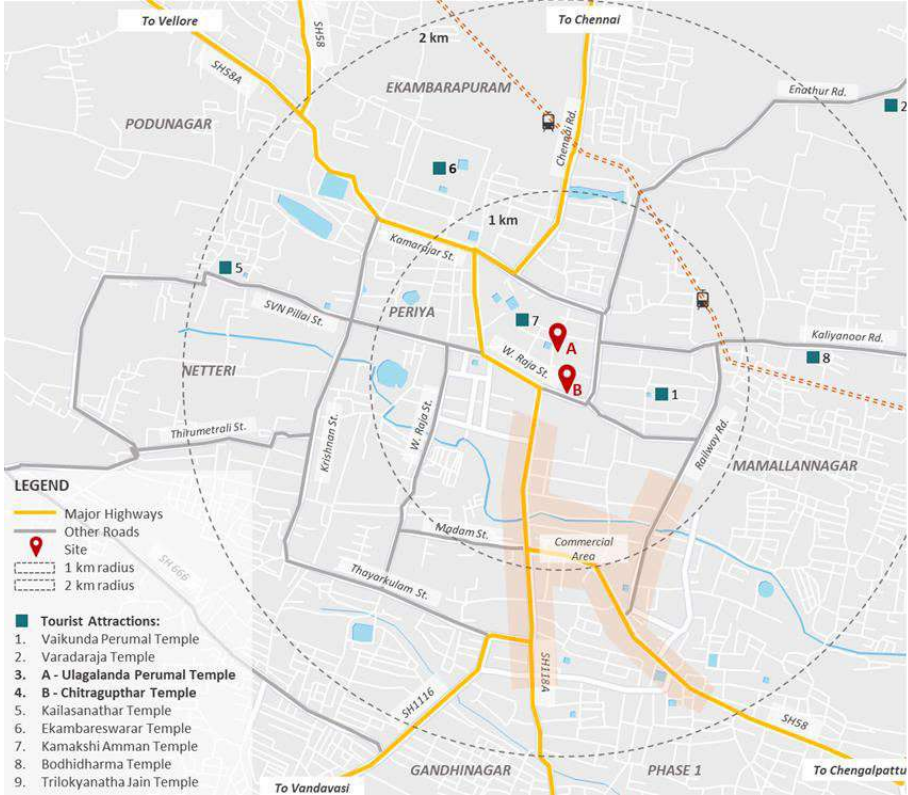
3. **Amenities** – The temple scored high on cleanliness but lacks certain amenities. Washrooms, Dustbins, safety measures, drinking water facility, designated footpaths and streetlights are present inside the temple complex. The site lacks the following amenities.
 - Ramps and/or wheelchairs are not available.
 - No F&B and Retail shop present inside the temple site, though few eatery joints present outside the site.
 - No proper signages/way findings on how to reach the temple.

Parking – The Site does not have any designated parking area. Vehicles park on the street surrounding the temple leading to frequent crowding and congestion during evenings and peak hours.

4. **Awareness** – The Chitragupthar temple enjoys low popularity among tourists. It receives very few visits in comparison to the other temples, with an even lower proportion of foreign visits. Only a few travel religious referral sites mention this temple.

5. **Activities** – On normal days, the temple does not offer any activities other than temple rituals. Intermittently, there are some activities such as temple festivals, feasts, recitals, etc.
6. **Accommodation** – The hotels here are majorly of the budget category, operated by standalone / regional players. Sriperumbudur (located ~35 km away) has a well-developed hotel ecosystem, with many reputed brands, such as Citrus, Mercure, Fairfield by Marriott, etc.
7. **Association with Community** – The festivals of the temple enjoy participation among the locals. There are also many hawkers and vendors that dot the site with carts and stalls – selling local goods, handicrafts and food items and increasing congestion.

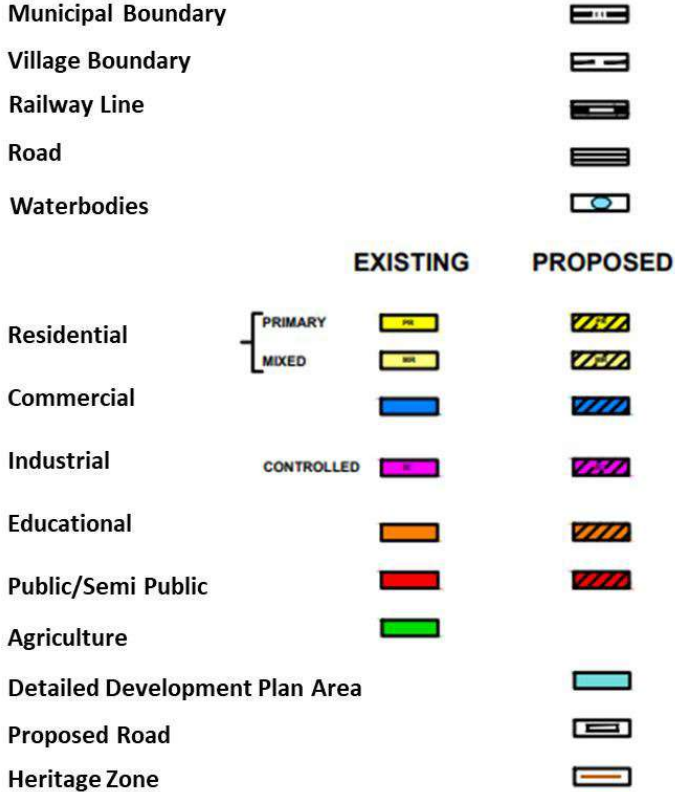
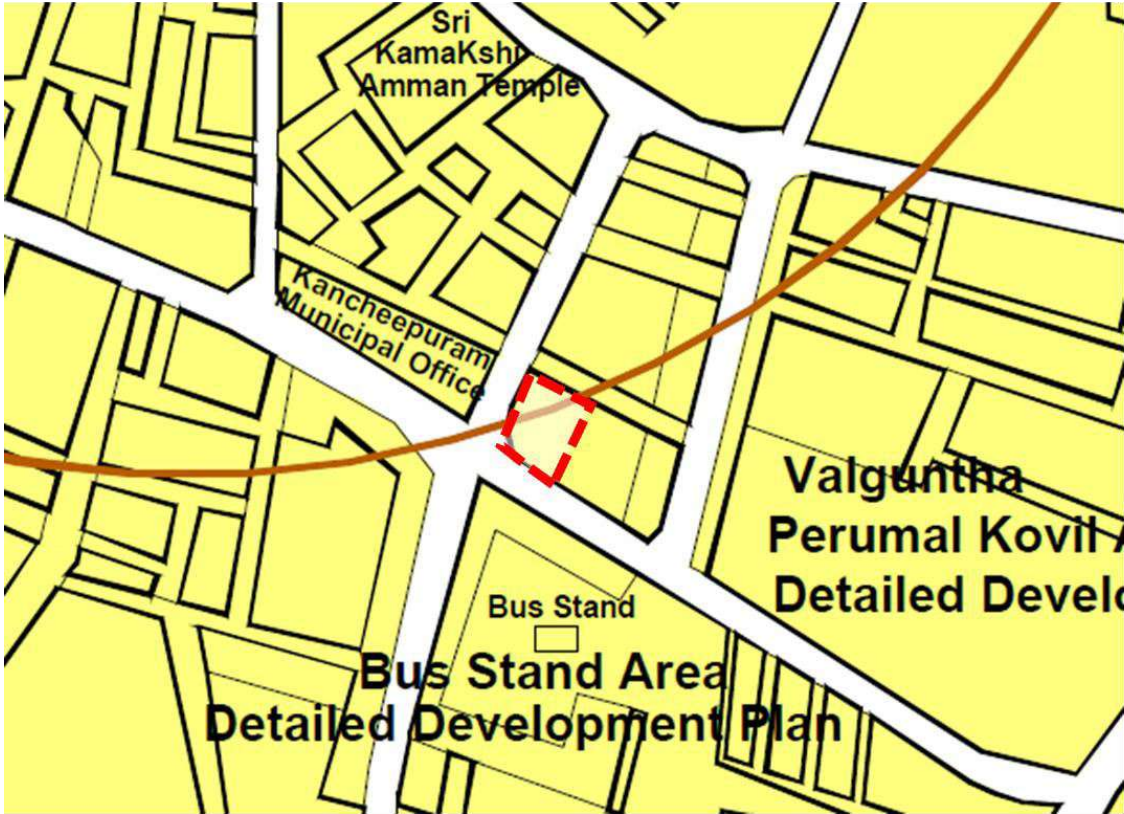
Figure 5-1: Location and Existing Layout



Site Pictures



Figure 5-2: Land Uses Regulation Zone at the Site



Vision for the Site

Chitragupthar Temple has adequate amenities and facilities present within the temple premises and is only famous for its religious significance of the main deity. However, the temple has site constraints as it is landlocked on all sides. It also has limited architectural significance and is only visited by local pilgrims.

The temple has limited potential to be developed into a high value tourist temple. Therefore, the temple is proposed to be developed as a regional tourist destination with provision of adequate amenities for the visitors. As Kanchipuram already has many sites which have more monumental or historic attraction value and given that this temple is small and in crowded areas, the objective is not to drive up visitor footfalls, but to adequately cater to the already captured traffic.

The vision for the site is to develop it as an offsite to the temple trail of Kanchipuram integrating it with Ulangalandha temple. As the temple is a low footfall temple, the focus is more on catering to the aspirations of the local community with provision of required infrastructure and amenities.

- **Target Visitor** – The site is largely a pilgrim site, with significant footfall from neighbouring areas as well as from rest of Tamil Nadu and other south Indian states due to its rich religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.

Further, pilgrims groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang and elderly). The target visitors to be captured here are:

- **Pilgrims and Domestic Tourists** – To develop as an intermediate tourist site in the 4 important temples of Kanchipuram, where visitors can enjoy the religious value of the site and increase its popularity and footfall.
- **Tourist Projections** – The site is categorized as a **Medium tourist site with moderate HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the

historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	873	2,386	3481
High Value Tourists (HVT) (Both domestic and foreign)	34	116	169
Maximum Carrying Capacity	3650		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

While most of the tourist footfall would be received by the anchor temples such as Ekambareswarar temple, the other smaller temples within the Kanchipuram cluster would receive 1/5th of its Tourist footfall. Given all possible interventions and the projected growth as per the tourist potential of the site, the practical capacity of these temples would be subject to 1/4th of Ekambareswarar temple's tourist footfall at any projected year.

Proposed Master Plan

Master Plan Concept

The objectives of Master planning at this Site include:

- **Improving pilgrims' experience** at the temple – Through improved circulation, conveniences, and amenities.
- **Linking with Ulangalandha Perumal temple** – Extension of the linkage between Kamakshi Amman Temple & Ulangandha temple to Chitragupta temple.

Hard Interventions

As the temple is a compact building and has constraints on site boundary therefore no major hard interventions can be proposed for the site.

1. **Landscaped Entrance** – The temple has 8 m of buffer area in front of the entrance gate which can be developed as a simple and inviting landscaping for

the visitors. This can be developed with usage of soft paving with paver blocks for ease of movement, tree planters, information board and directional signages. This will improve the look and feel of the surroundings.

Infrastructure Created: 360 sqm landscape area, 1 information board, Paver blocks, Tree planters

2. **Pilgrim Walkway** – As the temple is 300m south of Ulangalandha temple, the temple can be included in the temple walkway trail already proposed between Ulangalandha and Kamakshi Amman temple. This can be achieved by developing a shaded 3 m wide pedestrian walkway between the two temples on the side of the main access road. This will improve visibility and importance of the temple and hence attract higher tourist footfalls.

Infrastructure Created: 300 m shaded pedestrian walkway



Landscaped Entrance



Pilgrim Walkway

Soft Interventions

1. **Crowd Management** – As the access road is crowded and unable to handle traffic therefore measures will be undertaken as:
 - Ramps or special access for wheelchairs
 - Limit the number of people within the temple complex at any time.

- Deploy ushers to ensure people move through the temple at a minimum pace.
- Tents outside the temple complex could act as temporary holding areas for devotees, to prevent overcrowding inside, only during festivals.

Amenities Plan

1. **Signage** – Signage Package 1 is proposed to feature at this site. Both directional signage and informational signage should be used, as per the design guidelines.
2. **Parking** – Diagonal surface parking is proposed to be planned to maximise the number of ECS spots available on the front offset of the road. These will be a paved yard with a capacity of 8 cars to hold.
3. **Interior Lighting** – The temple has been modernised in the past. However, the interior is dark with inadequate lighting. Many temple paraphernalia have been stored around the site in a haphazard manner, therefore focus lights should be installed within the site.
4. **Technology** – As the site is small in scale and does not attract large number of tourists, therefore Package 1- Basic is proposed to feature on this site, as per the design guidelines.

Trunk Infrastructure

As the Site has direct access from the road, no trunk infrastructure interventions are required.

Project Identified

#	Project Component	Scale
1	Landscape Entrance	360 sqm
2	Shaded Pilgrim Walkway (Shading device type 1)	300 m
3	Parking (Paved Yard)	8 ECS
4	Signage (Package 1)	1
5	Internal Lighting	1
6	Street Landscaping	30 planters + 30 seating
7	Technology (Package 1)	1

Feasibility Assessment

The following considerations have been accounted for the cost projections of proposed interventions at this site:

- Feasibility of the cashflows projected here are accounted only for the additional components master planned.
- The current operating & maintenance cost of the temple have not been considered.

Capital Expenditures

The cost of the different project components proposed in the masterplan is calculated basis the current market price considering the appropriate escalations.

#	Project Component	Cost (INR Lakhs)
1	Landscape Entrance	1
2	Shaded Pilgrim Walkway	36
3	Parking (Paved Yard)	2
4	Signage (Package 1)	1
5	Internal Lighting	1
6	Street Landscaping	54
7	Street Landscaping - 30 seats	3
8	Technology (Package 1)	1
Total		INR 1 Cr.

Revenues - Proposed projects

(Note: The following considerations are applicable to the below mentioned revenue modules.

1. The revenues considered here are in addition to all the existing revenue currently accrued by the temple.
 2. The estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)
1. **Parking** – About 8 parking spaces assuming a daily occupancy of 4 ECS per day, would earn the temple an estimated revenue of *INR 1 Lakh*.

The total revenues to the temple from the proposed capital projects are projected at an estimated *INR 1 Lakh at Y5*.

Operating Expenditures

(Note: The following considerations are applicable to the below mentioned operational expense modules.

1. The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.
2. The operations and maintenance currently undergone by the temple for its existing facilities are not considered in this section.
3. The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)

1. **Repair & Maintenance costs** – This includes the expense incurred over time for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
The projected costs incurred is estimated at *INR 1 Lakh*.
2. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.
The projected costs incurred is estimated at *INR 2 Lakhs*.

The total operational expenditure incurred by the temple from the proposed capital projects is projected at an estimated *INR 3 Lakhs at Y5*.

Since the temple has no dedicated vacant area available and is master planned in liaison with the Ulangalanda temple, which hosts the larger capital projects such as Yatri Niwas, community hall, etc., the interventions planned here are envisioned to uphold the hygiene factor that is followed across all the temples in the Kanchipuram religious cluster.

Hence with estimated revenues (*INR 1 Lakh*) from the proposed projects falls short of the operational expenses (*INR 3 Lakhs*) incurred, however the interventions

proposed here are to be seen in a holistic manner with the perspective of the entire religious circuit of Kanchipuram.

Structuring & Implementation

Implementation Model

The development of the projects is to be taken up by HR & CE department and the implementation of these can be carried out as follows:

1. The implementation of the **Technology package** (i.e., Smart-App integrations, Virtual guides, NFC tags, etc.) at the site would be taken up by the SPV provisioned by the tourism department.
2. The **Parking facility** is to be undertaken by the temple body and the respective cost incurred is included in the operating expenses (*Admin. & Management cost*)

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 4,300¹⁶ man-days of construction labour (*spread across 1 year of implementation*)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 2 Persons¹⁷

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – As discussed above
- Indirect employment in the sectors supplying inputs to the tourism industries.

¹⁶ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.

- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 10,700 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 400 Cr. at the site.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

- As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
- Assumed cost of labour assumed for computation = INR 700 per day
- Cumulative labour man-days = 30% * CAPEX / 700

¹⁷ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and suppliers will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

Figure 5-3: Proposed Master Plan – Chitraguphar Temple, Kanchipuram



6. Vallakottai Murugan Temple, Sriperumbudur

Site Details

District:	Kanchipuram
Name of Site	Vallakottai Murugan Temple
Site No:	Site 20 of 295
Site Use:	Temple
Category:	A (Temple)
Location:	12.8828, 79.9331
Land Area:	~1.5 acres
Peak footfalls:	~2000 per day (April – May, October – January, March)
Operator:	HR & CE Dept.
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom. – 6.18 lakhs (2019 – 20) For. – 12,320 (2019 – 20)
Site Revenues:	~INR 1.3 Cr. (2019 – 20)
Site Orientation:	Pilgrim
Site Potential:	Medium Tourism Site
HVT Potential:	Moderate HVT Potential
Connectivity	
a. Railway Station:	~50 km (Chennai)
b. Airport:	~35 km (Chennai)
c. Highway:	~350 m from SH54
d. Other:	Nil
Trails Featured on:	Nil (Pure Pilgrim Temple)

This temple is renowned for its Murugan statue, which is the tallest in Tamil Nadu. The temple has great connectivity and high awareness amongst devotees. However, the temple faces the issue of crowd control due to its small size and its lack of supporting infrastructure for public amenities.

The scope of interventions for the site includes the creation of an added set of spaces for the provision of amenities, opening of temple tanks for the creation of a community space, and resolving the existing issues faced currently by the tourists and residents around the site.

Existing Condition

Location

The temple is in Vallakottai town about 20 km west of Singaperumal Koil, on Chennai – Vizhupuram National Highway, about 10 km south to the town of Sriperumbudur, and ~50 km southwest of Chennai. Sriperumbudur attracts tourists majorly for Adi Kesava Temple, Vallakottai Murugan Temple, Sri Ramanujar Temple, and Rajiv Gandhi Ninaivakam (memorial). The temple is easily accessible via Perumalpattu-Kottamedu road. It is around 250m from this road. The way to the temple is narrow with retail shops along the way.

Existing Layout

The temple complex occupies an area of ~ 1.5 acres. The temple has a five-tiered raja gopuram, the gateway tower which eases visitor entry from the south. The temple is accompanied by a large tank to the north. The temple tank is bounded by short walls to its east and south, while it has stepped access from its north and west sides. The temple complex on the south of the temple tank also houses many ancillary uses including Mandapam, Kitchen, Community Hall, Storeroom, cowshed, offices, etc.

Existing Uses

The temple is currently used by the local communities for religious purposes and the celebration of important festivals. The festivals are also considered as a peak season seeing around ~2000 temple visitors per day. Some of the festivals conducted at the site are:

- Monthly Kirutikai festival
- Temple Car festival in April
- Visakam festival in May
- Navaratri festival in May
- Skanda Shashti festival in October
- Thiru Karthikai festival in Nov/December
- Thaipusam festival in January and
- Pankuni Uthiram festival in March

Other Land Available

The temple does not own any land apart from the temple complex and the tank. The tank next to the temple is ~6315 sq. m in area.

Master Planning Considerations

Applicable Regulations

1. TNHRCE Rules, 1959

- a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions
- b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.
- c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to religious activities and for the facilitation of Hindu pilgrim tourists.
- d. The HR&CE Dept. owned land can be leased for no more than 3 years.

2. **Height Regulations** – AAI height restrictions allow the construction of buildings up to ~115 m. (up to 35 floors) above mean sea level in the temple complex and surrounding areas.

Key Sensitivities

The temple site does not have any pressing issues of sensitivity in and around the complex, which needs to be addressed while preparing the master plan.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

1. **Attraction** – Beautiful carvings of Thapas Kamakshi and Lord Rama embracing Sri Anjaneyar are carved on the pillars of Ardha Mandapam, along with it the 7ft long statue of Lord Murugan is the prime attraction to the temple. The temple tank, known as the Vajra Theertham, is believed to have been set up by vajra-ayudham of Lord Indra. Lord Indra used this tank to worship Lord Subramanya, and in this belief, many religious tourists are drawn to the temple. The temple surroundings are clean, however, the tank, one of the attractions, is not maintained. It is enclosed on 2 sides with a small wall, with an accumulation of algae and other water contaminants.

2. **Accessibility & Mobility** – The temple is accessible through narrow roads of Vallakottai town via Perumalpattu-Kottamedu road. It is around 250m from this road. The major mode of transport used by the visitors to access the temple are private vehicles, and public transport.

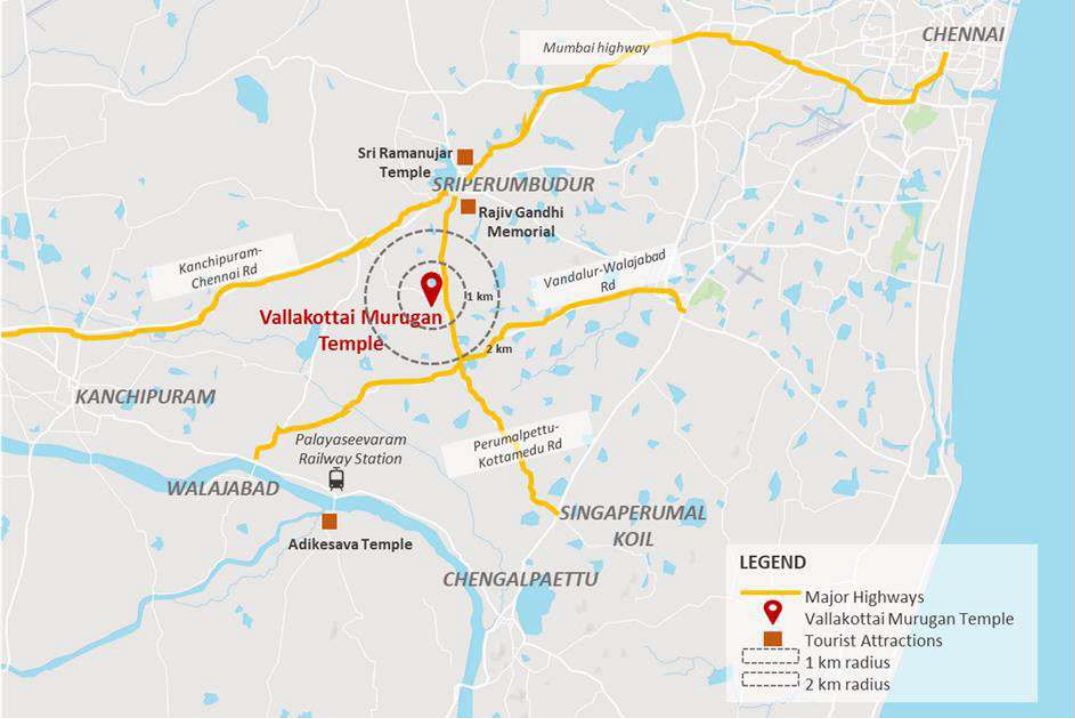
Parking – There are no dedicated parking lots available on the Site, the vehicles are redirected to be parked on the streets, and the parking site of a nearby Kalyana Mandapam. The access streets are already narrow and cannot withhold this parking resulting often in street congestion.

Internal circulation – The internal circulatory path within the temple is marked in white, with no continuous shading.

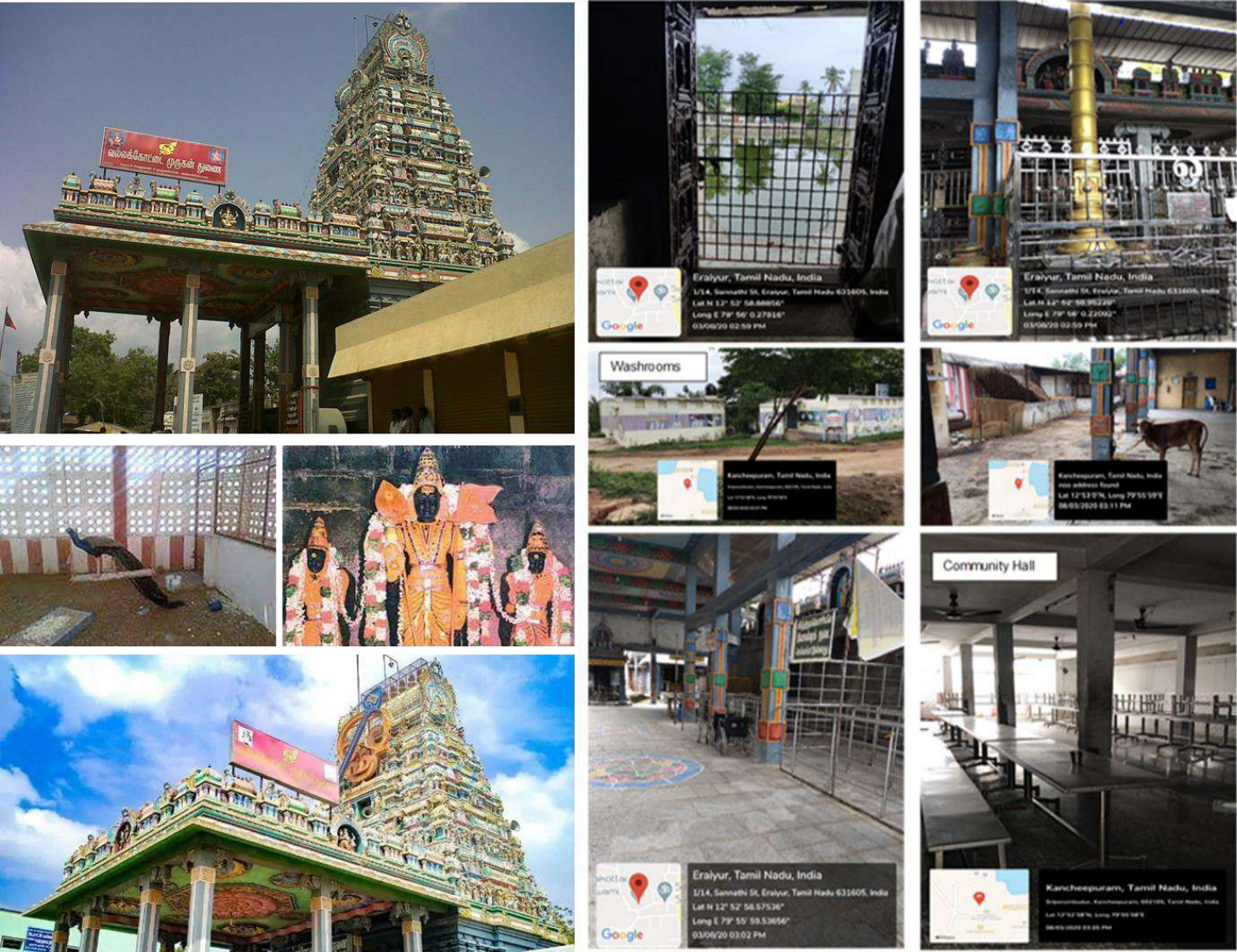
3. **Amenities** – The condition of amenities present at the site is meagre
 - The toilet present near the temple site is a panchayat built and ill-maintained.

- The site has no provision for free drinking water services, cloakrooms, and limited shading is available around the temple tank area.
 - The site is equipped with multiple signs and information boards however, they all in the Tamil Language (not decipherable by all the tourists).
- 4. Awareness** – The Subramaniya Swamy Temple is incredibly famous in Vallakottai. The Temple was recently renovated. People from various places visit this temple during festival days. This temple has a good online awareness level. It is present in all major travel sites and has its site managed by the HR & CE Dept.
- 5. Activities** – the set of activities that take place at the site are:
- **Everyday temple Pooja**
 - **Festival Celebrations** - Adi Kiruthikai festival (June – July),
 - **Annadhanam (lunch)** – It is being organized by KK VK Trust on all festive days and Sundays.
 - **Marriages** – The Temple is also famous for marriages and many marriage ceremonies are conducted during auspicious days.
- 6. Accommodation** – There are a few lodge and budget accommodation options that are close by. Multiple other hotels are present in the nearby town of Sriperumbudur (~10 km). Average room rates are around INR 1500 – 2500 per night.
- 7. Association with Community** – The temple is accessed by the local communities daily for religious visits, festival celebrations, etc. Given the popularity of the site among the community, it could offer an interesting atmosphere to tourists – as a place to experience the local culture and festive vibe. However, such aspects need to be highlighted and presented in a good setting.

Figure 6-1: Location & Existing Layout



Site Pictures



Vision for the Site

This temple is renowned for its Murugan statue, which is the tallest in Tamil Nadu. The temple has great connectivity and high awareness amongst devotees. However, the temple faces the issue of crowd control due to its small size and its lack of supporting infrastructure for public amenities. Moreover, the temple authorities do not own any extra vacant land parcels in the vicinity for further development of any tourist facilities.

Owing to the lack of any extra land parcels for the development of amenities, the main idea here is to enhance the existing site potential of being a religious tourist destination near Chennai (~55 km), fulfil the basic tourist requirements at the site, and overcome its current limitations. The scope of interventions for this site focuses more upon the enhancement of the current amenity provision and space use at the temple site.

- **Target Visitor** – The site is largely a pilgrim site, with significant footfall from neighbouring areas as well as from rest of Tamil Nadu and other south Indian states due to its rich religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.

Further, pilgrim groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang and elderly).

The target visitors to be captured here are two-fold:

- **Religious Tourists** – to develop a religious tourist destination where visitors can enjoy the religious environment of the site without disturbing the existing local communities in the town.
- **Tourist Projections** – The Site is categorized as a **Medium tourist site with Moderate HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC’s compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	606	1,671	3,945
High Value Tourists (HVT) (Both domestic and foreign)	25	68	160
Maximum Carrying Capacity	5,913		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Approach to Master Planning

The main objective/purpose of the master planning interventions for this site are:

- To **overcome the existing issues faced by pilgrims** at the site.
- To **create a live and interactive space around the temple tank** through extensive landscaping initiatives and opening it up to the communities living around the temple.

Hard Interventions

The set of hard interventions are more like design suggestions rather than master planning proposals.

1. **Landscaping and development of edges of the temple tank** - The temple currently is not accessible from all sides. The northern, eastern, and southern edges of the tank are walled. The idea behind this proposal is to open the temple tank and develop it as a space accessible by all. It can be done by bounding it from the road and a pavilion on all the sides with a stepped access through the openings connecting the road edge, the promenade along with and the actual waterside of the temple tank. The section of the promenade connected to the road can be concrete and solid, however, the areas of promenade passing through the tank can be temporary stilted structures with property safety fencing around it, as shown in the master plan figure.



Infrastructure Created: ~235 sq. m. of landscaped area, ~500 sq. m. of accessible seating area around the temple tank, creation of steps around the temple tank (~235 m. of length)

Soft Interventions

1. **Promotion** – The Tourism Department should promote the temple utilizing the stories behind the temple and the essential architectural elements of the temple, and events/activities held there, on its various platforms, following redevelopment and its integration with TN Assist App.
2. **Maintenance of the temple's cleanliness** – The temple surroundings now were seen to be unclean. Special community drives and programs can be developed to keep the area clean. Tourism awareness about the maintenance of site cleanliness can be done by the deployment of an adequate number of signages and dustbins across the site with continuous monitoring. The retailers present around the temple can also be made responsible for the same.
3. **Prohibition of ill-usage of temple tank** – In the current times, the temple tank regularly is used by the locals for washing clothes. Such activities must be prohibited by strict space monitoring and the creation of physical barriers which reduce the chances of this.

Amenities Plan

1. **Pay and Use Toilet Blocks** – The site must be equipped with ~3-4 modules/units of the toilet blocks. The location of the toilets shown in the master plan is an indicative representation.
2. **Drinking water Station** – The site must be equipped with ~3-4 drinking water stations at the facilitation center and ~5 units which can be placed at strategic locations within the temple premises.
3. **Street furniture** – The garden spaces and the spaces around the temple tank thus developed for public access must be provided with adequate benches, dustbins, and other street furniture. A detailed Landscape Design Guideline Manual will need to be prepared that will form the standard for all the street furniture from seating benches, shading devices, canopies, dustbins, bollards, paving materials, wayfinding, etc.
4. **Planting & landscaping** – More strategic tree planting is required along the pedestrian pathways, to create more shaded areas and beautify the site.
5. **Signage** – Package 1 set of signages must be deployed at the site. Signage at the Site is proposed to feature Tamil, English, and Hindi. Both directional signage and informational signage should be used, as per the design guidelines. The historical/symbolic relevance of the structures, statues, and buildings should be explained much more clearly.
6. **Technology Interventions** – Package 1 set of technology interventions are required to be deployed at the site. These include:
 - a. Compatibility with TN Assist App
 - b. CCTV coverage at up to 3 strategic locations
 - c. Electronic visitor counters

Trunk Infrastructure

As the site has excellent connectivity, no trunk infrastructure interventions are required.

Projects Identified

#	Project Component	Scale
1	Steps to reach temple tank	~135 m.
2	Pay and Use Toilets	~ 4 units
3	Drinking water Stations	~8 units
4	Street Lighting	~135 m.
5	Dustbins	~30 units
6	Signage	Package 1
7	Technology Integrations	Package 1
Total		INR 45 L

Feasibility Assessment

The following considerations have been accounted for the cost projections of proposed interventions at this site:

- Feasibility of the cash flows projected here are accounted only for the additional components master planned.
- The current operating & maintenance cost of the temple have not been considered.

Capital Expenditures

The cost of the different project components proposed in the masterplan is calculated basis the current market price considering the appropriate escalations.

#	Project Component	Cost (INR Lakhs)
1	Steps to reach temple tank	18
2	Pay and Use Toilets	20
3	Drinking water Stations	3
4	Street Lighting	2
5	Dustbins	1
6	Signage	1
7	Technology Integrations	1
Total		INR 45 L

(Note: Cost of all the project components including the Total capex is rounded-off to the nearest whole value.)

Revenues - Proposed projects

(Note: The following considerations are applicable to the below mentioned revenue modules.

1. *The revenues considered here are in addition to all the existing revenue currently accrued by the temple.*
2. *The estimated revenue projections are pegged at Y5 (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)*

1. **Pay per use Toilets** – Assuming about an average of 15% of the visitors using the proposed pay per use toilet, would earn the temple an estimated *INR 26 Lakhs.*

This being the only revenue stream from the proposed interventions, the total revenue to the temple is *INR 25 Lakhs at Y5.*

Operating Expenditures

(Note: The following considerations are applicable to the below mentioned operational expense modules.

1. *The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.*
2. *The operations and maintenance currently undergone by the temple for its existing facilities are not considered in this section.*
3. *The expense projections are pegged at Y5 (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)*

1. **Manpower Costs** – This includes the additional personnel required to manage the proposed facilities.
 - a. **A Help-desk staff** at the proposed toilet block.
The projected costs incurred is estimated at *INR 3 Lakhs.*
2. **Facility Maintenance costs** – This includes the costs incurred to maintain the cleanliness and the upkeep of the new facilities.
 - a. Maintenance of the **Open area**, which includes cleaners, gardeners, etc. for upkeep of the landscape in the temple.

b. Maintenance of the **Amenity block** - the cleaning of toilets, wash areas and drinking water stations.

The projected costs incurred is estimated at *INR 1 Lakh*.

3. **Repair & Maintenance costs** – This includes the expense incurred over time for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.

The projected costs incurred is estimated at *INR 1 Lakh*.

4. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percent of the total capital expenditure incurred.

The projected costs incurred is estimated at *INR 1 Lakh*.

5. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections of the temple.

The projected costs incurred is estimated at *INR 2 Lakhs*.

6. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash areas, toilets and drinking water stations.

The utilities for the rental kiosks and the community hall are pegged to the rental revenues earned from the respective sources.

The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175 per kilolitre*.

The projected costs incurred is estimated at *INR 8 Lakhs*.

7. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

The projected maintenance cost is estimated at a lump sum of *INR 50,000 per annum*.

The total operational expenditure incurred by the temple from the proposed capital projects is projected at an estimated *INR 15 Lakhs at Y5*.

Given that the estimated revenues (*INR 25 Lakhs*) from the proposed capital expenditure projects exceeds the operational expenses (*INR 15 Lakhs*) incurred, it can be concluded that the Interventions proposed at the site are Self-Sustainable and therefore beneficial to the temple and the Kanchipuram pilgrim/ tourist ecosystem.

Phasing & Funding Agencies

The development of the projects is to be taken up by HR & CE department and the implementation of these can be carried out as follows:

1. The implementation of the **Technology package** (i.e., Smart-App integrations, Virtual guides, NFC tags, etc.) at the site would be taken up by the SPV provisioned by the tourism department.

Developmental phasing

#	Project Component		Scale
1	Steps to reach temple tank	HR & CE Dept.	Y0 – Y2
2	Pay and Use Toilets	HR & CE Dept.	Y0 – Y2
3	Drinking water Stations	HR & CE Dept.	Y0 – Y2
4	Street Lighting	HR & CE Dept.	Y0 – Y2
5	Dustbins	HR & CE Dept.	Y0 – Y2
6	Signage	HR & CE Dept.	Y0 – Y2
7	Technology Integrations	HR & CE Dept.	Y0 – Y2

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 1,900¹⁸ man-days of construction labour (*spread across 1 year of implementation*)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 2 Persons¹⁹

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – As discussed above
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect, and induced effects is estimated as. 4,800 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 450 Cr. at the site.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.

Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

¹⁸ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.

- As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
- Assumed cost of labour assumed for computation = INR 700 per day

- Cumulative labour man-days = 30% * CAPEX / 700

¹⁹ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

Figure 6-2: Proposed Master Plan – Vallakottai Murugan Temple, Sriperumbudur



7. Sri Kanchi Kamakshi Amman Temple, Kanchipuram

Site Details

District:	Kanchipuram
Name of Site	Sri Kanchi Kamakshi Amman Temple
Site No:	Site 23 of 295
Site Use:	Temple
Category:	A (Temple)
Location:	12.8406, 79.7032
Land Area:	4 acres
Peak footfalls:	30,000 per day (January – June)
Operator:	Kanchi Kamakshi Ambal Devasthanam
Site Ownership:	Kanchi Kamakshi Ambal Devasthanam
Tourist Footfall:	Dom. – 121.9 lakhs (2019) For. – 1.0 lakh (2019)
Site Revenues:	Undisclosed
Site Orientation:	Pilgrim
Site Potential:	Very High Tourism Site
HVT Potential:	High HVT Potential
Connectivity	
a. Railway Station:	~40 km (Chengalpattu)
b. Airport:	~60 km (Chennai)
c. Highway:	~500 m from SH58
Trails Featured on:	Nil (Pure Pilgrim Temple)

Sri Kanchi Kamakshi Amman Temple is one of the oldest temples in Kanchipuram, receiving massive influx of tourists every year. The temple is one of the 51 Shakti Peethas and is neatly maintained with adequate provision of basic amenities. The temple has immense potential to stand alone as a holistic site with crowd control interventions during festivals and peak days and utilization of vacant space inside the temple for audio/ video shows and cultural performances.

The master plan largely focuses on improvement of tourist amenities and making the temple site easily accessible for pedestrians.

Existing Condition

Location

The Kamakshi Amman Temple is located in Kanchipuram, ~80 km away from Chennai via NH-48. It is also located ~1 km away from the main bus stand and ~1.5 km away from the railway station, making accessibility easy. The temple is situated in a busy mixed-use neighbourhood surrounded with high-density development on all sides. Several prominent tourist landmarks in close proximity are Ekambaranathar Temple, Kailasanathar temple, Vaikunda Perumal Temple and Ulangalandha Perumal temple.

Existing Layout and Uses

The Site consists of a ~4 acres land parcel with four Gopuras standing at all four entrances. All 4 sides of the site are bound by roads. Access to the site is via Street on the south. This is connected to a ~150 m long road connecting the temple gopuram to the arterial road. The peripheral Sannadhi Street (~24 m wide) is dedicated to temple use.

The site premises are walled off and the main site entry is on the southern side, via the South Gopuram. The following are the major elements of the Site:

- Temple complex – The temple complex is walled off. The complex comprises 1 main shrine and 1 large temple tank. There are few small shrines surrounding the sanctorum. In front of the main shrine there is a gayatri mandapam with 24 pillars.
- Other uses – chappal deposit room, office of the administrators, gallery on Adi Shankracharya's life history etc.
- Kalyan Mandapam – Outside the side on the northern side of the temple complex there is a Kalyana Mandapam used for religious rituals and marriages.

The temple on account of its immense significance enjoys immense popularity among locals and tourists. Being an important pilgrimage destination, on most days, the temple is crowded with tourists from all over the country. The major festivals celebrated are Navratri, Kanchi Kamakshi Brahmotsavam, Ther- the chariot festival, Theppam- the float festival etc.

Other Land Available

The temple does not hold any additional land for development.

Master Planning Considerations

Applicable Regulations

1. **Tamil Nadu Combined Development and Building Rules, 2019** – As per Kanchipuram Master Plan, site lies in a Mixed-use Residential and Heritage Zone. The permissible uses include:

Residential Buildings | Parks, playgrounds, farms, gardens | Public Utility Buildings | Swimming Pool, Daily or weekly markets | Hotels, Restaurants, Hostels, Dormitories, Boarding and Lodging houses | Retail establishments and shops, Departmental stores, Taxi stands and car parking multi-level parking | Religious buildings.

2. **Height Restrictions** - Heritage Zone height restrictions of ~13 m. (roughly up to 4 storeys) are applicable for the developments around the site.

Key Sensitivities

The temple does not hold any kind of environmental or social sensitivities to address.

Key Issues to Address

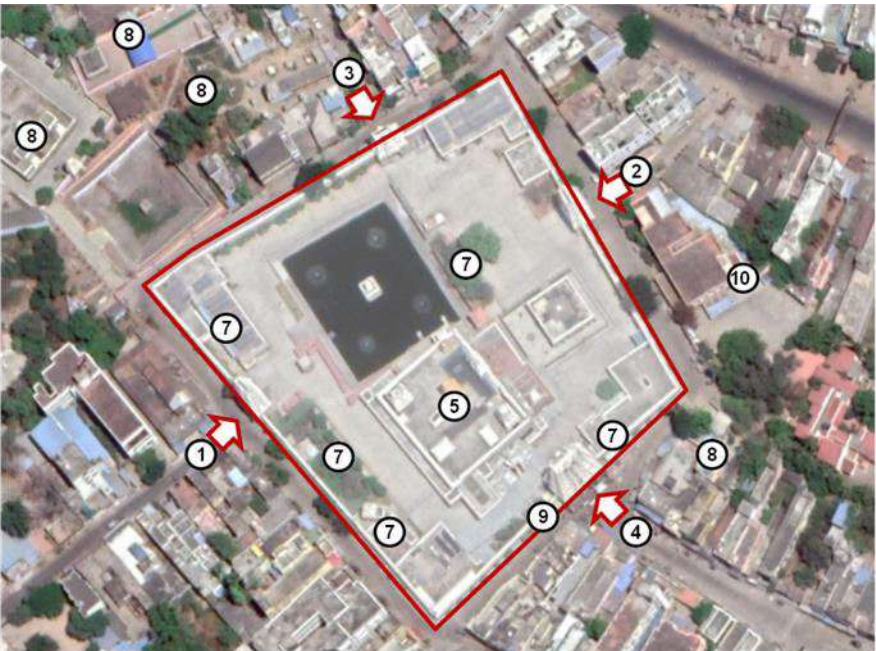
The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

1. **Attraction** – Kamakshi Amman Temple is a temple of great religious and historic significance. It is an important pilgrimage destination. The temple therefore enjoys immense popularity among tourists and pilgrims and is frequented by devotees with requests for children, wealth etc. A unique feature about this temple is that the presiding deity is in the seated Yogic posture of Padma Asana unlike the usual standing posture in other Shakti temples.
2. **Amenities** – The site is equipped with moderate level of amenities. The site is regularly cleaned and maintained with adequate provisions of drinking water, street lighting, divyaang friendly and safety security measures. However,
 - There are no retail or F&B outlets present at the site.
 - There is no toilet block available within the site
 - Security cameras are noticeably absent at certain mandapams.
 - The site lacks shaded area facilities for visitors to rest/sit outside the site.

Parking – The Site does not have any designated parking area. The cars and tour buses park on the street near the main entry leading to frequent crowding and congestion during evenings and peak hours.

3. **Awareness** – The temple enjoys immense popularity among pilgrims and is a well-known tourist destination in Tamil Nadu. It receives high foreign tourist footfalls and domestic footfalls. Also, the temple features prominently in many tourist itineraries and is a must visit attraction. It is recommended by renowned travel referral / review aggregators and also maintains its own website.
4. **Association with Community** – There are no guides at the temple. The festivals of the temple enjoy immense participation among the locals. There are also many hawkers and vendors that dot the site with carts and stalls – selling local goods, handicrafts, and food items, thus increasing congestion.

Figure 7-1: Location and Existing Layout



- Legend**
- 1 – South Gopuram
 - 2 – North Gopuram
 - 3 – West Gopuram
 - 4 – East Gopuram/Main Entrance
 - 5 – Main Sanctum
 - 6 – Temple Pond
 - 7 – Other Important Temples inside the site
 - 8 – Other Important Temples outside the site
 - 9 – Show and Chappal Deposit Room
 - 10 – Kalyana Mandapam

Site Pictures



Figure 7-2: Land Uses Regulation Zone at the Site



Municipal Boundary		
Village Boundary		
Railway Line		
Road		
Waterbodies		
	EXISTING	PROPOSED
Residential	PRIMARY	
	MIXED	
Commercial		
Industrial	CONTROLLED	
Educational		
Public/Semi Public		
Agriculture		
Detailed Development Plan Area		
Proposed Road		
Heritage Zone		

Vision for the Site

Kamakshi Amman Temple is one of Kanchipuram’s oldest temples. As the prime attraction of Kanchipuram, it draws massive hordes of tourists – domestic and foreign. Its uniqueness stems from its architecture and intricate stone carvings, depicting various deities. As a tourist magnet, the temple faces issues about crowd control and inadequate parking. Tourist-friendliness at the site can be improved by better traffic management, with development of a dedicated parking space for visitors to the temple, pedestrianisation of Kamakshi Amman Sannadhi Street and a Site Interpretation Centre. This will enhance the overall importance of the temple as it acts as an important nodal site in the holistic temple trail of Kanchipuram city.

Given the popularity of the site among the community and pilgrims, it could offer a unique value to tourists – as a place to experience the local culture and urban vibe. However, such aspects need to be highlighted and presented in a good setting.

- **Target Visitor** – The site currently draws a large number of pilgrim due to its religious value. Further, due to its monumental value, rich architecture and historical importance, the site draws good number of tourists – both foreign and domestic.

Having said that, given the location of the site and its rich historical value, there is a significant potential to increase the tourist footfalls by improving the quality of experience and amenities at the site.

The composition of visitors at the site includes all age groups of visitors and hence, facilities would need to be provided for all (especially for children, Divyaang and elderly).

The site will target tourists that will apprehend and appreciate the religious significance, architectural beauty, and cultural values of the local setup. The target visitors to be captured here are:

- **Pilgrims and Domestic Tourists** – To develop as an anchor tourist site in the temple trail of Kanchipuram, where visitors can enjoy and acknowledge the religious value of all the sites and increase its popularity and footfall.
- **High Value Tourists (both domestic and foreign)** - Who want to see the monumental value of the temple architecture.

- **Tourist Projections** – The site is categorized as a **Very High tourist site with high HVT footfall and potential.**

Past footfall data for the site has been received from sources like the site manager and TTDC’s compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	12,090	15,286	15,286
High Value Tourists (HVT) (Both domestic and foreign)	200	409	409
Maximum Carrying Capacity	15,695		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Though the temple receives a very high footfall, it is operating very close to its practical capacity, which requires strict crowd management practices. The projects/ interventions proposed are envisioned with the intent to spread and manage the footfalls received.

Proposed Master Plan

Master Plan Concept

Kamakshi Amman Sannadhi Street should become a much more appealing, safe experience for both tourists and pilgrims when walking up to the Temple. A combination of Traffic Management, Traffic Calming and Pedestrianisation allows the creation of an important Pedestrian Friendly public space just outside of the Temple, which will be very beneficial to the Tourists and Pilgrims overall experience of a visit to the Temple. This will help in reducing traffic and congestion issues on the access road. The temple is also a nodal site in the holistic temple trail developed in Kanchipuram.

Hard Interventions

1. Traffic Calming, Pedestrianisation and Traffic Routing Improvements around the Temple. Kamakshi Amman Sannadhi Street should become a much more appealing, safe approach for both Tourists and Pilgrims when visiting the Temple. The large gopuram at the main entrance is one of the main attractions and its impressive size can only be admired from a distance. Instead of being dropped off right in front of the gate, Traffic Calming and Pedestrianisation creates the required safe pedestrian space for Pilgrims and Tourists to walk comfortably along Kamakshi Amman Sannadhi Street. Pilgrims can buy their temples at their leisure and make it much more attractive for tourists to stop at frequent tourist shops and small eateries along the way. This means that the local business community will benefit more from the visitors to the Temple. All visitors can comfortably disembark their vehicle at the first part of the Kamakshi Amman Sannadhi Street where more pedestrian space is created, and cars are only allowed to drive in one direction. The second part of Kamakshi Amman Sannadhi Street, closest to the Temple will be completely pedestrianized.

Infrastructure Created: ~1500 sqm of hard landscaped pedestrian space with new trees and street furniture.

2. Façade Beautification of Kamakshi Amman Sannadhi Street. To improve the overall experience of the visit to the historically significant Temple, the buildings along Kamakshi Amman Sannadhi Street should reflect the architectural beauty of the Temple. Firstly, the disfiguring hoardings and other architecturally inappropriate structures added to the buildings over the years should be removed. Secondly, the owners of historic buildings along the street should be financially incentivized to renovate their building facades to let the original architecture shine. Thirdly, building facades nearest to the gopuram that are a real eyesore and distract from the historic beauty of the temple should be beautified in a manner that is historically more appropriate.

3. Kamakshi Amman Temple Interpretation and Tourist Facilitation Centre
One of the major aspects of the Tourist's experience when visiting a Temple complex that needs to be improved is the lack of proper amenities, tourist information and engaging background information at the temple sites. To address all of the above, a small Site Interpretation / Tourist Facilitation Centre is proposed to be built close to Temple entrance at the open space of the adjacent Kalyana Mandapam. The Interpretation Centre is aimed at Tourists who



Pedestrianisation and Façade Beautification Kamakshi Amman Sannidhi Street

don't know much about the Site. Inside this small building the story of the Temple is briefly explained with mounted displays. Considering the lack of bathroom facilities inside the Temple, those will be provided too, and small shop selling local handicrafts made by local craftsmen and weavers & other souvenirs will be placed. A small café with some al fresco seating for Tourists to take a quick drink/lunch break: a quiet spot for Tourists to relax a bit before continuing their visit will further enhance the area

Infrastructure Created: 80 sqm of built-up area

Soft Interventions

1. **Events** – The local Corporation or the Tourism Department could organise various events and pilgrim offering and food servings in and around the temple and interpretation centre during important festivals. This would help to popularise the site to other segments of visitors.
2. **Marketing & Promotion** – The site to be Integrated with TN Tourism Assist App, along with photo and video documentation. This can be advertised at all key public locations and online platforms.
3. **Crowd Management** – As the access road is crowded and unable to handle traffic, therefore additional measures will be undertaken during festivals as:
 - Ramps or special access for wheelchairs
 - Limit the number of people within the temple complex at any time.
 - Deploy ushers to ensure people move through the temple at a minimum pace and in line.
 - Tents outside the temple complex could act as temporary holding areas for devotees, to prevent overcrowding inside, only during festivals.
4. **Curation of facilitated tours** – Develop tours with QR codes, Self-Guided Audio Tours, etc. linking all five temples. Community integration can be enhanced by appointing locals as Local Guides- trained and accredited. The temple can act as an important intermediate point for the tour due to its high religious significance and proposed interpretation centre.



Kamakshi Amman Temple Interpretation and Tourist Facilitation Centre and Community Park

Amenities Plan

1. **Signage (Package 3)** – Package 3 signage is proposed to feature in Tamil, English, and Hindi. Both directional signage and informational signage should be used, as per the design guidelines .
2. **Technology Interventions (Package 3)**– Being an anchor tourism site, Kamakshi Amman Temple should offer all technological conveniences and employ technological tools for optimal management. This should be as per the design guidelines . These include:
 - Free Wi-Fi
 - Compatibility with TN Assist App
 - AR Experiences
 - CCTV coverage
 - Security beacons / panic buttons at remote parts of Site
 - Electronic visitor counters
3. **Drinking-Water Station** – Sufficient number of drinking water stations must be provided at the tourist facilitation centre and across the site, a module of which can be as per the design guidelines.
4. **EV & EC Stop** – The temple is a part of the holistic temple trail proposed in the Kanchipuram city connecting all important religious destinations. Therefore, an EV & EC Shuttle service stop is proposed at the site near the parking area. This shall facilitate and ease movement across all sites for the tourists avoiding traffic jams near temples.

Trunk Infrastructure

As the Site has excellent connectivity, no trunk infrastructure interventions are required.

Project Identified

#	Project Component	Scale
1	Traffic Calming, Pedestrianisation and Traffic Routing Improvements around the Temple	1500 sqm
3	Interpretation and Tourist Facilitation Centre	80 sqm

#	Project Component	Scale
4	Signage (Package 3)	1
5	Technology Interventions (Package 3)	1
6	Drinking-Water Station	2
7	EV Stop	1
8	EC Stop	1
Total		

Feasibility Assessment

The following considerations have been accounted for the cost projections of proposed interventions at this site:

- Feasibility of the cashflows projected here are accounted only for the additional components master planned.
- The current operating & maintenance cost of the temple have not been considered.

Capital Expenditures

The cost of the different project components proposed in the masterplan is calculated basis the current market price considering the appropriate escalations.

#	Project Component	Cost (Lakhs INR)
1	Traffic Calming, Pedestrianisation and Traffic Routing Improvements around the Temple	24
2	Interpretation and Tourist Facilitation Centre	16
3	Signage (Package 3)	6
4	Technology Interventions (Package 3)	12
5	Drinking-Water Station	3
6	EV Stop	20
7	EC Stop	1
Total		INR 80 L

(Note: Cost of all the project components including the Total capex is rounded-off to the nearest whole value.)

Revenues - Proposed projects

(Note: The following considerations are applicable to the below mentioned revenue modules.)

1. *The revenues considered here are in addition to all the existing revenue currently accrued by the temple.*
2. *The estimated revenue projections are pegged at Y5 (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)*

1. **Kiosks** – 2 leasable kiosk units at the proposed Facilitation centre with a rental earning of *INR 6 Lakhs*.
2. **Shuttle Services (Operator)** – A licensed shuttle service operator to manage the EV services catering to the visitors. The operator is estimated to pay an annual license fee of *INR 10 Lakhs* to the temple management.
3. **Parking** – About 83 parking spaces assuming a daily occupancy of 20%, would earn the temple an estimated revenue of *INR 1 Lakh*.

The total revenues to the temple from the proposed capital projects is projected at an estimated *INR 15 Lakhs at Y5*.

Operating Expenditures

(Note: The following considerations are applicable to the below mentioned operational expense modules.)

1. *The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.*
2. *The operations and maintenance currently undergone by the temple for its existing facilities are not considered in this section.*
3. *The expense projections are pegged at Y5 (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)*

1. **Manpower costs** – This includes the costs incurred to maintain the cleanliness and the upkeep of the new facilities.
 - a. A **Help-desk staff** at the facilitation centre.
 - b. A **security personnel** at the proposed parking.
 - c. An **Administration staff** to overlook the parking and the facilitation centre.
 The projected costs incurred is estimated at *INR 8 Lakh*.

2. **Facility Maintenance costs** – This includes the costs incurred to maintain the cleanliness and the upkeep of the new facilities.
 - a. Maintenance of the **Open area**, which includes cleaners, gardeners, etc. for upkeep of the landscape in the temple.
 - b. Maintenance of the **Building facilities** – The general cleaning and upkeep of the facilitation centre.
 The projected costs incurred is estimated at *INR 1 Lakh*.

3. **Repair & Maintenance costs** – This includes the expense incurred over time for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
 The projected costs incurred is estimated at *INR 1 Lakh*.

4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the retail kiosks, community event spaces in the temple surroundings.
 The projected costs incurred is estimated at *INR 1 Lakh*.

5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.
 The projected costs incurred is estimated at *INR 2 Lakhs*.

6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections of the temple.
 The projected costs incurred is estimated at *INR 16 Lakhs*.

7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations.
 The utilities for the rental kiosks are pegged to the rental revenues earned from the respective sources.

The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175* per kilolitre. The projected costs incurred is estimated at *INR 44 Lakhs*.

The total operational expenditure incurred by the temple from the proposed capital projects is projected at an estimated *INR 70 Lakhs at Y5*.

Though the revenues from the capital projects fall short of the estimated operational expenses, the temple being one of the prime attractions in the Kanchipuram temple trail, the interventions proposed here are necessary to sustain the footfalls received and are envisioned to benefit the entire Kanchipuram cluster.

Phasing & Funding Agencies

The development of the projects is to be taken up by HR & CE department and the implementation of these can be carried out as follows:

1. The implementation of the **Technology package** (i.e., Smart-App integrations, Virtual guides, NFC tags, etc.) at the site would be taken up by the SPV provisioned by the tourism department.
2. The **kiosk units** at the facilitation centre can be leased/ rented out to private operators to host souvenir shops to display and sell temple related religious arts/ craft/ pooja items.
3. The **Parking facility** is to be undertaken by the temple body through the addition of a security personnel, the additional workforce for parking management is included in the operating expenses (*Manpower cost*).
4. The **EV-hub** is to be developed and operated by private vendors by paying an annual lease to the temple management, while the provisioning of the space for operations is to be facilitated by the temple.

²⁰ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 3,400²⁰ man-days of construction labour (*spread across 1-2 years of implementation*)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 2 Persons²¹
- Retail and F&B spaces = 5 man-days per day²²

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – As discussed above
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect, and induced effects is estimated as. 8,600 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

- As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
- Assumed cost of labour assumed for computation = INR 700 per day
- Cumulative labour man-days = 30% * CAPEX / 700

²¹ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

²² Assuming average 2.5 persons per kiosk / shop

Both increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 2,450 Cr. at the site.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

Figure 7-3: Proposed Master Plan – Sri Kanchi Kamakshi Amman Temple, Kanchipuram



8. Thiru Mukkoodal Appan Venketesa Perumal Temple, Chennai

Site Details

District:	Chennai
Name of Site:	Thiru Mukkoodal Appan Venketesa Perumal Temple
Site No:	Site 24 of 295
Site Use:	Temple
Category:	A (Temple)
Location:	12.7629, 79.8606
Land Area:	~1.5 acres
Peak footfalls:	~500 per day (Only 2 days in a year)
Operator:	HR & CE Dept. Maintenance by ASI
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom. – ~6,000 (2019 - 20) For. – Nil (2019 – 20)
Site Revenues:	~INR 50,000. (2019 – 20)
Site Orientation:	Pilgrim
Site Potential:	Low Tourism Site
HVT Potential:	Low HVT Potential
Connectivity	
a. Railway Station:	~40 km (Chengalpattu)
b. Airport:	~60 km (Chennai)
c. Highway:	~500 m from SH58

Trails Featured on: **Nil (Pure Pilgrim Temple)**

Thiru Mukkoodal Appan Venketesa Perumal Temple is the oldest temple in Tamil Nadu. The temple has significance due to its location at the convergence of three rivers. These three rivers are called Triveni Sangamam, which are considered equivalent to the Ganges. The temple itself is well maintained and is adorned with lush green lawns but it faces issues due to its small size and its lack of supporting infrastructure for public amenities. The scope of interventions for this site mainly includes the development of small spaces around the temple to enhance tourist convenience.

Existing Condition

Location

The temple is located in Thirumukkoodal village, ~20 km south-east of Kanchipuram, ~70 km south-west of Chennai. Located on the merging point of three rivers Palar (Ksheera Nadhi), Vegavathi (Saraswathi), and Cheyyar (Bahu Nadhi) (also known as Triveni Sangamam and is considered equivalent to the Ganges). Situated on the banks of the Palar river, the site is easily accessible via Kanchipuram highway, NH 45, and SH 58.

Existing Layout

- The temple complex occupies an area of ~ 1.5 acres. The temple's entrance is from the east, even though it faces north.
- There are sitting areas, outside the boundaries of the temple adjacent to the main entrance of the temple.
- The temple parking is along the vacant land owned by the temple administrators outside the main entrance of the site. The temple complex also houses many ancillary uses including:
 - Mandapam, to the south of the main temple.

- Kitchen, to the west of the main entrance, right before the temple.

Existing Uses

The temple is currently used by the residents and the local tourists from nearby towns. The temple complex is used for religious purposes and the celebration of important festivals. The festivals are also considered as a peak season witnessing around ~6000 visitors per day. Some of the festivals at the site are:

- Varadaraja Perumal's Parivettai - Mattu Pongal Day
- Karthikai Deepam
- Janmashtami
- Vaikunda Ekadasi

Other Land Available

The temple complex owns 4 acres around the temple which consists of barren land and agricultural land. Besides, the temple owns 76 acres across three villages named Attur, Thirumukkudal, and Pazhaveri. The exact location of these land parcels is unknown.

Masterplanning Considerations

Applicable Regulations

- 1. ASI Regulations** – The site is an ASI Monument, as per Ancient Monuments, Archaeological Sites and Remains Act:
 - a. New construction is not permissible within the prohibited area (beginning at the limit of the protected monument and extending to a distance of 100 m in all directions)
 - b. Reconstruction or repairs or renovation of existing buildings within the prohibited area requires prior permission from the Competent Authority under the act.
 - c. Construction of new buildings, reconstruction or renovation, or addition to/alteration/modification of existing buildings within the regulated area (200m from the prohibited area limit) requires prior permission of the National Monument Authority under the AMASR Act²³.

²³ https://en.unesco.org/sites/default/files/inde_act24_1958_enorof.pdf

²⁴ <https://asi.nic.in/wp-content/uploads/2018/11/national-conservation-policy-final-April-2014.pdf>

- 2. National Conservation Policy** – Monument Conservation activities can be taken up by the competent state authority (ASI Chennai Circle). It shall be permissible inside the premises of protected monuments as per the National Policy for Conservation of Ancient Monuments and Archaeological Site Remains, 2014²⁴

3. TNHRCE Rules, 1959

- a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions
- b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.²⁵
- c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to religious activities and for the facilitation of Hindu pilgrim tourists.
- d. The HR& CE Dept. owned land can be leased for no more than 3 years.

Key Sensitivities

The temple site does not have any pressing issues of sensitivity in and around the complex, which needs to address while preparing the master plan.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

- 1. Attraction** – The main attraction to the temple is its location on the riverbank. This site allows visitors to enjoy intangible scenic beauty, the calm and peaceful environment around it. The attraction value of the temple is enhanced by clean and attractive surroundings.
- 2. Accessibility** – The temple has well-established accessibility by roads. However, the last ~180 m. of the site is unpaved and lacks street lighting, making

²⁵https://tnhrce.gov.in/resources/docs/actrule/2/28/TNHRCE_RULES_1959_PART11.pdf

https://tnhrce.gov.in/resources/docs/actrule/2/29/TNHRCE_RULES_1959_PART12.pdf

the site inaccessible difficult during evening hours. Moreover, the way to the temple is via the Palar river bridge and salavakkam-tirumukkoodal road. Since it is located far from any major town, public transport options are few and time-consuming.

Parking – A large chunk of open land owned by the temple authorities is made available for visitors parking. It currently seems sufficient due to fewer footfalls at the site. However, if the site is envisioned to have a higher number of footfalls, a formalized parking space is required to accommodate tourist vehicles.

3. **Amenities** – The condition of amenities present at the site is meager.
 - An adequate number of toilets are present at the site in comparison to the footfall it attracts, however, they are ill-maintained and put to use only during festivals.
 - The site has no provision for free drinking water services, cloakrooms, and many other tourist facilities.
 - The site is equipped with multiple signs and information boards however, they all in the Tamil Language (not decipherable by all the tourists).
 - The access road to the temple is not lit with the streetlights, indicating the area is dark and non-accessible during evening hours.
4. **Awareness** – The temple is not a very well-known or acknowledged temple. The site is also less documented and advertised in comparison to many other sites in the district. The site mainly flourished by regional tourists during peak season accounts for ~1000 people out of its annual footfall of ~6000 visitors. Considering the location of the site and the things it can offer if it is well developed, the site lacks substantially in terms of an online presence.
5. **Activities** – The temple site does not offer any tourist engaging activities throughout most of the time of the year. Maatu Pongal is a special festival conducted here. During this time, around 2000 people visit the temple.
6. **Accommodation** – The areas around the temple site are agricultural fields and villages, which do not offer any good accommodation options for the tourists. This can be attributed mainly to the lack of other tourist destinations and the day plan of visiting tourists. Also, the huge distance of this site from major towns like Chennai, Mahabalipuram, Kanchipuram, etc. does not compel many tourists to

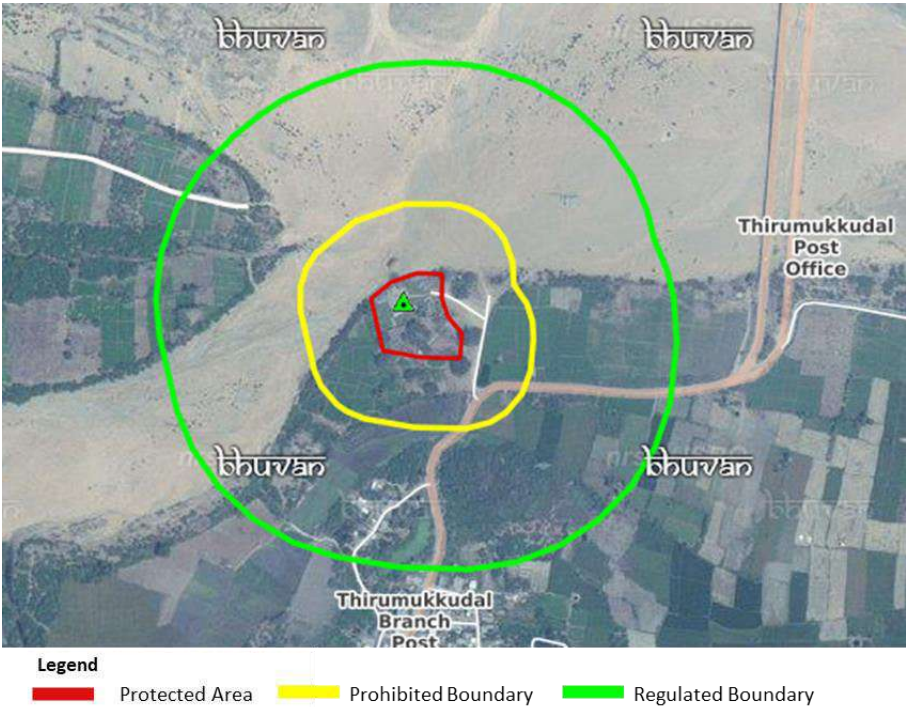
visit this lesser-known site. Out of the ones who visit the site, the typical plan of a visitor would be to come to the site in the first half of the day and leave before the sunsets.

7. **Association with Community** – The temple is accessed by the local communities for religious visits and festival celebrations. It does not have any significant association with local communities apart from it.

Figure 8-1: Location & Existing Layout

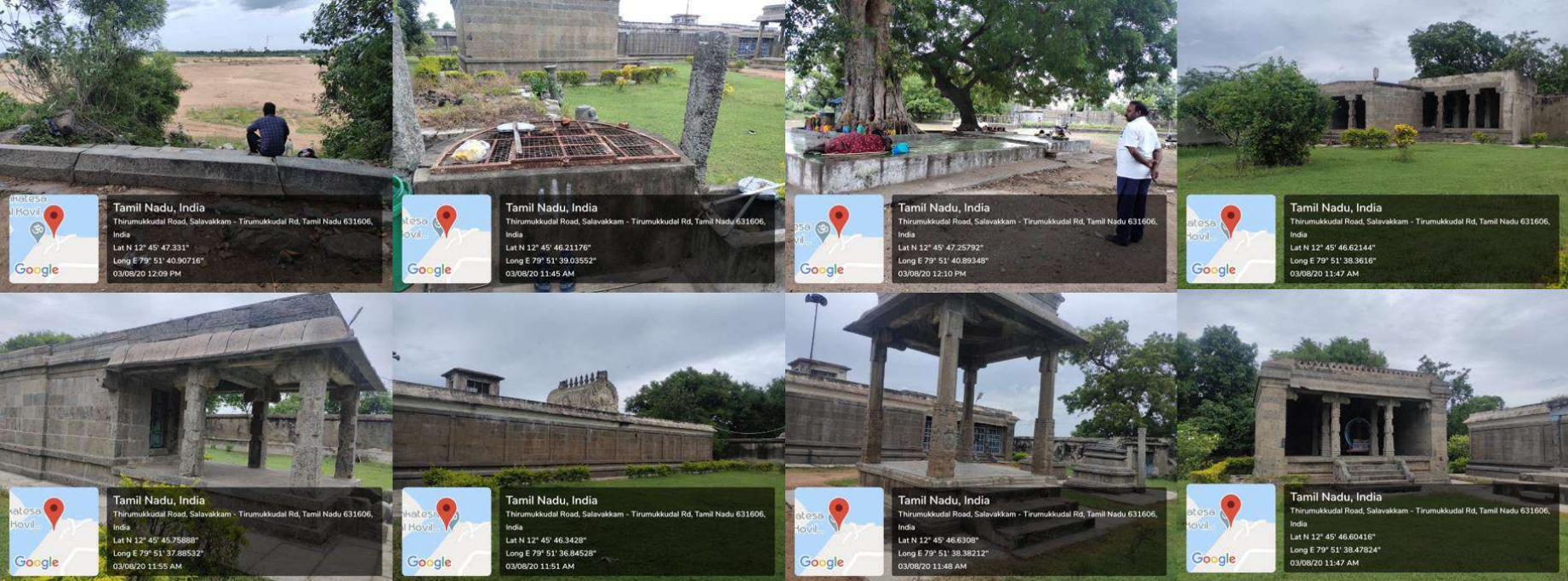


Figure 8-2: Protected, Prohibited, and Regulated areas around the monument



Site Pictures





Vision for the Site

The Thirumukkoodal Temple is an ancient temple dedicated to Lord Vishnu by the name ‘Sri Appan Prasanna Venkatesa Perumal’. In the current times, the site ‘s strength works to its location on the convergence point of 3 rivers and the quiet, calm, and peaceful atmosphere at the site. However, considering that there are certain development restrictions posed at the site by ASI, in addition to low tourist footfall and absence of tourist facilities.

Deliberating all the above-stated site situations and the presence of indigenous herbal medicines in the region, the site surrounding can be made interesting for the tourists as well as the locals mainly by the adoption of landscaping and temporary small constructions only.

- **Target Visitor** – The site is largely a pilgrim site, with significant footfall from neighbouring areas as well as from rest of Tamil Nadu and other south Indian states due to its rich religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.

Further, pilgrims groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang and elderly).

The target visitors to be captured here are two-fold:

- **Regional Tourists** – to develop an acknowledged tourist site where visitors can enjoy the site environment and celebrate the local religious festivals of the town.
- **Religious Tourists** – Who access the site for religious purposes.
- **Tourist Projections** – The site is categorized as a **Low tourism site** with **Low HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC’s compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	6	22	61
High Value Tourists (HVT) (Both domestic and foreign)	0	0	0
Maximum Carrying Capacity	5840		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Masterplan

Approach to Masterplanning

The temple despite being located along with the convergence points of 3 rivers, at a serene location, receives very few footfalls owing to the lack of awareness, absence of other good tourist attractions, or a well-established tourist destination. Additionally, the site is an ASI-protected monument that allows minimal development activities around the site.

Considering all the facts about the temple and its potential, the main objectives of the master planning interventions for this site are:

- To **overcome the existing issues faced by tourist** groups at the site.
- To **create live and interactive spaces around the temple** through extensive landscaping initiatives and opening it up to the communities residing around the temple.

Hard Interventions

The set of hard interventions are more like design suggestions rather than master planning proposals.

1. **Creation of Parking Space** – The site lacks in terms of provision of good, designated parking space around the site. Currently, the vehicles are parked along with the space near the temple. Designated parking spaces would help in organizing the informal parking, and the land parcel around the site can be utilized for other purposes.

Infrastructure Created: ~500 sqm of the paved parking area

- 2. Development of Small Semi-open Gallery** – The initial landscaped areas along with the site entry, can be utilized for the development of a shaded open gallery space, where monument information such as its significance, history, connections to the mythological stories, etc. can be displayed.

Infrastructure Created: ~100 sqm of shaded temporary space



Semi-Open Gallery Space

- 3. Development of herb garden and Garden for Medicinal Plants** – The region is known for the presence of medicinal herb plants. A part of the land around the temple can be utilized for the development of an herb garden for those plants from where the tourists can avail organically grown and developed medicines.

Infrastructure Created: ~260 sqm of paved area, Entrance gate, ~900 sqm of Garden Space, ~40 sqm of general site landscaping.



Curation of Medicinal Herb Gardens

Soft Interventions

- 1. Promotion** – The Tourism Department should promote the temple utilizing the stories behind the temple and the essential architectural elements of the temple, and events/activities held there, on its various platforms, following redevelopment and its integration with TN Assist App.
- 2. Maintenance of temple’s cleanliness** – The temple surroundings at the moment were observed to be unclean. Special initiatives must be developed for site maintenance.

Amenities Plan

- 1. Drinking water Station** – The site must be equipped with ~2 drinking water stations at the facilitation center and ~5 units which can be placed at strategic locations within the temple premises.
- 2. Street furniture** – The landscaped spaces inside the site must be provided with adequate benches, dustbins, and other street furniture. A detailed Landscape Design Guideline Manual will need to be prepared that will form the standard for all the street furniture from seating benches, shading devices, canopies, dustbins, bollards, paving materials, wayfinding, etc.
- 3. Planting & landscaping** – More strategic tree planting is required along the pedestrian pathways, to create more shaded areas and beautify the site.
- 4. Signage** – Package 1 set of signages must be deployed at the site. Signage at the Site is proposed to feature Tamil, English, and Hindi. Both directional signage and informational signage should be used, as per the design guidelines.
- 5. Technology Interventions** – Package 1 set of technology interventions are required to be deployed at the site. These include:
 - Compatibility with TN Assist App
 - CCTV coverage at up to 3 strategic locations
 - Electronic visitor counters

Trunk Infrastructure

As the site has excellent connectivity, no trunk infrastructure interventions are required.

Projects Identified

#	Project Component	Scale
1	Paved Parking Spaces	~500 sqm
2	Semi-Open Gallery	~100 sqm
3	Herb Garden	~1200 sqm
4	Drinking water Stations	~2 units
5	Dustbins	~10 units
6	Benches	~10 Units
7	General Landscaping Area	~0.7 acres
8	Paved walkways	~290 m
9	Signage	Package 1
10	Technology Integrations	Package 1

Feasibility Assessment

The following considerations have been accounted for the cost projections of proposed interventions at this site:

- Feasibility of the cashflows projected here are accounted only for the additional components master planned.
- The current operating & maintenance cost of the temple have not been considered.

Capital Expenditures

The cost of the different project components proposed in the masterplan is calculated basis the current market price considering the appropriate escalations.

#	Project Component	Cost (Lakhs INR)
1	Paved Parking Spaces	8
2	Semi-Open Gallery	20
3	Herb Garden	8
4	Drinking water Stations	3

#	Project Component	Cost (Lakhs INR)
5	Dustbins	1
6	Benches	1
7	General Landscaping Area	2
8	Paved walkways	6
9	Signage	1
10	Technology Integrations	1
Total		INR 50 L

(Note: Cost of all the project components including the Total capex is rounded-off to the nearest whole value.)

Revenues - Proposed projects

(Note: The following considerations are applicable to the below mentioned revenue modules.

1. The revenues considered here are in addition to all the existing revenue currently accrued by the temple.
 2. The estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)
1. **Parking** – About 28 parking spaces assuming a daily occupancy of 30%, would earn the temple an estimated revenue of **INR 1 Lakh**.
 2. **Space on Hire** – Assuming an average of an event per week, renting of the community hall for private religious events/ ceremonies would earn the temple **INR 2 Lakhs**.

The total revenues to the temple from the proposed capital projects is projected at an estimated **INR 3 Lakhs at Y5**.

Operating Expenditures

(Note: The following considerations are applicable to the below mentioned operational expense modules.

1. The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.

2. *The operations and maintenance currently undergone by the temple for its existing facilities are not considered in this section.*
3. *The expense projections are pegged at Y5 (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)*

1. **Repair & Maintenance costs** – This includes the expense incurred over time for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
The projected costs incurred is estimated at *INR 1 Lakh*.

2. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.
The projected costs incurred is estimated at *INR 1 Lakhs*.

3. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations.
The utilities for the parking space and the community hall are pegged to the rental revenues earned from the respective sources.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175* per kilolitre.
The projected costs incurred is estimated at *INR 3 Lakhs*.

The total operational expenditure incurred by the temple from the proposed capital projects is projected at an estimated *INR 5 Lakhs at Y5*.

Hence with estimated revenues (*INR 3 Lakh*) from the proposed projects falls short of the operational expenses (*INR 5 Lakhs*) incurred, however the interventions proposed here are limited to basic hygiene factors followed across all the undertaken sites and to cater to the needs of the pilgrim.

Phasing & Funding Agencies

The development of the projects is to be taken up by HR & CE department on approval from ASI and the implementation of these can be carried out as follows:

1. The implementation of the **Technology package** (i.e., Smart-App integrations, Virtual guides, NFC tags, etc.) at the site would be taken up by the SPV provisioned by the tourism department.
2. The **Parking facility** is to be undertaken by the temple body and the respective cost incurred by the management is included in the operating expenses (*Admin. & Management cost*).
3. **Community hall** to be rented out to the devotees/ private operators to conduct ceremonies like marriage, etc. and religious events during festivals.

Developmental phasing

#	Project Component	Agencies in Charge	Phasing of Development
1	Paved Parking Spaces	ASI	Y0 – Y2
2	Semi-Open Gallery	ASI	Y0 – Y2
3	Herb Garden	ASI	Y0 – Y2
4	Drinking water Stations	ASI	Y0 – Y2
5	Dustbins	ASI	Y0 – Y2
6	Benches	ASI	Y0 – Y2
7	General Landscaping Area	ASI	Y0 – Y2
8	Paved walkways	ASI	Y0 – Y2
9	Signage	ASI	Y0 – Y2
10	Technology Integrations	ASI	Y0 – Y2

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 2,150²⁶ man-days of construction labour (spread across 1 year of implementation)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 2 Persons²⁷
- Retail and F&B spaces = 3 man-days per day²⁸

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – As discussed above
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect, and induced effects is estimated as. 5,400 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 6 Cr. at the site .

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%

- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

²⁶ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.

- As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
- Assumed cost of labour assumed for computation = INR 700 per day
- Cumulative labour man-days = 30% * CAPEX / 700

²⁷ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

²⁸ Assuming average 2.5 persons per kiosk / shop

Figure 8-1: Proposed Master Plan – Thiru Mukkoodal Appan Venkatesa Perumal Temple



9. Ramanujar Temple, Sriperumbudur

Site Details

District:	Kanchipuram
Name of Site	Ramanujar Temple
Site No:	Site 26 of 295
Site Use:	Temple
Category:	A (Temple)
Location:	12°58'06"N 79°56'55"E
Land Area:	5 acres
Peak footfalls:	5000 per day
Operator:	HR & CE Dept.
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom. – 3.4 lakhs (2019 – 20) For. – 20,000 (2019 – 20)
Site Revenues:	Nil
Site Orientation:	Pilgrim
Site Potential:	Medium Tourism Site
HVT Potential:	Moderate HVT Potential
Connectivity	
a. Railway Station:	~40 km (Chennai)
b. Airport:	~35 km (Chennai)
c. Highway:	~1 km from SH57
Trails Featured on:	Nil (Pure Pilgrim Temple)

As the birthplace of Sri Ramanujar, a famous Vaishnavite, the temple is located ~30 km from Kanchipuram. The temple is adorned with a golden mandapam and gold-plated vimana. However, it lacks in aesthetic attractions for the pilgrim tourists and the provision of basic facilities. Furthermore, the temple lacks basic public amenities such as toilets and drinking water for the facilitation of pilgrim/religious tourists.

Scope for interventions includes the development of a facilitated environment for religious tourists that might ease the issues currently faced at the site and make the entire site surrounding vibrant, lively, and inclusive.

Existing Condition

Location

The temple is in Sriperumbudur, which is ~30 km east of Kanchipuram. Sriperumbudur attracts tourists majorly for Adi Kesava Temple, Vallakottai Murugan Temple, and Rajiv Gandhi Ninaivakam (memorial). There are several prominent tourist landmarks present around the site as Rajiv Gandhi Memorial, Chokhi Dhani memorial within 1 km, Vallakottai Murugan Temple within 10 Km.

Existing Layout

The temple is built in the Dravidian style of architecture and has two precincts. The temple has a rectangular plan surrounded by 10 ft (3.0 m) high walls, pierced by a seven-tier gopuram, the gateway tower. The presiding deity is housed in the sanctum and is an image made of granite seen in standing posture. The shrine of Garuda facing Adi Kesava, the vahana of Vishnu, is located axial to the central shrine. The central shrine is approached through a worship hall and a narrow Ardha mandapam. The flag post is located behind the shrine of Garuda, axial to the central shrine and the gateway tower. The second precinct includes images of Azhwars (poet-saints) in the worship hall on both sides and the shrine of Yathirajavalli. The gold-plated hall in front of the shrine of Ramanuja was endowed by the Maharaja of Mysore. There

is also a Bhodakal hall where the festive images of the presiding deity and his consort are housed during the festival.

Existing Uses

The temple is currently used by the local communities for religious purposes and the celebration of important festivals. Some of the festivals conducted at the site are, Guru dhrushyam, Masi magham (5 days, once in a year), Chitirai Brahmotsavam (20 days), and Panguni Uthiram festival during March - April.

Other Land Available

The temple doesn't own any land apart from the temple complex and the tank. However, a limited amount of open space between the temple mandapam and the main temple and a small land parcel on the northern edge accounting for ~2,100 sq. m. can be utilized for additional development.

Master Planning Considerations

Applicable Regulations

1. TNHRCE Rules, 1959

- a. The allowed set of modifications/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions.
- b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.
- c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to religious activities and for the facilitation of Hindu pilgrim tourists.
- d. The HR& CE Dept. owned land can be leased for no more than 3 years.

2. **Height Regulations** – AAI height restrictions allow the construction of buildings up to ~115 m. (up to 35 floors) above mean sea level in the temple complex and surrounding areas.

Key Sensitivities

The temple site does not have any social/environmental pressing issues of sensitivity in and around the complex.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

1. **Attraction** – The temple is visited by a large number of devotees as it is believed to be the birthplace of Ramanuja, the exponent of Vishishtadvaita philosophy. One of the main attractions of the temple is the gold-plated hall in front of the shrine of Ramanuja which was endowed by the Maharaja of Mysore. The vimana (roof of the sanctum) was gold plated in 1912 and is the earliest South Indian temple to have the feature. The plate has the image of Sri Ramanuja inscribed on it. The temple is heaven itself on earth, owing to the birth of great Acharya-Ramanuja. As a result, there is no Sorgavasal which means door to heaven in the temple, as is traditionally seen in Lord Vishnu temples. It is also believed that bathing in the temple tank called Ananth Saras, relieves one of their sins. In present days the temple is not attracting tourists due to less maintenance and unclean surroundings, tourist litter the place left the area less attractive and dirty. This issue needs to be resolved with proper regulation and signage to highlight the dustbins.
2. **Accessibility** – The temple has well-established accessibility by roads. It is well connected by a good network of roads. It is well accessible from Vellore-Chennai Highway via Gandhi road Owing to its location close to Kanchipuram and Chennai, the site is easily accessible via frequent public transportation bus service.

Parking - This site does not have any designated parking area hence the visitors face issues regarding the crowd and traffic absence of regularity majorly during peak seasons.
3. **Amenities** – The quality of amenities present at the site is poor.
 - There are no toilets within the site or in ~100 m. of the site.
 - There is free drinking water with an RO filter installed inside.

- The temple premises are properly cleaned daily but there is a lack of dustbins (only one dustbin for the entire temple complex).
- The site premises is equipped with CCTVs and firefighting mechanisms, with a walled site and sufficient street lighting around the site premises.
- Temple complex has wheelchair facilities for disabled people but without any ramp provided to the site and level differences.

Internal circulation –This site does not have any internal circulation and existing pathways to cater to the unnecessary crowds and chaos with one single entry to the temple complex.

4. Awareness – The temple site enjoys immense popularity among pilgrims. In 2019, the temple received ~3.8 lakh visitors, ~5% of whom were foreign tourists. It is recommended by renowned travel referral/review aggregators such as TripAdvisor, Chennai tourism, etc. The HRCE department maintains a temple website with relevant information.

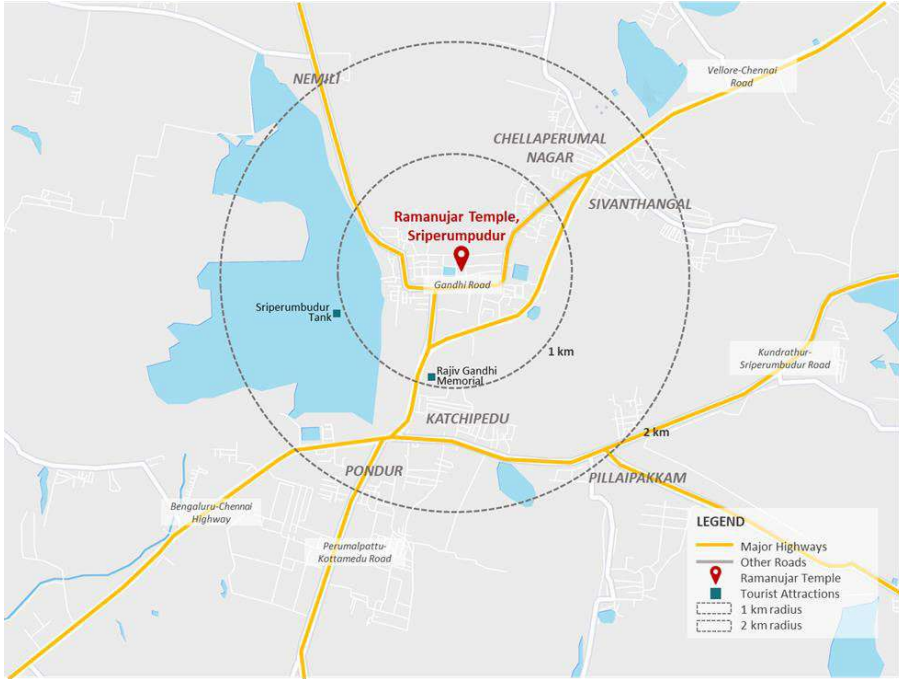
5. Activities - On a daily basis the temple offers pooja and rituals-based activities for the pilgrims four times a day. Apart from these, the other set of activities offered at the temple include:

- Weekly, monthly and fortnightly rituals performed in the temple
- Celebration of festivals - Chitirai Brahmotsavam, Masi Pooram and Panguni Uthiram festival
- The temple site however offers no other tourist activities or F&B related activities for pilgrim and other tourists.

6. Accommodation - Variety of stay options available, ranging from 3-star hotels to budget hotels are available in Sriperumbudur. The currently available options suffice the needs of pilgrims and religious tourists visiting the site. Fairfield by Marriott, a 4-star hotel, is located within a ~15 min (~7 km) drive from the temple

7. Association with Community –The birthplace of Ramanujar also has an active Vishitadvaiata school that influences the community's belief in Vaishnavism.

Figure 9-1: Location and Existing Layout



- Legend**
- | | | |
|----------------------|------------------------|--------------------|
| 1 – Rajagopuram | 5 – Udayaur Sannadhi | 9 – Ramar Sannadhi |
| 2 – Inner Parakaram | 6 – Andal Sannadhi | 10 – Mirror House |
| 3 – Outer Parakaram | 7 – Nam Azhar Sannadhi | 11 – Mandapam |
| 4 – Perumal Sannadhi | 8 – Thayar Sannadhi | 12 – Temple Tank |

Site Pictures



Vision for the Site

Considering the existing site situation, good accessibility, and popularity amongst regional and local pilgrim tourists as well as its limitations such as lack of pedestrian pathways, meagre site maintenance measures, etc., the site can be positioned as a regional pilgrim destination.

The temple administrative authorities do not own any vacant land parcels near the temple. However, there is a small developable space amidst the main temple and temple mandapam area which can be utilized for the services, amenity provision and amplify the surrounding and make it vibrant.

Several heritage sites around the temple serve as a potential for investing in the development of the temple. The vision for this site is to redevelop the existing open spaces around the temple, conserving the temple structure to make vibrant spaces to attract a greater number of tourists.

- **Target Visitors:** The site is largely a pilgrim site, with significant footfall from neighbouring areas as well as from rest of Tamil Nadu and other south Indian states due to its rich religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.

Further, pilgrim groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang and elderly). The target visitor group envisioned at the site are:

- **Pilgrims:** Visiting the temple for its religious value.
- **Domestic Tourists:** For the monumental and historical value of the temple.
- **High Value Tourists:** For the monumental and historical value of the temple.
- **Tourist Projections –** The site is categorized as a **Medium tourist site** with **Moderate HVT potential**.
Past footfall data for the site has been received from sources like the site manager and TTDC’s compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	344	921	2,175
High Value Tourists (HVT) (Both domestic and foreign)	40	138	326
Maximum Carrying Capacity	11,680		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

While most of the tourist footfall would be received by the anchor temples such as Ekambareswarar temple, the other smaller temples within the Kanchipuram cluster would receive 1/5th of its Tourist footfall. Given all possible interventions and the projected growth as per the tourist potential of the site, the practical capacity of these temples would be subject to 1/4th of Ekambareswarar temple’s tourist footfall at any projected year.

Proposed Master Plan

The intent behind the Master plan is:

- **Attracting more tourists** by increasing the number of activities during different festive seasons and engagement of the tourists at different age groups and increasing revenue generation through intervention.
- **Providing better amenities for pilgrims.**
- **Diversify with improved designing of the surrounding with different interventions and infrastructure development.**
- **Diversifying the area with landscaping and making it a vibrant recreational and religious space.**
- **Improving circulation and accessibility by providing side walkways and parking space to reduce the traffic and chaos.**

Hard Interventions

The set of hard interventions are more like design suggestions rather than master planning proposals.

- 1. Temple Information cum other facilities** – A small facility centre with an inquiry desk, luggage room, changing room, and rest/waiting area can be developed for tourist convenience and ease at the site. It can be a ground structure developed on the north to the entrance of a small temple at the site.

Infrastructure Created: ~1500 sqft of built-up area.



Tourist Information Centre

- 2. Landscaping Islands:** The landscape area inferno of the parking space will reduce the noise of the cars hoping and will cater to the requirement of the parking spaces for the visitors. This Island will be an additional beauty to the small temple site and create a visually appealing environment for religious tourists.

Infrastructure Created: ~100 sq. m. of Landscaping area



Landscaping and pavements at Temples

- 3. Recreational space connecting to the temple** – A small area on the northern side of the main temple entry along the road edge can be developed into a small community garden space where religious tourists can enjoy the calm and peaceful environment beside the temple. Space can be accompanied by a small, paved display area, where the temple’s historic stories and religious significance can be displayed in the form of stone engraved scriptures and idols.

Infrastructure Created: ~163 sq. m. of Garden space and ~50 sq. m. of temple display area

- 4. Temple Tank Redevelopment:** The edges of the temple tank can be made more inclusive and welcoming. In the current time, the temple tank is only utilized at the time of the festival. Making it into a well landscaped and edged open space along the roads might interest the locals and visitors. It can turn out to be a small roadside recreational space for the religious tourists and they can spend some time along with the temple tank. The temple tank can also be facilitated with space where semi-permanent shacks or changing rooms can be placed for the tourists who prefer to take a holy dip in the temple tank.

- The redevelopment could be merged with the heritage structures a line with the design and elements used for the development, which could be facilitated with broad walkways around the tank.

Infrastructure Created: ~800 sq. m. area of landscaping around the temple tank, ~600 sq. m. area of accessible space for pilgrim recreation around temple tank, ~50 sq. m. of temporary built-up area.



Spaces around temple tank

5. Development of Parking Space: The parking in the current situation takes place on the roads around the temple. The roads around the temple are quite narrow and on-street parking often leads to traffic congestion, especially during the peak season. A small amount of vacant land available inside the temple complex can be utilized for accommodating certain tourist vehicles.

Infrastructure Created: ~250 sq. m. of the paved parking yard

6. Separate entry and exit points: The site is open and can be entered from the north as well as from the south. The southern entry point can be made a vehicular access point, whereas the entry from the north side of the temple can be a pedestrian entry point with the installation of bollards.

Infrastructure created: Bollard installation, installation of vehicular entry and exit gates.

Soft Interventions

- 1. Promotion** – The Tourism Department and HR&CE could promote the temple utilizing the stories behind the temple and the essential architectural elements of the temple, and events/activities held there, on its various platforms, following redevelopment and its integration with TN Assist App.
- 2. Monumental lighting shows-** The gold-plated vimana is already a visual landmark in the neighborhood. This can be accentuated with monument lighting. The temple tank can be lit up to become a congregation space at night will make the temple premises more attractive.
- 3. Shuttle services-** The proposed shuttle services could be provided for the visitors with a partnership with existing Ola/Uber cab services. The sites along the connected roads could be merged in a group of different tourist spots and this could be used for small one-day site visit packages the booking could be done on the facilitation center and from the temple premises.
- 4. Rituals and activities of different festive times** – The temple authority and the local Corporation or the Tourism Department could organize various events based on rituals and different periods of the year to engage visitors at different times of the year will attract more tourists and increase the footfall in total.

5. Regulations can be developed for maintaining the cleanliness of temple premises and temple tank areas.

Amenities Plan

- 1. Pay and Use Toilet** – ~4 units of identified pay and use toilet blocks must be incorporated with proper landscaping. The entire premises could be secured with bollards to restrict people to come inside and fencing. The toilet areas could be surrounded by proper tree fencing or general landscaping to hide the unnecessary views. The location of the toilets shown in the master plan is an indicative representation.
- 2. Changing room:** In the place of the temple tank, there must be at least two different changing rooms for the tourist who are participating to take bath.
- 3. Street furniture:** Open sitting arrangement and adequate garden furniture like benches, dustbins, bollards, etc. are proposed to be provided at the landscaped areas in the temple complex., along with the design guidelines for street furniture.
- 4. Pedestrian walkways-** Side walkways for the local people and the visitors to reduce traffic and accidents with proper signage to make understand the direction of the walkways.
- 5. Drinking-Water Station** – ~2 drinking water stations are proposed to be provided at the Tourist facilitation area having different options of hot and cold-water facilities for the people who are coming.
- 6. Plantation and Landscaping** – Local planting is proposed to be used to weather the extreme climate. Planting would be used to beautify open-air exhibit areas, sidewalks, open-air theatre, and other visitor zones.
- 7. Signage (Package 1)** – Package 1 signage is proposed to feature in Tamil, English, and Hindi. Both directional signage and informational signage should be used, as per the design guidelines.
- 8. Technology Intervention (Package 1)** – Being an important tourist destination in the Kanchipuram district, the temple should offer all technological

conveniences and employ technological tools for optimal management. These include:

- a. Electronic visitor counters & body scanner at entry points
- b. TN Assist App integration (internet connection, QR scanner)
- c. CCTV coverage across the Site

Trunk Infrastructure

As the site has excellent connectivity, no trunk infrastructure interventions are required.

Projects Identified

#	Project Component	Scale
1	Tourist Facilitation Centre	~800 sqm
2	General Landscaping Area	~0.2 acres
3	Recreational space with benches	~163 sqm
4	Paved temple display area	~50 sqm
5	Changing Rooms	~50 sqm
6	Parking Paved yard	~250 sqm
7	Pay and use toilets	~ 4 units
8	Drinking water Stations	~8 units
9	Street Lighting	~800 m
10	Dustbins	~30 units
11	Signage	Package 1
12	Technology Integrations	Package 1
13	Monument lighting	~2 unit

Feasibility Assessment

The following considerations have been accounted for the cost projections of proposed interventions at this site:

- Feasibility of the cashflows projected here are accounted only for the additional components master planned.

- The current operating & maintenance cost of the temple have not been considered.

Capital Expenditures

The cost of the different project components proposed in the masterplan is calculated basis the current market price considering the appropriate escalations.

#	Project Component	Scale
1	General Landscaping Area	1
2	Recreational space with benches	1
3	Paved temple display area	1
4	Changing Rooms	6
5	Parking Paved yard	4
6	Pay and use toilets	20
7	Drinking water Stations	3
8	Street Lighting	13
9	Dustbins	1
10	Signage	1
11	Technology Integrations	1
12	Monument lighting	20
Total		INR 70 L

(Note: Cost of all the project components including the Total capex is rounded-off to the nearest whole value.)

Revenues - Proposed projects

(Note: The following considerations are applicable to the below mentioned revenue modules.

1. The revenues considered here are in addition to all the existing revenue currently accrued by the temple.
 2. The estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)
1. **Parking** – About 15 parking spaces assuming a daily occupancy of 50%, would earn the temple an estimated revenue of **INR 1 Lakh**.

2. **Pay per use Toilets** – Assuming about an average of 15% of the visitors using the proposed pay per use toilet, would earn the temple an estimated *INR 16 Lakhs*.

The total revenues to the temple from the proposed capital projects is projected at an estimated *INR 15 Lakhs at Y5*.

Operating Expenditures

(Note: The following considerations are applicable to the below mentioned operational expense modules.

1. *The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.*
2. *The operations and maintenance currently undergone by the temple for its existing facilities are not considered in this section.*
3. *The expense projections are pegged at Y5 (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)*

1. **Facility Maintenance costs** – This includes the costs incurred to maintain the cleanliness and the upkeep of the new facilities.
 - a. Maintenance of the **Open area**, which includes cleaners, gardeners, etc. for upkeep of the landscape in the temple.
 - b. Maintenance of the **Amenity block** - the cleaning of toilets, wash areas and drinking water stations.

The projected costs incurred is estimated at *INR 2 Lakhs*.

2. **Repair & Maintenance costs** – This includes the expense incurred over time for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.

The projected costs incurred is estimated at *INR 1 Lakhs*.

3. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.

The projected costs incurred is estimated at *INR 1 Lakh*.

4. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections of the temple.

The projected costs incurred is estimated at *INR 1 Lakhs*.

5. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations.

The utilities for the rental kiosks, Yatri Niwas and the community hall are pegged to the rental revenues earned from the respective sources.

The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175 per kilolitre*.

The projected costs incurred is estimated at *INR 6 Lakhs*.

6. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

The projected maintenance cost is estimated at a lump sum of *INR 50,000 per annum*.

The total operational expenditure incurred by the temple from the proposed capital projects is projected at an estimated *INR 10 Lakhs at Y5*.

Given that the estimated revenues (*INR 15 Lakhs*) from the proposed capital expenditure projects exceeds the operational expenses (*INR 10 Lakhs*) incurred, it can be concluded that the Interventions proposed at the site are Self-Sustainable and therefore beneficial to the temple and the Kanchipuram pilgrim/ tourist eco-system.

Phasing & Funding Agencies

The development of the projects is to be taken up by HR & CE department and the implementation of these can be carried out as follows:

1. The implementation of the **Technology integration** package (i.e., Smart-App integrations, Virtual guides, NFC tags, etc.) at the site would be taken up by the SPV provisioned by the tourism department.

2. The **Parking facility** is to be undertaken by the temple body and the respective cost incurred by the management is included in the operating expenses (*Admin. & Management cost*).

Development phasing

#	Project Component	Agencies in Charge	Phasing of Development
1	Tourist Facilitation Centre	HR & CE	Y0 – Y2
2	General Landscaping Area	HR & CE	Y0 – Y2
3	Recreational space with benches	HR & CE	Y0 – Y2
4	Paved temple display area	HR & CE	Y0 – Y2
5	Changing Rooms	HR & CE	Y0 – Y2
6	Parking Paved yard	HR & CE	Y0 – Y2
7	Pay and use toilets	HR & CE	Y0 – Y2
8	Drinking water Stations	HR & CE	Y0 – Y2
9	Street Lighting	HR & CE	Y0 – Y2
10	Dustbins	HR & CE	Y0 – Y2
11	Signage	HR & CE	Y0 – Y2
12	Technology Integrations	HR & CE	Y0 – Y2
13	Monument lighting	HR & CE	Y0 – Y2

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

²⁹ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.

Employment opportunities during Implementation: 3,000²⁹ man-days of construction labour (*spread across 1 year of implementation*)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 5 Persons³⁰

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – As discussed above
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect, and induced effects is estimated as. 7,500 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site

Both increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of 330 Cr. at the site.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%

- As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day

- Assumed cost of labour assumed for computation = INR 700 per day

- Cumulative labour man-days = 30% * CAPEX / 700

³⁰ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and suppliers will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

Figure 9-1: : Proposed Master Plan – Ramanujar Temple, Sriperumbudur



- 1 Parking
- 2 Landscaping Island
- 3 Garden
- 4 Tourist Information Cum Other Facilities
- 5 Toilets
- 6 Landscaping around Temple Tank

10. Trilokyanatha Jain Temple, Kanchipuram

Site Details

District:	Kanchipuram
Name of Site:	Trilokyanatha Jain Temple
Site No:	Site 27 of 295
Site Use:	Temple
Category:	A (Temple)
Location:	12.8307, 79.6808
Land Area:	~1.2 acres
Peak footfalls:	2000 per day
Operator:	Hereditary Temple Trust
Site Ownership:	State Department of Archaeology
Tourist Footfall:	Dom. – 2 lakhs (2019 - 20) For. – 630 (2019 - 20)
Site Revenues:	Undisclosed
Site Orientation:	Pilgrim
Site Potential:	Very Low Tourism Site
HVT Potential:	Low HVT Potential
Connectivity	
Railway Station:	~40 km (Chengalpattu)
Airport:	~65 km (Chennai)
Highway:	~2.5 km from SH116
Other:	Nil
Trails Featured on:	Nil (Pure Pilgrim Temple)

Trilokyanatha Temple in Thiruparthikundram (also called Thiruparthikundram Jain temple) is associated with the Digambara sect of Jainism. A predominant, illustrious Jinalaya, built-in 6 century A.D., is the standing testimony of the glory of Jainism in this area. Constructed in Dravidian architecture, the temple is situated in the Jain Kanchi region of Kanchipuram city. The scope of interventions and master planning for the site accommodates the needs of local communities as well as the interests of tourists visiting the site. It majorly focuses upon enhancing the underutilized spaces around the temple and provide the necessary tourist facilities at the site itself.

Existing Condition

Location

The temple is located in the south-west of Kanchipuram. Well connected via road, the temple is situated in a suburban area of Kanchipuram city, amidst low dense residential surroundings. The temple city is a famous destination for pilgrims and caters to a large number of visitors daily. The temple is situated within 5 km from several prominent religious sites in Kanchipuram including Kailasanathar Temple, Kamakshi Amman Temple, Ekambareshwarar Temple, Sri Vaikunta Perumal Temple etc.

Existing Layout

- The temple complex layout consists of two Jain temples with two entry points each for one temple – the larger one is dedicated to three deities (Trilokyanatha Mahavira, Lokanathar, and Neminatha) towards the south and the smaller one is dedicated to Chandaprabha is towards the north.
- **Gopuram** - The main temple is built in Dravidian architecture with a three-tiered gopuram (gateway tower).
- **Sanctum** - The sanctum of Mahavira accommodates Dharmadevi and a Tirthankara on either of his sides. There are painted pillars in the hall leading to the sanctum.

- **Dwajasthambam** - As in other South Indian Hindu temples, there is a flag post (called Dwajasthambam) in between and axial to the entrance and the sanctum.

Existing Uses

The temple is open for its visitors throughout the year. A popular religious spot of Jains, the temple is visited for worship by people from various states of India. Apart from tourists, locals visit the temple for daily darshan, perform their rituals regularly and celebrate festivals.

Other Land Available

The temple administration does not own any developable land parcel near the site.

Master Planning Considerations

Applicable Regulations

- 1. TN Ancient and Historical Monument and Archaeological sites and remains Act and Rules, 1971**
 - a. Any kind of construction or modification within the area under the jurisdiction of the **State Archaeology Department** shall be done with prior permission from the department.
 - b. Any kind of development activities within the site premises under the jurisdiction of the **State Archaeology Department** shall be undertaken by the department itself, the owner's right to the property is restricted.
 - c. Activities relating to **conservation/preservation/landscaping or amenity provision** are only set of activities allowed to be undertaken as per the act
- 2. Tamil Nadu Combined Development and Building Rules 2019** - The site lies in the **Proposed Residential Zone** as per the Kanchipuram Master Plan. The permissible uses include

Residential Buildings | Parks, playgrounds, farms, gardens | Public Utility Buildings | Swimming Pool, Daily or weekly markets | Hotels, Restaurants, Hostels, Dormitories, Boarding and Lodging houses | Retail establishments and shops, Departmental stores, Taxi stands, and car parking multi-level parking | Religious buildings.

- 3. Height Restrictions** – AAI height restrictions allow the construction of buildings up to ~115 m. (up to 35 floors) above mean sea level in the temple complex and surrounding areas.

Key Sensitivities

The temple site does not have any pressing issues of Environmental/Social sensitivity in and around the complex, which needs to be addressed while preparing the master plan.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

- 1. Attraction** – The temple is one of the first Tamil temples and is an important religious centre for Jains. The suburb where this temple is located is called “Jaina Kanchi”. The temple has great archaeological importance and its ceilings are painted depicting the life story of Krishna. The temple also houses a 2500-year-old tree named Dharma Kura. While the temple is popular amongst its devotees, it doesn't attract a large no. of tourists.

- 2. Accessibility** - The Temple, located in south-western suburbs of Kanchipuram, is well connected by a good network of roads. It is well accessible from Chakkaramallur-Kanchipuram Road.

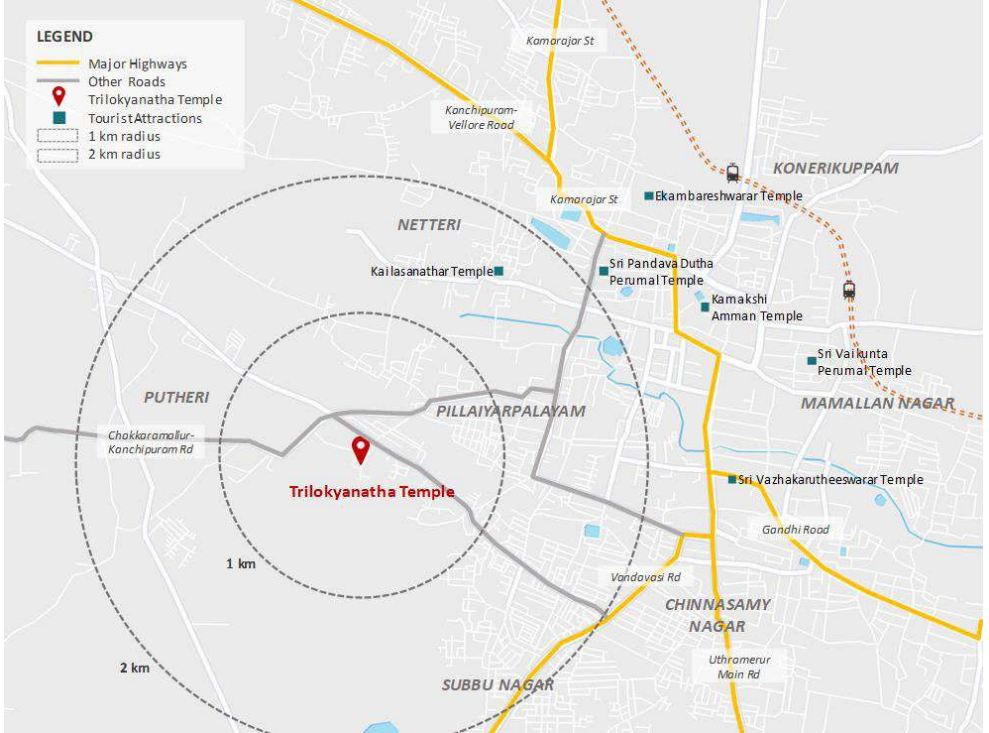
Parking – There are no parking areas defined for the temple visitors. Vehicles are often parked along the access road.

Internal Circulation – There are no measures taken to define internal site circulation. However, it is a small site area navigable by visitors on foot. The temple lacks the provision of Ramps and wheelchairs, which can make the site accessible for the elderly and physically disabled visitors.

- 3. Amenities** – The facilities in and around the temple complex are limited. The conditions of those amenities are quite deprived in general.
 - While there are no dustbins around the temple site, Toilets and RO water plants present at the site are inadequate in comparison to the number of tourists visiting the site, with additional issues due to lack of maintenance.

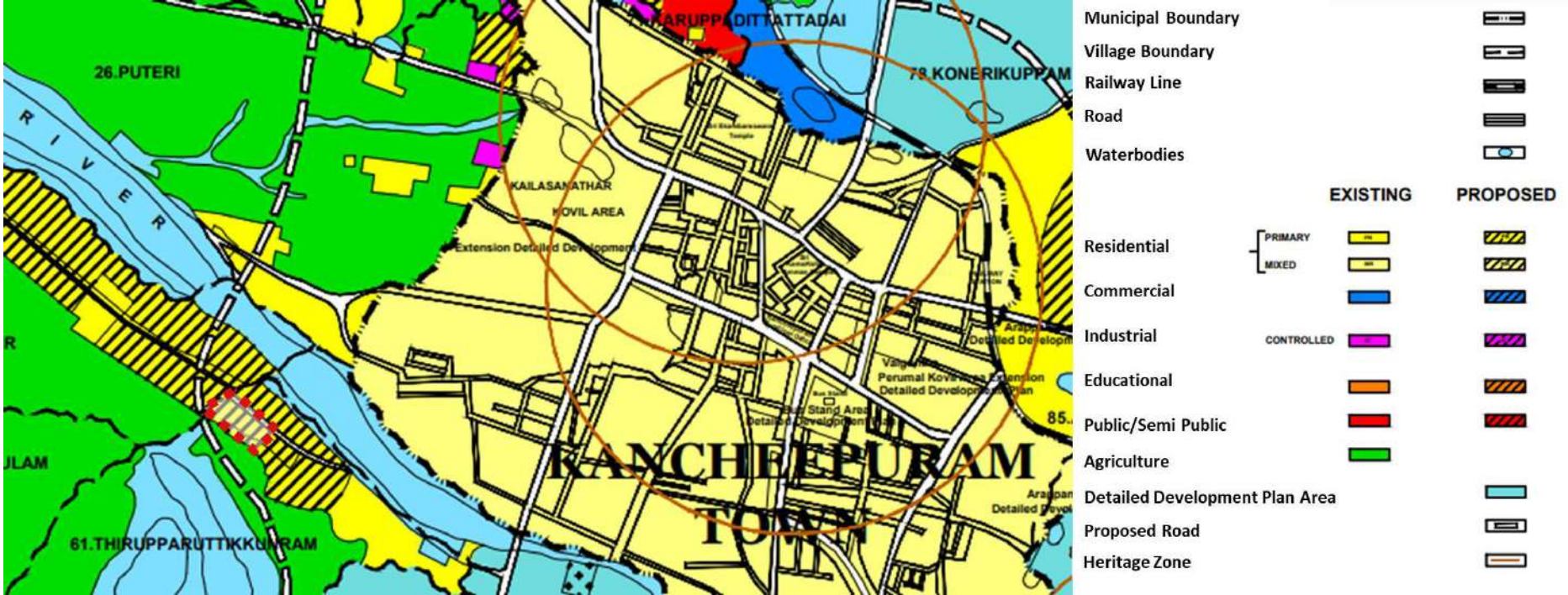
- The site boundaries are walled with the absence of a security guard.
 - The site additionally lacks information signages, interpretation centre/information centre, limited shaded seating area, etc.
4. **Awareness** – This temple is popular amongst its devotees. In 2019, the temple received ~2 lakh visitors, only ~1% of whom were foreign tourists. It is less popular and lacks awareness amongst tourists.
 5. **Activities** – The temple offers activities pertaining to jain religious activities. The temple can be visited free of charge and devotees engage in darshan, abhishekam, aarti, etc. There are no other local recreational or cultural activities offered at the site, even during festivals.
 6. **Accommodation** - The site, being located in Kanchipuram, has variety of stay options in its ~3-5 km radius. They range from budget hotels costing ~600-800 per night to luxury hotels. Owing to its location within ~2hr driving distance from Chennai. The additional accommodation needs for the tourists are fulfilled at Chennai.
 7. **Association with Community** – The site exhibits no prominent association with the local community.

Figure 10-1: Location and Existing Layout

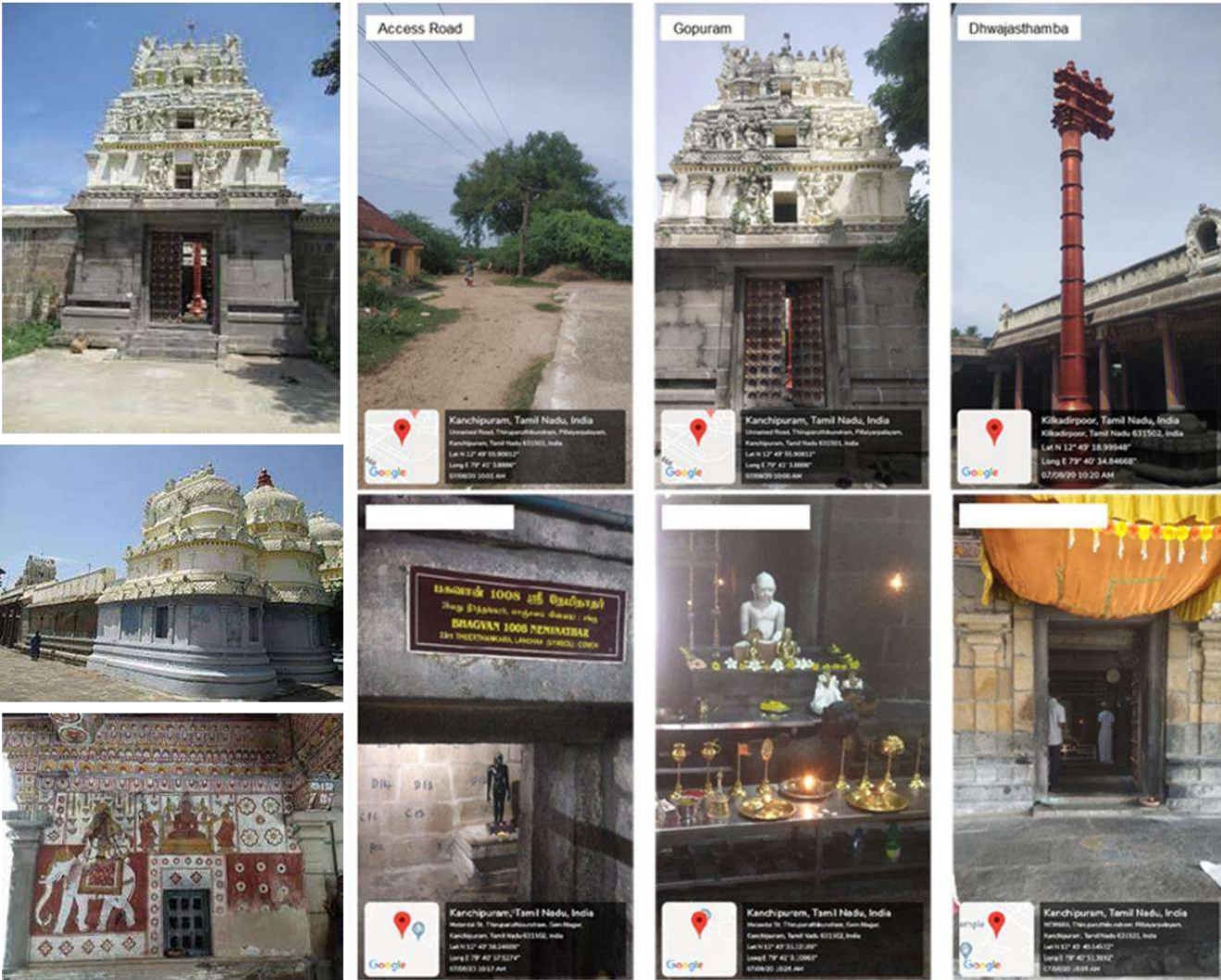


- Legend**
- 1 – Gopuram
 - 2 – Dhawajasthamba
 - 3 – Outer Parakaram
 - 4 – Pillared Hall
 - 5 – Sanctum
 - 6 – Chandaprabha Temple

Figure 10-2: Site Land Use – Kanchipuram Master Plan



Site Pictures



Planning Inspiration

Considering the existing situation and religious importance of the site such as:

- Being one of the ancient Jain temples in South India.
 - The Archaeological and Religious importance of the temple – Painted ceilings depicting the story of Lord Krishna.
 - The popularity amongst domestic Jain tourists and local pilgrims.
- and understanding of its limitations, such as:
- Lack of popularity amongst foreign tourists.
 - A secluded site with a lack of amenities in the immediate vicinity.
 - Restrictions from the Archaeological Department on developments in and/or around the temple complex.
 - Dull and non-interactive spaces around the temple.

Trilokyanatha Jain Temple has the potential to be developed into a religious tourist attraction with a local community space. Upgrading several temple-associated amenities with an additional set of space development would result in **an organic and interactive magnet for Jain tourists as well as other religious tourists visiting Kanchipuram**. From its current form, the new temple could offer new spaces for cultural activities, landscape enhancement, adequate tourist facilitation, etc.

Vision for the Site

A prominent temple, the Trilokyanatha temple is associated with the Digambara sect of Jainism. While the temple is well-connected to Kanchipuram and has a meagrely developed ecosystem of amenities, its tourism potential is hampered by a lack of awareness amongst the tourist population and the absence of any activities to engage tourists.

- **Target Visitor** – The site is largely a pilgrim site, with significant footfall from neighbouring areas, due to its rich religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.

Further, pilgrims groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang and elderly). The target visitors that the envisions to capture are:

- **Pilgrims** - Who visit for religious significance of the site.

- **Domestic Tourists** - Who visit while on visit to Kanchipuram, to see the heritage aspects of the temple.
- **Tourist Projections** – The site is categorized as a **Very low tourism site with low HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC’s compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	199	471	947
High Value Tourists (HVT) (Both domestic and foreign)	1	3	6
Maximum Carrying Capacity	2,847		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

While most of the tourist footfall would be received by the anchor temples such as Ekambareswarar temple, the other smaller temples within the Kanchipuram cluster would receive 1/5th of its Tourist footfall. Given all possible interventions and the projected growth as per the tourist potential of the site, the practical capacity of these temples would be subject to 1/4th of Ekambareswarar temple’s tourist footfall at any projected year.

Proposed Master Plan

Approach to Masterplanning

The objectives of master planning at this Site include:

- **Creating an integrated temple campus by connecting the two separated temples** – Development of connecting pathways and landscaped spaces around them.

- **Capitalize on the empty spaces at the temple campus by developing a place for the local religious community.**
- **Create a more tourist-friendly and facilitating environment at the site.**

Hard Interventions

The hard interventions for the site focus more on the design interventions and space allocation.

1. Development of a Community Hall – The site exhibits characteristics of an important site for Jain religion and local communities. Owing to the location of the temple in the Jain Kanchi region of Kanchipuram, a community hall for the outdoor tourists as well as the local community can be beneficial. The community hall can be used as an exhibition centre to display important information about the site and Jainism as a religion, space for conducting Mahaveer Jayanti celebrations in the peak season (April, August – October, December – January) and can be made available for the locals for events. The community hall can be on the ground only, with a slanted roof depicting the local style of construction.
Infrastructure Created: ~500 sq. m. building

2. Development of Parking Space – There is no provision of visitor parking at the site. The vehicles are currently parked along the roadside near the temple resulting in congestion during peak visitor season (6 out of 12 months). Provision of limited paid parking services within the temple complex would help in accommodating a share of those vehicles in peak season and reduce the congestion frequency. The revenue generated from the parking can be used for maintenance of parking itself.
Infrastructure Created: ~440 sq. m. of paved parking yard.

3. Local Recreation Space / Garden – Owing to the site location on the outskirts of Kanchipuram city, the area does not have adequate recreational spaces around. Reviving garden spaces in the vacant land in between the two temples with a paved path pathway and seating arrangements can create a nice recreational facility for the tourists to spend some time outside the temple as well as for the locals.
Infrastructure Created: ~500 sq. m. of garden



Community Hall (in traditional and courtyard architectural style)



Landscaped spaces around temples and monuments

Soft Interventions

- 1. Events** – The open space at the site could be open for organizing Jain meditation camps, local craft fairs, cultural events, festivals, which will make the place more alive and vibrant throughout the year.
- 2. Cleanliness** – The site premises must maintain cleanliness by adopting several volunteer programs, placement of informative signages at regular intervals, regular space maintenance, monitor loitering of stray animals or cows, and taking disciplinary action against those responsible for waste littering.
- 3. Site Promotion** - Increasing temple visibility with strategies like integration with TN Assist App, etc. The temple authorities can organize recurring events, associated festivals, etc. which can help publicize, increase awareness by

integrating it as part of the Jain pilgrim trail and mentions in the Kanchipuram anchor hub.

Amenities Plan

1. **Pay and Use Toilet Blocks** – ~2 units of toilets are proposed to be provided at the existing location within the temple complex. It needs to be upgraded/Renovated with additional cubicles to suffice the tourist population visiting the site, based on modern technologies and standards. The location of the toilets shown in the master plan is an indicative representation.
2. **Drinking-Water Station** – Sufficient number of drinking water stations must be provided at the tourist facilitation centre, a module of which can be as per the design guidelines.
3. **Landscaping** – To create comfortable spaces, and to enhance visual perception. Introducing a new landscape within the temple complex should put greater emphasis on the use of local flora, and should, as far as possible, be the least maintenance-oriented and be self-sustainable.
4. **Street furniture** – Adequate street furniture like benches, dustbins, etc. is proposed to be provided, along with the design guidelines for street furniture.
5. **Signage (Package 1)** – Package 1 set of signages are proposed to be installed at the site. It includes a Site map at entry, directional signage at 4-5 key points on the tourist path, descriptive placard on the Site’s importance. All the signages at the site must follow the design specifications of package 1 signages for cultural sites. Signage is proposed to feature Tamil, English, and Hindi.
6. **Technology Interventions (Package 1)** – Being a site with low tourist footfall in the current times as well as in the projected period, it is envisioned that the site must fulfil at least all the basic technological requirements for visitor safety and ease. These include:
 - a. Electronic visitor counters at entry points
 - b. TN Assist App integration (internet connection, QR scanner)
 - c. CCTV coverage at up to 3 locations

Trunk Infrastructure

The site has good connectivity, no trunk infrastructure interventions are required

Project Identified

#	Project Component	Scale
1	Community park (Recreation Space/Garden)	~500 sqm
2	Community Hall	~500 sqm
3	Paved Parking Yard	~440 sqm
4	Pay and Use Toilet	~2 units
5	Drinking water Station	~2 units
6	General Landscaping Area	~0.1 acres
7	Paved Walkways	~120 m
8	Street Furniture (Benches, Dustbins)	~15 units
9	Signage	Package 1
10	Technology Interventions	Package 1

Cashflows & Feasibility

The following considerations have been accounted for the cost projections of proposed interventions at this site:

- Feasibility of the cashflows projected here are accounted only for the additional components master planned.
- The current operating & maintenance cost of the temple have not been considered.

Capital Expenditures

The cost of the different project components proposed in the masterplan is calculated basis the current market price considering the appropriate escalations.

#	Project Component	Scale
1	Community park (Recreation Space/Garden)	3
2	Community Hall	60
3	Paved Parking Yard	7

#	Project Component	Scale
4	Pay and Use Toilet	20
5	Drinking water Station	3
6	General Landscaping Area	1
7	Paved Walkways	3
8	Street Furniture (Benches, Dustbins)	2
9	Signage	1
10	Technology Interventions	1
Total		INR 100 L

(Note: Cost of all the project components including the Total capex is rounded-off to the nearest whole value.)

Revenues - Proposed projects

(Note: The following considerations are applicable to the below mentioned revenue modules.

1. The revenues considered here are in addition to all the existing revenue currently accrued by the temple.
2. The estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)

1. **Space on Hire** – Assuming an average of an event per week, renting of the community hall for private religious events/ ceremonies would earn the temple **INR 18 Lakhs**.
2. **Parking** – About 24 parking spaces assuming a daily occupancy of 30%, would earn the temple an estimated revenue of **INR 1 Lakh**.
3. **Pay per use Toilets** – Assuming about an average of 15% of the visitors using the proposed pay per use toilet, would earn the temple an estimated **INR 7 Lakhs**.

The total revenues to the temple from the proposed capital projects is projected at an estimated **INR 25 Lakhs at Y5**.

Operating Expenditures

(Note: The following considerations are applicable to the below mentioned operational expense modules.

1. The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.
2. The operations and maintenance currently undergone by the temple for its existing facilities are not considered in this section.
3. The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)

1. **Manpower Costs** – This includes the additional personnel required to manage the proposed facilities.
 - a. An **Administration staff** to overlook the operations of the community hall. The projected costs incurred is estimated at **INR 3 Lakhs**.
2. **Facility Maintenance costs** – This includes the costs incurred to maintain the cleanliness and the upkeep of the new facilities.
 - a. Maintenance of the **Open area**, which includes cleaners, gardeners, etc. for upkeep of the landscape in the temple.
 - b. Maintenance of the **Amenity block** - the cleaning of toilets, wash areas and drinking water stations.
 - c. Maintenance of the **Building facilities** – The general cleaning and upkeep of the community hall premise. The projected costs incurred is estimated at **INR 2 Lakhs**.
3. **Repair & Maintenance costs** – This includes the expense incurred over time for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred. The projected costs incurred is estimated at **INR 2 Lakhs**.
4. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred. The projected costs incurred is estimated at **INR 2 Lakhs**.

5. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections of the temple.

The projected costs incurred is estimated at *INR 1 Lakh*.

6. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations.

The utilities for the rental kiosks and the community hall are pegged to the rental revenues earned from the respective sources.

The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175* per kilolitre.

The projected costs incurred is estimated at *INR 7 Lakhs*.

The total operational expenditure incurred by the temple from the proposed capital projects is projected at an estimated *INR 15 Lakhs at Y5*.

Given that the estimated revenues (*INR 25 Lakhs*) from the proposed capital expenditure projects exceeds the operational expenses (*INR 15 Lakhs*) incurred, it can be concluded that the Interventions proposed at the site are Self-Sustainable and therefore beneficial to the temple.

Phasing & Funding Agencies

The development of the projects is to be taken up by Temple trust and the implementation of these can be carried out as follows:

1. The implementation of the **Technology package** (i.e., Smart-App integrations, Virtual guides, NFC tags, etc.) at the site would be taken up by the SPV provisioned by the tourism department.
2. **Cultural space** is to be developed by the temple management and rented out to the devotees/ private operators to conduct ceremonies like marriage, etc. and religious events during festivals.

3. The **Parking facility** is to be undertaken by the temple body and the respective cost incurred by the management is included in the operating expenses (*Admin. & Management cost*).

Developmental phasing

#	Project Component	Agencies in Charge	Phasing of Development
1	Community park	Hereditary Temple Trust	Y0 – Y2
2	Community Hall	Hereditary Temple Trust	Y0 – Y2
3	Paved Parking Yard	Hereditary Temple Trust	Y0 – Y2
4	Pay and Use Toilet	Hereditary Temple Trust	Y0 – Y2
5	Drinking water Station	Hereditary Temple Trust	Y0 – Y2
6	General Landscaping Area	Hereditary Temple Trust	Y0 – Y2
7	Paved Walkways	Hereditary Temple Trust	Y0 – Y2
8	Street Furniture	Hereditary Temple Trust	Y0 – Y2
9	Signage	Hereditary Temple Trust	Y0 – Y2
10	Technology Interventions	Hereditary Temple Trust	Y0 – Y2
Total			

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 4,300³¹ man-days of construction labour (*spread across 1 year of implementation*)

During Operations: Jobs created during operations will entail:

³¹ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.

- As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
- Assumed cost of labour assumed for computation = INR 700 per day
- Cumulative labour man-days = 30% * CAPEX / 700

- Additional personnel deployed at site (Housekeeping, management, security) = 2 Persons³²

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – As discussed above
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect, and induced effects is estimated as. 10,700 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of 95 Cr. at the site.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%

- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

³² Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

Figure 10-3: Proposed Master Plan – Trilokyanatha Jain Temple, Kanchipuram



11. Kundrathur Murugan Temple, Chennai

Site Details

District:	Kanchipuram
Name of Site:	Kundrathur Murugan Temple
Site No:	Site 28 of 295
Site Use:	Temple
Category:	A (Temples)
Location:	12.9851, 80.0929
Land Area:	~10 acres
Peak footfalls:	5000 per day ³³ (April – May)
Operator:	HR & CE Dept. Managed by ASI
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom. – 4.45 lakhs (2019 - 20) For. – 2000 (2019 - 20)
Site Revenues:	INR 10 lakhs (2019 – 20)
Site Orientation:	Pilgrim
Site Potential:	Low Tourism Site
HVT Potential:	Low HVT Potential
Connectivity	
a. Railway Station:	~40 km (Chennai)
b. Airport:	~35 km (Chennai)
c. Highway:	~1 km from SH57
Trails Featured on:	Nil (Pure Pilgrim Temple)

This picturesque ASI-protected temple is located on top of a small hill. One major advantage of the temple is its connectivity to Chennai city. The main visitors to the temple are the residents of Chennai and nearby areas. The scope of interventions at this site majorly includes the development of photogenic spaces along the hill which can turn out to be a one-day recreational destination on the outskirts of Chennai.

Existing Condition

Location

Kundrathur Murugan Temple is located in Kundrathur, a suburb of Chennai in the Kancheepuram district of Tamil Nadu. The temple is situated within ~10km distance from several prominent temples and prominent tourist landmarks in Kundrathur and Chennai.

The temple by road is easily accessible from the Chennai ORR (~2.5 km) and using public transportation system tourists can get down at Kundrathur Murugan Temple Bus Stop. Situated on a hilltop in Kundrathur, the temple is accessible by motorable route as well as via steps.

Existing Layout

The temple is situated on top of a small hill and hence it has an open area to all 4 sides. The temple entrance can be accessed in 2 ways.

- One is accessible by climbing the 84 steps.
- The other is by driving up a road up to the hill on which the temple is located.

Several other components of site layout are:

- There are a prasad shop and store to the left of the entrance
- Administration office to the right of the entrance

³³ Received from Site Manager

- The dining hall, 2nd prasad stall, and a cooking area behind the main temple
- To the right of the staircase, there is a Vinayaka shrine
- small pond beside the hill
- A hill viewpoint is present to the east of the vehicular road
- Male and female toilets to the east of the main temple
- Vehicular Parking to the east of the main temple near toilets

Existing Uses

This is one of the most visited temples in Chennai. This temple is used in worshipping Lord Murugan. The other uses housed on the site include:

- Food outlets – 2 shops selling prasadam
- Offices of the administrators
- Temple Kitchen
- Dedicated space for Annadhanam
- Viewpoints
- Temple pond
- Festival Celebration – Tamil New Year, Chithirai Sasti, Aadi Krithigai, Kanda Sasti, Swamy Thirukalyanam, Thiru Karthigai Deepam, Thai Krithigai, Panguni Uthiram, Pongal.

Other Land Available

Apart from the temple complex, the temple owns the land of 6 acres around the hill and a pond of 3.5 acres.

Masterplanning Considerations

Applicable Regulations

- 1. ASI Regulations** – The site is an ASI Monument, as per Ancient Monuments, Archaeological Sites and Remains Act:
 - a. New construction is not permissible within the prohibited area (beginning at the limit of the protected monument and extending to a distance of 100 m in all directions)
 - b. Reconstruction or repairs or renovation of existing buildings within the prohibited area requires prior permission from the Competent Authority under the act.

- c. Construction of new buildings, reconstruction or renovation, or addition to/alteration/modification of existing buildings within the regulated area (200m from the prohibited area limit) requires prior permission of the National Monument Authority under the AMASR Act.

- 2. National Conservation Policy** – Monument Conservation activities can be taken up by the competent state authority (ASI Chennai Circle). It shall be permissible inside the premises of protected monuments as per the National Policy for Conservation of Ancient Monuments and Archaeological Site Remains, 2014

- 3. TNHRCE Rules, 1959**

- a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions
- b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.
- c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to religious activities and for the facilitation of Hindu pilgrim tourists.
- d. The HR& CE Dept. owned land can be leased for no more than 3 years.

- 4. Tamil Nadu Combined Development and Building Rules 2019** - As per Kundrathur Local Area Plan, the site lies in a Mixed Residential Zone,

Residential Buildings | Parks, playgrounds, farms, gardens | Public Utility Buildings | Swimming Pool, Daily or weekly markets | Hotels, Restaurants, Hostels, Dormitories, Boarding and Lodging houses | Retail establishments and shops, Departmental stores, Taxi stands, and car parking multi-level parking | Religious buildings.

- 5. Height Regulations** – AAI height restrictions allow the construction of buildings up to ~75 m. (up to 25 floors) and up to ~55 m. (up to 18 floors) above mean sea level in the temple complex and surrounding areas.

Key Sensitivities

There are no specific environmental/social sensitivity to be addressed at the site.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

1. **Attraction** – The temple’s attraction is both due to the religious values attached to the temple as well as due to its location and aesthetic beauty. This is the only Murugan temple in Tamil Nadu where the deity is standing in a north-facing direction. The specialty of this temple is that Lord Subramaniam can be seen only with one Goddess at a time even though he is there along with both the Goddesses. The temple site has also developed a viewpoint area along the hill where visitors can enjoy the serene and beautiful view from the top.
2. **Accessibility** – The temple is easily accessible via wide urban roads, rail, and air from Chennai ORR (~2.5 km), Pallavaran (~10 km), and Chennai Airport (~. Km). Buses ply at regular intervals in a day from Chennai and Other Major Cities like Kanchipuram (~ 60km), Chenagalpattu (~40 km). No interventions are required to augment accessibility to the site.

Parking – Two spaces have been developed for parking facilitation at the temple. These parking spaces are sufficient to cater to everyday tourists and pilgrims. However, it deems insufficient during peak season and Festivals due to heavy crowding at the temple.
3. **Amenities** – Minimal level of infrastructure facilities are present at the site in comparison to the number of footfalls it receives both annually and during peak season.
 - Only 1 block of the washroom is present at the site, often unclean and in non-usable condition.
 - The number of drinking water stations installed at the site is insufficient.
 - The temple premises are regularly kept clean, however, the number of dustbins in comparison to the site area is inadequate.
 - Other facilities such as directional signage, information board, street lighting are required need to be modernized and made appealing.

4. **Awareness** – The temple enjoys immense popularity among pilgrims. It is also a well-known and recommended tourist destination near Chennai amongst domestic tourists. About 98% of the visitors that come here are domestic visitors, 2% are foreign.
5. **Activities** – The set of activities that takes place at the temple site in current times are:
 - Enjoying leisure time at viewpoints
 - Marriages
 - Festival Celebration
 - Annadhanam

However, these activities are mainly occasional activities, clearly indicating a Lack of quality F&B / refreshment facilities and spaces where tourists can spend more time while visiting the site.
6. **Accommodation** – There are no accommodation options near the temple. The closest town to the temple, Pallavaram, offers multiple options at the price of INR 1800 per room per night. Furthermore, owing to its location in the outskirts of Chennai, the site’s accommodation requirement is also catered by Chennai City with a well-developed ecosystem of hotels.
7. **Association with Community** – Kundrathur, is a very well-known site for several temples, out of which Murugan temple is relatively more popular. The locals have immense belief attached to this temple. Few of them have set up small stalls and shops around the temple near the entrance on the ground. However, there is a lack of any substantial association of local communities which can be leveraged for tourism development.

Figure 11-1: Location and Existing Layout

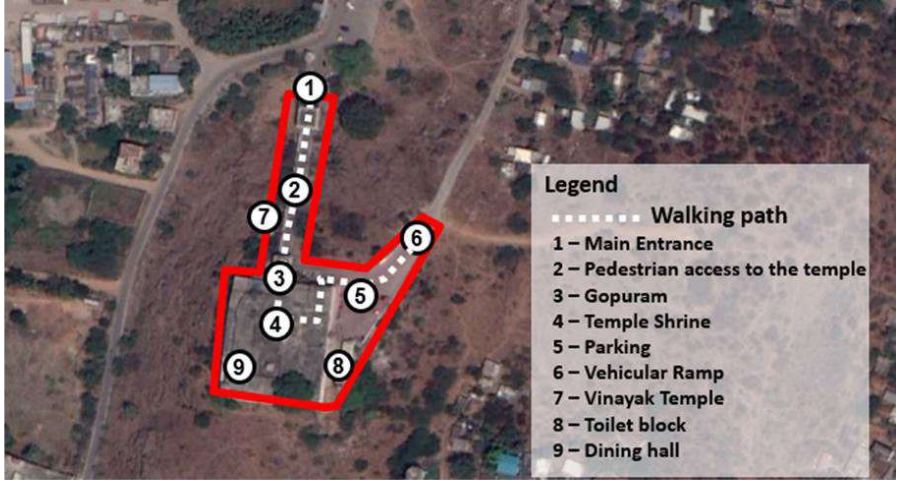


Figure 11-2: Site Land Use – Kunrathur Local Area Plan (Kundrathur Town Panchayat)

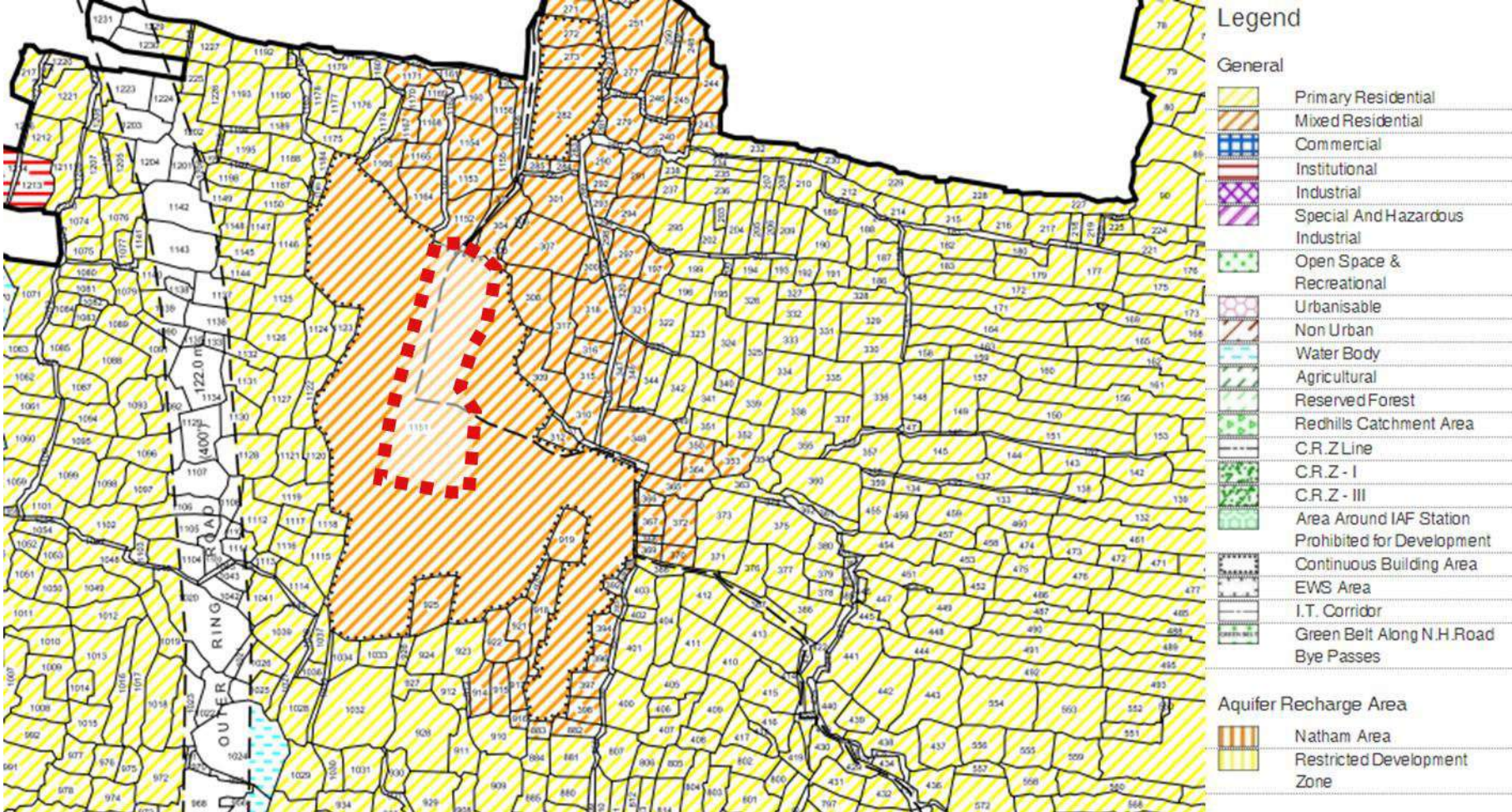
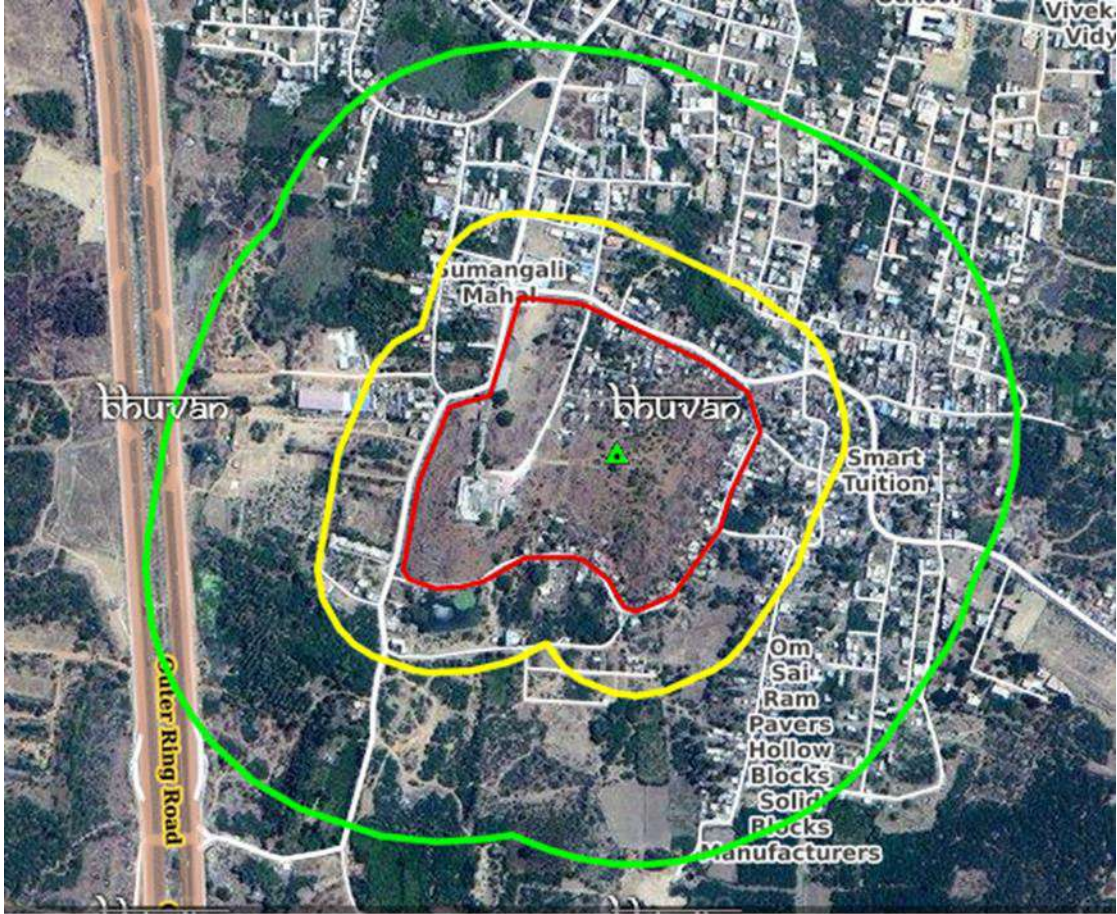
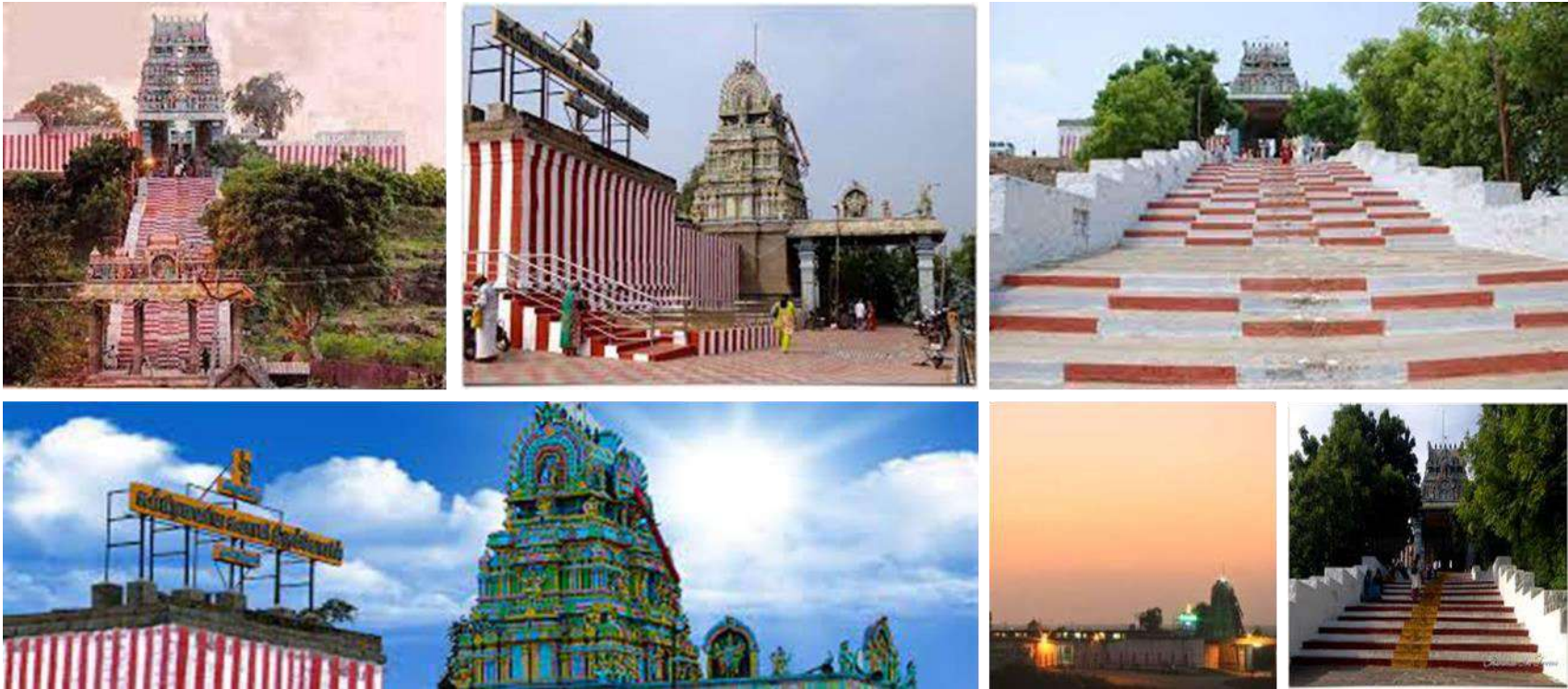


Figure 11-3: Protected, Prohibited, and Regulated areas around the monument



Legend
Protected Area Prohibited Boundary Regulated Boundary

Site Pictures



Vision for the Site

Considering the existing site situation such as:

- The picturesque temple located on top of a small hill,
- Well maintained and clean premises
- Easy accessibility by all modes of transport (bus, rail, auto, taxi, etc.)
- Proximity to the metropolitan town of Chennai

And understanding of its limitations, such as:

- Being an ASI protected structure
- Hillside location, restricting several development options
- Lack of temple acknowledgment

The temple can be developed on the idea of facilitating tourist movement along with the site and provide tourist engaging spots, compelling an extra tourist time being spend at the site as a weekend tourist destination and picnic spot near Chennai.

- **Target Visitor** - The site is largely a pilgrim site, with significant footfall from neighbouring areas as well as from rest of Tamil Nadu and other south Indian states due to its rich religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.

Further, pilgrim groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang and elderly). The target visitors to be captured here are:

- **Regional Tourists** – The master plan is prepared to target tourists from across the adjoining districts, and states.
- **Religious Tourists** to develop a religious tourist destination where visitors can enjoy the religious environment of the site without disturbing the existing local communities in the town.
- **Local Tourists** - from local catchment areas visiting the temple on a regular and occasional basis.
- **Tourist Projections** – The site is categorized as a **Low tourism site with Low HVT potential.**

Past footfall data for the site has been received from sources like the site manager and TTDC’s compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	443	1,645	4,537
High Value Tourists (HVT) (Both domestic and foreign)	4	15	41
Maximum Carrying Capacity	12,045.		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Masterplan

Approach to Masterplanning

The master planning approach at the site mainly deals with minimal permanent construction activities around the site. The site is already facilitated with several infrastructural provisions. Additionally, the site being an ASI-protected site on a hill, there is less scope of interventions possible at the site.

The objectives of master planning at this Site include:

- **To Create an additional recreational and vibrant space** around the temple for the visitors.
- **To facilitate the pedestrian pilgrims who access the temple site via steps.**
- Developing visitor **engaging activities** at the Site
- Facilitate the **development of a one-day picnic destination** on the outskirts of Chennai.

The set of hard interventions for the site are subjected to landscaping and pedestrianization only with minimal upkeep of the space.

Hard Interventions

1. Create Temporary Rest Shed for the Visitors - The temple is located on a small hilltop. The main site is accessible via a motorable route as well as steps. The areas along the steps do not provide any rest facilities for the tourists. Additionally, no new construction is allowed under the protected area boundary of the ASI monument. Therefore in such a situation, semi-permanent constructed resting areas must be developed at the midway on both sites.

Infrastructure Development – ~2 units of 25 sqm huts at specific locations

2. Viewpoint development – The viewpoint along the site’s motorable path is not developed to its full. It can be developed into garden spaces with a dedicated viewpoint area, which can turn out to be a local recreational space for the communities living around the site.

Infrastructure Development – ~1000 sqm of Garden Space with Viewpoints, Fenced viewpoints, and photography locations near the garden.

3. Create an inviting entrance – The temple entrance at present does not indicate an entry to an ASI-protected and architecturally important monument. A welcoming entrance can be created by developing an arch in a similar architectural style as that of the temple, using soft paving adjacent to the access roads, installing a temple history board near the arch, and directional signage near the deviation from NH-36 to the temple approach road.

Infrastructure Created: Temple Arch, ~1970 sqm. of pedestrian path, a stone cut direction signage near the arch.



Garden and Viewpoint, Tourist spaces along the hill

Soft Interventions

1. Site Visibility - Increasing temple visibility with strategies like live broadcast during festivals/ temple events, development of temple website with online ticket reservations, integration with Tourism Assist App, etc. The temple authorities can organize recurring events, associated festivals, etc. which can help publicize.

2. Landscaping – To create comfortable spaces, and to enhance visual perception. Introducing a new landscape within and/or around a monument should put greater emphasis on the use of local flora, and should, as far as possible, be the least maintenance-oriented and be self-sustainable

3. Curation of facilitated tours –Community integration can be enhanced by appointing locals as Local Guides- trained and accredited.

4. Site management – Site must be managed by the respective temple management authorities in the aspects of Crowd management with a cap on tourists within the temple complex at any time, limiting access timings- as a value addition for high-value tourists (during non-pooja tours, open for tourists to secular areas of the temple) and restricting waste littering inside the campus or at the temple tank area.

Amenities Plan

1. Drinking water Station – The site must be equipped with ~2 drinking water stations at the facilitation center and ~5 units which can be placed at strategic locations within the temple premises.



Temporary, Shaded rest areas for tourists, can be placed along with the steps

2. **Street furniture** – The landscaped spaces inside the site must be provided with adequate benches, dustbins, and other street furniture. A detailed Landscape Design Guideline Manual will need to be prepared that will form the standard for all the street furniture from seating benches, shading devices, canopies, dustbins, bollards, paving materials, wayfinding, etc.
3. **Planting & landscaping** – More strategic tree planting is required along the pedestrian pathways, to create more shaded areas and beautify the site.
4. **Signage** – Package 1 set of signages must be deployed at the site. Signage at the Site is proposed to feature Tamil, English, and Hindi. Both directional signage and informational signage should be used, as per the design guidelines. The historical/symbolic relevance of the structures, statues, and buildings should be explained much more clearly.
5. **Technology Interventions** – Package 1 set of technology interventions are required to be deployed at the site. These include:
 - a. Compatibility with TN Assist App
 - b. CCTV coverage at up to 3 strategic locations
 - c. Electronic visitor counters

Trunk Infrastructure

As the site has excellent connectivity, no trunk infrastructure interventions are required.

Projects Identified

#	Project Component	Scale
1	Rest Shed	~50 sqm
2	Viewpoint and Garden	~1000 sqm
3	Gate Complex (Temple Arch)	~1 unit
4	Pedestrian Paths	~1970 sqm
5	Drinking-Water Station	~2 units
6	Signage	Package 1
7	Technology	Package 1
8	Facilitated Tours	

Feasibility Assessment

The following considerations have been accounted for the cost projections of proposed interventions at this site:

- Feasibility of the cashflows projected here are accounted only for the additional components master planned.
- The current operating & maintenance cost of the temple have not been considered.

Capital Expenditures

The cost of the different project components proposed in the masterplan is calculated basis the current market price considering the appropriate escalations.

#	Project Component	Cost (Lakhs INR)
1	Rest Shed	2
2	Viewpoint and Garden	7
3	Gate Complex (Temple Arch)	2
4	Pedestrian Paths	1
5	Drinking-Water Station	3
6	Signage	1
7	Technology	1
8	Facilitated Tours	2.0
Total		INR 15 L

(Note: Cost of all the project components including the Total capex is rounded-off to the nearest whole value.)

Revenues - Proposed projects

Given that the site is bound by ASI restrictions and the tourism potential of the site benchmarked as low, the capital projects and restricted to bare minimal to upkeep the hygiene factor followed across all the sites. Hence there are no additional revenue streams with respect to the proposed interventions.

Operating Expenditures

(Note: The following considerations are applicable to the below mentioned operational expense modules.

1. The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.
2. The operations and maintenance currently undergone by the temple for its existing facilities are not considered in this section.
3. The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)

1. **Repair & Maintenance costs** – This includes the expense incurred over time for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.

The projected costs incurred is estimated at *INR 50,000*.

2. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.

The projected costs incurred is estimated at *INR 50,000*.

The total operational expenditure incurred by the temple from the proposed capital projects is projected at an estimated *INR 1 Lakh at Y5*.

As mentioned above since there are no additional revenue streams tagged to the proposed interventions and are done to uphold the hygiene factor followed across the site, the maintenance of the same is to be taken up by the managing authority.

Phasing & Funding Agencies

The development of the projects is to be taken up by HR & CE department on approval from ASI and the implementation of these can be carried out as follows:

1. The implementation of the **Technology package** (i.e., Smart-App integrations, Virtual guides, NFC tags, etc.) at the site would be taken up by the SPV provisioned by the tourism department.

Developmental phasing

#	Project Component	Agencies in Charge	Phasing of Development
1	Rest Shed	ASI	Y0 – Y2
2	Viewpoint and Garden	ASI	Y0 – Y2
3	Gate Complex (Temple Arch)	ASI	Y0 – Y2
4	Pedestrian Paths	ASI	Y0 – Y2
5	Drinking-Water Station	ASI	Y0 – Y2
6	Signage	ASI	Y0 – Y2
7	Technology	ASI	Y0 – Y2
8	Facilitated Tours	ASI	Y0 – Y2

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 650³⁴ man-days of construction labour (spread across 1-2 years of implementation)

³⁴ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.

- As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
- Assumed cost of labour assumed for computation = INR 700 per day
- Cumulative labour man-days = 30% * CAPEX / 700

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 5 Persons³⁵

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – As discussed above
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect, and induced effects is estimated as. 1,600 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 460 Cr. at the site.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%

- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

³⁵ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

Figure 11-4: Proposed Master Plan – Kundrathur Murugan Temple



12. Arulmigu Thiyagarajaswamy Temple, Thiruvottiyur

Site Details

District:	Tiruvallur
Name of Site	Arulmigu Thiyagarajaswamy Temple
Site No:	Site 35A of 295
Site Use:	Temple
Category:	A (Temple)
Location:	13.1612, 80.2989
Land Area:	4 acres (Temple) & 2 acres (Temple tank)
Peak footfalls:	5,000 per day (July - August, February - March)
Operator:	HR & CE Dept.
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom. – 8 lakhs (2019 – 20) For. – ~5000 (2019 – 20)
Site Revenues:	INR 3 Crores (2019 – 20)
Site Orientation:	Pilgrim
Site Potential:	Medium Tourism Site
HVT Potential:	Low HVT Potential
Connectivity	
Railway Station:	~12 km (Chennai)
Airport:	~30 km (Chennai)
Highway:	~5 km from SH56
Other:	1.5 km from Tiruvotiyur Metro
Trails Featured on:	Nil (Pure Pilgrim Temple)

The Arulmigu Thiyagarajaswamy temple is one of the Tri-Sakthi temples and has great religious significance. Since it is believed by the devotees that visiting all the Tri-Sakthi temples on a single day would bring good blessings, a pilgrim itinerary connecting all the three temples could increase footfalls across the three temples. Scope for interventions include rejuvenation of temple tank to form a vibrant cultural space, besides development and maintenance of basic public amenities to enhance tourist engagement.

Existing Condition

Location

Arulmigu Thiyagarajaswamy Temple is located in Thiruvottiyur and falls within Chennai city limits, making it accessible. Thiruvottiyur is about 25 km from Koyambedu Bus Terminal and 8 km from Central Railway Station, Chennai. The temple is situated in a dense residential neighbourhood with Shri Vadivudai Amman Temple, Shri Periya Palayathu Amman temple, Dakshinamoorthy Temple, Aalayaamman Koil, Mukundamman Temple, and Bharathiyar Nagar Beach in proximity.

Existing Layout

The temple site consists of 4 acres of land with 1.7 acres of ground coverage and 2 acres of temple tank outside the temple compound wall. There are two shrines for Lord Shiva – one for Sri Adipureeswarar and the other for Sri Otreeswarar. Similarly, there are two separate shrines for Goddess Parvathy - Vadivudai Amman and Vattaparai Amman located where Durgai is normally seen in other Shiva temples.

Existing Uses

Apart from the religious purpose, the site is used for the following:

- Temple Tank
- Shrines
- Madapalli
- Mandapams
- Parking

Thousands of devotees visit the site, during the 10-day Brahmotsavam festival (February-March) and Tamil month of Aadi (Mid-July to Mid-August).

Other Land Available

Apart from the 4-acre land used for the temple complex, other land parcels that the temple authority owns include:

- 0.5 acres of land 240 m away adjoining Nellika Pandaram Street.
- 2 acres of land about 700 m south of the temple, adjoining Ellaiamman Koil Street which has been taken over by the corporation for a housing board project.
- 6.5 acres of land about 18 km away from the site in Vellivoyal.

Master Planning Considerations

Applicable Regulations

1. Tamil Nadu Combined Development and Building Rules, 2019 – As per Chennai Metropolitan Area Master Plan, site lies in a Residential Zone. The permissible uses include:

Residential Buildings | Parks, playgrounds, farms, gardens | Public Utility Buildings | Swimming Pool, Daily or weekly markets | Hotels, Restaurants, Hostels, Dormitories, Boarding and Lodging houses | Retail establishments and shops, Departmental stores, Taxi stands and car parking multi-level parking | Religious buildings.

2. TN HRCE Rules, 1959

- a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions
- b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.

- c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to the religious activities and for the facilitation of Hindu pilgrim tourists.
- d. The HR&CE Dept. owned land can be leased for a period of no more than 3 years.

Key Sensitivities

There is no specific environmental/social sensitivity to be addressed at the site.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

- 1. Attraction** – It is believed that just entering this temple itself will cure one's illnesses. Devotees come to Thiruvottiyur temple and worship the lord here to seek wedding boon and for the welfare of their children. As 27 Shiva lingams are representing the 27 Nakshatrams (constellations) in this temple, devotees who are facing the adverse effects of these Nakshatrams can be seen performing poojas here. Apart from its religious significance and a temple tank, the site does not have any attraction for tourists.
- 2. Accessibility – Being located in Chennai, site enjoys great rail and road accessibility.** The temple is located at a distance of 25 km from the Koyambedu Bus terminus and 12 km from Central railway station. Thiruvottiyur train station is just 1 km away from the temple and has frequent services from the Chennai central station with a nominal fare. The site has easy accessibility to all road transport options which is why, the most preferred modes of transport that people use to commute to the site are buses and private cars.
- 3. Amenities** – The temple scores high on cleanliness but lacks certain amenities. Dustbins, Toilet blocks, street lighting, safety security & divyaang friendly measures are present inside the site. The site lacks the following amenities.
 - No tour guides
 - No frisking/ scanning of visitors.
 - No online booking facility.
 - No rest/seating area.
 - No maintenance of toilets and drinking water kiosks.

- No F&B and Retail shop present inside the temple site, though few retail outlets sell packaged food and groceries around the site.
- No amenities such as waiting hall, luggage/cloakroom, and tourist information centre present for visitors.

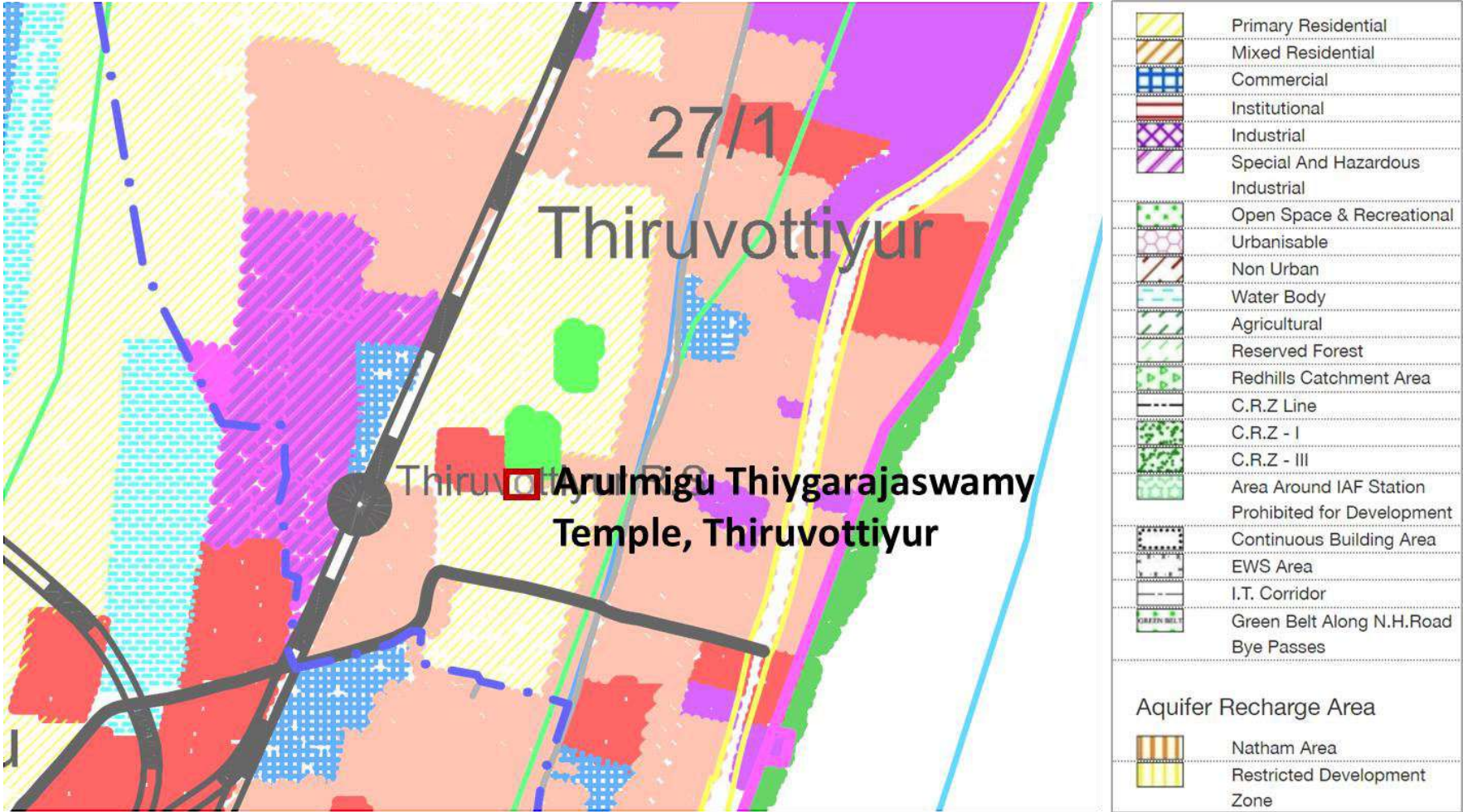
Parking - The site does have designated parking outside the temple compound; however, it does not have the capacity for peak seasons leading to congestion.

- 4. Awareness** – The temple has great awareness among the local crowd from the city and the other neighbouring districts. People from the bordering states of Tamil Nadu do come and visit the temple during special occasions. One unique aspect of the temple is that Tamil speaking Malaysian Hindus do make it a point to visit and worship the deity when they visit the city. The temple has received a decent number of Malaysian VIPs in the past.
- 5. Activities** – During peak season and festivals, the temple hosts a list of activities such as chariot processions, dance recitals, and other auspicious activities based on the occasion. These activities are usually done in the Tamil language. During the normal days, the temple has the standard Pooja activities based on the stipulated operating hours.
- 6. Accommodation** – There are no hotel accommodations within 500 meters of the site. However, at a radius of 2 km, there are budget accommodations with an average tariff of INR 1000. People with ancestral roots in the neighbourhood usually stay at their ancestral/kin's house during the festivals held in the temple.
- 7. Association with Community** – The festivals and daily rituals enjoy immense participation from the locals. The temple has many deities and historical values for which there is a need for guides to be present at the site. A large number of Beggars and Hawkers are usually around the premises causing inconvenience to the visitors.

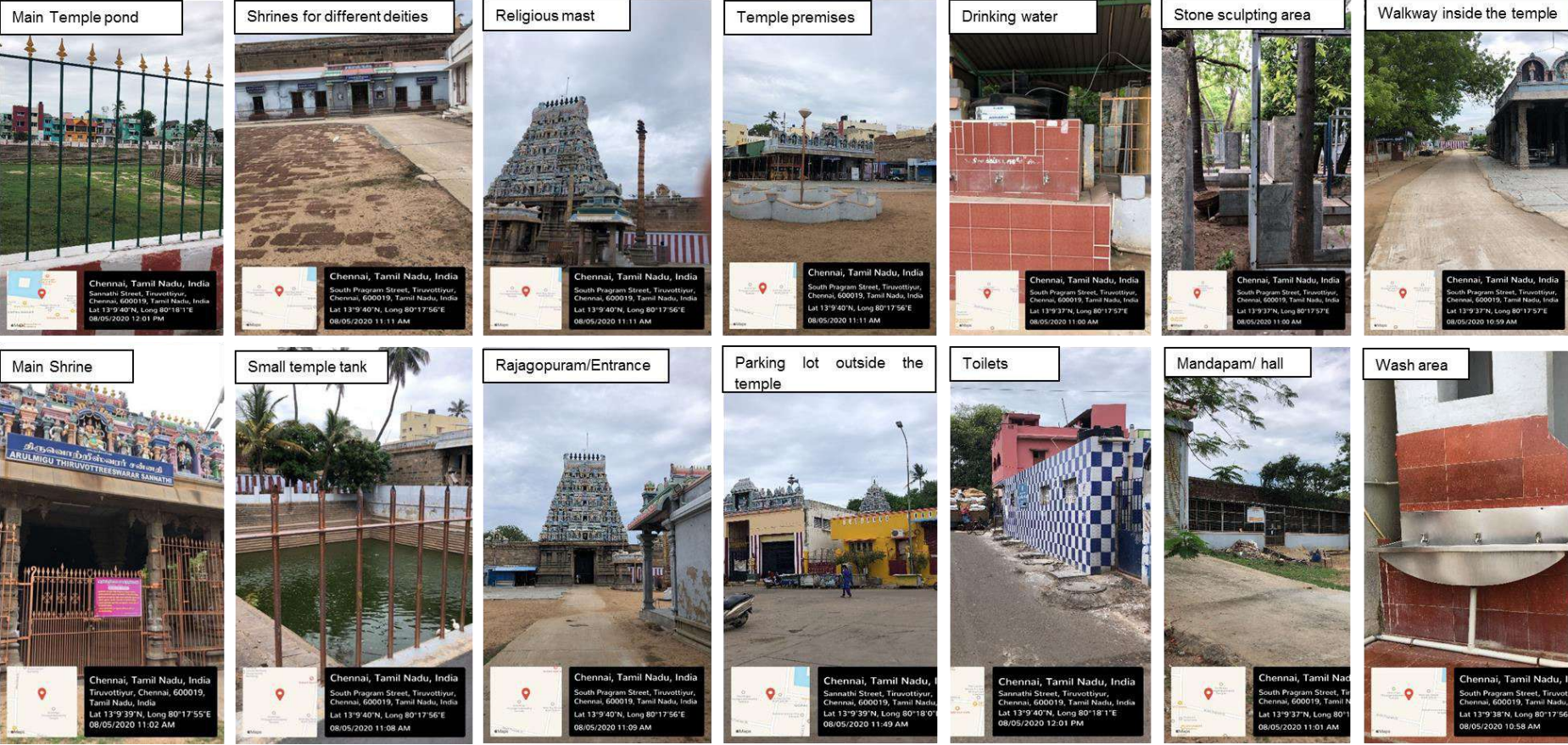
Figure 12-1: Location and Existing Layout



Figure 12-2: Land Uses Regulation Zone at the Site



Site Pictures



Vision for the Site

- The Arulmigu Thiyagarajaswamy temple is an important part of Hindu mythology being one of the famous Tri Sakthi temples. Furthermore, it has a rich history with architecture from two dynasties and houses a popular 7 tier Rajagopuram with sculptures across each tier. Though it has great architecture and religious significance, the temple lacks in providing decent facilities such as parking, drinking water kiosk, paved pathways, etc. to its visitors. Moreover, it does not maintain existing infrastructure and fails to provide an interactive environment.
- The temple has the potential to provide good overall experience to its visitors as it has ample open land within the temple premises that can be utilised to provide basic necessary amenities to the visitors. There is an opportunity to rejuvenate the temple tank and develop activities around the temple tank which is currently not maintained and is often dry. By clustering the temple with the other Tri Sakthi temples, it has great potential to improve the footfall of religious tourists visiting from Chennai.
- The vision for the site is to develop it as a religious tourist attraction by improving existing infrastructure and adding amenities such as landscaping on the open land to make it more interactive. The rejuvenation of the temple tank will be undertaken in order to allow more activities around the tank steps and thus enhance tourist engagement on the site.
- **Target Visitors:** The site is largely a pilgrim site, with significant footfall from neighbouring areas as well as from rest of Tamil Nadu and other south Indian states due to its rich religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.

Further, pilgrims groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang and elderly). The target visitor group envisioned at the site are:

- **Pilgrims:** Visiting the temple for its religious value.
- **Domestic Tourists:** For the monumental and historical value of the temple.
- **High Value Tourists:** For the monumental and historical value of the temple.
- **Tourist Projections** – the site is categorized as a **Medium tourist site with low High Value Tourists (HVT) potential.**

Past footfall data for the site has been received from sources like the site manager and TTDC’s compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	795	2,193	5,179
High Value Tourists (HVT) (Both domestic and foreign)	10	28	65
Maximum Carrying Capacity	19,710		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Masterplan Concept

Given that the site is popular among domestic tourists and being a religiously significant temple, the concept of the master plan is to:

- **Improving pilgrims’ experience** at the temple – through improved circulation, conveniences, and amenities.
- Developing **temporary cultural spaces** at the site by providing spaces on vacant land.
- **Rejuvenating temple tank and steps** – This will improve tourist engagement at the site.

Hard Interventions

1. **Amenity Block** – A small amenity block with an inquiry desk, ticket sales counter, cloak/luggage room, changing room, rest/waiting area, shoe stand, and temple wares retail kiosks serving Pooja items, prasadam can be developed for tourist convenience and ease at the site. It can be placed at the entrance of the temple.

Infrastructure Created: 100 sqm of building area.

2. **Landscape Garden** – The vacant land having flora on the north-east and south sides of the complex can be used for developing a landscape garden. The landscaping shall be done using native flora and paving material. This space will act as a vibrant cultural space that will enhance tourist engagement.
Infrastructure Created: ~2600 sqm of landscaped garden
3. **Temple tank Rejuvenation** – The temple has a beautiful temple tank with steps that can be rejuvenated and used to attract tourists. This can be achieved through sustainable measures like rainwater harvesting. Alternatively, it could also function as an amphitheatre, and host cultural events. The shape and size of the tank are conducive to this.
Infrastructure Created: ~315 m of Paved, Landscaped, and fenced temple tank boundary with benches for visitors.
4. **Paved Pathway** –Parikrama of ~300 m will be paved with white painted pavers. The entire pathway will be shaded with a canopy making it heat resistant and convenient for devotees visiting the temple in the hot climate.
Infrastructure Created: ~300m long and 3 wide concrete paved pathways

Soft Interventions

1. **Site Promotion** – Increasing temple visibility with strategies like integration with TN Assist App, etc. Marketing and Advertising at all key sites such as the other two Tri Sakthi temples, CMBT, Chennai International Airport, and Chennai Central Railway Station.
2. **Crowd Management** – During festive seasons, the temple has significant footfall, for which the following measure shall be taken to manage the crowd:
 - Limit the number of people within the temple complex by using temporary tents outside the temple complex or by using areas around the temple tank that can act as temporary holding areas for devotees.
 - Deploy ushers to ensure people move through the temple at a minimum pace and guide them through various shrines within the complex.
 - Parking congestion can be managed by the existing deployed guards.
3. **Community involvement** – The locals around the temple are very well aware of the temple’s history and significance. These local communities could be

involved in various activities within and around the temple through events/activities conducted on the temple tank and gardens.

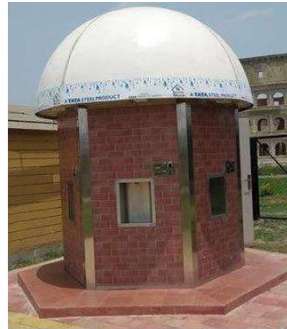
4. **Day Tour** – The temple with the other two Tri Sakthi temples namely Thiruvudai Amman Temple, Melur (Site 35B) and Masilamaneeswarar Temple, Thirumullaivayil (Site 40) can be curated into a daylong pilgrim tour for the devotees. Licensed guides shall be deployed to guide the visitors about the history and significance of the temple.

Amenities Plan

1. **Drinking-Water Station** – Drinking water station will be upgraded and replaced at the amenity block. A module of which can be referred from the design guidelines.
2. **Temple Souvenir shops** – Temple souvenir shops can be developed that will sell temple-related souvenirs such as Pooja items, prasadam and may include F&B shops selling vegetarian food items. A total of 5 retail kiosks will be developed on the east side from the main temple entrance along with canopy style seating area.
Infrastructure Created: 5 Retail kiosks of 3 by 3 meters each with 3 shading devices for the seating area.
3. **Parking** – Though a designated parking facility is available outside the temple premises, it can accommodate the vehicles during normal days. During the peak season parking becomes a problem, therefore the parking area will be redesigned and enhanced on the existing parking area to hold capacity of 20 cars. *Infrastructure Created: 250 sqm of paved parking yard.*



Landscaped Garden



Drinking Water Kiosk



Shaded Pathway



Temple Souvenir Shop



Trunk Infrastructure

As the Site has direct access from the road, no trunk infrastructure interventions are required

Project Identified

#	Project Component	Scale
1	Amenity Block	1 (100 sqm)
2	Landscape Garden	2600 sqm
3	Temple tank Rejuvenation	315 m
4	Paved Walkway (Paver block) (3 m wide)	300 m
5	Drinking-Water Station	1
6	Temple Souvenir shops (3x3m)	5
7	Shading device type 1	3
8	Parking (Paved Yard)	20 ECS

Feasibility Assessment

The following considerations have been accounted for the cost projections of proposed interventions at this site:

- Feasibility of the cashflows projected here are accounted only for the additional components master planned.
- The current operating & maintenance cost of the temple have not been considered.

Capital Expenditures

The cost of the different project components proposed in the masterplan is calculated basis the current market price considering the appropriate escalations.

#	Project Component	Cost (INR Lakhs)
1	Amenity Block	5
2	Landscape Garden	18
3	Temple tank Rejuvenation	13
4	Paved Walkway (Paver block) (3 m wide)	6

#	Project Component	Cost (INR Lakhs)
5	Drinking-Water Station	3
6	Temple Souvenir shops (3x3m)	7
7	Shading device type 1	1
8	Parking (Paved Yard)	6
Total		INR 60 L

Revenues - Proposed projects

(Note: The following considerations are applicable to the below mentioned revenue modules.

1. The revenues considered here are in addition to all the existing revenue currently accrued by the temple.
2. The estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)

1. **Kiosks** – 5 leasable kiosk units with a total rental revenue of *INR 15 Lakhs*.
2. **Parking** – About 20 parking spaces assuming a daily occupancy of 40%, would earn the temple an estimated revenue of *INR 1 Lakh*.

The total revenues to the temple from the proposed capital projects is projected at an estimated *INR 15 Lakhs at Y5*.

Operating Expenditures

(Note: The following considerations are applicable to the below mentioned operational expense modules.

1. The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.
2. The operations and maintenance currently undergone by the temple for its existing facilities are not considered in this section.
3. The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)

1. **Manpower Costs** – This includes the additional personnel required to manage the proposed facilities.
 - a. A **Help-desk staff** at the Amenity block.

The projected costs incurred is estimated at *INR 3 Lakhs*.

2. **Facility Maintenance costs** – This includes the costs incurred to maintain the cleanliness and the upkeep of the new facilities.
 - a. Maintenance of the **Open area**, which includes cleaners, gardeners, etc. for upkeep of the landscape in the temple.
 - b. Maintenance of the **Amenity block** - the cleaning of toilets, wash areas and drinking water stations.

The projected costs incurred is estimated at *INR 2 Lakhs*.

3. **Repair & Maintenance costs** – This includes the expense incurred over time for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.

The projected costs incurred is estimated at *INR 1 Lakh*.

4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the retail kiosks, community event spaces in the temple surroundings.

The projected costs incurred is estimated at *INR 1 Lakh*.

5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.

The projected costs incurred is estimated at *INR 1 Lakhs*.

6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections of the temple.

The projected costs incurred is estimated at *INR 3 Lakhs*.

7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations.

The utilities for the rental kiosks, Yatri Niwas and the community hall are pegged to the rental revenues earned from the respective sources.

The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175* per kilolitre. The projected costs incurred is estimated at *INR 17 Lakhs*.

8. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc. The projected maintenance cost is estimated at a lumpsum of *INR 50,000 per annum*.

The total operational expenditure incurred by the temple from the proposed capital projects is projected at an estimated *INR 25 Lakhs at Y5*.

Hence with estimated revenues (*INR 15 Lakh*) from the proposed projects falls short of the operational expenses (*INR 25 Lakhs*) incurred, however the interventions proposed here are limited to basic hygiene factors followed across all the undertaken sites and to cater to the needs of the pilgrim.

Phasing & Funding Agencies

The development of the projects is to be taken up by HR & CE department and the implementation of these can be carried out as follows:

1. The implementation of the **Technology package** (i.e., Smart-App integrations, Virtual guides, NFC tags, etc.) at the site would be taken up by the SPV provisioned by the tourism department.
2. The **kiosk units** can be leased/ rented out to private operators to host souvenir shops to display and sell temple related religious arts/ craft/ pooja items.
3. The **Parking facility** is to be undertaken by the temple body and the respective cost incurred by the management is included in the operating expenses (*Admin. & Management cost*).

³⁶ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 2,600³⁶ man-days of construction labour (*spread across 1-2 years of implementation*)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 2 Persons³⁷
- Retail and F&B spaces = 13 man-days per day³⁸

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – As discussed above
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect, and induced effects is estimated as. 6,500 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

- As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
- Assumed cost of labour assumed for computation = INR 700 per day
 - Cumulative labour man-days = 30% * CAPEX / 700

³⁷ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

³⁸ Assuming average 2.5 persons per kiosk / shop

Both increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 530 Cr. at the site.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

Figure 12-3: Proposed Master Plan – Arulmigu Thiyagrajaswamy Temple, Thiruvottiyur



13. Thiruvudai Amman Temple, Melur

Site Details

District:	Tiruvallur
Name of Site	Thiruvudai Amman Temple, Melur
Site No:	Site 35B of 295
Site Use:	Temple
Category:	A (Temple)
Location:	13.2604, 80.2701
Land Area:	3 acres (Temple) & 190 acres (Additional land)
Peak footfalls:	10,000 per day (July - August, April-May)
Operator:	HR & CE Dept.
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom. – 7 lakhs (2019 – 20) For. – 5000 (2019 – 20)
Site Revenues:	INR 5 lakhs (2019 – 20)
Site Orientation:	Pilgrim
Site Potential:	Low Tourism Site
HVT Potential:	Low HVT Potential
Connectivity	
a. Railway Station:	~30 km (Chennai)
b. Airport:	~45 km (Chennai)
c. Highway:	~1.3 km from SH56
Trails Featured on:	Nil (Pure Pilgrim Temple)

The Thiruvudai Amman Temple, Melur is one of the Tri-Sakthi temples and has great religious significance. Since it is believed by the devotees that visiting all the Tri-Sakthi temples on a single day would bring good blessings, a pilgrim itinerary connecting all the three temples could increase pilgrim footfalls.

Scope for interventions will aim to make site as a key site among Tri-Sakthi temples by providing amenities like facilitation centre, pilgrim orientation centre, and Yatri niwas. It will also include rejuvenation of the temple tank to form a vibrant cultural space along with maintenance of basic public amenities on the site.

Existing Condition

Location

Thiruvudai Amman Temple is located in the town of Melur, in Tamil Nadu. The temple is approximately at a distance of 20 km North of Chennai, 50 km North-East of Tiruvallur, and 7 km west of the Bay of Bengal. The temple is situated in a mid-density mixed-residential neighbourhood. Several prominent tourist landmarks such as Chinnakuppam Beach, Ennore Thazankuppam Breakwater Beach View, Sri Ranganatha Perumal, Devadhanam, Nettukuppam Pier, Bhartiya Nagar Beach are located at 10-15 km away from the site.

Existing Layout and Uses

The temple is spread across an area of 3 acres. The temple complex consists of 2 parts – Ambal Sannadhi and Shivan Sannadhi. The main entrance on the east side leads to the circulatory passage (prakaram) where the south-facing sanctum of Goddess Parvati, worshipped as Thiruvudai Amman is situated with a flag-post (dvajastambham) in front. The main sanctum with a Svayambhu (self-manifest) Siva Linga worshipped as Thirumanangishwarar faces east with a Vijayanagara stone mandapa in front and also a dvajastambham.

The temple is currently used as a place of worship by the residents and a religious tourist from bordering states. Besides, locals use the temple premises for marriages

and other events. Toilet and drinking water facilities inside the complex are used by residents of the nearby squatter settlements. Many devotees visit the temple to celebrate Chitirai Pournami and Friday Pournami.

Other Land Available

Apart from the 3-acre temple complex, the temple also owns 190 acres of additional land around the site. The temple tank is located on the opposite side of the approach road and covers 1.5 acres of the additional land. Some part of the additional land is currently being used for agricultural purposes, while some land parcels are given on lease for residential and institutional uses. Squatter settlements were also observed on these land parcels.

Master Planning Considerations

Applicable Regulations

1. **Tamil Nadu Combined Development and Building Rules, 2019** – As per Chennai Metropolitan Area Master Plan, site lies in a Mixed-Residential Zone. The permissible uses include:

Residential Buildings | Parks, playgrounds, farms, gardens | Public Utility Buildings | Swimming Pool, Daily or weekly markets | Hotels, Restaurants, Hostels, Dormitories, Boarding and Lodging houses | Retail establishments and shops, Departmental stores, Taxi stands and car parking multi-level parking | Religious buildings.

2. **TN HRCE Rules, 1959**

- a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions
- b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.
- c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to the religious activities and for the facilitation of Hindu pilgrim tourists.

- d. The HR&CE Dept. owned land can be leased for a period of no more than 3 years.

Key Sensitivities

There is no specific environmental/social sensitivity to be addressed at the site.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

1. **Attraction** – Thiruvudai Amman Temple is one of the Tri Sakthi Temples and belongs to Ichchaa Sakthi (the Devi who will fulfil devotees' wishes). Almost 10,000 people visit the temple during new moon day along with the other two Tri Shakti Temples namely Vadiudai Amman Temple (Thiruvottiyur) and Aruludai Amman Temple (Thiru mullaivayal). People visit the temple out of devotion they have for Lord Shiva and Amman Parvathi. The temple is also famous for its large image of Thiruvudai Amman made of one piece of a large stone, and the form of Amman in all three temples of Tri Shakti are identical and sculpted by the same sculptor.
2. **Accessibility** – Though the temple is situated in the outskirts of Chennai, yet it is easily accessible. The most optimal way to reach the temple is through an auto or bus. The bus stand is located 1 km. away from the temple site. Cabs (Ola/Uber) and autos are available in 1 km distance. The temple is also accessible via SH – 56, SH – 104, from Chennai.
3. **Amenities** – The condition of tourist amenities within and around the temple is average. The site lacks the following amenities.
 - No drinking water kiosk
 - Inadequate streetlights within and outside the temple
 - No emergency exit routes
 - No frisking/ scanning of visitors.
 - No ramps for elderly and physically challenged visitors
 - Narrow footpath along the approach road
 - No dustbin outside temple premises
 - Cleanliness issues around the site
 - No online booking facility.

- Poor maintenance of toilets
- No tourist information centre

Parking – The parking lot is provided outside of the temple complex and operates under a tender agreement with the temple authority.

- 4. Awareness** – The temple seems to have quite a significant importance amongst the local devotees. It is not a very well-known religious destination amongst foreign tourists. There are not many details documented for the temple apart from its religious importance amongst the local pilgrims. Being part of Tri-Shakti Temple is the only reason it is recommended by renowned travel referral/review aggregators such as Lonely Planet, TripAdvisor, etc.
- 5. Activities** – On normal days, the temple does not offer any activities. However, the temple has the necessary infrastructure to support light and sound shows, cultural shows, and any other such type of activities. There are special performance and song competitions held during Navaratri. The temple spaces at times are also used by private organizations to set up dance classes for a short period.
- 6. Accommodation** – There are no accommodation options available for tourists in the nearby vicinity of the temple, except for the resting hall outside the temple. The options for stay are available at Minjur at a minimum distance of 2 km. from the temple. The visitors often prefer to stay at Minjur, Ponneri, or Chennai while visiting this temple from there.
- 7. Association with Community** – People engage with the temple in different kinds of cultural activities like singing and dancing classes. Moreover, locals and few tourists use temple venues for marriage. To host such gatherings the temple complex needs to develop a Mandapam.

Figure 13-1: Location and Existing Layout

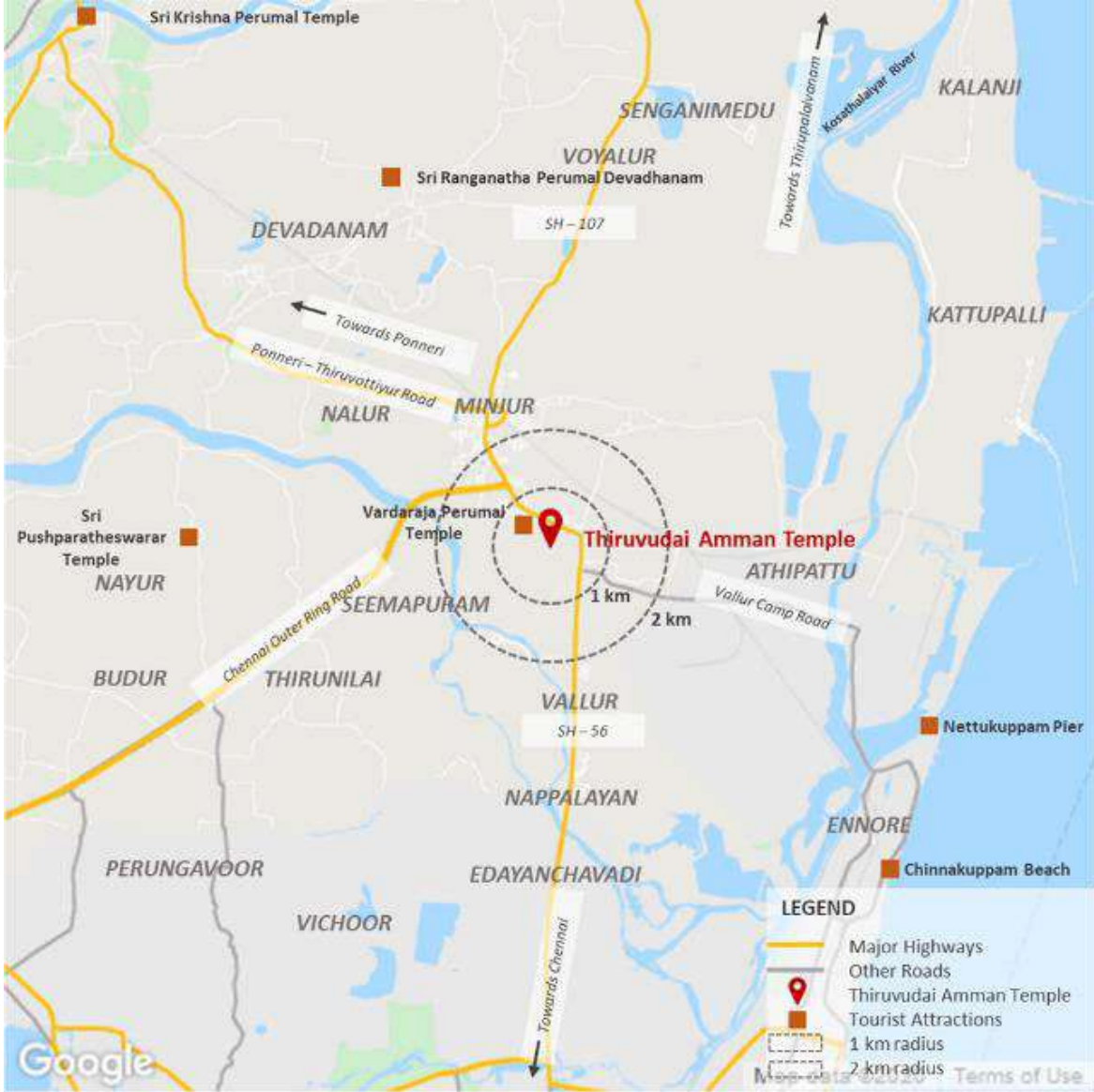
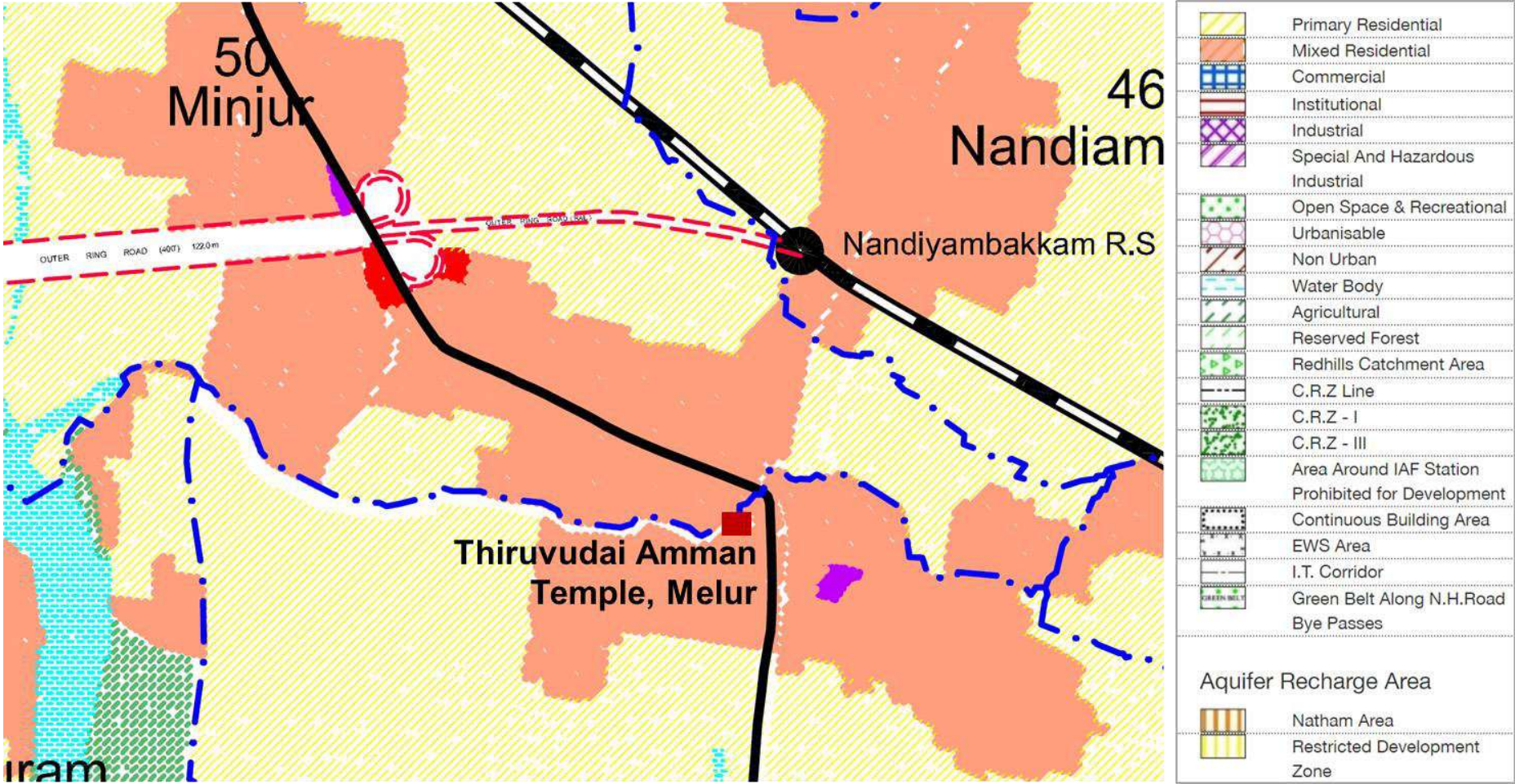
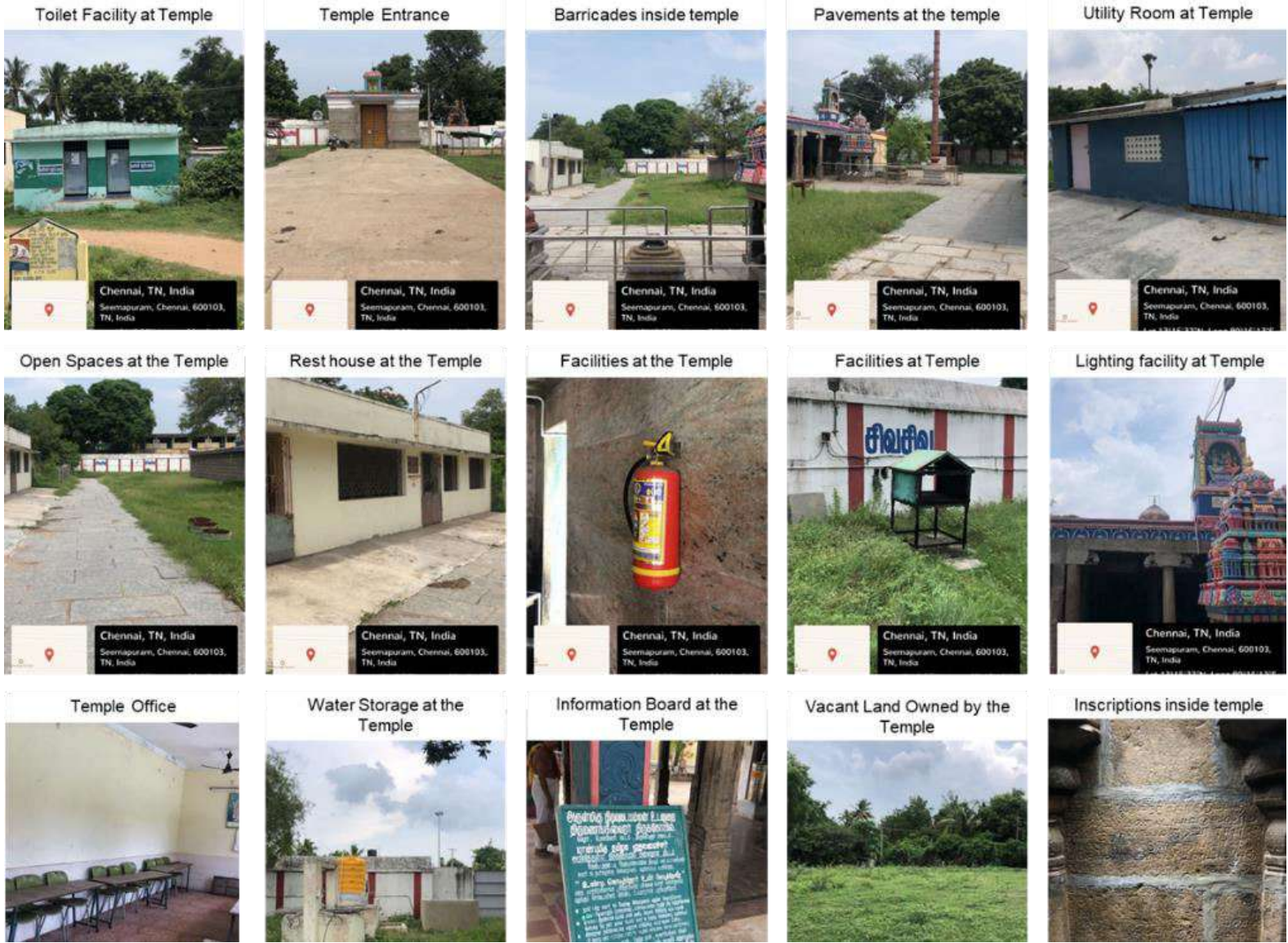


Figure 13-2: Land Users Regulation Zone at the site



Site Pictures



Vision for the Site

- The Thiruvudai Amman Temple is one of the famous Tri Sakthi temples. It has limited architectural significance therefore it is only visited by religious visitors because of its importance in Hindu mythology. The temple has average tourist amenities and lacks in providing a good experience to its visitors because of poorly maintained infrastructure. Moreover, it does not provide visitors with an interactive environment.
- The temple has huge potential to provide its visitors with adequate amenities as it has ample additional land that can be utilised to develop amenities. There is an opportunity to rejuvenate the temple tank and develop activities around the temple tank which is currently not maintained and is often dry. By clustering the temple with the other Tri Sakthi temples, it has great potential to improve the footfall of religious tourists visiting Chennai.
- The vision for the site is to develop it as an anchor site among the Tri-Sakthi temples by developing amenities like facilitation centre, pilgrim orientation centre, Yatri niwas, etc for tourists and pilgrims. The site is envisioned to become a hotspot among devotees visiting Tri-Sakthi temples and giving them facilities to engage and have accommodation while visiting all three Tri-Sakthi temples.
- **Target Visitors:** The site is largely a pilgrim site, with significant footfall from neighbouring areas as well as from rest of Tamil Nadu and other south Indian states due to its rich religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.

Further, pilgrim groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang and elderly). The target visitor group envisioned at the site are:

- **Pilgrims:** Visiting the temple for its religious value.
- **Domestic Tourists:** For the monumental and historical value.
- **High Value Tourists:** For the monumental and historical value.
- **Tourist Projections** – The site is categorized as a **Low tourist site with low (HVT) High Value Tourists potential.**

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the

historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	695	1,641	3,301
High Value Tourists (HVT) (Both domestic and foreign)	10	24	47
Maximum Carrying Capacity	19,710		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Masterplan Concept

Given that the site is popular among pilgrims, the objective is to drive religious tourist footfall and to adequately cater to the already captured traffic. Therefore, the concept for masterplan is:

- **Improving pilgrims' experience** at the temple – through paved pathways, landscaped areas, shaded seating areas and accommodation facility.
- Developing **engaging spaces** at the site such as facilitation centre, pilgrim orientation centre, etc.
- **Rejuvenating temple tank and steps and** organising activities around the tank for tourist engagement at the site.
- **Improving pilgrim footfall** through appropriate strategies like curating tours with other Tri-Sakthi temples.

Hard Interventions

1. **Facilitation Centre (Type 1)** – A small facility centre with an inquiry desk, ticket sales counter, cloak/luggage room, changing room, rest/waiting area, shoe stand, and temple wares retail kiosks serving Pooja items, prasadam, toilets can be developed for tourist convenience and ease at the site. It can be placed near the main entrance of the temple. This will be developed as per the design guidelines .

Infrastructure Created: ~1500 sqft of building.

2. **Yatri Niwas** – A Yatri Niwas for pilgrim accommodation will be developed on vacant land situated on the west side of the temple. It will hold a capacity of 20 keys which will include:

- 5 dormitories with common toilets,
- 3 non-reserved AC rooms and 2 VIP/VVIP AC rooms with attached washrooms. These rooms will be spacious with better in-house amenities and facilities.
- 10 non-AC rooms with attached washrooms.

Apart from rooms, it will include a community dining hall that would only serve vegetarian food and will be open for tourists and visitors to the temple on a dine-in or Ala-carte basis.

Infrastructure Created: ~500 sqm of Yatri Niwas with 20 keys and dining hall.

3. **Landscaped Garden** – The vacant land adjacent to the temple tank can be developed into a landscaped garden. The landscaping shall be done using native flora and paving material. This space will act as a vibrant cultural space that will enhance tourist engagement.

Infrastructure Created: ~10400 sqm of landscaped garden.

4. **Pilgrim Experience centre** – As the site lacks interactive spaces, therefore, a pilgrim experience centre will be developed that will include audio guides & guide stations, site galleries with audio-visual experiences portraying the historical and cultural importance of all three Shakti temples.

Infrastructure Created: ~400 sqm of pilgrim experience centre.

5. **Kalyana Mandapam** – The temple is used as a local venue for marriages and other events. Therefore, Kalyana Mandapam can be constructed outside the main shrine complex that would increase the chances of activities and revenue for the temple. Moreover, the Mandapam can also be used for any other events when not used for marriages such as the regular dance practices, singing shows, etc.

Infrastructure Created: ~400 sqm of Kalyana Mandapam.

6. **Annadhana Mandapam** – The temple is used by locals for gatherings and other events, therefore an Annadhana Mandapam adjacent to the proposed Kalyana

Mandapam can be developed as a community dining space. It can also be used to serve free meals to the visitors during festive seasons. It will include a dining hall, community kitchen, washing area, and storage facility.

Infrastructure Created: ~200 sqm of Annadhana Mandapam.

7. **Temple tank Rejuvenation** – The temple has a beautiful temple tank. It can be rejuvenated, and steps can be constructed along with the tank. The temple tank as observed had little water in it. Techniques of rainwater harvesting can be used to rejuvenate water for the temple tank.

Alternatively, it could also function as an amphitheatre, and host cultural events. The shape and size of the tank are conducive to this.

Infrastructure Created: ~180 m of Paved, Landscaped, and fenced temple tank boundary.

8. **Paved Pathway** – From the temple complex entrance gate to the main entrance, 50 m of the pathway will be paved. The entire pathway will be shaded with a canopy making it heat resistant and convenient for devotees visiting the temple in the hot climate.

Infrastructure Created: ~350m long and 3m wide concrete paved pathways

9. **Boundary wall** – There were squatter settlements observed around the temples that were using and damaging temple facilities. To address this issue a boundary wall enclosing ~11,400 sqm of area, will be built around the existing temple complex, new proposed developments such as Kalyana Mandapam, Annadhana Mandapam, facilitation centre, pilgrim experience centre, and parking area.

Infrastructure Created: ~560 m of boundary wall construction.

Soft Interventions

1. **Site Promotion** – Increasing temple visibility with strategies like integration with TN Assist App, etc. Marketing and Advertising at all key sites such as the other two Tri Sakthi temples, CMBT, Chennai International Airport, and Chennai Central Railway Station.
2. **Crowd Management** – During festive seasons the temple has significant footfall, for which the following measure shall be taken to manage the crowd:



Pilgrim Orientation Center



Yatri Niwas



Landscaped Garden

- Limit the number of people within the main shrine by using landscaped garden near temple tank and Mandapams as temporary holding areas for devotees.
- Deploy ushers to ensure people move through the temple at a minimum pace and guide them through various areas within the complex.

3. Community involvement – The locals around the temple are very well aware of the temple’s history and significance. These locals use the temple premises for marriages and other events. Thus, their involvement can be enhanced through organising various events/activities conducted on the temple tank, gardens and mandapams.

4. Day Tour – The temple with the other two Tri Sakthi temples namely Arulmigu Thiyagarajaswamy Temple, Thiruvottiyur (Site 35A) and Masilamaneeswarar Temple, Thirumullaivayil (Site 40) can be curated into a daylong pilgrim tour for the devotees. Licensed guides shall be deployed to guide the visitors about the history and significance of the temple.

Amenities Plan

1. Drinking-Water Station – Two drinking water stations will be developed, one of which will be located near the facilitation centre and another near temple souvenir shops adjacent to the landscaped garden. A module of which can be referred from the design guidelines .

2. Signage – Signage Package 1 is proposed to feature at this site. Both directional signage and informational signage should be used, as per the design guidelines

3. Community Toilet Block – As it was observed that squatter settlements were using temple toilets, therefore a separate community toilet block can be developed outside the proposed temple boundary and can be located along with the proposed parking facility near the temple tank. The location of toilet block is indicative and will be approved by HR&CE department. The design guidelines for Community Toilet Block are design guidelines.

4. Pay and Use Toilet Blocks – ~2 units of toilets are proposed to be provided near the facilitation centre. It will be a standalone unisex unit based on modern technologies and standards, having paid access and automated self-cleaning.

The location of the toilet block is indicative and will be approved by HR&CE department. The design guidelines for Pay and Use Toilet Blocks are design guidelines.

5. Street Lighting – The site is observed to be dull during the night. Initial surveys also suggest the lack of adequate streetlights that can illuminate the streets. Sustainable means can be adopted, and the streets can be kept illuminated by deploying solar streetlights.

6. Temple Souvenir shops – Small souvenir kiosks can be developed along the landscaped area near Temple Tank. These retail kiosks will sell temple-related souvenirs such as Pooja items, prasadam and may include F&B shops serving a vegetarian meal to devotees. A total of 5 retail kiosks will be developed on the east side of the temple complex entrance along with canopy style seating area.
Infrastructure Created: 5 Retail kiosks of 3 by 3 meters each with 3 shading devices for the seating area.

7. Parking – Though a designated parking facility is available outside the existing temple premises, it can only accommodate the vehicles during normal days. During the peak season, parking becomes a problem, therefore the parking area will be redesigned inside the proposed temple boundary. It will be located on the right side of the entrance and will hold capacity of 20 cars. Another parking space will be designed and located adjacent to the temple tank having 13 car space to cater to the parking need during peak seasons.
Infrastructure Created: 800sqm of paved parking yard.

Trunk Infrastructure

As the Site has direct access from the road, no trunk infrastructure interventions are required

Project Identified

#	Project Component	Scale
1	Facilitation Centre (Type 1)	1
2	Yatri Niwas (Pilgrim Accommodation)	500 sqm
3	Pilgrim Experience Centre	400 sqm
4	Kalyana Mandapam	400 sqm

#	Project Component	Scale
5	Annadhana Mandapam	200 sqm
6	Boundary wall construction	560 m
7	Shading device type 1	3
8	Landscaped Garden	10400 sqm
9	Temple tank Rejuvenation	180 m
10	Paved Walkway (Paver block)	350 m
11	Temple Souvenir shops (3 x 3m)	5
12	Parking (Paved Yard)	33 ECS
13	Drinking-Water Station	2
14	Community Toilet Block	1
15	Pay and Use Toilet block	2
16	Signage (Package 1)	1
17	Street Lighting	-

Feasibility Assessment

The following considerations have been accounted for the cost projections of proposed interventions at this site:

- Feasibility of the cashflows projected here are accounted only for the additional components master planned.
- The current operating & maintenance cost of the temple have not been considered.

Capital Expenditures

The cost of the different project components proposed in the masterplan is calculated basis the current market price considering the appropriate escalations.

#	Project Component	Cost (Lakhs INR)
1	Facilitation Centre (Type 1)	15
2	Yatri Niwas (Pilgrim Acoomodation)	270
3	Pilgrim Experience Center	215
4	Kalyana & Annadhana Mandapam	215

#	Project Component	Cost (Lakhs INR)
5	Boundary wall construction	31
6	Shading device type 1	1
7	Landscaped Garden	73
8	Temple tank Rejuvenation	13
9	Paved Walkway (Paver block)	7
10	Temple Souvenir shops (3 x 3m)	7
11	Parking (Paved Yard)	9
12	Drinking-Water Station	3
13	Community Toilet Block	5
14	Pay and Use Toilet block	20
15	Signage (Package 1)	1
16	Street Lighting	1
Total		INR 885 L

(Note: Cost of all the project components including the Total capex is rounded-off to the nearest whole value.

1. The Capital projects considered here are planned holistically taking into account the 3 temples associated the Trisakthi temple pilgrim cluster followed by the devotees.)

Revenues - Proposed projects

(Note: The following considerations are applicable to the below mentioned revenue modules.

1. The revenues considered here are in addition to all the existing revenue currently accrued by the temple.
2. The estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)

1. **Kiosks** – 6 leasable kiosk units with a rental earning of *INR 18 Lakhs*.
2. **Parking** – About 33 parking spaces assuming a daily occupancy of 40% per day, would earn the temple an estimated revenue of *INR 1 Lakh*.

3. **Space on Hire** – Assuming an average of an event per week, renting of the community hall for private religious events/ ceremonies would earn the temple *INR 15 Lakhs*.
4. **Pay per use Toilets** – Assuming about an average of 15% of the visitors using the proposed pay per use toilet, would earn the temple an estimated *INR 25 Lakhs*.
5. **Yatri Niwas** – Assuming an average of 40% occupancy across the year at an average tariff of *INR 1100* across the ~20 keys consisting of AC, Non-AC & dormitory categories, the temple would earn a revenue of *INR 29 Lakhs*.

The total revenues to the temple from the proposed capital projects is projected at an estimated *INR 85 Lakhs at Y5*.

Operating Expenditures

(Note: The following considerations are applicable to the below mentioned operational expense modules.

1. The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.
2. The operations and maintenance currently undergone by the temple for its existing facilities are not considered in this section.
3. The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)

1. **Manpower costs** – This includes the costs incurred to maintain the cleanliness and the upkeep of the new facilities.
 - a. A **Help-desk staff** at the facilitation centre.
 - b. A **security personnel** at the proposed parking.
 - c. An **Administration staff** to overlook the parking and the facilitation centre.
2. **Facility Maintenance costs** – This includes the costs incurred to maintain the cleanliness and the upkeep of the new facilities.
 - a. Maintenance of the **Open area**, which includes cleaners, gardeners, etc. for upkeep of the landscape in the temple.
 - b. Maintenance of the **Building facilities** – The general cleaning and upkeep of the facilitation centre.

3. **Repair & Maintenance costs** – This includes the expense incurred over time for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the retail kiosks, community event spaces in the temple surroundings.
5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.
6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections of the temple.
7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations.
The utilities for the rental kiosks are pegged to the rental revenues earned from the respective sources.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175* per kilolitre.

The total operational expenditure incurred by the temple from the proposed capital projects is projected at an estimated *INR 70 Lakhs at Y5*.

Given that the estimated revenues (*INR 85 Lakhs*) from the proposed capital expenditure projects exceeds the operational expenses (*INR 70 Lakhs*) incurred, it can be concluded that the Interventions proposed at the site are Self-Sustainable and therefore beneficial to the temple and the Tri-sakthi temple as a cluster.

³⁹ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.

Phasing & Funding Agencies

The development of the projects is to be taken up by HR & CE department and the implementation of these can be carried out as follows:

1. The implementation of the **Technology package** (i.e., Smart-App integrations, Virtual guides, NFC tags, etc.) at the site would be taken up by the SPV provisioned by the tourism department.
2. The **kiosk units** at the facilitation centre can be leased/ rented out to private operators to host souvenir shops to display and sell temple related religious arts/ craft/ pooja items or F&B to cater to the pilgrims.
3. **Community hall** to be rented out to the devotees/ private operators to conduct ceremonies like marriage, etc. and religious events during festivals.
4. While the development of the **Yatri Niwas** be taken up the HR & CE dept. the operation and maintenance of the facility can be tendered out to private hotels operators on a 3-year retainer contract basis. This would help in maintaining a benchmark in the quality of the services rendered.
5. The **Parking facility** is to be undertaken by the temple body through the addition of a security personnel, the additional workforce for parking management is included in the operating expenses (*Manpower cost*).
6. The **Parking facility** is to be undertaken by the temple body through the addition of a security personnel, the additional workforce for parking management is included in the operating expenses (*Manpower cost*).

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 38,000³⁹ man-days of construction labour (*spread across 1 year of implementation*)

- As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
- Assumed cost of labour assumed for computation = INR 700 per day
- Cumulative labour man-days = 30% * CAPEX / 700

During Operations: Jobs created during operations will entail:

- Yatri Niwas = 14 man – days per day⁴⁰
- Additional personnel deployed at site (Housekeeping, management, security) = 2 Persons⁴¹
- Retail and F&B spaces = 15 man-days per day⁴²

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – As discussed above
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect, and induced effects is estimated as. 94,900 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 335 Cr. at the site.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and suppliers will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.

Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

⁴⁰ As per World Bank thumb rule, 12 man-days per day for 10-key 4-star hotel and 20 man-days for 10-key 5-star hotel.

As per HVS Report, in typical India hotels, manpower to room ratio for 4/5 star hotels is 2.11-2.70, for mid-market 1.52 and for budget hotels 0.72. We have assumed 2 for our computation.

⁴¹ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

⁴² Assuming average 2.5 persons per kiosk / shop

Figure 13-3: Proposed Master Plan – Thiruvudai Amman Temple



14. Mangadu Amman temple, Thiruvallur

Site Details

District	Tiruvallur
Name of Site	Sri Kamakshi Amman Temple
Site No:	Site 37 of 295
Site Use:	Temple
Category:	A (Temple)
Location:	13.0299,80.1078
Land Area:	3 acres (Temple) & 30 acres (Additional Land)
Peak footfalls:	5,000 per day (February, July, October, December)
Operator:	HR & CE Dept.
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom. – 10 lakhs (2019 – 20) For. – 5,000 (2019 – 20)
Site Revenues:	INR 5 crores (2019 – 20)
Site Orientation:	Pilgrim
Site Potential:	Medium Tourism Site
HVT Potential:	Low HVT Potential
Connectivity	
a. Railway Station:	~20 km (Chennai)
b. Airport:	~20 km (Chennai)
c. Highway:	~4 km from SH55
Trails featured on:	Nil (Pure Pilgrim Temple)

The Sri Kamakshi Amman Temple located in Mangadu is in close proximity to the Poonamallee town, making it easily accessible by the tourists. The temple has good popularity among the devotees and attracts people from across Tamil Nadu, especially Chennai and the states like Karnataka, Telangana and Maharashtra (especially Mumbai). Scope of interventions for this temple are aimed at efficiently managing parking, rejuvenating the temple tank and lake, adding facilities of accommodation, community hall and landscaping to form a vibrant cultural space on available vacant land.

Existing Condition

Location

The Sri Kamakshi Amman Temple, Mangadu is located 20 km west of Chennai and is connected through Poonamalle high road. Mangadu is well connected by buses from Koyambedu Market (13km), T.Nagar, Tambaram and Guindy. Different trains provide service from the Chennai Central railway station to Mangadu. Temple has good access to Chennai airport which is ~13 km away and can be reached via buses, rail and cab services. The temple is situated in an institutional area surrounded by mixed-residential neighbourhoods. Prominent tourist landmarks present around the site are Sri Vaigunda Perumal Temple, Velleeswarar Kovil, Sukran stalam, and Perumal Koil, Mangadu.

Existing Layout

The Site covers an area of 3 acres of temple complex constructed in Chola style of architecture. The temple has two entrances, one in the east side and the other one in the south with the seven tier Rajagopuram having different sculptures across each tier. The temple is known for Lord Vishnu as he can be seen in a seated posture along with his 2 consorts Sridevi and Bhoodevi. It is a small temple with separate shrines for Goddess Lakshmi, Sri Andal and Lord Hanuman. The temple tank is situated on the northern side of the temple.

Existing Uses

The Kamakshi Amman Temple is visited by locals and domestic tourists for its religious significance. The prominent festivals celebrated in the temple are Navratri, Shivratri and Vaikuntha Ekadashi. The other uses housed on the site include:

- Food outlets – 1 shop selling prasadam.
- An administration office.
- A ticket counter.
- A Kitchen.
- A mini hall for marriage ceremonies and other functions - ~150 capacity, with light & sound system.

Other Land Available

Apart from the 3-acre land used for the temple complex, the temple also owns ~30 acres of land about 1 km northeast of the temple, which is currently leased out for farming. The temple earns a steady revenue in the form of leases.

Master Planning Considerations

Applicable Regulations

1. Tamil Nadu Combined Development and Building Rules, 2019 – As per Chennai Metropolitan Area Master Plan, the main temple complex lies in an Institutional Zone, whereas the additional land owned by the temple lies in a Mixed-Residential zone. The permissible uses include:

For Institutional Zone

Educational Institutions | Govt./Quasi Govt./Private Offices and Institutions | Art galleries | Museums | Public Libraries | Social and Cultural Institutions | Religious buildings | Health institutions | Public & Semi-public open spaces | Public utilities | Residential and commercial spaces | Bus and Railway stations | Parking lots including multi-level parking | Cinema theatres | Kalyana mandapams | Community/Assembly halls | Waterfront Developments | Circuses/Fairs.

For mixed-Residential Zone

Residential Buildings | Parks, playgrounds, farms, gardens | Public Utility Buildings | Swimming Pool, Daily or weekly markets | Hotels, Restaurants, Hostels, Dormitories, Boarding and Lodging houses | Retail establishments and shops, Departmental stores, Taxi stands and car parking multi-level parking | Religious buildings.

2. TN HRCE Rules, 1959

- a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions
- b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.
- c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to the religious activities and for the facilitation of Hindu pilgrim tourists.
- d. The HR&CE Dept. owned land can be leased for a period of no more than 3 years.

Key Sensitivities

There is no specific environmental/social sensitivity to be addressed at the site.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

- 1. Attraction** – The temple is famous for its religious and architectural significance. It has the biggest Sri Chakra covered with 9-yard saree, panchaloka (alloy of 5 metals) of Mother Kamakshi and 7 tier Rajagopuram with different carvings of Kamakshi across each tier. The temple has a divine appeal to it with white marble flooring all across the walkways. The entire area is covered with concrete roof supported by pillars along both sides that has the goddess Amman's carvings on them. It gives the devotees and the tourist's ample space to rest during the visit. Furthermore, the temple has a beautiful tank that is accessible through its northern gate. Apart from temples there is no other tourist attraction point in the vicinity.
- 2. Accessibility** – The Temple is located in a suburb called Mangadu, bordering Kanchipuram and Chennai district. It is 250 meters away from the Mangadu bus stop on the Kunrathur road, which is an arterial route, connecting to the major Poonamalle trunk road. The last ~200 m of the road to the temple is narrow and prone to overcrowding. People prefer to commute to the site through tour bus,

public buses, autos and taxis/private cars. However, the most optimal way to reach the temple is by a bus, since parking is a huge problem in the vicinity. The east side entrance faces a crowded street where vendors sell all religious/ Pooja items. The southern main entrance opens to a residential street.

- 3. Amenities** – The condition of tourist amenities within the temple is excellent, and well maintained. However, the condition of amenities declines outside the temple premises. The site lacks the following amenities:
- No toilet/bathroom facilities within its premises.
 - No online/digital means for ticketing.
 - Narrow tarred roads with vehicles parked on both sides
 - Roadside vendors and frequent congestion.
 - No designated footpath.
 - Water clogging on the roadsides
 - Vending makes the street crowded and prone to littering as dustbins are mostly overfilled.
 - No amenities present for visitors to rest/sit outside the site.
 - No lodging facilities for the devotees and visitors

Parking – Parking lot is designed outside the site with a capacity of 10 cars. However, during festive seasons the vehicles are usually parked along the residential streets leading to congestion on the roads. There is a common concern of panchayat association charging illegal parking fee of Rs. 10-20 per car.

- 4. Awareness** – The temple enjoys decent popularity among pilgrims and devotees from Andhra Pradesh, Karnataka and especially Mumbai, as there is a similar devotion shared for Kamakshi Amman in Mumbai. Since the temple is in the suburbs of Chennai with no other popular destinations nearby it, international tourists tend to overlook this place.
- 5. Activities** – On normal days, the temple does not offer any activities. On festive occasions, there are activities such as feasts, chariot procession, dance recitals, music concerts, etc. The temple is usually crowded with devotees during the different festive celebrations mentioned above.

- 6. Accommodation** – There is no proper accommodation around the site to host the pilgrims and other devotees. Located in close proximity to Chennai city and with no decent accommodation within the 1 km vicinity, tourists usually base their location in Chennai and visit the temple as a day tour.
- 7. Association with Community** – The temple has immense popularity among locals and pilgrims for special needs. Locals engage in different activities in and around the temple. High vending activities can be seen around the temple. However, visitors don't spend much time inside the temple as there are not enough activities to capture their attention.

Figure 14-1: Location and Existing Layout

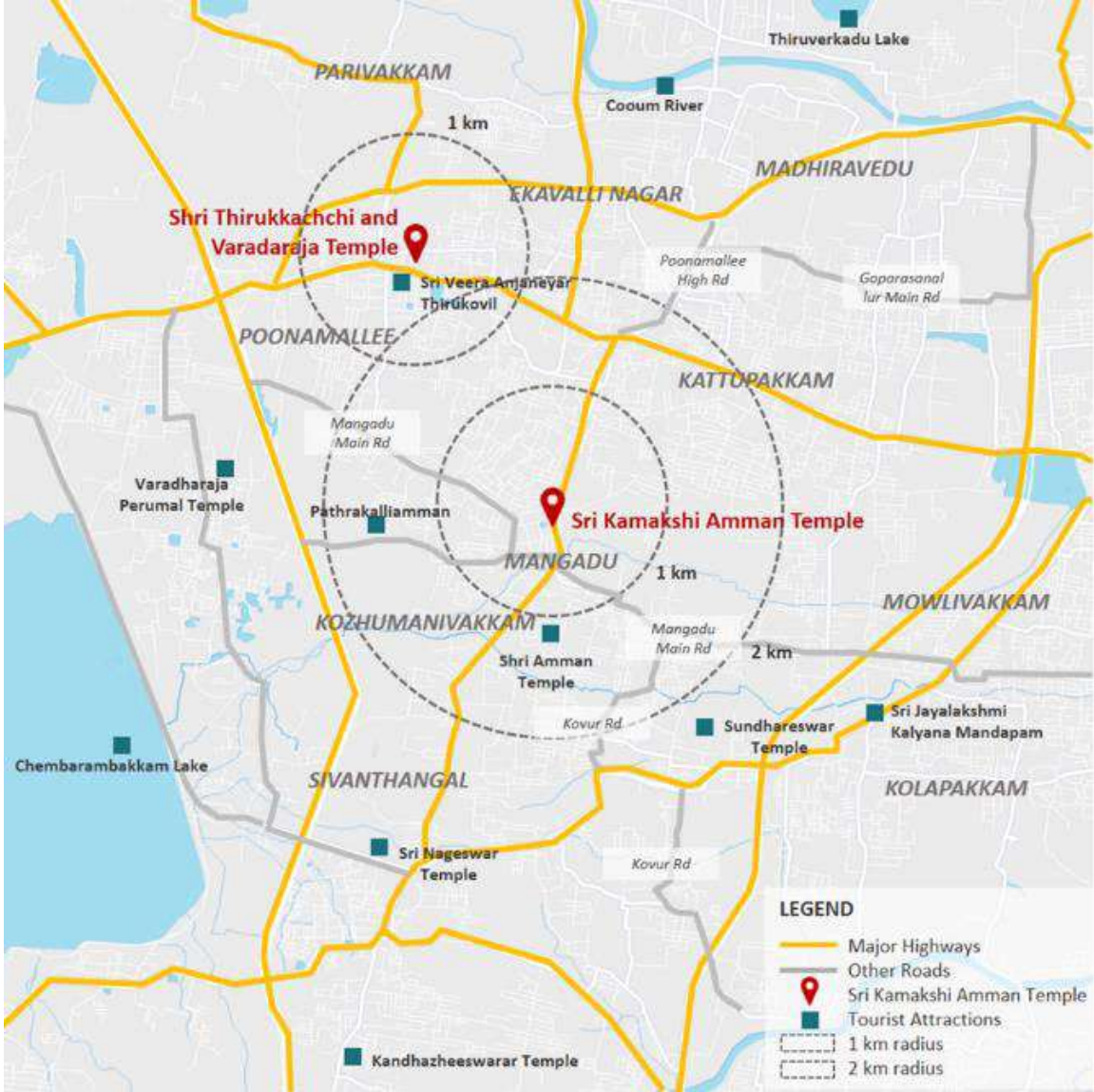
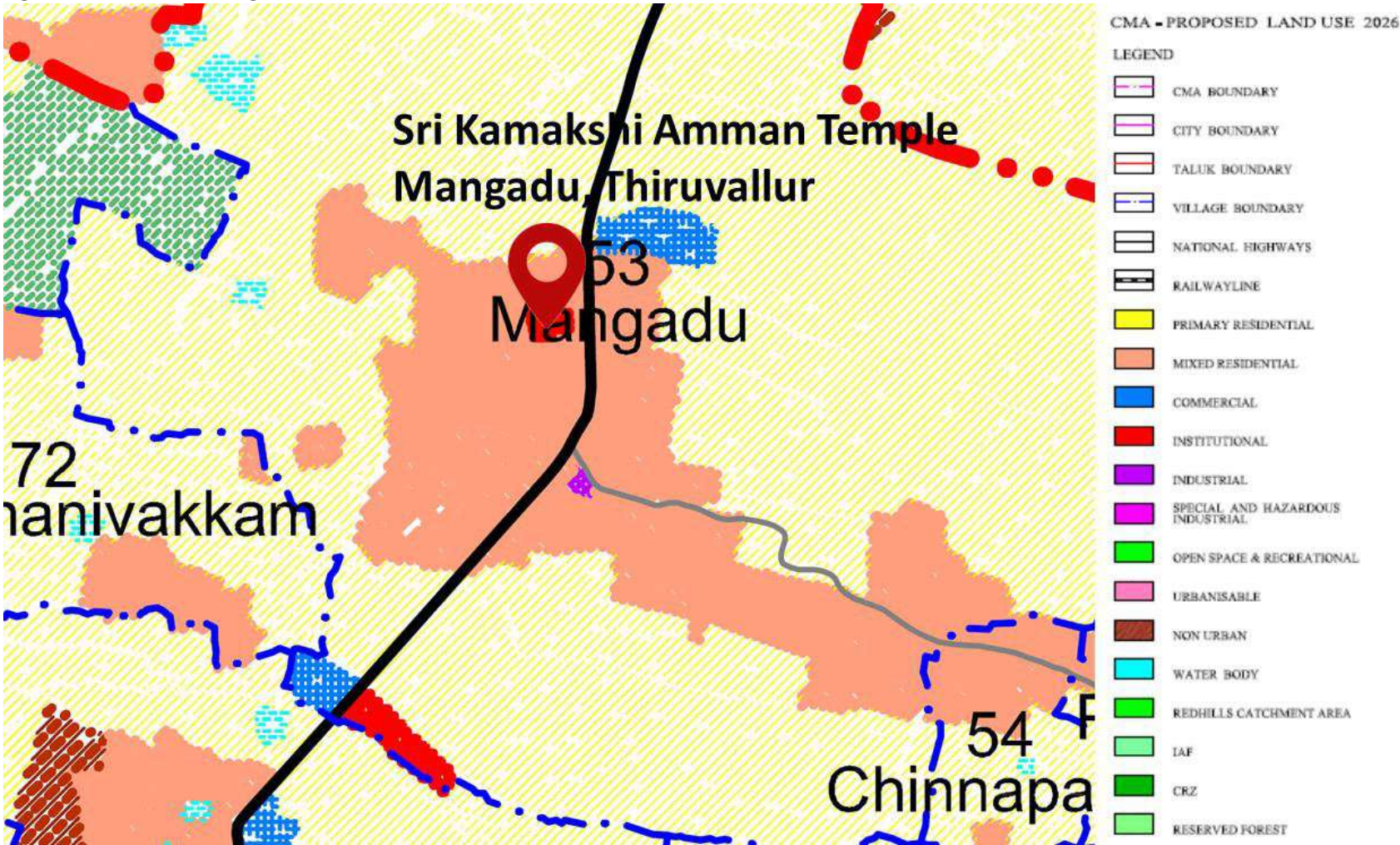


Figure 14-2L Land Uses Regulation Zone at the Site



Site Pictures



Vision for the Site

The temple has an important story in the Hindu scriptures and the Artha Meru Chakra having 43 Trikonas triangles making it one of a kind and stands for royalty. It is the place where the goddess Kamakshi performed her penance to marry and re-unite with Lord Shiva, thus having immense popularity among locals and pilgrims for special needs. However, the temple does not provide basic amenities such as accommodation, relaxing areas, guides, toilets, and sufficient parking space. Moreover, it does not provide visitors with an interactive environment.

The temple has good potential to be developed into a religious tourist attraction as it has beautiful temple architecture and significant religious importance. The temple has the opportunity to enhance tourist experience by utilising the additional vacant land adjacent to the lake for developing basic amenities as well as interactive spaces.

The vision for the site is to develop it as a religious tourist attraction by improving existing infrastructure, developing required amenities on the vacant land, rejuvenating and renovating the temple tank, reviving existing lake on the additional land and planning a themed garden along with accommodation and parking facility. The new developments on additional land will provide basic infrastructure and act as interactive spaces for the visitors.

- **Target Visitors** - The site is largely a pilgrim site, with significant footfall from neighbouring areas as well as from rest of Tamil Nadu and other south Indian states due to its rich religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.

Further, pilgrim groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang and elderly). The target visitor group envisioned at the site are:

- **Pilgrims:** Visiting the temple for its religious value.
- **Domestic Tourists:** For the monumental and historical value of the temple.
- **High Value Tourists:** For the monumental and historical value of the temple.
- **Tourist Projections** – The site is categorized as a **Medium tourist site with low HVT potential.**

Past footfall data for the site has been received from sources like the site manager and TTDC’s compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annun Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	995	2,745	6,481
High Value Tourists (HVT) (Both domestic and foreign)	10	28	65
Maximum Carrying Capacity	8,030		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Masterplan Concept

Given that the site is popular among pilgrims, the objective is to drive religious and domestic tourist footfall and to adequately cater to the already captured traffic. Therefore, the concept for the masterplan is:

- **Improving pilgrims’ experience** at the temple – through improved circulation, conveniences, and amenities.
- Developing **cultural spaces** by utilising spaces on the vacant land.
- **Rejuvenating temple tank and steps** – This will improve tourist engagement at the site.
- Adding attraction points **by reviving the lake and creating themed garden**– This will improve tourist engagement and footfall at the site.

Hard Interventions

1. **Yatri Niwas** – A Yatri Niwas for pilgrim accommodation will be developed on vacant land situated on the west side of the lake. It will hold a capacity of 25 keys which will include:
 - 5 dormitories with common toilets,

- 7 non-reserved AC rooms and 3 VIP/VVIP AC rooms with attached washrooms. These rooms will be spacious with better in-house amenities and facilities.
- 10 non-AC rooms with attached washrooms.
- Apart from rooms, it will include a community dining hall that would only serve vegetarian food and will be open for tourists and visitors to the temple on a dine-in or Ala-carte basis.

Infrastructure Created: ~680 sqm of Yatri Niwas with 25 keys and dining hall.

- 2. Amenity Block (Outside temple)** – A small amenity block with an inquiry desk, ticket sales counter and cloak/luggage room, can be developed for tourist convenience and ease at the site. It can be placed at south-east corner of the temple boundary wall. This will be developed as per the design guidelines .

Infrastructure Created: ~40 sqm of building area.

- 3. Themed Landscaped Garden** – To create relaxing spaces, and to enhance visual perception, the vacant land adjacent to the lake can be developed into a themed landscaped garden. The landscaping shall be done using native flora, and should, as far as possible, be the least maintenance-oriented and be self-sustainable. More sculptural trees and flowering trees and shrubs should help to beautify the site. Adequate garden furniture like benches, dustbins, bollards, etc. are proposed to be provided in the garden, adhering to the design guidelines for street furniture. This space shall act as a vibrant cultural space that could enhance tourist engagement.

Infrastructure Created: ~4300 sqm of garden, paver blocks, tree planters.

- 4. Community hall** – Temple has a mini hall for marriage ceremonies and other functions within the temple premises leading to congestion within and outside the temple. Therefore, a community hall is proposed on the additional land to solve this issue. The proposed themed landscaped garden in front of it can be used in case of large gatherings. The community hall will be used for various types of gatherings and would increase the chances of activities and revenue for the temple.

Infrastructure Created: ~259 sqm of Kalyana Mandapam.

- 5. Temple tank Rejuvenation** – The temple has a beautiful temple tank. However, locals often have complaint / mention of poor rainwater harvesting technique

being used for temple tanks that results in flooding of the surrounding streets and the temple pond getting dried out soon. Therefore, temple tank rejuvenation will be done including improving rainwater harvesting technique and redeveloping steps around the temple tank to make it more aesthetically appealing. Alternatively, it could also function as an amphitheatre, and host cultural events. The shape and size of the tank are conducive to this. There is a small park-like enclosure on the northern side of the temple tank, it has overgrown weeds and wild plants. Beautification and maintenance of the same would increase the aesthetic appeal of the temple.

Infrastructure Created: ~250 m of Paved, and fenced temple tank boundary.

- 6. Rejuvenation Water Body** – The Water body / lake that is in close vicinity to the temple and is located on the temple owned additional land could be developed into a natural/recreational site with activities like boating, recreational fishing, etc. As this area lacks any attraction point for the tourists, rejuvenating and maintaining this lake will attract more visitors and enhance the temple's revenue.

Infrastructure Created: ~1400 m of paved walkway around the lake.

- 7. Amenity block (near lake)** – A small amenity block having toilets, drinking water station and storage room will be developed along the lake side to provide technical support and facilities to the boating and fishing activities in the lake.

Infrastructure Created: ~90 sqm of building area.

- 8. Paved walkway** – Paved shaded walkways are proposed on the additional vacant temple-owned land. The pathways will link lake, community hall, community toilet and parking area. This will enhance ease in walkability around the amenities provided on the site. The entire pathway can be shaded in canopy style, to make walking convenient for visitors visiting the temple in the hot climate.

Infrastructure Created: ~540 m of paved-shaded walkways.



Amenity Block



Lake Rejuvenation



Themed Landscaped Garden

Soft Interventions

1. Site Promotion – Increasing temple visibility with strategies like integration with TN Assist App, etc. Marketing and Advertising at all key sites such as the other two Tri Sakthi temples, CMBT, Chennai International Airport, and Chennai Central Railway Station.

2. Community Toilet Block – As it was observed that there were only 4 toilets available outside the temple premises, out of which two are always locked. Therefore, to cater to this situation a community toilet block will be developed near the proposed parking on the vacant land adjacent to the lake. This will be useful for the entire town. The location of the toilet block is indicative and will be approved by HR&CE department. The design guidelines for Community Toilet Block are design guidelines.

3. Crowd Management – During festive seasons the temple has significant footfall, for which the following measure shall be taken to manage the crowd:

- Limit the number of people within the main shrine by using the landscaped area near the lake as temporary holding areas for devotees.
- Deploy ushers to ensure people move through the temple at a minimum pace and guide them through various areas within the complex.
- Parking in peak season shall not be allowed outside the temple but on the proposed parking area near the lake.

4. Community involvement – Temple enjoys immense popularity among locals. On most days, large crowds visit the temple for worship. Some non-commercial events are also hosted at the temple, such as dance recitals, music concerts, etc. To enhance community engagement, community spaces such as a landscaped area with a seating facility, pilgrim souvenirs, and F&B shops can be developed. Also, locals will be trained and appointed as guides for the site.

5. Vending Zone –During peak season, vending outside the temple leads to congestion. Therefore a temporary vending area will be designed which will replace the parking area outside the temple only during peak seasons and other events hosting large gatherings. Vending zone will have temporary vending kiosks that will be appointed to vendors and regulated by the temple authority. This will enhance community participation and provide visitors with facilities to engage on the site.

6. Day Tour – The temple and Chembarambakkam Lake can be curated with other temples such as Sri Vaigunda Perumal Temple, Velleeswarar Kovil, Sukran stalam, and Perumal Koil, Mangadu into a daylong pilgrim tour for the devotees. Licensed guides shall be deployed to guide the visitors about the history and significance of the temple.

Amenities Plan

- 1. Signage (Package 1)**– Information boards and guides will be appointed at the site to explain the importance of the place in the Hindu mythology. For this signage package 1 is proposed to feature at this site. Both directional signage and informational signage should be used, as per the design guidelines .
- 2. Street furniture** – Temple lacks in providing seating/ relaxing area. Therefore, benches in the themed landscaped garden in front of the proposed community hall adjacent to the lake shall be placed strategically. Dustbins of appropriate size, shape and material at fixed intervals shall be placed to prevent littering in the garden. Dustbin and bench design shall be as per guidelines .
Infrastructure Created: 5 benches to be placed in landscaped gardens.
- 3. Temple Souvenir shops** – Small souvenir kiosks can be developed along the proposed landscaped area. These shops will sell temple-related souvenirs such as Pooja items, prasadam and may include F&B shops serving a vegetarian meal to devotees. A total of 5 retail kiosks will be developed near lake along with canopy style seating area.
Infrastructure Created: 5 Retail kiosks of 3 by 3 meters each with 3 shading devices for the seating area.
- 4. Parking** – A designated parking area is available outside the temple premises but is not organised. Moreover, it does not have capacity to hold vehicles during peak seasons. Therefore, parking outside the temple will be organised for regular days. To cater to the parking requirement in peak season, parking space will be developed on additional temple-owned vacant land. It will be located ~700m from the main temple entrance on the Kunrathur Road along with the proposed Yatri Niwas.
Infrastructure Created: 90 ECS of paved parking yard.
- 5. E-Rickshaw Bay** – Public amenities such as parking area, accommodation, and community hall are proposed ~700 m away from the temple complex, therefore an E-rickshaw bay is proposed. The rickshaws will operate to and fro from temple complex to the given amenities near Chembarambakkam Lake. E-Rickshaw stations along with drop-in and pick-up points will be designed. The stations will be designed within the proposed parking area near the lake.

Trunk Infrastructure

As the Site has direct access from the road, no trunk infrastructure interventions are required.

Project Identified

#	Project Component	Scale
1	Amenity block (outside temple)	40 sqm
2	Amenity Block (near lake)	90 sqm
3	Yatri Niwas	680 sqm
4	Shading device type 1	3
5	Themed Landscaped Garden	4300 sqm
6	Temple tank Rejuvenation	250 m
7	Rejuvenating Lake (2m wide)	1400 m
8	Community Hall	250 sqm
9	Paved Walkway (Paver block)	540 m
10	Temple Souvenir shops (3x3m)	5
11	Parking (Paved Yard)	90 ECS
12	Community Toilet Block	2
13	Signage (Package 1)	1
14	Vending Zone (temporary stalls)	40 sqm
15	E-rickshaw bay (Drop in-Drop out station) (2*100 sqm)	200 sqm
16	Street Furniture (Benches)	5

Feasibility Assessment

The following considerations have been accounted for the cost projections of proposed interventions at this site:

- Feasibility of the cashflows projected here are accounted only for the additional components master planned.
- The current operating & maintenance cost of the temple have not been considered.

Capital Expenditures

The cost of the different project components proposed in the masterplan is calculated basis the current market price considering the appropriate escalations.

#	Project Component	Cost (INR Lakhs)
1	Amenity Block (near lake)	5
2	Amenity Block (outside temple)	5
3	Yatri Niwas	360
4	Shading device type 1	1
5	Themed Landscaped Garden	30
6	Temple tank Rejuvenation	33
7	Rejuvenating Lake	14
8	Community Hall	67
9	Paved Walkway (Paver block)	10
10	Temple Souvenir shops (3x3m)	8
11	Parking (Paved Yard)	26
12	Community Toilet Block	10
13	Signage (Package 1)	1
14	Vending Zone (temporary stalls) (10*4sqm)	1
15	E-rickshaw bay (Drop in-Drop out station) (2*100sqm each)	3
16	Street Furniture (Benches)	1
Total		INR 575 L

Revenues - Proposed projects

(Note: The following considerations are applicable to the below mentioned revenue modules.

1. The revenues considered here are in addition to all the existing revenue currently accrued by the temple.
2. The estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)

1. **Kiosks** – 15 leasable kiosk units at the proposed Facilitation centre with a rental earning of *INR 45 Lakhs*.
2. **Parking** – About 90 parking spaces assuming a daily occupancy of 20%, would earn the temple an estimated revenue of *INR 1 Lakh*.
3. **Space on Hire** – Assuming an average of an event per week, renting of the community hall for private religious events/ ceremonies would earn the temple *INR 9 Lakhs*.
4. **Pay per use Toilets** – Assuming about an average of 15% of the visitors using the proposed pay per use toilet, would earn the temple an estimated *INR 5 Lakhs*.
5. **Yatri Niwas** – Assuming an average of 60% occupancy across the year at an average tariff of *INR 2200* across the ~25 keys consisting of AC, Non-AC & dormitory categories, the temple would earn a revenue of *INR 96 Lakhs*.

The total revenues to the temple from the proposed capital projects are projected at an estimated *INR 1.5 CR at Y5*.

Operating Expenditures

(Note: The following considerations are applicable to the below mentioned operational expense modules.

1. The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.
 2. The operations and maintenance currently undergone by the temple for its existing facilities are not considered in this section.
 3. The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)
1. **Manpower Costs** – This includes the additional personnel required to manage the proposed facilities.
 - a. A **Help-desk staff** at the Amenity block.
 - b. A **security personnel** at the Yatri Niwas.
 - c. An **Administration staff** to overlook the operations of the Yatri Niwas and the community hall.

The projected costs incurred is estimated at *INR 8 Lakhs*.

2. **Facility Maintenance costs** – This includes the costs incurred to maintain the cleanliness and the upkeep of the new facilities.
 - a. Maintenance of the **Open area**, which includes cleaners, gardeners, etc. for upkeep of the landscape in the temple.
 - b. Maintenance of the **Amenity block** - the cleaning of toilets, wash areas and drinking water stations.
 - c. Maintenance of the **Building facilities** – The general cleaning and upkeep of the Yatri Niwas premise and the community block.

The projected costs incurred is estimated at *INR 5 Lakhs*.
3. **Repair & Maintenance costs** – This includes the expense incurred over time for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.

The projected costs incurred is estimated at *INR 9 Lakhs*.
4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the retail kiosks, community event spaces in the temple surroundings.

The projected costs incurred is estimated at *INR 3 Lakh*.
5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 *percentage* of the total capital expenditure incurred.

The projected costs incurred is estimated at *INR 11 Lakhs*.
6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections of the temple.

The projected costs incurred is estimated at *INR 3 Lakhs*.

7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations.

The utilities for the rental kiosks, Yatri Niwas and the community hall are pegged to the rental revenues earned from the respective sources.

The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175* per kilolitre.

The projected costs incurred is estimated at *INR 35 Lakhs*.
8. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

The projected maintenance cost is estimated at a lumpsum of *INR 50,000 per annum*.

The total operational expenditure incurred by the temple from the proposed capital projects is projected at an estimated *INR 75 Lakhs at Y5*.

Given that the estimated revenues (*INR 1.5 Cr.*) from the proposed capital expenditure projects exceeds the operational expenses (*INR 75 Lakhs*) incurred, it can be concluded that the Interventions proposed at the site are Self-Sustainable and therefore beneficial to the temple.

Phasing & Funding Agencies

The development of the projects is to be taken up by HR & CE department and the implementation of these can be carried out as follows:

1. The **kiosk units** can be leased/ rented out to private operators to host souvenir shops to display and sell temple related religious arts/ craft/ pooja items or to vendors for F&B.
2. **Community hall** to be rented out to the devotees/ private operators to conduct ceremonies like marriage, etc. and religious events during festivals.
3. While the development of the **Yatri Niwas** be taken up the HR & CE dept. the operation and maintenance of the facility can be tendered out to private hotels operators on a 3-year retainer contract basis. This would help in maintaining a benchmark in the quality of the services rendered.

4. The **Parking facility** is to be undertaken by the temple body through the addition of a security personnel, the additional workforce for parking management is included in the operating expenses (*Manpower cost*).

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 24,650⁴³ man-days of construction labour (*spread across 2-3 years of implementation*)

During Operations: Jobs created during operations will entail:

- Yatri Niwas = 18 man – days per day⁴⁴
- Additional personnel deployed at site (Housekeeping, management, security) = 5 Persons⁴⁵
- Retail and F&B spaces = 38 man-days per day⁴⁶

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – As discussed above
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect, and induced effects is estimated as. 61,800 man-days.

⁴³ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
 - Assumed cost of labour assumed for computation = INR 700 per day

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site

Both increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 660 Cr. at the site.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Cumulative labour man-days = 30% * CAPEX / 700

⁴⁴ As per World Bank thumb rule, 12 man-days per day for 10-key 4-star hotel and 20 man-days for 10-key 5-star hotel.

As per HVS Report, in typical India hotels, manpower to room ratio for 4/5 star hotels is 2.11-2.70, for mid-market 1.52 and for budget hotels 0.72. We have assumed 2 for our computation.

⁴⁵ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

⁴⁶ Assuming average 2.5 persons per kiosk / shop

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and suppliers will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

Figure 14-3: Proposed Master Plan – Mangadu Amman Temple, Thiruvallur



15. Thiruverkadu Amman Temple

Site Details

District:	Tiruvallur
Name of Site:	Thiruverkadu Amman Temple
Site No:	Site 39A of 295
Site Use:	Temple
Category:	A (Temple)
Location:	13.0719, 80.1240
Land Area:	~3.26 acres
Peak footfalls:	10,000 per day (Jan – Feb, May, Nov – Dec)
Operator:	HR & CE Dept.
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom. – 17.96 lakhs (2019 - 20) For. – 3.500 (2019 - 20)
Site Revenues:	INR 12 Crores ⁴⁷ (FY 2019 – 20)
Site Orientation:	Pilgrim
Site Potential:	Medium Tourism Site
HVT Potential:	Low HVT Potential
Connectivity	
a. Railway Station:	~20 km (Chennai)
b. Airport:	~25 km (Chennai)
c. Highway:	~2.5 km from NH4
Trails Featured on:	Nil (Pure Pilgrim Temple)

The Arulmigu Devi Karu Mariamman Temple, in Thiruverkadu, is immensely popular among the local crowd and attracts visitors from the districts across Tamilnadu. This temple along with the Sri Vedapureeswarar Temple can be clustered together to form a daylong itinerary on a pilgrim visit.

The scope of interventions at the site includes the development of tourist facilitating spaces and amenities along with the development of limited recreational space around the rejuvenated temple tank.

Existing Condition

Location

The temple is located at a distance of ~2.7 km from the Chennai – Vellore highway (NH - 48). The site is located ~13 km east of the Chennai outer ring road. The town is located ~20 km west of Chennai. The temple is in the middle of a residential setup with all necessary retail outlets and other basic amenities such as pharmacies, clinics, and ATMs in the vicinity. The surrounding area is a rapidly growing commercialized and residential setup with great connectivity options.

Existing Layout and Uses

The temple and the temple tank cover a land area of ~3 acres and are about 1000 years old built during the Chola dynasty in a Dravidian style architecture. The temple is a semi-open structure with the clustered placement of the main and other small shrines. The presiding deity is Karu Mariamman. She is in the sanctum sanctorum in a graceful form with all Parasakthi features. There is also a shrine for the Karu Mariamman idol with the idol made of wood. She is called Wooden Idol Amman. Some of the elements of the temple layout plan are:

⁴⁷ For Temple 39 A and 39 B

- A temple tank (to the east of the main temple) with several auspicious and healing beliefs.
- A Pongal shed near the temple tank, where people come from various places to their ancestral houses in the surroundings to celebrate Pongal with their neighbourhood community.
- A 5-tier Raja gopuram in the entrance welcoming the devotees.
- The temple has guest houses that can be booked on a priority basis and reserved for government officials and VIPs.
- A Washroom.
- An administration office.
- A Prasad stall.
- A small hall (mandapam) for recitals and other religious gatherings.
- Emergency exits in the Northern and southern directions.

The temple tank to the east of the main temple has the temple's access roads abutting it.

The Temple is currently accessed by pilgrims and religious tourists for religious purposes, offer worship, pooja, and celebrate festivals.

Other Land Available

The temple administration owns ~2.65 acres of land parcels on the backside of the temple. The parcel of land has a 9 m. wide road access which then further connects to Sri Veedapureeswarar Temple to the West.

Master Planning Considerations

Applicable Regulations

1. **Tamil Nadu Combined Development and Building Rules 2019** - As per Thiruverkadu Master Plan, the site lies in a **Mixed-use Residential**. The permissible uses include:

Residential Buildings | Parks, playgrounds, farms, gardens | Public Utility Buildings | Swimming Pool, Daily or weekly markets | Hotels, Restaurants,

Hostels, Dormitories, Boarding and Lodging houses | Retail establishments and shops, Departmental stores, Taxi stands, and car parking multi-level parking | Religious buildings.

2. TNHRCE Rules, 1959

- a. The allowed set of modifications/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions.
- b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.⁴⁸
- c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to religious activities and for the facilitation of Hindu pilgrim tourists.
- d. The HR&CE Dept. owned land can be leased for no more than 3 years.

3. **Height Regulations** – AAI height restrictions allow the construction of buildings up to ~75 m. (up to 25 floors) above mean sea level in the temple complex and surrounding areas.

Key Sensitivities

There are no specific environmental/social sensitivities to be addressed at the site.

Key Issues to Address

The key issues at the site identified at the Baseline Stage are summarised below along the 7A Framework:

1. **Attraction** – The site's attraction value as compared to other religious tourist destinations in the proximity is high. The temple's aesthetic beauty is also well maintained. The main reason for the temple being visited for the auspicious and other healing beliefs.

⁴⁸https://tnhrce.gov.in/resources/docs/actrule/2/28/TNHRCE_RULES_1959_PART11.pdf
https://tnhrce.gov.in/resources/docs/actrule/2/29/TNHRCE_RULES_1959_PART12.pdf

2. **Accessibility** – The temple is easily accessible by roadways; however, the current width of the access road is quite narrow in comparison to the temple’s popularity and the footfalls it receives during festivals. The access road is often observed to be congested and crowded with devotees in peak season.

Parking – A designated parking facility is available outside the temple premises. But the parking space is confined to ~20 cars. During peak seasons and festivals parking is done on the adjacent neighbouring streets. There is frequent overcrowding during peak season. Appropriate interventions for parking arrangements are required to avoid street congestion during peak seasons.

3. **Amenities** – The temple scored high on cleanliness but lacks in the provision of essential basic amenities.
- The site lacks the provision of toilet facilities for the tourists.
 - The site also has minimal parking provisions and retail outlets for tourist facilitation and local engagement.
 - It is adequately lit; fire safety measures and CCTV are also equipped to a sufficient extent at the site.
 - The site is also equipped with ramped access to certain places along with the presence of 6 wheelchairs.

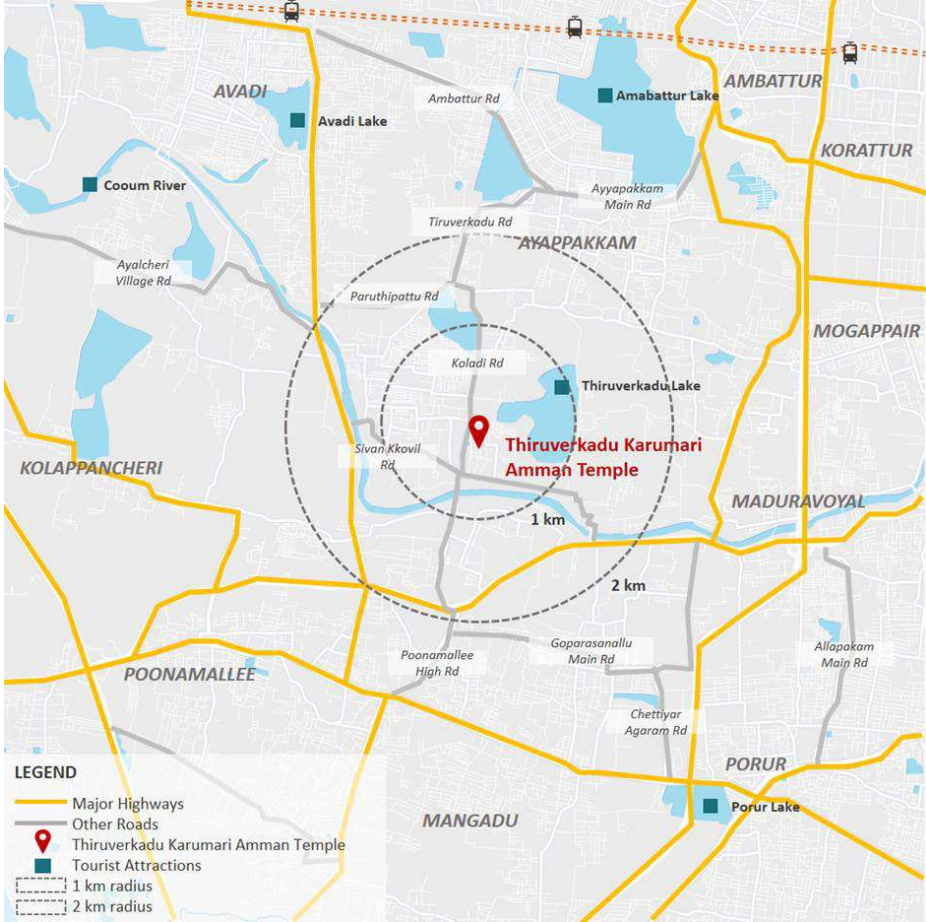
4. **Awareness** – The temple enjoys high popularity among local devotees and tourists from the neighbouring districts and surrounding states. In 2019, the temple received ~ 18 Lakh visitors, no foreign tourists visited the temple. The temple draws huge crowds during the Tamil festive season of Aadi and during January as many devotees gather to celebrate Pongal with their community

5. **Activities** – The preparation of boiled pot Pongal and ceremonies dedicated to special needs such as marriage and health issues are some of the most prominent festivals in the temple. However, it lacks in the provision of a good and serene recreational activity space for the pilgrims, and visitors who visit the site from distant locations.

6. **Accommodation – Despite the availability of guest house in the vicinity, it is reserved for the government officials and the VIPs who visit the temple. Accommodation for the common devotees and tourists' needs is usually fulfilled by the accommodation options available in Chennai (~20 km).**

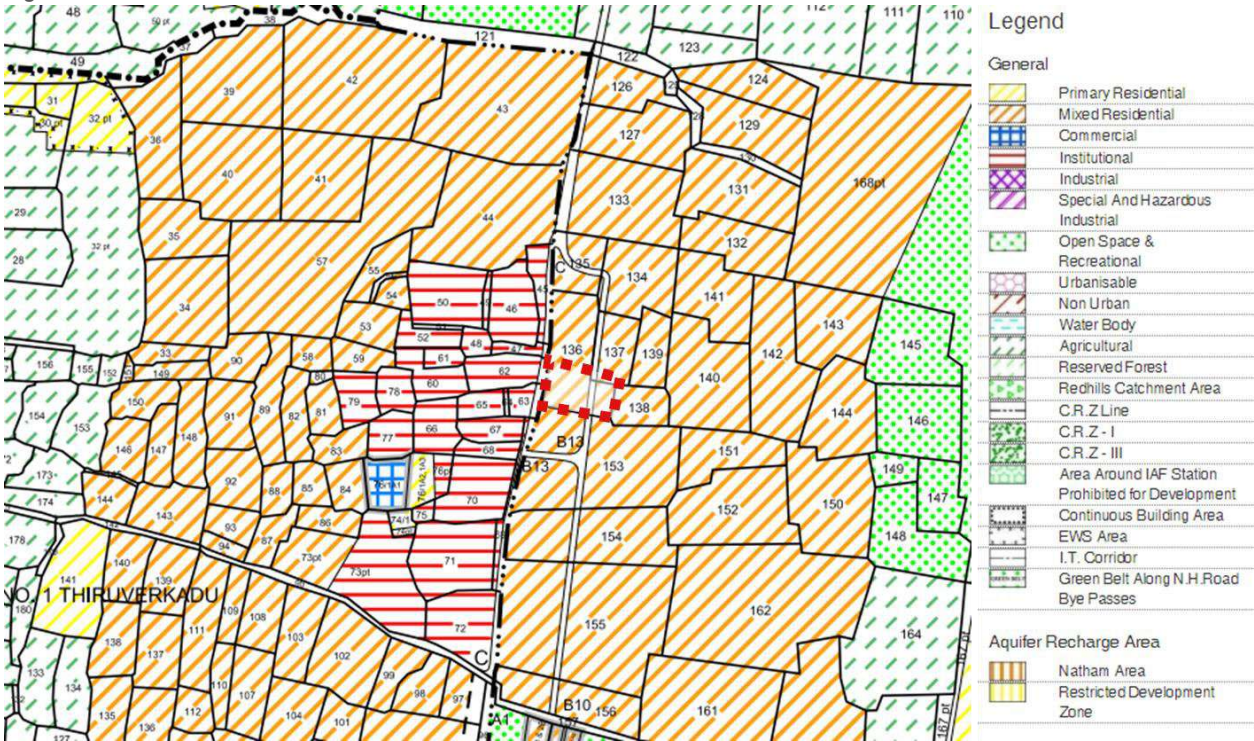
7. **Association with Communities** – There are no common or regular associations of the local communities with the temple. However, every year during Pongal the temple’s connection to the locals is observed to be at the next level. The Pongal-making ceremony is one of the highlights in the temple, it happens in the Pongal shed built in front of the temple tank. The faithful, cook Pongal with the tank water, which is said to fulfil their special needs.

Figure 15-1: Location and Existing Layout

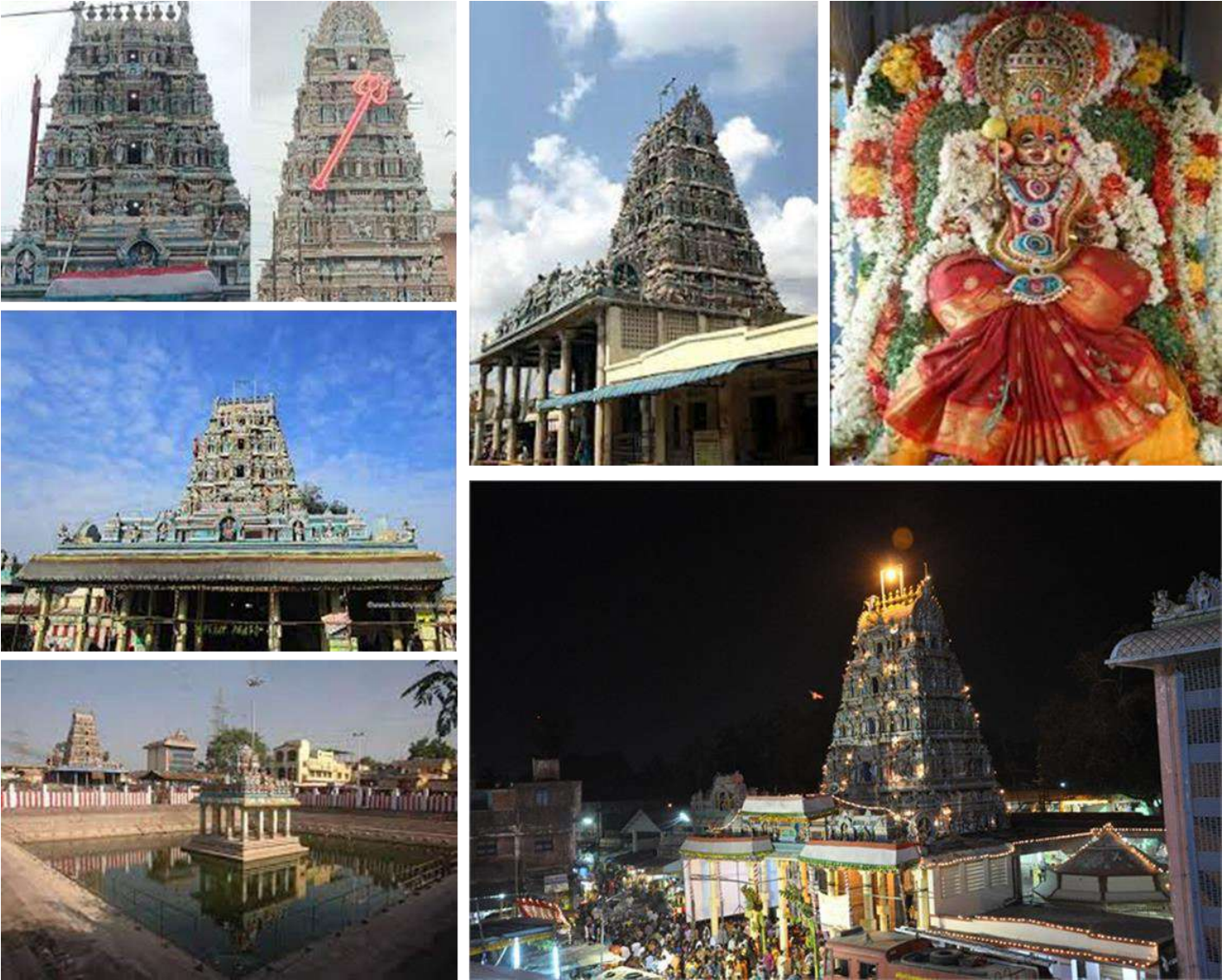


- Legends:
- 1 - Temple pond
 - 2 - Pongal shed
 - 3 - Main Entrance/ Rajagopuram
 - 4 - Perumal Shrine
 - 5 - Temple chariot
 - 6 - Shrines of different Amman
 - 7 - Ganapathi Shrine
 - 8 - Dhakshana moorthy shrine
 - 9 - Main Shrine

Figure 15-2: Site Land Use – Thiruverkadu Master Plan



Site Pictures



Vision for the Site

- The Thiruverkadu Temple, situated on the outskirts of Chennai is a well-known and acknowledged religious destination. The main source of tourist segment comprises of regional and a set of domestic tourists majorly from the neighbouring states This Parvathi Temple along with the Sri Vedapureeswarar Temple (Shiva Temple) is understood to be clustered to form a daylong itinerary that starts with a pilgrim visit and ends on a recreational visit to the lake.
- Considering the site's good accessibility, good awareness preserved construction style, and the auspicious beliefs associated with the temple tank, the temple is recognized as having a great potential of being developed as a pilgrim tourist destination.
- Despite the above considerations, the temple lags inadequate tourist facilitation and in the provision of several basic amenities, being an underdeveloped site. Moreover, the temple tank is also degrading due to algae accumulation.
- The temple's unrealized potential lies in its amazing architectural style (beautiful and intricate carvings on the internal and external gopurams). The temple with the provision of sufficient and basic tourist amenities can attract a greater number of pilgrims as well as tourist footfalls in comparison to the current figures.
- The temple authorities have ~2.65 acres of vacant land connected to the temple's western edge. The land parcel is connected to a ~6 m. wide road further connecting this temple to the Sri Veedapureeswarar Temple (~1.5 km to the west). A part of this land must be developed with the development of a Westside entrance to the main temple and some basic facilities, whereas the rest can be kept vacant for any future uses.
- The temple site and its other landholdings can be utilized for further development. It can be developed on the lines of regional benchmark religious tourist destinations such as **Kagvad / Khodaldham Temple (Virpur, Gujarat), Ranakpur Jain Temple (Rajasthan), under development Hastinapur Temple (U.P.)**. All these sites are a regional level, tourism sites for pilgrims coming from the state and a certain number of domestic tourists and owing to the ecstatic developments along with them like pedestrian-friendly landscaping, better pilgrim facilitation, and added attraction points before the main temple site, the temple

managed to attract tourists from across the state, neighbouring states with a small share of domestic tourists too. However, these temples managed to put forth all the developments on an extravagant and large scale. Considering the amount of land available at the site, the inspirational interventions adopted from the site must be taken up as per the site conditions and requirements.

- Owing to the temple's popularity and its proximity to Chennai, the temple can be developed on the idea of space development, pilgrim amenity provision, and site area development.



Hastinapur Temple, U.P.



Khodaldham Temple, Gujarat

- **Target Visitor** - The site is largely a pilgrim site, with significant footfall from neighbouring areas [as well as from rest of Tamil Nadu and other south Indian states] due to its rich religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.

Further, pilgrim groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang and elderly). The target visitors to be captured here are:

- **Regional Tourists** – to develop a religious site integrated into the circuit of Chennai – Tiruvallur - Kanchipuram temple sites, where visitors can visit temple attractions and witness the local culture.
- **Tourist Projections** – The site is categorized as a **Medium tourist site with low HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	1,793	4,945	11,677
High Value Tourists (HVT) (Both domestic and foreign)	7	19	46
Maximum Carrying Capacity	12,848		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Masterplan

Approach to Masterplanning

The objectives of master planning at this site include:

- **Improving visitors' experience** – through revamping and redevelopment of existing resources, amenities, and creation of interactive spaces.
- Creating a **welcoming environment around the site** for the visitors.
- Create a vibrantly landscaped environment around the temple tank for everyday visitors as well as for the rejuvenation of the temple tank.

Hard Interventions

1. Tourist Facilitation Centre – The temple currently lacks in terms of amenities such as cloakrooms, luggage rooms, inquiry desks, etc. Type 1 tourist facilitation centre is proposed to be developed at the site. A tourist facilitation/information centre can be helpful in the provision of such amenities at one place for first-time visitors, as well as for visitors from distant locations. The facilitation centre can be equipped with a small gallery, some retail shops, souvenir shops, etc. the architectural style of the building can bear a resemblance to the temple architecture with a modern touch.

Infrastructure Created: ~800 sqft of built-up area

2. Community Hall / F&B Area – A small Community hall with temple-managed F&B counters can be developed in the space around the facilitation centre. It can be useful for the pilgrims traveling long distances for temple visits. These halls in the non-peak seasons can be used for marriages or other cultural events associated with the temple.

Infrastructure Created: ~1000 sqft of a community hall

3. Open Display Area and Site Landscaping – A small open area near the temple's west entry can be utilized for the development of temple history, other significant information, and its connections with Sri Vedapureeswarar Temple. A paved display area with stone stands can be developed into a beautiful space that disseminated temple information (in conjunction with other pilgrim sites in the state).

Infrastructure Created: ~ 25 sqm of beautifully landscaped temple display area



Open Display Area



Tourist Facilitation Centre and Community Hall in Traditional Vernacular Style

4. Temple Tank Rejuvenation –

- The areas around the temple tank can be developed into a welcoming space for the pilgrims by redesigning the cross-section of the temple tank boundary.
- The temple tank is walled from all the sides, retaining that wall, the upper promenade of the steps can be developed into a landscaped space with a water-retaining plant, which can help in water harvesting.
- The steps of the temple tank can have a small path cutting its cross-section which can allow the flow of water from the areas on a higher slope to the tank. It can help in the revival of water levels in the temple tank.
- Simultaneously, on the outer side of the temple tank, a small space running all across the tank can be created for bioswales along with benches and lighting to create a recreational space for the pilgrims.

Infrastructure Created: ~680 sqm of area for water-retentive plantation, ~360 sqm of area for a walkway with benches.



5. An inclusive and Vibrant Entrance from the West side of the temple –

- The current temple entrance is from the east along with ~3 m. wide road adjacent to the temple tank. There are no entrance gate or signages developed along the access road to the temple site. It is only when we reach the final site an entrance with Raja gopuram can be witnessed.
- An entrance along the western side of the road is envisioned at the site, to create better access for the tourists. The tourists and pilgrims, from the west side entrance, can access the temple through ~6m. wide road with better access conditions which can reduce the chaos and congestions on the narrow road to the east of the main temple. The entry gate at the west can have two landscape separated spaces for vehicular movement and pedestrians.

Infrastructure Created – Temple Arch Gate, with two separate entries for Pedestrians with bollards and Vehicular Movement.

- #### 6. Development of Parking Spaces –
- Car parking, especially during the festivals and peak seasons is currently done along the side of the temple tank and on the streets, resulting in chaos on a narrow road at times. A new paved parking space must be developed along with the western entry gate of the temple. The parking must be situated along the vehicular entry side of the new entrance gate.

Infrastructure Created: ~800 sqm of the paved parking area

Soft Interventions

1. **Local Events** – The temple complex may remain closed after hours, but the community hall should remain open for hosting numerous cultural events.
2. **Cleanliness Initiative** – The temple surroundings and the areas around the temple tank can be kept clean through awareness drives, and various innovative initiatives like “Own your Street” where the locals residing in those areas along with the local cleaning workers can manage the cleanliness of the area.
3. **Site management** – The site management authority must develop regulations and guidelines on the limit of the crowd which can be allowed at one time inside the campus to avoid architectural and structural damages due to overcrowding, access timings can be made exclusive for high-value tourists, etc.
4. **Promotion** – The Tourism Department should promote Kailasanathar Temple, and events/activities held there, in the TN Assist app and on its various platforms, following the site changes.
5. **Boundary Improvement** - All interventions at the site should be respectful of the temple’s architecture and views from the street. Boundary walls on side of the temple where new developments are proposed.
6. **Site Landscaping** – The open areas along the site must be paved and developed with light pedestrian-friendly landscaping measures.

Amenities Plan

1. **Pay and Use Toilet Block** – ~6-8 units of identified pay and use toilet blocks must be incorporated with the tourist facilitation center. The location of the toilets shown in the master plan is an indicative representation.
2. **Drinking-Water Station** – ~5 drinking water station is proposed to be provided at the facilitation center along the Parking area.
3. **Garden Furniture** – Adequate garden furniture like benches, dustbins, bollards, etc. are proposed to be provided at the landscaped areas in the temple complex., along with the design guidelines for street furniture.

4. **Plantation and Landscaping** – Local planting is proposed to be used to weather the extreme climate. Planting would be used to beautify open-air exhibit areas, sidewalks, open-air theatre, and other visitor zones.
5. **Signage (Package 2)** – Package 2 signage is proposed to feature in Tamil, English, and Hindi.
6. **Technology Intervention (Package 1)** – Package 1 set of technology interventions are required to be deployed at the site. These include:
 - a. Compatibility with TN Assist App
 - b. CCTV coverage at 3 locations
 - c. Electronic visitor counters

Trunk Infrastructure

As this site has good accessibility, it does not need any improvements in the trunk infrastructure.

Projects Identified

#	Project Component	Scale
1	Tourist Facilitation Centre	~800 sqft
2	Community Hall	~1000 sqft
3	Display Area	~25 sqm
4	Parking Space	~800 sqm
6	Site Entrance Arch	~1 unit
7	General Landscaping Area	~0.5 acres
8	Areas with Bio Retentice Plantation	~680 sqm
9	Paved Walkways + Garden Furniture	~360 sqm
10	Site Boundary Masonry	~250 m
11	Toilets	~8 units
12	Drinking-Water Station	~5 units
13	Signage	Package 2
14	Technology Intervention	Package 1
15	Civic Upgradation - Cleanliness Drive	

Feasibility Assessment

The following considerations have been accounted for the cost projections of proposed interventions at this site:

- Feasibility of the cashflows projected here are accounted only for the additional components master planned.
- The current operating & maintenance cost of the temple have not been considered.

Capital Expenditures

The cost of the different project components proposed in the masterplan is calculated basis the current market price considering the appropriate escalations.

#	Project Component	Cost (INR Lakhs)
1	Tourist Facilitation Centre	16
2	Community Hall	60
3	Display Area	1
4	Parking Space	13
6	Site Entrance Arch	2
7	General Landscaping Area	2
8	Areas with Bio Retentive Plantation	5
9	Paved Walkways + Garden Furniture	1
10	Site Boundary Masonry	14
11	Toilets	20
12	Drinking-Water Station	3
13	Signage	3
14	Technology Intervention	1
15	Civic Upgradation - Cleanliness Drive	1
Total		INR 140 L

(Note: Cost of all the project components including the Total capex is rounded-off to the nearest whole value.)

Revenues - Proposed projects

(Note: The following considerations are applicable to the below mentioned revenue modules.

1. The revenues considered here are in addition to all the existing revenue currently accrued by the temple.
 2. The estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)
1. **Kiosks** – 2 leasable kiosk units at the proposed Facilitation centre with a rental earning of *INR 6 Lakhs*.
 2. **Parking** – About 44 parking spaces assuming a daily occupancy of 30%, would earn the temple an estimated revenue of *INR 1 Lakh*.
 3. **Space on Hire** – Assuming an average of an event per week, renting of the community hall for private religious events/ ceremonies would earn the temple *INR 2 Lakhs*.
 4. **Pay per use Toilets** – Assuming about an average of 15% of the visitors using the proposed pay per use toilet, would earn the temple an estimated *INR 74 Lakhs*.

The total revenues to the temple from the proposed capital projects is projected at an estimated *INR 85 Lakhs at Y5*.

Operating Expenditures

(Note: The following considerations are applicable to the below mentioned operational expense modules.

1. The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.
 2. The operations and maintenance currently undergone by the temple for its existing facilities are not considered in this section.
 3. The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)
1. **Manpower Costs** – This includes the additional personnel required to manage the proposed facilities.
 - a. A **Help-desk staff** at the facilitation centre.
 - b. A **security personnel** for the community hall and the parking.

- c. An **Administration staff** to overlook the operations of the community hall. The projected costs incurred is estimated at *INR 8 Lakhs*.
2. **Facility Maintenance costs** – This includes the costs incurred to maintain the cleanliness and the upkeep of the new facilities.
 - a. Maintenance of the **Open area**, which includes cleaners, gardeners, etc. for upkeep of the landscape in the temple.
 - b. Maintenance of the **Amenity block** - the cleaning of toilets, wash areas and drinking water stations.
 - c. Maintenance of the **Building facilities** – The general cleaning and upkeep of the community hall premise. The projected costs incurred is estimated at *INR 3 Lakhs*.
 3. **Repair & Maintenance costs** – This includes the expense incurred over time for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred. The projected costs incurred is estimated at *INR 2 Lakhs*.
 4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the retail kiosks, community event spaces in the temple surroundings. The projected costs incurred is estimated at *INR 50,000*.
 5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 *percentage* of the total capital expenditure incurred. The projected costs incurred is estimated at *INR 3 Lakhs*.
 6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections of the temple. The projected costs incurred is estimated at *INR 5 Lakhs*.

7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rental kiosks and the community hall are pegged to the rental revenues earned from the respective sources. The projected costs incurred is estimated at *INR 27 Lakhs*.
8. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc. The projected maintenance cost is estimated at a lumpsum of *INR 50,000 per annum*.

The total operational expenditure incurred by the temple from the proposed capital projects is projected at an estimated *INR 50 Lakhs at Y5*.

Given that the estimated revenues (*INR 85 Lakhs*) from the proposed capital expenditure projects exceeds the operational expenses (*INR 50 Lakhs*) incurred, it can be concluded that the Interventions proposed at the site are Self-Sustainable and therefore beneficial to the temple.

Phasing & Funding Agencies

The development of the projects is to be taken up by HR & CE department and the implementation of these can be carried out as follows:

1. The implementation of the **Technology package** (i.e., Smart-App integrations, Virtual guides, NFC tags, etc.) and the **cleanliness drive** as part of the Civic Upgradation in and around the site would be taken up by the SPV provisioned by the tourism department.
2. The **Parking facility** is to be undertaken by the temple body through the addition of a security personnel, the additional workforce for parking management is included in the operating expenses (*Manpower cost*).
3. The **kiosk units** at the facilitation centre can be leased/ rented out to private operators to host souvenir shops to display and sell temple related religious arts/ craft/ pooja items.
4. **Community hall** is to be rented out by the temple management to the devotees/ private operators to conduct ceremonies like marriage, etc. and religious events during festivals.

Developmental phasing

#	Project Component	Agencies in Charge	Phasing of Development
1	Tourist Facilitation Centre	HR & CE Dept.	Y2 – Y5
2	Community Hall	HR & CE Dept.	Y2 – Y5
3	Display Area	HR & CE Dept.	Y0 – Y2
4	Parking Space	HR & CE Dept.	Y0 – Y2
6	Site Entrance Arch	HR & CE Dept.	Y0 – Y2
7	General Landscaping Area	HR & CE Dept.	Y0 – Y2
8	Areas with Bio Retentive Plantation	HR & CE Dept.	Y2 – Y5
9	Paved Walkways	HR & CE Dept.	Y0 – Y2
10	Site Boundary Masonry	HR & CE Dept.	Y0 – Y2
11	Toilets	HR & CE Dept.	Y0 – Y2
12	Drinking-Water Station	HR & CE Dept.	Y0 – Y2
13	Signage	HR & CE Dept.	Y0 – Y2
14	Technology Intervention	HR & CE Dept.	Y0 – Y2
15	Cleanliness Drive	HR & CE Dept.	Y0 – Y2

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 6,000⁴⁹ man-days of construction labour (spread across 1-2 years of implementation)

⁴⁹ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 2 Persons⁵⁰
- Retail and F&B spaces = 5 man-days per day⁵¹

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – As discussed above
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect, and induced effects is estimated as 15,000 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 1,175 Cr. at the site.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

- As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
- Assumed cost of labour assumed for computation = INR 700 per day
- Cumulative labour man-days = 30% * CAPEX / 700

⁵⁰ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

⁵¹ Assuming average 2.5 persons per kiosk / shop

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and suppliers will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

Figure 15-3: Proposed Master Plan – Thiruverkadu Amman Temple



16. Sri Vedapureeswarar Temple, Thiruverkadu

Site Details

District:	Tiruvallur
Name of Site:	Sri Vedapureeswarar Temple
Site No:	Site 39B of 295
Site Use:	Temple
Category:	A (Temple)
Location:	13.0715, 80.1126
Land Area:	~2.26 acres
Peak footfalls:	10,000 per day (January – February, May, November – December)
Operator:	HR & CE Dept.
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom. – 17.96 lakhs (2019 - 20) For. – 3.500 (2019 - 20)
Site Revenues:	INR 12 Crores ⁵² (FY 2019 – 20)
Site Orientation:	Pilgrim
Site Potential:	Medium Tourism Site
HVT Potential:	Low HVT Potential
Connectivity	
a. Railway Station:	~20 km (Chennai)
b. Airport:	~25 km (Chennai)
c. Highway:	~2.5 km from NH4

Trails featured on: **Nil (Pure Pilgrim Temple)**

The Sri Vedapureeswarar Temple located in Thiruverkadu is a Lord Shiva Temple usually visited as a pair along with Arulmigu Devi Kaumariamman Temple (Parvathi Temple) by the devotees. The temple in conjunction with Arulmigu Devi Kaumariamman Temple is immensely acknowledged and receives a sizable number of visitors from the districts across Tamil Nadu and the neighbouring states. However, it lacks in the provision of several essential basic tourist amenities. This temple can be clustered with Arulmigu Devi Kaumariamman temple which is about 1.5 km away to be charted as a daylong pilgrim tour to increase footfalls, since the latter is widely known and channels the visitors to the Sri Vedapureeswarar Temple.

Existing Condition

Location

The temple is located at a distance of ~2.7 km from the Chennai – Vellore highway (NH 48). The site is located ~13 km east of the Chennai outer ring road. The town is located ~20 km west of Chennai.

The temple is in the middle of a residential setup with all necessary retail outlets and other basic amenities such as pharmacies, clinics, and ATMs in the vicinity. The surrounding area is a rapidly growing commercialized and residential setup with great connectivity options.

Existing Layout and Uses

The temple and the temple tank cover an area of approximately 2.26 acres and the temple has a built-up area of 1.5 acres. The temple tank is towards the east of the main temple across the temple's access road. The temple's main entrance is from the east, however, there are 3 other emergency exits situated on all the other 3 sides of the temple.

⁵² For Temple 39 A and 39 B

The temple campus occupies one main shrine in the centre of the entire campus, while the other small shrines present in the campus can be seen on the north and south of the main entrance. The temple campus additionally houses a kitchen and a Charity hall present to the south-east corner of the campus.

The Temple is currently accessed by pilgrims and religious tourists for religious purposes, offer worship, pooja, and celebrate festivals.

Other Land Available

Other than the temple land and temple tank the temple administrator does not own any vacant land parcels near the temple site.

Master Planning Considerations

Applicable Regulations

1. **Tamil Nadu Combined Development and Building Rules 2019** - As per Thiruverkadu Master Plan, the site lies in a **Mixed-use Residential**. The permissible uses include:

Residential Buildings | Parks, playgrounds, farms, gardens | Public Utility Buildings | Swimming Pool, Daily or weekly markets | Hotels, Restaurants, Hostels, Dormitories, Boarding and Lodging houses | Retail establishments and shops, Departmental stores, Taxi stands, and car parking multi-level parking | Religious buildings.

2. TNHRCE Rules, 1959

- a. The allowed set of modifications/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions.
- b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.⁵³

- c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to religious activities and for the facilitation of Hindu pilgrim tourists.
- d. The HR&CE Dept. owned land can be leased for no more than 3 years.

3. **Height Regulations** – AAI height restrictions allow the construction of buildings up to ~75 m. (up to 25 floors) above mean sea level in the temple complex and surrounding areas.

Key Sensitivities

There are no specific environmental/social sensitivities to be addressed at the site.

Key Issues to Address

The key issues at the site identified at the Baseline Stage are summarised below along the 7A Framework:

1. **Attraction** – The site's attraction value as compared to other religious tourist destinations in the proximity is high, however, in comparison to the Thiruverkadu Amman Temple, it is less acknowledged. The temple's aesthetic beauty is well maintained, but the areas around the temple tank seem to be dead during non-festival times. The tourists who visit the Arulmigu Devi Karumariamman Temple ~1.5 km from this temple make it a point to visit this temple and vice-versa.
2. **Accessibility** – The temple site is located at a close knot distance from the National Highway, with plenty of travel options available along these roads. However, the last ~3 km connectivity to the temple includes narrow roads with residential buildings along the sides prone to traffic congestion. The site enjoys excellent rail access from Chennai Central Railway Station for a nominal price.

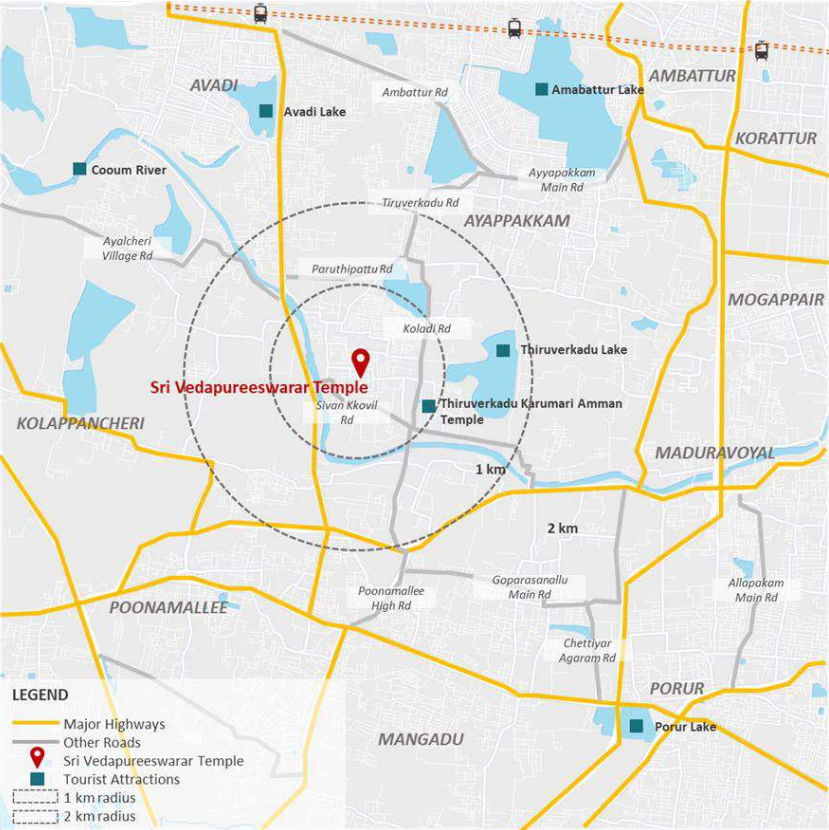
Parking – A designated informal parking facility is available outside the temple premises. During peak seasons and festivals parking is done on the adjacent neighbouring streets. There is frequent overcrowding during peak season. Appropriate interventions for parking arrangements are required to avoid street congestion during peak seasons.

⁵³https://tnhrce.gov.in/resources/docs/actrule/2/28/TNHRCE_RULES_1959_PART11.pdf
https://tnhrce.gov.in/resources/docs/actrule/2/29/TNHRCE_RULES_1959_PART12.pdf

- 3. Amenities** – Minimal to a negligible quantum of a basic pilgrim and tourist amenities are provided at the temple.

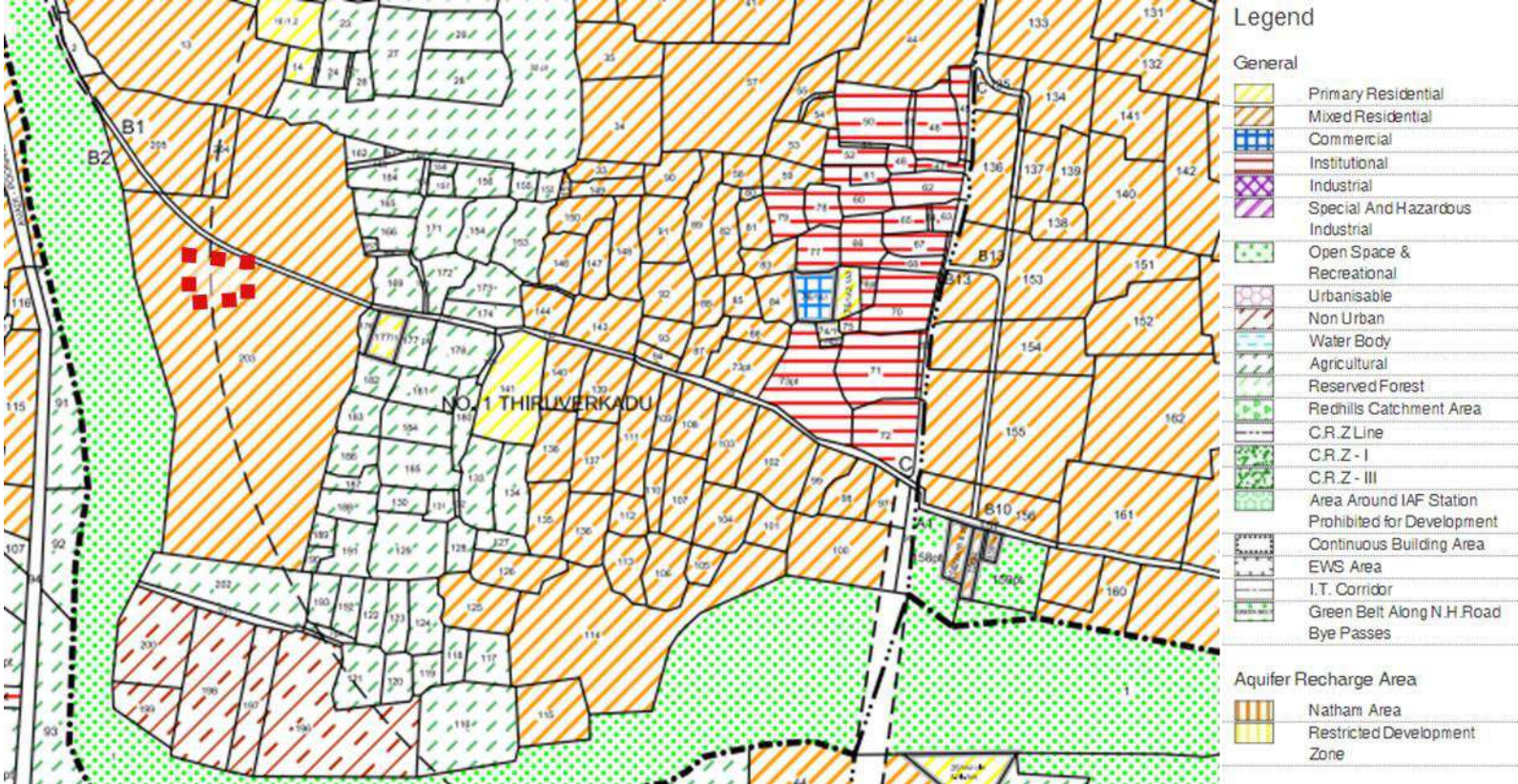
 - The temple site and surroundings are kept clean and are equipped with facilities for drinking water, CCTVs, fire safety measures, wheelchairs for differently abled and elderly tourists, etc.
 - The site lacks the provision of toilet facilities for the tourists within the site, and the quality of public toilets present near the temple site is poor
 - The site also lacks in the provision of retail outlets for tourist facilitation and local engagement.
 - There are no proper way-finding and directional signages to travel from Thiruverkadu Amman Temple or Vice Versa.
- 4. Awareness** – The temple's popularity amongst the devotees and tourist's acknowledgement is due to its location being close to the Kumari Amman temple, many people usually visit both the temples together. This temple is a regionally acknowledged and significant pilgrim site among the Lord Shiva devotees.
- 5. Activities** – The preparation of boiled pot Pongal and ceremonies dedicated to special needs such as marriage and health issues are some of the most prominent festivals in the temple. However, it lacks in the provision of a good and serene recreational activity space for the pilgrims, and visitors who visit the site from distant locations.
- 6. Accommodation** – Despite the availability of a guest house in the 5 km vicinity, it is reserved for the government officials and the VIPs who visit the temple. Accommodation for the common devotees and tourists' needs is usually fulfilled by the accommodation options available in Chennai (~20 km).
- 7. Association with Communities** – There are no common or regular associations of the local communities with the temple. However, every year during Pongal the temple's connection to the locals is observed to be at the next level. The Pongal-making ceremony is one of the highlights in the temple

Figure 16-1: Location and Existing Layout

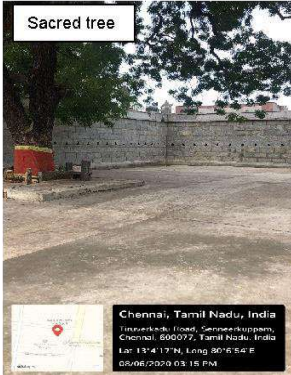
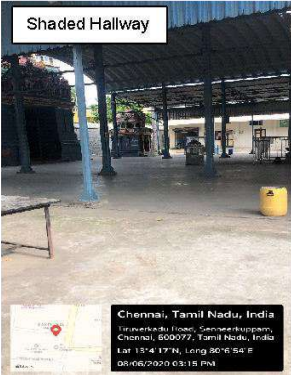
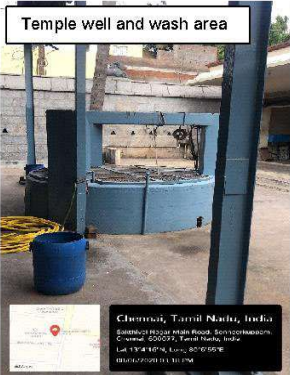
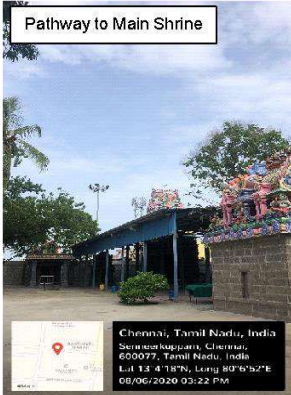
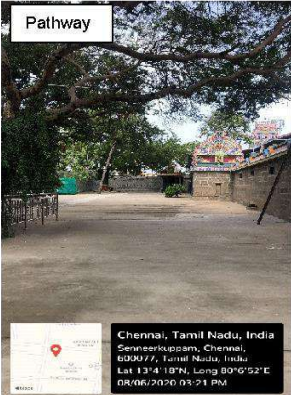
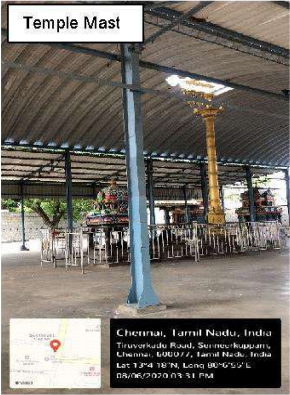


- Legends:
- 1 – Temple Tank
 - 2 – Gopuram
 - 3 – Main Temple Shrine
 - 4 – Emergency/other exits
 - 5 – Charity hall
 - 6 – Kitchen
 - 7 – Other shrines

Figure 16-2: Site Land Use – Thiruverkadu Master Plan



Site Pictures



Vision for the Site

- Sri Vedapureeswarar Temple situated on the outskirts of Chennai is usually visited as a pair along with Arulmigu Devi Karu Mariamman Temple by the devotees. The temple gets a sizeable number of visitors from the districts across Tamilnadu and the neighbouring states. This temple is envisioned to be clustered with Arulmigu Devi Karu Mariamman temple (~1.5 km) east of this temple as a daylong pilgrim tour to increase footfalls since the latter is widely known and channels the visitors to the Sri Vedapureeswarar Temple.
- Considering the site’s good accessibility, good awareness, preserved construction style, and the auspicious beliefs associated with the temple tank, the temple is recognized as having a great potential of being developed as a pilgrim tourist destination.
- Despite the above considerations, the temple lags inadequate tourist facilitation and in the provision of several basic amenities, being an underdeveloped site. Moreover, the temple tank is also degrading due to the accumulation of waste and low water retention capacity.
- **Target Visitor** - The site is largely a pilgrim site, with significant footfall from neighbouring areas as well as from rest of Tamil Nadu and other south Indian states due to its rich religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.

Further, pilgrims groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang and elderly).The target visitors to be captured here are:

- **Regional Tourists** – to develop a religious site integrated into the circuit of Chennai – Tiruvallur - Kanchipuram temple sites, where visitors can visit a temple and have a quality time around the site.
- **Tourist Projections** – The site is categorized as a **Medium tourism site** with **low HVT potential**. Past footfall data for the site has been received from sources like the site manager and TTDC’s compiled data. Based on the available data about the

historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	1,793	4,945	8,871
High Value Tourists (HVT) (Both domestic and foreign)	7	19	35
Maximum Carrying Capacity	8,906		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Approach to Master Planning

The temple administration does not own any vacant land parcels near the site. Henceforth the scope of master planning activity includes the redevelopment of the existing spaces and provision of basic amenities at the site. Owing to a connection amongst two temples (Sri Vedapureeswarar Temple and Thiruverkadu Amman Temple), the spaces around the later temple are common.

Considering the site development potentials and limitations, the site can be developed on the idea of developing vibrant spaces around the tank, while improving the water-retentive capacity of the tank and creating a better tourist environment for ease of movement around the site.

The objectives of master planning at this site include:

- **Improving visitors’ experience** – through revamping and redevelopment of existing resources, amenities, and creation of interactive spaces.
- Create a vibrantly landscaped environment around the temple tank for everyday visitors as well as for the rejuvenation of the temple tank.

Hard Interventions

1. **Tourist Facilitation Centre** – The temple currently lacks in terms of amenities such as cloakrooms, luggage rooms, inquiry desks, etc. Type 1 tourist facilitation centre is proposed to be developed at the site. A tourist facilitation/information centre can be helpful in the provision of such amenities at one place for first-time visitors, as well as for visitors from distant locations. The facilitation centre can be equipped with some retail shops, F&B kiosks, etc. the architectural style of the building can bear a resemblance to the temple architecture with a modern touch.

Infrastructure Created: ~800 sqft of built-up area

2. **Development of Parking Spaces** – Designated parking facility is available outside the temple premises, however, it is not well developed and merged along the road edges. During peak seasons and festivals parking is done on the adjacent neighbouring streets. The Parking spaces outside the temple premises and near the temple tank can be organized, paved, and turned into formalized parking spaces. Furthermore, to accommodate the additional vehicles during festivals and peak season, the area in the latter part of the temple premises can be used as a parking space.

Infrastructure Created: ~500 sqm of the paved parking area along the road and Temple Tank, ~600 sqm of a paved parking area to the later part of the temple (to be used only during peak seasons)

3. **Temple Tank Rejuvenation** –

- The areas around the temple tank can be developed into a welcoming space for the pilgrims by redesigning the cross-section of the temple tank boundary.
- The temple tank is walled from all the sides, retaining that wall, the upper promenade of the steps can be developed into a landscaped space with a water-retaining plant, which can help in water harvesting.
- The steps of the temple tank can have a small path cutting its cross-section which can allow the flow of water from the areas on a higher slope to the tank. It can help in the revival of water levels in the temple tank.
- Simultaneously, on the outer side of the temple tank, a small space running all across the tank can be created for bioswales along with benches and lighting to create a recreational space for the pilgrims.

Infrastructure Created: ~680 sqm of area for water-retentive plantation, ~360 sqm of area for a walkway with benches.



Cross-Section of Area Around Temple Tank



Tourist Facilitation Centre in Traditional Vernacular Style



Design of Parking Spaces Along the Road Edge

Soft Interventions

1. **Cleanliness Initiative** – The temple surroundings and the areas around the temple tank can be kept clean through awareness drives, and various innovative initiatives like “Own your Street” where the locals residing in those areas along with the local cleaning workers can manage the cleanliness of the area.
2. **Promotion** – The Tourism Department should promote Kailasanathar Temple, and events/activities held there, in the TN Assist app and on its various platforms, following the site changes.
3. **Site Landscaping** – The open areas along the site must be paved and developed with light pedestrian-friendly landscaping measures.
4. **Marketing & Communication**
 - a. The display area at Thiruverkadu Amman Temple can be utilized for conveying information about this site too, and also to explain the connection between both the temples.
 - b. A separate plan for the development of Thiruvekedu Lake can be taken up to spread awareness about the location and to attract additional tourists, recreational activities can be organized to entertain tourists.

Amenities Plan

1. **Pay and Use Toilet Block** – ~2 units of identified pay and use toilet blocks must be incorporated with the tourist facilitation centre. The location of the toilets shown in the master plan is an indicative representation.
2. **Street Furniture** – Adequate street furniture like benches, dustbins, bollards, etc. are proposed to be provided at the landscaped areas in the temple complex., along with the design guidelines for street furniture.
3. **Plantation and Landscaping** – Local planting is proposed to be used to weather the extreme climate. Planting would be used to beautify open-air exhibit areas, sidewalks, open-air theatre, and other visitor zones.
4. **Signage (Package 1)** – Owing to the small area of the site, package 1 signage is proposed to feature in Tamil, English, and Hindi. Both directional signage and informational signage should be used, as per the design guidelines in Vol A.

5. **Technology Intervention (Package 1)** – Package 1 set of technology interventions are required to be deployed at the site. These include:
 - a. Compatibility with TN Assist App
 - b. CCTV coverage at 3 locations
 - c. Electronic visitor counters

Trunk Infrastructure

As this site has good accessibility, it does not need any improvements in the trunk infrastructure.

Projects Identified

#	Project Component	Scale
1	Parking Space	~1100 sqm
2	General Landscaping Area	~0.49 acres
3	Areas with Bio Retentive Plantation	~600 sqm
4	Paved Walkways + Garden Furniture	~600 sqm
5	Toilets	~2 units
6	Signage	Package 1
7	Technology Intervention	Package 1
8	Civic Upgradation - Cleanliness Drive	

Feasibility Assessment

The following considerations have been accounted for the cost projections of proposed interventions at this site:

- Feasibility of the cashflows projected here are accounted only for the additional components master planned.
- The current operating & maintenance cost of the temple have not been considered.

Capital Expenditures

The cost of the different project components proposed in the masterplan is calculated basis the current market price considering the appropriate escalations.

#	Project Component	Cost (INR Lakhs)
1	Parking Space	18
2	General Landscaping Area	2
3	Areas with Bio Retentive Plantation	4
4	Garden Furniture	1
6	Paved Walkways	1
7	Toilets	20
8	Signage	1
9	Technology Intervention	1
Total		INR 45 L

(Note: Cost of all the project components including the Total capex is rounded-off to the nearest whole value.)

Revenues - Proposed projects

(Note: The following considerations are applicable to the below mentioned revenue modules.

1. The revenues considered here are in addition to all the existing revenue currently accrued by the temple.
2. The estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)

1. **Parking** – About 60 parking spaces assuming a daily occupancy of 30%, would earn the temple an estimated revenue of *INR 1 Lakh*.
2. **Pay per use Toilets** – Assuming about an average of 15% of the visitors using the proposed pay per use toilet, would earn the temple an estimated *INR 74 Lakhs*.

The total revenues to the temple from the proposed capital projects is projected at an estimated *INR 75 Lakhs at Y5*.

Operating Expenditures

(Note: The following considerations are applicable to the below mentioned operational expense modules.

1. The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.
2. The operations and maintenance currently undergone by the temple for its existing facilities are not considered in this section.
3. The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)

1. **Manpower Costs** – This includes the additional personnel required to manage the proposed facilities.
 - a. A **security personnel** for the parking.
The projected costs incurred is estimated at *INR 2 Lakhs*.
2. **Facility Maintenance costs** – This includes the costs incurred to maintain the cleanliness and the upkeep of the new facilities.
 - a. Maintenance of the **Open area**, which includes cleaners, gardeners, etc. for upkeep of the landscape in the temple.
 - b. Maintenance of the **Amenity block** - the cleaning of toilets, wash areas and drinking water stations.
The projected costs incurred is estimated at *INR 3 Lakhs*.
3. **Repair & Maintenance costs** – This includes the expense incurred over time for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
The projected costs incurred is estimated at *INR 1 Lakhs*.
4. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.
The projected costs incurred is estimated at *INR 1 Lakhs*.
5. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections of the temple.
The projected costs incurred is estimated at *INR 5 Lakhs*.

6. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations.

The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175* per kilolitre. The projected costs incurred is estimated at *INR 21 Lakhs*.

7. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

The projected maintenance cost is estimated at a lumpsum of *INR 50,000 per annum*.

The total operational expenditure incurred by the temple from the proposed capital projects is projected at an estimated *INR 35 Lakhs at Y5*.

Given that the estimated revenues (*INR 75 Lakhs*) from the proposed capital expenditure projects exceeds the operational expenses (*INR 35 Lakhs*) incurred, it can be concluded that the Interventions proposed at the site are Self-Sustainable and therefore beneficial to the temple.

Phasing & Funding Agencies

The development of the projects is to be taken up by HR & CE department and the implementation of these can be carried out as follows:

1. The implementation of the **Technology package** (i.e., Smart-App integrations, Virtual guides, NFC tags, etc.) and the **cleanliness drive** as part of the Civic Upgradation in and around the site would be taken up by the SPV provisioned by the tourism department.
2. The **Parking facility** is to be undertaken by the temple body through the addition of a security personnel, the additional workforce for parking management is included in the operating expenses (*Manpower cost*).

⁵⁴ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.

Developmental phasing

#	Project Component	Agencies in Charge	Phasing of Development
1	Parking Space	HR&CE Dept.	Y0 – Y2
2	General Landscaping Area	HR&CE Dept.	Y0 – Y2
3	Areas with Bio Retentive Plantation	HR&CE Dept.	Y0 – Y2
4	Paved Walkways + Garden Furniture	HR&CE Dept.	Y0 – Y2
5	Toilets	HR&CE Dept.	Y0 – Y2
6	Signage	HR&CE Dept.	Y0 – Y2
7	Technology Intervention	HR&CE Dept.	Y0 – Y2
8	Civic Upgradation - Cleanliness Drive	HR&CE Dept.	Y0 – Y2

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 1,950⁵⁴ man-days of construction labour (*spread across 1-2 years of implementation*)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 2 Persons⁵⁵

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – As discussed above

- As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
- Assumed cost of labour assumed for computation = INR 700 per day
- Cumulative labour man-days = 30% * CAPEX / 700

⁵⁵ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect, and induced effects is estimated as. 4,800 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 895 Cr. at the site .

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

Figure 16-3: Proposed Master Plan – Sri Veedapureeswarar Temple



17. Masilamaneeswarar Temple, Thirumullaivayil

Site Details

District:	Tiruvallur
Name of Site	Masilamaneeswarar Temple
Site No:	Site 40 of 295
Site Use:	Temple
Category:	A (Temple)
Location:	13.1349, 80.1442
Land Area:	1.5 acres (Temple) & 2 acres (Temple tank)
Peak footfalls:	20,000 per day (February – March, May – July)
Operator:	HR & CE Dept.
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom. – 12 lakhs (2019 – 20) For. – 24,000 (2019 – 20)
Site Revenues:	INR 20 lakhs (2019 – 20)
Site Orientation:	Pilgrim
Site Potential:	Medium Tourism Site
HVT Potential:	Low HVT Potential
Connectivity	
a. Railway Station:	~20 km (Chennai)
b. Airport:	~25 km (Chennai)
c. Highway:	~2.5 km from NH4
Trails featured on:	Nil (Pure Pilgrim Temple)

The Masilamaneeswarar temple is located in Thirumullaivayil and falls within the Greater Chennai city limits, making it easily accessible by the tourists. The temple is one among the Tri-Sakthi temples and has great religious significance. Since it is believed by the devotees that visiting all the Tri-Sakthi temples on a single day would bring good blessings, a pilgrim itinerary connecting all the three temples could increase footfalls across the three temples.

Scope for interventions includes rejuvenation of temple tank and steps to form a vibrant cultural space, besides enhancing and maintaining basic public amenities to improve tourist engagement.

Existing Condition

Location

The Masilamaneeswarar Temple, Thirumullaivayil is a Hindu Temple dedicated to Lord Shiva located in the Tiruvallur district on the Chennai-Avadi road. Thirumullaivoyalis is one of the temple towns of Chennai which is located 20 km west of Chennai City. The temple complex is 2.5 km from Thirumullaivayil Railway station. The temple is situated in a traditional mixed-residential neighbourhood. Prominent tourist landmarks present around the site are Kuthukkal Muneeswaran Temple, Pachaiamma Temple, and Vaishnavi Temple.

Existing Layout

The Site covers an area of 1.5 acres of temple complex and 2 acres of temple tank. The temple is made in Dravidian architecture form. It has five-tier grand Rajagopuram which forms the southern entrance to the temple. The vimana (roof) of the sanctum has an element of "Gaja Prishtam", looks like the rear of an elephant. Some elements of the Pallava architecture form is also seen in the lion pillars of the Vinayakar shrine. The Nandi faces away from the sanctum in the east direction. The two Erukku pillars are 11 ft tall and have a perimeter of 2.5 ft which is at the front of the sanctum having inscriptions from the period of Uttama Chola. There are shrines of

Rishabantikadevar, Natarajar, and Bhikshatanar on the premises. This beautiful temple has one temple tank and one large Temple Pond.

Existing Uses

The Masilamaneeswarar Temple enjoys immense popularity among locals and tourists. On most days, large crowds visit the temple for worship. Some non-commercial events are also hosted at the temple, such as dance recitals, music concerts, etc. The other uses housed on the site include:

- Retail outlets – Bookstall
- Offices of the administrators
- Temple Kitchen
- Temple Tank
- Shrines of Shri Kodyidai Amman, Rishabantikadevar, Natarajar and Bhikshatanar
- A small place is rented for cultural performance (functions/dance) etc. – INR 1000.

The prominent festivals celebrated at the temple are Brahmotsavam, wedding festival on the Vaikasi Visakam day, Masi Float festival and Vasantha Utsavam.

Other Land Available

Apart from the 3.5-acre land used for the temple and the Temple tank, the temple also owns 58 acres of land which is distributed across the Thiruvallur district. Some of the vacant land parcels available in close proximity to the temple include:

- 6 acres of Land in Vallar nagar about 5 kms from the temple complex - Block number: 22; Town survey number: 52.
- 2 acres of land near the Be Well hospital, Ambattur, which is about 2 kms away.

Master Planning Considerations

Applicable Regulations

1. **Tamil Nadu Combined Development and Building Rules, 2019** – As per Chennai Metropolitan Area Master Plan, site lies in a Mixed-Residential Zone. The permissible uses include:

Residential Buildings | Parks, play grounds, farms, gardens | Public Utility Buildings | Swimming Pool, Daily or weekly markets | Hotels, Restaurants,

Hostels, Dormitories, Boarding and Lodging houses | Retail establishments and shops, Departmental stores, Taxi stands and car parking multi-level parking | Religious buildings.

2. TN HRCE Rules, 1959

- a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions
- b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.
- c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to the religious activities and for the facilitation of Hindu pilgrim tourists.
- d. The HR&CE Dept. owned land can be leased for a period of no more than 3 years.

Key Sensitivities

There is no specific environmental/social sensitivity to be addressed at the site.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

1. **Attraction** – The main reason for the temple being visited is due to its rich history and Dravidian architecture. The most notable feature of this temple is its five-tier Rajagopuram which is beautifully built with a sculpture of God and Goddess and can be seen from multiple streets leading to the temple. The temple draws huge crowds during the Tamil festive season i.e., Chithirai Brahmotsavam in April – May.
Secondly, the Shri Kodyidai Amman temple, one of the Tri-Shakti is also situated within the Masilamaneeswarar temple premises. It is considered to be auspicious to visit all the three Tri Shakti temples on the same day, especially on the full moon.

- 2. Accessibility** – The temple is situated 30 km west of Chennai city and has easy access to rail, road, and air connectivity. It can be accessed via Chennai-Avadi road. However, the last mile connectivity to the temple includes narrow roads with potholes. The nearest bus stop and railway station is about 100 meters and 2.5 km away respectively. The preferred modes of transport to reach the site by the people are buses, auto, and private cars.
- 3. Amenities** – The temple scored high on cleanliness but lacks certain amenities. Street lighting, safety security & divyaang friendly measures are present inside the site. The site lacks the following amenities.
 - No seating and waiting area
 - No shaded pathway
 - No frisking/ scanning of visitors.
 - Narrow access road with potholes
 - No pilgrim souvenir and F&B shop present inside the temple site
 - No amenities such as waiting hall, luggage/cloakroom, and tourist information centre.
- 4. Awareness** – The temple enjoys popularity among locals and tourists. In 2019, the temple received visitors from the surrounding districts and states. But the proportion of foreign tourists were less at ~2% of the total incoming crowd. Many tourists come from Andhra Pradesh and Rajasthan. The HRCE department maintains a temple website with relevant information.
- 5. Activities** – Apart from the daily rituals (pooja), the temple does not offer any activities. There are some cultural activities such as feasts, dance recitals, music concerts, etc that can be observed mostly during festival times.
- 6. Accommodation** – Being situated in a semi-urban setup, there are no options for accommodation in the form of hotels or hostels for tourists within a 1 km radius, however, there are multiple budget hotels on the highway which is about ~3 km away with an average tariff of INR 1200.
- 7. Association with Community** – On special occasions, it attracts domestic visitors from Andhra Pradesh, Kerala, Karnataka, and foreign tourists from Malaysia. However, visitors don't spend much time around the temple as there are not enough activities to capture their attention.

Figure 17-1: Location and Existing Layout

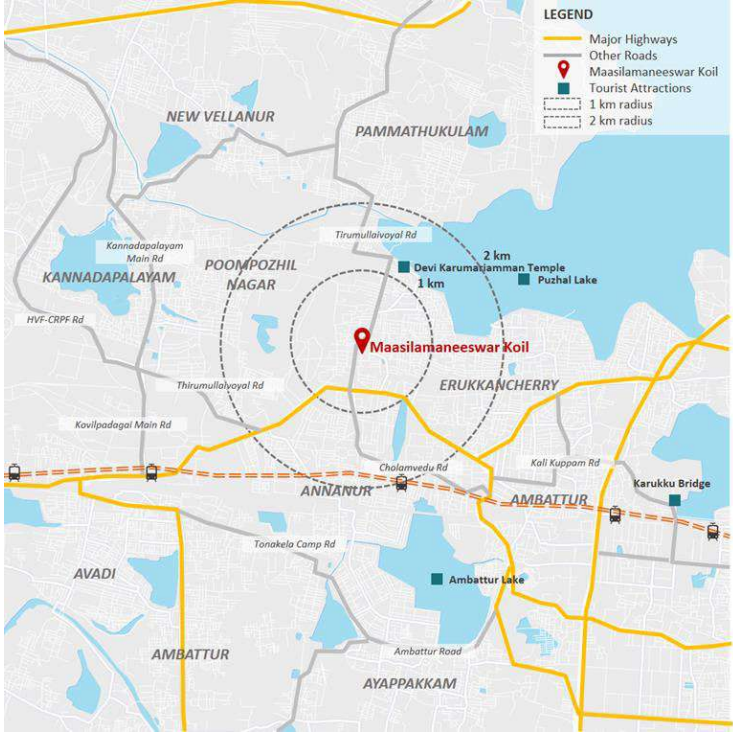
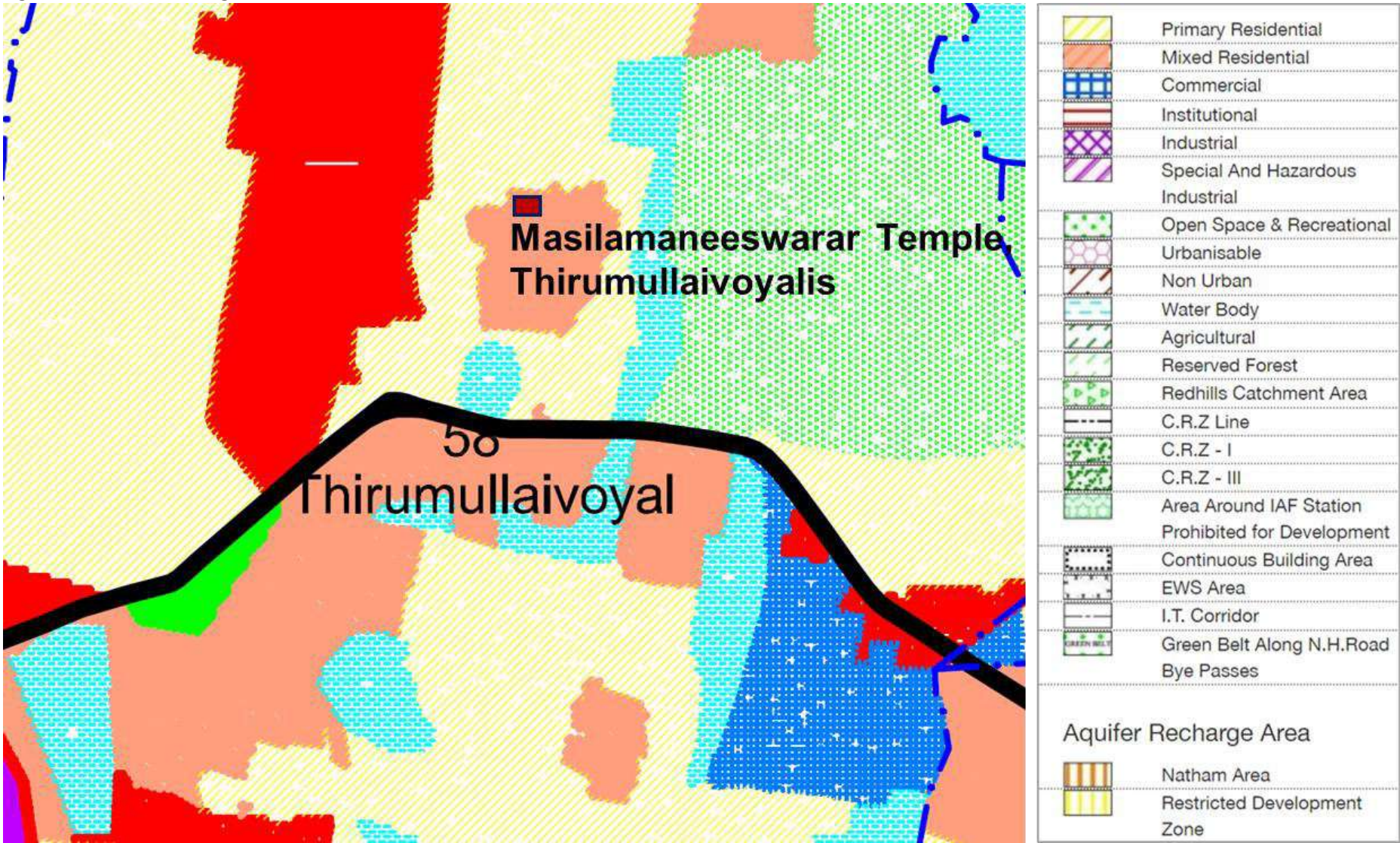


Figure 17-2: Land Uses Regulation Zone at the Site



Site Pictures



Vision for the Site

- The Masilamaneeswarar Temple is the 21st of the 32 Tevara Stalams in the Tondai region of South India, making it special to worship Shri Kodiyidai Amman, one of the Tri-Shakti at the temple premises on full moon days. Though the temple draws huge crowds during the Tamil festive season, yet it provides average tourist amenities and lacks in providing a good experience to its visitors because of poorly maintained infrastructure. Moreover, it does not provide visitors with an interactive environment.
- The temple has a beautiful temple tank, notable architecture, and high tourist footfall. Therefore, by providing basic necessary amenities and interactive spaces to the visitors the temple can attract more tourists. There is an opportunity to rejuvenate the temple tank which is currently not maintained and is often dry. By clustering the temple with the other Tri Sakthi temples, it has great potential to improve the footfall of religious tourists visiting Chennai.
- The vision for the site is to develop it as a religious tourist attraction by improving existing infrastructure and developing required amenities such as amenity block, landscaped gardens, designated parking, paved-shaded pathways for ease of convenience and to make the temple more interactive. Rejuvenation of the temple tank and steps to organise activities around the tank to engage visitors on the site.
- **Target Visitors:** The site is largely a pilgrim site, with significant footfall from neighbouring areas as well as from rest of Tamil Nadu and other south Indian states due to its rich religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.

Further, pilgrims groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang and elderly). The target visitor group envisioned at the site are:

- **Pilgrims:** Visiting the temple for its religious value.
- **Domestic Tourists:** For the monumental and historical value of the temple.
- **High Value Tourists:** For the monumental and historical value of the temple.

Tourist Projections – The site is categorized as a **Medium tourist site** with **moderate High Value Tourist (HVT) potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC’s compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	1,176	3,211	7,583
High Value Tourists (HVT) (Both domestic and foreign)	48	166	391
Maximum Carrying Capacity	8,030		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Masterplan Concept

Given that the site is popular among pilgrims, the objective is to drive religious tourist footfall and to adequately cater to the already captured traffic. Therefore, the concept for the masterplan is:

- **Improving pilgrims’ experience** at the temple – through improved circulation, conveniences, and amenities.
- Developing **temporary cultural spaces** at the site by providing spaces on vacant land.
- **Rejuvenating temple tank and steps** – This will improve tourist engagement at the site.

Hard Interventions

1. **Amenity block** – A small amenity block including a drinking water station, toilet, changing room, cloakroom, and bathroom can be developed along with the temple tank for tourist convenience and ease at the site. It can be placed on the north-east corner of the temple tank.

Infrastructure Created: ~50 sqm of the building area of the amenity block.

- 2. Landscaped Garden** – The vacant land around the main shrine can be developed into a landscaped garden. The landscaping shall be done using native flora and paving material. The garden shall include benches at intervals for visitors to relax and engage. This space will act as a vibrant cultural space that will enhance tourist engagement.

Infrastructure Created: ~800 sqm of garden, paver blocks, tree planters.

- 3. Temple tank Rejuvenation** – The temple has a beautiful temple tank. However, garbage is often observed floating inside and surrounding the tank sides. Therefore, the tank will be cleaned and rejuvenated. Steps can be constructed along with the tank. Techniques of rainwater harvesting can be used to rejuvenate water for the temple tank.

Alternatively, it could also function as an amphitheatre, and host cultural events. The shape and size of the tank are conducive to this.

Infrastructure Created: ~345 m of Paved, Landscaped, and fenced temple tank boundary with benches for visitors.

- 4. Paved walkway** – Paved walkways can be given from the temple complex to the temple tank and along the perimeter of the temple tank. This will enhance ease in walkability around the temple premises. The entire pathway can be paved with heat-resistant material, to make walking convenient for devotees visiting the temple in the hot climate.

Infrastructure Created: ~36 m paved walkway.



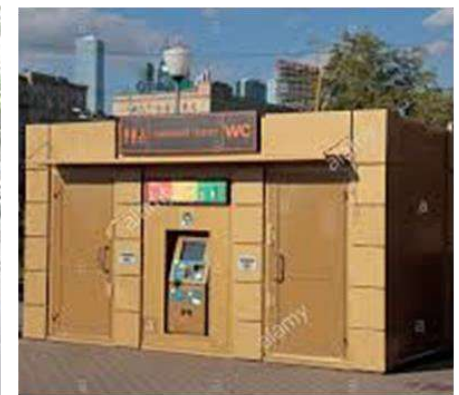
Landscaped Garden



Paved Pathway



Amenity Block with toilets and drinking water kiosk



Pay and Use Toilet Block

Soft Interventions

- 1. Site Promotion** – Increasing temple visibility with strategies like integration with TN Assist App, etc. Marketing and Advertising at all key sites such as the other two Tri Sakthi temples, CMBT, Chennai International Airport, and Chennai Central Railway Station.
- 2. Crowd Management** – During festive seasons the temple has significant footfall, for which the following measure shall be taken to manage the crowd:
 - Limit the number of people within the main shrine by using the landscaped area as temporary holding areas for devotees.
 - Deploy ushers to ensure people move through the temple at a minimum pace and guide them through various areas within the complex.
- 3. Community involvement** – Temple enjoys immense popularity among locals. On most days, large crowds visit the temple for worship. Some non-commercial events are also hosted at the temple, such as dance recitals, music concerts, etc. To enhance community engagement, community spaces such as a landscaped area with a seating facility, pilgrim souvenirs, and F&B shops can be developed.
- 4. Day Tour** – The temple with the other two Tri Sakthi temples namely Arulmigu Thiyagarajaswamy Temple, Thiruvottiyur (Site 35A), and Shri Thiruvudai Amman Temple, Melur (Site 35B) can be curated into a daylong pilgrim tour for the devotees. Licensed guides shall be deployed to guide the visitors about the history and significance of the temple.

Amenities Plan

- 1. Signage** – Signage Package 1 is proposed to feature at this site. Both directional signage and informational signage should be used, as per the design guidelines.
- 2. Street furniture** – Street furniture such as dustbins and benches in the landscaped garden surrounding the temple tank can be placed. Temple lacks in providing seating/ relaxing area. Furthermore, garbage can be seen inside and around the temple tank, therefore benches and dustbins along the temple tank at fixed intervals can be placed. Dustbin and bench design shall be as per guidelines .
Infrastructure Created: 5 benches in the temple premises.

- 3. Pay and Use Toilet Blocks** – ~2 units of toilets are proposed to be provided outside the temple near the parking area. It will be a standalone unisex unit based on modern technologies and standards having paid access and automated self-cleaning. The location of toilet block is indicative and will be approved by HR&CE department. The design guidelines for Pay and Use Toilet Blocks are design guidelines.
- 4. Monumental Lighting** – Temple has iconic Rajagopuram with the sculptures of God and Goddess which can be seen from multiple streets leading to the temple. Thus, monumental lighting can be used to enhance and highlight its elements during the night.
- 5. Temple Souvenir shops** – Small souvenir kiosks can be developed along the proposed landscaped area near Temple Tank. These shops will sell temple-related souvenirs such as Pooja items, prasadam and may include F&B shops serving a vegetarian meal to devotees. A total of 5 retail kiosks will be developed on the west side of the temple tank along with canopy style seating area.
Infrastructure Created: 5 Retail kiosks of 3 by 3 meters each with 3 shading devices for the seating area.
- 6. Parking** – Though a designated parking area is available outside the temple premises, it is not organised. Therefore, the parking area will be redesigned for ~20 car space along the temple entrance boundary wall.
Infrastructure Created: ~300 sqm of paved parking yard.

Trunk Infrastructure

As the Site has direct access from the road, no trunk infrastructure interventions are required

Project Identified

#	Project Component	Scale
1	Amenity Block	50 sqm
2	Landscaped Garden	800 sqm
3	Temple tank Rejuvenation	345 m
4	Paved Walkway (Paver block) (3 m wide)	36 m

#	Project Component	Scale
5	Signage (Package 1)	1
6	Street Furniture (Benches)	5
7	Pay and Use Toilet block	2
8	Monumental Lighting	-
9	Temple Souvenir shops (3x3m)	5
10	Shading device type 1	3
11	Parking (300 sqm of Paved Yard)	21 ECS

Feasibility Assessment

The following considerations have been accounted for the cost projections of proposed interventions at this site:

- Feasibility of the cashflows projected here are accounted only for the additional components master planned.
- The current operating & maintenance cost of the temple have not been considered.

Capital Expenditures

The cost of the different project components proposed in the masterplan is calculated basis the current market price considering the appropriate escalations.

#	Project Component	Cost (INR Lakhs)
1	Amenity Block	5
2	Landscaped Garden	5
3	Temple tank Rejuvenation	13
4	Paved Walkway (Paver block) (3 m wide)	1
5	Signage (Package 1)	1
6	Street Furniture (Benches)	1
7	Pay and Use Toilet block	20
8	Monumental Lighting	20
9	Temple Souvenir shops (3x3m)	7

#	Project Component	Cost (INR Lakhs)
10	Shading device type 1	1
11	Parking	6
Total		INR 80 L

Revenues - Proposed projects

(Note: The following considerations are applicable to the below mentioned revenue modules.

1. The revenues considered here are in addition to all the existing revenue currently accrued by the temple.
2. The estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)

1. **Kiosks** – 5 leasable kiosk units with a total rental revenue of *INR 15 Lakhs*.
2. **Parking** – About 21 parking spaces assuming a daily occupancy of 40%, would earn the temple an estimated revenue of *INR 1 Lakh*.
3. **Pay per use Toilets** – Assuming about an average of 15% of the visitors using the proposed pay per use toilet, would earn the temple an estimated *INR 51 Lakhs*.

The total revenues to the temple from the proposed capital projects is projected at an estimated *INR 65 Lakhs at Y5*.

Operating Expenditures

(Note: The following considerations are applicable to the below mentioned operational expense modules.

1. The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.
2. The operations and maintenance currently undergone by the temple for its existing facilities are not considered in this section.
3. The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)

1. **Manpower Costs** – This includes the additional personnel required to manage the proposed facilities.
 - a. A **Help-desk staff** at the Amenity block.
The projected costs incurred is estimated at *INR 3 Lakhs*.
2. **Facility Maintenance costs** – This includes the costs incurred to maintain the cleanliness and the upkeep of the new facilities.
 - a. Maintenance of the **Open area**, which includes cleaners, gardeners, etc. for upkeep of the landscape in the temple.
 - b. Maintenance of the **Amenity block** - the cleaning of toilets, wash areas and drinking water stations.
3. **Repair & Maintenance costs** – This includes the expense incurred over time for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at *1.5* percentage of the total capital expenditure incurred.
4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the retail kiosks at the temple.
5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at *2 percentage* of the total capital expenditure incurred.
6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposal as per the environment norms. It is calculated based on the footfall projections of the temple.
7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations.
The utilities for the rental kiosks, Yatri Niwas and the community hall are pegged to the rental revenues earned from the respective sources.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175* per kilolitre.

8. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

The total operational expenditure incurred by the temple from the proposed capital projects is projected at an estimated *INR 30 Lakhs at Y5*.

Given that the estimated revenues (*INR 65 Lakhs*) from the proposed capital expenditure projects exceeds the operational expenses (*INR 30 Lakhs*) incurred, it can be concluded that the Interventions proposed at the site are Self-Sustainable and therefore beneficial to the temple.

Phasing & Funding Agencies

The development of the projects is to be taken up by HR & CE department and the implementation of these can be carried out as follows:

1. The implementation of the **Technology package** (i.e., Smart-App integrations, Virtual guides, NFC tags, etc.) at the site would be taken up by the SPV provisioned by the tourism department.
2. The **kiosk units** at the facilitation centre can be leased/ rented out to private operators to host souvenir shops to display and sell temple related religious arts/ craft/ pooja items or operate a small F&B outlet to cater to the visitors.
3. The **Parking facility** is to be undertaken by the temple body and the respective cost incurred by the management is included in the operating expenses (*Admin. & Management cost*).

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 3,400⁵⁶ man-days of construction labour (spread across 1- years of implementation)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 2 Persons⁵⁷
- Retail and F&B spaces = 13 man-days per day⁵⁸

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – As discussed above
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 8,600 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 900 Cr. at the site .

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%

- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

⁵⁶ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.

- As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
- Assumed cost of labour assumed for computation = INR 700 per day
- Cumulative labour man-days = 30% * CAPEX / 700

⁵⁷ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

⁵⁸ Assuming average 2.5 persons per kiosk / shop

Figure 17-3: Proposed Master Plan – Masilamaneeswarar Temple, Thirumullaivayil



18. Varadaraja Perumal Temple, Poonamallee

Site Details

District:	Chennai
Name of Site:	Varadaraja Perumal Temple
Site No:	Site 42 of 295
Site Use:	Temple
Category:	A (Temple)
Location:	13.0511, 80.0951
Land Area:	~1.5 acres
Peak footfalls:	4,000 per day ⁵⁹ (July, September, December)
Operator:	HR & CE Dept.
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom. – 8 lakhs (2019 - 20) For. – Nil (2019 - 20)
Site Revenues:	INR 80 lakhs (FY 2019 – 20)
Site Orientation:	Pilgrim
Site Potential:	Low Tourism Site
HVT Potential:	Low HVT Potential
Connectivity	
a. Railway Station:	~20 km (Chennai)
b. Airport:	~20 km (Chennai)
c. Highway:	Along SH55
Trails featured on:	Nil (Pure Pilgrim Temple)

Sri Varadaraja Perumal Koil in Poonamallee is a Vishnu temple situated less than a kilometer away from the Poonamallee Mofussil bus stand, making it well connected and easily accessible to tourists. Despite being located on the outskirts of Chennai, the temple has less visibility to the tourists other than the devotees who regularly visit the temple and lack the provision of certain essential amenities. The scope of the master planning exercise for the site includes the provision of basic amenities at the temple site, as well as utilization of the temple land parcel for the development of a religious event centre for pilgrim facilitation (as a special project).

Existing Condition

Location

The temple site is located in Poonamallee town, in the outskirts of Chennai. Despite being located in the sub-urban stretch and therefore is accessible by common modes of transport. It is situated ~14km away from the Koyambedu bus terminus on the way along Bangalore-Chennai highway, ~18 km from Chennai International Airport, and ~10 km from Avadi Railway Station.

Existing Layout

The temple site occupies an area of ~1.5 acres, with a close-knit built structure. The temple entrance is situated on the western side of the site boundary. Some other components of the temple layout are:

- Ranganadhar Shrine – can be noticed directly once anyone enters the site. It is situated exactly opposite the temple entrance.
- Towards the north of the entrance inside the site, one can locate – Shrine of Srinivasa, Manadapas, and the administrative office.
- Towards the south of the entrance inside the site, one can locate Vimanam and Shrine of Pushpakavalli.

⁵⁹ Received from Site Manager

- The main shrine of Vishnu is in the centre of the site area, towards the east of the Ranganadhar Shrine.
- Gaushala, Prasad Kitchen, and the holy temple tree are located to the east of the main temple shrine
- The temple tank is situated on the west of the main site entry ~50 m. along the temple's access road.

Existing use

The Temple is currently accessed by pilgrims and religious tourists for religious purposes, offer worship, pooja, and celebrate festivals. The temple welcomes the visitors with a 5 tier Rajagopuram, and the main shrine is speculated to be built around 907- 954 AD (10th century) by the Chola Dynasty. The temple has a walkway cutting through grass grown on both sides across the various structures inside.

- An administration office.
- A Gaushala –hosts a herd of 18-20 cows.
- A Prasad kitchen.
- A shrine for the main deity Vishnu in three different postures.
- Shrines for other deities.
- A temple pond.

Other Land Available

Apart from the 1.5-acres of the land used for the temple complex, the temple also owns ~80 acres of other lands about 1.5 km in the North-western direction of the temple, which is currently leased out for farming. The CMRL (Chennai Metro rail) is in talks with the temple authorities for acquiring the land to convert it into a metro rail yard.

Master Planning Considerations

Applicable Regulations

1. **Tamil Nadu Combined Development and Building Rules 2019** - As per Thiruverkadu Master Plan, the site lies in a **Mixed-use Residential**. The permissible uses include:

Residential Buildings | Parks, playgrounds, farms, gardens | Public Utility Buildings | Swimming Pool, Daily or weekly markets | Hotels, Restaurants, Hostels, Dormitories, Boarding and Lodging houses | Retail establishments and

shops, Departmental stores, Taxi stands, and car parking multi-level parking | Religious buildings.

2. TNHRCE Rules, 1959

- a. The allowed set of modifications/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions.
- b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.
- c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to religious activities and for the facilitation of Hindu pilgrim tourists.
- d. The HR&CE Dept. owned land can be leased for no more than 3 years.

3. **Height Regulations** – AAI height restrictions allow the construction of buildings up to ~55 m. (up to 18 floors) above mean sea level in the temple complex and surrounding areas.

Key Sensitivities

There are no specific environmental/social sensitivities to be addressed at the site.

Key Issues to Address

The key issues at the site identified at the Baseline Stage are summarised below along the 7A Framework:

1. **Attraction** – The temple attraction can be valued from the religious beliefs attached to it. The temple has the deity Vishnu in three different postures. The Dravidian architecture was built by the Chola dynasty the temple is said to be more than 1200 years old and dedicated to the famous saint Sri Thirukkachchi Nambigal and is the avatar sthalam of the saint. However, the aesthetic value of the temple is low as compared to other tourist destinations in and around Chennai. The open spaces around the temple are occupied with unwanted vegetation, spaces around the temple tank and the tank within are covered with algae and irregular plant growths.

2. Accessibility – Owing to the proximity of the site to Chennai city, it is easily accessible using road, rail, and air transport. NH 48 and SH 138 connect the site to the main Chennai city and other cities of the state. The site is adjacent to the Poonamallee bus station, public transportation services are easily available near the site.

Parking – There is no dedicated parking space available outside the site. The vehicles are directed to be parked in the street opposite the main entrance, the streets are said to hold close to 150 2 wheelers. During the festive seasons, the vehicles are usually parked along the adjoining residential streets ending up in road congestion and inconvenience to the residents.

3. Amenities – The condition of tourist amenities within the temple is average and is regularly maintained.

- Since the site is located on the state highway it is bombarded with high levels of dust and noise pollution. The highway adjacent to the temple is prone to overcrowding due to unregulated traffic and vendor encroachments.
- The site does not have any toilet/bathroom facilities within its premises.
- There are minimal provisions of drinking water facilities at the temple site.
- The signboards present at the site are only in the Tamil Language
- No footwear Stand is available at the site.
- There is no dedicated prasad stall inside the temple

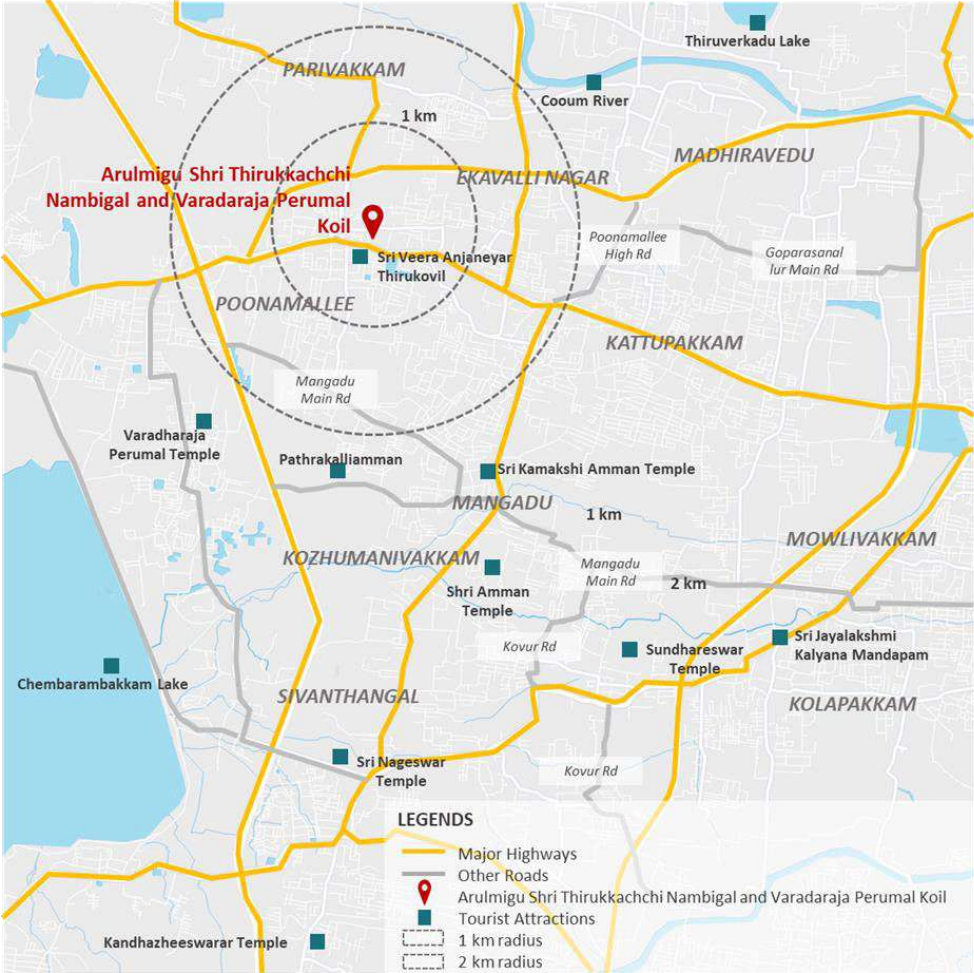
4. Awareness – The temple is a well-known site close to Chennai and holds good acknowledgment amongst the regional tourists from the areas of Chennai city, Kanchipuram, and other adjoining districts. Since the temple is in the suburbs of Chennai with no other popular destinations nearby it, International tourists tend to overlook this place.

5. Activities – On a regular day there are no pilgrim or tourist engaging activities at the temple. On festive occasions, there are activities such as feasts, chariot procession, dance recitals, programs conducted by the nearby schools, etc.

6. Accommodation – There are no proper accommodation services available near the site. Owing to the proximity to Chennai, accommodation for the common devotees and tourists' needs is usually fulfilled by the accommodation options available in Chennai (~20 km).

7. Association with Communities – There are no common or regular associations of the local communities with the temple. However, every year during temple festivals, the temple is a place of celebration and for conducting local events.

Figure 18-1: Location and Existing Layout

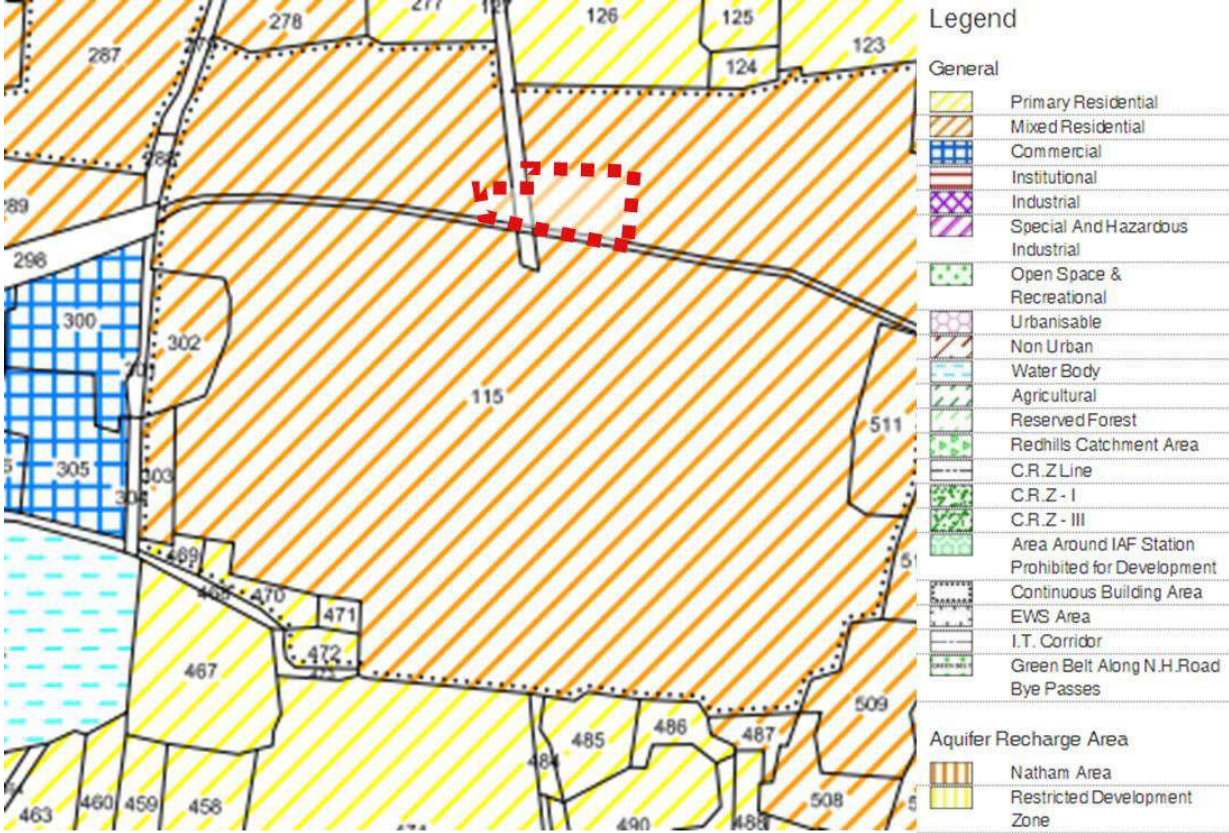


- Legends:**
- 1 - Entrance
 - 2 - Rajagopuram
 - 3 - Temple Tank 4 Sacred Tree – Malli
 - 5 - Main Shrines of Vishnu
 - 6 - Shrine of Pushpakavalli Thayar
 - 7 - Shrine of Thirukatchi Nambi Alwar
 - 8 - Shrine of Srinivasa
 - 9 - Mandapas
 - 10 - Vimanam
 - 11 - Administration office
 - 12 - Ranganadhar shrine
 - 13 - Prasad kitchen
 - 14 - Gaushala
 - 15 - Parking area

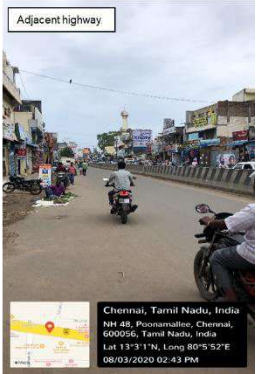
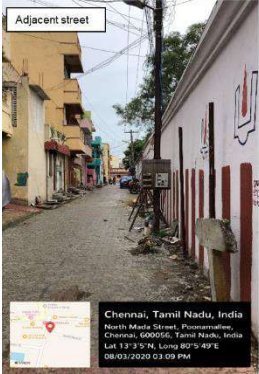
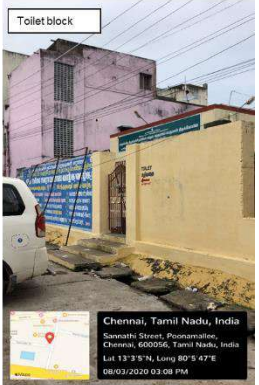
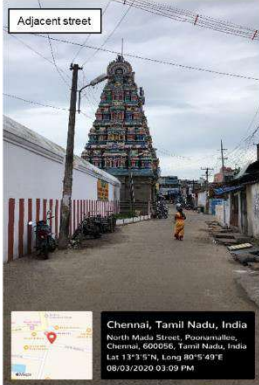
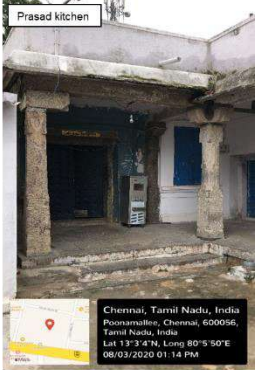
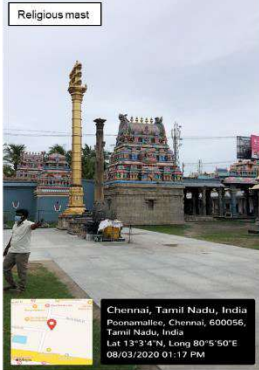
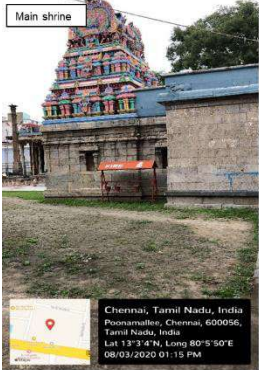
Figure 18-2: Other Land Holdings



Figure 18-3: Site Land Use – Poonamallee Municipality Local Area Plan



Site Pictures



Vision for the Site

The Arulmigu Shri Thirukkachchi Nambigal and Varadaraja Perumal Koil Temple authorities also own an additional 80 acres of land about 1.5 km in the North-western direction of the temple, which is currently mostly leased out for farming.

The temple complex is currently situated amidst a densely developed area with the hard availability of any vacant and developable land parcels. Therefore, the site master planning is envisioned to be done along with the ~80-acre land parcel on the theme of development of a pilgrim event and accommodation centre. The details of which are shown under special projects.

Despite, the CMRL (Chennai Metro rail) being in talks with the temple authorities for acquiring the land to convert it into a metro rail yard, the recommendation is to develop at least a part of the 80 acres site into a Pilgrim Centre, with Pilgrim Accommodation (Rest House), a Kalyana Mandapa and area for holding religious events.

- **Target Visitor** - The site is largely a pilgrim site, with significant footfall from neighbouring areas as well as from rest of Tamil Nadu and other south Indian states due to its rich religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.

Further, pilgrim groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang and elderly). The target visitor group envisioned at the site are:

- **Pilgrims and Religious Tourists** – to develop a religious site integrated into the circuit of Chennai – Tiruvallur - Kanchipuram temple sites, where visitors can visit temple attractions and witness the local culture.
- **Tourist Projections** – The site is categorized as a **low potential tourism site** with **Low HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC’s compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	800	1,889	3,800
High Value Tourists (HVT) (Both domestic and foreign)	0	0	0
Maximum Carrying Capacity	5,913		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Approach to Masterplanning

The master plan for this site is developed on the idea of developing a better tourist environment and facilitating the pilgrim visit to the temple. It is proposed to be done by the development of a small tourist amenity centre along with the temple site.

Hard Interventions

1. **Tourist Amenity Centre:** The site currently has a minimal amount of basic tourist facilities. An amenity block is envisioned to cater to the basic needs of the tourists. It can have toilets, a cloakroom, local retail stores, public drinking water, Luggage Room, etc.
Infrastructure created — ~800 sqft built-up area

Soft Interventions

1. **Local Events** – The temple complex may remain closed after hours, but the community hall should remain open for hosting numerous cultural events.
2. **Site management** – The site management authority must develop regulations and guidelines on the limit of the crowd which can be allowed at one time inside the campus to avoid architectural and structural damages due to overcrowding, access timings can be made exclusive for high-value tourists, etc.
3. **Promotion** – The Tourism Department should promote Kailasanathar Temple, and events/activities held there, in the TN Assist app and on its various platforms, following the site changes.

4. Temple Tank Rejuvenation – in the current times the water retention capacity of the temple tank is less, which results in an easily dried out water tank. The spaces along the steps of the temple tank can be developed into an underground water storage facility during rains. Water from the storage facility can be utilized to keep the tank filled for a longer period.

Water plants that live on the surface, such as water lilies that provide large lily pads, can help reduce water reduction from evaporation. These work in ponds found in partial shade or full sun. Place several pots under the water, letting the lily pads cover up to 70 percent of the water's surface.



Temple Tank Boundary and Recharge Structures

Amenities Plan

- 1. Plantation and Landscaping** – Local planting is proposed to be used to weather the extreme climate. Planting would be used to beautify open-air exhibit areas, sidewalks, open-air theatre, and other visitor zones.
- 2. Signage (Package 1)** – Package 1 signage is proposed to feature in Tamil, English, and Hindi. Both directional signage and informational signage should be used, as per the design guidelines in Vol A.
- 3. Technology Intervention (Package 1)** – Package 1 set of technology interventions are required to be deployed at the site. These include:
 - a. Compatibility with TN Assist App
 - b. CCTV coverage at 3 locations
 - c. Electronic visitor counters

Trunk Infrastructure

As this site has good accessibility, it does not need any improvements in the trunk infrastructure.

Projects Identified

#	Project Component	Scale
1	Tourist Amenity Centre	~800 sqft
2	Signages	Package 1
3	Technology Interventions	Package 1
4	Temple Tank Rejuvenation	1 LS

Feasibility Assessment

The following considerations have been accounted for the cost projections of proposed interventions at this site:

- Feasibility of the cashflows projected here are accounted only for the additional components master planned.
- The current operating & maintenance cost of the temple have not been considered.

Capital Expenditures

The cost of the different project components proposed in the masterplan is calculated basis the current market price considering the appropriate escalations.

#	Project Component	Cost (Lakhs INR)
1	Amenity block	5
2	Temple Tank Rejuvenation	13
3	Signages	1
4	Technology Interventions	1

Total~ ~INR 20 L

(Note: Cost of all the project components including the Total capex is rounded-off to the nearest whole value.)

Revenues - Proposed projects

There are no revenues pegged to the proposed capital projects, given the low tourist potential. The intervention planned are limited to basic hygiene factors that are being followed across the set of undertaken sites.

Operating Expenditures

(Note: The following considerations are applicable to the below mentioned operational expense modules.

1. The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.
2. The operations and maintenance currently undergone by the temple for its existing facilities are not considered in this section.
3. The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)

1. **Repair & Maintenance costs** – This includes the expense incurred over time for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.

The projected costs incurred is estimated at *INR 1 Lakh*.

2. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.

The projected costs incurred is estimated at *INR 1 Lakhs*.

3. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

The projected maintenance cost is estimated at a lumpsum of *INR 50,000 per annum*.

⁶⁰ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour

The total operational expenditure incurred by the temple from the proposed capital projects is projected at an estimated *INR 5 Lakhs at Y5*.

Phasing & Funding Agencies

The development of the projects is to be taken up by HR & CE department and the implementation of these can be carried out as follows:

1. The implementation of the **Technology package** (i.e., Smart-App integrations, Virtual guides, NFC tags, etc.) at the site would be taken up by the SPV provisioned by the tourism department.

Now, in order to compensate for the CAPEX and annual OPEX to be incurred at the site, it is recommended to utilize the additional ~80-acre site owned by HR&CE. Master Plan for this ~80 acres are provided in this report as a “Pilgrim Centre”.

Developmental phasing

#	Project Component	Agencies in Charge	Phasing of Development
1	Tourist Amenity Centre	HR & CE Dept.	Y0 – Y2
2	Signages	HR & CE Dept.	Y0 – Y2
3	Technology Interventions	HR & CE Dept.	Y0 – Y2

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 860⁶⁰ man-days of construction labour (*spread across 1 year of implementation*)

- Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 2 Persons⁶¹

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – As discussed above
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 2,150 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of 380 Cr. at the site .

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

○ As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
 ○ Assumed cost of labour assumed for computation = INR 700 per day

• Cumulative labour man-days = 30% * CAPEX / 700
⁶¹ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

Figure 18-4: Proposed Master Plan – Sri Varadaraja Perumal Temple, Poonamallee



- 1 Site Entrance
- 2 Tourist Amenity Block
- 3 Temple Tank

19. Pilgrim Centre, Poonamallee

Site Details

District:	Tiruvallur
Name of Site:	Bodhi Centre and Beach Tourism Complex
Location:	13.0573, 80.0871
Land Area:	A portion of ~80 acres
Site Ownership:	HR&CE (Varadaraja Perumal Temple)
Tourist Footfall:	NA
Site Revenues:	NA
Site Orientation:	Pilgrim
Connectivity	
Railway Station:	~20 km (Chennai)
Airport:	~20 km (Chennai)
Highway:	Along SH55
Trails Featured On	Nil (Pure Pilgrim Site)

HR&CE owns ~80 acres of land in close vicinity to the Varadaraja Perumal Temple, a Vishnu temple located in Poonamallee. Poonamallee is a small town located on the outskirts of Chennai and acts as a gateway to the city from the western side. Chennai and the surrounding areas of the metropolitan city have various religiously significant sites which attract high tourist footfalls. Additionally, Tamil Nadu being a significant Pilgrimage destination, holds a lot of potential for religious or spiritual activities.

Hence, leveraging the location of Poonamallee and the lack of any major community space in the vicinity, a Pilgrim Centre is proposed on the ~80 acres land parcel owned by the Varadaraja Perumal temple. Strategically located on the outskirts of Chennai, the Pilgrim centre aims to be a sanctuary for Pilgrims visiting and/or living close to the Chennai Metropolitan area.

Site & Location

The site is located in Poonamallee, a small town situated on the outskirts of Chennai. It is well connected by roads and rail to the other cities of Tamil Nadu. Tamil Nadu Road Transport Corporation buses also ply regularly from Chennai, Kanyakumari, Madurai, Trichy and other major cities to Poonamallee.

Well located on NH-48, the Pilgrim Centre is proposed to be developed on a portion of the ~80-acre land parcel. NH-48, the main access road to the site, is well connected to all the major areas in Chennai, indicating good accessibility to other major urban centres. Chennai International Airport is ~20km from the proposed site.

Other temples located near the proposed pilgrim centre include Sri Kamakshi Amman Temple (~8.6 km away) and Pathrakalliamman Kovil (~9.6 km away).

Master Planning Considerations

Applicable Regulations

1. Tamil Nadu Combined Development and Building Rules 2019 - As per Poonamallee Master Plan, the site area lies in an Industrial zone. The permissible uses include:

Industrial Zone: All use permissible in Residential and commercial use zones | All industries except those industries listed under as Red category | Container terminal

2. TN HRCE Rules, 1959

- The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions

- b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.
- c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to the religious activities and for the facilitation of Hindu pilgrim tourists.

- d. The HR&CE Dept. owned land can be leased for a period of no more than 3 years.

Key Sensitivities

There is no specific environmental/social sensitivity to be addressed at the site.

Figure 19-1: Location and Proposed Site

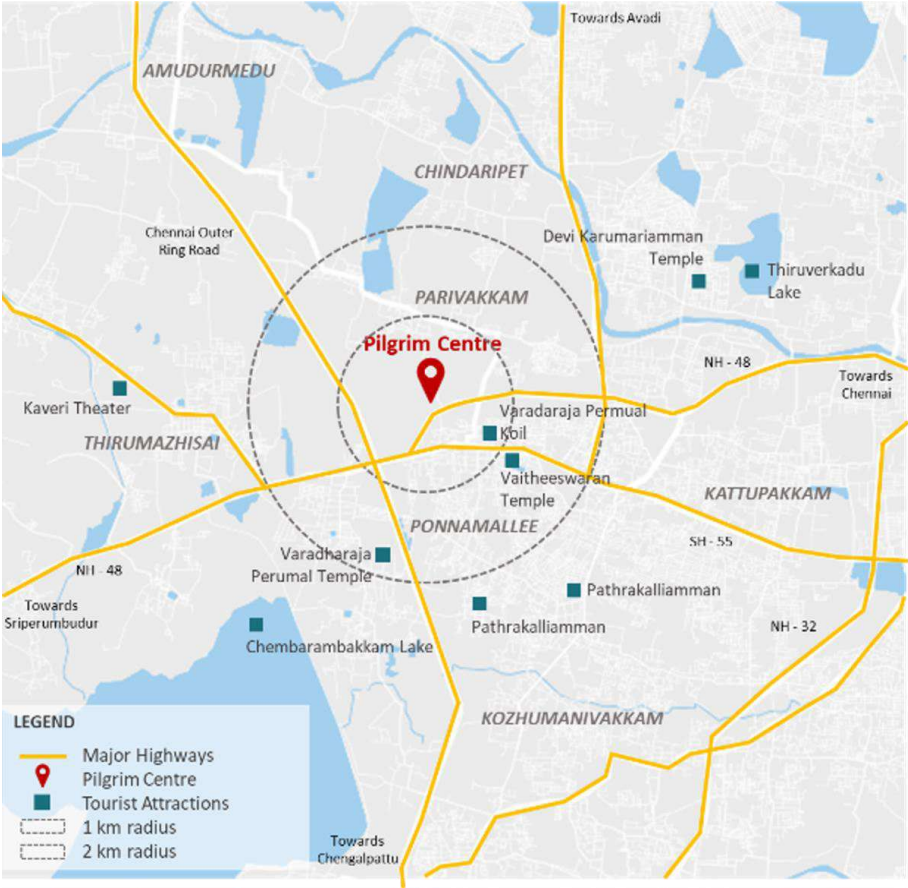
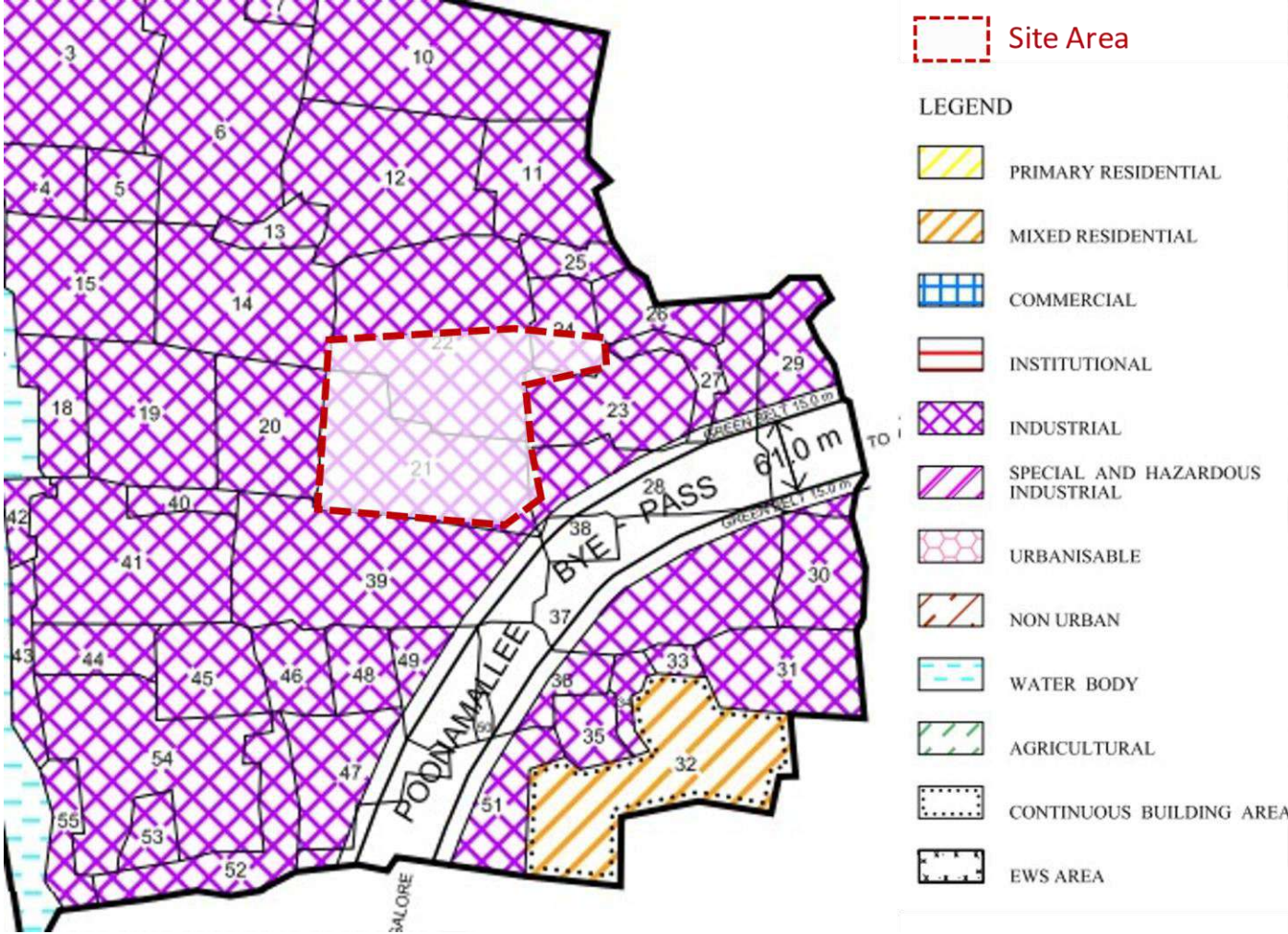


Figure 19-2: Land Use Zones at the Site, as per Poonamallee Master Plan



Vision for the Site

HR&CE owns an additional ~80 acres of land about 1.5 kms to the North-west of the Varadaraja Perumal Temple. This land is currently leased out for farming activities. While the CMRL (Chennai Metro Rail Limited) is in talks with the temple authorities for acquiring the land and converting it into a metro rail yard, the recommendation is to develop a portion of the ~80 acres site into a Pilgrim Centre. The proposed centre would have multiple components like Pilgrim Accommodation (Rest House), Kalyana Mandapam and an area for holding religious events.

- **Target Visitor** - The target visitors to be captured here are:
 - **Pilgrims:** visiting the religious sites in and around Chennai, could be tapped as the site is well connected to its nearby surroundings. Additionally, Tamil Nadu hosts multiple religious circuits, which could be a potential driver for the centre
 - **Locals:** Locals could be a key target audience considering the community offerings of the centre and areas to host religious fairs, melas, local events etc.
 - **Domestic tourists:** could be tapped as the project entails various spaces to host cultural activities / events
- **Tourist Projections** – The site envisions to tap the tourist footfalls that Varadaraja Perumal Temple is already capturing (~8 lakhs in 2019) and attract more, with its proposed facilities for pilgrims and areas to host cultural events.

Proposed Master Plan

Master Planning Concept

The development of the Pilgrim Centre will require only a small portion of the 80 acres of land owned by HR&CE. To ensure convenient access, the Pilgrim Centre is suggested to be planned along the village road that passes through the Site. The area chosen for the site, has not witnessed any farming activities for the last couple of years and currently lies vacant.

Instead of carving out one piece of land from the adjoining agricultural lands and building an unsightly wall around it, it is recommended to plan the different building components of the Pilgrim Centre as large traditional courtyard buildings. These

components would be oriented around clearly demarcated, safe & attractive courtyard spaces, which would have multiple uses. This building typology allows the Pilgrim Centre to be situated right within the green agricultural farmlands and become a valuable part of the countryside landscape.

Hard Interventions

- 1. Pilgrim Accommodation (Rest House)** - Three 1-2 story buildings, housing (dorm) rooms, bathroom facilities, canteen/restaurant, prayer rooms, gathering spaces, relaxation/lounge areas, library, back of house offices etc.
Infrastructure created — 2400 sqm built up area and 800 sqm hard landscaped courtyards
- 2. Kalyana Manadapa** - One 1-2 story building, housing all facilities required for (semi) indoor and outdoor events, with an emphasis on hosting religious wedding ceremonies, cultural and religious events.
Infrastructure created — 1200 sqm built up area and 400 sqm hard landscaped courtyard
- 3. Outdoor Event Space for Religious events** - The availability of land also allows to demarcate an adjoining plot of land for large scale religious events that are difficult to plan at the Varadaraja Perumal Koil Temple or other nearby temples because of lack of space.
Infrastructure created – 3500 sqm soft landscaped area and tree plantation. Other hard landscaped area: plazas and parking area:10,000 sqm



Pilgrim Centre & Religious Event Space



Activities/events at the Pilgrim Centre

Soft Interventions

1. **Marketing & Promotion** – The Pilgrim Centre would be Integrated with TN Tourism Assist App, along with photo and video documentation. This can be advertised at all nearby religious sites and online platforms.
2. **Creation of a Calendar of Events** – The local Corporation or the Tourism Department could organise various events at the Pilgrim Centre – such as religious mela, festivals, workshops, small-scale spiritual retreats, fairs, community events, etc. This would help to popularise the centre to varied segments of visitors.
 - **Annual Mela/Fair:** The Pilgrim centre could host an annual event like a religious fair or mela, to attract pilgrims. The event can be planned during a festival / peak season which witnesses a large influx of pilgrims in the region.

Amenities Plan

1. **Signage (Package 1)** – Package 1 signage is proposed to feature in Tamil, English, and Hindi. Directional signage should be installed, as per the design guidelines mentioned in Glossary of Interventions
2. **Technology Intervention (Package 1)** – Being a special offering for pilgrims, the site should offer the following technological conveniences:
 - Electronic visitor counters at entry point
 - TN Assist App integration (internet connection, QR scanner)
 - CCTV coverage at key locations
3. **Parking** – A designated parking space will be developed for accommodating vehicles, with good lighting and pavements. This will be located near the site entrance, with a holding capacity of ~120 cars
4. **Safety & Security** – Fire Extinguishers, Sand Buckets, Emergency Exits, etc, should be planned and installed at the site, with a monitoring control room within the main building.
5. **Other Amenities** – Amenities like toilets and drinking water stations would be planned and developed as a part of the common amenities / office building and accommodation buildings.

Trunk Infrastructure

As the Site has excellent connectivity, no trunk infrastructure interventions are required.

Please refer to Design Guidelines in Glossary of Interventions regarding amenities and urban design.

Projects Identified

#	Project Component	Scale
1	Pilgrim Accommodation	~2,400 sqm
2	Kalyan Mandapam	~1,200 sqm
3	Plaza and Parking Area	~10,000
4	Hard Landscape Courtyards	~1,200 sqm
5	Soft Landscape area & Tree Plantations	~3,500 sqm
6	Signage (Package 1)	1
7	Technology Intervention (Package 1)	1

Feasibility Assessment

Capital Expenditures

The cost of the different project components proposed in the masterplan is calculated basis the current market price considering the appropriate escalations.

#	Project Component	Cost (INR Lakhs)
1	Pilgrim Accommodation – 2,400 sqm	484
2	Kalyan Mandapam	323
3	Plaza and Parking Area (120 ECS)	160
4	Hard Landscape Courtyards	19
5	Soft Landscape area & Tree Plantations - ~3,500 sqm	3
6	Signage (Package 1)	0.65
7	Technology Intervention (Package 1)	0.60
Total		INR 9-10 Cr

Revenues - Proposed projects

(Note: The following considerations are applicable to the below mentioned revenue modules.

1. *The revenues considered here are in addition to all the existing revenue currently accrued by the temple.*
2. *The estimated revenue projections are pegged at Y5 (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)*

1. **Parking** – About 120 parking spaces assuming a daily occupancy of 4 ECS per day (and occupancy of ~70%), would earn the site considerable revenue.
2. **Event Space** – Given the nature of the site, it is likely to hold large number of events per annum. This would translate into a revenue stream assuming the space is occupied for ~100 days.
3. **Pilgrim Accommodation** – Assuming an average of 80% occupancy across the year across the ~32 keys, this would be another source of income.

The total revenues to the temple from the proposed capital projects is projected at an estimated **INR 1.5 CR at Y5**.

Operating Expenditures

(Note: The following considerations are applicable to the below mentioned operational expense modules.

1. *The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.*
2. *The operations and maintenance currently undergone by the temple for its existing facilities are not considered in this section.*
3. *The expense projections are pegged at Y5 (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)*

1. **Manpower Costs** – This includes the additional personnel required to manage the proposed facilities.
 - a. Four **Help-desk staff**
 - b. Four **security personnel** at the accommodation and dining hall.

- c. Two **Administration staff** to overlook the operations

The projected costs incurred is estimated at **INR 28 Lakhs** at Y5

2. **Facility Maintenance costs** – This includes the costs incurred to maintain the cleanliness and the upkeep of the new facilities.
 - a. Maintenance of the **Open area**, which includes cleaners, gardeners, etc. for upkeep of the landscape.
 - b. Maintenance of the **Amenity block** - the cleaning of toilets, wash areas and drinking water stations.
 - c. Maintenance of the **Building facilities** – The general cleaning and upkeep of the premises and the community block.

The projected costs incurred is estimated at **INR 9 Lakhs**.

3. **Repair & Maintenance costs** – This includes the expense incurred over time for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.

The projected costs incurred is estimated at **INR 8 Lakhs** at Y5

4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the retail kiosks, community event spaces in the temple surroundings.

The projected costs incurred is estimated at **INR 0.8 Lakh** at Y5

5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.

The projected costs incurred is estimated at **INR 10 Lakhs** at Y5

The total operational expenditure incurred by the temple from the proposed capital projects is projected at an estimated **INR 50 Lakhs at Y5**.

Given that the estimated revenues (**INR ~1.5 Cr.**) from the proposed projects exceeds the operational expenses (**INR 50 Lakhs.**) incurred, it can be concluded that the Interventions proposed at the site are Self-Sustainable.

Structuring & Implementation

The development of the projects is to be taken up by HR & CE department and the implementation of these can be carried out as follows:

1. The implementation of the Technology package (i.e., Smart-App integrations, Virtual guides, NFC tags, etc.) at the site would be taken up by the SPV provisioned by the tourism department.
2. The **event spaces** can be leased/ rented out to private operators to host various events.
3. While the development of the **pilgrim accommodation** be taken up the HR & CE dept. the operation and maintenance of the facility can be tendered out to private hotels operators on a 3-year retainer contract basis. This would help in maintaining a benchmark in the quality of the services rendered.

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 42,900⁶² man-days of construction labour (spread across 1 – 2 years of implementation)

During Operations: Jobs created during operations will entail:

- Accommodation Facility = 23 man – days per day⁶³
- Additional personnel deployed at site (Housekeeping, management, security) = 12 man-days⁶⁴
- Activity Operators = 8 – 10 Persons

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above.*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect, and induced effects is estimated as. 42,900 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Increase in overall number of visitors is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending at the site⁶⁵.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

⁶² Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
 - Assumed cost of labour assumed for computation = INR 700 per day
- Cumulative labour man-days = 30% * CAPEX / 700

⁶³ As per World Bank thumb rule, 12 man-days per day for 10-key 4-star hotel and 20 man-days for 10-key 5-star hotel.

As per HVS Report, in typical India hotels, manpower to room ratio for 4/5 star hotels is 2.11-2.70, for mid-market 1.52 and for budget hotels 0.72. We have assumed 2 for our computation.

⁶⁴ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

⁶⁵ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and suppliers will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.

Figure 19-3: Proposed Master Plan – Pilgrim Centre, Poonamallee



20. Bhavani Amman Temple, Preiyapalayam

Site Details

District:	Tiruvallur
Name of Site	Bhavani Amman Temple
Site No:	Site 43 of 295
Site Use:	Temple
Category:	A (Temple)
Location:	13.3105,80.0418
Land Area:	2.5 acres (Temple) 2 acres (Additional Land)
Peak footfalls:	20,000 per day (July - August)
Operator:	HR & CE Dept.
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom. – 18.07 lakhs (2019 – 20) For. – Nil (2019 – 20)
Site Revenues:	INR 17 crores (2019 – 20)
Site Orientation:	Pilgrim
Site Potential:	Medium Tourism Site
HVT Potential:	Low HVT Potential
Connectivity	
a. Railway Station:	~40 km (Chennai)
b. Airport:	~55 km (Chennai)
c. Highway:	~550 m from SH50A
Trails featured on:	Nil (Pure Pilgrim Temple)

The Bhavani Amman Temple is located in Preiyapalayam and is on a connecting road to the highly popular Tirupati temple in Andhra Pradesh. It is popular among the Tirupati devotees and for several religious activities it hosts during festivals; those who travel to Tirupati generally make a stop at the Bhavani Amman Temple. The temple is well maintained with all the required amenities for the visitors inside the temple but lacks basic necessities outside its premises.

Scope for interventions includes improving existing infrastructure within the temple, adding amenities outside the temple premises, and promoting temple to enhance tourist footfall.

Existing Condition

Location

The Bhavani Amman Temple is in Thanakulam village, West Uthukottai Taluk, Periyapalayam, Thiruvallur. It is located about 40 km north of Chennai on Chennai-Kolkata highway. Situated on the banks of the Arani River, the temple is developed in a sparse mixed-residential neighbourhood. Several prominent tourist landmarks present around the site are Sri Periyaandvar Kainnima Temple, Shri Easwaran Temple, Om Sri Angalaamma Temple, Shri Nagathama Amman Temple, Suyambu linga Baba Temple.

Existing Layout and Uses

The temple is spread across an area of 2.5 acres. It is about 600 years old with a Dravidian style architecture and has a 5 tier Rajagopuram. The main entrance will lead to Vinayagar having a separate Sanidhi in the name of Sri Arpudha Sakthi Vinayagar, followed by Sri Sarva Sakthi Mathangi Amman. In the Moolasthanam Amman can be seen with Sangu Chakram in the upper hands while the sword and Amirtha Kalasam on her lower hands. Crossing the Moolasthanam, Utsavar Amman welcomes us sitting in a well-decorated seat. The temple complex has Sannidhis of

Sri Subrammaniyar, Srinivasa Perumal with Mahalakshmi, Anjaneyar, and Sri Prasuramar and Naga Sannidhi. The temple premises house the following:

- Main Shrine for Bhavani Amman.
- Shrines for other deities
- A Prasad kitchen
- A wash area and drinking water facility
- Vending on the approach road
- A marriage hall
- Parking space outside the temple.

The temple has a constant flow of local devotees and tourists during the season of Aadi (Mid July to mid-August).

Other Land Available

Apart from the 2.5-acre land used for the temple complex, other land parcels that the temple owns include:

- About 2 acres of land, 750 m away from the temple on the Tirupati road that is currently under a proposal for construction of cottages for the pilgrim visitors.
- There are a couple of other land parcels in the temple vicinity which is currently sanctioned for the temple facilities like Annadhana kudam (Charity hall), etc.

Master Planning Considerations

Applicable Regulations

The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land. As the land is owned by The HR & CE department, the rules and regulations for the site are:

1. TN HRCE Rules, 1959

- a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions
- b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.

- c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to the religious activities and for the facilitation of Hindu pilgrim tourists.
- d. The HR&CE Dept. owned land can be leased for a period of no more than 3 years.

Key Sensitivities

There is no specific environmental/social sensitivity to be addressed at the site.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

1. **Attraction** – The temple is situated on the connecting road to Tirupati on NH716 which makes it popular among Tirupati devotees who pay a visit to the temple while going to Tirupati Temple. The temple itself has a rich history and Dravidian style of architecture. Another reason which attracts visitors to the temple is the idol of Goddess Bhavani Amman which is believed to have originated itself. Apart from this, there are several activities performed on sites that attract visitors such as the huge vending market on the approach road.
2. **Accessibility** – The Bhavani Amman temple is located to the north of Chennai - Kolkata Highway. These are wide roads with plenty of travel options available along these roads. However, the last mile connectivity to the temple includes narrow roads.

Buses from CMBT are also available to visit this site. The nearest bus stop is located near Tirupathi road (50A) about 650m away from the temple. Being located outside Chennai, the site has average rail accessibility. The nearest railway station is Ponneri railway station which is located 17 km away from the temple. Cab/ Auto can be easily accessed within 100 m from the temple. Therefore, the major modes of transport people use to commute to the site are buses and private cars.

3. **Amenities** – The temple premises is clean and provides basic amenities to its visitors in terms of toilets, drinking water, safety & security, parking, divyang friendly measures, etc. However, the amenities outside the temple premises are

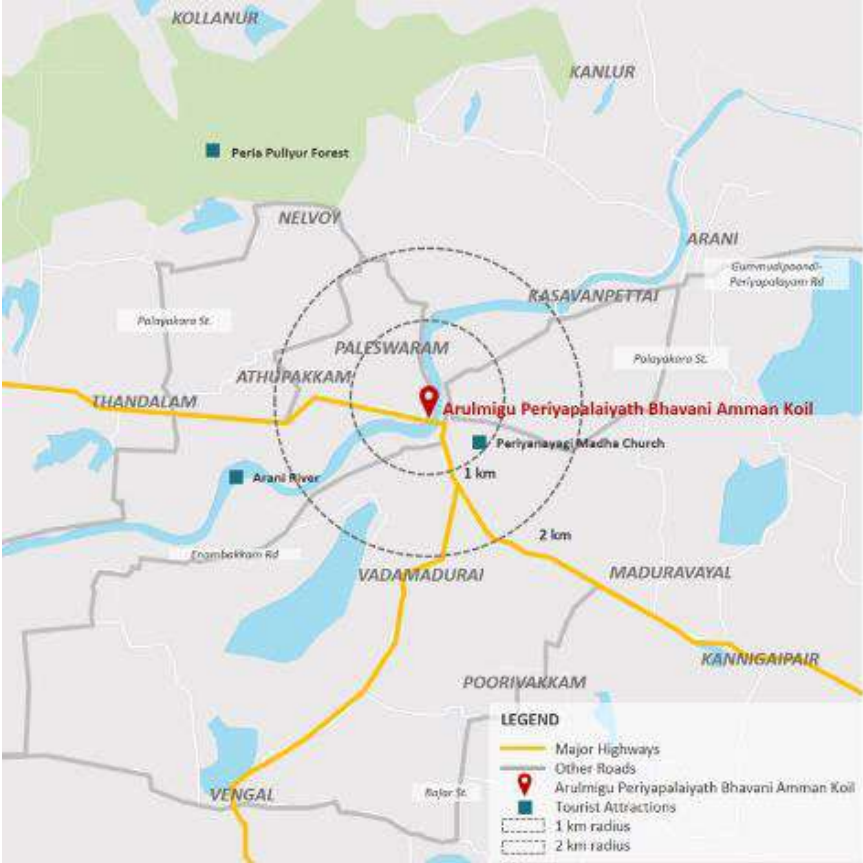
not maintained. The amenities that are not maintained outside the temple premises are:

- No drinking water kiosk
- No resting area
- No washrooms
- Water clogged roads
- Garbage along the approach road
- Inadequate streetlights
- No designated footpaths
- Some approach roads are unpaved with potholes.

Parking – A designated and charged parking facility is available outside the temple premises. The charges are- Bike INR 5, Car INR 10-20, Van INR 40, Bus INR 50.

4. **Awareness** – The temple enjoys popularity among locals and domestic tourists. In 2019, the temple received ~18 lakh local and domestic visitors from Andhra Pradesh, Telangana, and Karnataka. It is recommended by renowned travel referral/review aggregators such as Lonely Planet, TripAdvisor, etc. The HR&CE department maintains a temple website with relevant information.
5. **Activities** – The preparation of boiled pot Pongal, sacrificing goats and hens, tonsuring their heads, reciting prayers wearing neem leaves around the dress, and rolling on the grounds (Angapradakshinam) of the temple are some of the prominent activities done in the temple.
6. **Accommodation** – Being situated in a village, there are no options for accommodation in the form of hotels or a hostel within the 500 m range. However, there are few budget hotels available with an average tariff of INR 1000 at a distance of 3 km. Temple authority has proposed construction of cottages for the pilgrim visitors in additional 2-acre land owned by the temple which is 750m away from the temple complex. The construction of these cottages will satisfy the need for accommodation for pilgrims.
7. **Association with Community** – People engage with the temple in different kinds of activities like preparing Pongal in the community kitchen, reciting prayers wearing green leaves, visiting vendor markets outside the temple, etc.

Figure 20-1: Location and Existing Layout



Site Pictures



Vision for the Site

The Bhavani Amman Temple is popular among Tirupati devotees and besides high religious importance, it has provided good facilities and activities to engage tourists on the site. However, the existing infrastructure within the temple complex is outdated and is not aesthetically appealing. Moreover, there is a need to provide amenities in the immediate surrounding of the temple premises.

The temple has huge potential to act as a tourist magnet as it is situated on the connecting route to the famous Tirupati temple. The tourist footfall can be enhanced by improving temple visibility along NH716 leading towards Tirupati and improving aesthetic appeal. Also, the temple has ample open land within temple premises that can be developed into cultural space for community/visitor engagement. There is an opportunity to develop an approach road to make it pedestrian-friendly.

The vision for the site is to develop it as a religious tourist magnet that will attract pilgrims going to Tirupati and other temples via NH716. Pedestrianisation of abutting roads and development of landscaped gardens will enhance tourist engagement on the site. The site will target local and domestic religious tourists that will apprehend and appreciate the religious significance, architectural beauty, and cultural values of the temple.

- **Target Visitors:** The site is largely a pilgrim site, with significant footfall from neighbouring areas as well as from rest of Tamil Nadu and other south Indian states due to its rich religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.

Further, pilgrims groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang and elderly). The target visitor group envisioned at the site are:

- **Pilgrims:** Visiting the temple for its religious value.
- **Locals:** For daily worship and celebration of festivals
- **Domestic Tourists:** For the monumental and historical value of the temple, generally on their way to Tirupati
- **Tourist Projections** – The site is categorized as a **Medium tourist site** with **Low HVT** (High Value Tourist) potential.

Past footfall data for the site has been received from sources like the site manager and TTDC’s compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	1,807	4,985	11,771
High Value Tourists (HVT) (Both domestic and foreign)	0	0	0
Maximum Carrying Capacity	13,505		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Master Plan Concept

Given that the site is popular among pilgrims, the objective is to enhance religious tourist footfall and to adequately cater to the already captured traffic. Therefore, the concept for masterplan is:

- **Improving pilgrims’ experience** at the temple – by pedestrianisation of the approach road, development of landscaped garden and improvement of existing infrastructure to make it aesthetically appealing.
- Developing **cultural spaces such as landscaped garden** at the site by utilising open land within the site.
- **Improving temple visibility** through improved visibility on NH-716 and appropriate marketing & promotion.

Interventions for implementing the Master Plan concept are:

Hard Interventions

1. **Pedestrianisation of the Approach Road** – The approach road leading towards the temple has shops on both sides of the road, because of which the approach road becomes congested. Therefore, for the ease of convenience of visitors and

to make the approach road more pedestrian-friendly, pedestrianisation of the entire stretch is proposed. Tourists and devotees can park their vehicles on the proposed parking area which will be located outside the temple premises, adjacent to the eastern wall of the complex.

Infrastructure Created: ~180 m long and 4.5m wide, pedestrianised road with pavers.

- 2. Landscaped Garden** – The vacant open land within the temple premises on the east side of the entrance can be developed into a landscaped garden. This will improve the aesthetic appeal of the site by reducing the hardscape and will provide shaded canopy-style seating for the tourists to relax outside the temple. This place will also act as a holding space for pilgrims during peak seasons. The landscaping shall be done using native flora and paving material.

Infrastructure Created: ~2700 sqm of landscaped garden having 6 canopy-style seating areas.

- 3. Permanent animal care structure** – The site has a gaushala on the east side of the temple which is made of a temporary bamboo-tin structure. The structure is not aesthetically appealing and thus a permanent structure along with a feeding area is proposed. The visitors can visit the gaushala and can buy fresh dairy products. This will also act as a revenue source for the temple.

Infrastructure Created: 60 sqm of building.

Soft Interventions

- 1. Site Promotion** – The site is situated on the connecting route to Tirupati on NH 716. The highway can be used to promote the temple among devotees going towards Tirupati by putting directional signage along the road at the appropriate position. Temple visibility can also be improved with strategies like integration with TN Assist App, live telecasting of temple festivals, etc.
- 2. Open Gallery** – As the site has different shrines in and around the temple complex therefore an open information gallery is proposed to be developed on the site which will portray the historical and cultural importance of all the shrines. It shall be developed within the proposed landscaped garden.



Pedestrianisation of Approach Road



Landscaped Garden



Open Gallery

3. **Day Tour** – The temple is surrounded by other temples in the vicinity and is located on the bank of the Arani River. Its proximity to these sites shall be utilized by curating day-long tours for the devotees. Licensed guides could be deployed to guide the visitors about the history and significance of the temple.
4. **Community involvement** – The locals around the temple are very well aware of the temple’s history and significance. Therefore, locals can be trained and appointed as guides which will result in community engagement as well as awareness about the temple history among the visitors.

Amenities Plan

1. **Drinking-Water Station** – Temple has a good facility of drinking water inside its premises. However, there is no provision of drinking water outside the temple premises. As visitors spend significant time on approach roads having vendors on both sides, therefore a drinking water kiosk will be developed along the existing toilet block. A module of which can be referred from the design guidelines .
2. **Community Toilet Block** – The toilet block of the temple is accessible only from temple premises which leads to no toilet facility outside the temple. Moreover, the existing toilet block needs to be upgraded. Therefore, the existing toilet block will be re-designed as a community toilet block that can be accessed from both inside and outside of the temple. The design guidelines for Community Toilet Block are design guidelines.
3. **Street Lighting** – The site is observed to have inadequate streetlights. Therefore, streetlights along the outer periphery of the temple complex are proposed to be installed at the appropriate distance. Sustainable means can be adopted, and the streets can be kept illuminated by deploying solar street lights. *Infrastructure Created: 110 m long stretch will be provided with streetlight at the appropriate distance.*
4. **Improvement of Pongal Shed** – Temple has a Pongal shed beneath which a temporary market operates. This is a bamboo-tin structure which is aesthetically not pleasing. Therefore, a canopy style structure is proposed to improve its appearance and attract more visitors. *Infrastructure Created: 45 m long and 12 m wide canopy style structure.*

5. **Parking** – The parking facility is proposed to be shifted and re-located adjacent to the eastern boundary wall of the temple complex. This will restrict vehicular movement within the temple premises and thus will vacate the space in front of the temple to develop cultural/relaxing areas for the tourists. *Infrastructure Created: 900 sqm of paved parking yard.*
6. **Cleanliness** – It was observed during initial surveys that the area outside the temple complex is not clean due to high vending activities. Therefore, dustbins at appropriate distances are proposed to be installed to make the approach road clean.

Trunk Infrastructure

Some of the approach roads to the temple are not even tarred and have potholes. Moreover, the surrounding roads are prone to water clogging even after light rainfall. Therefore, road infrastructure could be improved by the concerned authority to improve access to the temple and for ease in the convenience of the tourists.

Project Identified

#	Project Component	Scale
1	Pedestrianisation of Road (4.5 m wide)	~180 m
2	Landscaped Garden	~2700 sqm
3	Permanent Animal Care Structure	~60 sqm
4	Drinking-Water Station	1
5	Community Toilet Block	1
6	Streetlights	110 m
7	Improvement of Pongal Shed (12 m wide)	45 m
8	Parking (~20 ECS)	~900 sqm

Feasibility Assessment

The following considerations have been accounted for the cost projections of proposed interventions at this site:

- Feasibility of the cashflows projected here are accounted only for the additional components master planned.

- The current operating & maintenance cost of the temple have not been considered.

Capital Expenditures

The cost of the different project components proposed in the masterplan is calculated basis the current market price considering the appropriate escalations.

#	Project Component	Cost (INR Lakhs)
1	Pedestrianisation of Road (4.5 m wide)	4
2	Landscaped Garden	19
3	Permanent Animal Care Structure	6
4	Drinking-Water Station	3
6	Community Toilet Block	5
7	Streetlights	2
8	Improvement of Pongal Shed (12 m wide)	5
9	Parking	6
Total		INR 50 L

(Note: Cost of all the project components including the Total capex is rounded-off to the nearest whole value.)

Revenues - Proposed projects

(Note: The following considerations are applicable to the below mentioned revenue modules.

1. The revenues considered here are in addition to all the existing revenue currently accrued by the temple.
 2. The estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)
1. **Parking** – About 20 parking spaces assuming a daily occupancy of 40%, would earn the temple an estimated revenue of **INR 1 Lakh at Y5**.

Given the potential of the site and its proximity, the interventions proposed are limited to the basic hygiene factors followed across all the undertaken sites.

Operating Expenditures

(Note: The following considerations are applicable to the below mentioned operational expense modules.

1. The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.
2. The operations and maintenance currently undergone by the temple for its existing facilities are not considered in this section.
3. The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)

1. **Facility Maintenance costs** – This includes the costs incurred to maintain the cleanliness and the upkeep of the new facilities.
 - a. Maintenance of the **Open area**, which includes cleaners, gardeners, etc. for upkeep of the landscape in the temple.
 - b. Maintenance of the **Amenity block** - the cleaning of toilets, wash areas and drinking water stations.

The projected costs incurred is estimated at **INR 2 Lakhs**.

2. **Repair & Maintenance costs** – This includes the expense incurred over time for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.

The projected costs incurred is estimated at **INR 1 Lakh**.

3. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.

The projected costs incurred is estimated at **INR 1 Lakh**.

The total operational expenditure incurred by the temple from the proposed capital projects is projected at an estimated **INR 5 Lakhs at Y5**.

The estimated revenues from the proposed capital expenditure projects falls short of the estimated operational expenses since the footfall at the site is negligible and has very low future potential. Keeping this in mind the capital projects proposed here

are limited to bare necessities to upkeep the hygiene factor followed across all the sites.

Phasing & Funding Agencies

The development of the projects is to be taken up by HR & CE department and the implementation of these can be carried out as follows:

1. The **Parking facility** is to be undertaken by the temple body through the addition of a security personnel, the additional workforce for parking management is included in the operating expenses (*Manpower cost*).

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 2,150⁶⁶ man-days of construction labour (*spread across 1-2 years of implementation*)

During Operations: Jobs created during operations will entail:

- Yatri Niwas = 20.16 man – days per day⁶⁷
- Additional personnel deployed at site (Housekeeping, management, security) = 12 Persons⁶⁸
- Retail and F&B spaces = 5 man-days per day⁶⁹

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – As discussed above
- Indirect employment in the sectors supplying inputs to the tourism industries.

⁶⁶ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
 - Assumed cost of labour assumed for computation = INR 700 per day

- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 5,450 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site

Both increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 1180 Cr. at the site .

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

- Cumulative labour man-days = 30% * CAPEX / 700

⁶⁷ As per World Bank thumb rule, 12 man-days per day for 10-key 4-star hotel and 20 man-days for 10-key 5-star hotel.

As per HVS Report, in typical India hotels, manpower to room ratio for 4/5 star hotels is 2.11-2.70, for mid-market 1.52 and for budget hotels 0.72. We have assumed 2 for our computation.

⁶⁸ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

⁶⁹ Assuming average 2.5 persons per kiosk / shop

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and suppliers will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

Figure 20-2: Proposed Master Plan – Bhavani Amman Temple, Preiyapalayam



21. Andarkuppam Murugan Temple, Tiruvallur

Site Details

District:	Tiruvallur
Name of Site	Andarkuppam Murugan Temple
Site No:	Site 44A of 295
Site Use:	Temple
Category:	A (Temple)
Location:	13.3100, 80.1581
Land Area:	4 acres
Peak Footfalls:	5000 per day (April – May)
Operator:	HR & CE Dept.
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom. – 5 lakhs (2019 – 20) For. – ~Nil
Site Revenues:	INR 15 lakhs (2019)
Site Orientation:	Pilgrim
Site Potential:	Low Tourism Site
HVT Potential:	Low HVT Potential
Connectivity	
a. Railway Station:	~35 km (Chennai)
b. Airport:	~50 km (Chennai)
c. Highway:	~850 m from SH56
Trails featured on:	Nil (Pure Pilgrim Temple)

The Andarkuppam Murugan Temple is dedicated to the deity Murugan. This temple is usually visited along with the Siruvapuri Murugan Temple by the tourists. The temple enjoys good popularity among the local crowd and has plenty of visitors from Chennai city. The temple also gets a good number of visitors from the neighbouring districts – Andhra Pradesh and Telangana.

To increase the footfalls, the temple would require interventions in terms of the last mile connectivity. A dedicated shuttle service can be planned between the two temples to alleviate the connectivity issues that currently exist.

Existing Condition

Location

The Andarkuppam Murugan Temple site is located in Andarkuppam, near Ponneri town in Tiruvallur district of Tamil Nadu. The city is located 30 kms north of Chennai. The temple is at a distance of 2 km from the Chennai - Kolkata Highway. The temple complex is mostly surrounded by agriculture fields. Few cluster developments of residential / mixed-use form are sited near the temple area. Siruvapuri Murugan Temple, another important pilgrim destination is 5.5 km from this temple.

Existing Layout and Uses

The temple is about 600 years old and covers an area of 4 acres. It is made in Dravidian architecture form having five-tier gopuram. The idol of the deity, Murugan appears in standing posture with Goddess Valli.

Despite being in a rural and village set up the temple enjoys popularity among locals and tourists. On most days, large crowds visit the temple for worship. Some non-commercial events as cultural performances (dance recitals, music concerts, etc.) are done. The other uses housed on the site include:

- Food outlets – 1 shop selling prasadam
- Offices of the administrators

- A stage for temple functions/dance performances etc.

The major festivals celebrated in the temple are Chithirai Brahmotsavam, Vaikasi Visakam, Aadi Kruthikai, Kanda Sashti etc.

Other Land Available

Apart from the 4-acres land used for the temple complex, the temple also owns about 110 acres of land which is partially leased out for farming. These lands are present around the temple in a distributed manner and few parcels towards the Ponneri highway. The additional land is not used for Master Planning.

Master Planning Considerations

Applicable Regulations

1. **Tamil Nadu Combined Development and Building Rules, 2019** – The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land.
2. **TN HRCE Rules, 1959**
 - a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions
 - b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.
 - c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to the religious activities and for the facilitation of Hindu pilgrim tourists.
 - d. The HR&CE Dept. owned land can be leased for a period of no more than 3 years.

Key Sensitivities

There is no specific environmental/social sensitivity to be addressed at the site.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

1. **Attraction** – Tourists visit the temple for its rich history and Dravidian architecture. The most notable feature of this temple is its five-tiered rajagopuram. This gopuram is beautifully built with a sculpture of god and goddess and acts as a landmark for the neighbouring area. The temple draws huge crowds during the Tamil festive season – Chithirai Brahmotsavam in April and May. The temple is well suited for pilgrims and does not offer much attraction value to tourists.
 2. **Accessibility & Mobility** – The site can be accessed from Chennai - Kolkata Highway which is at a distance of 2 km. The highway has wide roads with plenty of travel options available. However, the last mile connectivity to the temple are narrow roads with multiple potholes. The nearest bus stop is 1 km away. The major modes of transport people use to commute to the site are buses, autos, and private cars.
 3. **Amenities** – The temple scores high on cleanliness and basic amenities. Washrooms, footwear stands, dustbins, drinking water facility and safety security are present inside the site. However, the site lacks the following amenities:
 - Inadequate street lighting.
 - No designated footpaths.
 - No facility for visitors to rest/sit outside the site.
 - No proper signages/way findings for the temple.
- Parking** – The Site has a designated parking area on the northern side of the site with a standard charge of INR 5.
4. **Awareness** – The temple enjoys popularity among locals and tourists. In 2019, the temple received ~ 5 lakhs visitors from the neighbouring districts and states, with no foreign tourist visitors. Many tourists come from Andhra Pradesh and Karnataka. The HRCE department maintains a temple website with relevant information.

5. **Activities** – There aren't any regular activities conducted on the temple premises. Only temple related activities are undertaken at the site with major rituals, dance recitals and cultural fests celebrated during festival time.
6. **Accommodation** – Being situated in a small village, there are no options for accommodation in the form of hotels or a hostel. The nearest accommodation facilities available are in Ponneri town, 10 km away in form of budget hotels and dormitories. Premium hotels and resorts are available in Chennai (~30 km away).
7. **Association with Community** – The festivals of the temple enjoy participation among the locals. There are also many hawkers and vendors that dot the site with carts and stalls – selling local goods, handicrafts, and food items during the Kantha Sasti festival.

Figure 21-1: Location and Existing Layout



- Legends:
- 1 – Main Entrance
 - 2 – Temple Corridor
 - 3 – Main Gopuram
 - 4 – Main Shrine
 - 5 – Ticket counter
 - 6 – Mandapams/ hall
 - 7 – other shrines
 - 8 – Toilet block
 - 9 – Temple Tank

Site Pictures



Rajagopuram



Main shrine gopuram



Main shrine



Thiruvallur, Tamil Nadu, India
Ponneri, Thiruvallur, 601204,
Tamil Nadu, India
Lat 13°18'34"N, Long 80°9'37"E
08/05/2020 02:47 PM



Thiruvallur, Tamil Nadu, India
Ponneri, Thiruvallur, 601204,
Tamil Nadu, India
Lat 13°18'34"N, Long 80°9'37"E
08/05/2020 02:48 PM



Thiruvallur, Tamil Nadu, India
Ponneri, Thiruvallur, 601204,
Tamil Nadu, India
Lat 13°18'34"N, Long 80°9'37"E
08/05/2020 02:48 PM



Mandapam/ Mini hall.

Thiruvallur, Tamil Nadu, India
Ponneri, Thiruvallur, 601204,
Tamil Nadu, India
Lat 13°18'34"N, Long 80°9'37"E
08/05/2020 02:47 PM



Stone carvings

Thiruvallur, Tamil Nadu, India
Ponneri, Thiruvallur, 601204,
Tamil Nadu, India
Lat 13°18'34"N, Long 80°9'37"E
08/05/2020 02:50 PM



Entrance

Thiruvallur, Tamil Nadu, India
Ponneri, Thiruvallur, 601204,
Tamil Nadu, India
Lat 13°18'34"N, Long 80°9'37"E
08/05/2020 03:18 PM



Ticket counter

Thiruvallur, Tamil Nadu, India
Ponneri, Thiruvallur, 601204,
Tamil Nadu, India
Lat 13°18'34"N, Long 80°9'37"E
08/05/2020 02:46 PM



Walkway inside the temple

Thiruvallur, Tamil Nadu, India
Ponneri, Thiruvallur, 601204,
Tamil Nadu, India
Lat 13°18'34"N, Long 80°9'37"E
08/05/2020 02:46 PM



Store room & generator

Thiruvallur, Tamil Nadu, India
Ponneri, Thiruvallur, 601204,
Tamil Nadu, India
Lat 13°18'34"N, Long 80°9'37"E
08/05/2020 02:46 PM



Community Hall

Thiruvallur, Tamil Nadu, India
Ponneri, Thiruvallur, 601204,
Tamil Nadu, India
Lat 13°18'34"N, Long 80°9'37"E
08/05/2020 03:24 PM



Temple entrance & parking

Thiruvallur, Tamil Nadu, India
Ponneri, Thiruvallur, 601204,
Tamil Nadu, India
Lat 13°18'34"N, Long 80°9'37"E
08/05/2020 03:24 PM



Adjacent street

Thiruvallur, Tamil Nadu, India
Ponneri, Thiruvallur, 601204,
Tamil Nadu, India
Lat 13°18'34"N, Long 80°9'37"E
08/05/2020 03:18 PM

Vision for the Site

- Andal Kuppam Murugan Temple has religious importance due to its rich history and Dravidian architecture. The most notable feature of this temple is its five-tiered rajagopuram. The temple is well maintained and has developed ecosystem of amenities and facilities. The temple is farfetched from any main city centre therefore lacks good accessibility to the site. It has fair amount of popularity among the locals and attracts maximum footfalls only during festive days.
- The temple has the potential to be developed as a domestic tourist attraction by linkage with Siruvapuri Murugan Temple and upgradation of existing amenities. Both the temples can be developed as a day tour expedition from Chennai for pilgrims and tourists. Thus, marginally increasing the overall footfall.
- The vision for the site is to develop it as a day-tour religious tourist spot by improving existing infrastructure and basic amenities and developing connectivity and linkages. This will position the temple for attracting higher footfall. The temple also has ample amount of available vacant land which can be developed into pilgrim recreation space, theme garden with provision of necessary public amenities engaging the tourists and visitors at site.
- **Target Visitor** – The site is largely a pilgrim site, with significant footfall from neighbouring areas as well as from rest of Tamil Nadu and other south Indian states due to its rich religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.

Further, pilgrims groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang and elderly).

- **Tourist Projections** – The site is categorized as a **Low tourism site** with **low HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC’s compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	500	1,181	2,375
High Value Tourists (HVT) (Both domestic and foreign)	0	0	0
Maximum Carrying Capacity	15,695		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Masterplan Concept

The objectives of master planning at this Site include:

- **Improving pilgrims’ experience** at the temple – through improved circulation, conveniences, and amenities.
- Developing **pilgrim cultural spaces** and **theme gardens** with engaging public amenities and facilities.

Hard Interventions

1. Pilgrim Recreational Space – The 0.5-acre open space at the northern side of the temple is envisioned to be developed into a recreational space for the tourists and pilgrims. The area will accommodate resting areas, pilgrim souvenir shops and food joints. The area can also be used for conducting cultural events such as dance festivals, recitals etc. with additional temporary tensile structures (Rest Areas) used for seating. This would make the space more vibrant and increase tourist engagement at the site for a longer period. The area will be paved and landscaped using local materials.

Infrastructure Created: 5 Tensile canopies with temporary seating (Rest Areas), 5 Pilgrim Souvenir & Food shops, Landscaping: 250 sqm

2. Pilgrim Walkway – As the temple is 60m west of the temple tank, a temple walkway is proposed between the two. This can be achieved by developing a

shaded 3 m wide pedestrian walkway with pergola or trellis structures. This will improve visibility of the temple tank and enhance the look and feel of the area.
Infrastructure Created: 60 m shaded pedestrian walkway

3. Temple tank Rejuvenation – The temple has a temple tank that can be replenished through sustainable measures like rainwater harvesting. The tank can also be developed into a better public space for the temple visitors through creating a stepped boundary on all sides and soft landscaping.
Infrastructure Created: ~210 m of Paved, Landscaped, and fenced temple tank boundary

4. Theme Landscaped Garden – Owing to the site available land around the temple tank and existing parking area, a theme landscaped garden can be developed. This will be a tank facing garden with beautifully carved landscaped layout adorned by botanical flowers and bushes. This can be complemented with paved pathways and seating arrangements for locals and tourists to spend time.
Infrastructure Created: ~2000 sqm of garden

5. Site Boundary – Currently, only the temple is walled on all sides. Boundary wall will be developed around the proposed development of temple tank and landscaping. This will protect the site and the proposed development from local interference and trespassers ensuring minimum issues of loitering and waste littering.
Infrastructure Created: 585 m of boundary wall

6. Paved Pathway – 150 m of paved pathway connecting the main access road to the theme garden is proposed.
Infrastructure Created: 150m of pathway



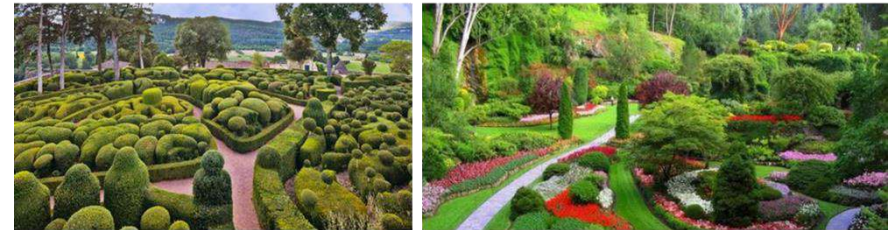
Pilgrim Recreation Area



Pilgrim Walkway



Temple tank Rejuvenation



Theme Landscaped Garden

Soft Interventions

1. **Events** – The local Corporation could organise various events and pilgrim offering and food servings in the proposed open pilgrim cultural area during important festivals. This would help to popularise the site to other segments of visitors.
2. **Marketing & Promotion** – The site to be Integrated with TN Tourism Assist App, along with photo and video documentation. This can be advertised at all key public locations and online platforms.
3. **Site management** – The site must be managed by the respective management authorities in the aspects of placing restrictions on waste littering at the site and tourist loitering at the site. It can be done by deploying adequate full-time security staff at the site. This will also aid in crowd management during Kantha Sasti festival.
4. **Curation of facilitated tours** – Develop a curated tour from Chennai connecting this temple with Siruvapuri Murugan Temple. There will be licensed tour guides along the day long tour. Dedicated shuttle service can be started between the temples enhancing ease of movement.

Amenities Plan

1. **Signages** – Package 1 set of signages are proposed to be installed at the site. It includes a Site map at entry, directional signage at 4-5 key points on the tourist path, descriptive placard on the Site's importance. All the signages at the site should be as per the design guidelines.
2. **Parking** – A regulated parking area on the existing parking area will be developed. The area will be paved and fenced accommodating 50 cars.
3. **Technology Interventions (Package 1)** – As the site is small in scale and does not attract a large number of tourists, therefore Package 1- Basic is proposed to feature on this site, as per the design guidelines .
4. **Monument lighting** – The temple has a beautiful Dravidian style of architecture with iconic Rajagopuram and a huge temple tank.

- The gopuram, vimana, and temple tank is already a visual landmark in the neighbourhood. This can be accentuated with monument lighting.
 - The temple tank can also be lighted to become a congregation space at night.
5. **Lighting** – Street lighting is proposed to be provided along with the entire site, for concerns related to visitor security in the evening.
 6. **Pay and Use Toilet Blocks** – ~1 units of toilets are proposed to be provided at the landscaped garden and pilgrim recreation space each. This will be based on the standards and guidelines.
 7. **Drinking-Water Station** – 1 water station will be installed at the theme garden behind the parking area.

Trunk Infrastructure

As Siruvapuri Murugan Temple is accessed via narrow roads, road widening should be proposed for better circulation to the local authority.

Project Identified

#	Project Component	Scale
1	Pilgrim Recreation Space	1200 sqm
	• Tensile canopies (Rest Areas)	2
	• Pilgrim Souvenir & F&B shops	5
	• Fixed Rest areas (Gazebos)	2
	• Landscaping	250 sqm
2	Pilgrim Walkway	60 m
3	Temple tank Rejuvenation	210 m
4	Theme Landscape Garden	2000 sqm
5	Site Boundary	585 m
6	Paved Pathway	150 m
7	Technology (Package 1)	1
8	Signage (Package 1)	1
9	Parking (Paved Yard)	50 ECS
10	Monumental Lighting	-

#	Project Component	Scale
11	Street Lighting	440 m
12	Pay and Use toilet Block	2
13	Drinking water-station	1

Feasibility Assessment

The following considerations have been accounted for the cost projections of proposed interventions at this site:

- Feasibility of the cashflows projected here are accounted only for the additional components master planned.
- The current operating & maintenance cost of the temple have not been considered.

Capital Expenditures

The cost of the different project components proposed in the masterplan is calculated basis the current market price considering the appropriate escalations.

#	Project Component	Cost (INR Lakhs)	Phasing
1	Pilgrim Recreation Space	8	Y2 - Y5
2	Tensile canopies (Rest Areas)	1	Y2 - Y5
3	Pilgrim Souvenir shops	7	Y0 - Y5
4	Food & Beverage joints	12	Y2 - Y5
5	Fixed Rest areas (Gazebos) - 30 sqm (2 gazebos of 15sqm each)	4	Y2 - Y5
6	Landscaping	1	Y2 - Y5
7	Pilgrim Walkway	1	Y0 - Y5
8	Temple tank Rejuvenation	13	Y0 - Y5
9	Theme Landscape Garden	2	Y0 - Y5
10	Site Boundary	32	Y0 - Y5
11	Paved Pathway	3	Y0 - Y5
12	Technology (Package 1)	1	Y0 - Y5

#	Project Component	Cost (INR Lakhs)	Phasing
13	Signage (Package 1)	1	Y0 - Y5
14	Parking (Paved Yard)	20	Y0 - Y5
15	Monumental Lighting	20	Y2 - Y5
16	Street Lighting	7	Y0 - Y5
17	Pay and Use toilet Block	20	Y0 - Y5
18	Drinking water-station	2	Y0 - Y5
Total		~INR 150 L	

Revenues - Proposed projects

(Note: The following considerations are applicable to the below mentioned revenue modules.

1. The revenues considered here are in addition to all the existing revenue currently accrued by the temple.
2. The estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)

1. **Kiosks** – 8 leasable kiosk units with a total rental revenue of *INR 24 Lakhs*.
2. **Parking** – About 50 parking spaces assuming a daily occupancy of 30%, would earn the temple an estimated revenue of *INR 1 Lakh*.
3. **Pay per use Toilets** – Assuming about an average of 15% of the visitors using the proposed pay per use toilet, would earn the temple an estimated *INR 18 Lakhs*.

The total revenues to the temple from the proposed capital projects is projected at an estimated *INR ~45 Lakhs at Y5*.

Operating Expenditures

(Note: The following considerations are applicable to the below mentioned operational expense modules.

1. The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.

2. *The operations and maintenance currently undergone by the temple for its existing facilities are not considered in this section.*
3. *The expense projections are pegged at Y5 (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)*

1. **Manpower Costs** – This includes the additional personnel required to manage the proposed facilities.
 - a. A **Help-desk staff** at the Amenity block.
 - b. A **security personnel** at the proposed parking.
 The projected costs incurred is estimated at *INR 4 Lakhs*.
2. **Facility Maintenance costs** – This includes the costs incurred to maintain the cleanliness and the upkeep of the new facilities.
 - a. Maintenance of the **Open area**, which includes cleaners, gardeners, etc. for upkeep of the landscape in the temple.
 - b. Maintenance of the **Amenity block** - the cleaning of toilets, wash areas and drinking water stations.
 The projected costs incurred is estimated at *INR 2 Lakhs*.
3. **Repair & Maintenance costs** – This includes the expense incurred over time for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
 The projected costs incurred is estimated at *INR 2 Lakhs*.
4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the retail kiosks, community event spaces in the temple surroundings.
 The projected costs incurred is estimated at *INR 1 Lakh*.
5. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections of the temple.
 The projected costs incurred is estimated at *INR 1 Lakhs*.

6. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations.
 The projected costs incurred is estimated at *INR 32 Lakhs*.
7. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.
 The projected maintenance cost is estimated at a lumpsum of *INR 50,000 per annum*.

The total operational expenditure incurred by the temple from the proposed capital projects is projected at an estimated *INR ~40 L at Y5*.

Given that the estimated revenues (*INR ~45 Lakhs*) from the proposed capital expenditure projects exceeds the operational expenses (*INR 40 Lakhs*) incurred, it can be concluded that the Interventions proposed at the site are Self-Sustainable and therefore beneficial to the temple.

Phasing & Funding Agencies

The development of the projects is to be taken up by HR & CE department and the implementation of these can be carried out as follows:

1. The implementation of the **Technology package** (i.e., Smart-App integrations, Virtual guides, NFC tags, etc.) at the site would be taken up by the SPV provisioned by the tourism department.
2. The **kiosk units** can be leased/ rented out to private operators to host souvenir shops to display and sell temple related religious arts/ craft/ pooja items.
3. The **Parking facility** is to be undertaken by the temple body and the respective cost incurred by the management is included in the operating expenses.

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 6,450⁷⁰ man-days of construction labour (spread across 1 year of implementation)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 2 Persons⁷¹
- Retail and F&B spaces = 20 man-days per day⁷²

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – As discussed above
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect, and induced effects is estimated as. 16,100 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 240 Cr. at the site .

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%

- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

⁷⁰ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.

- As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
- Assumed cost of labour assumed for computation = INR 700 per day
- Cumulative labour man-days = 30% * CAPEX / 700

⁷¹ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

⁷² Assuming average 2.5 persons per kiosk / shop

Figure 21-2: Proposed MasterPlan – Andarkuppam Murugan Temple, Tiruvallur



22. Siruvapuri Murugan Temple, Tiruvallur

Site Details

District:	Tiruvallur
Name of Site	Siruvapuri Murugan Temple
Site No:	Site 44B of 295
Site Use:	Temple
Category:	A (Temple)
Location:	13.3212,80.1169
Land Area:	5.5 acres
Peak Footfalls:	10,000 per day (November)
Operator:	HR & CE Dept.
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom. – 6.50 lakhs (2019 – 20) For. – ~16 (2019 – 20)
Site Revenues:	INR 1 Crore (2019)
Site Orientation:	Pilgrim
Site Potential:	Low Tourism Site
HVT Potential:	Low HVT Potential
Connectivity	
a. Railway Station:	~35 km (Chennai)
b. Airport:	~55 km (Chennai)
c. Highway:	~3 km from AH45
Trails featured on:	Nil (Pure Pilgrim Temple)

The Siruvapuri Murugan Temple is dedicated to the deity Murugan. This temple is usually visited along with the Andarkuppam Murugan Temple by the tourists. The temple enjoys good popularity among the local crowd and has plenty of visitors from Chennai city. The temple also gets a good number of visitors from the neighbouring districts – Andhra Pradesh and Telangana.

To increase the footfalls, the temple would require interventions in terms of the last mile connectivity. A dedicated shuttle service can be planned between the two temples to alleviate the connectivity issues that currently exist.

Existing Condition

Location

The Siruvapuri Murugan Temple site is located in Siruvapuri village, (also known as Chinnambedu), near to Ponneri town in Tiruvallur district of Tamil Nadu. The city is located 35 kms north of Chennai. The temple is at a distance of 3 km from the Chennai - Kolkata Highway. The temple complex is mostly surrounded by agriculture fields. Few cluster developments of residential / mixed-use form are sited near the temple area. Andal Kuppam Murugan temple, another important pilgrim destination is 5.5 km from this temple.

Existing Layout and Uses

The temple is about 2000 years old and covers an area of 5.5 acres. It is made in Dravidian architecture form having five-tier gopuram with a single prakaram. The unique feature of this temple is the peacock, carrier of Lord Murugan made of greenstone. The idol of deity Bala Subrahmanya, Murugan is about 4.5 ft height and appears in standing posture with goddess Valli. Opposite to the idol of deity Bala Subrahmanya, Murugan is the sanctum of Saint Arunagirinathar, on the right-hand side is the sanctum of Annamalaiyar and on the left is the sanctum of Unnamulai Ambal. The temple also houses a few smaller shrines.

The major festivals celebrated in the temple are Karthikai, Sasti, Prathosam, Amavasya etc.

Other Land Available

Apart from the 5.5-acres land used for the temple complex, the temple also owns about 48 acres of land which is leased out for farming. These lands are distributed around the temple.

Master Planning Considerations

Applicable Regulations

1. **Tamil Nadu Combined Development and Building Rules, 2019** – The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land.
2. **TN HRCE Rules, 1959**
 - a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions
 - b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.
 - c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to the religious activities and for the facilitation of Hindu pilgrim tourists.
 - d. The HR&CE Dept. owned land can be leased for a period of no more than 3 years.

Key Sensitivities

There is no specific environmental/social sensitivity to be addressed at the site.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

1. **Attraction** – Tourists visit the temple for its rich history and Dravidian architecture. The most notable feature of this temple is its five-tiered rajagopuram

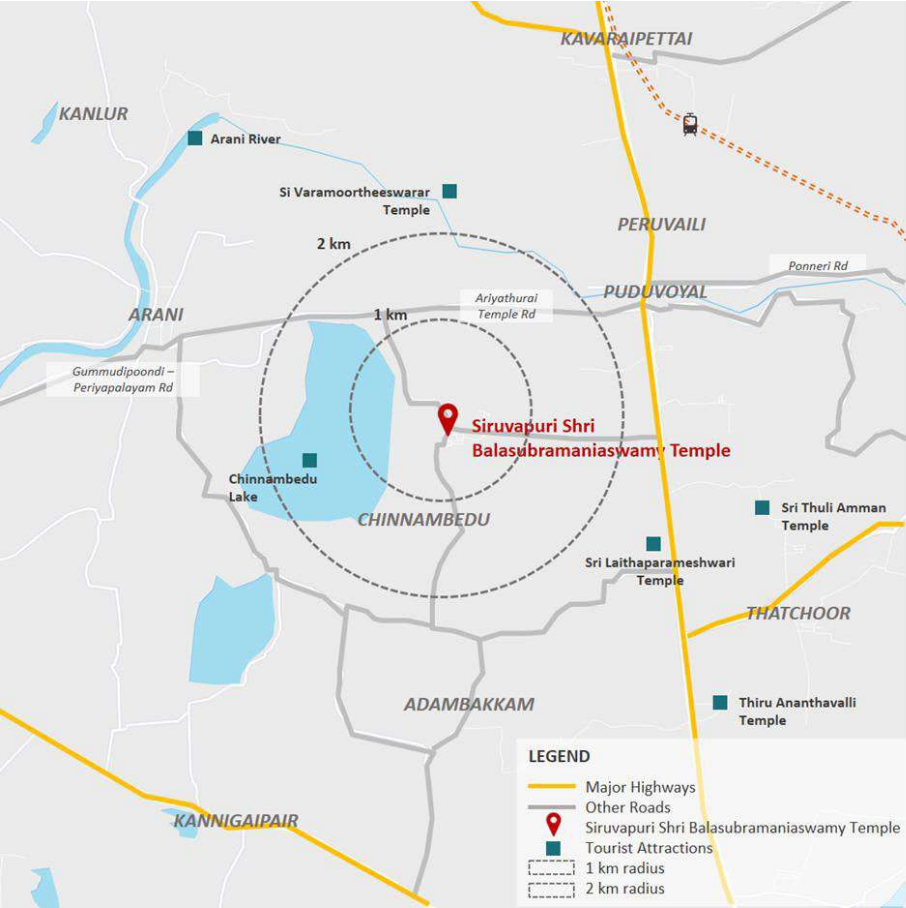
with single Prakaram. This gopuram is beautifully built and acts as a landmark for the neighbouring area. The temple draws huge crowds during the Tamil festive season – Kandha Sashti. The temple does not offer much attraction value to tourists, as distinct from pilgrims.

2. **Accessibility & Mobility** – The site can be accessed from Chennai - Kolkata Highway which is at a distance of 3 km. The highway has wide roads with plenty of travel options available. However, the last mile connectivity to the temple are narrow roads with multiple potholes. The nearest bus stop is 1.6 km away. The major modes of transport people use to commute to the site are buses and private cars.
 3. **Amenities** – The temple scores high on cleanliness and basic amenities. Washrooms, footwear stand, Dustbins, and drinking water facility are present inside the site. However, the site lacks the following amenities:
 - There is inadequate street lighting
 - Divyaang friendly measures are not available
 - No designated footpaths
 - No facility for visitors to rest/sit outside the site.
 - No proper signages/way findings for the temple.
- Parking** – The Site has a designated parking area on the northern side of the site with a standard charge of INR 5.
4. **Awareness** – The temple enjoys popularity among locals and tourists. In 2019, the temple received ~ 6.5 lakhs visitors from the neighbouring districts and states, with no foreign tourist visitors. Many tourists come from Andhra Pradesh and Karnataka. The HRCE department maintains a temple website with relevant information.
 5. **Activities** – There aren't any regular activities conducted on the temple premises. Only temple related activities are undertaken at the site with major rituals, celebrations and cultural fests celebrated on Kandha Sashti, the most prominent festival in the temple.
 6. **Accommodation** – Being situated in a small village, there are no options for accommodation in the form of hotels or a hostel. The nearest accommodation

facilities available are in Ponneri town, 10 km away in form of budget hotels and dormitories. Premium hotels and resorts are available in Chennai.

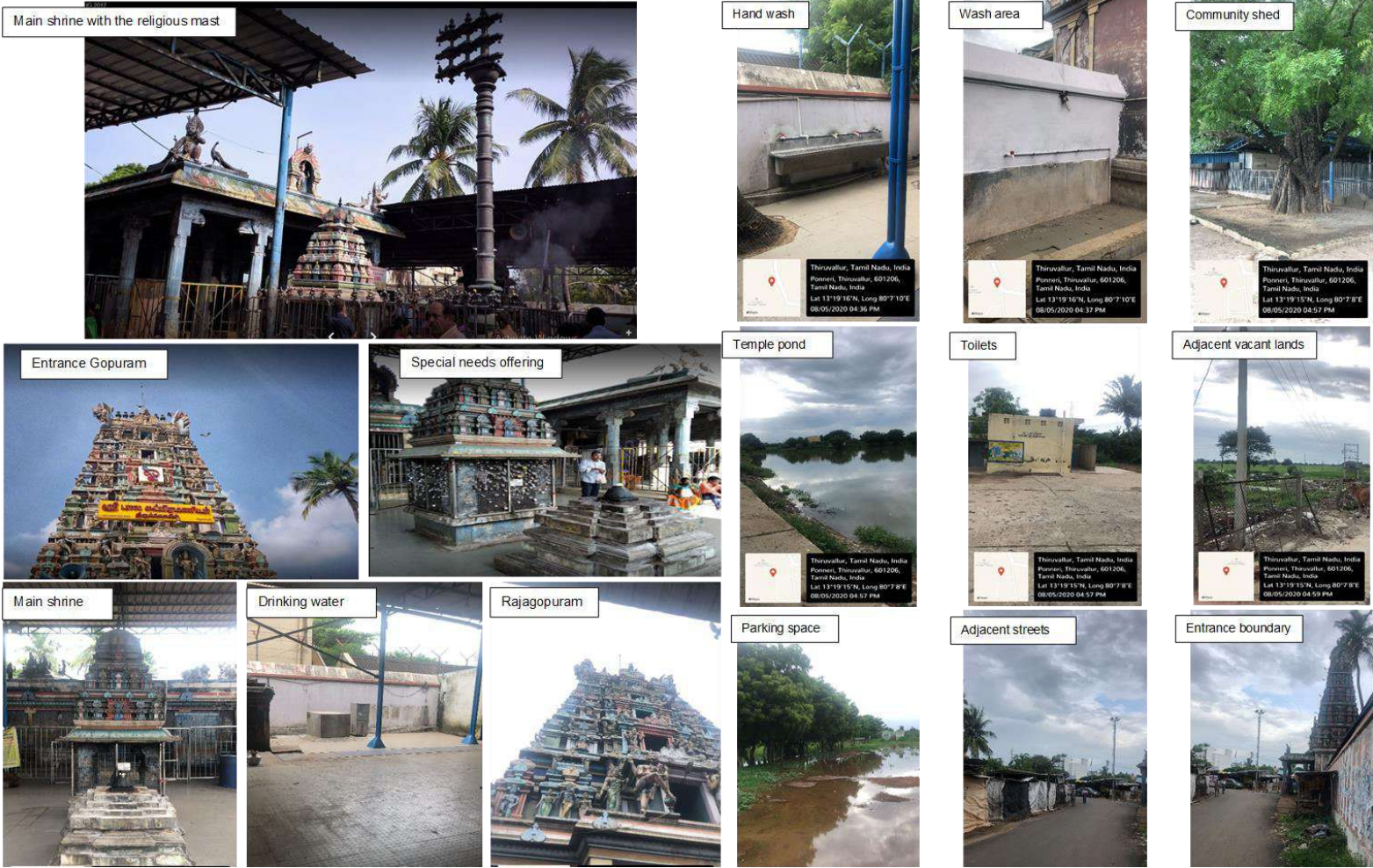
7. **Association with Community** – The festivals of the temple enjoy participation among the locals. There are also many hawkers and vendors that dot the site with carts and stalls – selling local goods, handicrafts, and food items during the Kantha Sasti festival.

Figure 22-1: Location and Existing Layout



- Legends:**
- 1 – Rajagopuram (Entrance)
 - 2 – Temple Complex
 - 3 – Temple pond
 - 4 – Temple Parking
 - 5 – Mandapam
 - 6 – Other shrines
 - 7 – Toilet block

Site Pictures



Vision for the Site

- Siruvapuri Murugan Temple has religious importance due to its rich history and Dravidian architecture. The most notable feature of this temple is its five-tiered rajagopuram with single Prakaram. The temple is well maintained and has developed an ecosystem of amenities and facilities. The temple is farfetched from any main city centre therefore lacks good accessibility to the site. It has a fair amount of popularity among the locals and attracts maximum footfalls only during festive days.
- The temple has the potential to be developed as a domestic tourist attraction by linkage with Andakkulam Murugan temple and upgradation of existing amenities. Both the temples can be developed as a day tour expedition from Chennai for pilgrims and tourists. Thus, marginally increasing the overall footfall.
- The vision for the site is to develop it as a day-tour religious tourist spot by improving existing infrastructure and basic amenities and developing connectivity and linkages. This will position the temple for attracting higher footfall. The temple also has available land which can be developed into pilgrim cultural space with necessary public engaging amenities and a small accommodation facility.
- **Target Visitor** – The site is largely a pilgrim site, with significant footfall from neighbouring areas as well as from rest of Tamil Nadu and other south Indian states due to its rich religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.

Further, pilgrim groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang and elderly).

- **Tourist Projections** – The site is categorized as a **Low tourism site with low (HVT) High Value Tourist potential.**

Past footfall data for the site has been received from sources like the site manager and TTDC’s compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	500	1,181	2,375
High Value Tourists (HVT) (Both domestic and foreign)	0	0	0
Maximum Carrying Capacity	15,695		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Masterplan Concept

The objectives of master planning at this Site include:

- **Improving pilgrims’ experience** at the temple – through improved circulation, conveniences, and amenities.
- Developing a **small Pilgrim Rest house** at the available parking area on the rear side for visitors and tourists.
- Developing **pilgrim cultural spaces** with engaging public amenities and facilities.

Hard Interventions

1. Dormitories (Pilgrim Rest house) – As the temple is located in a small village, it lacks any accommodation facility around. Therefore, a small pilgrim resthouse is proposed on the backside of the available parking space of the site. The resthouse will house 5 dorm rooms with a common toilet and dining block. The dormitories will accommodate 30 people. It will be a G only building. The accommodation facility will support both Sivapuri and Andarkuppam temple visitors.

Infrastructure Created: ~200 sqm building footprint area

2. Pilgrim Cultural spaces – The 1-acre open space at the northern side of the temple is envisioned to be used for conducting cultural events such as dance festivals, recitals etc. with development of temporary tensile structures (Rest Areas) used for seating. This would make the space more vibrant and increase

tourist engagement at the site for a longer period. The area will be paved and landscaped using local materials and natural flora.

Infrastructure Created: 3935 sqm area with 5 Souvenir and F&B Kiosks

- 3. Paved Pathway** – The internal lanes connecting the dormitories, parking, pilgrim cultural space, temple and smaller shrines will be paved and developed as pedestrian pathways. This will regularize the tourist movement and improve the look and feel of the entire site.

Infrastructure Created: 620 m length of paved pathway (3m wide)

- 4. Temple tank Rejuvenation** – The temple has a temple tank that can be replenished through sustainable measures like rainwater harvesting. The tank can also be developed into a better public space for the temple visitors through creating a stepped boundary on all sides and soft landscaping.

Infrastructure Created: ~385 m. of Paved, Landscaped, and fenced temple tank boundary

Soft Interventions

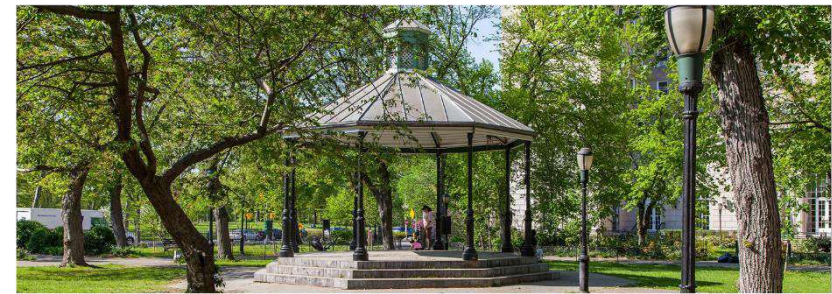
- 1. Events** – The local Corporation could organise various events and pilgrim offering and food servings in the proposed open pilgrim cultural area during important festivals. This would help to popularise the site to other segments of visitors.
- 2. Marketing & Promotion** – The site to be Integrated with TN Tourism Assist App, along with photo and video documentation. This can be advertised at all key public locations and online platforms.
- 3. Site management** – The site must be managed by the respective management authorities in the aspects of placing restrictions on waste littering at the site and tourist loitering at the site. It can be done by deploying adequate full-time security staff at the site. This will also aid in crowd management during Kantha Sasti festival.
- 4. Curation of facilitated tours** – Develop a curated tour from Chennai connecting this temple with Andarkuppam Murugan Temple. There will be licensed tour guides along the day long tour.



Dormitories- Pilgrim Rest house



Temple tank Rejuvenation



Landscaped Garden

Amenities Plan

1. **Signages** – Package 1 set of signages are proposed to be installed at the site. It includes a Site map at entry, directional signage at 4-5 key points on the tourist path, descriptive placard on the Site’s importance. All the signages at the site should be as per the design guidelines .
2. **Parking** – A regulated parking on the existing parking area will be developed. The area will be paved and accommodate 54 cars.
3. **Technology Interventions (Package 1)** – As the site is small in scale and does not attract a large number of tourists, therefore Package 1- Basic is proposed to feature on this site, as per the design guidelines .
4. **Monument lighting** – The temple has a beautiful Dravidian style of architecture with iconic Rajagopuram and a huge temple tank.
 - The gopuram, vimana, and temple tank is already a visual landmark in the neighbourhood. This can be accentuated with monument lighting.
 - The temple tank can also be lit to become a congregation space at night.
5. **Planting & landscaping** – More strategic tree planting is required along the entrance road in an alley formation. This will create more shaded areas to make the site attractive during the daytime. More sculptural trees and flowering trees and shrubs should be placed, thus helping in beautifying the site.

Trunk Infrastructure

As Siruvapuri Murugan Temple is accessed via narrow roads, therefore road widening should be proposed for better circulation to the Municipal corporation.

Project Identified

#	Project Component	Scale
1	Pilgrim Rest house (Dormitories)	210 sqm
2	Pilgrim Cultural space	3,935 sqm
3	Paved Pathway (3m wide)	620 m
4	Technology (Package 1)	1
5	Signage (Package 1)	1
6	Temple tank Rejuvenation	385 m

#	Project Component	Scale
7	Parking (Paved Yard)	54 ECS
8	Monumental Lighting	-
9	Streetlighting	620 m
10	Planting & landscaping (along the road)	175 m
Total		

Feasibility Assessment

The following considerations have been accounted for the cost projections of proposed interventions at this site:

- Feasibility of the cashflows projected here are accounted only for the additional components master planned.
- The current operating & maintenance cost of the temple have not been considered.

Capital Expenditures

The cost of the different project components proposed in the masterplan is calculated basis the current market price considering the appropriate escalations.

#	Project Component	Cost (INR Lakhs)
1	Pilgrim Rest house (Dormitories)	60
2	Pilgrim Cultural space	60
3	Pilgrim Cultural space - Kiosks	7
4	Paved Pathway (3m wide)	12
5	Technology (Package 1)	1
6	Signage (Package 1)	1
7	Temple tank Rejuvenation	13
8	Parking (Paved Yard)	15
9	Monumental Lighting	20
10	Planting and Landscaping	10
Total		INR 200 L

(Note: Cost of all the project components including the Total capex is rounded-off to the nearest whole value.)

Revenues - Proposed projects

(Note: The following considerations are applicable to the below mentioned revenue modules.

1. *The revenues considered here are in addition to all the existing revenue currently accrued by the temple.*
2. *The estimated revenue projections are pegged at Y5 (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)*

1. **Kiosks** – 5 leasable kiosk units at the proposed Facilitation centre with a rental earning of *INR 15 Lakhs*.
2. **Parking** – About 54 parking spaces assuming a daily occupancy of 40% daily occupancy, would earn the temple an estimated revenue of *INR 2 Lakhs*.
3. **Space on Hire** – Assuming an average of an event per week, renting of the community hall for private religious events/ ceremonies would earn the temple *INR 55 Lakhs*.
4. **Yatri Niwas** - Assuming an average of 50% occupancy would earn the temple *INR 13 Lakhs*

The total revenues to the temple from the proposed capital projects is projected at an estimated *INR 85 Lakhs. at Y5.*

Operating Expenditures

(Note: The following considerations are applicable to the below mentioned operational expense modules.

1. *The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.*
2. *The operations and maintenance currently undergone by the temple for its existing facilities are not considered in this section.*
3. *The expense projections are pegged at Y5 (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)*

1. **Manpower costs** – This includes the labour costs incurred to manage and for the upkeep of new facilities.
2. **Facility Maintenance costs** – This includes the costs incurred to maintain the cleanliness and the upkeep of the new facilities.

3. **Repair & Maintenance costs** – This includes the expense incurred over time for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.

4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the retail kiosks, community event spaces in the temple surroundings.

5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.

6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposal as per the environment norms. It is calculated based on the footfall projections of the temple.

7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rental kiosks and the community hall are pegged to the rental revenues earned from the respective sources. The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175 per kilolitre*.

8. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

The projected maintenance cost is estimated at a lumpsum of *INR 50,000 per annum*.

The total operational expenditure incurred by the temple from the proposed capital projects is projected at an estimated *INR 30 Lakhs at Y5.*

Given that the estimated revenues (*INR 85 Lakhs*) from the proposed capital expenditure projects exceeds the operational expenses (*INR 30 Lakhs*) incurred, it can be concluded that the Interventions proposed at the site are Self-Sustainable

and therefore beneficial to the temple and the Kanchipuram pilgrim/ tourist ecosystem.

Phasing & Funding Agencies

The development of the projects is to be taken up by HR & CE department and the implementation of these can be carried out as follows:

1. The implementation of the **Technology package** (i.e., Smart-App integrations, Virtual guides, NFC tags, etc.) and the **cleanliness drive** as part of the Civic Upgradation in and around the site would be taken up by the SPV provisioned by the tourism department.
2. The **kiosk units** can be leased/ rented out to private operators to host souvenir shops to display and sell temple related religious arts/ craft/ pooja items.
3. **Community hall/** event space at the Amphitheatre to be rented out to the devotees/ private operators to conduct ceremonies like marriage, etc. and religious events during festivals.
4. The **Parking facility** is to be undertaken by the temple through the addition of a security personnel, the additional workforce for parking management is included in the operating expenses (*Manpower cost*).

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 8,570⁷³ man-days of construction labour (*spread across 2-3 years of implementation*)

During Operations: Jobs created during operations will entail:

- Yatri Niwas = 5 man – days per day⁷⁴

⁷³ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
 - Assumed cost of labour assumed for computation = INR 700 per day

- Additional personnel deployed at site (Housekeeping, management, security) = 5 Persons⁷⁵
- Retail and F&B spaces = 13 man-days per day⁷⁶

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – As discussed above
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect, and induced effects is estimated as. 21,500 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 240 Cr. at the site .

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

- Cumulative labour man-days = 30% * CAPEX / 700

⁷⁴ As per World Bank thumb rule, 12 man-days per day for 10-key 4-star hotel and 20 man-days for 10-key 5-star hotel.

As per HVS Report, in typical India hotels, manpower to room ratio for 4/5 star hotels is 2.11-2.70, for mid-market 1.52 and for budget hotels 0.72. We have assumed 2 for our computation.

⁷⁵ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

⁷⁶ Assuming average 2.5 persons per kiosk / shop

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

Figure 22-2: Proposed Master Plan – Siruvapuri Murugan Temple, Tiruvallur



23. Tirumalai Jain Temple, Polur

Site Details

District	Tiruvannamalai
Name of Site	Tirumalai Jain Temple
Site No:	Site 52 of 295
Site Use:	Temple
Category:	A (Temple)
Location:	12.5573, 79.2059
Land Area:	27 acres +18 acres other lands
Peak footfalls:	25,000 per day (January, October & November)
Operator:	Archaeological Survey of India
Site Ownership:	Archaeological Survey of India
Tourist Footfall:	Dom. – 1.7 lakhs (2019 - 20) For. – 7,233 (2019 – 20)
Site Revenues:	Nil
Site Orientation	Pilgrim
Site Potential:	Very low tourism site
HVT Potential:	Low HVT Potential
Connectivity:	
a. Railway station:	~5 km from Madimangalam Railway Station
b. Airport:	~150 km from Chennai International Airport
c. Highway:	~8 km from SH-115, ~10 km from NH-38
Trails featured on:	Nil (Pure Pilgrim Temple)

The Jain temple is located in Tirumalai, which is also known as the “holy mountain”. It is a cave complex that includes 3 Jain caves, 3 Jain temples and a sculpture of Tirthankara Neminatha. The complex now under the control of ASI is a holy mountain that is famous for housing the tallest Jain sculpture in Tamil Nadu. Interventions at this site is limited to having the basic tourist amenities and better convenience in terms of facilities.

Existing Condition

Location

Tirumalai Jain Temple is located in Tirumalai, ~45 km from Vellore and ~50 km from Tiruvannamalai. Located on the northern banks of Cheyyar river, the site is easily accessible from the Vellore-Tiruvannamalai (NH-38) highway. Situated on the Major District Road (MDR)-801, the temple has the following landmarks and tourist destinations located nearby are Temple of Five Tirthankars, Arihantgiri Jain Math and Polur Reserved Forest.

Existing Layout

Spread over an area of ~27 acres, the temple complex has 3 temples, 3 caves and the statue of Neminatha. The temple, located on a hillock, has sparse residential settlements with supporting small-scale commercial on its south and north-west side. The north-side of the hillock has a large water body and rest of the surroundings are dominated by agricultural lands. While vehicles can reach up to the base of the hill, there are ~140 steps with railing that leads to the hilltop statue and temple. Following are the major component of the temple complex-

- **Mahavira Temple:** Located at the base of the hill, the temple has a three-tier rajagopuram and is surrounded by walls on all sides. The temple has a pillared hall in front, with the central chamber housing Mahavira Idol.
- **Kunthavai Jinalaya:** Built into the cliff adjacent to the Mahavir Temple, reached by climbing few steps, is the Kunthavai Jinalaya temple. Said to be commissioned by queen Kunthavai, the 10-11th century jinalaya consists of a

garbagriha, anthralam, arthamandapam, maha mandapam and muga mandapam. The sanctum houses Neminatha idol.

- **Caves:** The caves are adorned with unique fresco paintings. While the outer sides are 6-7 feet high, the inner area at places reduces to a foot height. The paintings on walls are believed to be from Vijayanagara period, while the ones on the ceiling from Chola period.
- **Neminatha Statue:** A series of steps from the west side of the hill, leads to a tall gated shrine that houses the ~16 ft statue of Neminatha.
- **Parshvanatha Temple:** More steps lead to the top of the hill, reaching a small sannadhi of Parshwanatha. This temple consists of sanctum, shikhara and kailasha. The sanctum houses Parshwanatha in standing posture with a five-headed snake on its head.
- **Holy Foot-prints:** There are three sets of holy footprints carved into the rock on top of the hillock. It is believed that they are of Shri Vrishabhsenachrya (west), Sree Samantbhadracharaya (east) and Sree Varadattachrya munivar (north).

Existing Uses

Tirumalai Jain temple daily receives hundreds of devotees to worship. Popular among locals as well as tourists, the temple is an attraction housing the tallest Jain statue in Tamil Nadu. Currently, under the control of ASI, the temple is only used for religious purposes. Some of the festivals celebrated at this temple are Kaanum Pongal, Full moon day, Aadi thiruvizha (10 days) and Mahaveer Jayanti.

Other Land Available

Apart from 27 acres of the main temple complex area, the temple trust has ~18 acres of land. The land parcels are vacant and located in parts around the main temple complex (exact extents of the parcel not known).

Masterplanning Considerations

Applicable Regulations

1. **ASI Regulations** – The site is an ASI protected monument, as per Ancient Monuments, Archaeological Sites and Remains Act:
 - a. New construction is not permissible within the prohibited area (beginning at the limit of the protected monument and extending to a distance of 100 m in all directions)

- b. Reconstruction or repairs or renovation of existing buildings within the prohibited area, requires prior permission from the Competent Authority under the act.
- c. Construction of new buildings, reconstruction or renovation or addition to/alteration/modification of existing buildings within the regulated area (200m from the prohibited area limit) requires prior permission of the National Monument Authority under the AMASR Act.

2. Tamil Nadu Combined Development and Building Rules, 2019

The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land.

Key Sensitivities

There is no specific environmental/social sensitivity to be addressed at the site. All interventions inside the temple complex need to conform to the ASI regulations.

Key Issues to Address

The key issues at the site identified at the Baseline Stage are summarised below along the 7A Framework:

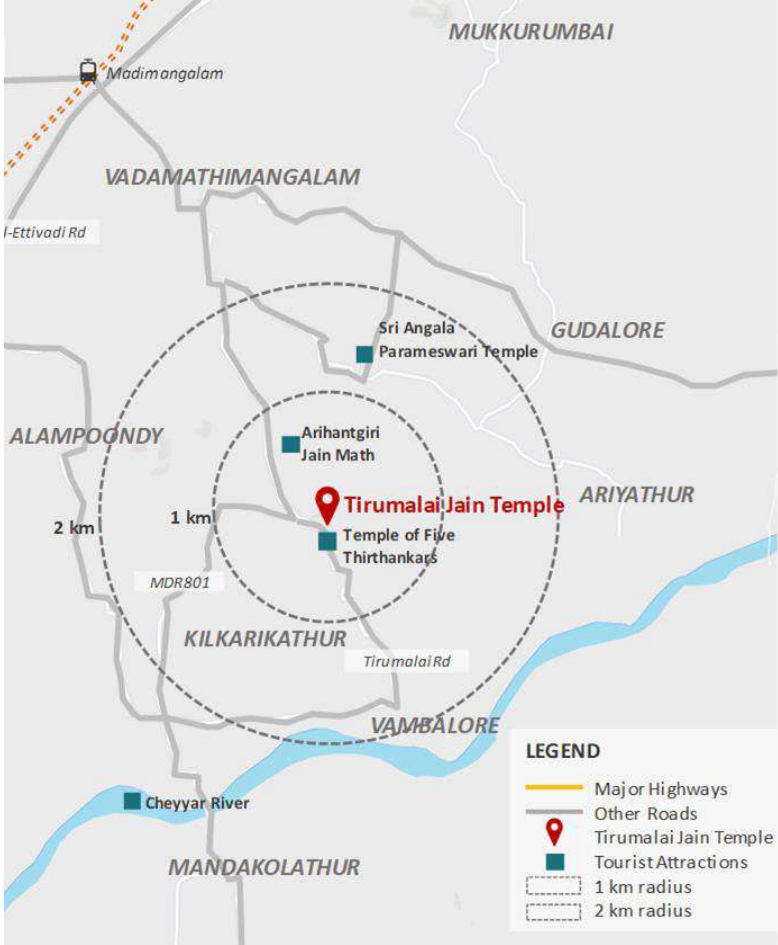
1. **Attraction** – Tirumalai Jain temple, a famous Jain pilgrim of the region, is visited by hundreds of devotees daily. The ancient religious centre houses the tallest Jain sculpture in Tamil Nadu. The 16 ft tall statue of Neminatha is believed to date from the 12th century. The temple's architecture, ancient inscriptions and paintings inside the temple add to the attraction value of the site. Visited by pilgrims from all over the country, the hill temple is believed to render an absolute sense of peace and devotion. While the temple complex lacks any visitor facilities, Arahantgiri Jain Math is located ~1km from the hill complex and is managed by the same temple trust. The Math accommodates food as well as stay facilities for visitors.
2. **Accessibility** – The temple is situated in Tirumalai, ~45 km from Vellore and ~50 km from Tiruvannamalai. The temple is easily accessible from Vellore-Tiruvannamalai Highway, with last ~7km on MDR-801. While vehicles can reach up to the base of the temple, the statue and hilltop shrine can only be accessed by climbing ~140 steps. The major modes of transport people use to commute

to the site include private vehicles, tour buses (majorly during festivals), public buses, autos and taxis. The nearest bus stop is located at a distance of ~300m.

Parking – There is no dedicated parking area located on the temple premises. Parking is done at the base, inside the complex on vacant land and along the streets outside.

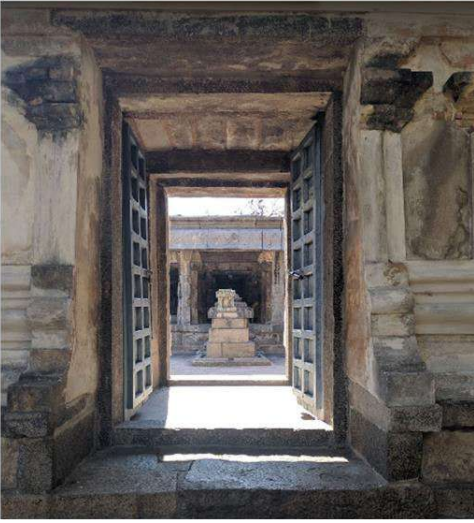
3. **Amenities-** The site lacks visitor amenities within and around the temple complex.
 - The temple does not have any provision of toilet blocks.
 - There is no facility for drinking water within the temple premises.
 - The site lacks CCTV coverage and has only 1 security guard deployed at the site.
 - The main temple boundary is fenced.
 - There is no street lighting around the site. It also lacks fire safety equipment and other safety features.
 - The site has no retail or food outlets inside the complex.
 - It lacks a power connection as well as a backup power facility.
 - Ease of movement around the site- difficult
 - The site has level differences, with the hill temple only reachable through a flight of ~140 steps. No ramp or wheelchair facility is available.
4. **Awareness-** The temple enjoys immense popularity among Jainism followers and is a famous Jain Pilgrim of the region. It is also well-known as a tourist destination and is visited by pilgrims from all over the country, including North-Indian states. The temple lacks mention by renowned travel referral/review aggregators and has no website presence.
5. **Activities-**The temple only caters to daily activities of worship, abhishekam, etc are. During the festivals, special poojas and aartis are hosted at the temple.
6. **Accommodation-** The area lacks accommodation options, with the nearest hotel at a distance of ~10 km from the site. Pilgrims have the facility to stay at the Arahantgiri Jain Math, located ~1km from the site. The facility is available free of cost for devotees.
7. **Association with Community** – There are no common or regular associations of the local communities with the temple.

Figure 23-1: Location & Existing Layout, Tirumalai Jain Temple



- Legend**
- 1 – Rajagopuram
 - 2 – Mahavir Temple
 - 3 – Kunthavai Jinalaya
 - 4 – Caves
 - 5 – Way to Hilltop
 - 6 – Neminatha Statue
 - 7 – Parshvantha Shrine

Site Pictures



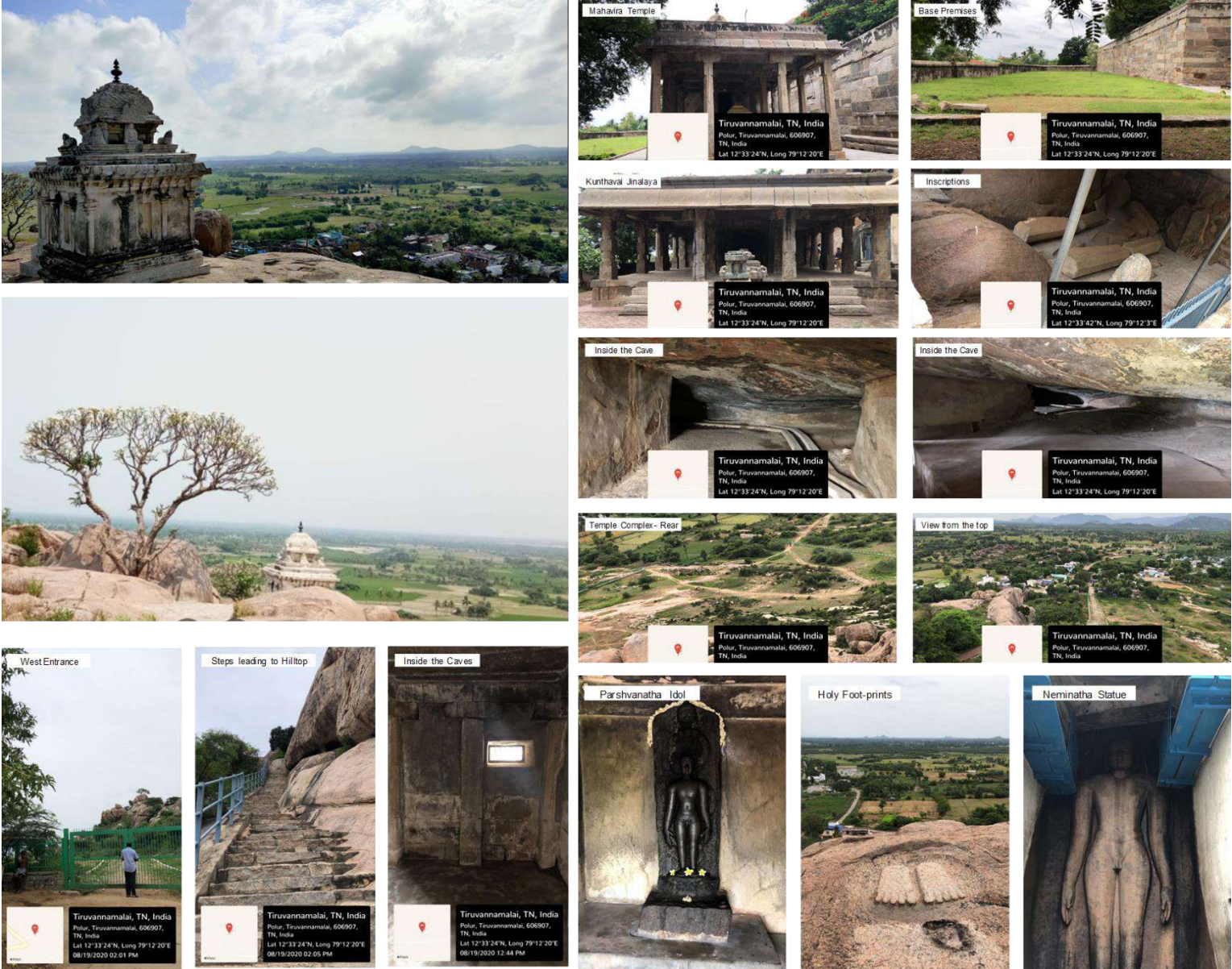
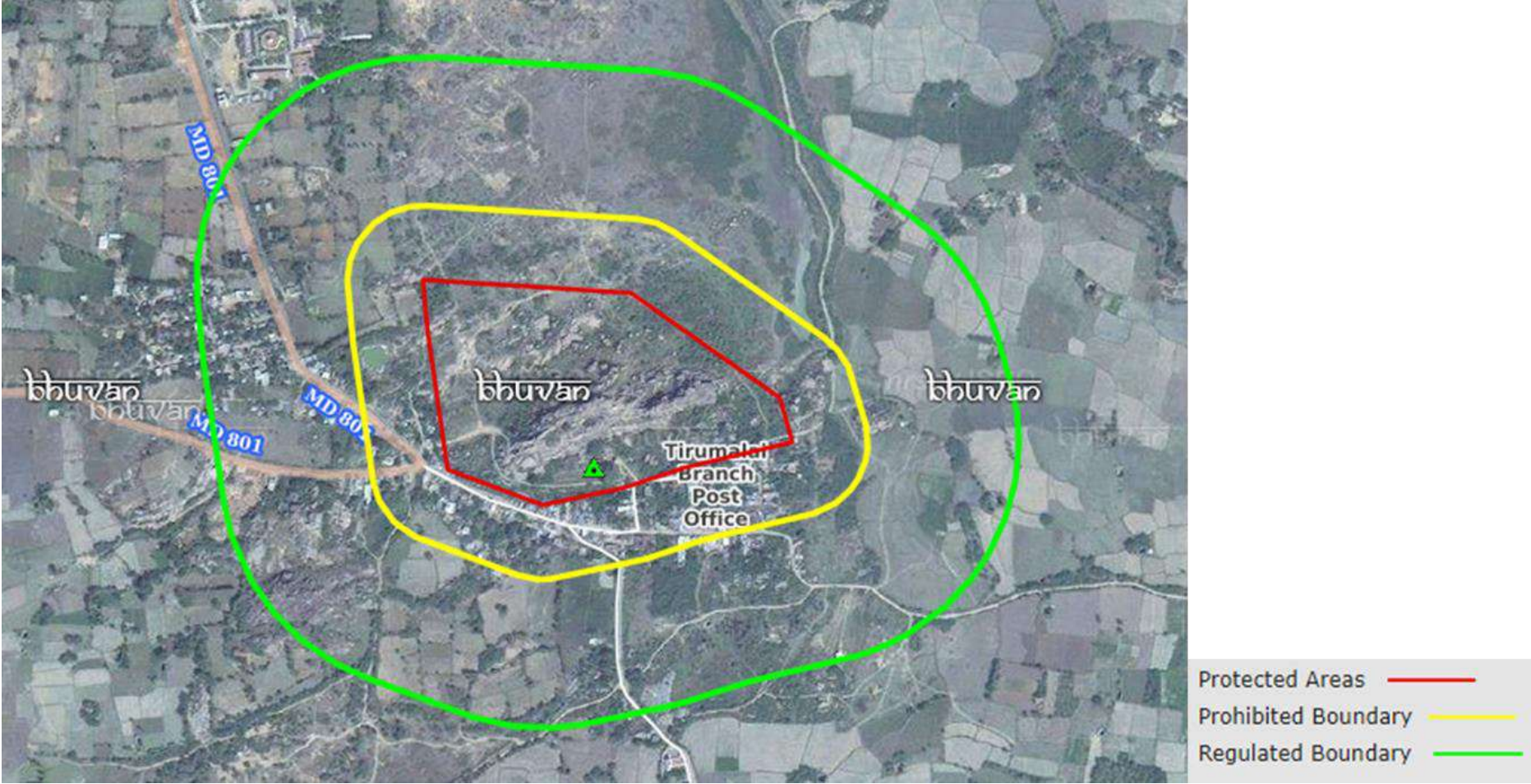


Figure 23-2: ASI Regulation Zones for the site



Vision for the Site

Tirumalai Jain Temple is one of the most ancient Jain Temples in Tamil Nadu. The temple has rich historical and religious values attached with inscriptions, paintings, caves, etc. 16 ft Neminatha statue is one of the biggest attractions of this site.

Although the temple is popular and has easy access from Vellore-Tiruvannamalai Highway, it lacks basic infrastructure such as power connection, toilets, drinking water, etc.

Tirumalai Jain Temple has the potential to increase the footfall with the development of tourist facilities for visitors such as seating area, dedicated parking, etc. The vision for the site is to develop it as a tourist destination by improving existing infrastructure and conveying the temple’s rich history to the visitors

- **Target Visitor** – The site is largely a pilgrim site, with significant footfall from neighbouring areas as well as from rest of Tamil Nadu and other south Indian states due to its rich religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.

Further, pilgrim groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang and elderly).

- **Tourist Projections** – The site is categorized as a **Very low tourism site with low HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC’s compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	163	372	727
High Value Tourists (HVT) (Both domestic and foreign)	14	33	64
Maximum Carrying Capacity	98,500		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Approach to Masterplanning

Given that the site is a religiously significant temple, interventions should be planned with the perspective of providing facilities for visitors and improving their experience. The objectives of Master planning at this site include:

- **Improving visitor’s experience** at the temple through improved conveniences and amenities.
- **Promoting** the temple’s rock-cut architecture and rich historical values.
- **Improvement in temple infrastructure** by providing information boards, signages, etc.

Hard Interventions

1. **Development of Parking Space-** Currently, there is no dedicated parking area. The available vacant land on the foothill on MDR-801 will be dedicated as parking space. It will be levelled and developed as an unpaved (Kachha) parking space. *Infrastructure Created: ~50 ECS unpaved parking area.*

Soft Interventions

1. **Temple Timing-** The temple is open for a shorter duration. Currently, it is open to visitors for 2 hrs in the morning (9:00 am to 11:00 am) and 1 hr in the evening (5:00 pm to 6:00 pm). It should be open for a longer duration which will also result in increased footfall.
2. **Guided tour-** The temple complex houses 3 temples, 3 caves and a Neminatha Statue. Apart from this, various other points of interest like old inscriptions and holy foot-prints are located within the site. Licensed guides can be deployed to take tourists around the site and impart relevant information & facts about the temple.

3. **Redesigning the Infrastructure-** The existing railings and fences are made of metals, which does not give an aesthetic look to the façade of the temple. It is suggested to redesign all the railings, steel barricades, platforms, etc. in keeping with the architecture and theme of the temple.
4. **Promotion** – The Tourism Department should promote the temple, and events/activities held there, in the TN Assist app and on its various platforms, following the site changes.

Amenities Plan

1. **Toilet Block-** There is no toilet facility in the temple complex. Considering the low footfall and ASI development restriction, one unit of common toilet is proposed on the south western corner of the site. The location of the toilet shown in the master plan is an indicative representation.
2. **Stone Benches** – Permanent stone benches should be provided at the landscaped area near Mahavir temple and on top of the hill. The design of these benches should be in theme with the temple’s architectural style.
Infrastructure Created: ~8 units.
3. **Drinking Water Station-** Availability of free drinking water is a major issue at this site. Hence, 1 drinking water station with RO water coolers should be installed.
4. **Solar Streetlights** - The site has no lighting facility as it lacks in power connection. Providing solar streetlights will be a sustainable measure to keep the temple illuminated after dark.
Infrastructure Created: 10 units.
5. **Dustbins-** Dustbins must be provided in sufficient quantity to maintain the site and keep the surroundings clean. These dustbins are to be developed as per the design guidelines mentioned in the Glossary of Interventions.
Infrastructure Created: 5 units
6. **Signage (Package 1)-** Signages can be installed along the approach roads indicating the presence of the site. Signage Package 1 is proposed to feature for

this site. Both directional signage and informational signage should be used, as per the design guidelines mentioned in the Glossary of Interventions.

7. **Technology Interventions (Package 1)** – The development should offer few technological conveniences and should be equipped with technological tools for optimal management. Therefore Technology Package 1 is proposed for this site. These shall include:
 - Electronic Visitor Counter at the entry point.
 - TN Assist App integration at the site, with an internet connection and QR scanner.
 - CCTV coverage at up to 3 locations.

Trunk Infrastructure

As the site has excellent connectivity, no trunk infrastructure interventions are required.

Projects Identified

#	Project Component	Scale
1	Parking Space (Unpaved) (Only Levelling)	50 ECS
2	Toilet Block	10 sqm
3	Stone Benches	8
4	Drinking Water Station	1
5	Solar streetlights	10
6	Dustbins	5
7	Signage (Package 1)	1
8	Technology Interventions (Package 1)	1

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in Volume A.

#	Project Component	Cost (INR Lakhs)
1	Parking Space (Unpaved)	6
2	Toilet Block	5
3	Stone Benches	1
4	Drinking Water Station	3
5	Solar streetlights	2
6	Dustbins	1
7	Signage (Package 1)	1
8	Technology Interventions (Package 1)	1
Total		INR 20 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.
- Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- All revenues are unescalated.
- Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

There are no additional revenue streams pegged to the interventions proposed at this temple, since it is limited to the basic amenities to uphold the hygiene factors followed across the sites undertaken.

As discussed in note above, the following existing revenues, if any, are not considered:

- Prasadam sale

- Puja tickets
- VIP tickets
- Mass meals
- Donations and Sponsorships
- Sale of maps, guidebooks etc. (assumed to be at cost value)

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.
- The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.
- The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- The costs are un-escalated.

The following OPEX is expected for the site:

- Manpower Costs** – Additional manpower will be required at the site to manage the proposed interventions.
 - A **Helpdesk staff** at the toilet block.
- Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
- Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
- Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
- Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses

such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.

6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.
7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of INR 175 per kilolitre.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee, if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as INR 5 Lakhs.

Feasibility Assessment and Implementation Plan

Though the operating expenditure incurred is more than that of the revenues earned through the proposed capital projects, the interventions planned at the temple are directed to cater to the needs of the pilgrims and to uphold the hygiene factors followed across all the sites undertaken in the Jain Heritage trail.

Also, since the amenities are limited, it is recommended that the interventions will have to be implemented and funded by ASI itself.

⁷⁷ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR L)	Phasing	Funding Agency
1	Parking Space (Unpaved)	6	Y0 – Y2	ASI
2	Toilet Block	5	Y0 – Y2	ASI
3	Stone Benches	1	Y0 – Y2	ASI
4	Drinking Water Station	3	Y0 – Y2	ASI
5	Solar streetlights	2	Y0 – Y2	ASI
6	Dustbins	1	Y0 – Y2	ASI
7	Signage (Package 1)	1	Y0 – Y2	ASI
8	Technology Interventions (Package 1)	1	Y0 – Y2	ASI
Total		INR 20 L		

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 860⁷⁷ man-days of construction labour (spread across 2-3 years of implementation)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 12 Persons⁷⁸

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – As discussed above
- Indirect employment in the sectors supplying inputs to the tourism industries.

- As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
- Assumed cost of labour assumed for computation = INR 700 per day
- Cumulative labour man-days = 30% * CAPEX / 700

⁷⁸ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect, and induced effects is estimated as. 2,170 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site

Both increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 79 Cr. at the site.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

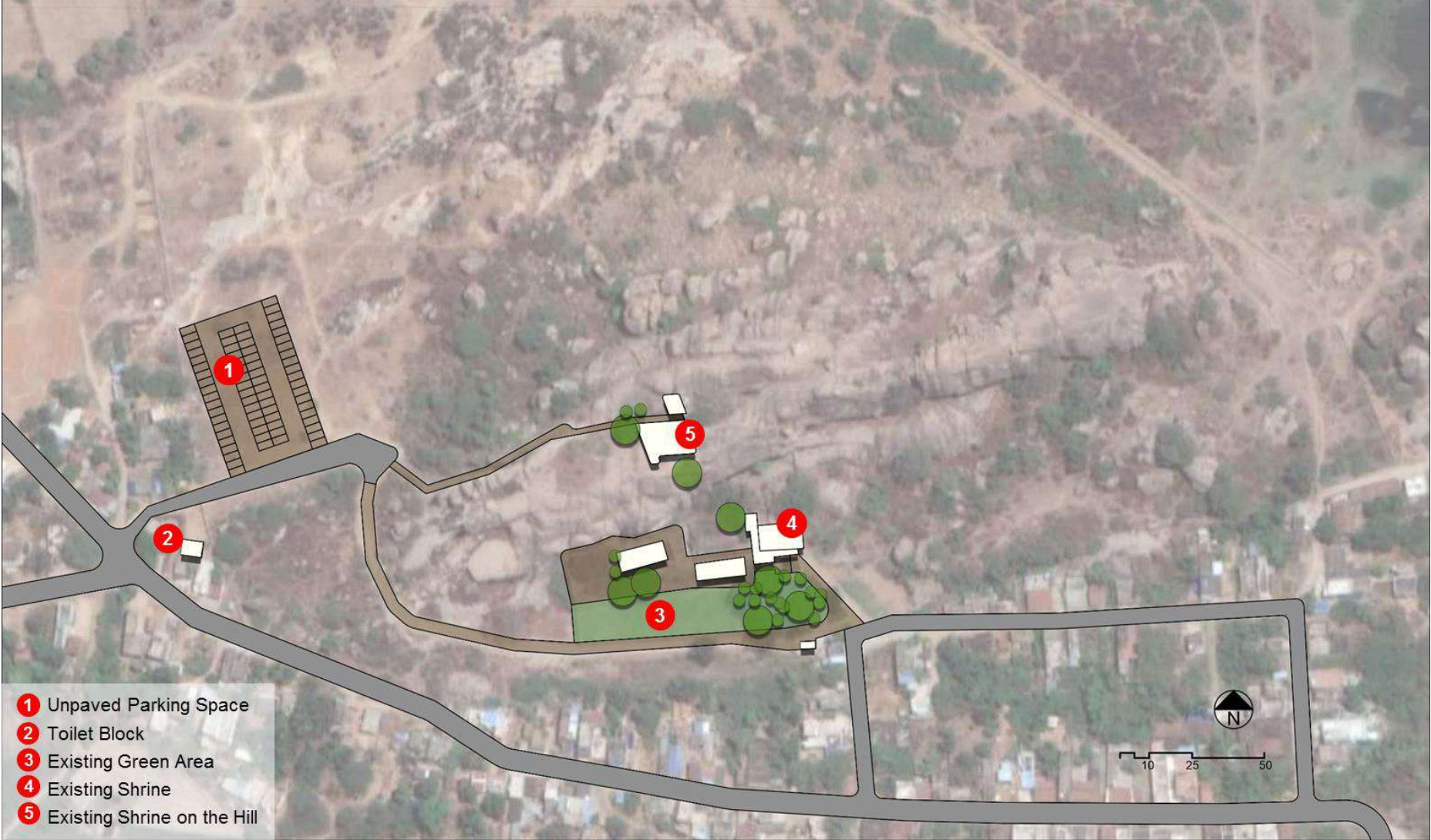
This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

Figure 23-3: Proposed Master Plan – Tirumalai Jain Temple



24. Arahanthgiri Jain Math, Tirumalai

Site Details

District	Tiruvannamalai
Name of Site	Arahanthgiri Jain Math
Site No:	Site 54 of 295
Site Use:	Temple
Category:	A (Temple)
Location:	12.5622, 79.2013
Land Area:	18 acres + 35 acres other land
Peak footfalls:	10,000 per day (During Diwali and Das-Lakshan Festival)
Operator:	Temple Trust (Shree Kshetra Arihantgiri Digambar Jain Management Trust)
Site Ownership:	Temple Trust (Shree Kshetra Arihantgiri Digambar Jain Management Trust)
Tourist Footfall:	Dom. – 7 lakhs (2019 - 20) For. – 35,000 (2019 – 20)
Site Revenues:	Undisclosed
Site Orientation	Pilgrim
Site Potential:	Low tourism site
HVT Potential:	Moderate HVT Potential
Connectivity:	
a) Railway station:	~5 km from Madimangalam Railway Station
b) Airport:	~150 km from Chennai International Airport
c) Highway:	~8.5 km from SH-115, ~8.5 km from NH-38
Trails featured on:	Nil (Pure Pilgrim Temple)

The Arahanthgiri Jain Math is largely a facility for gurus and other charity institutions governed by the Shree Kshetra Arihantgiri Digambar Jain Management Trust. The site by itself has an average attraction from the tourism perspective and is mostly dedicated to serving the people and operational functions of the surrounding Jain temples. The scope of intervention for this site is the provision of all the facilities for the old age people and students residing here and improving the visitor amenities for the tourists.

Existing Condition

Location

The Arahanthgiri Jain Math is located in Tirumalai, ~45 km from Vellore and ~50 km from Tiruvannamalai. Located on the northern banks of the Cheyyar river, the site is easily accessible from the Vellore-Tiruvannamalai (NH-38) highway. Situated on the Major District Road (MDR)-801, the temple has various landmarks and tourist destinations located nearby such as the Temple of Five Tirthankars, Tirumalai Jain Temple, and Polur Reserved Forest.

Existing Layout

Spread over an area of ~18 acres, the Jain Math has a temple in the centre. The temple is dedicated to Panchkula Devis, housing five Amman matas. The temple has a main entrance from the western side. It is surrounded by agricultural lands and the large site complex accommodates the following facilities:

- **Math-** Accommodating pooja rooms, meditation area, pravachan halls, halls for events, facilities for gurus, etc.
- **Hostel-** Dormitories housing ~40 students
- **Old age home-** Home to 15 male and 13 female members.
- **Temple Kitchen (Bhojanshala)-** Providing free food to ~1000 people daily; including students, devotees, poor, etc.
- **Primary School-** With a capacity of ~350 students.
- **Goshala-** Housing ~150 cows.

- **Guest House/Rooms-** 4 AC and 12 Non-AC rooms provided free of cost.

Existing Uses

Arahantgiri Jain Math daily receives devotees to worship the temple and perform rituals at the math. Pilgrims coming to worship Tirumalai Jain Temple also come to the Jain Math for accommodation and other facilities. Intermittently, the math also hosts poojas, vidhis, pravachans, etc. Apart from the religious use, the site is currently used for the following purposes:

- **Food-** The temple kitchen provides free food.
- **Education-** A primary school located within the premises provides basic education.
- **Agriculture-** Crops are grown on the fertile land available and used for temple charity purposes.
- **Accommodation-** AC and non-AC guest rooms are available free of cost.
- **Shelter-** For elderlies and students.

The site has a large amount of land that is vacant and can be used for infrastructure development. Some of the festivals celebrated at the temple are Kaanum Pongal, Full moon day, Diwali, Aadi thiruvizha, and Das lakshan parv.

Other Land Available

Apart from the ~18 acres of the main math area, the trust has a land pool of ~35 acres. These 35 acres are spread over 3 land parcels:

- **2.13 acres** of vacant land available opposite math.
- **6 acres** of land located ~300m away. 2 acres is occupied by school and the rest ~4 acres are vacant.
- **27 acres** of vacant land available- located abutting Othiyanthangal Pillayaar road, 1km away from the Math.

Masterplanning Considerations

Applicable Regulations

1. Tamil Nadu Combined Development and Building Rules, 2019

The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land.

Key Sensitivities

The temple site does not have any pressing issues of sensitivity in and around the complex which needs to be addressed while preparing the master plan.

Key Issues to Address

The key issues at the site identified at the Baseline Stage are summarised below along the 7A Framework:

1. **Attraction** –The math is known for the circular Panchkula Devi temple and the religious activities & events organized at the math. A large number of locals also visit the math for the free food prepared at the temple.
Tirumalai Jain temple, a famous Jain pilgrim of the region, is located ~1km from the site. A large number of devotees, visiting the Tirumalai Jain Temple, come to the Math for accommodation and other facilities
2. **Accessibility** – The math is situated in Tirumalai, ~45 km from Vellore and ~50 km from Tiruvannamalai. The site is easily accessible from Vellore-Tiruvannamalai Highway, with last ~7km on MDR-801. The major modes of transport people use to commute to the site include private vehicles, tour buses (majorly during festivals), public buses, autos, and taxis. The nearest bus stop is located at 500m distance and auto services are also available.

Parking – Parking of vehicles and tour buses is done inside the site premises, on vacant land, and along the pathways.
3. **Amenities-** The temple complex has the following state of visitor amenities within and around its premises.
 - The site has a toilet block inside and is well maintained.
 - Free drinking water with aqua guard filtration is installed.
 - The site lacks CCTV coverage and has 4 security guards deployed at the site.
 - The main temple boundary is partially walled.
 - There is street lighting around the site but does not cover all areas.
 - 8 fire extinguishers are installed on the site for fire safety.
 - The site has no retail activities inside the premises.
 - It has a 45KV power backup facility as the area experiences frequent power cuts.

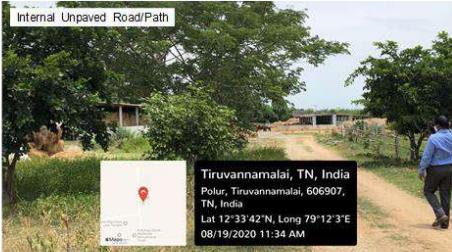
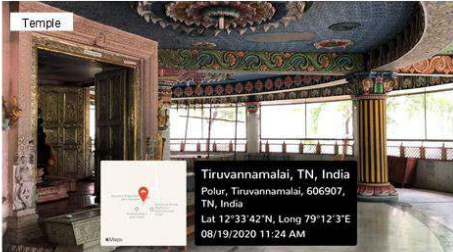
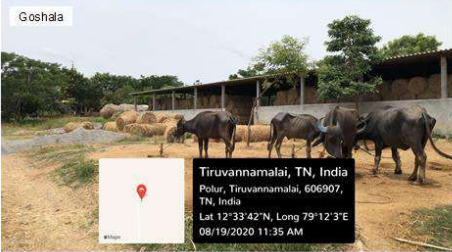
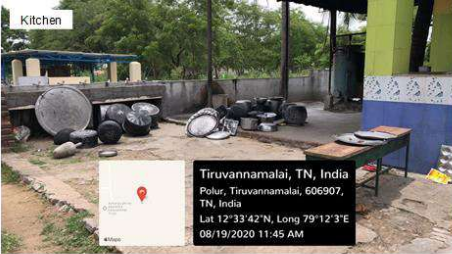
- The complex is majorly leveled with no ramp access across the site. Only 1 wheelchair is available.
4. **Awareness-** The math enjoys popularity in conjunction with the Tirumalai Jain Temple and is visited by pilgrims from Rajasthan, Gujarat, and Maharashtra. The temple lacks mention by renowned travel referral/review aggregators and has no website presence.
 5. **Activities-** The math caters to daily activities of worship, abhishekam, etc. Various festivals, special poojas, and pravachans are hosted within the temple premises. Apart from the temple activities, the site hosts various other activities, including farming, raising and milking of cows, cooking, etc. The math is also home to students living in the hostel and elderlies living in the old-age home. There is also a primary school, educating ~350 students, operating on the math grounds.
 6. **Accommodation-** The area lacks accommodation options, with the nearest hotel at a distance of ~10 km from the site. An accommodation facility is available within the site with 12 non-AC and 4 AC rooms. The facility is available free of cost for devotees.
 7. **Association with Community –** The elderlies and students residing in the old age home and hostel are directly associated with the temple. Other than that, the temple has a limited association with the local community.

Figure 24-1: Location & Existing Layout, Arahantgiri Jain Math



Site Pictures





Vision for the Site

Arahanthgiri Jain Math has rich religious values attached. It is popular among pilgrims and tourists, including tourists originating from North-Indian states. The math is a recent development and within few years the temple trust has expanded its operations and is engaged in noble works of providing shelter, food, and education.

Although the temple has visitors' facilities and amenities, including bhojanshala, guest house, etc. it is lacking with dedicated parking and accommodation area.

Arahanthgiri Jain Math has the potential to be an attractive and engaging destination with extensive landscape and well-designed open areas. This shall facilitate resident comfort at the site and leverage ancillary recreation activities for visitor engagement. The vision for the site is to make it a more attractive place to stay and effectively utilizing the available vacant parcels of land within the temple complex.

- **Target Visitor** – The site is largely a pilgrim site, with significant footfall from neighbouring areas as well as from other states due to its rich religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.

Further, pilgrim groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang, and elderly).

- **Tourist Projections** – The site is categorized as a **low tourism site with moderate HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	665	2,288	6,067
High Value Tourists (HVT) (Both domestic and foreign)	70	309	820
Maximum Carrying Capacity	70,901		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Approach to Masterplanning

Given that the site is a religiously significant temple and is engaged in charity activities, interventions should be planned with the perspective of improving the facilities and attracting more visitors. The objectives of Master planning at this site include:

- Developing **recreational spaces** at the site by providing facilities on available vacant land.
- **Improving visitors' experience** at the temple through improved circulation, conveniences, and amenities.
- **Upgrading the existing infrastructure** without hampering the natural aura of the place.

Hard Interventions

1. **Yatri Niwas** - A Yatri Niwas for pilgrim accommodation should be developed at the vacant land near the entrance area. The Yatri Niwas can be developed with good landscaping areas around in traditional south Indian architectural style using local materials. The proposed yatri niwas has a holding capacity of 30 keys which will include:

- 2 dormitories
- 20 AC rooms with attached washrooms.
- 8 non-AC rooms with attached washrooms.
- Landscaping area.

Infrastructure Created:

- *Built-up area- 1500 sqm*
- *Softscape- 1800 sqm*
- *Paved Pathway- 250 m*
- *Benches- 4*

2. Yoga Center and Meditation Pavilion- The vacant area available on the southeastern corner in front of the old age home can be developed into a landscaped recreation area with a water body, yoga center, and meditation pavilion. It will have a large green area around the waterbody to create a peaceful environment with a focus on outdoor relaxation, meditation, yoga, wellness, and pathways that will allow peaceful walks in the grounds and a small pavilion among the trees as spaces for meditation.

Infrastructure Created:

- *Softscape- 3400 sqm*
- *Mediation Pavillion- 800sqm*
- *Waterbody- 50 sqm*
- *Paved Walkway- 350m*
- *Benches- 2*

3. Facilities for Gaushala – The area available in front of the gaushala is proposed to be a grazing area for the cows. A compost facility can also be provided for composting the cow dung and organic wastes from the site.

Infrastructure Created:

- *Cow grazing area (Softscape)- 2200 sqm*
- *Compost Facility (BUA)- 100sqm*

4. Fruit and Vegetable Garden- The vacant land on the north-eastern corner is proposed to be a fruit and vegetable garden. The garden can be split into various parts for different types of fruit trees and vegetables. The manure from the compost pit can be used as fertilizers in this garden.

Infrastructure Created: 4900 sqm

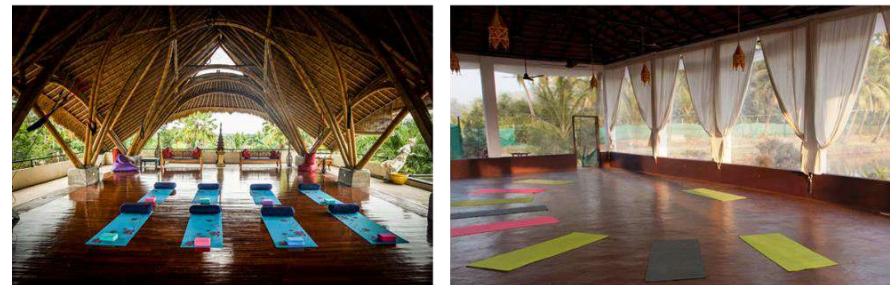
5. Product cottage- A product cottage is proposed near the existing gaushala and proposed yatri niwas area. Residents from old age homes and other temple workers can make pure products from fresh fruits and vegetables grown, milk, ghee, etc. This is not only an additional source of revenue but also an engaging activity for old-age residents. It can also be made available to visitors. The revenue generated can be further used for Math and related charity activities.

Infrastructure Created:

- *Built-up area- 300 sqm*
- *Softscape- 350 sqm*
- *Hardscape- 200 sqm*



Reference images for Yatri Niwas



Reference images for Meditation Pavilion



Yoga Center

Reference images for Compost Facility



Reference images for Fruit and Vegetable Garden

6. Play Area – Existing toilet block and storage area will be demolished and a playground with a children's play area will be proposed near the school. The outdoor play area will have a playground and dedicated children play area with playing equipment

Infrastructure Created:

- *Playground- 800 sqm*
- *Children Play Area- 450 sqm*

7. Garden/Rest Area- The available land near the temple area can be developed as a resting space with the provision of nice seating arrangements and beautifully carved pathways with naturally shaded areas from the trees, where visitors can rest and enjoy the temple's environment. The landscaping will feature native and religious flowers and bushes, and should, as far as possible, be the least maintenance-oriented and be self-sustainable.

Infrastructure Created:

- *Softscape – 3350 sqm*
- *Footpath – 300 m*
- *Benches – 4*

8. General Site Landscaping –Strategic site landscaping has been done on the entire site to provide a circulation pattern with paved walkways. The green cover will also ensure rainwater absorption into the ground, air purification, reduction of ambient noise and temperature.

Infrastructure Created:

- *Softscape- 3800 sqm*
- *Hardscape- 2800 sqm*
- *Paved Walkway - 400 m*

9. Site Boundary Wall- The temple has a partial boundary wall in a small stretch. The construction of a boundary wall around the entire complex will protect it from stray animals and illegal activities. An inviting gate will also be constructed along with the boundary wall on the front side.

Infrastructure Created: ~1000m in length



Reference images for Garden / Rest Area



Playground

Children Play Area



Reference images for General Site Landscaping

Soft Interventions

1. **Site management** – The site must be managed by the respective temple management authorities to maintain the cleanliness in and around the site and conserve the aesthetic feature of the temple, etc.
2. **Site Promotion** - Increasing temple visibility with strategies like integration with TN Assist App, etc. The temple authorities can organize recurring events, associated festivals, etc. which can help publicize and increase awareness.
3. **Divyang friendly infrastructure** – The complex houses an old age home. Hence all the interventions should be divyang friendly as much as possible with the incorporation of ramps and ewer level differences.

Amenities Plan

1. **Parking** –A designated parking space will be developed for accommodating vehicles, with good lighting and pavements. This will be located near the site entrance.
Infrastructure Created: 50 ECS (1000 sqm)
2. **Dispensary-** The complex has a school with a hostel for students and old age homes. A dispensary equipped with essential medicines and amenities for the students and elderlies can be proposed near the Math area.
Infrastructure Created: 75 sqm BUA
3. **Toilet-** The playground is proposed on the existing toilet area; hence a new toilet block can be proposed near the math area.
Infrastructure Created: 50 sqm (5 Male, 5 Female, and 1 handicapped toilet)
4. **Store Area-** The playground is proposed on the existing storage area; hence a new storage unit can be proposed near the math area.
Infrastructure Created: 30sqm BUA
5. **Dustbins-** Dustbins must be provided in sufficient quantity around the temple complex to maintain the site and keep the surroundings clean. These dustbins are to be developed as per the design guidelines mentioned in the Glossary of Interventions.
Infrastructure Created: 10 units

6. **Street-Lighting** – The temple complex is lacking lighting in many areas. Therefore streetlights should be installed in and around the temple complex.
Infrastructure Created: 15 Units
7. **Signage (Package 1)** –Signage Package 1 is proposed to feature for this site. Both directional signage and informational signage should be used, as per the design guidelines mentioned in the Glossary of Interventions.
8. **Technology Interventions (Package 1)** – The development should offer few technological conveniences and should be equipped with technological tools for optimal management. Therefore Technology Package 1 is proposed for this site. These shall include:
 - Electronic Visitor Counter at the entry point.
 - TN Assist App integration at the site, with an internet connection and QR scanner.
 - CCTV coverage at up to 3 more locations.

Trunk Infrastructure

As the site has excellent connectivity, no trunk infrastructure interventions are required.

Please refer to Design Guidelines mentioned in the Glossary of Interventions regarding amenities and urban design.

Projects Identified

#	Project Component	Scale
1	Yatri Niwas (30 Keys)- <ul style="list-style-type: none"> • Built-up area • Softscape • Paved pathway 	1500 sqm 1800 sqm 250 m
2	Yoga Center and Meditation Pavilion- <ul style="list-style-type: none"> • Softscape • Mediation Pavillion • Waterbody • Paved Walkway 	3400 sqm 800 sqm 50 sqm 350 m
3	Gaushala Facilities- <ul style="list-style-type: none"> • Cow grazing area (Soft Landscape) 	2200 sqm

#	Project Component	Scale
	<ul style="list-style-type: none"> Compost Area 	100 sqm
4	Fruit and Vegetable Garden	4900 sqm
5	Product cottage- <ul style="list-style-type: none"> Built-up area Softscape Hardscape 	300 sqm 350 sqm 200 sqm
6	Play Area- <ul style="list-style-type: none"> Playground Children Play area 	800 Sqm 450 sqm
7	Garden/Rest Area- <ul style="list-style-type: none"> Softscape Footpath 	3350 Sqm 300 m
8	General Site Landscaping- <ul style="list-style-type: none"> Softscape Hardscape Paved Walkway 	3800 Sqm 2800 sqm 400 m
9	Site Boundary Wall	1000 m
10	Parking	50 ECS
11	Dispensary	75 sqm
12	Toilet Block	50 sqm
13	Store Area	30 sqm
14	Dustbins	10
15	Street lighting	15
16	Benches	10
17	Signage (Package 1)	1
18	Technology Interventions (Package 1)	1

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in Volume A.

#	Project Component	Cost (INR Lakhs)
1	Yatri Niwas	450
2	Yatri Niwas - Softscape	2
3	Yatri Niwas - Paved pathway	5
4	Yoga Centre - Softscape	3
5	Yoga Centre - Meditation pavilion	160
6	Yoga Centre - waterbody	10
7	Yoga Centre - walkway	7
8	Gaushala - Soft Landscape	2
9	Gaushala - Compost Area	1
10	Fruit and Vegetable Garden	4
11	Product cottage - Built-up area	48
12	Product cottage - Soft and hardscape	1
13	Children play area	5
14	Playground	6
15	Garden - Landscape	7
16	Garden - Footpath	6
17	Landscaping	14
18	Paved walkway	6
19	Site Boundary Wall	55
20	Parking	14
21	Dispensary	5
22	Toilet Block	5
23	Store Area	5
24	Dustbins	1
25	Street lighting	4
26	Benches	1
27	Signage (Package 1)	1
28	Technology Interventions (Package 1)	1
Total		INR 8.25 Cr.

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- a) Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.
- b) Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- c) All revenues are unescalated.
- d) Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

1. **Yatri Niwas** – Capturing 30 keys with average yearly occupancy of 60% at INR 1750 per room and additional revenues of 20% over room revenues.
2. **Parking** – Capturing 50 ECS at 20% occupancy per day with 2 rotations at INR 15 per ECS.

As discussed in note above, the following existing revenues, if any, are not considered:

1. Prasadam sale
2. Puja tickets
3. VIP tickets
4. Mass meals
5. Donations and Sponsorships
6. Sale of maps, guidebooks etc. (assumed to be at cost value)

Considering the above, total additional un-escalated revenues from the site in Y5 is estimated as INR 1.5 Cr.

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- a) The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.
- b) The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.
- c) The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- d) The costs are un-escalated.

The following OPEX is expected for the site:

1. **Manpower Costs** – Additional manpower will be required at the site to manage the proposed interventions.
 - a. Assuming **4 Help-desk staff** for the yoga centre, yatri niwas and the amenity block.
 - b. Assuming **4 security personnel** for the yatri niwas, yoga centre, product cottage and the parking.
 - c. Assuming **3 Administration staff** to overlook the operations of the yatri niwas, retail spaces, and the yoga centre.
2. **Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
3. **Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses

such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 *percentage* of the total capital expenditure incurred.

6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.
7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175* per kilolitre.
8. **Pond Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the Pond such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee, if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as *INR 1.45 Cr.*

Feasibility Assessment and Implementation Plan

Given that the estimated additional revenue from the proposed interventions is in par with the operational expenses incurred, it can be concluded that the interventions proposed at the site are **Operationally Self-Sustainable** and therefore beneficial to the Math as well as the Jain Heritage trail.

The interventions proposed at the site are largely for improving amenities and experience of visitors and hence have an associated “social cause”. Given the conservative protocols of the Math (Temple Trust), PPP is not an option for development and implementation. Hence, the recommended interventions will have to be implemented and funded by Math itself.

However, it is advisable to tender out the operations of the Yatri Niwas to private operators for better efficiency and long-term sustainability.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Yatri Niwas ⁷⁹	450	Y5 – Y2	O&M on PPP ⁸⁰
2	Yatri Niwas - Softscape	2	Y0 – Y2	Temple Trust
3	Yatri Niwas - Paved pathway	5	Y0 – Y2	Temple Trust
4	Yoga Centre - Softscape	3	Y0 – Y2	Temple Trust
5	Meditation pavilion	160	Y0 – Y2	Temple Trust
6	Yoga Centre - waterbody	10	Y0 – Y2	Temple Trust
7	Yoga Centre - walkway	7	Y0 – Y2	Temple Trust
8	Gaushala - Soft Landscape	2	Y0 – Y2	Temple Trust
9	Gaushala - Compost Area	1	Y0 – Y2	Temple Trust
10	Fruit and Vegetable Garden	4	Y0 – Y2	Temple Trust
11	Product cottage - Built-up area	48	Y0 – Y2	Temple Trust
12	Product cottage - Landscaping	1	Y0 – Y2	Temple Trust
13	Children play area	5	Y0 – Y2	Temple Trust
14	Playground	6	Y0 – Y2	Temple Trust
15	Garden - Landscape	7	Y0 – Y2	Temple Trust
16	Garden - Footpath	6	Y0 – Y2	Temple Trust

⁷⁹ The development of these components can be taken up at future phases basis the footfall increase on a PPP model.

⁸⁰ The specifics of the PPP implementation structure to be determined basis a detailed feasibility study during the transaction advisory phase.

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
17	Landscaping	14	Y0 – Y2	Temple Trust
18	Paved walkway	6	Y0 – Y2	Temple Trust
19	Site Boundary Wall	55	Y0 – Y2	Temple Trust
20	Parking	14	Y0 – Y2	Temple Trust
21	Dispensary	5	Y0 – Y2	Temple Trust
22	Toilet Block	5	Y0 – Y2	Temple Trust
23	Store Area	5	Y0 – Y2	Temple Trust
24	Dustbins	1	Y0 – Y2	Temple Trust
25	Street lighting	4	Y0 – Y2	Temple Trust
26	Benches	1	Y0 – Y2	Temple Trust
27	Signage (Package 1)	1	Y0 – Y2	Temple Trust
28	Technology Interventions	1	Y0 – Y2	Temple Trust
Total		INR 8.25 Cr.		

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 35,400⁸¹ man-days of construction labour (spread across 2-3 years of implementation)

During Operations: Jobs created during operations will entail:

⁸¹ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
 - Assumed cost of labour assumed for computation = INR 700 per day

- Yatri Niwas = 22 man – days per day⁸²
- Additional personnel deployed at site (Housekeeping, management, security) = 12 Persons⁸³

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – As discussed above
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect, and induced effects is estimated as. 88,500 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site

Both increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 895 Cr. at the site.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

- Cumulative labour man-days = 30% * CAPEX / 700

⁸² As per World Bank thumb rule, 12 man-days per day for 10-key 4-star hotel and 20 man-days for 10-key 5-star hotel.

As per HVS Report, in typical India hotels, manpower to room ratio for 4/5 star hotels is 2.11-2.70, for mid-market 1.52 and for budget hotels 0.72. We have assumed 2 for our computation.

⁸³ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

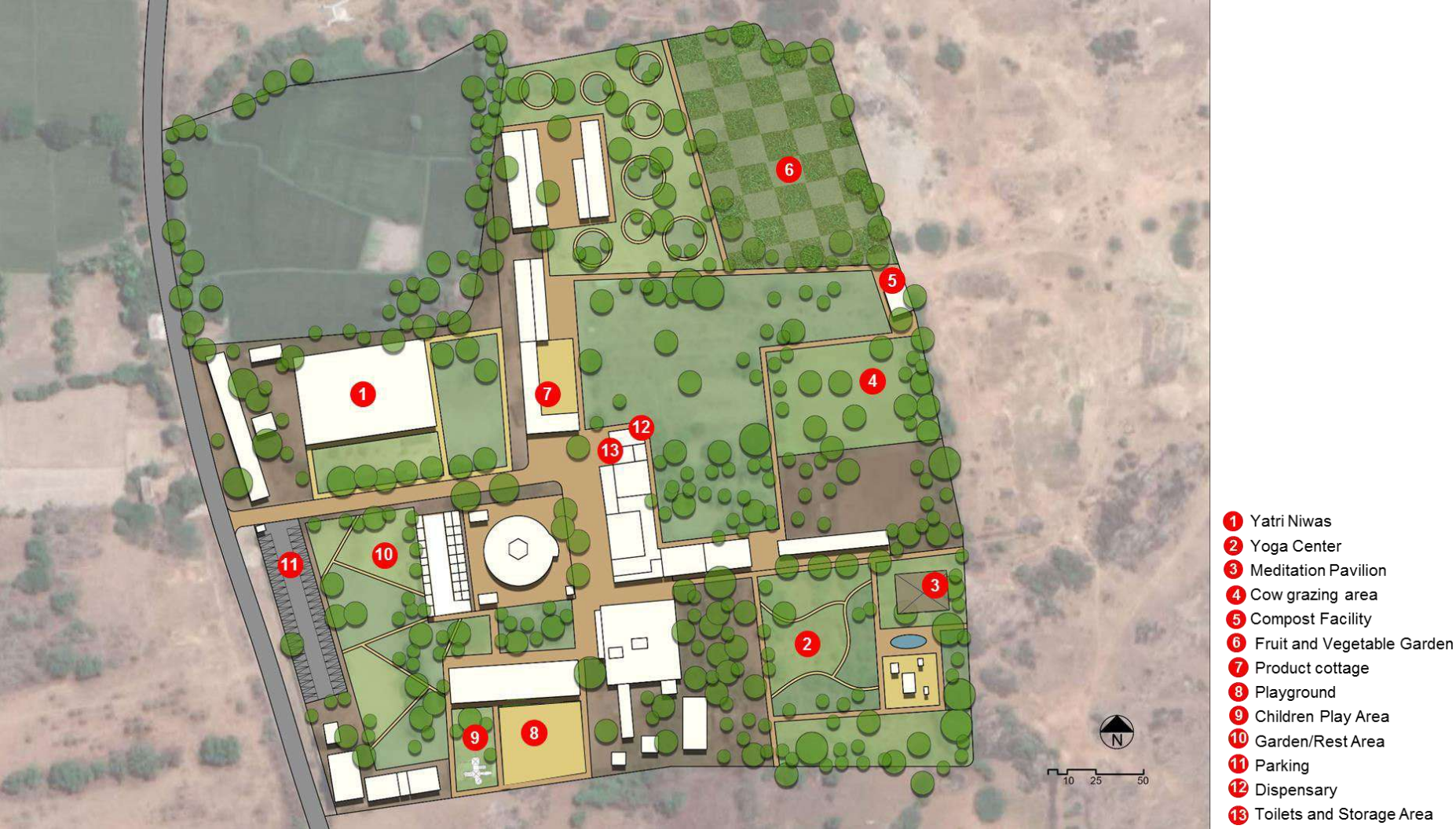
This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

Figure 24-2: Proposed Master Plan –Arahanthgiri Jain Math



25. Thirunarunkondai (Jain Circuit) - Appandainathar Jain Temple

Site Details

District	Villupuram
Name of Site	Thirunarunkondai - Appandainathar Jain Temple
Site No:	Site 62 of 295
Site Use:	Temple
Category:	A (Temple)
Location:	11.8118, 79.2811
Land Area:	2.6 acres + 18 acres
Peak footfalls:	300 per day (January Thai for 18 days, Chithrai Poornima)
Operator:	Adinath Jain Trust
Site Ownership:	Adinath Jain Trust
Tourist Footfall:	Dom. – 47,500 (2019 - 2020) For. – 2,500 (2019 - 2020)
Site Revenues:	Undisclosed (FY20)
Site Orientation:	Pilgrim
Site Potential:	Very Low Tourism Site
HVT Potential:	Low HVT potential
Connectivity:	
a. Railway Station:	15 km (Ulundurpet)
b. Airport:	170 km (Chennai)
c. Highway:	4 Km from SH-69
Trails featured on:	Nil (Pure Pilgrim Temple)

The Jain temple built in caves, is serene in terms of its architectural beauty and surrounding environment. But the temple lacks in connectivity, amenities, and awareness. It is majorly visited by the Jain devotees from the surrounding villages and few other parts of Tamil Nadu. The temple site seems to have less potential to be developed as a tourist destination, even with appropriate marketing and development of amenities, due to administrative restrictions. Thus, the intent of master planning at the site is to improve visitors' convenience at the site, while keeping the natural & serene setting of the site intact.

Existing Condition

Location

The Site is located on a hilltop near Thirunarungundram surrounded by barren lands and another temple on an adjacent hilltop. The pair of temples is accompanied by a water reservoir on a side. The temple site is located 15 km south from the town of Thirukoilure and about 25 km west from the Villupuram.

Existing Layout

Temple being placed on a hilltop; the main shrine is accessible by the steps. While the ancillary service buildings like office administration building, Annadhanam Building, Rest House etc. are constructed on the ground. The Appandainathar is sculptured in the rock inside a cave. The Moola gopuram is built on the same rock.

Existing Uses

The temple is an ancient masterpiece of Dravidian style of architecture and is currently used by the devotees to worship. The temple is currently maintained by Adinath Jain trust. There are annual festivals organised by the temple, such as 18-

day Thai festival. There are no retail shops and any other activities that take place inside the temple complex.

Other Land Available

In addition to the 2.6 acres temple complex, the temple also owns land in the nearby village. The land amounts to 18 acres, which is presently either a forest land or is given on lease for agricultural purposes.

Master Planning Considerations

Applicable Regulations

1. **Tamil Nadu Combined Development and Building Rules, 2019** – The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land.

Key Sensitivities

There is no specific environmental/social sensitivity to be addressed at the site.

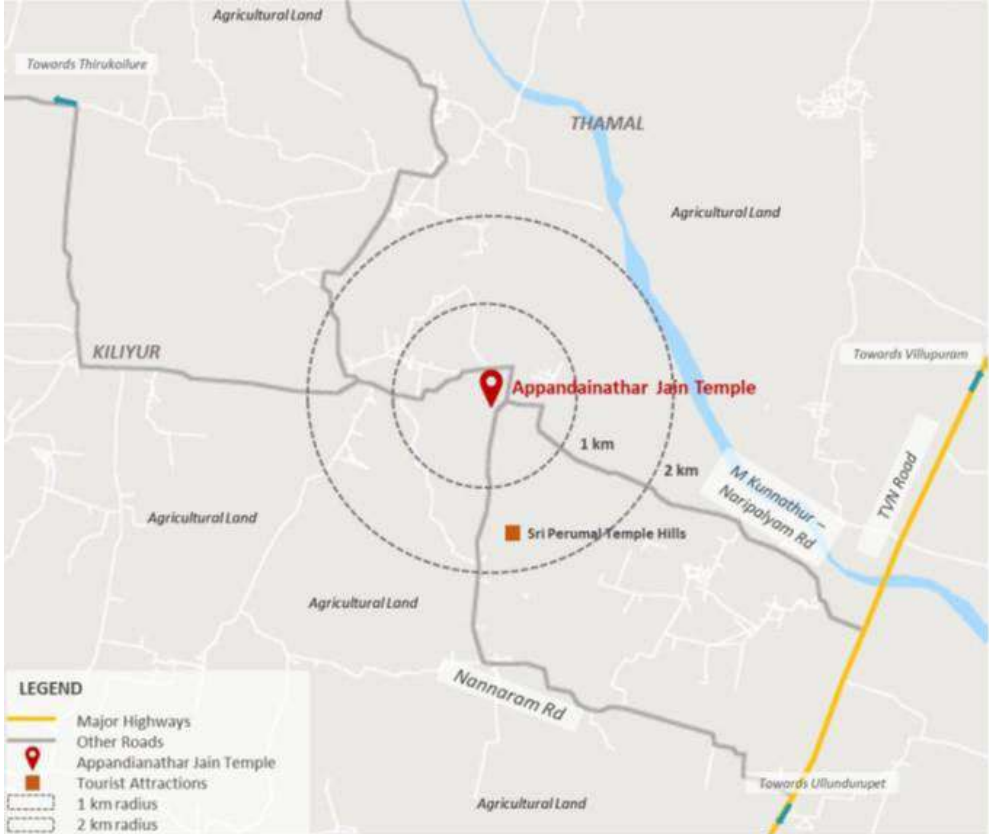
Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

1. **Attraction** – The temple holds a religious value and is mainly visited by pilgrims from local areas. This ancient temple is among the must-visit places among Tamil Jains. Another unique feature of this temple is its serenity and calmness. The visitors experience a unique atmosphere of peace and tranquillity at the temple. It also houses a dedicated meditation place for the pilgrims and priests.
2. **Accessibility**– The Appandainathar Jain temple is situated at a remote location at a distance of about 25 km from the town of Villupuram. Despite of its location the roads that lead to the temple are observed to be in good quality and appropriate width.
 - Bus Stop ~ 650 m
3. **Amenities** – The temple is located in a small village and lacks in adequate facilities in and around the temple.

- No wayfinding signages and informative signage boards are available for the site. The informative signage present are in Tamil language.
 - No cloak room, waiting area or drinking water facilities are available for pilgrims.
 - No retail, F&B kiosks are present inside or around the temple site.
 - The site being located on the hilltop have many steps to visit different areas within the site. No divyand friendly infrastructure is present within the temple site.
 - The area around the temple is not well lit due to absence of adequate lighting.
 - No Dustbins are provided, and the waste is observed to be thrown on the street side areas.
4. **Awareness** – The temple enjoys popularity among Jain pilgrims. It is not very well-known as a tourist destination. In 2019, the temple received, ~5% foreign tourists and 95% of the tourists from local regions of Tamil Nadu. There is not much increase in the footfall, even during the festival celebrations.
 5. **Activities** – On normal days, the temple does not offer any activities. Intermittently, there are some activities such as Thai for 18 days and Chithrai Pournima, Special occasions poojas are conducted. The temple campus owing to its surrounding was used for organising the felicitation ceremony function of a Jain marvel.
 6. **Accommodation** – There are hardly any accommodation options available in the nearby vicinity of the temple, except for the one provided by the temple administration. A set of decent accommodation options involving budget friendly hotels to 2-star hotels are available at Villupuram at a distance of about 25 km.
 7. **Association with Community** – The temple is of religious significance to the local people. The temple is mostly visited by Tamil Jains, due their ancestral ties with the temple.

Figure 25-1: Location and Existing Layout



Site Pictures





Thirunarungudram, Tamil Nadu, India
Thirunarunkondram, Nannaram Post, Ulundurpet Taluk,
Villupuram, Thirunarungudram, Tamil Nadu 606102, India
14/08/20 01:00 PM

Priest's House at the Temple



Thirunarungudram, Tamil Nadu, India
Thirunarunkondram, Nannaram Post, Ulundurpet Taluk,
Villupuram, Thirunarungudram, Tamil Nadu 606102, India
14/08/20 12:56 PM

Inscriptions at the Temple



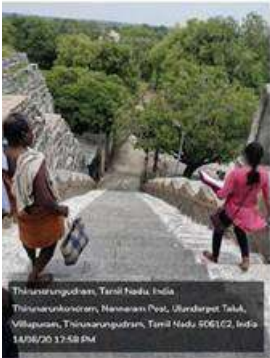
Ma Kunnathur, Tamil Nadu, India
Thirunarungudram Bus Stop, Thirunarungudram,
Ma Kunnathur, Tamil Nadu 606102, India
14/08/20 01:01 PM

Annchanam Building at the Temple



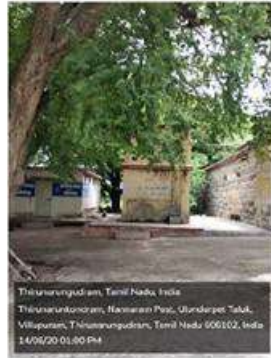
Thirunarungudram, Tamil Nadu, India
Thirunarunkondram, Nannaram Post, Ulundurpet Taluk,
Villupuram, Thirunarungudram, Tamil Nadu 606102, India
14/08/20 12:57 PM

Inscriptions at the Temple



Thirunarungudram, Tamil Nadu, India
Thirunarunkondram, Nannaram Post, Ulundurpet Taluk,
Villupuram, Thirunarungudram, Tamil Nadu 606102, India
14/08/20 12:58 PM

Stairs to the Main Temple



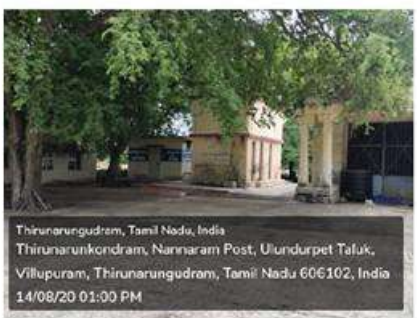
Thirunarungudram, Tamil Nadu, India
Thirunarunkondram, Nannaram Post, Ulundurpet Taluk,
Villupuram, Thirunarungudram, Tamil Nadu 606102, India
14/08/20 01:00 PM

Facilities at the Temple



Ma Kunnathur, Tamil Nadu, India
Thirunarungudram Bus Stop, Thirunarungudram,
Ma Kunnathur, Tamil Nadu 606102, India
14/08/20 01:02 PM

Access Road to the Temple



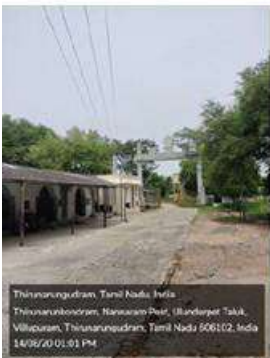
Thirunarungudram, Tamil Nadu, India
Thirunarunkondram, Nannaram Post, Ulundurpet Taluk,
Villupuram, Thirunarungudram, Tamil Nadu 606102, India
14/08/20 01:00 PM

Facilities at the Temple



Thirunarungudram, Tamil Nadu, India
Thirunarunkondram, Nannaram Post, Ulundurpet Taluk,
Villupuram, Thirunarungudram, Tamil Nadu 606102, India
14/08/20 12:57 PM

Inscriptions at the Temple



Thirunarungudram, Tamil Nadu, India
Thirunarunkondram, Nannaram Post, Ulundurpet Taluk,
Villupuram, Thirunarungudram, Tamil Nadu 606102, India
14/08/20 01:01 PM

Road Inside the Temple



Tamil Nadu, India
MDRG20, Tamil Nadu 606102, India
14/08/20 01:10 PM

Clay pot making by Villagers



Tamil Nadu, India
MDRG20, Tamil Nadu 606102, India
14/08/20 01:11 PM

Idol making by Villagers

Vision for the Site

The temple holds a religious value and is visited mainly by local pilgrims and few regional pilgrims.

- The vision for the site is to enhance the visitor experience by upgrading the already existing amenities within the temple complex and adding the missing amenities.
- The temple has a potential to be developed with a unique atmosphere of peace and tranquillity. Hence, the intent is to develop the temple keeping its natural setting intact.
- **Target Visitor** – The site is largely a pilgrim site, with footfall from local areas and rest of Tamil Nadu. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.

Further, pilgrims' groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyang and elderly).

- **Tourist Projections** – The site is categorized as a **Very Low Tourism Site** with **Low HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	45	48	50
High Value Tourists (HVT) (Both domestic and foreign)	5	5	6
Maximum Carrying Capacity	10,241		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Master Plan Concept

The objectives of Master planning at this Site include:

- **Improving visitor experience** at the temple – through improved circulation, conveniences, and amenities.
- **Upgrading the existing infrastructure** without hampering the natural aura of the place.

Hard Interventions

1. **Shaded walkway** – The temple has a 200 m long 'pradakshina path', surrounding the main temple. The path is used by pilgrims as part of their prayer offerings in the temple. The harsh climatic conditions on hilly terrain, makes it difficult for pilgrims to follow this path three times. Thus, a shaded walkway on this path would ease the issue.

Infrastructure Created: ~200 m of shaded walkway

2. **Cultural Hall** –The site's location and the experience it provides to the visitor, a cultural hall can be developed in coordination with the local body. The hall could be used as a meditation centre, marriage hall and a place for holding celebrations during festivals. It can also house informative kiosks based on the principles of Jainism, and make aware to the visitors, about the rich culture.

Infrastructure Created for cultural hall: ~200 sqm of BUA

Soft Interventions

1. **Promotion: Temple to be included in 'Jain Tourism circuit'**– The inclusion of temple within the tourism circuit would increase the visibility of the temple. Additionally, promoting the site with strategies like integration with TN Assist App, etc. The temple authorities can organize recurring events, associated festivals, etc. which can help publicize, increase awareness about its religious significance.

2. **Divyaang friendly infrastructure** – The placement of the temple site on hilly terrain, many areas are accessed by flight of steps, which makes it difficult for disabled visitors to access them. The addition of ramps on these locations would make site Divyaang friendly.

Amenities Plan

1. **Signage (Package 1)** – Package 1 signage is proposed to feature in Tamil, English, and Hindi. Both directional signage and informational signage should be used, as per the design guidelines .
 Apart from the directional signage, informative signages to be placed at different locations within the temple site. The temple has a rich collection of carvings and inscriptions in the cave walls. Information about the architecture, history, and the inscriptions would engage pilgrims.
2. **Streetlight** – The area around the temple is not well lit due to absence of adequate lighting. To ensure temple site and surrounding areas are safe and secure, streetlights would be installed in and around the temple area, as detailed in design guidelines.
3. **Drinking water Station** - As highlighted by many tourists in the baseline surveys, availability of free drinking water was a major issue at tourist sites. Hence, drinking water stations with RO water coolers could be installed at the temple site. A standalone drinking water station, in the courtyard, near to the temple office block.

Trunk Infrastructure

As the Site has direct access from the road, no trunk infrastructure interventions are required.

Projects Identified

#	Project Component	Scale
1	Shaded Walkway	500 sqm
2	Cultural Centre (Kalyan Mandapam)	200 sqm
5	Streetlight	20
6	Signage Package 1	1
7	Drinking Water Station	1

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discuss in previous sections. Standard items are also discussed in design guidelines.

#	Project Component	Cost (INR Lakhs)
1	Shaded walkway	8
2	Cultural centre	53
3	Streetlight	1
4	Signage Package 1	1
5	Drinking Water Station	2
Total		INR 65 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- a) *Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.*
- b) *Estimated revenue projections are pegged at Y5 (exit of short-term Y0-Y5 phase).*
- c) *All revenues are unescalated.*
- d) *Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.*

The following revenue sources are expected for the site:

1. **Space on Hire** – Capturing an average of 4 events per month at INR 6,000 per event.

As discussed in note above, the following existing revenues, if any, are not considered:

1. Prasadam sale
2. Puja tickets
3. VIP tickets
4. Mass meals
5. Donations and Sponsorships
6. Sale of maps, guidebooks etc. (assumed to be at cost value)

Considering the above, total additional un-escalated revenues from the site in Y5 is estimated as INR 5 Lakhs.

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- a) *The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.*
- b) *The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.*
- c) *The expense projections are pegged at Y5 (exit of short-term Y0-Y5 phase).*
- d) *The costs are un-escalated.*

The following OPEX is expected for the site:

1. **Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
2. **Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
3. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.

4. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 *percentage* of the total capital expenditure incurred.
5. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.
6. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue. The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of INR 175 per kilolitre.
7. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee, if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as INR 5 Lakhs.

Feasibility Assessment and Implementation Plan

Given that the estimated additional revenue from the proposed interventions is in par the operational expenses incurred, it can be concluded that the interventions proposed at the site are **Operationally Self-Sustainable** and therefore beneficial.

The interventions proposed at the site are largely for improving amenities and experience of visitors and hence have an associated “social cause”. Given the strict

conservative protocols followed by the temple trust - Adinath Jain Trust, PPP is not an option for development and implementation.

Hence, the recommended interventions will have to be implemented and funded by the temple trust itself.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Shaded walkway	8	Y0 – Y2	Temple Trust
2	Cultural centre ⁸⁴	53	Y3 – Y5	Temple Trust
3	Streetlight	1	Y0 – Y2	Temple Trust
4	Signage Package 1	1	Y0 – Y2	Temple Trust
5	Drinking Water Station	2	Y0 – Y2	Temple Trust
Total		INR 65 L		

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 2,800⁸⁵ man-days of construction labour (spread across 1-1.5 years of implementation)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 2 man-days⁸⁶

⁸⁴ The development of the proposed component can be taken up at later phases based on the increase in future footfalls.

⁸⁵ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as 7,000 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both, increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 5.5 Cr. at the site⁸⁷.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%

- As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
- Assumed cost of labour assumed for computation = INR 700 per day
- Cumulative labour man-days = 30% * CAPEX / 700

⁸⁶ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

⁸⁷ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

Figure 25-2: Proposed Master Plan – Appandainathar Jain Temple



26. Vakrakali Amman Temple, Thiruvakkarai

Site Details

District	Villupuram
Name of Site	Vakrakali Amman Temple
Site No:	Site 64 of 295
Site Use:	Temple
Category:	A (Temple)
Location:	12.0274, 79.6526
Land Area:	20 acres
Peak footfalls:	9,000 per day (Thiruvalluvar day, Thai Poosam, Chithra Pournami, Pournami, Amavaasai)
Operator:	HR & CE Dept.
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom. – 1.3 Lakh (2019 - 2020) For. – 61 (2019 - 2020)
Site Revenues:	Undisclosed
Site Orientation:	Pilgrim
Site Potential:	Low Tourism Site
HVT Potential:	Low HVT potential
Connectivity:	
a. Railway Station:	3 km (Aduthirai)
b. Airport:	170 km (Chennai)
c. Highway:	6 Km from SH-136
Trails featured on:	Nil (Pure Pilgrim Temple)

Vakrakali Amman Temple is one of the greatest Maa Kali temples in South India. While it is very well known amongst the local devotees, it is also visited by the devotees from the Karnataka, Kerala, AP, and few other parts of Tamil Nadu. Being located in a rural setup, it has average connectivity. The temple complex has ~7-acre area under landscaping and temple tank which lacks maintenance. The temple site seems to have a potential to be developed as a regional pilgrim destination with appropriate marketing and development of amenities.

Existing Condition

Location

The Temple is located in Thiruvakkarai, a village near Puducherry, in Villupuram District of Tamil Nadu, India. Located in a small village, the temple is surrounded by village houses, few shops, agricultural fields, etc. along with the presence of rocky land immediately behind the temple. Several prominent tourist landmarks near Vakra Kali Amman Temple are:

- Thiruvakkarai National Fossil Wood Park – ~1 km.
- Auro Beach – ~25 km
- Veedur Dam – ~10 km
- Kodathur Lake – ~5 km
- Pondicherry – ~20 km

Existing Layout

The temple occupies an area of about 20 acres. Out of 20-acres of the total land under the temple administration, nearly 15 acres is occupied by the temple complex and the temple tank adjacent to it. The rest of the 5 acres of land is present in front of the temple. The land is used for construction of shops by temple administration.

Existing Uses

The temple is currently used as a place of worship by local and regional devotees. The Temple is currently operated and maintained by HR & CE. The temple complex

does not have any retail outlets on the inside, however, there are few shops owned by the temple administration on the immediate outer side of the temple.

Other Land Available

Apart from the 15-acre land, which houses the temple complex and temple tank, 5 acres of land is in front of temple entrance, where shops are given on lease to local people.

Master Planning Considerations

Applicable Regulations

1. **Tamil Nadu Combined Development and Building Rules, 2019** – The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land.
2. **TN HRCE Rules, 1959**
 - a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions
 - b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.
 - c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to the religious activities and for the facilitation of Hindu pilgrim tourists.
 - d. The HR&CE Dept. owned land can be leased for a period of no more than 3 years.

Key Sensitivities

There is no specific environmental/social sensitivity to be addressed at the site.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

1. **Attraction** – The temple holds a significant religious value and attracts visitors from Tamil Nadu and neighbouring states. The place exhibits a unique ancient

craft of making items from granite stone. Most of the visitors often visit this temple along the National Fossil Wood Museum located in the 1 km vicinity of the temple.

2. **Accessibility** – The temple is located in a rural setup surrounded by agricultural fields, small shops, and village settlements. The temple is accessed through SH 136 at a distance of 6 kms. The last mile is accessed through unpaved narrow road.
3. **Amenities** – The temple lacks in adequate facilities in and around the temple. The facilities present are in need of renovation or maintenance.
 - Poor condition of temple access road – the access road to temple is a single lane narrow, unpaved road leading to congestion during peak season.
 - Open drainage line passing adjacent to the temple boundary wall, creates issue of bad odour frequently.
 - No wayfinding signages and informative signage boards are available for the site. The signage present are in Tamil language.
 - No divyaang friendly infrastructure is present within the temple complex.
4. **Awareness** – The domestic tourist visiting the temple comprises of people majorly from Andhra Pradesh, Karnataka, and Kerala. A website is designed to encourage donations and participation of devotees from remote location. The website also provides detail information about the temple, its history, the events and pooja that are conducted at the temple. There are several travel bloggers and architecture enthusiast who have written about the temple.
5. **Activities** – The temple also does not offer any special services or activities that can attract many people, except for Annadhanam. On Sri Vakkarakaliyamman Chitra Pournima Festival, a night street show is organised by the temple.
6. **Accommodation** – There are 2 dormitories available near the temple as an accommodation option for tourists. The temple also provides accommodation facilities for tourists inside the temple. A wider range of option are available at Mailam – 10 km., Villupuram – 30 km. and Pondicherry – 20 km.
7. **Association with Community** – The locals are involved during the organisation and operations of festival celebrations.

Figure 26-1: Location and Existing Layout



Site Pictures



Vision for the Site

Vakrakali Amman Temple, dedicated to Maa Kali, holds a significant religious value to the local pilgrims. Being located in the rural setup, the site acts as a recreation space for locals.

- The site is envisioned as an inviting religious pilgrim destination, and a congregation space for locals and pilgrims.
- The intent of development at site is to enhance the visitor experience by upgrading the already existing amenities within the temple complex and maintaining the existing soft landscape.
- **Target Visitor** – The site is largely a pilgrim site, with fair footfall from neighbouring areas as Tamil Nadu, Karnataka, Andhra Pradesh, and Kerala due to its rich religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience. Further, pilgrims’ groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang and elderly).
- **Tourist Projections** – The site is categorized as a **Low Tourism Site** with **Low HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC’s compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	130	143	155
High Value Tourists (HVT) (Both domestic and foreign)	0	0	0
Maximum Carrying Capacity	78,779		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality

of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Master Plan Concept

The objectives of master planning at this site include:

- **Improving visitors’ experience** – through revamping the existing amenities in the temple and adding the missing ones.
- Upgrading the civic infrastructure and stressing upon hygienic surroundings.
- Promoting cultural events, that involve the local community, hence promoting local culture.

Hard Interventions

1. **Improved Access to the temple** – The last ~200m of the site approach road is a narrow unpaved pathway, currently in dilapidated condition. The temple access pathway creates an uninviting experience for the visitors. Further, improved road access from nearby bus/ auto stands would create a safe and attractive pedestrian experience. Thus, pathway could be developed with asphalt to make the temple entrance more appealing.
Infrastructure Created: ~1000 sqm of asphalt paved.
2. **Facilitation Centre (Type 1)** – A small facility centre with an inquiry desk, luggage room, changing room, and rest/waiting area can be developed for tourist convenience and ease at the site. It can be placed at the entrance of the temple. This development will be as per the design guidelines mentioned in Glossary of Interventions.
Infrastructure Created: ~150 sqm of building.

Soft Interventions

1. **Civic Improvement** – The entrance of the temple is through unpaved roads, which creates an uninviting entrance to the temple. In addition, the open drains and garbage littered on road, makes the entrance to the temple unclean and unwelcoming. The local municipal body is encouraged to take up a cleanliness and sanitation drive, with the help of local people, to address this issue.

Amenities Plan

- 1. Signage (Package 1)** – Package 1 signage is proposed to feature in Tamil, English, and Hindi. Both directional signage and informational signage should be used, as per the design guidelines mentioned in Glossary of Interventions.
- 2. Technology Interventions (Package 1):** A basic package of technology integration could be installed at the temple site. These include:
 - Electronic Visitor Counter at entry point
 - TN Assist App integration at site, with internet connection and QR scanner
 - CCTV coverage at up to 3 locations
- 3. Drinking-Water Station** – Sufficient number of drinking water stations must be provided at the tourist facilitation centre and across the site, a module of which can be as per the design guidelines in Glossary of Interventions.

Trunk Infrastructure

As the Site has excellent connectivity, no trunk infrastructure interventions are required.

Project Identified

#	Project Component	Scale
1	Asphalt Paved Access	1000 Sqm
2	Facilitation Centre (Type 1)	150 sqm
3	Signage Package 1	1
4	Technology Intervention (Package 1)	1
5	Drinking Water Station	3

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in Glossary of Interventions.

#	Project Component	Cost (INR Lakhs)
1	Asphalt paved access	60
2	Drinking water station	3
3	Signage Package 1	1
4	Technology Package 1	1
5	Tourist Facilitation Center (Type 1)	15
Total		INR 80 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing, and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.
- Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- All revenues are un-escalated.
- Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

The following revenue sources are expected for the site:

- Kiosks** – Captures 1 kiosk to be rented out at INR 2 Lakhs per annum.

As discussed in note above, the following existing revenues, if any, are not considered:

- Prasadam sale
- Puja tickets
- VIP tickets
- Mass meals
- Donations and Sponsorships
- Sale of maps, guidebooks etc. (assumed to be at cost value)

Considering the above, total additional un-escalated revenues from the site in Y5 is estimated as INR 2 Lakhs.

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- a) The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.
- b) The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.
- c) The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- d) The costs are un-escalated.

The following OPEX is expected for the site:

1. **Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
2. **Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
3. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
4. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.
5. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposal as per the environment norms. It is calculated based on the footfall projections.

6. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.

The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of INR 175 per kilolitre.

7. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as INR 2 Lakhs.

Feasibility Assessment and Implementation Plan

Given that the estimated additional revenue from the proposed interventions is in par with the operational expenses incurred, it can be concluded that the interventions proposed at the site are **Operationally Self-Sustainable** and therefore beneficial. The interventions proposed at the site are largely for improving amenities and experience of visitors and hence have an associated “social cause”.

Sub-projects which can be taken up by the local governing body/ Town panchayat

The last mile connectivity to the temple is poor and has been raised as a repeated concern by the local residents frequently visiting the temple and by the pilgrims alike. Since this is out of the temple’s scope, it has to be taken up by the local governing body/ town panchayat to address the concerns of its constituents.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Asphalt paved access	60	Y0 – Y2	Local governing body/ Town panchayat
2	Drinking water station	3	Y0 – Y2	HR&CE
3	Signage Package 1	1	Y0 – Y2	HR&CE
4	Technology Package 1	1	Y0 – Y2	HR&CE
5	Tourist Facilitation Centre	15	Y0 – Y2	HR&CE
Total		INR 80 L		

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 3,400⁸⁸ man-days of construction labour (spread across 1-1.5 years of implementation)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 2 man-days⁸⁹

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above*
- Indirect employment in the sectors supplying inputs to the tourism industries.

- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 8,600 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

The increase in overall number of visitors is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 15.50 Cr. at the site⁹⁰.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

⁸⁸ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day

- Assumed cost of labour assumed for computation = INR 700 per day

- Cumulative labour man-days = 30% * CAPEX / 700

⁸⁹ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

⁹⁰ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into a 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and suppliers will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.

Figure 26-2: Proposed Master Plan – Vakrakali Amman Temple



27. Kripapureeswarar Temple, Thiruvannainallur

Site Details

District	Villupuram
Name of Site	Kripapureeswarar Temple, Thiruvannainallur
Site No:	Site 66 of 295
Site Use:	Temple
Category:	A (Temple)
Location:	11.8602, 79.3662
Land Area:	5 acres
Peak footfalls:	1 Lakh per day (March Garuda Mahotsavam, Panguni Month, Aadi Swaths, Brahmotsavam)
Operator:	HR & CE Dept.
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom. – 4 Lakh (2019 - 2020) For. – 18,000 (2019 - 2020)
Site Revenues:	13 Lakh (FY 2019 - 2020)
Site Orientation:	Pilgrim
Site Potential:	Low Tourism Site
HVT Potential:	Low HVT potential
Connectivity:	
a. Railway Station:	7 km (Thiruvannainallur)
b. Airport:	170 km (Chennai)
c. Highway:	0.6 Km from SH-69

Trails featured on: **Nil (Pure Pilgrim Temple)**

The temple, dedicated to lord Shiva, is one of the ancient traditional Hindu temples. It well known amongst the devotees for yajna pooja and attracts local and regional pilgrims. It is majorly visited by the devotees from the Karnataka, Kerala, and few other parts of Tamil Nadu. The temple lacks in basic amenities such as clean drinking water, lighting, etc. Though the temple land has large vacant land available but the local dominance over land makes it difficult to develop it. The temple site seems to have potential to be developed as a pilgrim destination with appropriate landscaping and development of amenities.

Existing Condition

Location

The Kripapureeswarar temple is located in a panchayat town of Thiruvannainallur, in Villupuram district Tamil Nadu. The temple is surrounded by few other temples, residential houses, and retail shops. Several prominent tourist landmarks nearby Kripapureeswarar temple are:

- Sri Ayyanar Temple – ~800 m
- Sri Marundhuesar Temple – ~5.8 km
- Sri Guru Bagavan Temple - ~7 km
- Thirumundeeswaram Padal Petra Temple - ~5.5 km
- Then Pennai River - ~7.5 km

Existing Layout

The temple complex occupies an area of 5 acres, with a granite wall surrounding the temple, enclosing all its shrines. The temple is accessed by a seven-tiered rajagopuram, the gateway tower piercing the granite wall.

The temple complex houses a water tank and gardens scattered throughout the complex.

Existing Uses

The temple is currently used as a place of worship by local and regional devotees. The Temple is currently operated and maintained by HR & CE. The temple complex does not have any retail outlets on the inside, however, there are few shops owned by the temple administration on the immediate outer side of the temple.

Other Land Available

Apart from the 5-acre temple complex, the temple also owns around 20 acres of the land. The land is under agricultural use or rented out to commercial uses. Some of this land lies vacant near the temple complex.

Master Planning Considerations

Applicable Regulations

1. **Tamil Nadu Combined Development and Building Rules, 2019** – The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land.
2. **TN HRCE Rules, 1959**
 - a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions
 - b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.
 - c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to the religious activities and for the facilitation of Hindu pilgrim tourists.
 - d. The HR&CE Dept. owned land can be leased for a period of no more than 3 years.

Key Sensitivities

There is no specific environmental/social sensitivity to be addressed at the site.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

1. **Attraction** – The temple holds a significant religious value and attracts visitors from Tamil Nadu and neighbouring states. The main attractions of the temple are a 7th century traditional and ancient temple. One of the most prominent villages around Thiruvannainallur is Thirudayarufamous for having its monumental evidence of Chola kingdom's lord Shiva temple and for its beautiful landscapes.
2. **Accessibility** – The temple is situated at Thiruvannainallur Town and is easily accessible via SH - 69. The most optimal way to reach the temple is through an auto or bus.
3. **Amenities** – The temple lacks in adequate facilities in and around the temple.
 - The area around the temple remains dark during the evening due to inadequate streetlights.
 - Lack of Maintenance of temple space – Many areas at the temple were found to be neglected and having unwanted and irregular vegetation.
 - The site has no provision for free drinking water RO plant.
 - No wayfinding signages and informative signage boards are available for the site. The signage present are in Tamil language.
 - No divyand friendly infrastructure is present within the temple complex.
 - Lack of accommodation options near the site.
4. **Awareness** – The temple has gained its popularity and belief amongst the devotees, as s well-known destination to perform yajna for good health. Many visitors from countries such as Japan, Malaysia and Singapore have visited the temple for the yajna. On a peak day the temple attracts around 50,000 to 1,00,000 devotees.
5. **Activities** – On normal days, the temple does not offer any activities, apart from Annadhanam. The temple arranges Annadhanam for 50 people on a daily basis and also accepts donations for the same. However, the temple occasionally organises light and show, cultural folk performances during Brahmotsavam and Garuda Mahotsavam.

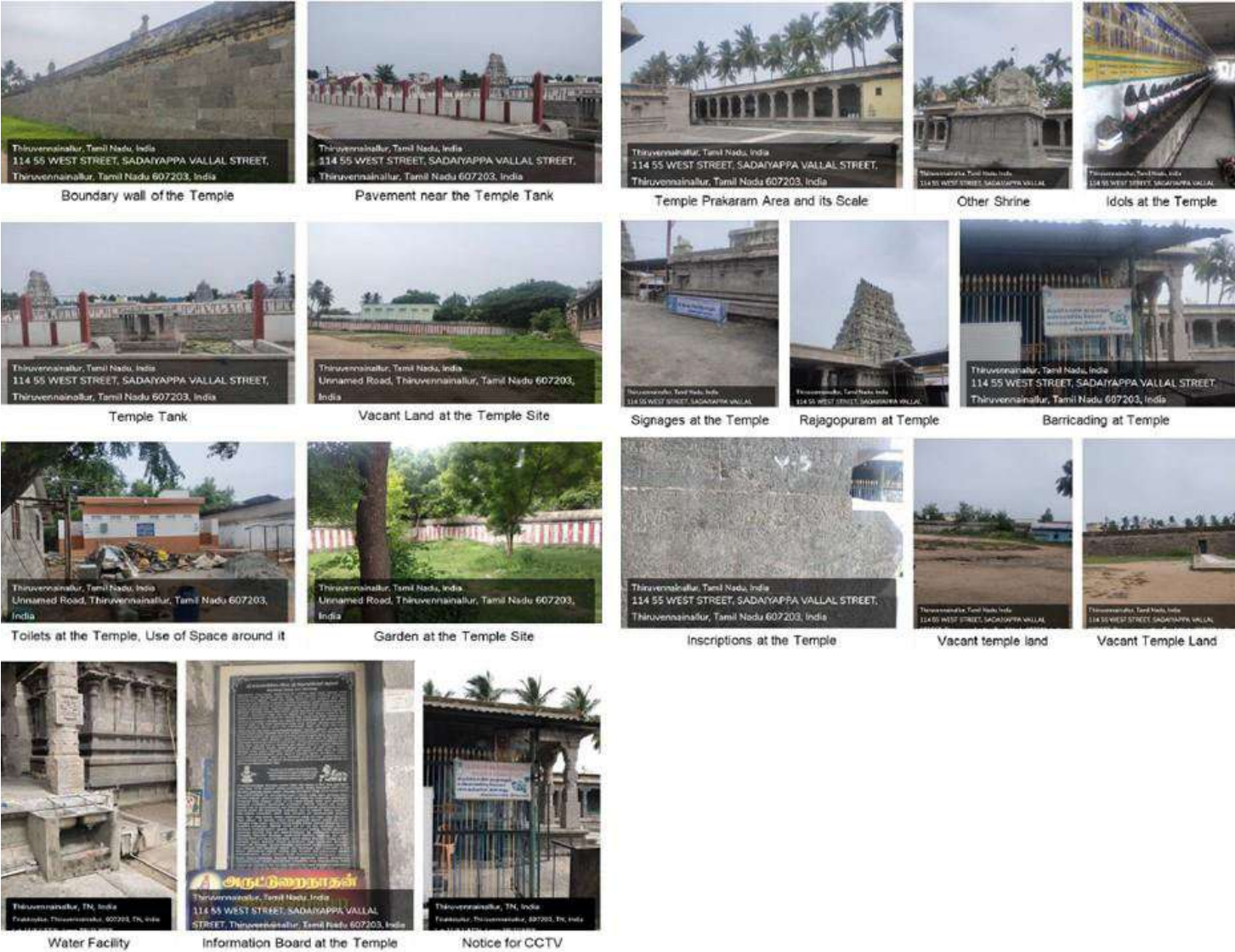
- 6. **Accommodation** – There are no accommodation facilities available around the temple. Visitors visiting this temple prefer to stay at Villupuram (15 km) or Thirakoil (25 km), where a wide range of options are available in the range of INR 500 to INR 3000.
- 7. **Association with Community** – The locals are involved during the organisation and operations of festival celebrations.

Figure 27-1: Location and Existing Layout



Site Pictures





Vision for the Site

The temple, dedicated to Lord Vishnu, holds a significant religious value to the local and regional pilgrims. The temple has open land vacant land under plantation which requires careful upgradation and maintenance.

- The vision for the site is to enhance the visitor experience by upgrading the already existing amenities within the temple complex and developing the existing soft landscape.
- **Target Visitor** – The site is largely a pilgrim site, with fair footfall from neighbouring areas as Tamil Nadu, Karnataka, Andhra Pradesh, and Kerala due to its rich religious significance. It also receives some footfall from Asian countries. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.
Further, pilgrims' groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang and elderly).
- **Tourist Projections** – The site is categorized as a **Low Tourism Site** with **Low HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	382	422	454
High Value Tourists (HVT) (Both domestic and foreign)	36	40	43
Maximum Carrying Capacity	19,695		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Master Plan Concept

The objectives of master planning at this site include:

- **Improving visitors' experience** – through revamping and redevelopment of existing resources, amenities, and creation of interactive spaces.
- Upgrading the civic infrastructure and stressing upon hygienic surroundings.
- Creating a welcoming/ inviting environment around the site for the visitors.

Hard Interventions

1. **Tourist Facilitation Centre (Type 1)** – A small facility centre with an inquiry desk, luggage room, changing room, and rest/waiting area can be developed for tourist convenience and ease at the site. It can be placed at the entrance of the temple. This development will be as per the design guidelines mentioned in Glossary of Interventions.
Infrastructure Created: ~150 sqm of building.
2. **Yatri Niwas** - Yatri Niwas is proposed as a small facility, within the temple complex, of 8 – 10 rooms on the first floor of the cultural hall, to accommodate pilgrims visiting the temple.
Infrastructure Created: ~400 sqm of BUA, 10 keys.

Soft Interventions

1. **Crowd Management** – As the temple gets crowded during the peak seasons and festivals, measures to be taken are as follows:
 - Ramps or special access for wheelchairs
 - Tents within temple complex, could act as temporary holding areas for devotees, to prevent overcrowding.

Amenities Plan

1. **Signage (Package 1)** – Package 1 signage is proposed to feature in Tamil, English, and Hindi. Both directional signage and informational signage should be used, as per the design guidelines mentioned in Glossary of Interventions.
2. **Technology Interventions (Package 1):** A basic package of technology integration could be installed at the temple site. These include:
 - Electronic Visitor Counter at entry point

- TN Assist App integration at site, with internet connection and QR scanner
- CCTV coverage at up to 3 locations

3. Drinking-Water Station – Sufficient number of drinking water stations must be provided at the tourist facilitation centre and across the site, a module of which can be as per the design guidelines in Glossary of Interventions.

Trunk Infrastructure

As the Site has excellent connectivity, no trunk infrastructure interventions required.

Project Identified

#	Project Component	Scale
1	Tourist Facilitation Centre	150 Sqm
2	Yatri Niwas	400 sqm 10 rooms
3	Signage Package 1	1
4	Technology Intervention (Package 1)	1
5	Drinking Water Station	3

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in Glossary of Interventions.

#	Project Component	Cost (INR Lakhs)
1	Yatri Nivas (Built Area)	150
2	Drinking water station	3
3	Signage Package 1	1
4	Technology Package 1	1
5	Tourist Facilitation Center (Type 1)	15
Total		INR 170 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.
- Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- All revenues are unescalated.
- Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

The following revenue sources are expected for the site:

- Kiosks** – Captures 1 kiosk at the facilitation centre to be rented out at INR 1.5 Lakhs per annum.
- Yatri Niwas** – Capturing 10 keys with average yearly occupancy of 60% at INR 1750 per room and additional revenues of 20% over room revenues.

As discussed in note above, the following existing revenues, if any, are not considered:

- Prasadam sale
- Puja tickets
- VIP tickets
- Mass meals
- Donations and Sponsorships
- Sale of maps, guidebooks etc. (assumed to be at cost value)

Considering the above, total additional un-escalated revenues from the site in Y5 is estimated as INR 40 Lakhs.

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- a) The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.
- b) The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.
- c) The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- d) The costs are un-escalated.

The following OPEX is expected for the site:

1. **Manpower Costs** – Additional manpower will be required at the site to manage the proposed interventions.
 - a. A **Helpdesk staff** at the facilitation centre.
 - b. A **security personnel** for the yatri niwas.
 - c. An **Administration staff** to overlook the operations of the yatri niwas.
2. **Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
3. **Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.

6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposal as per the environment norms. It is calculated based on the footfall projections.
7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of INR 175 per kilolitre.
8. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee, if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as INR 35 Lakhs.

Feasibility Assessment and Implementation Plan

Given that the estimated additional revenues from the proposed interventions exceeds the operational expenses incurred, it can be concluded that the interventions proposed at the site are **Operationally Self-Sustainable** and therefore beneficial.

The interventions proposed at the site are largely for improving amenities and experience of visitors and hence have an associated “social cause”. Also, since leasing of spaces beyond 3 years is not allowed by HR&CE, PPP is not an option for development and implementation. Hence, the recommended interventions will have to be implemented and funded by HR&CE itself.

However, it is recommended to give out operations and management of the yatri niwas at the site to private operators for better efficiency and long-term sustainability.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Yatri Nivas ⁹¹	150	Y5 – Y7	O&M on PPP ⁹²
2	Drinking water station	3	Y0 – Y2	HR&CE
3	Signage Package 1	1	Y0 – Y2	HR&CE
4	Technology Package 1	1	Y0 – Y2	HR&CE
5	Tourist Facilitation Centre	15	Y0 – Y2	HR&CE
Total		INR 170 L		

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 7,300⁹³ man-days of construction labour (spread across 1-2 years of implementation)

During Operations: Jobs created during operations will entail:

- Yatri Niwas = 7.2 man – days per day⁹⁴

⁹¹ The development of the yatri niwas can be taken up at later phases based on the increase in future footfalls.

⁹² The specifics of the PPP implementation structure to be determined basis a detailed feasibility study during the transaction advisory phase.

⁹³ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day

- Additional personnel deployed at site (Housekeeping, management, security) = 5 man-days⁹⁵

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect, and induced effects is estimated as. 18,200 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both, increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 50 Cr. at the site⁹⁶.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

- Assumed cost of labour assumed for computation = INR 700 per day

- Cumulative labour man-days = 30% * CAPEX / 700

⁹⁴ As per World Bank thumb rule, 12 man-days per day for 10-key 4-star hotel and 20 man-days for 10-key 5-star hotel.

As per HVS Report, in typical India hotels, manpower to room ratio for 4/5 star hotels is 2.11-2.70, for mid-market 1.52 and for budget hotels 0.72. We have assumed 2 for our computation.

⁹⁵ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

⁹⁶ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and suppliers will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.

Figure 27-2: Proposed Master Plan – Kripapureeswarar Temple



28. Sathyagnana Sabhai, Vadalur

Site Details

District:	Cuddalore
Name of Site:	Sathyagnana Sabhai
Site No:	Site 68 of 295
Site Use:	Temple
Category:	A (Temple)
Location:	11.5484, 79.5459
Land Area:	~61.91 acres
Peak footfalls:	~1 lakh per day (January, April-May, October)
Operator:	Valallar Ramalingar Gnana Sabhai
Site Ownership:	Valallar Ramalingar Gnana Sabhai
Tourist Footfall:	Dom – 33.1 lakhs (2019 – 20) For – nil (2019 – 20)
Site Revenues:	Nil
Site Orientation:	Pilgrim and Tourist
Site Potential:	Medium Tourism Site
HVT Potential:	Low HVT Potential
Connectivity:	
a. Railway Station:	~2.5 km from Vadalur Railway Station
b. Airport:	~60 km from Pondicherry Airport
c. Highway:	~600 m from SH10 ~2 km from NH36 & NH45C
Trails featured on:	Nil (Pure Pilgrim Temple)

Sathyagnana Sabha (Temple of Wisdom) is a temple constructed by the Saivite saint Sri Raamalinga Swaamigal (Vellalar). It is a place where no fruits or flowers are offered, nor blessings are given, making it unique from other temples. Large crowds visit this temple from Tamil Nadu and neighbouring state. Therefore, the scope of interventions includes the facilitation of visitors and provision of amenities to make the site more convenient and comfortable for pilgrims and tourists. Besides enhancing facilities, strategies to enhance footfall by improving the visibility are envisioned.

Existing Condition

Location

The Sathyagnana Sabha Temple is located in Vadalur which is a panchayat town in Cuddalore district in the Indian state of Tamil Nadu. It is 208 km from Chennai, the state capital of Tamil Nadu. The nearest railway station to the site is Vadalur Railway Station at a distance of ~2.5 km, while the nearest airport is situated ~60 km away in Pondicherry. The temple has sparsely developed mixed-residential neighbourhood. Other tourist landmarks in the vicinity are Sacred Heart Church, Mattukkuppam Subramaniyar Temple, Pachai Vaazi Amman Temple, Paravanaaru River, and Uruppidi Amman Temple. Apart from these temples, major tourist destinations at 30-45 km distance are Silver beach, Cuddalore, Pichavaram boat house, and Thillai Nataraja Temple, Chidambaram.

Existing Layout

The temple covers an area of ~17 acres. The Sathya Gnana sabha consists of three Sabhas namely, the Chirchabai, the Porchabai, and the third Gnana Sabha. Other prominent features of the temple are:

- **The Octagonal Building** – The main building was built in an octagonal shape which represents the 8 bones in the human skull. The sanctum sanctorum of the temple is concealed from the main hall by seven curtains which are parted only

on the Thai Poosam day. All the four towers of the Chidambaram Natarajar temple are visible from the sabha.

- **The oven** – The famous oven lighted by Vellalar about 142 years ago, on May 23, 1867, in the Sathya Dharma Sala never extinguishes and continues to burn till today. The oven is 21 feet long and 2.5 feet deep.
- **Mandapa** – The front mandapa was built by Tamil Nadu Government in 2010. At the centre of the Gnana Sabhai, there is a mandapa supported by 4 pillars and inside there is a 12 pillar mandapa.
- **Lamp** – The perpetual Lamp is kept at the center. The lamp is 6.75 feet high and 4.75 feet wide. A mirror is kept to reflect light which is called the Jothi. This was lit initially by Vellalar, on 25th January 1872 AD.
- **Locked Room** – This is known as Tirukappitta Arai (room). Vellalar entered this room on the 19th of Thai month (January-February) in the year 1874 and got united with the Jyothi. The Arutperunjothi Agaval authored by Vellalar is engraved here.
- **Others** – There is an old-age home near the Satya Darma Shala and a Samadhi of Vellalar's disciple Kalpattu Iya in the temple.

Existing Uses

The temple has a vast land with just a small part of it being used. The uses include:

- Gnana Sabia – The main shrine where the eternal lamp is worshipped.
- Also used as a meditation centre
- Dharmasalai – Food is served to thousands every day of the year in this place
- Office, toilet block and a water tank.

Other Land

The temple owns an area of ~62 acres around the temple, out of which the temple covers only 17 acres. Rest of the land is left vacant and can only be used for shrine activities.

Masterplanning Considerations

Applicable Regulations

The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land.

Key Sensitivities

There are no specific environmental/social sensitivity to be addressed at the site. However, there is a restriction imposed by the temple authority that does not allow development of any permanent structures in the vacant land, since the land is mainly designated for pilgrims during the peak season.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

1. **Attraction** – The main attraction of this site is the eternal lamp and main octagonal shape building. The fact that only two Saints established Sangha (sabha) in Indian and World history, one being Gautama Buddha and another Saint Vallalar, makes this place more prominent. The complex houses Dharamsalai that offers food to thousands of visitors every day. Further, the complex houses Jeeva Samaadhi of Kalpattu Ayyaa which is visited by many devotees. Other attractions that people value on the site are Vellalar items and books that are sold here.
2. **Accessibility** – The site is accessible via wide urban roads. The State Highway SH 10 is ~600 m away from the site. It has Vadalur Railway Station, just ~2.5 km away. The nearest airport to the site is ~60 km away in Pondicherry and has charter flights to Cuddalore (~25 km from the site). The Vadalur junction bus stop is ~1.8 km away, from where autos are readily available. The major modes of transport people use to commute to the site include tour buses, autos, and taxis/private cars. However, tour buses dominate the mode of transportation in the peak season.
3. **Amenities** – The temple provides good tourist amenities within the temple premises. The site has facilities of washrooms, drinking water, divyaang friendly measures, safety & security measures, and an adequate number of dustbins to keep the site clean. However, the temple lacks in providing amenities such as;
 - Inadequate lodging facilities for tourists and pilgrims.
 - No tourist facilitation center.
 - No shaded seating area from the complex entrance to the main shrine.
 - No green/recreational spaces.

Parking – Parking is practiced on the vacant land within the site and is free of cost. However, no delineation of parking space is done on the site.

- 4. Awareness** – This site is quite popular and draws about 10 lakhs people on the Thai Poosam week. People from all over Tamil Nadu flock to this place. The site receives domestic tourists from Karnataka, Andhra Pradesh, Kerala, etc, and foreign tourists from Singapore, Malaysia, etc. There are several travel bloggers who have written about the great significance and other details of the site.
- 5. Activities** – Apart from serving food every day, the temple hosts functions on the occasion of Thai Poosam, which is celebrated in January. On Thai Poosam thousands of devotees from all over Tamil Nadu and neighbouring states visits the temple. More than 10,000 stalls and other entertainment are available for at least a week for the pilgrims. Vellalar started the Jyoti Darshan (Lamp darshan) on Thai Poosam in the year 1872, since then the festival is very devotionally celebrated. There are cultural performances as well during this period which are free for visitors. The locked room where Vellalar attained Samadhi is opened on the second day of Thai Poosam for the devotees to have darshan through the window of the room.
- 6. Accommodation** – There are about 9 accommodation options available for tourists in the 2 km vicinity of the temple. These are budget hotels with prices ranging from INR 500 to INR 1500. The site lacks 3 star or better accommodation choices. During peak seasons, visitors are seen sleeping on the road.
- 7. Association with Community** – The temple is a very well-known religious destination amongst the locals. It feeds ~1500 or more people including locals, homeless and elderly people. It has sheds/ shelters for people (mainly elderly and homeless) to stay at the site. Locals frequently visit the temple. Besides, hawkers and vendors can be seen sprawling the site, keeping the outer street busy.

Figure 28-1: Location & Existing Layout.



Site Pictures





Vision for the Site

- The Sathyagnana Sabha Temple is entirely a secular place. It is a place where no fruits or flowers are offered, nor blessings are given, making it unique from other temples. Large crowds visit this temple from Tamil Nadu and neighbouring state. The temple provides good facilities to its visitors.
- To enhance the tourist experience, the site has immense potential to develop new amenities, as it has huge vacant land around the main shrine. Therefore, the vision of the masterplan is to develop amenities like a facilities and amenities to facilitate higher time spent at the site.
- Besides enhancing facilities, strategies to enhance footfall by improving the visibility of the temple through signages, guided tours, marketing, and promotion are envisioned.
- **Target Visitor** – The site is largely a pilgrim site, with less footfall majorly constituting of locals and pilgrims due to its religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.

Further, pilgrims groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang and elderly).

- **Tourist Projections** – The site is categorized as a **Medium Tourism Site** with **Low HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC’s compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made.

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	3,300	3,555	3,783
High Value Tourists (HVT) (Both domestic and foreign)	0	0	0
Maximum Carrying Capacity	2,40,276		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at the site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Approach to Masterplanning

Given the site’s religious and architectural significance and its popularity among pilgrims and domestic tourists, the concept of the masterplan is to:

- **Improve pilgrims’ and locals’ experience** at the temple – by enhancing amenities such as Yatri Niwas, Facilitation center, landscaping and seating areas.
- **Ease of convenience** of pilgrims by providing them accommodation option within the site and green spaces to relax and engage.
- **Improving temple visibility** through signages, and appropriate marketing and promotion.

Hard Interventions

1. **Tourist Facilitation Center** – A small tourist information/facilitation center with an inquiry desk, luggage room, changing room, and rest/waiting area, drinking water station, and galleries depicting temple history can be developed for tourist convenience and ease at the site. It can be placed near the entrance of the temple complex. This development will be as per the design guidelines given in Glossary of Interventions. *Infrastructure Created: ~300 sqm of building.*
2. **Yatri Niwas** – As temple attracts huge pilgrims during peak season. Therefore an in-house Yatri Niwas for visitors’ convenience will be developed. This will be located on the first and second floors of the facilitation center building. It will hold a capacity of 20 keys which will include:
 - 10 dormitories with common toilets,
 - 3 non-reserved AC rooms and 2 VIP/VVIP AC rooms with attached washrooms. These rooms will be spacious with better in-house amenities and facilities.
 - 10 non-AC rooms with attached washrooms.

Apart from rooms, it will include a community dining hall that would only serve vegetarian food and will be open for tourists and visitors to the temple on a dine-in or Ala-carte basis.

Infrastructure Created: ~600 sqm of Yatri Niwas with 25 keys and dining hall.

- 3. Landscaping along inner approach road** – Landscaping on both sides of the inner road (2 km long) leading from the temple entrance to the main shrine is proposed. The focus is on providing green space and naturally shaded-resting area/holding space for ease of convenience of visitors. This will provide them with an engaging space outside the temple. Also during crowd management, this space can act as a holding space where visitors will wait under tree shades. This area will also have gazebos for seating.

Infrastructure Created: ~12,000 sqm of landscaping (6,000 sqm on each side) along with 20 gazebos (10 on each side).

- 4. Adding Natural shading devices to existing pathways**– The existing pathways around the main temple shrine are not shaded, resulting in inconvenience to pilgrims visiting the temple in a hot climate. Therefore, natural shading devices such as trees are proposed to be planted along the whole stretch of pathways to make walking convenient and comfortable for devotees.

Infrastructure Created: ~450 m long, pathways provided with natural shading device.

Soft Interventions

- 1. Marketing and Promotion** – The temple has high potential to enhance its footfall for which it has to be marketed well. Marketing and Advertising at all key sites, CMBT, Chennai International Airport, and Chennai Central Railway Station will help to enhance tourist footfall and attract high-value tourists.
- 2. Guided Tours**– Self-guided audio tour provision shall be present on the site to portray the rich history of the site. Licensed guides can also be deployed to guide the visitors on the site.
- 3. Community Engagement** – The locals around the temple are well aware of the temple’s history and significance. Therefore, the local community can be encouraged to participate in various activities within and around the temple. Locals can be trained and appointed as guides in the temple, they shall be

allowed to sell homemade souvenirs in the proposed retail zone. This will not only enhance activity on site but will also increase the revenue of the temple.



Landscaping along Road



Gazebos



Trees shading Pathway

Amenities Plan

1. **Retail zone** – A retail zone near the entrance is proposed. This will have a temporary retail kiosk that will sell temple-related souvenirs and daily need products, required by pilgrims staying at the proposed Yatri Niwas. As local vendors as seen selling their products on the surrounding road, therefore these retail kiosks can be allotted to them to run on a rotational basis. This will help to clear the congestion on road and will also give the opportunity to the local vendors. *Infrastructure Created: A total of 5 retail kiosks of 9 sqm each.*

2. **Signage** – The site is filled with signboards describing instructions and history. However, all signages are in Tamil. As the site attracts many tourists, therefore signages in English shall also be erected. Signage Package 1 is proposed to feature for this site. Both directional signage and informational signage should be used, as per the design guidelines mentioned in Glossary of Interventions.

3. **Parking** – The temple has vacant land where free parking is practiced. However, the parking space is undelineated and thus vehicles are parked in an unorganized manner. Thus, a designated parking space is proposed. The parking area will be paved and have markings on it. Temple authority shall regulate the use of parking space. *Infrastructure created – ~2400 sqm of paved parking area having 75 ECS.*

4. **Technology Interventions** – For tourist's awareness on the site, self-audio tours are proposed, which will require technological facilities. Therefore Technology Package 1 is proposed for this site. These shall include:
 - Free WiFi
 - Compatibility with TN Assist App
 - The package shall exclude CCTV's as there are sufficient numbers of CCTV's on the site.

Trunk Infrastructure

As the Site has direct access from the road, no trunk infrastructure interventions are required.

Projects Identified

#	Project Component	Scale
1	Tourist Facilitation Center (Type 1)	300 sqm
2	Yatri Niwas (built up area)	600 sqm
3	Landscaping	12,000 sqm
4	Gazebos	20
5	Shade along existing pathway	450 m
6	Retail kiosk (3 by 3 m)	5
7	Signage Package 1	1
8	Parking (2400 sqm of paved parking yard)	75 ECS
10	Technology Package 1 (Exclude CCTV's)	1

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in Glossary of Interventions.

#	Project Component	Cost (INR Lakhs)
1	Yatri Nivas (Built Area)	165
2	Yatri Nivas - Landscaping	10
3	Paved walkway - shade	22
4	Parking	21
5	Gazebos	40
6	Retail Kiosks	7
7	Signage Package 1	1
8	Technology Package 1	1
9	Tourist Facilitation Centre (Type 1)	15
Total		INR 285 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- a) Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.
- b) Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- c) All revenues are unescalated.
- d) Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

The following revenue sources are expected for the site:

1. **Kiosks** – Captures 5 kiosks to be rented out at INR 8 Lakhs per annum.
2. **Yatri Niwas** – Capturing 11 keys with average yearly occupancy of 60% at INR 1750 per room and additional revenues of 20% over room revenues.
3. **Parking** – Capturing 75 ECS at 30% occupancy per day at INR 15 per ECS.

As discussed in note above, the following existing revenues, if any, are not considered:

1. Prasadam sale
2. Puja tickets
3. VIP tickets
4. Mass meals
5. Donations and Sponsorships
6. Sale of maps, guidebooks etc. (assumed to be at cost value)

Considering the above, total additional un-escalated revenues from the site in Y5 is estimated as INR 55 Lakhs.

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- a) The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.
- b) The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.
- c) The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- d) The costs are un-escalated.

The following OPEX is expected for the site:

1. **Manpower Costs** – Additional manpower will be required at the site to manage the proposed interventions.
 - a. A **Helpdesk staff** at the facilitation centre.
 - b. A **security personnel** for the parking and the yatri niwas.
 - c. An **Administration staff** to overlook the operations of the yatri niwas.
2. **Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
3. **Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.

6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposal as per the environment norms. It is calculated based on the footfall projections.
7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue. The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175* per kilolitre.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee, if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as *INR 45 Lakhs*.

Feasibility Assessment and Implementation Plan

Given that the estimated additional revenue from the proposed interventions exceeds the operational expenses incurred, it can be concluded that the interventions proposed at the site are **Operationally Self-Sustainable** and therefore beneficial.

The interventions proposed at the site are largely for improving amenities and experience of visitors and hence have an associated “social cause”. Given the conservative regulations of the Valallam Ramalingam Gnanasabhai, PPP is not an option for development and implementation. Hence, the recommended interventions will have to be implemented and funded by Temple Trust itself.

⁹⁷ The specifics of the PPP implementation structure to be determined basis a detailed feasibility study during the transaction advisory phase.

⁹⁸ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour

However, it is recommended to give out operations and management of the yatri niwas at the site to private operators for better efficiency and long-term sustainability.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Yatri Nivas (Built Area)	165	Y0 – Y2	O&M on PPP ⁹⁷
2	Yatri Nivas - Landscaping	10	Y0 – Y2	Temple Trust
3	Paved walkway - shade	22	Y0 – Y2	Temple Trust
4	Parking	21	Y0 – Y2	Temple Trust
5	Gazebos	40	Y0 – Y2	Temple Trust
6	Retail Kiosks	7	Y0 – Y2	Temple Trust
7	Signage Package 1	1	Y0 – Y2	Temple Trust
8	Technology Package 1	1	Y0 – Y2	Temple Trust
9	Tourist Facilitation Centre	15	Y0 – Y2	Temple Trust
Total		INR 285 L		

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 12,200⁹⁸ man-days of construction labour (*spread across 1-2 years of implementation*)

- Minimum wage in Tamil Nadu for construction of buildings & roads = *INR 330* per day.
- As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – *INR 769* per day; Mazdoor = *INR 502* per day
- Assumed cost of labour assumed for computation = *INR 700* per day
- Cumulative labour man-days = 30% * CAPEX / 700

During Operations: Jobs created during operations will entail:

- Yatri Niwas = 14.4 man – days per day⁹⁹
- Additional personnel deployed at site (Housekeeping, management, security) = 12 man-days¹⁰⁰

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 30,600 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

The, increase in overall number of visitors tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 380 Cr. at the site¹⁰¹.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%

- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.

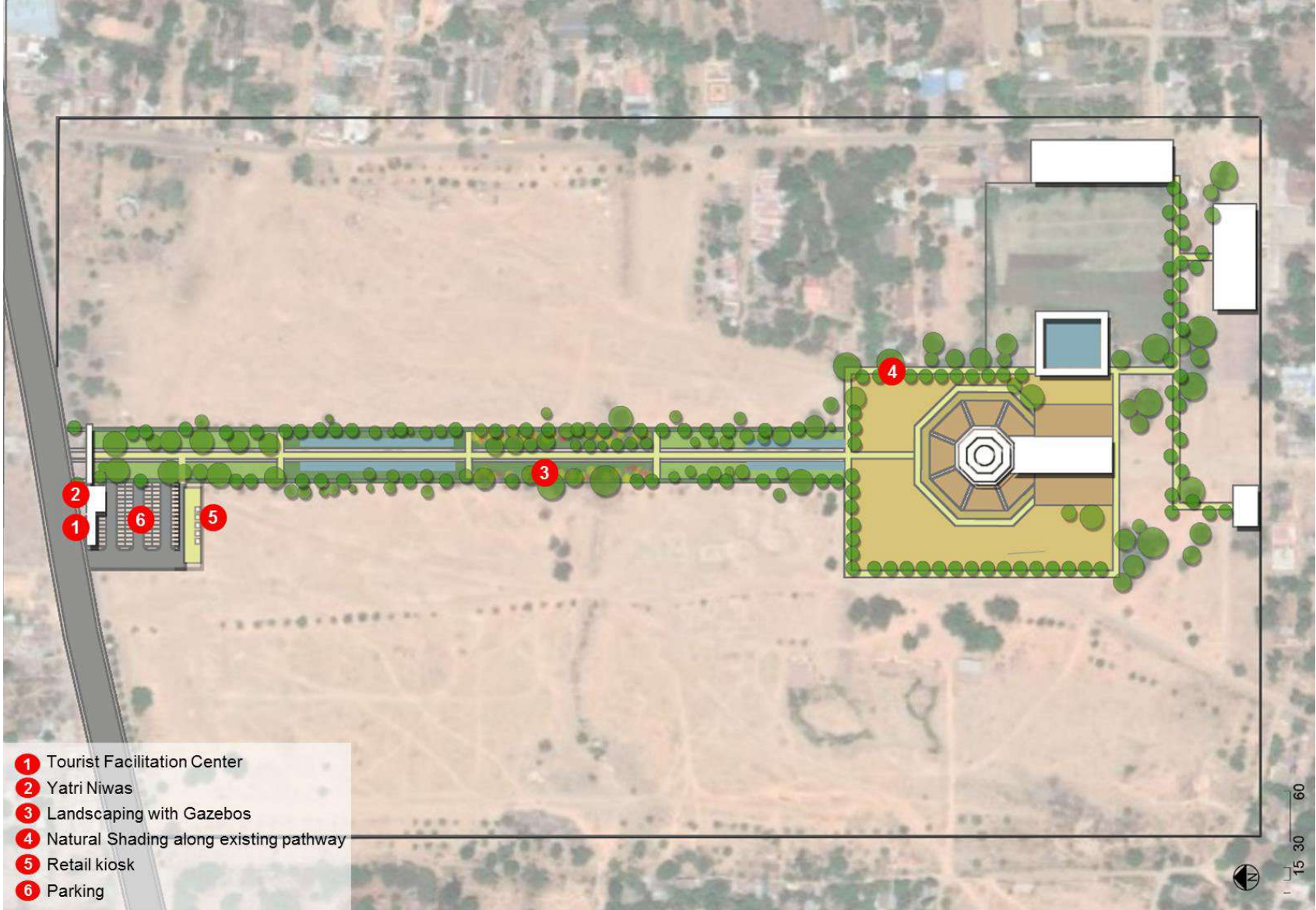
⁹⁹ As per World Bank thumb rule, 12 man-days per day for 10-key 4-star hotel and 20 man-days for 10-key 5-star hotel.

As per HVS Report, in typical India hotels, manpower to room ratio for 4/5 star hotels is 2.11-2.70, for mid-market 1.52 and for budget hotels 0.72. We have assumed 2 for our computation.

¹⁰⁰ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

¹⁰¹ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

Figure 28-2: Proposed Master Plan - Sathyagnana Sabhai Temple



29. Sri Viruthagiriswarar Temple, Virudhachalam

Site Details

District:	Cuddalore
Name of Site:	Sri Viruthagiriswarar Temple
Site No:	Site 70 of 295
Site Use:	Temple
Category:	A (Temple)
Location:	11.5168, 79.3195
Land Area:	~1.5 acres (Temple) ~12.31 acres (Additional Land)
Peak footfalls:	~5,000 per day (January – April, September – December)
Operator:	HR & CE Dept.
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom – 7.57 lakhs (2019 – 20) For – nil (2019 – 20)
Site Revenues:	INR 1.5 crores (2019 – 20)
Site Orientation:	Pilgrim
Site Potential:	Low Tourism Site
HVT Potential:	Low HVT Potential
Connectivity:	
a. Railway Station:	~3 km (Vriddhachalam)
b. Airport:	~100 km (Pondicherry)
c. Highway:	~100 m from SH 141; ~ 650 m from SH70

Trails featured on: **Nil (Pure Pilgrim Temple)**

Sri Viruthagiriswarar Temple has rich history and architecture, dating back 1700 years. The temple has many classic stories related to it and is considered equivalent to Kasi, making it one of the prominent Hindu temples among pilgrims. The temple provides good facilities to its tourists. However, it lacks to provide a good experience to its visitors. Therefore, the scope of interventions includes the enhancement of tourist facilitation and engagement at the site, along with strategies to enhance footfall by improving the visibility of the temple.

Existing Condition

Location

Sri Viruthagiriswarar Temple is located in the town of Virudhachalam, situated in the Cuddalore district of Tamil Nadu. The temple lies on the banks of the Manimutharu river. The nearest railway station to the site is Vriddhachalam Junction at ~3 km, while the nearest airport is situated ~100 km away in Pondicherry. The temple lies in an Institutional zone and is surrounded by commercial buildings on all 4 sides, which are rented/leased out by the temple. Prominent tourist attractions located nearby include Kolanjiappar temple, Manimukhta River, Shri Ekanayakar Temple, Shri Vedappar Kovil, and Sri Bhuvanaraha Swamy Temple (Purana Sthalam), Srimushnam.

Existing Layout

The temple covers an area of 1.5 acres and has a fort-like structure with high boundary walls. It is enclosed by commercial buildings on all 4 sides. The prominent features of the temple are:

- The Saiva Siddhantha comp rises 28 Agamas-branches. These Lingas are in a separate shrine located on the northwest side of the temple.
- Lord Muruga with his consorts Valli and Deivanai graces the devotees from a shrine between Lord and Mother Vruddhambika shrine.
- The temple has five gopurams, 5 Kodi Marams, and 5 theerthams.
- The temple has a mandapam which is carved like a chariot.

- A toilet block is located on the south-east corner, having separate male and female toilets.
- The site houses an inspector's office, an old temple office, and an old library.
- There is one store present within the temple.

Existing Uses

The temple is considered to be Kasi of the South because of which it is highly worshipped by the locals, pilgrims, and domestic religious tourists. Apart from that, the temple complex has 1 store for providing Pooja items, religious books, prasadam, and items required in mandapam. Locals also visit the temple for marriages and to celebrate festivals like Brahmotsavam, Aadi Pooram, Vaikasi Vasanth Utsav, Aani Tirumanjanam, Arudra Darshan, and Skanda Sashti-Soora Samharam.

Other Land

The temple owns an area of 13.81 acres in Virudhachalam. In this 13.81 acres, the main temple complex covers 1.5 acres, and rest houses leased out commercial buildings, roads, and open spaces. A ~1.50 acres of vacant land parcel is proposed for new amenities.

Masterplanning Considerations

Applicable Regulations

The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land. However, the HRCE Rules applicable for the site are:

1. **Tamil Nadu Combined Development and Building Rules, 2019** – As per Master Plan, the temple complex lies in an Institutional Zone. The permissible uses include:

For Institutional Zone

Educational Institutions | Govt/Quasi Govt./Private Offices and Institutions | Art galleries | Museums | Public Libraries | Social and Cultural Institutions | Religious buildings | Health institutions | Public & Semi-public open spaces | Public utilities | Residential and commercial spaces | Bus and Railway stations | Parking lots including multilevel parking | Cinema theatres | Kalyana

mandapams | Community/Assembly halls | Waterfront Developments | Circuses/Fairs.

2. TN HRCE Rules, 1959

- a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions
- b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.
- c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to the religious activities and for the facilitation of Hindu pilgrim tourists.
- d. The HR& CE Dept. owned land can be leased for a period of no more than 3 years.

Key Sensitivities

There are no specific environmental/social sensitivity to be addressed at the site.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

1. **Attraction** – The main attraction of the temple is its significance to the number 5. Everything present in the temple is 5 in number including Murthis, Vinayakas, towers, Prakaras, Kodimarams, Mandaps, and car raths. The temple has 100 pillars mandapam, beautifully carved out like Chariot. This temple is considered equivalent to Kasi. People visiting the temple take a holy dip in the Manimukhta River which is famous for ensuring salvation as per scriptures. Apart from the Manimukhta River, Kolanjiappar Temple and small temples in the vicinity, there is no major attraction near the site.
2. **Accessibility** – The site is accessible via wide urban roads of State Highway 141 which is ~100 m from the site. It has Vriddhachalam Railway Junction, just ~3 km away. The nearest airport to the site is ~100 km away in Pondicherry and has charter flights to Cuddalore (~25 km from the site). The major modes of

transport people use to commute to the site include tour bus, autos, and taxis/private cars.

3. Amenities – The temple provides good tourist amenities within the temple premises. The site has facilities of washrooms, drinking water, divyaang friendly measures, safety & security measures, and an adequate number of dustbins to keep the site clean. However, the temple lacks in providing amenities outside the temple complex, such as;

- No toilet facility outside the temple.
- No lodging facility for tourists and pilgrims.
- No paved surfaces near the river for pilgrims.
- No pathway connecting parking area and temple complex.

Parking – The parking space is provided on the vacant temple-owned land, across the road near the Manimukth river. The parking fee charged on an hourly basis is INR 20 for a car and INR 40 for a bus/van. However, due to the undelimited parking area, vehicles are parked in an unorganised manner resulting in a smaller number of parked vehicles than its holding capacity. Moreover, during peak season, parking is practiced on-street due to the unavailability of parking space inside this land. Thus, parking space needs to be redesigned.

4. Awareness – The temple does not enjoy the awareness levels of other famous temples in Tamil Nadu. Its rich history and beautiful architecture haven't realised its true potential. Though it draws about 1 lakh people during peak seasons, but 95% of people are locals and domestic pilgrims, while the rest 5% are foreigners from Malaysia and Singapore according to the temple officials. It has very little online coverage and thus has less popularity.

5. Activities – The temple organises various activities throughout the year. Special abhisheka is performed to procession deity Peria Nayakar on Poornima-full moon days. Sankabishek-Abishek with conches and Kalasabishekam also are performed. Annadhanam also takes place in this temple for 50 people every day. Apart from that, the temple hosts various festivals like:

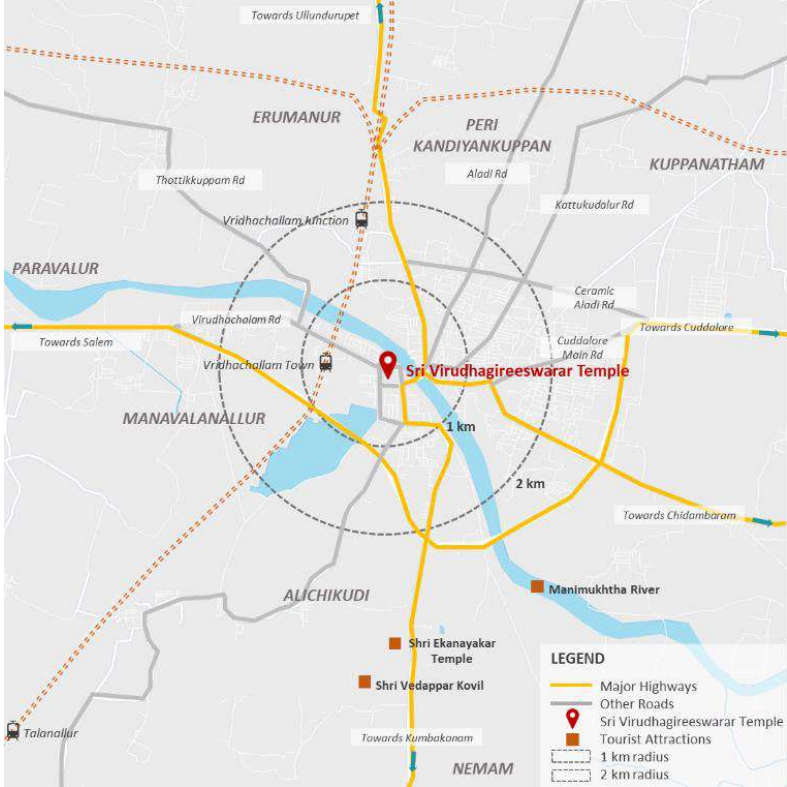
- 10-day Brahmotsavam drawing a huge crowd of devotees, especially on the car festival on the 9th day in Masi (February-March);

- 10-day Aadi Pooram especially for Ambica with Wedding Festival and the flag hoisting and Ambica procession.
- 10-day Vaikasi Vasanth Utsav in May-June;
- Aani Tirumanjanam in June-July;
- Arudra Darshan in December-January;
- Skanda Sashti-Soora Samharam in October-November.

6. Accommodation – The temple is surrounded by many budget hotels. The most preferable accommodation by the tourists is Anandha lodge which charges around 1200 per room per night. It enjoys about 80 to 100% occupancy in the peak months. Other options present in the vicinity are Shanmuga lodge and Vasantha lodge. However, for 4-star hotels, the nearest options are available in Pondicherry which is almost 90 km away from the site.

7. Association with Community – The locals around the temple are very well aware of the temple's history and significance. They are involved in everyday rituals of the temple. Hawkers and vendors also sprawl the site during festivals and other occasions.

Figure 29-1: Location & Existing Layout

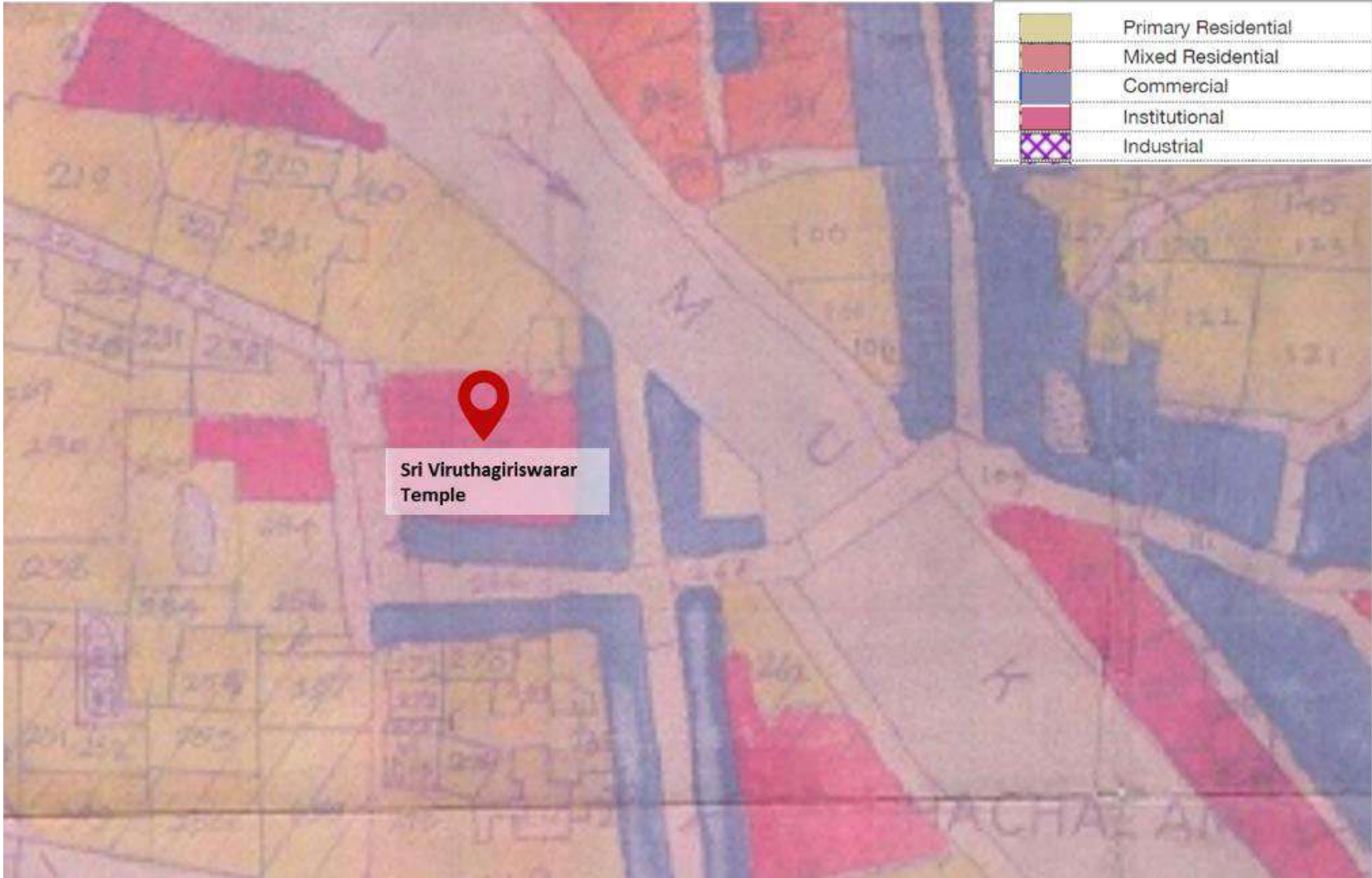


Site Pictures





Figure 29-2: Land Use Regulation Zone at the Site



Vision for the Site

- Sri Viruthagiriswarar Temple has rich history and architecture, dating back 1700 years. The temple has many classic stories related to it and is considered equivalent to Kasi, making it one of the prominent Hindu temples among pilgrims. The temple provides good facilities to its tourists. However, it lacks to provide an engaging experience to its visitors.
- The temple has huge potential to enhance its amenities as it has huge vacant land in the vicinity, where amenities can be provided for the ease of convenience of visitors. Considering these, the vision for the site is to develop it as a religious tourist attraction that ensures good experience to its visitors by providing them amenities and facilities for spending higher time at the site.
- Besides enhancing facilities, strategies to enhance footfall by improving the visibility of the temple through signages, guided tours, marketing, and promotion are envisioned.
- **Target Visitor** – The site is largely a pilgrim site, with less footfall majorly constituting of locals and pilgrims due to its religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.

Further, pilgrim groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang and elderly).

- **Tourist Projections** – The site is categorized as a **Low Tourism Site** with **Low HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC’s compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	757	836	900
High Value Tourists (HVT) (Both domestic and foreign)	0	0	0
Maximum Carrying Capacity	5,908		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at the site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Approach to Masterplanning

Given the site’s religious and architectural significance and its popularity among pilgrims and domestic tourists, the concept of the masterplan is to:

- **Improve pilgrims’ and locals’ experience** at the temple – by enhancing amenities such as tourist facilitation center, community toilet block, ghat along the river, parking area, and paved pathway.
- **Utilisation of the river as a recreational source** by developing ghat on it and thus enhancing activities around the temple.
- **Ease of convenience** of pilgrims by providing them accommodation option within the site by developing Yatri Niwas on the vacant land.
- **Improving temple visibility** through signages, and appropriate marketing and promotion.

Hard Interventions

1. **Tourist Facilitation Center** – A small tourist information/facilitation center with an inquiry desk, luggage room, changing room, and rest/waiting area, drinking water station, a temple-souvenir shop and galleries can be developed for tourist convenience and ease at the site. It can be placed outside the temple complex, near the entrance. This development will be as per the design guidelines mentioned in Glossary of Interventions.
Infrastructure Created: ~150 sqm of building.

2. Yatri Niwas – Virudhachalam acts as a connecting hub for travel between cities like Salem, Kumbakonam, Cuddalore, Chidambaram, etc. It also comes on the way for people travelling to Bangalore from Mayiladuthurai, Chidambaram, and Kumbakonam. This makes it a suitable place for travellers' layover. So a Yatri Niwas for accommodation will be developed to cater to the need of pilgrims. It will be located on the temple-owned vacant land situated across the road, near the river. It will hold a capacity of 25 keys which will include:

- 10 dormitories with common toilets,
- 3 non-reserved AC rooms and 2 VIP/VVIP AC rooms with attached washrooms. These rooms will be spacious with better in-house amenities and facilities.
- 10 non-AC rooms with attached washrooms.
- Apart from rooms, it will include a community dining hall that would only serve vegetarian food and will be open for tourists and visitors to the temple on a dine-in or Ala-carte basis.

Infrastructure Created: ~650 sqm of Yatri Niwas with 25 keys and dining hall.

3. Development of ghat along the river – The temple is situated on the bank of Manimuktha River that is considered to ensure salvation, as per scriptures, because of which many pilgrims take a holy dip in the river. Moreover, the river is utilised by the temple in the Masimagam function, Pongal karnal function, and Thirthavare. Therefore, for pilgrims' and tourists' experience and ease on the site, a small ghat is proposed to be developed along the river.

Infrastructure Created: ~1200 sqm of ghat along the river.

4. Paved Pathways– A pathway connecting the parking area, Yatri Niwas, Facilitation Center to the temple, and ghat will be developed. It shall be paved with pavers that are sourced locally. The entire 2 m wide pathway will be shaded naturally using trees to make walking convenient for devotees visiting the temple in the hot climate.

Infrastructure Created: ~200 m long, paved-shaded pathways.



Development of Ghat along river



Paved-pathway along with tree shade

Soft Interventions

- 1. Marketing and Promotion** – As it was observed that the temple has moderate awareness among pilgrims, therefore to enhance the visibility of the temple, it has to be marketed well. Virudhachalam acts as a connecting hub for travel between cities like Salem, Kumbakonam, Cuddalore, Chidambaram, and to Bangalore from Mayiladuthurai, Chidambaram, and Kumbakonam, making it a suitable place for a layover. This shall be taken into an advantage by installing signages at the road to attract and aware travelling tourists. Increasing visibility with strategies like integration with TN Assist App, etc. Marketing and Advertising at all key sites, CMBT, Chennai International Airport, and Chennai Central Railway Station will also help to enhance tourist footfall and attract high-value tourists.
- 2. Guided Tours**– Self-guided audio tour provision shall be present on the site to portray the history of the site. As the temple has rich history and architecture, therefore, the self-guided tour shall aware the tourists of the historical significance of the site. Licensed guides can also be deployed to guide the visitors on the site.
- 3. Community Engagement** – The locals around the temple are well aware of the temple’s history and significance. Therefore, the local community can be encouraged to participate in various activities within and around the temple. Locals can be trained and appointed as guides in the temple.

Amenities Plan

- 1. Community Toilet Block** – As there are no public toilets in the vicinity. Therefore to cater to this situation a community toilet block will be developed on the additional vacant land across the road, near the river. It shall be located on the north-west corner of this land. The design guidelines for Community Toilet Block are mentioned in Glossary of Interventions.
Infrastructure created – 300 sqm of the community toilet block.
- 2. Signage** – Signages can be installed on the nearby attraction sites such as Manimukhta River and Kolanjiappar Temple for the outreach of the temple. Layout and wayfinding signages shall be erected at appropriate places for the ease of movement of visitors. Signage Package 1 is proposed to feature for this

site. Both directional signage and informational signage should be used, as per the design guidelines mentioned in Glossary of Interventions.

- 3. Parking** – The temple has vacant land outside temple premises where chargeable parking is practiced. However, the parking space is undelineated and thus vehicles are parked in an unorganised manner resulting in less number of parked vehicles than its holding capacity. Thus parking space will be redesigned to utilize its maximum potential. The parking area will be paved and have markings on it. Temple authority shall regulate the use of parking space.
Infrastructure created – ~1800 sqm of paved parking area having 74 ECS.
- 4. Technology Interventions** – For tourist’s awareness on the site, self-audio tours are proposed, which will require technological facilities. Therefore Technology Package 1 is proposed for this site. These shall include:
 - Free WiFi
 - Compatibility with TN Assist App
 - The package shall exclude CCTV’s as there are sufficient numbers of CCTV’s on the site.

Trunk Infrastructure

As the Site has direct access from the road, no trunk infrastructure interventions are required.

Projects Identified

#	Project Component	Scale
1	Tourist Facilitation Center (Type 1)	150 sqm
2	Yatri Niwas	650 sqm
3	Paved Pathway (2 m wide)	200 m
4	Ghat along River	1200 sqm
5	Community Toilet	300 sqm
6	Signage Package 1	1
7	Parking (1800 sqm of paved parking yard)	74 ECS
8	Technology Package 1 (Exclude CCTV’s)	1

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in Glossary of Interventions.

#	Project Component	Cost (INR Lakhs)
1	Yatri Nivas (Built Area)	180
2	Paved walkway	4
3	Parking	21
4	Ghats along the river	12
5	Community Toilet	5.
6	Signage Package 1	1
7	Technology Package 1	1
8	Tourist Facilitation Centre (Type 1)	15
Total		INR 240 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.
- Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- All revenues are unescalated.
- Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

The following revenue sources are expected for the site:

- Kiosks** – Captures 1 kiosk at the facilitation centre to be rented out at INR 1.5 Lakhs per annum.
- Yatri Niwas** – Capturing 12 keys with average yearly occupancy of 60% at INR 1750 per room and additional revenues of 20% over room revenues.
- Parking** – Capturing 75 ECS at 30% occupancy per day at INR 15 per ECS.

As discussed in note above, the following existing revenues, if any, are not considered:

- Prasadam sale
- Puja tickets
- VIP tickets
- Mass meals
- Donations and Sponsorships
- Sale of maps, guidebooks etc. (assumed to be at cost value)

Considering the above, total additional un-escalated revenues from the site in Y5 is estimated as INR 50 Lakhs.

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.
- The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.
- The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- The costs are un-escalated.

The following OPEX is expected for the site:

- Manpower Costs** – Additional manpower will be required at the site to manage the proposed interventions.
 - A **Helpdesk staff** at the facilitation centre.
 - A **security personnel** for the parking and the yatri niwas.

- c. An **Administration staff** to overlook the operations of the yatri niwas.
- 2. **Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
- 3. **Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
- 4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
- 5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 *percentage* of the total capital expenditure incurred.
- 6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.
- 7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175* per kilolitre.

As discussed in note above, the following existing OPEX, if any, are not considered:

- 1. Salaries and perks of existing employees
- 2. O&M cost of existing site and facilities

¹⁰² The development of the yatri niwas can be taken up at later phases based on the increase in future footfalls.

- 3. Regulatory fee, if any
Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as INR 45 Lakhs.

Feasibility Assessment and Implementation Plan

Given that the estimated additional revenues from the proposed interventions exceeds the operational expenses incurred, it can be concluded that the interventions proposed at the site are **Operationally Self-Sustainable** and therefore beneficial.

The interventions proposed at the site are largely for improving amenities and experience of visitors and hence have an associated “social cause”. Also, since leasing of spaces beyond 3 years is not allowed by HR&CE, PPP is not an option for development and implementation. Hence, the recommended interventions will have to be implemented and funded by HR&CE itself.

However, it is recommended to give out operations and management of the yatri niwas at the site to private operators for better efficiency and long-term sustainability.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Yatri Nivas ¹⁰²	180	Y5 – Y7	O&M on PPP ¹⁰³
2	Paved walkway	4	Y0 – Y2	HR&CE
3	Parking	21	Y0 – Y2	HR&CE
4	Ghats along the river	12	Y0 – Y2	HR&CE
5	Community Toilet	5.	Y0 – Y2	HR&CE
6	Signage Package 1	1	Y0 – Y2	HR&CE
7	Technology Package 1	1	Y0 – Y2	HR&CE
8	Tourist Facilitation Center	15	Y0 – Y2	HR&CE
Total		INR 240L		

¹⁰³ The specifics of the PPP implementation structure to be determined basis a detailed feasibility study during the transaction advisory phase.

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 10,300¹⁰⁴ man-days of construction labour (*spread across 1-2 years of implementation*)

During Operations: Jobs created during operations will entail:

- Yatri Niwas = 18 man – days per day¹⁰⁵
- Additional personnel deployed at site (Housekeeping, management, security) = 5 man-days¹⁰⁶

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect, and induced effects is estimated as. 25,800 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

The increase in overall number of visitors is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 90 Cr. at the site¹⁰⁷.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and suppliers will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.

¹⁰⁴ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
 - Assumed cost of labour assumed for computation = INR 700 per day
- Cumulative labour man-days = 30% * CAPEX / 700

¹⁰⁵ As per World Bank thumb rule, 12 man-days per day for 10-key 4-star hotel and 20 man-days for 10-key 5-star hotel.

As per HVS Report, in typical India hotels, manpower to room ratio for 4/5 star hotels is 2.11-2.70, for mid-market 1.52 and for budget hotels 0.72. We have assumed 2 for our computation.

¹⁰⁶ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

¹⁰⁷ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

Figure 29-3: Proposed Master Plan - Sri Viruthagiriswarar Temple



30. Sri Rajagopala Swamy Temple, Mannargudi

Site Details

District	Thiruvavur
Name of Site	Sri Rajagopala Swamy Temple
Site No:	Site 91 of 295
Site Use:	Temple
Category:	A (Temple)
Location:	10.6671, 79.4424
Land Area:	3 acres + 23 acres
Peak footfalls:	5,000 per day (Vaikunta Ekadasi, Panguni Bhramoutsavam)
Operator:	HR & CE Dept.
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom. – 8 Lakh (2019 - 2020) For. – 16,000 (2019 - 2020)
Site Revenues:	INR 1 Crore (2019 - 20)
Site Orientation:	Pilgrim
Site Potential:	Medium Tourism Site
HVT Potential:	Moderate HVT potential
Connectivity:	
a. Railway Station:	3.5 km (Mannargudi)
b. Airport:	110 km (Tiruchirapalli)
c. Highway:	0.1 Km from SH-90
Trails featured on:	Nil (Pure Pilgrim Temple)

Sri Rajagopala swamy temple, located in a remote town of Mannargudi, is a Hindu temple belonging to Vaishnav community. The temple, also known as 'Dakshina Dwarka', is of significant religious value. The temple has the largest temple tank in Tamil Nadu which spans for 23 acres. The temple is immensely popular among the people of Tamil Nadu, especially the Krishna devotees. Scope of interventions at the temple includes enhancement of visitor experience and creation of spaces to host social & cultural activities / gatherings.

Existing Condition

Location

Sri Rajagopala Swamy temple is located in the town of Mannargudi, at a distance of 36 km from Kumbakonam, 45 km from Thanjavur, in Tamil Nadu, India. Located in the small town, the temple is surrounded by shops, residential and institutional buildings. Several prominent tourist landmarks nearby Sri Rajagopala Swamy temple are:

- Kailasnathar Kovil - ~2 km.
- Sri Jayamkonda Nathar Temple - ~1.5 km
- Sri Agnieeswarar Temple – ~15 km
- Vaduvur Bird Sanctuary - ~15 km

Existing Layout

The site covers an area of acres with 3 acres temple tank located outside the temple complex.

- The temple has a large gopuram (gateway tower) facing east with a temple tank in the north eastern direction.
- The central shrine is located axial to the gateway and the flag post and approached through a series of pillared halls.
- The temple complex has 16 gopurams (tower gateways), 7 prakarams (outer courtyard), 24 shrines, seven mandapams (halls) and 9 sacred theerthams (temple tanks).

- The temple has two water tanks in its proximity. One temple tank is located on the western side of the main temple entrance and the other tank, called the Haridra Nadhi covering an area of 23 acres is located ~800m north of the temple.
- The temple has an existing toilet block near the main entrance, which is cleaned and maintained well by temple authority.

Existing Uses

- The temple is currently used as a place of worship by the residents and a religious tourist destination by the nearby tourists
- The temple holds festivals, which experiences fairly good footfall, especially during 18 days celebration of Panguni Brahmotsavam.
- The temple is also used as a venue for local school programs, dance competitions, and many other events during the one-month festival. The temple venue is provided free of cost with the provision of the essential facilities required for the event
- Currently, the temple owned 4-acre vacant land near temple is used for parking.

Other Land Available

Apart from the 3-acres temple complex, the temple houses the temple tank, located at a distance of 600m on the northern side covering an area of 7 acres. In addition, the temple owns ~ 23 acres of land around the temple. The rest of the land is spread across the villages and is given on lease.

Master Planning Considerations

Applicable Regulations

1. **Tamil Nadu Combined Development and Building Rules, 2019** – As per Mannargudi Master Plan 2011, site lies in a Residential Zone. The permissible uses include:

Residential Buildings | Parks, play grounds, farms, gardens | Public Utility Buildings | Swimming Pool, Daily or weekly markets | Hotels, Restaurants, Hostels, Dormitories, Boarding and Lodging houses | Retail establishments and shops, Departmental stores, Taxi stands and car parking multi-level parking | Religious buildings.

2. TN HRCE Rules, 1959

- a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions
- b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.
- c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to the religious activities and for the facilitation of Hindu pilgrim tourists.
- d. The HR&CE Dept. owned land can be leased for a period of no more than 3 years.

Key Sensitivities

There is no specific environmental/social sensitivity to be addressed at the site.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

1. Attraction –

- The temple is known as **‘South Dwarka’** holds a high religious value among tourists. Its religious significance attracts a good number of tourists every year.
- **Largest Temple Tank in India** - The temple tank is called Haridra Nadhi, 1,158 ft (353 m) long and 837 ft (255 m) broad (23 acres (9.3 ha)), making it one of the largest temple tanks in India.
- **Annual Panguni Festival** – The annual festival held annually in the month of march – April, attracts local as well as regional tourists.

2. **Accessibility** – Sri Rajagopala Swamy temple is situated in the town of Mannagudi near Kollumangudi Town and is accessible via urban roads.

3. **Amenities** – The temple lacks in adequate facilities in and around the temple.
 - No wayfinding signages and informative signage boards are available for the site. The signage present are in Tamil language.

- No cloak room, waiting area or drinking water facilities are available for pilgrims.
 - There are no commercial or retail activities observed on the inner or outer side of the temple complex.
 - No divyaang friendly infrastructure is present within the temple complex.
 - Lack of clean drinking water – owing to the location's proximity to the sea and lack of infrastructure to clean the water, the residents highlighted an issue of receiving salty drinking water in the temple.
4. **Awareness** – Rajagopala swamy Temple has been one of the important Vaishnava shrines in Thiruvapur, Tamil Nadu. There are several travel bloggers and architecture enthusiasts who have written about the great architectural and other details of the temple. The temple is well known to local and regional tourists.
5. **Activities** – On normal days, the temple does not offer any activities. However, there is an 18-day Panguni Brahmotsavam Festival celebrated annually at the temple. The temple is quite famous for the celebration of this festival with pomp and glory.

The temple is also used as a venue for local school programs, dance competitions, and many other events during the one-month festival. The temple venue is provided free of cost with the provision of the essential facilities required for the event

6. **Accommodation** – There are very few accommodation options available for tourists in the nearby vicinity of 2 km. the radius of the temple ranging from budget lodges to 2 – star hotels. Some of the decent stay options are available at Thiruvapur at a distance of 25 Km. from the temple.
7. **Association with Community** - The festivals of the temple enjoy immense participation among the locals. The locals also engage in activities in gosla, within the temple site. There are also many hawkers and vendors that dot the site with carts and stalls – selling local goods, handicrafts and food items increasing congestion.

Figure 30-1: Location and Existing Layout



Site Pictures





The Temple Rajagopuram



Paintings at the Temple



Inner Spaces at the Temple



Information Board at the Temple



Signages at the Temple



Vegetation at the Temple



Boundary of the Temple



Facilities at the Temple



Facilities at the Temple



Lighting at the Temple



Steps at the Temple



Pillars and Corridors at the Temple



Pillars at the Temple



Courtyard Spaces at the Temple



Access Road to the Temple



Pond / Tank near the Temple



Facilities at the Temple

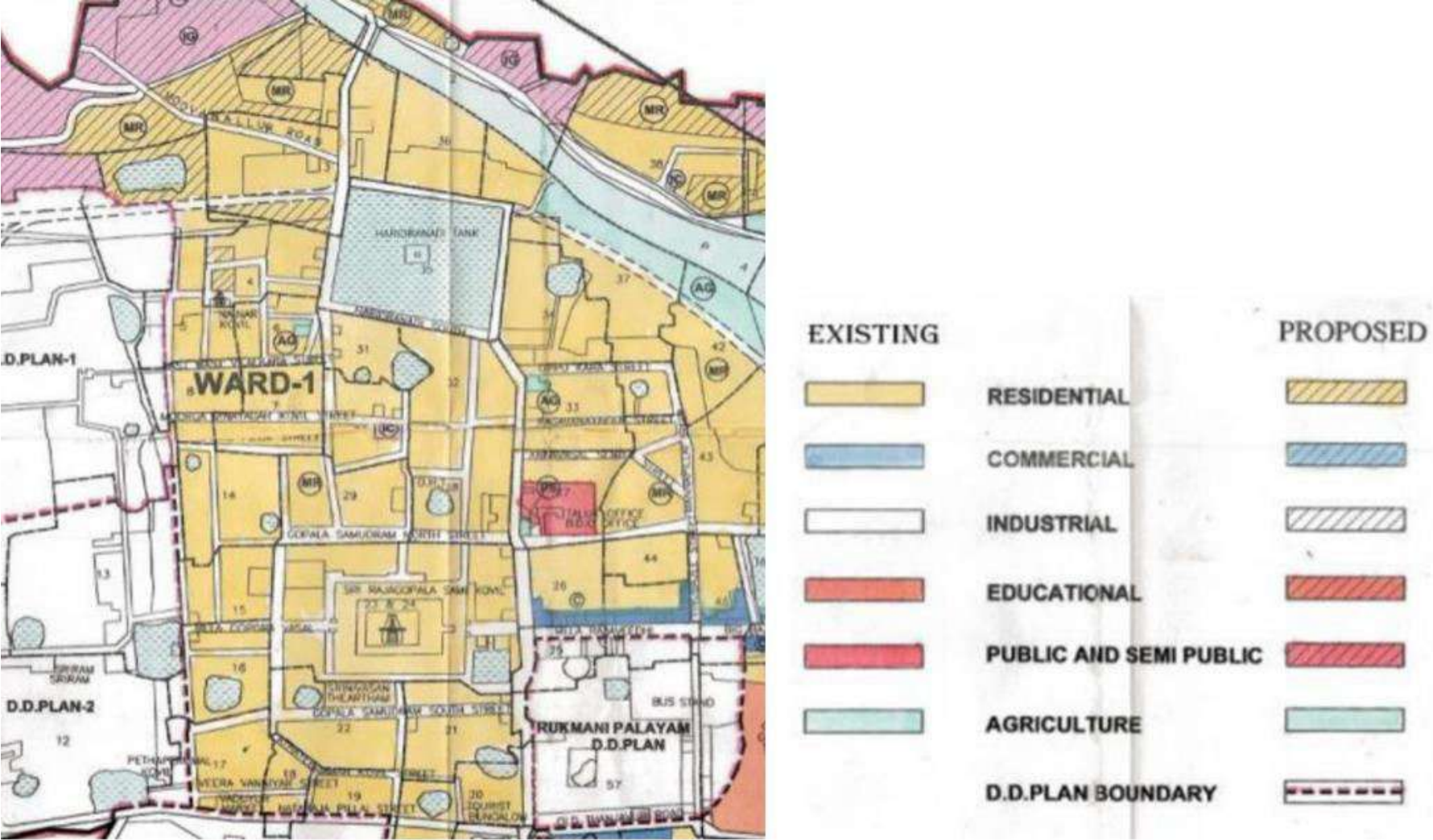


Haridra Nandhi



Mandapam at the Temple

Figure 30-2: Land Uses Regulation Zone at the Site



Vision for the Site

Sri Rajagopala Swamy Temple, also known as “Dakshina Dwarka”, holds a high religious value. **The temple is immensely popular among the people of Tamil Nadu, especially the Krishna devotees.**

- The site is envisioned as an inviting religious pilgrim destination, which hosts social and cultural activities in and around its complex.
- Further, the intent is to enhance the visitor experience by upgrading the already existing amenities within the temple complex
- **Target Visitor** – The site is largely a pilgrim site, with significant footfall from neighbouring areas as well as from rest of Tamil Nadu, Andhra Pradesh and Karnataka due to its rich religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.

Further, pilgrim groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang and elderly).

- **Tourist Projections** – The site is categorized as a **Medium Tourism Site** with **Moderate HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC’s compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	784	2,013	4,509
High Value Tourists (HVT) (Both domestic and foreign)	32	104	232
Maximum Carrying Capacity	11,817		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality

of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Master Plan Concept

The objectives of master planning at this site include:

- **Improving visitors’ experience** – through revamping and redevelopment of existing resources, amenities, and creation of interactive spaces.
- Creating **facilities to handle peak load** of pilgrims during festivals.
- Creating informal spaces for **gathering and hosting cultural events** around the site.
- Creating a **welcoming/ inviting environment** around the site for the visitors.

Hard Interventions

1. Tourist Facilitation Centre (Type 1) – A small facility centre with an inquiry desk, luggage room, changing room, and rest/waiting area can be developed for tourist convenience and ease at the site. It can be placed at the entrance of the temple. This development will be as per the design guidelines mentioned in Glossary of Interventions.

Infrastructure Created: ~150 sqm of building.

2. Temple Tank Rejuvenation: The temple complex houses a water tank, with an area of ~1 acre. As an added attraction, the water tank can be developed into a landscaped garden, with additional elements of pathways, lighting fixtures along the tank. Traditionally, the tanks were used to recharge the aquifer and maintain the ecological cycle. The temple tank would be replenished through rainwater harvesting measures and revived for same purposes. Alternatively, it could also function as a Community congregation space, and host cultural events

Infrastructure Created: ~1040 sqm of soft landscaped areas

3. Pilgrim Souvenir and F&B shops – As the temple lacks souvenir retail shops, therefore, along the side of temple tank near entrance, an array of shops with food and beverages and souvenirs are proposed. This will enhance the tourist experience and improve the area with a vibrant interactive cultural value.

Infrastructure Created: Souvenir shops and F&B Shops – 10 units

4. Changing Rooms: The tourists are allowed to enter the temple premises only in traditional clothes. Therefore, changing rooms are provided near the existing toilet block, to help tourists change as required.

Infrastructure Created: ~250 sqm of building.

5. Rest Area: Shading Device Type 2: The temple site is in close proximity (approx. 800m) from Haridra Nandhi, that is largest water tank in Tamil Nadu. The tourist visiting the temple, also pay visit to the water tank. A shaded rest area made with local materials, created midway to these sites, would provide resting space for tourists walking from temple to water tank.



Soft Interventions

- 1. Restoration and maintenance of the temple building** – The temple complex and the structure are observed to be deteriorating. Leaving the situation untouched, affects the aesthetics of the place and more importantly, might weaken the structure. A proper maintenance plan for the temple in consultation with the conservation architects and specialists can be developed to improve the visitor experience.
- 2. Ticketed Parking on vacant land** – The temple site currently provides vacant land for parking of vehicles visiting the site. Ticketing the parking with minimal charges would regulate the parking as well as provide an additional source of revenue to the temple authorities.
- 3. Site Promotion** - Increasing temple visibility with strategies like integration with TN Assist App, etc. The temple authorities can organize recurring events,

associated festivals, etc. which can help publicize, increase awareness by integrating it as part of the pilgrim trail of Kumbakonam.

Amenities Plan

- 1. Signage (Package 2)** – Package 2 signage is proposed to feature in Tamil, English, and Hindi. Both directional signage and informational signage should be used, as per the design guidelines mentioned in Glossary of Interventions.
- 2. Technology Interventions (Package 1):** A basic package of technology integration could be installed at the temple site.
 - Electronic Visitor Counter at entry point
 - TN Assist App integration at site, with internet connection and QR scanner
 - CCTV coverage at up to 3 locations
- 3. Drinking-Water Station** – Sufficient number of drinking water stations must be provided at the tourist facilitation centre and across the site, a module of which can be as per the design guidelines mentioned in Glossary of Interventions.

Trunk Infrastructure

As the Site has excellent connectivity, no trunk infrastructure interventions are required.

Project Identified

#	Project Component	Scale
1	Tourist Facilitation Centre (Type 1)	150 sqm
2	Changing Rooms	250 sqm
3	Temple tank rejuvenation <ul style="list-style-type: none"> • Steps • Cleaning of temple tank • Soft landscape 	8000 sqm 330 m (each) 8000 sqm 1040 sqm
4	Pilgrim Souvenir and F&B shops	30 sqm
5	Technology Intervention (Package 1)	1
6	Signage (Package 2)	1
7	Drinking Water Station	3
8	Rest Area, Shading Device 2	2

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in Glossary of Interventions.

#	Project Component	Cost (INR Lakhs)
1	Tourist Facilitation Centre (Type 1)	15
2	Changing Rooms	6
3	Temple Tank Rejuvenation	13
4	Steps (Length)	10
5	Soft Landscape	1
6	Pilgrim Souvenir and F&B Shops	12
Total		INR 60 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.
- Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- All revenues are unescalated.
- Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

The following revenue sources are expected for the site:

- Kiosks** – Captures 8 kiosks to be rented out at INR 1.5 Lakhs per annum.

As discussed in note above, the following existing revenues, if any, are not considered:

- Prasadam sale
- Puja tickets
- VIP tickets
- Mass meals
- Donations and Sponsorships
- Sale of maps, guidebooks etc. (assumed to be at cost value)

Considering the above, total additional un-escalated revenues from the site in Y5 is estimated as INR 15 Lakhs.

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.
- The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.
- The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- The costs are un-escalated.

The following OPEX is expected for the site:

- Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
- Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
- Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.

4. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.
5. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.
6. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175* per kilolitre.
7. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee, if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as INR 10 Lakhs.

Feasibility Assessment and Implementation Plan

Given that the estimated additional revenues from the proposed interventions exceeds the operational expenses incurred, it can be concluded that the

¹⁰⁸ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.

interventions proposed at the site are **Operationally Self-Sustainable** and therefore beneficial.

The interventions proposed at the site are largely for improving amenities and experience of visitors and hence have an associated “**social cause**”. Also, since leasing of spaces beyond 3 years is not allowed by HR&CE, PPP is not an option for development and implementation. Hence, the recommended interventions will have to be implemented and funded by HR&CE itself.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Tourist Facilitation Centre	15	Y0 – Y2	HR&CE
2	Changing Rooms	6	Y0 – Y2	HR&CE
3	Temple Tank Rejuvenation	13	Y0 – Y2	HR&CE
4	Steps (Length)	10	Y0 – Y2	HR&CE
5	Soft Landscape	1	Y0 – Y2	HR&CE
6	Souvenir/ F&B Shops	12	Y0 – Y2	HR&CE
Total		INR 60 L		

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 2,600¹⁰⁸ man-days of construction labour (*spread across 1-2 years of implementation*)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 2 man-days¹⁰⁹

- As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
- Assumed cost of labour assumed for computation = INR 700 per day
- Cumulative labour man-days = 30% * CAPEX / 700

¹⁰⁹ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – As discussed above
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 6,400 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site

Both, increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 535 Cr. at the site¹¹⁰. As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

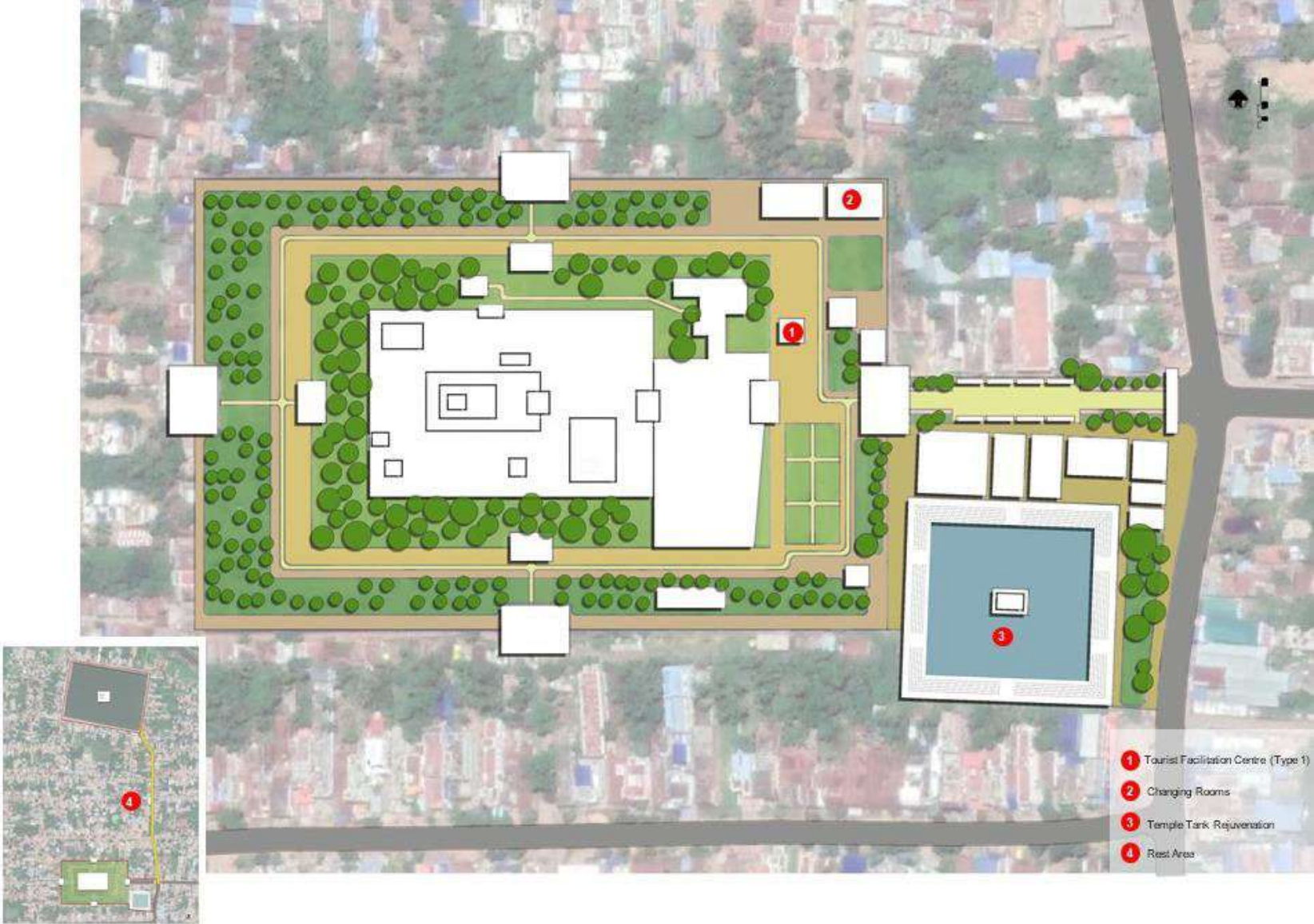
Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area. These mainly include the Kumbakonam metal workers.

¹¹⁰ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

Figure 30-3: Proposed Master Plan, Sri Rajagopala Swamy Temple, Mannargudi



31. Thiyagarajar Temple, Thiruvaiyaru

Site Details

District	Thanjavur
Name of Site	Thiyagarajar Temple
Site No:	Site 115 of 295
Site Use:	Temple
Category:	A (Temple)
Location:	10.8797, 79.1096
Land Area:	3.5 acres
Peak footfalls:	20,000 per day (for seven days of festival in January)
Operator:	Sri Thyagabrahma Mahotsav Sabha
Site Ownership:	Sri Thyagabrahma Mahotsav Sabha
Tourist Footfall:	Dom. – 1.8 lakhs (2019 - 20) For. – 20,000 (2019 – 20)
Site Revenues:	Nil
Site Orientation	Pilgrim
Site Potential:	Low tourism site
HVT Potential:	Low HVT Potential
Connectivity:	
a. Railway station:	~19 km (Thanjavur)
b. Airport:	~60 km (Tiruchirappalli)
c. Highway:	~250 m from SH-22, ~500m from NH-136
Trails featured on:	Nil (Pure Pilgrim Temple)

Located on the banks of river Kaveri, the temple is a memorial for Thiyagarajar, one of the greatest music composers of South India and father of modern Karnataka music. Hundreds of Carnatic musicians, domestic and foreign visitors assemble at this place to offer Pancharatna Keerthanas every year. The temple holds immense potential owing to its serene surroundings and pleasant backdrop. Thus, the scope of interventions at the site includes development of visitor facilities, meditation areas and dedicated spaces to hold events, that double up as open spaces for rejuvenation on non-event days.

Existing Condition

Location

The samadhi is located in Thiruvaiyaru, a panchayat town in Thanjavur district of Tamil Nadu. It is situated on the banks of the river Kaveri and 13 km distance from Thanjavur. The temple can easily be accessed via Thiruvaiyaru- Kumbakonam main road (SH-22). Small shrines located nearby are - Ramaswamy Koil, Thiruvaiyaru Shiva Temple, Sri Ragavendra Temple, Brahmasira Kandeewarar Kovil, Pushpavana Nathar Temple and Neyyadiyappar Temple.

Existing Layout and Uses

The samadhi is enclosed within a wall covering an area of 3.5 acres. The main entrance is located on the western side. The saint's idol is installed in a small memorial where he attained Jeeva Sannadhi. Apart from this, there are other various idols located within the premise, related to the religious background of this site, such as Lord Rama idol, a statue of Smt. Nagarathinammal who founded the Thyagaraja worship tradition, small shrines of Lord Vinayaka and Sri Anjaneya who performed penance here, Sage Valmiki's idol is installed with Lava and Kusha (sons of Lord Sri Rama) listening to their guru.

There is a Bodhi tree under which the saint did his singing penance. A huge complex (mandapam) is constructed overlooking the river to accommodate the large audience that attends the concert in ever-increasing numbers every year.

There are two performance stages outside the temple where devotees sit and offer their prayers to Saint Thyagaraja, singing his compositions during the Aradhana festival. It is one of the famous Indian classical music festivals, which is attended by people all across the world.

Some of the festivals conducted at the site are Pancharatna Keerthana, Shivratri and Ram Navami.

Other Land Available

In addition to the temple complex of 3.5 acres, the temple does not own any other land.

Masterplanning Considerations

Applicable Regulations

1. Tamil Nadu Combined Development and Building Rules, 2019: The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land.

The site is located within 15 meters of the Kaveri River, so future development will require permission from an executive authority to prevent any contamination or any risk of the drainage of building passing into the river.

Key Sensitivities

The site is located adjacent to a graveyard, operated by the panchayat, who are not willing to negotiate on its removal as the complex houses only a samadhi and no temple.

Key Issues to Address

The key issues at the site identified at the baseline stage are summarised below along the 7A Framework:

1. Attraction- The Brindavan temple is the Jeeva Samadhi of saint Thiyagaraja, a great music composer of South India and father of modern Karnataka music. Every year on his death anniversary, an Aradhana festival is conducted by the Sri Thyagabrahma Mahotsav Sabha and is held in the precincts of the samadhi (memorial) of the saint. Hundreds of Carnatic musicians preside over and perform at the festival.

The Samadhi is located on the banks of the river Kaveri, thus providing a pleasant atmosphere and picturesque views.

2. Accessibility & Mobility – The Thiyagarajar Temple can be easily accessed from Thiruvaiyaru- Kumbakonam main road (SH-22). The major modes of transport people use to commute to the site include public bus, auto/taxis and private transport.

Buses ply at regular intervals in a day between Kumbakonam/Tiruchirappalli and Thiruvaiyaru. Thiruvaiyaru bus stand (~0.8 km) is located close to the site and the facility of auto/taxi stand is present at the site. The access road to the samadhi is paved/tarred with designated footpaths.

Parking – There are 1.5 acres of open land, dedicated for free of cost parking.

3. Amenities – This site scores high on cleanliness. Though common toilet blocks and security measures are present inside the temple, it lacks the following facilities –

- Tourist information centre is not available.
- Dustbins and street-lights are not installed in adequate number
- Signages & wayfinding's are not available for this site.
- 4 M/F common toilet block available within site, but not sufficient.
- Free drinking water facility is not available.
- Divyang-friendly measures are not present inside the site.
- Site boundaries are walled but not at the desired height.

4. Awareness – Thiyagarajar temple is a prominent landmark due to the Pancharatna Keerthana festival celebrated every year. The 7-day festival receives a tourist footfall of 1-2 lakhs attendees. It is majorly visited by people residing in various states (Karnataka, Tamil Nadu, Andhra Pradesh etc.) of South India. Whereas, a large number of visitors are also from foreign countries, all across the world. It finds mention in renowned travel referral / review aggregators such as Lonely Planet, TripAdvisor etc.

5. Activities – On normal days, the temple does not offer any activity. Thiyagaraja Aradhana is an annual aradhana of Telugu saint composer Thiyagaraja. The aradhana is conducted on Pushya Bahula Panchami day in January every year

when the saint attained samadhi. The musicians render the saint's Pancharatna Kriti's. Many of the leading exponents of Carnatic music gather here to perform and are watched by thousands of ardent fans of classical music. Temporary structures with food outlets and sheds are developed during the festive time.

The festival is also celebrated all over the world with hundreds of Carnatic musicians at different times. In the United States, the Cleveland Thyagaraja Festival is held in Cleveland, Ohio every year around Easter. Thiyagaraja Aradhana Festival London, UK also performs Thiyagaraja Kriti's all over London. It is also being celebrated by different organizations in Mauritius and Nigeria.

- 6. Accommodation** – There is a lodging facility available within the temple complex with 10 large rooms, each with a capacity of 4 people. This facility is only used by the administrative staff. For the visitors, there are few low-budget accommodation facilities available nearby, like dormitories and guesthouses with a tariff range of INR 500-1000. A wider range of options and 3- star hotels are also available in Thanjavur.
- 7. Association with Community** – There are no common or regular associations of the local communities with the temple/ samadhi.

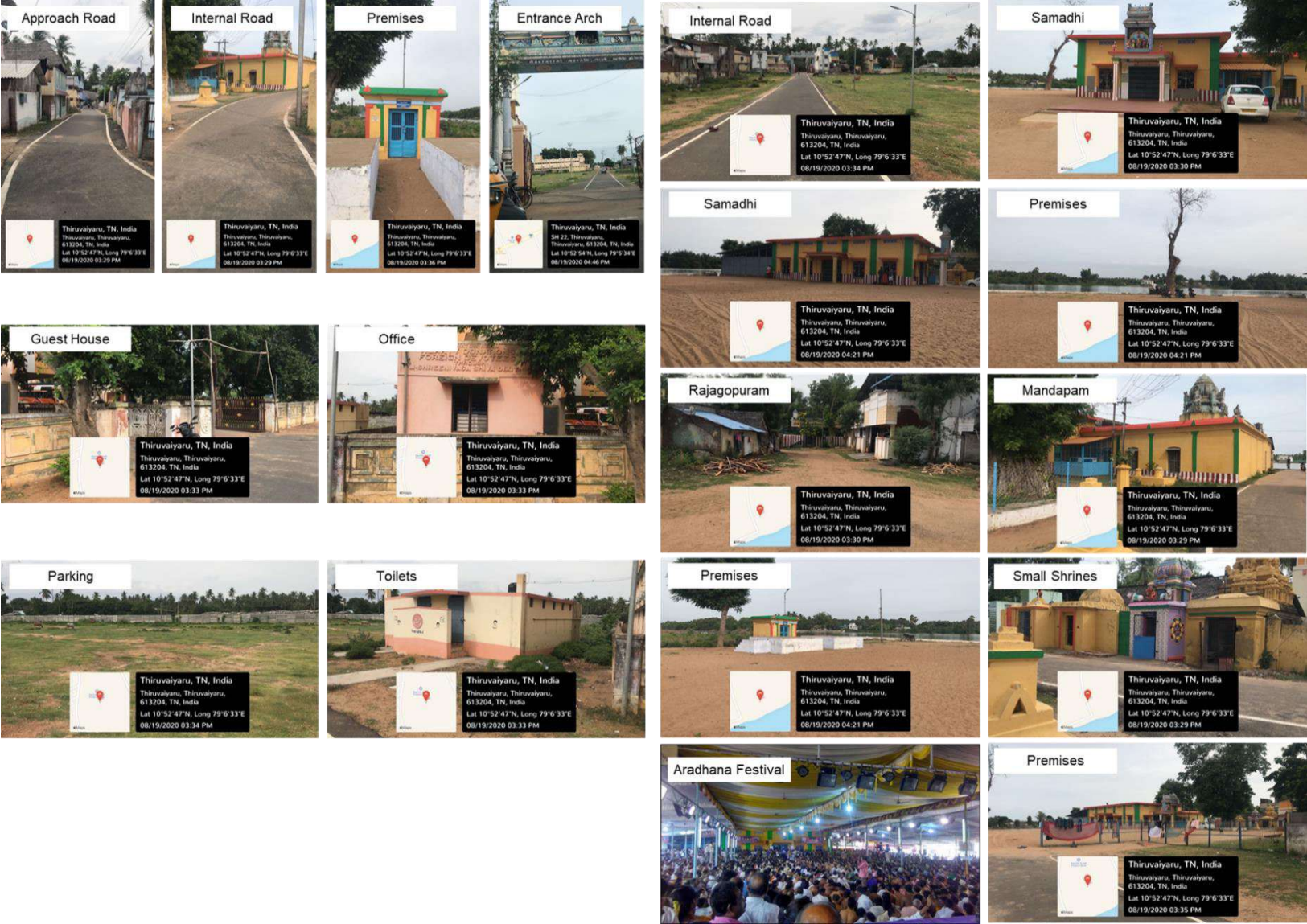
Figure 31-1: Location & Existing Layout, Thiyagarajar Temple



- Legend**
- 1 – Sannadhi Shrine
 - 2 – Shamiana (Asbestos)
 - 3 – Mandapam
 - 4 – Office
 - 5 – Guest Rooms
 - 6 – Existing Toilet
 - 7 – Proposed Toilet
 - 8 – Parking

Site Pictures





Vision for the Site

The samadhi enjoys immense popularity among South Indians because Thiyagaraja was one of the greatest music composers of South India and one of the musical prodigies of all time. The site attracts a large number of tourists during Pancharatna Keerthanas for 7 days in January. It has easy accessibility from Kumbakonam city with a well-developed parking space.

Although the temple is well-maintained, it is lacking with few basic amenities such as signages, dustbins etc. The temple gets over-crowded during festival times. Thiyagarajar Temple has the potential to be developed into an event organising center by providing space for musical and cultural events. Utilizing the picturesque view and improving the landscape will enhance the visitor’s experience.

The vision for the site is to develop it as a tourist destination by improving existing infrastructure and basic amenities and effectively utilizing the available vacant parcels of land within the site.

- **Target Visitor** – The site is largely a domestic tourist site, with significant footfall from Karnataka, Tamil Nadu, Andhra Pradesh and other south Indian states and also, a few visitors from foreign countries all across the world due to its rich cultural significance.

Having said that, given the location of the site and its rich historical value, there is a significant potential to increase the tourist footfalls by improving the quality of experience and amenities at the site.

Further, tourists’ groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang and elderly).

- **Tourist Projections** – The site is categorized as a **low tourism site with low HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC’s compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	160	516	1,337
High Value Tourists (HVT) (Both domestic and foreign)	40	172	446
Maximum Carrying Capacity	13,786		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Approach to Masterplanning

The objectives of master planning at this site include:

- Depicting the life **story of Thiyagarajar** through open exhibit installation.
- Multi utilization of 1.5 acres open land for **parking cum event organizing** area.
- Promotion of **Pancharatna Keerthana festival** to attract more crowd and facilitation of **crowd control measures** during various events.

Hard Interventions

1. **Parking cum event area-** The open land on the northern area, which is currently being used for parking could be developed into a parking cum event space with a stage, for organising music concerts, dance recitals etc. This space can also be rented out to private operators and locals to conduct various ceremonies and events during non-festive seasons. The location of the stage is indicative.

Infrastructure Created:

- *Softscape- 3500 sqm*
- *Construction of stage- 120 sqm*

2. **Meditation hall-** The area on the riverbank should be used to its advantage to create a peaceful retreat space. A semi-open meditation hall will be proposed, providing a serene view of the proposed landscape and the Kaveri river, located on the south-east side of the complex. The roof can be constructed using local materials. *Infrastructure created: 150 sqm*

3. Open-air exhibition area- An open-air exhibit area can be developed near the proposed mediation hall to depict the life story of Thiyagarajar and showcasing the rich cultural and religious history of the Samadhi.

Infrastructure created: 100 sqm

4. Garden area – As an added attraction, the area on the southern corner near the river bank can be developed into a garden area with additional elements of pathways, lighting fixtures, and other garden accessories.

Infrastructure created: 150sqm

5. Extension of compound wall height– The temple is located adjacent to a graveyard, maintained by the panchayat. The panchayat is unwilling to remove the graveyard for a Samadhi. Therefore, the height of the compound wall should be increased to a substantial level on the eastern side obstructing the view and presence of the graveyard for the tourists.

Infrastructure created: 45mX2.5m (LXH)

6. Provision of an additional entrance gate - An additional gate should be constructed along the western boundary wall on the Thiyagaraja Samadhi road for vehicular entrance to the parking area. The existing entrance gate can prioritize pedestrian footfall.

Infrastructure created: 1 gate

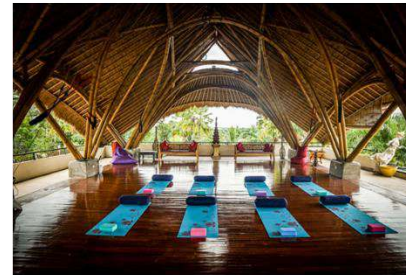
Soft Interventions

- 1. Events –** The open space and event area proposed at the site could be used for organizing local and cultural events and festivals, which will make the place more alive and vibrant throughout the year.
- 2. Site Promotion -** Increasing the smadhi/temple visibility with strategies like integration with TN Assist App, etc. Sri Thygabrahma Mahotsav Sabha can organize recurring events, associated festivals, etc. which can help publicize, increase awareness by integrating it as part of the tourist trail of Thanjavur and Kumbakonam.
- 3. Crowd Management –** The temple gets over-crowded during festival times, therefore measures will be undertaken as:
 - Ramps or special access for wheelchairs.

- Limit the number of people within the temple complex at any time.
- Deploy ushers to ensure people move through the premise at a minimum pace.
- Tents outside and inside the temple complex could act as temporary holding areas for devotees, to prevent overcrowding inside, only during festivals.
- Access timings can be made exclusive for high-value tourists



Reference images for parking cum event area



Reference images for meditation hall



Reference images for open air exhibition area

Amenities Plan

1. **Technology intervention (Package 1)** – The development should offer few technological conveniences and should be equipped with technological tools for optimal management. Therefore Technology Package 1 is proposed for this site. These shall include:
 - Electronic Visitor Counter at the entry point.
 - TN Assist App integration at the site, with an internet connection and QR scanner.
 - There is no requirement for additional CCTV coverage as 6 CCTVs are installed in the office building and entry/exit points.

2. **Signage (Package 1)** – Few direction boards can be installed indicating the directions for the site. Signage Package 1 is proposed to feature for this site. Both directional signage and informational signage should be used, as per the design guidelines mentioned in Glossary of Interventions.

3. **Divyang Toilet** – The samadhi complex is already well equipped with toilet facilities but lacks divyang or aged-friendly toilet block. Therefore, one divyang friendly toilet block is proposed next to the already proposed toilet block by the samadhi authority.

4. **Dustbins** – Dustbins must be provided in sufficient quantity. This is important to maintain the site and keep the surroundings clean. These dustbins are to be developed as per the design guidelines mentioned in Glossary of Interventions. *Infrastructure Created: 10 units around the entire samadhi premise.*

5. **River-side landscaping**–Strategic river-side landscaping is required along the bank of the Kaveri river, to enhance the attraction of the site. This green patch will also reduce soil erosion in the flood-plain area. *Infrastructure Created: 250 sqm*

6. **Drinking Water Station**- Availability of free drinking water is one of the issues at this site. Hence, 1 drinking water station with RO water coolers should be installed near the toilet block.

7. **Lighting**- Yard lighting could be provided at the parking cum event area and few street lights should be provided from the proposed toilet blocks towards the landscaping area.

Infrastructure Created: Yard lighting- 1, Street lighting- 5

Trunk Infrastructure

As the site has excellent connectivity, no trunk infrastructure interventions are required.

Projects Identified

#	Project Component	Scale
1	Parking cum event area <ul style="list-style-type: none"> • Softscape • Construction of stage • Yard Light 	3500 Sqm 120 Sqm 1
2	Meditation hall (Semi Open)	150 sqm
3	Open-air exhibition area	100 sqm
4	Garden area	150 sqm
5	Extension of compound wall height	45mX2.5m (LXH)
6	Vehicular entrance gate	1
7	Technology intervention (Package 1) (No CCTV)	1
8	Signage (Package 1)	1
9	Divyang Toilet	1
10	Dustbins	10
11	River-side landscaping	250 sqm
12	Drinking Water Station	1
13	Street lighting	5

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in Glossary of Interventions.

#	Project Component	Cost (INR Lakhs)
1	Event area - Landscaping	3
2	Event area - Stage	2
3	Event area - Lighting	35
4	Meditation hall (Semi Open)	30
5	Open-air exhibition area	2
6	Garden area	1
7	Extension of compound wall height	2
8	Vehicular entrance gate	1
9	Divyang Toilet	4
10	River-side landscaping	1
11	Street-lighting	1
12	Dustbin	1
13	Drinking Water Station	3
14	Signage Package 1	1
15	Technology Interventions	1
Total		INR 85 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

a) Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the

revenues considered here are in addition to all the existing revenue currently accrued by the site.

- Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- All revenues are unescalated.
- Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

The following revenue sources are expected for the site:

- Entry Ticket** – INR 10 per ticket for the open-air exhibit
- Built-up area rent** – Captures renting out of 150 sqm built-up space at INR 172 per sqm per annum.
- Space on Hire** – Capturing 52 events a year at ~INR 1 Lakh per event.

As discussed in note above, the following existing revenues, if any, are not considered:

- Prasadam sale
- Puja tickets
- VIP tickets
- Mass meals
- Donations and Sponsorships
- Sale of maps, guidebooks etc. (assumed to be at cost value)

Considering the above, total additional un-escalated revenues from the site in Y5 is estimated as INR 65 Lakhs.

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.
- The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.
- The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).

d) *The costs are un-escalated.*

The following OPEX is expected for the site:

1. **Manpower Costs** – Additional manpower will be required at the site to manage the proposed interventions.
 - a. A **Help-desk staff** at the open-air exhibit area.
 - b. A **security personnel** for the event space.
 - c. An **Administration staff** to overlook the operations of the event space.
2. **Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
3. **Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 *percentage* of the total capital expenditure incurred.
6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.
7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.

The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175* per kilolitre.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee, if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as *INR 45 Lakhs*.

Feasibility Assessment and Implementation Plan

Given that the estimated additional revenue from the proposed interventions exceeds the operational expenses incurred, it can be concluded that the interventions proposed at the site are **Operationally Self-Sustainable** and therefore beneficial.

The interventions proposed at the site are largely for improving amenities and experience of visitors and hence have an associated “social cause”. Given the strict conservative protocols followed by the temple trust - Sri Thyagabrahma Mahotsav Sabha, PPP is not an option for development and implementation. Hence, the recommended interventions will have to be implemented and funded by the temple trust itself.

However, it is recommended to give out operations and management of the *event space* at the site to private operators for better efficiency and long-term sustainability.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Event area - Landscaping	3	Y0 – Y2	Temple Trust
2	Event area - Stage	2	Y0 – Y2	Temple Trust
3	Event area - Lighting	35	Y0 – Y2	Temple Trust
4	Meditation hall (Semi Open)	30	Y0 – Y2	Temple Trust
5	Open-air exhibition area	2	Y0 – Y2	Temple Trust

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
6	Garden area	1	Y0 – Y2	Temple Trust
7	Extension of compound wall	2	Y0 – Y2	Temple Trust
8	Vehicular entrance gate	1	Y0 – Y2	Temple Trust
9	Divyang Toilet	4	Y0 – Y2	Temple Trust
10	River-side landscaping	1	Y0 – Y2	Temple Trust
11	Street-lighting	1	Y0 – Y2	Temple Trust
12	Dustbin	1	Y0 – Y2	Temple Trust
13	Drinking Water Station	3	Y0 – Y2	Temple Trust
14	Signage Package 1	1	Y0 – Y2	Temple Trust
15	Technology Interventions	1	Y0 – Y2	Temple Trust
Total		INR 85 L		

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 3,650¹¹¹ man-days of construction labour (spread across 1-2 years of implementation)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 2 man-days¹¹²

Employment is typically generated at 3 levels:

¹¹¹ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day

- Direct employment in the tourism at site – *As discussed above*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 9,100 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both, increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 180 Cr. at the site¹¹³.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

○ Assumed cost of labour assumed for computation = INR 700 per day
 • Cumulative labour man-days = 30% * CAPEX / 700

¹¹² Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

¹¹³ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and suppliers will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area. These mainly include the Thanjavur Gold Painting Artisans.

Figure 31-2: Proposed Master Plan- Thiyagarajar Temple



32. Mahalingeswarar Temple, Thiruvidadimarudur

Site Details

District	Thanjavur
Name of Site	Mahalingeswarar Temple
Site No:	Site 116 of 295
Site Use:	Temple
Category:	A (Temple)
Location:	10.9947, 79.4516
Land Area:	10.5 acres + 2.5 acres additional land
Peak footfalls:	500 per day (January- February)
Operator:	Sivaprakasa Desika Paramacharya Svamigal Thiruvavaduthurai Aadheenam
Site Ownership:	Sivaprakasa Desika Paramacharya Svamigal Thiruvavaduthurai Aadheenam
Tourist Footfall:	Dom. – NA For. – NA
Site Revenues:	Nil
Site Orientation	Pilgrim
Site Potential:	Low tourism site
HVT Potential:	Low HVT Potential
Connectivity:	
a. Railway station:	~10 km (Kumbakonam)
b. Airport:	~100 km (Tiruchirappalli)
c. Highway:	~500 m from SH-22, ~9km from NH-36

Trails featured on: **Nil (Pure Pilgrim Temple)**

One of the seven major Shiva temples, Mahalingeswarar Temple (also known as Thiruvidadimarudur Temple) houses the biggest temple car in Tamil Nadu. Enshrined by the God Shiva, it is a highly revered temple by the Hindu sect of Shaivism. The temple is majorly visited by devotees from the southern states of India. Temple holds immense potential to increase its tourist footfall with interventions like showcasing temple car with renovated glass roof cover, renovation work within the temple complex and provision of public amenities.

Existing Condition

Location

Mahalingeswarar temple is located near Thiruvidadimarudur, a village in the outskirts of Kumbakonam town (~10 km away) in Thanjavur district. The temple is easily accessible via Kumbakonam - Sirkazhi Highway (SH-22) and well connected with autos/taxis and bus services from Kumbakonam. There are several other temples located nearby namely, Sarabeshwarar Temple, Thirunageswaram Naganatha Swamy Temple, Uppiliappan Temple, Gowthameaswerer Temple.

Existing Layout and Uses

The temple covers an area of 10.5 acres and is rectangular in plan with east–west orientation. It has four entrances in each of the four cardinal directions. The main entrance is located on the northern side with the five-tiered Rajagopuram. There are three prakarams leading from the gateway, the middle prakaram is adorned by beautiful artworks.

Enshrined by the Mahalingam, the temple also houses five temple tanks namely, Karunyamirdha Theertham, Soma Theertham, Kanaga Theertham, Kalyana Theertham and Iravatha Theertham. There are two separate consort shrines in this temple- Parvathi in the form of Bruhatsundara Kujambigai (Perunalamulayaal/Nanmulainayaki) and Mookambiga. 27 other water bodies are also associated with the temple around the village.

The temple car is located outside the main temple complex in the northeastern direction. It is the biggest chariot in Tamil Nadu with twelve pillars denoting twelve lagnas. The temple is surrounded by bazaar area and residential development on all sides.

The site is currently used for religious purposes mainly. Some of the festivals conducted at the site are Thaipooam, Brahmotsavam, Vasanthotsavam, Aaadipooram, Karthigai, Tamil and English new year, Deepavali & Pongal.

Other Land Available

In addition to the temple complex of 3.5 acres, the temple also owns 2.5 acres Kaarunyamirtham Theertham (temple tank) located on the eastern side. The temple tank is only opened for performing rituals by the priest.

Masterplanning Considerations

Applicable Regulations

1. Tamil Nadu Combined Development and Building Rules, 2019

The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land.

Key Sensitivities

The temple site does not have any pressing issues of sensitivity in and around the complex which needs to be addressed while preparing the master plan.

Key Issues to Address

The key issues at the site identified at the baseline stage are summarised below along the 7A framework:

1. **Attraction** – The temple is referred to as **Panchalinga Kshetram** due to the presence of five lingams, four in the cardinal directions and the fifth one at the centre. Though it is not one of the Pancha Bootha Sthalams or 12 Jyotirlingams, the presiding deity is represented by his lingam and the venerated idol is known as Jothimayalingam.

The temple car, being the biggest temple chariot in Tamil Nadu is a major attraction. Currently, it is covered with temporary metal asbestos sheets and not visible to visitors on normal days.

2. **Accessibility & Mobility** – The Mahalingeswarar Temple can be accessed via SH-22 (Kumbakonam- Mayiladuthurai road). The major modes of transport people use to commute to the site includes public bus, auto/taxis and private transport. Buses ply regularly in a day from Kumbakonam directly to the temple. Visitors majorly use private/ rental vehicles. Auto/Taxi stand and bus stop are available within 500m of the site.

Ramps and wheelchairs are available within the site, making it a barrier-free development. The temple has free Access with paid priority (INR 50) and special queues for abhishekam (INR 650, ~200 members per day).

Parking – On-street parking is available on the approach road to the eastern entrance. The parking capacity is for ~30 ECS on both sides of the road. It is a paid parking facility with charges of Car/Van (INR 25), Bus (INR 50), collected by the panchayat.

3. **Amenities** – This temple is a popular tourist destination with a developed ecosystem of infrastructure earmarked for public amenities. The temple has a well-developed infrastructure dedicated to public services.

- It has mandapam, chariot halls, pragharam and a stage for conducting various events.
- The administration office is located opposite the main entrance along with a ticket counter, footwear stand and proposed waiting area.
- The temple premise is adequately clean and dustbins are provided.
- The site boundaries are walled with 2 security guards are deployed at the site per shift (2 shifts). 52 CCTVs are installed at all tourist-gathering spaces and entry/exit points.
- The guest house is located inside the temple complex but the paid toilet facility is outside the complex.
- Illustrative boards imparting the temple's historic background and glory are placed in some areas.
- Fire safety equipment like extinguishers and fire hoses are installed. Emergency exit routes are marked.

It lacks the following facilities –

- Tourist information centre is not available.
- Signages and wayfinding are not available for the temple.
- Free drinking water facility is available in the office area, but it is not sufficient.

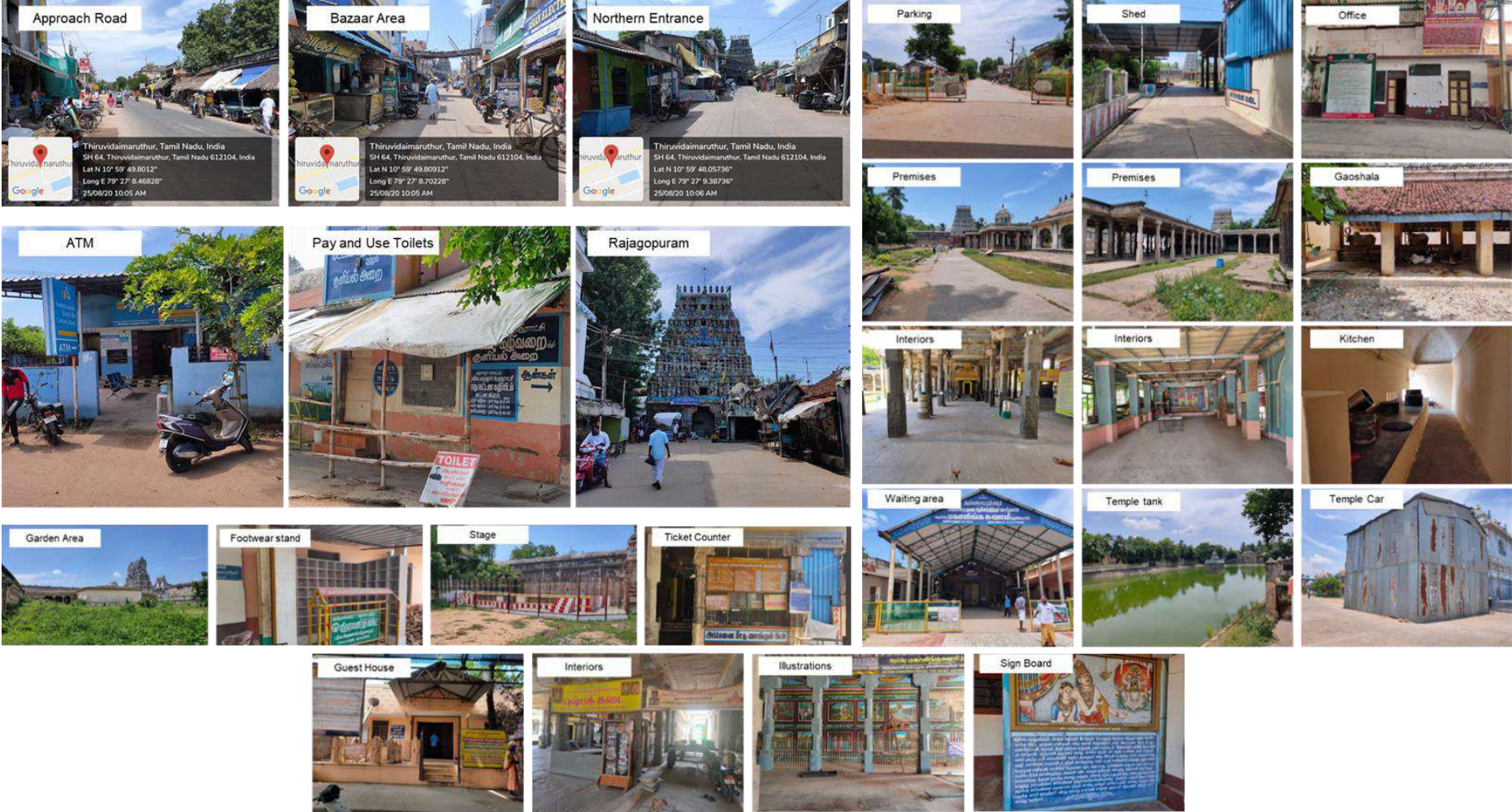
- Sufficient streetlights installed around the site, but a handful in working condition. Electrical wiring inside the temple complex in bad condition.
 - There are no retail shops and food outlets. One prasada stall operated by the temple on the site.
4. **Awareness** – Mahalingeswarar Temple is one of the prominent temples near Kumbakonam. It is majorly visited by people residing in various south Indian states (Karnataka, Tamil Nadu, Andhra Pradesh etc) of India. The foreign footfall for the temple is minimum. It finds mention in renowned travel referral / review aggregators such as Lonely Planet, TripAdvisor etc.
5. **Activities** – On normal days, the temple does not offer any activities. On specific festival days, there are some activities such as feasts, dance recitals, music concerts, etc. Thaipooam, the chariot festival is the most prominent festival of the temple. It is a 10-day festival celebrated during the Tamil month of Thai (mid-January – mid-February). The festivities involve dressing up the deities and carrying a procession in the temple and across town in different vehicles.
6. **Accommodation** – Temple owns a guest house inside its premises with a total of 4 rooms (2 AC and 2 non-AC) with a fixed tariff for Non-AC (INR 500) and AC (INR 1000). It is majorly used by VIP guests. There are few low-budget accommodation facilities available nearby for visitors like dormitories and guest houses. A wider range of options and 3-star hotels are available near Kumbakonam railway station and bus stand.
7. **Association with Community** –The festivals of the temple enjoy immense participation among the locals and visitors. There are also many hawkers and informal vendors that dot the site with carts and stalls. Beggars and stray animals are also present in the surrounding areas.

Figure 32-1: Location & Existing Layout, Mahalingeswarar Temple



Site Pictures





Vision for the Site

Mahalingeswarar Temple is an iconic marvel with an amalgamation of the architectural expertise and construction finesse in the life and times of Pandyas, Cholas, Thanjavur Nayaks and Thanjavur Maratha kingdom. The temple holds a belief that the consort of Lord Shiva, placed here is very powerful and married couples worship intensely for childbirth. It is also said, devotees who circle methodically the big prakaram and then worship the presiding deity are relieved from mental aberration and psychic depression.

Although the temple has a developed ecosystem of auto-rickshaws, pharmacies, banks, retail stores and lodging facilities, the adjoining areas are occupied by beggars and hawkers, affecting the character of the temple. Interventions around the temple have to be carefully thought out to avoid permanent structures built on the paths used for the temple deity’s procession during the chariot festival. Further, the vision is to highlight the temple’s significant elements and improve spaces for community and visitors.

- **Target Visitor** – The site is largely a pilgrim site, with significant footfall from neighboring areas as well as from rest of Tamil Nadu and other south Indian states due to its rich religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.

Further, pilgrim groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang and elderly).

- **Tourist Projections** – The site is categorized as a **low tourism Site with low HVT potential**. Past footfall data for the site could not be received from sources like the site manager and TTDC’s compiled data.

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	-	-	-
High Value Tourists (HVT) (Both domestic and foreign)	-	-	-
Maximum Carrying Capacity	41,359		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Approach to Masterplanning

The objectives of master planning at this site include:

- Creating awareness about the **historical and architectural significance** of this temple.
- Promoting the grandeur of the **temple chariot**.
- Developing the temple premise as a **vibrant space** for the visitors.
- Providing an **interactive space** for the **local community**.

Hard Interventions

1. **Exhibit structure for temple car-** The temple owns the biggest temple car in Tamil Nadu placed near the northern entrance. It is currently placed inside metal asbestos and opens to the public during the chariot festival. A structure of glass and mica could be constructed for the temple car, showcasing it on non-festive days to the tourists.

Infrastructure created – 280 sqm.

2. **Open Event Area-** Mahalingeswarar Temple is located in the heart of the Thiruvaidaimarudur settlement. Developing an integrated yet segregated event/community space will provide a suitable area for formal and informal events for the locals. The event area will be proposed near the existing stage on the southeast corner. Temporary semi-open spaces can be incorporated with the event area, according to the requirement of various events such as wedding, poojas etc.

Infrastructure created –

- *Softscaping- 1200sqm*
- *Yard light- 1*

3. **Redevelopment of Existing Garden Area-** The existing garden area is located in the center of the site, surrounded by goshala on the east, the main shrine on the west and annadhanam on the south. Reviving the garden area with a nice seating arrangement and trees providing natural shade is proposed. The landscaping will feature native and religious flowers and bushes, and should, as far as possible, be the least maintenance-oriented and be self-sustainable. This shall thus create a visual treat for the visitors.

Infrastructure Created:

- Footpath - 260 m length and 3 m wide
- Softscape- 1000sqm
- Temporary Seating – 4 units

Soft Interventions

1. **Ticket Counter cum Information Center-** The site lacks the provision of a tourist information centre. Incorporating the existing ticket counter with the information centre will act as a multi-utilized space. The centre can provide brochures and catalogues imparting the historic background of the temple.
2. **Goshala and Temple Garden Tour-** The presence of goshala inside the temple complex is a unique feature, that could be promoted as an interactive tour for the visitors (Especially HVT). The paid tour package will include the visit of goshala, temple garden and temple chariot etc. Community integration can be enhanced by appointing locals as guides- trained and accredited.
3. **Events –** The event space proposed at the site could be used for organizing local craft and cultural events, weddings and festivals which will make the place more alive and vibrant throughout the year.
4. **Site Promotion -** Increasing temple visibility with strategies like integration with TN Assist App, etc. The temple authorities can organize recurring events, associated festivals, etc. which can help publicize, increase awareness by integrating it as part of the pilgrim trail of Kumbakonam.



Conceptual images for Temple Chariot structure



Reference images for Event Area



Reference images for Garden Area

Amenities Plan

- 1. Signage (Package 1)** – Few direction boards can be installed indicating the directions for the site. Signage Package 1 is proposed to feature for this site. Both directional signage and informational signage should be used, as per the design guidelines mentioned in Glossary of Interventions.
- 2. Drinking Water Station-** Availability of free drinking water is one of the issues at this site. Hence, 1 drinking water station with RO water coolers should be installed near the toilet block.
- 3. Technology intervention (Package 1)** – The development should offer few technological conveniences and should be equipped with technological tools for optimal management. Therefore Technology Package 1 is proposed for this site. These shall include:
 - Electronic Visitor Counter at the entry point.
 - TN Assist App integration at the site, with an internet connection and QR scanner.
 - There are 52 CCTVs are installed at all tourist-gathering spaces and entry/exit points. So, there is no need for additional CCTV coverage.

Trunk Infrastructure

As the site has excellent connectivity, no trunk infrastructure interventions are required.

Projects Identified

#	Project Component	Scale
1	Exhibit structure for temple car	280 sqm
2	Open Event Area- <ul style="list-style-type: none"> • Softscaping • Yard light 	1200 Sqm 1
3	Redevelopment of Existing Garden Area- <ul style="list-style-type: none"> • Footpath • Softscape • Temporary Seating 	260 m 1000 Sqm 4
4	Signage (Package 1)	1

#	Project Component	Scale
5	Drinking Water Station	1
6	Technology intervention (Package 1) (No CCTV)	1

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in Glossary of Interventions.

#	Project Component	Cost (INR Lakhs)
1	Temple car Exhibit	5
2	Open Event Area	1
3	Open Event Area - Yard Lighting	24
4	Garden area refurbishment - footpath	5
5	Garden area refurbishment - landscaping	1
6	Garden area refurbishment - Seats	1
7	Drinking Water Station	3
8	Signage Package 1	1
9	Technology Interventions	1
Total		INR 40 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the

revenues considered here are in addition to all the existing revenue currently accrued by the site.

- b) Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- c) All revenues are unescalated.
- d) Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

The following revenue sources are expected for the site:

- 1. **Space on Hire** – Capturing 52 events a year at ~INR 35,000 per event.

As discussed in note above, the following existing revenues, if any, are not considered:

- 1. Prasadam sale
- 2. Puja tickets
- 3. VIP tickets
- 4. Mass meals
- 5. Donations and Sponsorships
- 6. Sale of maps, guidebooks etc. (assumed to be at cost value)

Considering the above, total additional un-escalated revenues from the site in Y5 is estimated as INR 20 Lakhs.

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- a) The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.
- b) The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.
- c) The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- d) The costs are un-escalated.

The following OPEX is expected for the site:

- 1. **Manpower Costs** – Additional manpower will be required at the site to manage the proposed interventions.

- a. A **security personnel** for the event space.
- b. An **Administration staff** to overlook the operations of the event space.

- 2. **Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
- 3. **Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
- 4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
- 5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.
- 6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.
- 7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue. The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of INR 175 per kilolitre.
- 8. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee, if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as INR 15 Lakhs.

Feasibility Assessment and Implementation Plan

Given that the estimated additional revenue from the proposed interventions exceeds the operational expenses incurred, it can be concluded that the interventions proposed at the site are **Operationally Self-Sustainable** and therefore beneficial.

The interventions proposed at the site are largely for improving amenities and experience of visitors and hence have an associated “social cause”. Given the strict conservative protocols followed by the temple trust - Sivaprakasa Desika Thiruvavaduthurai Aadheenam, PPP is not an option for development and implementation. Hence, the recommended interventions will have to be implemented and funded by the temple trust itself.

However, it is recommended to give out operations and management of the *event space* at the site to private operators for better efficiency and long-term sustainability.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Temple car Exhibit	5	Y0 – Y2	Temple Trust
2	Open Event Area	1	Y0 – Y2	Temple Trust

¹¹⁴ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
3	Yard Lighting	24	Y0 – Y2	Temple Trust
4	Footpath	5	Y0 – Y2	Temple Trust
5	Landscaping	1	Y0 – Y2	Temple Trust
6	Shaded Seats	1	Y0 – Y2	Temple Trust
7	Drinking Water Station	3	Y0 – Y2	Temple Trust
8	Signage Package 1	1	Y0 – Y2	Temple Trust
9	Technology Interventions	1	Y0 – Y2	Temple Trust
Total		INR 40 L		

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 1,300¹¹⁴ man-days of construction labour (*spread across 1-2 years of implementation*)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 5 man-days¹¹⁵

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – As discussed above
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

- As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
- Assumed cost of labour assumed for computation = INR 700 per day
- Cumulative labour man-days = 30% * CAPEX / 700

¹¹⁵ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 3,200 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site. Due to lack of availability of the current site footfalls, it is difficult to project exact number of footfalls in Y5 Y10, as against current undisclosed footfall.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.

Figure 32-2: Proposed Master Plan – Mahalingeswarar Temple



33. Vedaranyam Sivan Kovil

Site Details

District:	Nagapattinam
Name of Site:	Vedaranyam Sivan Kovil
Site No:	Site 140 of 295
Site Use:	Temple
Category:	A (Temples)
Location:	10.3752, 79.8500
Land Area:	~5.24 acres
Peak footfalls:	5,000 per day ¹¹⁶ (Chithrai Festival, Aadi Masam Festival)
Operator:	HR & CE Dept.
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom. – 3 lakhs (2019 - 20) For. – nil (2019 - 20) ¹¹⁷
Site Revenues:	INR 1 Crore (2019 - 2020)
Site Orientation:	Pilgrim/Tourist
Site Potential:	Low Tourism Site
HVT Potential:	Low HVT Potential
Connectivity:	
a. Railway Station:	800 m (Vedaranyam)
b. Airport:	158 km (Tiruchirappalli)
c. Highway:	350 m from Thanjavur – Kodaikanal Highway

Trails featured on: **Nil (Pure Pilgrim Temple)**

Vedaranyeswarar Temple is a Hindu temple dedicated to Shiva, located in the town of Vedaranyam. Vedaranyeswarar temple is a part of the series of temples built by Aditya Chola (871-907 CE) along the banks of river Cauvery to commemorate his victory in the Thiruppurambiyam battle. It has several inscriptions dating back to the Chola period. As per Hindu legend, the Vedas worshipped Shiva in this place, giving the name “Vedaranyam” to the place. The temple site does not receive a high footfall, in comparison to other pilgrim destinations in the region. It is the crowd from neighbouring districts and other South Indian states which comprise the tourist source for this site.

The scope of interventions at the site majorly includes developing site aesthetics and amenities for ease of pilgrim movement around the site and revival of old / dead / dilapidated spaces at the site.

Existing Condition

Location

This Paadal Petra Sthalam temple is located at Vedaranyam, a seashore town. It is situated at about 45 km from Nagapattinam, 35 km from Thiruthuraiipoondi, 63 km from Thiruvarur & 100 km from Kumbakonam.

Existing Layout

The temple site occupies an area of ~5.24 acres, which comprises of:

- Mandapam – towards the north and western side of the main temple area.
- Temple tank – towards the south of the eastern side main entrance of the temple
- Toilet blocks – located on the northern side of the main temple, but it is closed due to public opposition,
- Cowshed – Towards the southwest side of the main temple area
- Office – Near the garden area

¹¹⁶ Received from Site Manager

¹¹⁷ Received from Site Manager (The existing foreign tourist footfalls at the site comprise of the NRI and South Indian (especially people from Tamil Nadu) residing overseas.

- Garden – on the inner side of the temple site, towards the north of the eastern side main entrance of the temple.
- Well – to the north of the main temple site
- Annadhanam Hall – near Gaushala towards the southwest side of the main temple

Existing Uses

The temple is currently accessed by pilgrims for religious uses. An area of the temple site is also occasionally used for local cultural events and celebrations of festivals.

Other Land Available

British records say the temple owns 23,000 acres, mostly agricultural lands, and salt pans. Of it, about 17,000 acres of land now belonging to the temple are in the hands of the cultivators or salt pans owners, of which 2,426 acres are with the Central government-owned salt department. The rest of the land is spread out throughout the town and nearby towns.

There is no land in the immediate vicinity suitable for development.

Masterplanning Considerations

Applicable Regulations

1. **Tamil Nadu Combined Development and Building Rules, 2019** – The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land.
2. **TNHRCE Rules, 1959**
 - a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions
 - b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.

- c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to religious activities and for the facilitation of Hindu pilgrim tourists.
- d. The HR& CE Dept. owned land can be leased for no more than 3 years.

Key Sensitivities

The temple site does not have any pressing issues of sensitivity in and around the complex, which needs to address while preparing the master plan.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

1. **Attraction** – The site is not aesthetically attractive and appealing as compared to most other religious/pilgrim sites in Tamil Nadu. However, its cleanliness is maintained and the spaces at the site are well organized in comparison to the temples in the district. Considering the renovation work that took place at the temple 5 years ago, the temple site and the temple tank are in a good condition, but the other structures at the site were excluded from the conservation work and therefore are in a degraded condition.
2. **Accessibility** – The temple site is accessible via good quality but narrow roads. Although bus services are available to reach Vedaranyam, it is better to go by car if one has to visit nearby places like Agathiyampalli, Ramar Patham, Kodiakarai, Pushpavanam, and Naluvadapath. The access roads of the site are directly connected via the district roads to the city of Vaillankanni and Nagapattinam, and Pattukottai and Mannargudi via SH 63.

Parking – There are no parking provisions made at the site. The vehicles are most often parked along the street outside the temple. However, no issues of traffic congestion are observed due to on-street parking at the site.

Internal Circulation – The temple site facilitate tourist circulation through paved areas and pedestrian pathways to a certain extent. however, these areas are not shaded and are supported by vert minimal landscaping, which makes the circulation difficult for the pilgrims during high heats, as well as for the elderly and physically disabled visitors.

- 3. Amenities** – The condition of tourist amenities within the temple is quite poor.
- The toilets present at the site are inadequate in number in comparison to the number of tourists received as well as non-functional in nature.
 - The number of drinking water outlets and dustbins also does not suffice with the number of tourists. Additionally, these facilities are not spread across a spread site.
 - The site area is monitored by an adequate number of CCTV cameras and is made safe both physically by a boundary wall and from fire casualties by placing an adequate number of fire safety measures. However, there is no frisking of visitors at the site which might be a risk.
 - The site surroundings provide public toilets, several accommodation options, small F&B outlets, retail shops, and adequate lighting. However, the cleanliness condition of the site surrounding is poor due to the presence of beggars and stray animals.

4. Awareness – The temple is not a very well-known or acknowledged site. However, apart from the pilgrims, it is occasionally visited by people with a keen interest in history and architecture. The annual Brahmotsavam (prime festival) is attended by thousands of devotees from far and near. It is well documented by various blogs and present in travel sites like TripAdvisor. It has multiple videos about it on YouTube.

- 5. Activities** – The set of activities that currently take place at the site include:
- Organization of local cultural programs - A program of 4-5hrs includes Dance, Pattimandram and Bharathi Natyam happen here during festivals. The language is Tamil and is free of charge for everyone
 - Religious activities – offerings made by the devotees at the temple, Festival celebrations.
 - Annadhanam activities - Many organize feeding-Annadhana.
 - Nivedhana Offering - They also offer nivedhana to Lord and Mother and distribute it to visitors.

Being a pilgrim site, the site offers adequate activities to keep tourists engaged at the site. The F&B requirements of the pilgrims are looked after by the food stalls and small shops present in the vicinity of the temple.

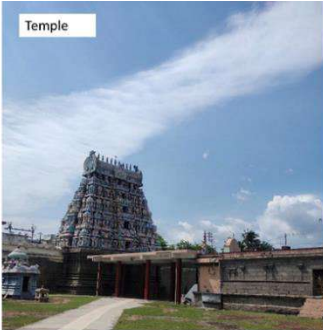
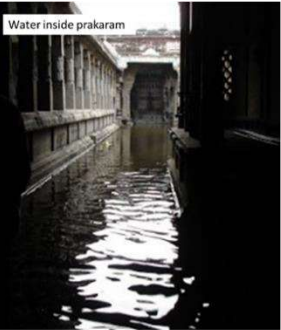
6. Accommodation – There are a couple of options like Amman lodge and VMT guest house. For other options, one needs to go to Vailankanni which is about 40 km away. People who visit here tend to stay at Nagapattinam or Vailankanni.

7. Association with Communities – Currently the locals are involved only in retail activities near the temple. Umopathy, an auto driver, says that the temple does not have any means for community engagement, in the form of tour guides, or souvenir shops, etc. which the local communities can be benefitted from.

Figure 33-1: Location and Existing Layout



Site Pictures





Vision for the Site

This temple is believed to be the birthplace of the Vedas. Its rich history is linked to the Tamil saint poets. The paintings, inscriptions, and annual festivals draw thousands to this site. It is one among the Devara Sthalams and Saptha Vidanga Sthalams.

Considering the existing site situation such as:

- Rich history dating back 1000s of years
- Renovated about 5 years back
- Huge temple with plenty of free space within the boundaries
- It is a beautiful one-hour drive through some of the most picturesque paddy fields in India from Vailankanni or Nagapattinam

As well as the weaknesses and limitations associated with the site such as:

- Lack of availability of land for development in the vicinity.
- The presence of dead spaces and structures within the site
- The neglected temple premises
- Lack of amenities for pilgrims such as drinking water, toilets, changing rooms, etc.

The temple can be developed upon the idea of reviving the old, degraded, and dilapidated spaces at the temple campus location, and provide additional facilities to

ease pilgrim visits at the site. It is ideated to be done by developing rich, eye-appealing spaces around the site.

- **Target Visitor** – The site is largely a pilgrim site, with significant footfall from neighboring areas as well as from the rest of Tamil Nadu and other south Indian states due to its rich religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience. The target visitor group envisioned to be captured at the site are:
 - **Pilgrims** – Visiting the temples for their religious value. The idea of master planning will be to capture these tourists to also engage in other activities apart from a visit to the temple.

Further, pilgrims' groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang, and elderly).

- **Tourist Projections** – The site is categorized as a **Low Tourism Site** with **Low HVT potential**. Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data.

Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	300	609	1,044
High Value Tourists (HVT) (Both Domestic and Foreign)	0	0	0
Maximum Carrying Capacity	20,679		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- Foreign – All non-Indians
- High-Value Tourists – A new definition proposed to capture estimated footfall of visitors who can spend more at the site and expect a higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites. For purely pilgrim sites, HVT footfalls are taken as 10% of domestic footfalls.

Proposed Masterplan

Approach to Masterplanning

The renovation of the temple site has been done 5 years ago. However, it is only the main temple site and the temple tank area that has been renovated. The master plan activity intends to work on the remaining areas which contribute to the development of a better pilgrim destination.

The objectives for developing master planning interventions at this site are:

- Revive the old, dilapidated and dead areas of the site and put them to use for their intended purposes.
- Enhance pilgrims feel at the temple – through improved circulation areas, provision of additional useable conveniences, and amenities.
- Developing better site aesthetics and landscaped garden areas with engaging public amenities and facilities.

Hard Interventions

1. Revive the Garden Space – The recreational space at the north of the main entrance site, which was earlier made for the pilgrims, is currently accessible due to overgrown haphazard vegetation. Space can be revived and developed into a garden area where the site visitor can enjoy quality time.

The landscaped garden area can have a canopy seating area, paved pathways, a children’s play area, etc. for recreational purposes. The landscaping shall be done using native flora and paving material. This space will act as a vibrant cultural space that will enhance tourist engagement

Infrastructure Created: ~1500 sqm of garden area

2. Tourist Facilitation Centre – The temple currently lacks in terms of amenities such as cloakrooms, luggage rooms, inquiry desks, etc. Type 1 tourist facilitation centre is proposed to be developed at the site. A tourist facilitation/information centre can be helpful in the provision of such amenities at one place for first-time visitors, as well as for visitors from distant locations.

The facilitation centre can be equipped with:

- A small gallery for the display of ancient painting collection of the temple,
- Some retail shops, souvenir shops,
- Inquiry desk,
- Cloakroom
- Drinking water facility, etc.
- The architectural style of the building can bear a resemblance to the temple architecture with a modern touch.

Infrastructure Created: ~140 sqm of built-up area

3. Refurbishment of Toilets – The existing toilet facilities provided at the site are inadequate in number in comparison to the number of pilgrims who visit the site. Additionally, these facilities are not currently made available to the site visitors, as it opens from the inner side of the temple campus.

Refurbishing the temple block with increased capacity and if its entrance is shifted along the roadside, it can be put to use. These toilets block can be a Pay and Use Toilet Block as identified in Glossary of Interventions.

Infrastructure Created: ~1800sqm of pay and use toilet block with ~20 units

4. Changing Area – The temple tank water is considered to be holy by the pilgrims, and due to easy accessibility of the tank, several pilgrims prefer to take a holy dip in the temple tank. The development of a small changing area for the pilgrims can make it easy for the tourists to change after taking a dip in the temple tank.

Infrastructure Created: ~2 units of changing area as per Glossary of Interventions

5. Pedestrian Friendly Landscaping and Shaded Pathways – the landscaping area around the site, are demarcated in a neat fashion. However, the soft scaping done around the space is quite minimal or dried out at several places. The idea is to revive those areas and make the site visually attractive, as well as which can create a soothing environment for the pilgrims during scorching heat. The landscaping areas can be complemented by the provision of s shaded pathways along with the parikrama areas as well as few canopy structures or Gazebo for pilgrims to rest.

A comprehensive landscape and open space design with a logical pedestrian routing, comfortable places will tie together the variety of spaces at the site and create one cohesive destination

Infrastructure Created: Installation of shading devices along the pathway of ~430 m. long, ~5 units of Gazebo to be installed at strategic locations, ~5,100 sqm of landscaping area.

Soft Interventions

1. **Temple site cleanliness maintenance** – Despite the provision of dustbins, the area around the temple is observed to be littered with waste from the stalls and visitors. The strategies that can be applied to ensure clean surroundings are:
 - a. **Community participation** programs or devotee volunteers.
 - b. **Providing adequate dustbins** for disposal of segregated waste.
 - c. Regulations for **no waste disposal into the temple tank**
2. Develop a **façade maintenance guideline** for the temple – The façade of buildings around the temple within the site area must follow the traditional architectural style of the temple and other buildings in the village, to provide the look and feel of a pilgrim destination. The facades of the buildings within the site must also be repainted and cleaned every 10 years to maintain the spatial character of the place.
3. **Parking Management Strategies**
 - a. Set up 2-wheeler parking spots by designating areas where people can park so that 2 wheelers are parked in an organized manner.
 - b. Designate 4-wheeler parking spots and enforce odd and even side parking on the roads so that the roads don't become congested
 - c. This would ease movement in the roads leading to the temple

Events – The open areas along the temple sie can be opened up for organizing local events.

4. Promotion – The Tourism Department should promote the temple, and events/activities held there, in the TN Assist app and on its various platforms, following the site changes

Amenities Plan

1. **Planting & landscaping** – More strategic tree planting is required along the pedestrian pathways, to create more shaded areas and beautify the site.
2. **Signages** – Package 1 set of signages must be deployed at the site. Signage at the Site is proposed to feature Tamil, English, and Hindi. Both directional signage and informational signage should be used, as per the design guidelines. The historical/symbolic relevance of the structures, statues, and buildings should be explained much more clearly.
3. **Technology Interventions** – Package 1 set of technology interventions are required to be deployed at the site. These include:
 - a. Electronic Visitor Counter at entry points
 - b. TN Assist App integration at the site,



Landscaped Garden Area



Gazebo in the Landscaping area



Shaded Walkways



Tourist Interpretation Centre

Trunk Infrastructure

As this site has good accessibility, it does not need any improvements in the trunk infrastructure.

Project Identified

#	Project Component	Scale
1	Garden Refurbishment/Upgradation	~1500 sqm
2	Refurbishment of toilets	~1800 sqm
3	Tourist Facilitation Centre	~140 sqm
4	Shaded Pedestrian Pathways	~430 m
5	General Landscaping Area	~5,100 sqm
6	Changing Area	~2 units
	Gazebo for the pilgrims to rest	~5 units
7	Signages	Package 1
8	Technology Interventions a. Electronic Visitor Counter at entry points b. TN Assist App integration at site	Package 1

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in Glossary of Interventions.

#	Project Component	Cost (INR Lakhs)
1	Garden Refurbishment/Upgradation	10
2	Refurbishment of toilets	5
3	Tourist Facilitation Centre	15
4	Shaded Pedestrian Pathways	8
5	General Landscaping Area	4

#	Project Component	Cost (INR Lakhs)
6	Changing area	6
7	Gazebos	10
8	Signage Package 1	1
9	Technology Package 1	1
Total		INR 60 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.
- Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- All revenues are unescalated.
- Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

The following revenue sources are expected for the site:

- Kiosks** – Captures 1 kiosk at the facilitation centre to be rented out at INR 1.5 Lakhs per annum.

As discussed in note above, the following existing revenues, if any, are not considered:

- Prasadam sale
- Puja tickets
- VIP tickets
- Mass meals
- Donations and Sponsorships
- Sale of maps, guidebooks etc. (assumed to be at cost value)

Considering the above, total additional un-escalated revenues from the site in Y5 is estimated as INR 5 Lakhs.

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.
- The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.
- The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- The costs are un-escalated.

The following OPEX is expected for the site:

- Manpower Costs** – Additional manpower will be required at the site to manage the proposed interventions.
 - A **Help-desk staff** at the facilitation centre.
- Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
- Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
- Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
- Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.

6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposal as per the environment norms. It is calculated based on the footfall projections.
7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175* per kilolitre.
8. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee, if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as *INR 10 Lakhs*.

Feasibility Assessment and Implementation Plan

Though the operating expenditure incurred is more than that of the revenues earned through the proposed capital projects, the interventions planned at the temple are directed to cater to the needs of the pilgrims and to uphold the hygiene factors followed across all the sites undertaken in the cluster.

¹¹⁸ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = *INR 330* per day.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Garden Refurbishment	10	Y0 – Y2	HR&CE
2	Refurbishment of toilets	5	Y0 – Y2	HR&CE
3	Tourist Facilitation Centre	15	Y0 – Y2	HR&CE
4	Shaded Pathways	8	Y0 – Y2	HR&CE
5	General Landscaping Area	4	Y0 – Y2	HR&CE
6	Changing area	6	Y0 – Y2	HR&CE
7	Gazebos	10	Y0 – Y2	HR&CE
8	Signage Package 1	1	Y0 – Y2	HR&CE
9	Technology Package 1	1	Y0 – Y2	HR&CE
16	Streetlighting	7	Y0 – Y2	HR&CE
17	Technology Package 1	1	Y0 – Y2	HR&CE
Total		INR 60 L		

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 2,570¹¹⁸ man-days of construction labour (*spread across 1-2 years of implementation*)

During Operations: Jobs created during operations will entail:

- As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – *INR 769* per day; Mazdoor = *INR 502* per day
- Assumed cost of labour assumed for computation = *INR 700* per day
- Cumulative labour man-days = 30% * CAPEX / 700

- Additional personnel deployed at site (Housekeeping, management, security) = 5 man-days¹¹⁹

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 6,450 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

The increase in overall number of visitors is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 105 Cr. at the site¹²⁰.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%

- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.

¹¹⁹ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

¹²⁰ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

Figure 33-2: Proposed Master Plan – Vedaranyam Sivan Koil



34. Thirumazhisai Temple

Site Details

District:	Tiruvallur
Name of Site:	Thirumazhisai Temple (Jaganatha Perumal Temple)
Site No:	Site 146 of 295
Site Use:	Temple
Category:	A (Temples)
Location:	13.0521, 80.0613
Land Area:	~1.5 acre (Temple) + ~3.8 acres (Temple Tank)
Peak footfalls:	2,000 per day ¹²¹
Operator:	HR & CE Dept.
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom. – ~12,000 (2019 - 20)
Site Revenues:	INR 40 lakhs (2019 – 20)
Site Orientation:	Pilgrim
Site Potential:	Low Tourism Site
HVT Potential:	Low HVT Potential
Connectivity	
Railway Station:	~25 km (Chennai)
Airport:	~20 km (Chennai)
Highway:	~2 km from NH4
Trails featured on:	Nil (Pure Pilgrim Temple)

Situated in Thirumazhisai, Jaganatha Perumal Temple is a well-known Hindu temple dedicated to Lord Vishnu with a special reference to the Jaganatha temple present in Puri (Odissa). The temple is believed to be the birthplace of Thirumalisai Alvar, one of the twelve Azhwars (supreme devotees of Vishnu) in the Tamil Culture. Constructed in the Dravidian style of architecture, the temple is located in a very calm and peaceful surrounding. However, the temple doesn't attract much footfall, lacks awareness & basic tourist infrastructure. The scope of interventions at the site majorly includes provision of the current basic tourist amenities at the site along with the development of certain attractions for recreational activities.

Existing Condition

Location

The Jagannatha Perumal Temple is located in Tirumazhisai town, in the district of Tiruvallur, ~24 km west of Chennai. The temple is located on the Tiruvallur High road and has excellent connectivity to all the major towns nearby via NH-48. The temple is located within ~10 km vicinity of major pilgrim tourist destination including Kundrathur Murugan temple (~11 km), Nageswara Temple (~10 km), Thiruverkadu Kumari Amman Temple (~10 km) and Vedapureeswarar Temple (~9 km).

Existing Layout

The temple complex occupies an area of ~1.5 acres, which is divided into two precincts. The temple layout is rectangular plan surrounded by 10 ft high walls on all sides with a central five-tier gopuram the gateway tower. Apart from the main temple complex, the toilets, Annadhanam shed, and Chariot Storage building is located to the east of the main temple site. The temple is also accompanied by a temple tank adjacent to the access road and behind the Annadhanam building. The Temple office is located inside the temple precinct towards the southern end.

¹²¹ Received from Site Manager

Existing Uses

The temple is currently used by the local communities for religious purposes and the celebration of important festivals. The festivals are also considered as a peak season witnessing around ~1000 temple visitors per day and ~2000 per day (December to January). Some of the festivals conducted at the site are Vaikunda Ekadashi and Alwar Avatharam Utsavam which goes on for 10 days.

Other Land Available

The temple owns ~108 acres of agricultural land spread across the village apart from the temple complex and the tank. The temple tank adjacent area has the potentiality for future development.

Master Planning Considerations

Applicable Regulations

1. TNHRCE Rules, 1959

- a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions
- b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.
- c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to religious activities and for the facilitation of Hindu pilgrim tourists.
- d. The HR&CE Dept. owned land can be leased for no more than 3 years.

2. Tamil Nadu Combined Development and Building Rules 2019 - As per Madavilagam Local Area Plan (Thirumazhisai Town Panchayat), the site lies in an **Institutional Zone**. The permissible uses include:

Govt and Quasi Govt. Offices | Institutions | Professional and business offices | Art galleries, Archives, Museums, Public Libraries, Social and Cultural, Institutions and Religious buildings | Hospitals, Sanatoria, and other medical and public health institutions | Parks, Playfields, Swimming pools and other public and Semi-public open spaces | Social and Cultural Institutions including Sabhas, Residential and commercial spaces | Transport terminals, bus, parking lots

including multilevel parking lots | Kalyana mandapams | Community halls, Assembly halls, Auditoriums and Theatres, Recreation Complexes, Exhibition, Fares | All public and semi-public recreational uses and open spaces, parks and playgrounds | Waterfront developments, museums and memorials | Theme parks and amusement parks, Open Air Theatre, Exhibitions | Circuses, Fairs and Festival grounds, public utilities.

3. **Height Regulations** – AAI height restrictions allow the construction of buildings up to ~55 m. (up to 18 floors) above mean sea level in the temple complex and surrounding areas.

Key Sensitivities

The temple site does not have any pressing issues of sensitivity in and around the complex, which needs to address while preparing the master plan.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

1. **Attraction** – The temple's attraction value is its religious importance. The site is currently not well-kept and aesthetically maintained. Its popularity is minimal among tourists for various reasons including minimal upkeep.
2. **Accessibility & Mobility** – The temple site is easily accessible from Tiruvallur High Road and National Highway 48. It also enjoys good accessibility via public transportation systems and railways from ~500 m and ~8 km respectively.

Parking – The temple site has no dedicated parking space for visitors. However, tourists usually park their vehicles in open spaces around the temple's main entrance.

Internal Circulation – The internal circulatory routes of the temple are non-shaded pedestrian paths. It is often difficult to pass those paths in peak summers. Currently, they are occupied with wood and construction waste due to ongoing renovation works.

3. **Amenities** – The visitor amenities within and around the temple are poor and ill-maintained.

- The site has minimal infrastructure provision for local temple retail shops.
 - The site lacks provision of adequate quantity and quality of directional and wayfinding signages, the temple also lacks in terms of information dissemination spaces and boards.
4. **Awareness** – The Thirumazhisai Temple is a less acknowledged religious destination amongst tourists. It receives very few visits in comparison to the other temples in the vicinity such as Thiruverkadu Amman Temple, Kundrathur Murugan Temple, etc. In 2019, the temple received ~12,000 visitors. Out of which ~3000 were accounted for during peak seasons of December-January. The site is visited only by regional tourists from surrounding regions and neighbouring states.
 5. **Activities** – The temple site does not offer any specific tourist engaging activities apart from the regular pooja (rituals) and special pooja during festivals. However, several small pilgrims and local recreational activities are required as per the local surveys in the region.
 6. **Accommodation** – The accommodation facilities available around the site are in the form of budget hotels as well as 1 luxury hotel. These options are sufficient in comparison to the number of tourists visiting the site. Moreover, the site is ~25 km from Chennai, therefore many visitors prefer to accommodate themselves in Chennai and travel to the site.
 7. **Association with Community** – The locals around the site access temple spaces for religious visits.

Figure 34-1: Location and Existing Layout

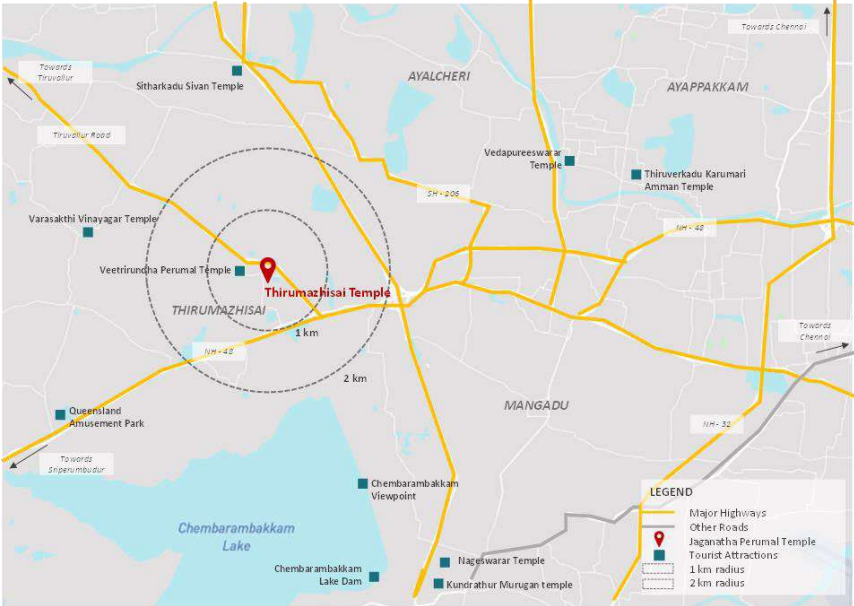
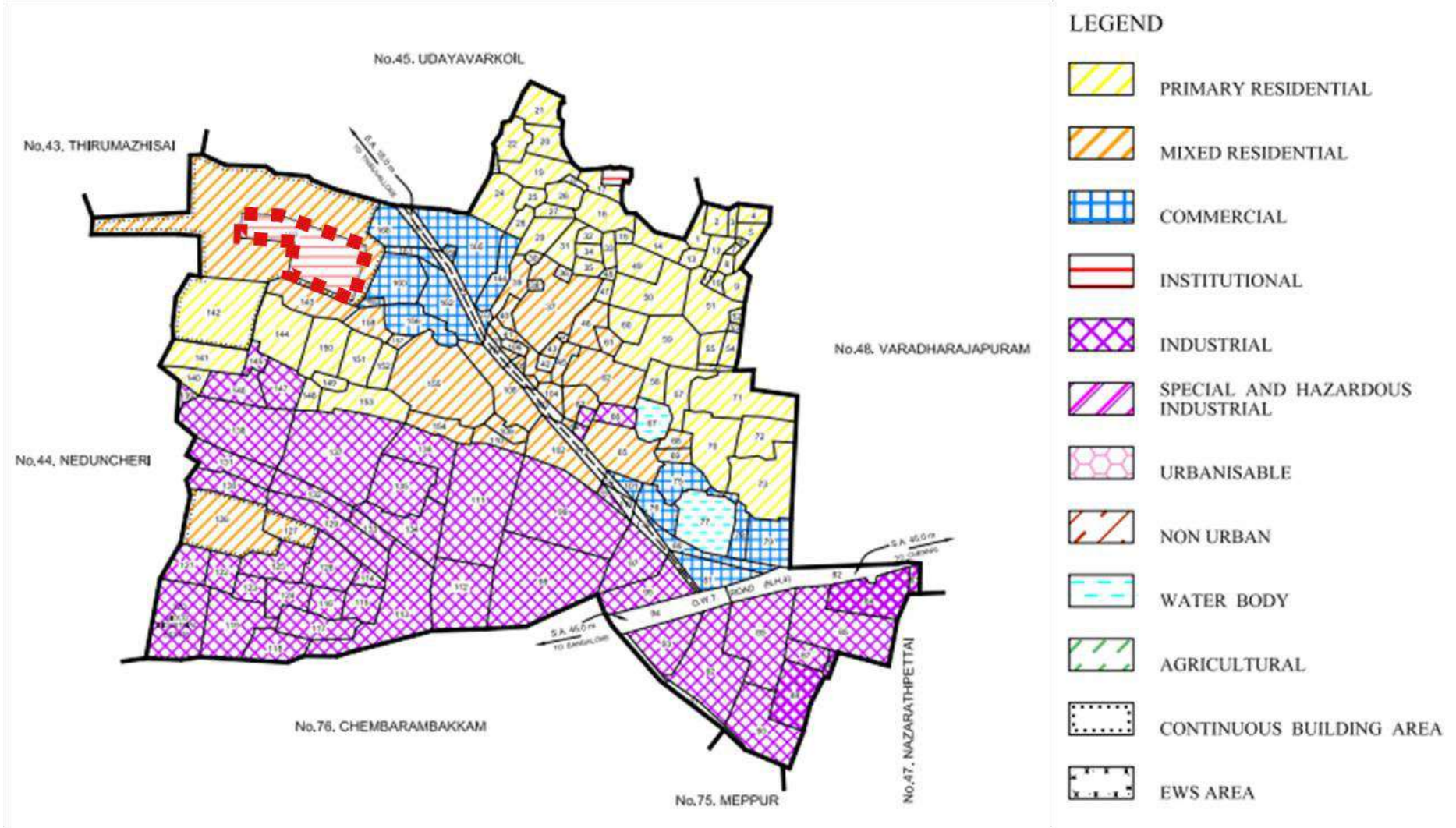


Figure 34-2: Site Land Use - Madavilagam Local Area Plan (Thirumazhisai Town Panchayat)



Site Pictures



Vision for the Site

- Situated in Thirumazhisai, Jaganatha Perumal Temple is a well-known Hindu temple dedicated to Lord Vishnu. The temple is believed to be the birthplace of Thirumalisai Alvar, one of the twelve Azhwars (supreme devotees of Vishnu) in the Tamil Culture. Constructed in the Dravidian style of architecture, the temple is located in a very calm and peaceful surrounding. However, the temple does not attract many footfalls and lacks awareness & basic tourist infrastructure.
- In addition to the main temple area, the temple management authorities do not own any land parcel near to the site location which can be utilised for the development of temple facilities. However, a small parcel of land between the temple tank and the main temple can be utilised for locating certain essential amenities at the site.
- Space thus will be developed in the most basic manner, with the up-gradation of current public amenities and provision of certain additional facilities and some minimal soft developments around the temple tank.
- **Target Visitor** - The site is largely a pilgrim site, with significant footfall from neighbouring areas as well as from rest of Tamil Nadu and other south Indian states due to its rich religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.

The target visitors to be captured here are largely **Pilgrims**, who visit the temple for its religious value. Further, pilgrims groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang and elderly).

- **Tourist Projections** – The site is categorized as a **Low tourism site** with **Low HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC’s compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	12	29	57
High Value Tourists (HVT) (Both domestic and foreign)	0	0	0
Maximum Carrying Capacity	5,913		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Approach to Master Planning

The temple site does not have any additional spaces available for development, however, the small parcel of land between the main temple and temple tank can be utilised to resolve the issues of tourist facilitation, accessibility to the temple tank, etc.

The master plan intends to utilize the small parcel of land and make the space interactive and engaging for the tourists. The idea is to develop all the necessary facilities, and additional attraction points, that improves the tourist footfalls at the site as well as enhance the experience of existing tourists.

The master plan objectives at this site are developed more from the perspective of space improvement and therefore comprises design interventions and facility provision mainly.

Hard Interventions

1. **Parking** – There are no existing tourist parking spaces available near the site. Vehicles are parked in the open space near the temple in a haphazard manner. Development of a small parking space to the north of the temple entry opposite the temple tank and adjacent to the temple chariot space can help in organising the parking chaos, especially during peak season.
Infrastructure Created: ~200 sq. m. of the paved parking area.

2. Small Display Area - The open area to the south of the temple entry can be utilised for the development of temple history and other significant information. A paved display area with stone stands can be developed into a beautiful space that disseminated temple information (in conjunction with other pilgrim sites in the state).

Infrastructure Created: ~25 sq. m. of beautifully landscaped temple display area

3. Redevelopment of areas around temple tank –

- The temple tank in the present condition is bounded by walls and fencing. Owing to its depth, visitors are not allowed to enter the tank area. Moreover, there is no access from the temple site to the main tank. A small alley on the north parallel to the main access road can be developed as access to the temple tank from the main temple.
- A small promenade can be developed around the temple tank, connected to the alley, and circumventing around the temple tank. A promenade with steps leading to the fenced water area of the temple tank can make the inaccessible temple tank area accessible by the pilgrims to an extent.
- Pilgrims must only be allowed to enter the tank area up to 3 m after which it should be fenced for pilgrim safety.

Infrastructure Created: ~3 m wide and ~420 m long promenade around the temple tank, ~50 m. long alley of 6 m. width connecting the temple to the tank area.

4. Tourist Information cum other facilities – Adjacent to the temple’s information display area, other ancillary facilities must be accommodated which can house a ticket centre, a help desk, few retail stores, etc.

Infrastructure Created: ~800 sqft built-up area

5. Development of Garden Near Temple Tank – There is a small existing garden space on the south-east corner of the temple tank. It is currently occupied by shrubs. Creating it into a small community garden accessible from the roadside can develop it into a small local recreational space with seating arrangement, children’s play area required at the site.

Infrastructure Created: ~500 sq. m. of a community garden



Development of Areas around temple tank



Tourist Information Centre and display



Community Garden Design

6. **Site Boundary development** – The northern and southern edge of the temple is open. A boundary wall with a specific entry point must be developed.

Infrastructure Created: ~65 m. a long boundary wall with site entry gate on the North and ~50 m long boundary wall on the South

7. **Beautification of the site structures/areas** - The beautiful mandapams within the temple could be revamped to enhance the aesthetic sense of the temple architecture. The areas between the main temple, other facilities, and temple tank must be developed into pedestrian-friendly landscaped spaces.

Infrastructure Created: ~ 910 sq. m. of landscaping area

Soft Interventions

1. **Cleanliness Initiative** – Civic initiatives, along with participation from local communities and pilgrim volunteers can be taken up to keep the temple surroundings clean.

2. **Ticket Pricing** – INR 10 per person of temple entry can be charged, and the funds thus collected can be utilised for daily maintenance of the temple surroundings.

3. Marketing and Communication

- The temple could be integrated into nearby temple circuits of Chennai & Thiruvallur
- Brochures/Guides of the temple with detailed site information could be distributed at popular tourist attractions nearby
- Better advertisement and promotion of the site is a must

Amenities Plan

1. **Toilets** - The site must be equipped with ~2 modules/units of the toilet blocks as identified in Vol A. The location of the toilets shown in the master plan is an indicative representation. It must be tentatively integrated with parking areas and pick up drop off areas and facilitation centre.

2. **Street Furniture** – The spaces around the temple, temple tank and community garden thus developed for public access must be provided with adequate benches, dustbins, and other street furniture. A detailed Landscape Design Guideline Manual will need to be prepared that will form the standard for all the

street furniture from seating benches, shading devices, canopies, dustbins, bollards, paving materials, wayfinding, etc.

3. **Drinking water station** – The site must be equipped with ~3 units of drinking water stations which can be placed at the facilitation centre.

4. **Planting & landscaping** – More strategic tree planting is required along the pedestrian pathways, to create more shaded areas and beautify the site.

5. **Signages** – Package 1 set of signages must be deployed at the site. Signage at the Site is proposed to feature Tamil, English, and Hindi. Both directional signage and informational signage should be used, as per the design guidelines. The historical/symbolic relevance of the structures, statues, and buildings should be explained much more clearly.

6. **Technology Interventions** – Package 1 set of technology interventions are required to be deployed at the site. These include:

- Compatibility with TN Assist App
- CCTV coverage at 3 locations
- Electronic visitor counters

Trunk Infrastructure

As this site has good accessibility, it does not need any improvements in the trunk infrastructure.

Project Identified

#	Project Component	Scale
1	Tourist Information cum other facilities	~800 sqft
2	Paved Parking Area	~200 sqm
3	Display Area	~25 sqm
4	Promenade around the temple tank	~1260 sqm
5	Paved access to the temple tank	~50 m.
6	Community Garden	~500 sqm
7	Site Boundary (Masonry)	~115 m.
8	Entry Gate	~1 unit

#	Project Component	Scale
9	General Site Landscaping	~910 sqm
10	Pay and Use Toilets	~2 units
11	Drinking-Water Station	~3 units
12	Signages	Package 1
13	Technology Interventions	Package 1

Feasibility Assessment

Capital Expenditures

The cost of the different project components proposed in the masterplan is calculated basis the current market price considering the appropriate escalations.

#	Project Component	Cost (Lakhs INR)
1	Paved Parking Area	3
2	Display Area	1
3	Promenade around the temple tank	5
4	Paved access to the temple tank	1
5	Community Garden	3
6	Site Boundary (Masonry)	6
7	Entry Gate	1
8	General Site Landscaping	1
9	Pay and Use Toilets	20
10	Drinking-Water Station	3
11	Signages	1
12	Technology Interventions	1
13	Amenity Block	6
Total		INR 50 L

(Note: Cost of all the project components including the Total capex is rounded-off to the nearest whole value.)

Revenues - Proposed projects

(Note: The following considerations are applicable to the below mentioned revenue modules.

- 1. The revenues considered here are in addition to all the existing revenue currently accrued by the temple.*
- 2. The estimated revenue projections are pegged at Y5 (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)*

- 1. Parking** – About 11 parking spaces assuming a daily occupancy of 2 ECS per day, would earn the temple an estimated revenue of *INR 1 Lakhs*.
- 2. Kiosks** – 1 leasable kiosk unit at the proposed Amenity block with a rental earning of *INR ~2 Lakhs*.
- 3. Pay per use Toilets** – Assuming about an average of 15% of the visitors using the proposed pay per use toilet, would earn the temple an estimated *INR 1 Lakh*.

The total revenues to the temple from the proposed capital projects is projected at an estimated *INR 5 Lakhs at Y5*.

Operating Expenditures

(Note: The following considerations are applicable to the below mentioned operational expense modules.

- 1. The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.*
- 2. The operations and maintenance currently undergone by the temple for its existing facilities are not considered in this section.*
- 3. The expense projections are pegged at Y5 (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)*

- 1. Manpower Costs** – This includes the additional personnel required to manage the proposed facilities.
 - a. A Help-desk staff** at the proposed Amenity block. The projected costs incurred is estimated at *INR 2 Lakhs*.
- 2. Repair & Maintenance costs** – This includes the expense incurred over time for the repairs done to the facilities to minimize the deterioration. This may

include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.

The projected costs incurred is estimated at *INR 1 Lakh*.

- Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations.

The projected costs incurred is estimated at *INR 6 Lakhs*.

- Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

The projected maintenance cost is estimated at a lumpsum of *INR 50,000 per annum*.

The total operational expenditure incurred by the temple from the proposed capital projects is projected at an estimated *INR 10 Lakhs at Y5*.

The OPEX seems to be reasonable as against the existing revenue earned by the temple. The additional revenue from proposed projects will be an added source of income for the temple.

Phasing & Funding Agencies

The development of the projects is to be taken up by HR & CE department and the implementation of these can be carried out as follows:

- The implementation of the **Technology package** (i.e., Smart-App integrations, Virtual guides, NFC tags, etc.) at the site would be taken up by the SPV provisioned by the tourism department.
- The **Parking facility** is to be undertaken by the temple body and the respective cost incurred by the management is included in the operating expenses (*Admin. & Management cost*).

¹²² Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.

Developmental phasing

#	Project Component	Agencies in Charge	Phasing of Development
1	Tourist Information & other facilities	HR & CE Dept.	Y0 – Y2
2	Paved Parking Area	HR & CE Dept.	Y0 – Y2
3	Display Area	HR & CE Dept.	Y2 – Y5
4	Promenade around the temple tank	HR & CE Dept.	Y2 – Y5
5	Paved access to the temple tank	HR & CE Dept.	Y0 – Y2
6	Community Garden	HR & CE Dept.	Y2 – Y5
7	Site Boundary (Masonry)	HR & CE Dept.	Y0 – Y2
8	Entry Gate	HR & CE Dept.	Y0 – Y2
9	General Site Landscaping	HR & CE Dept.	Y0 – Y2
10	Pay and Use Toilets	HR & CE Dept.	Y0 – Y2
11	Drinking-Water Station	HR & CE Dept.	Y0 – Y2
12	Signages	HR & CE Dept.	Y0 – Y2
13	Technology Interventions	HR & CE Dept.	Y0 – Y2

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 2,150¹²² man-days of construction labour (*spread across 1 year of implementation*)

During Operations: Jobs created during operations will entail:

- As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
- Assumed cost of labour assumed for computation = INR 700 per day
- Cumulative labour man-days = 30% * CAPEX / 700

- Additional personnel deployed at site (Housekeeping, management, security) = 2 Persons¹²³
- Retail and F&B spaces = 3 man-days per day¹²⁴

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – As discussed above
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 5,400 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of 5.75 Cr. at the site .

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%

- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

¹²³ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

¹²⁴ Assuming average 2.5 persons per kiosk / shop

Figure 34-3: Proposed Master Plan – Thirumazhisai Temple



- 1 Access to Temple Tank
- 2 Steps to Temple Tank
- 3 Community Garden
- 4 Tourist Information Cum Other Facilities
- 5 Parking
- 6 Temple Entry Gate
- 7 Toilet Block

35. Thirumanancheri, Nagapattinam

Site Details

District:	Mayiladuthurai
Name of Site:	Kalyanasundareswarar Temple, Thirumanancheri
Site No:	Site 153 of 295
Site Use:	Temple
Category:	A (Temple)
Location:	11.1072, 79.5702
Land Area:	~0.9 acres (Temple) ~110 acres (Additional Land)
Peak footfalls:	~10,000 per day (February- April)
Operator:	HR & CE Dept.
Site Ownership:	HR & CE Dept.
Tourist Footfall:	Dom – 1.3 lakhs (2019 – 20) For – nil (2019 – 20)
Site Revenues:	INR 1.5 crores (2019 – 20)
Site Orientation:	Pilgrim
Site Potential:	Low Tourism Site
HVT Potential:	Low HVT Potential
Connectivity:	
a. Railway Station:	~6 km
b. Airport:	~134 km
c. Highway:	~6 km from SH 64 and NH 22
Trails featured on:	Nil (Pure Pilgrim Temple)

The Kalyanasundareswarar Temple is a Hindu temple dedicated to Shiva and is regarded as one of the 276 Devara Paadal Petra Shiva Sthalams. It is popular among devotees seeking complications in marriages and childbirth. The temple is equipped with adequate and well-maintained amenities. Therefore, scope of interventions includes enhancing pilgrim experience by further developing the site & surroundings and curating strategies to attract visitors.

Existing Condition

Location

The Kalyanasundareswarar temple is located in the town of Thiruvelvikudi in the Kuthalam taluk of the Mayiladuthurai district. The site is ~5.6 km from Kuthalam, ~17 km from Mayiladuthurai city, ~ 30 km from Kumbakonam. Located on Kuthalam-Thirumanancheri Road, it lies on the Mayiladuthurai to Kumbakonam bus route making it easily accessible by road. From Chennai and Pondicherry, it lies on the Cuddalore-Thirumanancheri route.

The nearest railway station is the Kuthalam Station (~ 6km) while the nearest major stations are Kumbakonam Junction (~29 km) and Mayiladuthurai Junction (~13 km). The nearest airport is Tiruchirappalli International Airport (~134 km). The temple lies in a sparse mixed-residential development that is further surrounded by agricultural land. The other tourist spots within a ~20 km radius of the temple include Edirkolpadi Temple, Vadivudayaman Temple, Sundrareswarar temple, Neikuppai, Sri Vannmutti Perumal Temple, Arulmigu Parimala Ranganathar Temple, Kathiramangalam Temple, Thirukodeeswar temple, and Kolidam River.

Existing Layout

The temple is built on ~0.9 acres of land and has the following prominent characteristics:

- There is a three-tiered RajaGopuram and 2 Prakaramas.
- The complex lacks a Dhvajastambha (flagpole).

- The east-facing sanctum located in the north has a Suyambu Linga (self – manifested).
- There is a separate south-facing shrine for Parvathi in the complex.
- The complex houses an Ardha Mandapam, Maha Mandapam, Yeduthukatti Mandapam.
- The complex houses shrines and idols dedicated to various other deities as well.
- There are stone inscriptions providing valuable information about the history of the temple.
- The temple tank is called Mangala Teertham/ Gouthuga Bandana Theertham.

Existing Uses

The site serves as a temple attracting tourists from all over the country. Cultural shows like Bharatnatyam and Bomalatam are held in the complex. Apart from regular pooja, many specific poojas are held for resolution of various conflicts – difficulty in getting married/sustaining marriage, difficulty in childbirth, astrological complications, etc. Numerous marriage ceremonies are held in the temple complex. The temple's infrastructure is decently developed and includes.

- Administration office
- 3 Toilet blocks
- Ticket Centre
- Luggage/Cloak Rooms
- Free Footwear Stands
- 1 prasadam stall.

Other Land

In addition to the temple complex, the temple authority also owns 110 acres of additional land. Most of this land is being used for agriculture, while some land parcels are leased out for commercial/residential purposes. The additional land is spread away from the site, however, ~1.25 acres of this land can be located near temple premises.

Masterplanning Considerations

Applicable Regulations

- 1. Tamil Nadu Combined Development and Building Rules, 2019** – The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land.

2. TN HRCE Rules, 1959

- a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions
- b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.
- c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to the religious activities and for the facilitation of Hindu pilgrim tourists.
- d. The HR& CE Dept. owned land can be leased for a period of no more than 3 years.

Key Sensitivities

There are no specific environmental/social sensitivity to be addressed at the site.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

- 1. Attraction** – The temple is one of the 276 Devara Paadal Petra Shiva Sthalam. It serves as a popular “Parihara Sthalam” for rectification of complications related to marriages and childbirth. Besides special poojas and regular religious rituals, the temple hosts some cultural shows as well. The temple has many other temples in the vicinity, apart from which there is no major tourist attraction to attract visitors.
- 2. Accessibility** – The temple is located on the Kutalam-Thirumanancheri Road and from Chennai and Pondicherry, it lies on the Cuddalore-Thirumanancheri route, thus can be accessed via wide urban roads. The site enjoys excellent rail access as the nearest major station is the Mayiladuthurai Junction at a distance of ~ 13 km. The site lies on the Mayiladuthurai to Kumbakonam bus route and thus is easily accessible via buses. The nearest bus stop is ~100m away from the site. The site can be approached via mini-buses and autos from Kuthalam. The major modes of transport people use to commute to the site include tourist/public bus, auto-rickshaw, taxi, and private/hired transport.

3. Amenities – The temple provides amenities like the drinking water station, safety & security measures, and paved surfaces for ease of movement. However, the temple lacks to provide the following:

- No tourist information center
- No layout and wayfinding signage on the site.
- No dustbins on the surrounding streets
- No tour guides or self-audio tours available on the site

Parking – The parking space is available on the site outside the temple premises. However, due to the lack of delineated parking area, vehicles are parked in an unorganised manner resulting in a smaller number of parked vehicles than its holding capacity. Thus parking space needs to be redesigned.

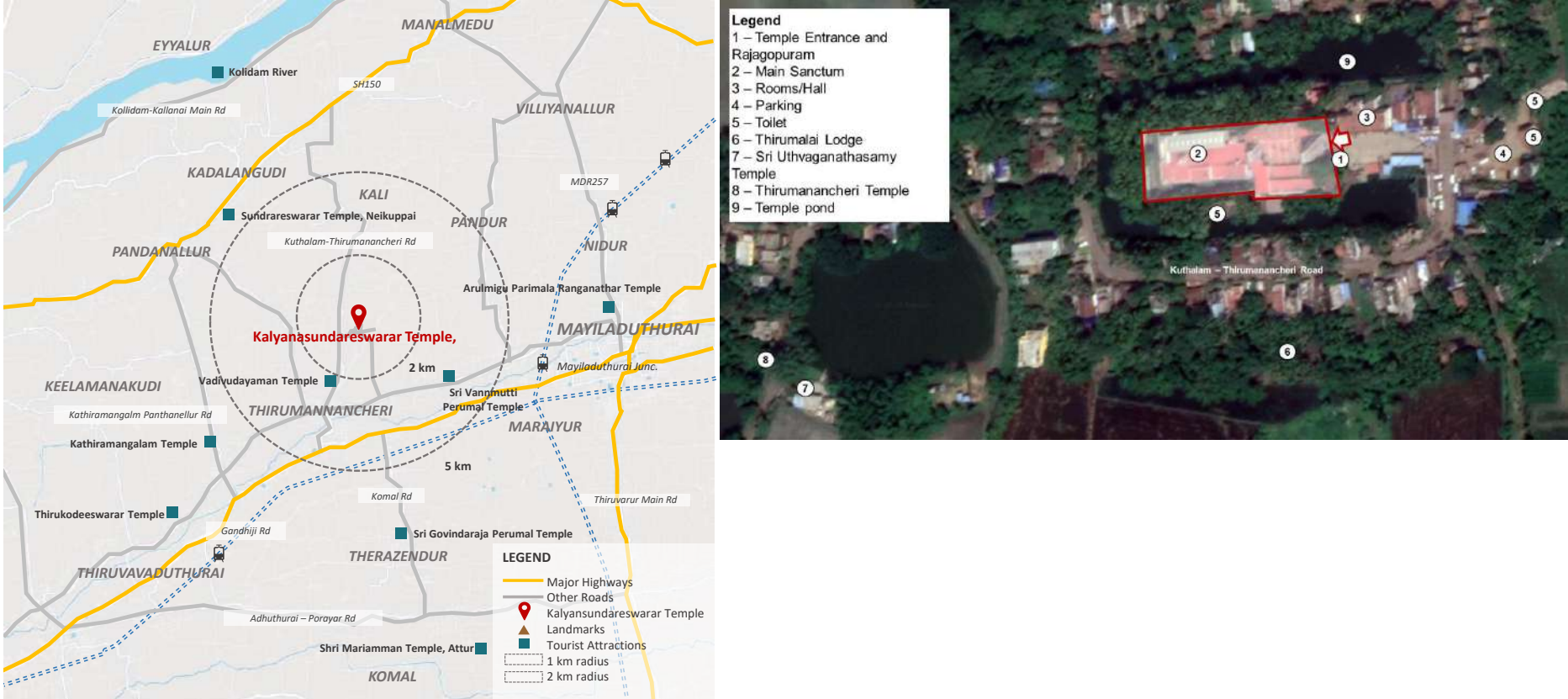
4. Awareness – The temple is popular with tourists and receives a footfall of ~5000 on Fridays, Saturdays, and Sundays and ~1000 on other days. Marriage days may see huge crowds with the footfall as high as 10,000. It is frequently visited by families, and large groups from Tamil Nadu, Karnataka, and Andhra Pradesh. It sometimes receives foreign tourists from Malaysia and Singapore as well. The temple finds mention in popular travel journals like Trip Advisor. The temple also has an online website managed by HR & CE that provides details about the temple.

5. Activities – The temple hosts number of special poojas and events within its complex. In addition to regular Darshan, special poojas on all Mondays and the full moon days (Pournami) are performed which can be attended by devotees at a cost of INR. 285. The temple hosts major festivals like Thiru Kalyanam, Vinayakar Chaturthi, Thiruvadhirai, Shivrathri, Panguni Uthiram, and Pradosham. Moreover, cultural shows of Bharatnatyam and Bomalatam are also organized in the temple complex.

6. Accommodation – Temple provides an accommodation facility called Thirumal Lodge which is situated outside the main temple complex, on its southern side. It has 5 rooms and 2 halls to serve guests. The charge for the accommodation is INR 20/person/night. Several other budget lodging facilities are also available in the vicinity at INR 700 – 1100/person/night.

7. Association with Community – Currently the locals are involved in the basic transportation and commercial activities around the site. They also contribute to the regular operation and maintenance of the site. There is, however, the immense potential to involve the local community and develop an ecosystem to generate additional employment opportunities.

Figure 35-1: Location & Existing Layout.



Site Pictures



Vision for the Site

- The Kalyanasundareswarar Temple is a Hindu temple dedicated to Shiva, and is regarded as one of the 276 Devara Paadal Petra Shiva Sthalam. The temple is equipped with decent and well-maintained amenities. The temple has potential to provide its visitors with good experience by adding few necessary amenities.
- The temple has huge opportunity to enhance its amenities as it has vacant land surrounding the temple premises. Moreover the temple is surrounded by beautiful pond that can act as an engaging space for pilgrims and locals.
- Taking advantage of this, the vision of the masterplan is to enhance pilgrims’ and locals’ experience by providing facilities of designated parking, paved pathways along temple pond and construction of a tourist facilitation center. Besides, enhancing facilities, strategies to attract tourists by curating day-tours and appropriate marketing are envisioned.
- **Target Visitor** – The site is largely a pilgrim site, with less footfall majorly constituting of locals and pilgrims from Tamil Nadu and neighbouring states due to its religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.

Further, pilgrims groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang and elderly).

- **Tourist Projections** – The site is categorized as a **Low Tourism Site** with **Low HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC’s compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	130	264	453
High Value Tourists (HVT) (Both domestic and foreign)	0	0	0
Maximum Carrying Capacity	3,939		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at the site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Approach to Masterplanning

Given the site’s religious and architectural significance and its low popularity among pilgrims and domestic tourists, the concept of the masterplan is to:

- **Improving pilgrims’ and locals’ experience** at the temple – by developing a tourist facilitation center.
- **Enhancing engaging space** within the temple by developing a pathway along with seating area around temple pond.
- **Ease of convenience** of pilgrims and locals by providing them designated parking space.
- **Improving temple visibility** through signages, day tours, appropriate marketing and promotion.

Hard Interventions

1. Tourist Information/Facilitation Center – A small tourist information/facilitation center with an inquiry desk, luggage room, changing room, and rest/waiting area, toilets, drinking water station and a temple-souvenir shop can be developed for tourist convenience and ease at the site. It can be placed outside the temple complex, near the entrance. This development will be as per the design guidelines mentioned in Glossary of Interventions.

Infrastructure Created: ~150 sqm of building.

2. Pathway around temple pond– The temple has a huge pond surrounding the temple premises. This pond will act as an engaging space for pilgrims and locals. Therefore, paved pathways secured with fencing are proposed to be developed. The entire 2 m wide pathways will be shaded with natural greens and will have seating areas at appropriate distances.

Infrastructure Created: ~580 m of paved pathways along with 8 benches



Pathways along Temple Pond



Seating along Temple Pond

Soft Interventions

1. Marketing and Promotion – Temple’s location on the Kutalam-Thirumanancheri Road shall be taken into an advantage by installing signages at the road to attract and aware travelling tourists. There are some temples in the vicinity such as Edirkolpadi Temple, Vadivudayaman Temple, Sundrareswarar temple, Neikuppai, Sri Vannmutti Perumal Temple, Arulmigu Parimala Ranganathar Temple, Kathiramangalam Temple, and Thirukodeeswar temple where information/directional signage of the temple can be erected to attract tourists to this site. Increasing visibility with strategies like integration with TN Assist App, etc. Marketing and Advertising at all key sites, CMBT, Chennai International Airport, and Chennai Central Railway Station will also help to enhance tourist footfall and attract high-value tourists.

2. Guided Tours– Self-guided audio tour provision shall be present on the site to portray the history of the site. As the temple is located in the close vicinity of other temples, therefore, the site shall be curated with these sites for day-long tours. Licensed guides shall be deployed to guide the visitors about the history and significance of these sites.

3. Community Engagement – The locals around the temple are well aware of the temple’s history and significance. Therefore, the local community can be encouraged to participate in various activities within and around the temple like utilizing the proposed pathway around the pond for peaceful walks and running the proposed temple-souvenir shop within the facilitation center. Furthermore, training and appointing locals as guides in the temple will help to engage them.

Amenities Plan

1. Signage – The temple is located on the Kutalam – Thirumanancheri Road, thus signages can be installed along the road for the outreach of the temple. Layout and wayfinding signage at appropriate places shall be erected. Signage Package 1 is proposed to feature for this site. Both directional signage and informational signage should be used, as per the design guidelines mentioned in Glossary of Interventions.

2. Parking – The temple has vacant land outside temple premises where chargeable parking is practiced. However, the parking space is undelineated and thus vehicles are parked in an unorganized manner resulting in a smaller number

of parked vehicles than its holding capacity. Thus parking space will be redesigned to utilize its maximum potential. The parking area will be paved and have markings on it. Temple authority shall regulate the use of parking space.
Infrastructure created – ~950 sqm of paved parking area having 45 ECS.

3. Technology Interventions – For tourist's awareness on the site, self-audio tours are proposed, which will require technological facilities. Therefore Technology Package 1 is proposed for this site. These shall include:

- Free WiFi
- Compatibility with TN Assist App
- The package shall exclude CCTV's as there are sufficient numbers of CCTV's on the site.

Trunk Infrastructure

As the Site has direct access from the road, no trunk infrastructure interventions are required.

Projects Identified

#	Project Component	Scale
1	Tourist Information/Facilitation Center	150 sqm
2	Paved Pathway along temple pond (2 m wide)	580 m
3	Benches (along Pond)	8
4	Signage Package 1	1
5	Parking (950 sqm of paved parking yard)	45 ECS
6	Technology Package 1 (Exclude CCTV's)	1

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in Glossary of Interventions.

#	Project Component	Cost (INR Lakhs)
1	Paved Walkway	11
2	Tourist Information/Facilitation Centre	14
3	Seats	1
4	Parking	5
5	Signage Package 1	1
6	Technology Interventions	1
Total		INR 35 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing, and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- a) *Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.*
- b) *Estimated revenue projections are pegged at Y5 (exit of short-term Y0-Y5 phase).*
- c) *All revenues are unescalated.*
- d) *Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.*

The following revenue sources are expected for the site:

1. **Parking** – Capturing 45 ECS at 30% occupancy per day at INR 15 per ECS.
2. **Kiosks** – Captures 1 kiosk at the facilitation centre to be rented out at INR 1.5 Lakhs per annum.

As discussed in note above, the following existing revenues, if any, are not considered:

1. Prasadam sale

2. Puja tickets
3. VIP tickets
4. Mass meals
5. Donations and Sponsorships
6. Sale of maps, guidebooks etc. (assumed to be at cost value)

Considering the above, total additional un-escalated revenues from the site in Y5 is estimated as INR 5 Lakhs.

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- a) *The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.*
- b) *The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.*
- c) *The expense projections are pegged at Y5 (exit of short-term Y0-Y5 phase).*
- d) *The costs are un-escalated.*

The following OPEX is expected for the site:

1. **Manpower Costs** – Additional manpower will be required at the site to manage the proposed interventions.
 - a. A **Help-desk staff** at the facilitation centre.
2. **Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
3. **Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.

5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 *percentage* of the total capital expenditure incurred.
6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.
7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of INR 175 per kilolitre.
8. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee, if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as INR 5 Lakhs.

Feasibility Assessment and Implementation Plan

Given that the estimated additional revenues from the proposed interventions is in par with the operational expenses incurred, it can be concluded that the interventions proposed at the site are **Operationally Self-Sustainable** and therefore beneficial. The interventions proposed at the site are largely for improving amenities and experience of visitors and hence have an associated “social cause”.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Paved Walkway	11	Y0 – Y2	HR&CE
2	Facilitation Centre ¹²⁵	14	Y5 – Y7	HR&CE
3	Seats	1	Y0 – Y2	HR&CE
4	Parking	5	Y0 – Y2	HR&CE
5	Signage Package 1	1	Y0 – Y2	HR&CE
6	Technology Interventions	1	Y0 – Y2	HR&CE
Total		INR 35 L		

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 1,500¹²⁶ man-days of construction labour (spread across 1-2 years of implementation)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 2 man-days¹²⁷

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above*
- Indirect employment in the sectors supplying inputs to the tourism industries.

¹²⁵ Given the low footfalls recorded at the temple the development of facilitation centre can be taken up at later phases as deemed necessary by the temple authorities.

¹²⁶ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.

- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 3,800 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

The increase in overall number of visitors is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 45 Cr. at the site¹²⁸.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

- As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
- Assumed cost of labour assumed for computation = INR 700 per day
- Cumulative labour man-days = 30% * CAPEX / 700

¹²⁷ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

¹²⁸ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and suppliers will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.

Figure 35-2: Proposed Master Plan - Thirumanancheri



36. Swayambunathaswamy Temple, Peralam

Site Details

District	Thiruvarur
Name of Site	Suyambunadhar Temple, Peralam
Site No:	Site 156 of 295
Site Use:	Temple
Category:	A (Temple)
Location:	10.9622, 79.6604
Land Area:	1.2 acres + 220 acres
Peak footfalls:	300 per day (March – April Karthigai Nathchatiram, Prodosume, Poornami Pooja)
Operator:	Dharmapuram Adheenam Devasthanam
Site Ownership:	Dharmapuram Adheenam Devasthanam
Tourist Footfall:	Dom. – 40,000 (2019 - 2020) For. – Nil (2019 - 2020)
Site Revenues:	Not disclosed (FY20)
Site Orientation:	Pilgrim
Site Potential:	Low Tourism Site
HVT Potential:	Low HVT potential
Connectivity:	
a. Railway Station:	0.7 km (Peralam)
b. Airport:	140 km (Trichy)
c. Highway:	0.1 Km from SH-23
Trails featured on:	Nil (Pure Pilgrim Temple)

The Suyambunadhar Temple, a Hindu temple, is believed to house Shiva in a self – manifested form. The temple is visited mainly by local pilgrims and is maintained by local group of people. The site is easily accessible by via public transport and private vehicles. The temple’s location on a hilltop, in a calm neighbourhood adds to the serenity of the place. The amenities in and around the site are inadequate– lacks footpaths, toilets, signboards, parking etc. The surroundings are poorly maintained and unclean. The site has a potential to be developed as a public recreation space, due to its location & surroundings and presence of two temple tanks present in its close vicinity. With improvement in site landscape and upgradation of existing amenities, site can be developed for improved visitor experience.

Existing Condition

Location

Sri Saranathan Perumal Temple is located in the town of Peralam in Thiruvarur. The temple is surrounded with agricultural lands and residential areas. Few other tourist attractions located near the site are:

- Koothanoor Saraswathi (~5 km)
- Adhishesha Theertham (~ 9 km)
- Agniswaraswamy Temple (~18 km)

Existing Layout

The temple, constructed in Dravidian architectural style, covers an area of 1.2 acre. The temple complex is mainly surrounded by calm residential neighbourhood.

- The temple marks an entrance with a Rajagopuram.
- The temple complex houses two water tanks on eastern and western sides.
- The temple complex houses sannidhis and shrines dedicated to various deities and sages.
- The temple complex has a toilet block outside the main temple area.
- The temple area has an administrative office and a ticket counter near entrance.

Existing Uses

- The temple is visited mainly for religious purposes by local tourists. The temple receives a footfall of ~100 on special days and ~50 on normal days.
- The important festivals celebrated at the temple are Karthigai Nathchatiram, Prodosume and Poornami Pooja.

Other Land Available

In addition to the temple complex, the temple also owns 220 acres of land which is primarily used for agricultural purposes. The temple also owns around 30 shops around the site.

Master Planning Considerations

Applicable Regulations

1. **Tamil Nadu Combined Development and Building Rules, 2019** – The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land.

Key Sensitivities

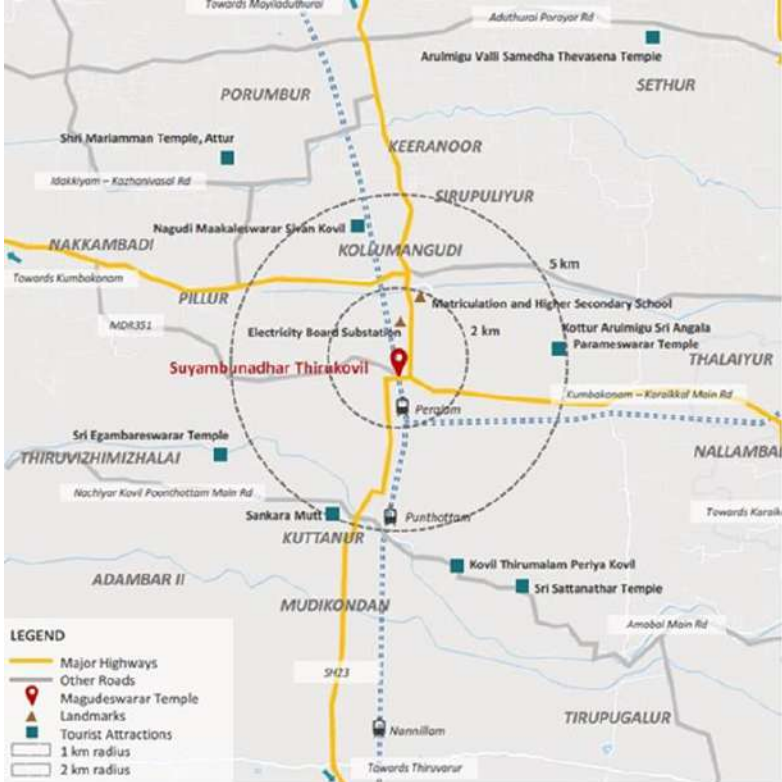
There is no specific environmental/social sensitivity to be addressed at the site.

Key Issues to Address

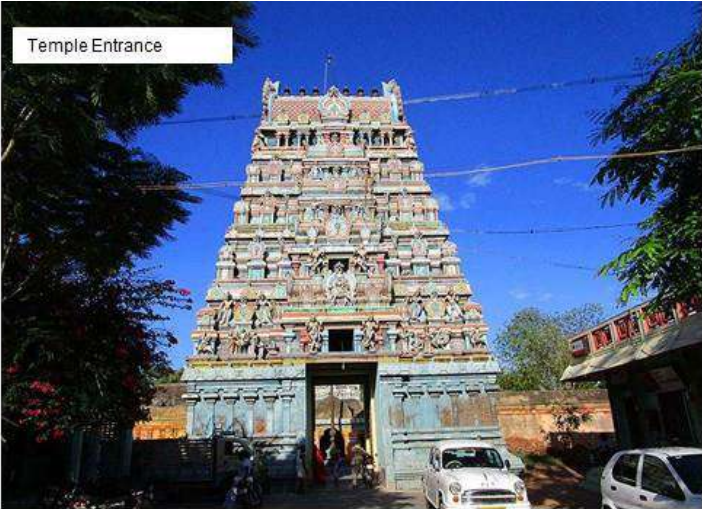
The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

1. **Attraction** – The temple holds a religious value and is mainly visited by pilgrims from local areas. The temple is maintained inadequately and requires renovation.
2. **Accessibility** – The temple is in the town of Peralam on the Kumbakonam – Karaikkal Main Road and can thus be accessed via wide urban roads. The town is serviced by many government and private buses.
 - Bus Stop ~ 100 m
 - Auto Stand and Cab Stand within ~ 100m
3. **Amenities** – The temple lacks in adequate facilities in and around the temple. The facilities present are in need of renovation or maintenance.
 - No wayfinding signages and informative signage boards are available for the site. The signage present are in Tamil language.
 - No cloak room, waiting area or drinking water facilities are available for pilgrims.
 - No F&B kiosks are present inside the temple site, though few retail shops present outside the temple site.
 - No divyand friendly infrastructure is present within the temple complex.
4. **Awareness** – The temple is not very popular with tourists and receives a footfall of ~100 on special days and ~50 on normal days. Festivals may see comparatively larger crowds with the daily footfall as high as ~300.
5. **Activities** – On normal days, the temple does not offer any activities. Every year, Shivaratri day is celebrated with grandeur and magnificence, as believed, Rahu got relieved of his pains praying to Naganathar during a Shivaratri day. On specific festival days, there are some activities such as feasts, dance recitals, music concerts, etc. Holy dip in temple tank is allowed on special request.
6. **Accommodation** – There is no accommodation facility available for pilgrims within the temple complex, but a guestroom facility is available nearby.
7. **Association with Community** – Currently the locals are involved in the basic transportation and in the regular operation and maintenance of the site. They are also engaged in numerous retail outlets around the temple, which are owned by temple. There is immense potential to involve the local community and develop and ecosystem to generate additional employment opportunities.

Figure 36-1: Location and Existing Layout



Site Pictures





Vision for the Site

The temple holds a religious value as it houses lord Shiva in a self – manifested form. The temple is visited mainly by pilgrims from local areas and lacks in basic amenities such as clean drinking water, signages or footwear stands, etc.

Even with low footfall, the temple has a potential to involve local community and develop an ecosystem to generate employment.

- The vision for the site is to attract regional tourists and enhance the visitor experience by upgrading the already existing amenities within the temple complex.
- **Target Visitor** – The site is largely a pilgrim site, with footfall from local areas. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.

Further, pilgrims' groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang and elderly).

- **Tourist Projections** – The site is categorized as a **Low Tourism Site with Low HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	40	137	356
High Value Tourists (HVT) (Both domestic and foreign)	-	-	-
Maximum Carrying Capacity	4,727		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Though the temple receives a low footfall, it has potential to operate very close to its practical capacity, which requires strict crowd management practices. The projects/ interventions proposed are envisioned with the intent to spread and manage the footfalls received.

Proposed Master Plan

Master Plan Concept

The objectives of Master planning at this Site include:

- **Improving visitor experience at the temple** – through improved circulation, conveniences, and amenities.
- **Developing two temple tanks** in the temple complex to create cultural/recreational spaces.
- Creating a **welcoming environment** around the site for the visitors.

Hard Interventions

1. **Temple tank Rejuvenation** – The temple complex houses two water tanks on either side of the temple complex. As an added attraction, the water tank can be developed into a landscaped garden, with additional elements of pathways, lighting fixtures along the tank. Traditionally, the tanks were used to recharge the aquifer and maintain the ecological cycle. The temple tank would be replenished through rainwater harvesting measures and revived for same purposes. Alternatively, it could also function as a Community congregation space, and host cultural events.

Infrastructure Created: ~270 m of hard landscaped steps with ~560 m of soft landscaped areas, ~3700 sqm of BUA



2. **Community toilet block** – A new toilet block built in place of the existing toilet facility outside the temple boundary. A community toilet block which is gender and divyang friendly. A locally built block for local community and pilgrims in the temple.

Soft Interventions

1. **Site Promotion** - Increasing temple visibility with strategies like integration with TN Assist App, etc. The temple authorities can organize recurring events, associated festivals, etc. which can help publicize, increase awareness by integrating it as part of the pilgrim trail of Kumbakonam.
2. **Site maintenance** – The temple site requires maintenance and landscaping to enhance the visitor experience. Currently the site conditions do not provide inviting surroundings.

Amenities Plan

1. **Signage (Package 1)** – Package 1 signage is proposed to feature in Tamil, English, and Hindi. Both directional signage and informational signage should be used, as per the design guidelines mentioned in Glossary of Interventions.
2. **Drinking water station**– As highlighted by many tourists in the baseline surveys, availability of free drinking water was a major issue at tourist sites. Hence, drinking water stations with RO water coolers could be installed at the temple site. A standalone drinking water station, in the courtyard, after the entrance to the main temple site.

Trunk Infrastructure

As the Site has direct access from the road, no trunk infrastructure interventions are required.

Project Identified

#	Project Component	Scale
1	Temple tank rejuvenation <ul style="list-style-type: none"> • Cleaning of temple tank • Steps • Landscaping 	3700 sqm 270 m 560 m
2	Community Toilet Block	60 sqm

#	Project Component	Scale
3	Drinking Water Station	1
4	Signage Package 1	1

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in Glossary of Interventions.

#	Project Component	Cost (INR Lakhs)
1	Temple tank rejuvenation	27
2	Temple tank steps	5
3	Temple tank - Landscaping	1
4	Drinking Water Station	3
5	Community Toilet block	5
Total		INR 40 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.
- Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- All revenues are unescalated.

d) *Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.*

There are no additional revenue streams pegged to the interventions proposed at the temple, since it is limited to the basic amenities to uphold the hygiene factors followed across the sites.

As discussed in note above, the following existing revenues, if any, are not considered:

1. Prasadam sale
2. Puja tickets
3. VIP tickets
4. Mass meals
5. Donations and Sponsorships
6. Sale of maps, guidebooks etc. (assumed to be at cost value)

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- a) *The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.*
- b) *The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.*
- c) *The expense projections are pegged at Y5 (exit of short-term Y0-Y5 phase).*
- d) *The costs are un-escalated.*

The following OPEX is expected for the site:

1. **Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
2. **Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of

broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.

3. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
4. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.
5. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.
6. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of INR 175 per kilolitre.
7. **Tank Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple tank such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee, if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as INR 5 Lakhs.

Feasibility Assessment and Implementation Plan

Though the operating expenditure incurred is more than that of the revenues earned through the proposed capital projects, the interventions planned at the temple are directed to cater to the needs of the pilgrims and to uphold the hygiene factors followed across all the sites undertaken in the cluster.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Temple tank rejuvenation	27	Y0 – Y2	HR&CE
2	Temple tank steps	5	Y0 – Y2	HR&CE
3	Temple tank - Landscaping	1	Y0 – Y2	HR&CE
4	Drinking Water Station	3	Y0 – Y2	HR&CE
5	Community Toilet block	5	Y0 – Y2	HR&CE
Total		INR 40 L		

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 1,700¹²⁹ man-days of construction labour (spread across 1-2 years of implementation)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 2 man-days¹³⁰

¹²⁹ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – As discussed above
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 4,300 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

The increase in overall number of visitors is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 35 Cr. at the site¹³¹.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%

○ Assumed cost of labour assumed for computation = INR 700 per day

- Cumulative labour man-days = 30% * CAPEX / 700

¹³⁰ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

¹³¹ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

- Stay – 35%

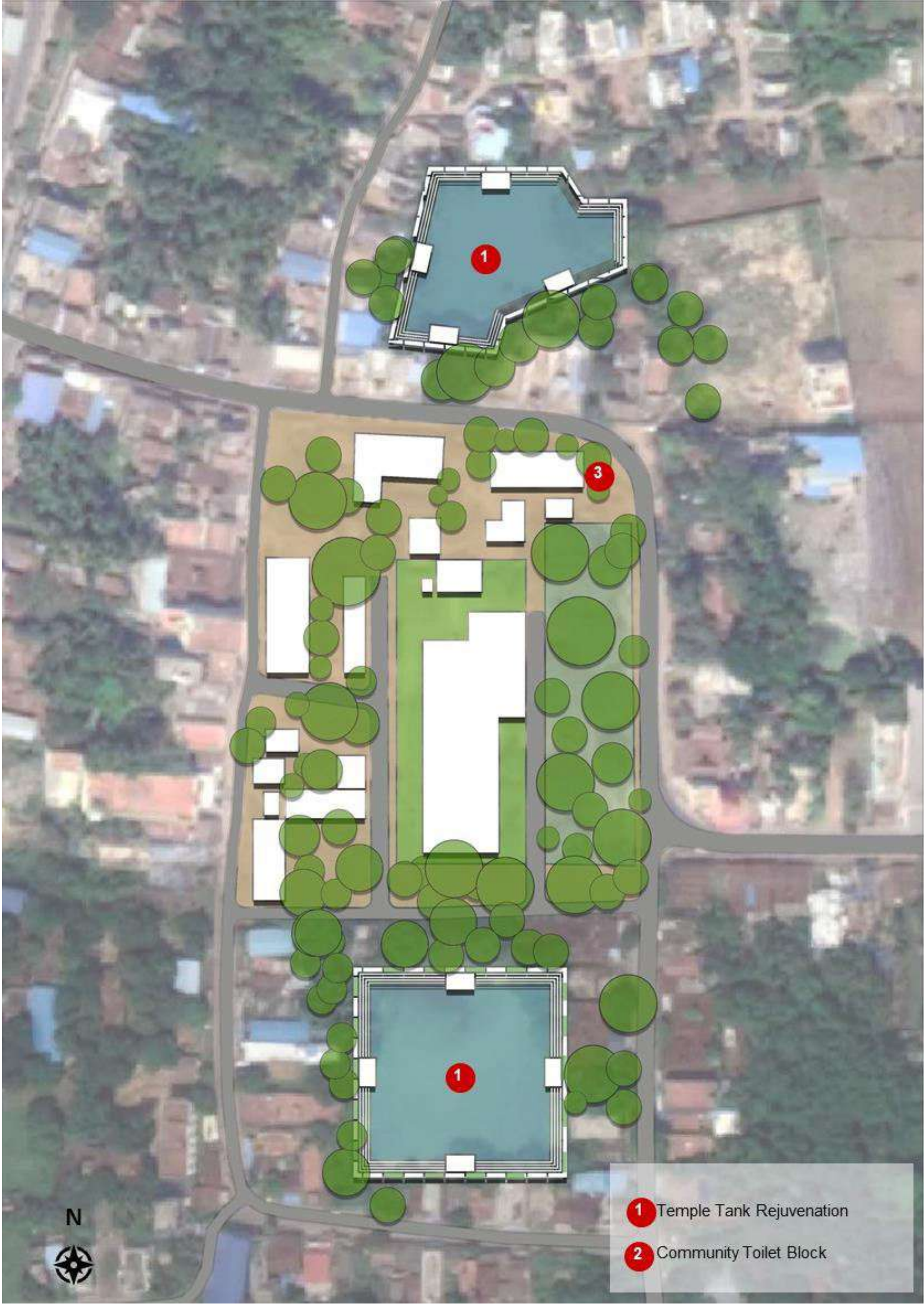
This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and suppliers will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.

Figure 36-2: Proposed Master Plan – Swayambunathaswamy Temple



37. Kumari Amman (Bagavathi Amman Temple)

Site Details

District	Kanyakumari
Name of Site	Kumari Amman (Bagavathi Amman Temple)
Site No:	Site 282A of 295
Site Use:	Temple
Category:	A (Temple)
Location:	8.0793,77.5487
Land Area:	1.3 acres+ 5.7 acres other lands
Peak footfalls:	70,000 per day (May – June, November, January)
Operator:	HR & CE Dept
Site Ownership:	HR & CE Dept
Tourist Footfall:	Dom. – 39.49 lakhs (2019 - 20) For. – 18,500 (2019 – 20)
Site Revenues:	Undisclosed
Site Orientation	Pilgrim
Site Potential:	Very high tourism site
HVT Potential:	High HVT Potential
Connectivity:	
a. Railway station:	~1.3 km km from Kanyakumari Railway Station
b. Airport:	~90 km from Trivandrum International Airport
c. Highway:	~1.5 km from SH-179, ~350m from NH-44

Trails featured on: **Nil (Pure Pilgrim Temple)**

Bagavathi Amman Temple is one of the most popular temples in Southern India. It is one of the 52 Shakti Peethams dedicated to Goddess Sati. In addition to its religious significance, the temple also provides the tourist with a scenic view of the ocean. The temple is located on the beautiful seashore of Kanyakumari, at the confluence of 3 seas. The temple enjoys immense popularity and receives high footfalls all around the year. The scope for intervention at this site is planned development interventions and uplifting the temple surroundings to attract larger footfalls.

Existing Condition

Location

The site is located on the coastline near Kanyakumari beach and is easily accessible by the NH-44. The site is situated at the southernmost tip of India. The temple has many landmarks and tourist destinations located nearby such as Kanyakumari Government museum, Tsunami Memorial Park, Kanyakumari Beach and Vivekananda Memorial & Thiruvalluvar Statue.

Existing Layout

Dedicated to Devi Kanyakumari, Kumari Amman Temple is more than 3000 years old and has beautifully sculpted gopurams and vimanas. The main deity of the temple, Devi Kumari is facing towards the east. Kanyakumari Temple is surrounded by strong stone walls and the main entrance to the temple is via the northern gate. The eastern gate of the temple is kept closed on most of the days and is opened only on special occasions. There are various others shrines within the temple complex dedicated to Lord Surya Deva, Lord Ganesh, Lord Ayyappa Swamy, Goddess Balasundari and Goddess Vijaya Sundari. The other prominent characteristics of this temple are as follows:

- The temple office is located on the north-west end of the compound near the main entry.

- The precinct of the main shrines can be accessed through the Alankara Mandapam situated on the north end.
- There are multiple mandapams within the temple complex.
- There are rooms towards the southern end of the temple precinct.
- The inner temple precinct has a parikrama path on four sides of the sanctum.
- The main temple sanctum is located at the centre of the temple complex. The presiding deity inside the sanctum is facing east
- There are two small wells inside the temple. One at the north seerapali parikrama and the other at the south-eastern end of the temple complex. The water from these well is used in the abhishekam for the main deity
- The eastern entrance of the complex is closed for most of the time of the year.

Existing Uses

Kumari Amman Temple enjoys immense popularity among tourists from various parts of India. On most days, large crowds visit the temple for worship. The other uses housed on the site include:

- One temple office
- One Prasadam stall
- 2 retail stalls (Pooja items)
- One store room
- 2 small wells

Some of the festivals celebrated at the temple are Aadi amnavasai, Thai amnavasai, Vishagham, Thirukarthigai, Navarathri and Mahara jothi.

Other Land Available

In addition to ~1.3 acres of temple land, the temple also has ~5.7 acres of land available adjacent to the temple. Out of this 5.7 acres, only ~2.8 acres of land is available for future development. The remaining land parcels are already under use (Tsunami Memorial Park & other retail shops).

Masterplanning Considerations

Applicable Regulations

- 1. CRZ Regulations** – As per CZMP Map, the site lies in CRZ-II. Please see the Coastal Regulation Zone at Kanyakumari Beach for the extent of CRZ applicability.
 - a. CRZ II – It includes the areas developed up to the shoreline which fall within the Municipal limits. The site lies on the landward side. Permissible Uses: Defence and Security purposes | Construction of buildings on the landward side of existing road/building | reconstruction of authorized buildings without a change in land-use | Temporary tourism facilities
- 2. TN HRCE Rules, 1959**
 - a. The allowed set of modification/additions as per the TNHRCE Rule, 1959 for any religious properties include work relating to construction, repair, alterations, conservation, and renovation of any building as well as other structures belonging to the religious institutions.
 - b. Any modification/addition inside the temple complex shall be done as per the procedure mentioned in TNHRCE Rules, 1959, The management and preservation of properties of religious institution rules.
 - c. The permissible activities allowed on the lands owned by HR & CE Dept. must be only relating to the religious activities and for the facilitation of Hindu pilgrim tourists.
 - d. The HR&CE Dept. owned land can be leased for a period of no more than 3 years.
- 3. Tamil Nadu Combined Development and Building Rules, 2019** – The site is falling under the coastal regulation zone in the Kanyakumari Local Planning Area- Master Plan map. Therefore, all the developments should follow the rules as per the coastal regulation zone guidelines.

Key Sensitivities

Owing to the proximity to the ocean, the activities planned along the site must be less polluting and contaminating.

Key Issues to Address

The key issues at the site identified at the baseline stage are summarised below along the 7A Framework:

1. **Attraction** – Situated on the beautiful Kanyakumari beach at the southernmost tip of the country, Kumari Amman Temple is one of the oldest Hindu temples of India. Considered one of the 52 shakti Peethams in India, the temple is quite popular among pilgrims. Dating back to more than 3000 years, this temple is not only religiously significant but also has great historical importance. The temple has been mentioned in various scriptures and also has specific mentions in the Mahabharata and Ramayana. It is also believed that Swami Vivekananda first worshiped the Devi at this temple before embarking on his remarkable journey. The other factor that attracts tourists to this site is its beautiful location. Situated on the confluence of the 3 seas, the temple offers spectacular views of its surroundings. In addition to this, there are multiple tourist sites that tourists can explore while visiting the temple.

2. **Accessibility & Mobility** – The temple is easily accessible via NH-44 which connects Kanyakumari to nearby towns and cities. The major modes of transport people use to commute to the site include private vehicles, buses (private and public both) and private taxis. The nearest bus stop is located at ~1.5 km distance from the site. Auto and taxi stand is located ~500m away from the temple.

Parking- 2 parking lots are available outside the temple complex in close vicinity (~250m from the temple). The parking charges range for buses INR 80 and cars INR 50. However, visitors also park on the streets.

3. **Amenities**- The visitor amenities within and around the temple are well maintained but need some additions.

- The site has one toilet block located for both males & females.
- Free drinking water is installed with RO purification.
- Adequate dustbins are provided on site and the site premises are kept clean regularly
- 25 CCTV cameras cover the entire temple premises. Further, 25 security guards service the site.
- The main temple boundary is walled and there is sufficient street lighting around the site. ~20 fire extinguishers are also provided at the temple

- There is one 1 prasadam stall on site which is given out on lease and 2 retail shops at the temple, one selling pooja items while the other is a flower shop
- Online reservations not available. The temple has free access and special tickets (INR 20) and Abishegam INR 250 (2 members) provision.
- There are adequate signages & way findings at the temple. The signages are in Tamil, English, Malayalam, Hindi. However, there aren't any signboards that describe the temple's history.
- Photography is prohibited and men have to remove shirt while entering the temple
- A backup power facility with a 25KV generator is available
- The temple has the provision of 1 wheelchair
- There is one tour guide present on site with 50 tours taken on normal days. The average duration of tours varies from 15-20 min and the tour available in Hindi, Tamil, Malayalam and English languages. However, there are no audio-visual tour guides available
- Tourist Information Centre (TIC) is present ~250m from the site. They have layout maps and Brochures for the tourist attractions in Kanyakumari
- Ticketed Lockers (10INR) and free of cost footwear stands facility is also available at the temple.

4. **Awareness**- The temple enjoys immense popularity among tourists and pilgrims. The site is visited by both domestic & foreign tourists, with domestic visitors originating mainly from Kerala, Karnataka, Uttar Pradesh & West Bengal. The foreign tourists are mainly from Germany, Singapore & Malaysia. The temple is visited by solo travellers as well as large groups. Tourist groups especially from Northern India and from Sabri Malai visit this temple. It is recommended by renowned travel referral/review aggregators such as Lonely Planet, TripAdvisor, etc. HRCE maintains the temple website with relevant information about the temple and its activities.

5. **Activities**- The temple priests perform pooja (rituals) on a daily basis and during festivals. There aren't any activities that happen regularly at the temple. However, there are multiple activities in the immediate surroundings of the temple like local retail shops, viewpoints, food market, etc.

- 6. Accommodation-** The temple enjoys a variety of accommodation options, ranging from 3-star hotels to budget lodges. There are multiple 3-star luxurious hotels & resorts near the temple with room tariffs ranging from INR 2000 to INR 4000. The budget hotels around the temple, including chains like OYO, have average room tariffs ranging from INR 800 to INR 1800.
- 7. Association with Community-** The city of Kanyakumari is known for its local handicrafts made out of the shell. The tourists that come to visit the temple also purchase the various kinds of handicrafts and souvenirs handcrafted by the locals. The temple is an intrinsic part of the town. The locals not only visit the temple for daily worship but also earn their livelihood from it. The community benefits from temple tourism in various forms which include direct employment at the temple, small retail shops near the temple area, hotels & lodges, restaurants, etc.

Figure 37-1: Location & Existing Layout, Kumari Amman (Bagavathi Amman Temple)



Site Pictures





Figure 37-2: Coastal Regulation Zone at Kumari Amman (Bagavathi Amman Temple)

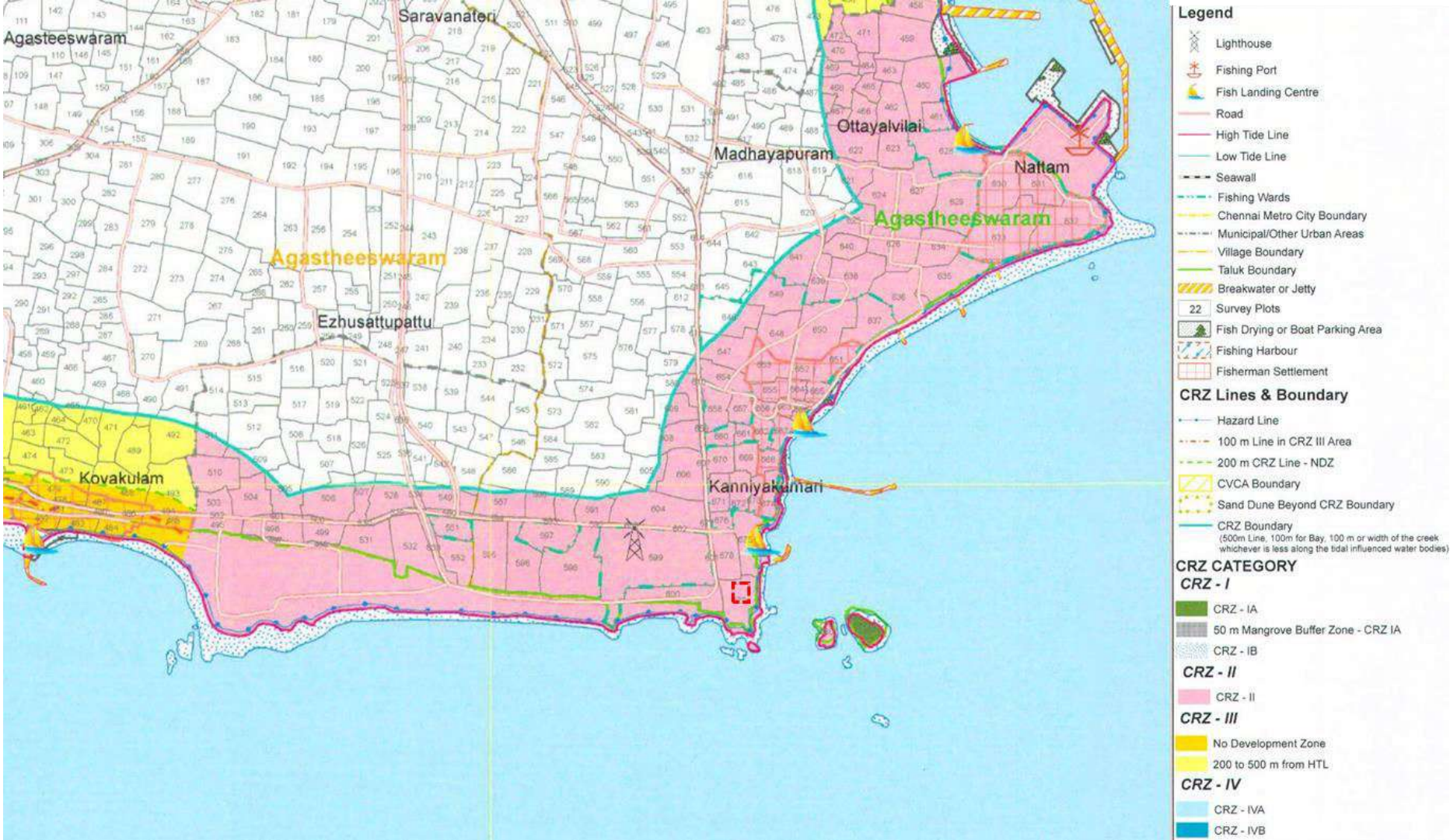
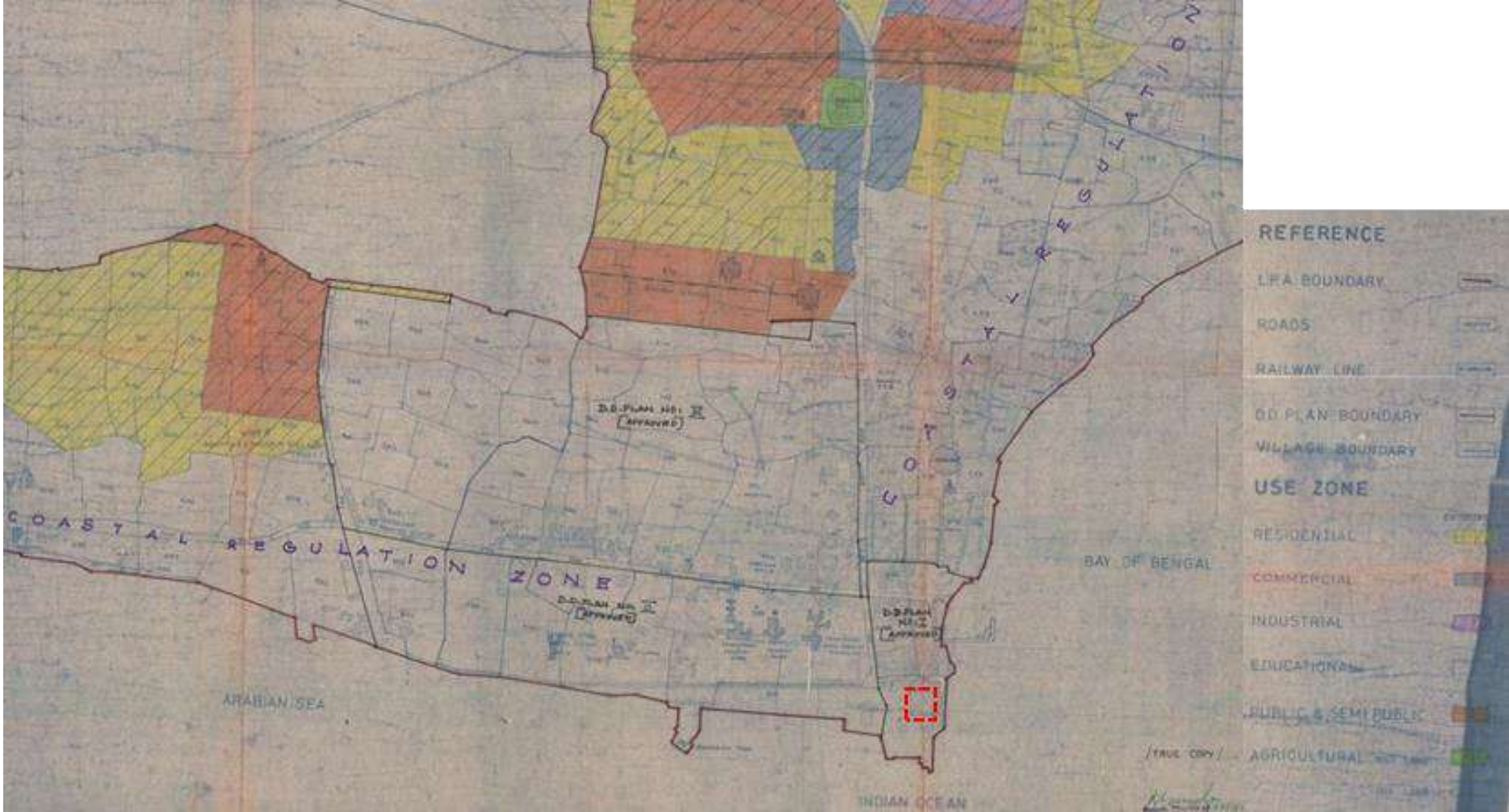


Figure 37-3: Site Land Use- Kanyakumari Local Planning Area- Master Plan



Vision for the Site

Kumari Amman Temple is one of South India’s most important temples and as a prime attraction of Kanyakumari, it draws large groups of pilgrims and tourists who combine a visit to the temple with a boat ride from the adjacent pier to the Vivekananda Rock Memorial Island. As a tourist magnet, the temple’s direct vicinity faces issues about crowd control and inadequate parking. Tourist-friendliness at the site can be improved by better traffic management, a special Temple Interpretation Centre and improved more Tourist-friendly design of the streets, the Temple Square and Bathing Ghats.

- **Target Visitor** – The site currently draws a large number of pilgrim due to its religious value. Further, due to its monumental value, rich architecture and historical importance, the site draws good number of tourists – both foreign and domestic.

Having said that, given the location of the site and its rich historical value, there is a significant potential to increase the tourist footfalls by improving the quality of experience and amenities at the site.

The composition of visitors at the site includes all age groups of visitors and hence, facilities would need to be provided for all (especially for children, Divyaang and elderly).

- **Tourist Projections** – The site is categorized as a **very high tourism site with high HVT potential.**

Past footfall data for the site has been received from sources like the site manager and TTDC’s compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	3,931	7,839	11,157
High Value Tourists (HVT) (Both domestic and foreign)	37	141	299
Maximum Carrying Capacity	15,756		

Note:

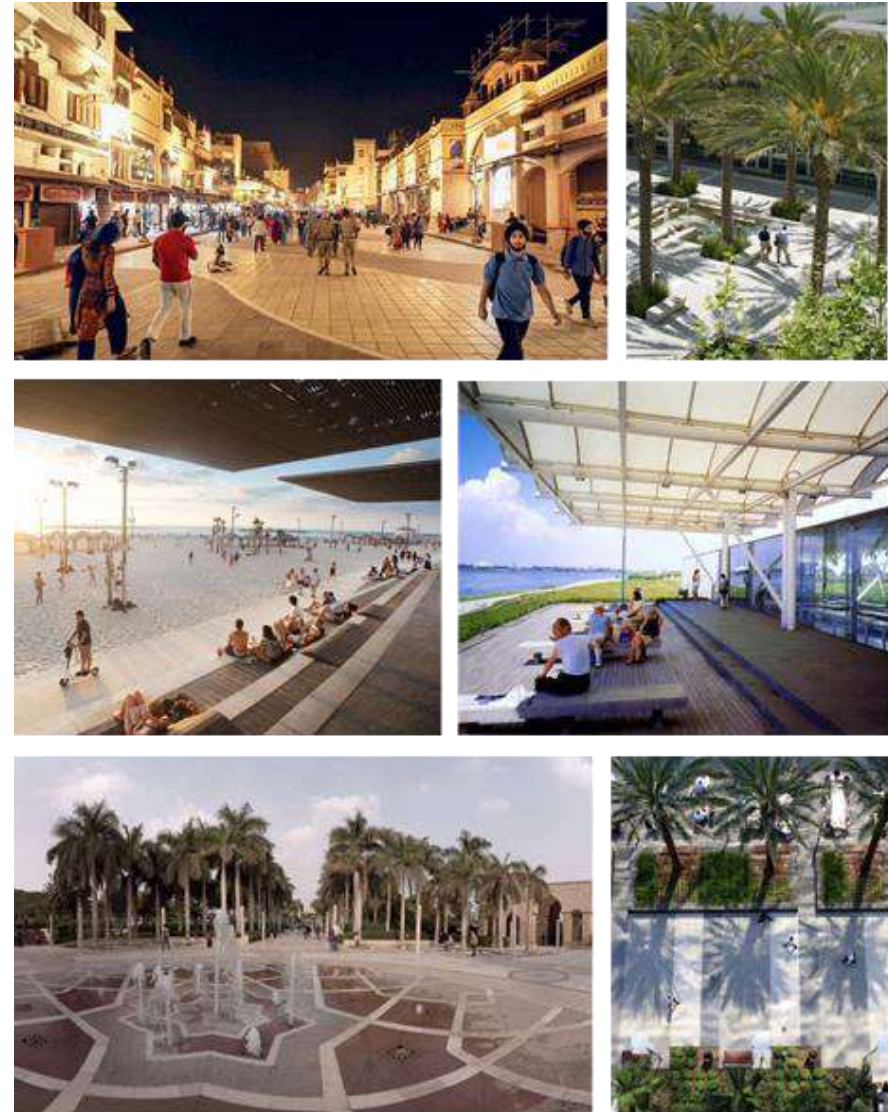
- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Though the temple receives a very high footfall, it is operating very close to its practical capacity, which requires strict crowd management practices. The projects/ interventions proposed are envisioned with the intent to spread and manage the footfalls received.

Proposed Master Plan

Approach to Masterplanning

- The streets in the Old Town Area, like Sannadhi Street leading up to the Kumari Amman Temple's main entrance and others just behind the Beachfront, should be improved with a combination of Traffic calming and Pedestrianisation allowing the creation of a much more attractive pedestrian-friendly public space in this historic, most scenic and crowded part of the city.
- The corner drop-off point to the temple along the beach road should become a pedestrianized entrance plaza, increasing the carrying capacity at this very busy point for pedestrian traffic. Visitors who come by bus/car can be dropped off and picked up here. Parking that has been organized at separate sites may need to be increased, by a better organization of these plots or the addition of an MSCP.
- The Kumari Amman Temple's Plaza offers the best views of the spectacular Thiruvalluvar Statue and Vivekananda Rock. As the most southern tip of the Indian Subcontinent, it should be celebrated in a more dignified fashion. The entire plaza should be redesigned and landscaped with the highest quality paving, street furniture and ornamental trees. The focus should lie much more on its cultural, historic, religious and geographic significance and not on unregulated commercial activities of encroaching hawkers. One new pavilion should be planned for hawkers, in combination with a zero-tolerance policy towards any future encroachment and hawking on the rest of the temple plaza.
- The Triveni Sangam Bathing Ghats should be redesigned and upgraded, fitting more with the significance of the site has for the many pilgrims who come here to bathe. One new pavilion is planned as changing rooms for bathers.
- For the many visitors who come to enjoy the sunrise or sunsets and the views towards the monuments will sit at the stepped area. This area should be upgraded with a large canopy structure providing shade, whilst not obstructing any views.
- The landscape interventions and newly built structures should be of the highest architectural quality, sustainable and fitting with the historic context of the Site.



Kumari Amman Temple Square: High quality landscaping, pedestrian friendly shaded spaces to sit, relax, bath and enjoy the views

Hard Interventions

1. Traffic Calming, Pedestrianisation Improvements around the Temple - To provide a safe experience for pilgrims when walking through the streets.

Infrastructure Created: ~200 m long x 10 m wide hard landscaped pedestrianized streets with new trees and street furniture

2. Kumari Amman Temple Interpretation Center - One of the major aspects of the Tourist’s experience when visiting a temple complex that needs to be improved is the lack of proper amenities, tourist information and engaging background information at the temple sites. To address all of the above, a small Site Interpretation Centre is proposed at the existing temple offices right outside the temple walls. This historic building lies in a quiet courtyard garden space, which is the perfect setting for tourists to get away from the hustle and bustle inside the Temple and surrounding streets.

Infrastructure Created: ~400 sqm of built-up area

3. Hawkers Pavilion – A dedicated area for hawkers and vendors to carry out their economic activities.

Infrastructure created: ~500 sqm built-up area.

4. Triveni Sangam Bathing Ghats and Changing Room/ Shower / Toilets Pavilion – Development of ancillary facilities for the devotees who take a holy dip and bathe in the sea.

Infrastructure created:

- ~500 sqm built-up area
- ~500 sqm of new steps, railings, retaining walls, etc for bathing ghats

5. Shading Structure and Landscaping – A resting space with landscaping. The landscaping will feature native and religious flowers and bushes, and should, as far as possible, be the least maintenance-oriented and be self-sustainable. This shall thus create a visual treat for the visitors.

Infrastructure created: ~200 sqm shading canopy structure



Interpretation Centre Kumari Amman Temple



Hawkers Pavilion



Changing Room / Toilet Pavilion and Bathing Ghats

Soft Interventions

1. **Engaging the Local Community** – Planning for a dedicated hawker pavilion as a way to ensure the rest of the temple plaza remains clear of more encroachment, as well as strategies for pedestrianisation and traffic calming in the old town area can only be achieved with the local community brought in as an active participant in the planning, design and operations of these interventions. This is the only way to create ownership with important stakeholders and more assurance the maintenance and cleanliness of these important public spaces will be taken seriously.
2. **Crowd Management** – As the access road is crowded and unable to handle traffic during peak season, therefore measures will be undertaken as:
 - Limit the number of people within the temple complex at any time.
 - Deploy ushers to ensure people move through the temple at a minimum pace.
 - Tents outside and inside the temple complex could act as temporary holding areas for devotees, to prevent overcrowding inside, only during festivals.
 - Access timings can be made exclusive for high-value tourists.

Amenities Plan

1. **Lighting** – Improved streetlighting focusing on pedestrians is proposed along the Beachfront, the pedestrianised streets, all public plazas, the pier/breakwater. Streetlamps design is proposed to follow the same design guidelines as for street furniture.
2. **Street furniture** – The existing street furniture needs improvement and is thought of more comprehensively and sustainably. Currently, the street furniture is not sufficient nor comfortable. An international standard to the design and quality of the street furniture should be the benchmark. Street furniture needs to become an integral part of the public space landscape design. A detailed landscape design guideline manual will need to be prepared that will form the standard for any future addition or change to the street furniture from seating benches, shading devices, canopies, cycle racks, dustbins, bollards, paving materials, wayfinding, etc.
Infrastructure Created: ~8,000 sqm hard landscaping, with new trees and street furniture

3. **Planting & landscaping** – More planting is required to create more shaded areas and to make space attractive also during the daytime. More greenery in the shape of shrubs will also help to demarcate different zones better and sculptural and flowering trees are required to beautify certain important spaces and emphasize certain vistas and viewpoints.
4. **Signage (Package 2)** – Signage is proposed to feature Tamil, English and Hindi. Both directional signage and informational signage should be used, as per the design guidelines as mentioned in Glossary of Interventions.
5. **Parking** – Surface parking is proposed to be replanned to maximize the number of ECS spots available at the remote parking sites currently used by Temple Visitors. The capacity may need to be increased even more by planning for MSCP at these plots.
6. **Technology Interventions (Package 2)** – Being a flagship tourism site, Kumari Amman Temple should offer all technological conveniences and employ technological tools for optimal management. These include:
 - Free WiFi
 - Compatibility with TN Assist App
 - AR Experiences
 - CCTV coverage
 - Security beacons/panic buttons at remote parts of Site
 - Electronic visitor counters

Trunk Infrastructure

As the site has excellent connectivity, no trunk infrastructure interventions are required.

Please refer to the Design Guidelines mentioned in the Glossary of Interventions regarding amenities and urban design.

Projects Identified

#	Project Component	Scale
1	Traffic Calming and Pedestrianisation Improvements	200 m x 10 m
2	Kumari Amman Temple Interpretation Center	400 sqm

#	Project Component	Scale
3	Hawkers Pavilion	500 sqm
4	Triveni Sangam Bathing Facilities- <ul style="list-style-type: none"> Built-up area New steps, railings, retaining walls, etc for bathing ghats 	500 sqm 500 sqm
5	Shading canopy structure	200 sqm
6	Hard landscaping	8000 m
7	Signage (Package 2)	1
8	Technology (Package 2)	1

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in Volume A.

#	Project Component	Cost (INR Lakhs)
1	Traffic Calming and Pedestrianisation Improvements	200
2	Kumari Amman Temple Interpretation Centre	42
3	Hawkers Pavilion	7
4	Triveni Sangam Bathing Facilities- Change area	6
5	Triveni Sangam Bathing Facilities- Toilet	20
6	Triveni Sangam Bathing Facilities- Drinking water	3
7	Triveni Sangam Bathing Facilities- store room	5
8	New steps, railings, retaining walls, etc for bathing ghats	22
9	Shading canopy structure	3

#	Project Component	Cost (INR Lakhs)
10	Hard landscaping	17
11	Signage (Package 2)	3
12	Technology (Package 2)	7
Total		INR 335 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- All revenues are unescalated.
- Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

The following revenue sources are expected for the site:

- Kiosks** – Captures 2 kiosks at the facilitation centre, each to be rented out at INR 1.5 Lakhs per annum.
- Pay per use Toilets/ change rooms** – Assuming that ~15% of the visitors would use the toilets at INR 10 per person.
- Hawker zone** – Captures renting out of 500 sqm of built-up space at INR 950 per sqm per annum.

Considering the above, total additional un-escalated revenues from the site in Y5 is estimated as INR 1.5 Cr.

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- a) *The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.*
- b) *The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.*
- c) *The expense projections are pegged at Y5 (exit of short-term Y0-Y5 phase).*
- d) *The costs are un-escalated.*

The following OPEX is expected for the site:

1. **Manpower Costs** – Additional manpower will be required at the site to manage the proposed interventions.
 - a. Assuming **4 Help-desk staff** for the facilitation centre, amenity block, and the retail area.
 - b. Assuming **3 security personnel** for the facilitation centre, bathing area, and the parking.
 - c. Assuming **3 Administration staff** to overlook the operations of the facilitation centre, retail spaces, and the bathing area.
2. **Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
3. **Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.
6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and

responsible disposable as per the environment norms. It is calculated based on the footfall projections.

7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.

The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of INR 175 per kilolitre.

8. **Bathing area Maintenance cost** – This includes the expense incurred for day-to-day maintenance of the temple bathing area such as de-eutrophication, removal of the floating pooja discards, water recycling, etc.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee, if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as INR 1 Cr.

Feasibility Assessment and Implementation Plan

Given that the estimated additional revenue from the proposed interventions exceeds the operational expenses incurred, it can be concluded that the interventions proposed at the site are **Operationally Self-Sustainable** and therefore beneficial to the temple and the entire Kanyakumari cluster.

The interventions proposed at the site are largely for improving amenities and experience of visitors and hence have an associated “social cause”. Also, since leasing of spaces beyond 3 years is not allowed by HR&CE, PPP is not an option for development and implementation. Hence, the recommended interventions will have to be implemented and funded by HR&CE itself.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Traffic Calming and Pedestrianisation Improvements	200	Y0 – Y2	HR & CE
2	Kumari Amman Temple Interpretation Centre	42	Y0 – Y2	HR & CE
3	Hawkers Pavilion	7	Y0 – Y2	HR & CE
4	Triveni Sangam Bathing Facilities- Change area	6	Y0 – Y2	HR & CE
5	Triveni Sangam Bathing Facilities- Toilet	20	Y0 – Y2	HR & CE
6	Triveni Sangam Bathing Facilities- Drinking water	3	Y0 – Y2	HR & CE
7	Triveni Sangam Bathing Facilities- store room	5	Y0 – Y2	HR & CE
8	New steps, railings, retaining walls, etc for bathing ghats	22	Y0 – Y2	HR & CE
9	Shading canopy structure	3	Y0 – Y2	HR & CE
10	Hard landscaping	17	Y0 – Y2	HR & CE
11	Signage (Package 2)	3	Y0 – Y2	HR & CE
12	Technology (Package 2)	7	Y0 – Y2	HR & CE
Total		INR 335 L		

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 14,350¹³² man-days of construction labour (*spread across 1-2 years of implementation*)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 2 man-days¹³³
- Retail and F&B spaces = 50 man-days per day¹³⁴

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – As discussed above
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 36,000 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

¹³² Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.

- As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
- Assumed cost of labour assumed for computation = INR 700 per day
 - Cumulative labour man-days = 30% * CAPEX / 700

¹³³ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

¹³⁴ Assuming average 2.5 persons per kiosk / shop

The increase in overall number of visitors is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 1,780 Cr. at the site¹³⁵.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and suppliers will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.

¹³⁵ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

Figure 37-4: Proposed Master Plan – Kumari Amman (Bagavathi Amman Temple)



- 1 Car Drop-Off / Pick Up
- 2 Pedestrianisation
- 3 Dedicated Hawker Pavilion
- 4 Landscaping/ Greening Plaza Triveni Sangamam
- 5 Canopy Structure for shading at View Point
- 6 Pavilion for Toilets/ Shower/ Changing Rooms
- 7 Reuse office as Temple Interpretation Center /
- 8 Landscaping / Greening / Pedestrianisation all four streets around Temple

WEEKEND DESTINATIONS



Weekend Destinations consist of popular weekend getaways, with varied categories of sites such as bathhouses, beaches, caves, eco-resorts, etc. These destinations are beautiful and peaceful, far from hustle and bustle of the city and tourists can head to one of these sites when time is a constraint. Located in close proximity to major cities, these sites offer various activities to engage the visitors, varying from adventure, luxury, spiritual enlightenment, to sightseeing and relaxation.

Summary

Sites & their Tourism Potential

All footfalls are in '000s per annum

D = Domestic / Pilgrim | HVT = High Value Tourist (domestic & foreign)

S. No.	Site	District	Site	Product Type	Y0 - D	Y0 - HVT	Y5 - D	Y5 - HVT	Y10 - D	Y10 - HVT	Carrying Capacity	Tourist Positioning	HVT Positioning
1	13	Chengalpattu	Mudhaliarkuppam Boat House and Eco Resort	Boathouse	40	0.8	150	3	415	8	400	Low tourism site	Low HVT Potential
2	73	Cuddalore	Silver Beach, Cuddalore	Beach	650	1	700	1	745	1	7,870	Medium tourism site	Moderate HVT Potential
3	142	Tiruvallur	Gudiyam Caves	Cultural Sites	1	0	3.8	0	10	0	16,425	Low tourism site	Low HVT Potential
4	151	Mayiladuthurai	Kodiyampalayam Beach (near Pichavaram)	Beach	60	0	160	2	385	5	13,770	Medium tourism site	Moderate HVT Potential
5	185	Erode	Kodiveri Falls and Park	Waterbody	813	0	1,850	0	2,555	0	1,480	Medium tourism site	Low HVT Potential
6	295	Kanyakumari	Eraiamman Padithurai to Viravalai Boating	Waterbody	-	-	-	-	-	-	-	Very low tourism site	Moderate HVT Potential

S. No.	Site	Estimated CAPEX (INR Cr)	Implementation Agency	Private Sector Projects
1	Mudhaliarkuppam Boat House and Eco Resort, Chengalpattu	4.25 - 4.5	TTDC	Boathouse – Licensed to operators, Eco-resort – O&M on PPP
2	Silver Beach, Cuddalore	2.6	Town Panchayat	Sea Pier, Jetty – Licensed to operators
3	Gudiyam Caves, Tiruvallur	5.5 - 6	Forest Department	-
4	Kodiyampalayam Beach, Mayiladuthurai	18 - 20	Town Panchayat	Boathouse & Sea pier/ Jetty – Licensed to operators
5	Kodiveri Falls and Park, Erode	3.8 - 4	PWD	Adventure Park – Licensed to operators
6	Eraiamman Padithurai to Viravalai Boating, Kanyakumari	7.2	PWD	Beachside Pavilions – Annual Lease, Boathouse – Licensed to operators

Impact

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment Opportunities

The proposed interventions are planned to:

- Increase visitor comfort and convenience to the tourist sites
 - Increase tourist footfalls at the sites
- Promote higher footfall of high-value tourists – thereby increasing overall spending at the sites.

This tourist spending will directly flow to the local economy and communities.



~225k man-days Construction Jobs



~150 man-days per day during operations jobs

(Accommodation, Site maintenance & housekeeping, Activity Operators, Retail and F&B operators, hawkers, vendors etc.)



~190k man-days Indirect & Induced Jobs

created due to multiplier impact of construction and operations jobs

Benefitted Stakeholders



Local Weavers, Craftsmen and Artisans



Security & Maintenance Staff



Retail / F&B Vendors → Farmers



Tour Guides & Operators, Activity Operators



Transporters (Taxi/Auto)



Hospitality Staff



Fishermen

1. Mudhaliarkuppam Boat House and Eco Resort, Chengalpattu

Site Details

District	Chengalpattu
Name of Site	Mudhaliarkuppam Boat House
Site No:	Site 13 of 295
Site Use:	Boathouse
Category:	E (Waterbodies / Boathouses)
Location:	12.3518, 80.0622
Land Area:	~5 acres
Peak footfalls:	~1000 per day (Weekends and Holidays)
Operator:	TTDC
Site Ownership:	TTDC
Tourist Footfall:	Dom. – 41,088 (2019 - 20) For. – 399 (2019 – 20)
Site Revenues:	INR 59.29 lakhs (2019 – 20)
Site Orientation	Tourist
Site Potential:	Low tourism site
HVT Potential:	Low HVT Potential
Connectivity:	
a) Railway station:	35 km from Melmaruvathur Railway Station
b) Airport:	~90 km from Chennai International Airport
c) Highway:	~850 m from SH-49, ~36 km from NH-32
Trails featured on:	Nil (Weekend Destination)

Mudaliarkuppam Boat House, also known as Raindrop Boat House, is a water sports facility centre developed by the Tamil Nadu Tourism Development Corporation on the Odiyur lake backwaters. The boathouse is well located on the ECR, between Chennai and Pondicherry. The facility provides varied boating offerings such as kayaking, banana boating and Island Beach drop-offs. While the site has all the basic necessities, there is a lot of untapped potentials that the site's location and availability of lake-facing vacant land have to offer.

Therefore, the scope for interventions includes the refurbishment of the existing facilities and the addition of waterfront activities along with the development of Eco-Huts for accommodation purposes.

Existing Condition

Location

The site is located in Chengalpattu district on the East Coast Road, ~40 km south of Mamallapuram and ~90 km from Chennai city. The site is sparsely populated and surrounded by restaurants, resorts, hotels, churches, temples, and mosques. Prominent tourist landmarks present around the boat house are Sri Ayyanar Alayam, Odiyur lake backwaters,, and Mudaliarkuppam backwaters.

Existing Layout

The ~5 acres land parcel overlooks the Odiyur Lake backwaters and is located on the eastern side of the Eastern Coast Road (ECR). Currently, only a part of the ~5-acre land parcel is being utilized as the boathouse complex, with a restaurant, jetty & dock area. The remaining land is vacant and can be proposed for development. The site accommodates the following:

- **Restaurant** – There is a small restaurant at the beginning of the complex.

- **Ticket counter**
- **Community Hall** – The first floor of the complex is used as a small party hall.
- **Parking** – Vehicles are parked near the entrance.
- **Washrooms** – There is a washroom present in the main boat house complex, towards the end furthest from the entrance.
- **Dock area** – Dock area is used to access the boats.

Existing Uses

The boat house is used for various water sports activities such as Banana Boating, Water Scooter, Kayaking, and Speed boat ride. It is also famous for bird watching, as it attracts many native and migratory bird species such as brahminy kite, brown-headed gull, greater flamingo, Indian skimmer, osprey, painted stork, slender-billed gull, stone curlew, and white-bellied sea eagle during October to March. The restaurant in the complex hosts a few private events, such as small birthday/anniversary parties.

Other Land Available

This boat house owns a total of ~5 acres. Out of these, ~5 acres, the current boat house building covers ~0.5 acres of land. The remaining ~4.5 acres of land is available for development.

Operating Performance

The revenue of the boat house for FY 2020 is ~INR 59.29 lakhs, with a net profit of INR 2.7 lakhs. The revenue split (in lakhs) is as follows:

- Water sports – 45.5
- F&B – 11.3
- Others – 2.5

The net profit for the boat house has been reduced by 5.58 lakhs from the last FY. Repairs & Maintenance worth INR 3.73 lakhs were undertaken in FY 2019-2020.

Master Planning Considerations

Applicable Regulations

1. **CRZ Regulations** – As per CZMP Map, the site lies in CRZ-III. The regulations prescribe:

- a) No construction is permitted within NDZ in CRZ III, except for repairs or reconstruction not exceeding the existing Floor Space Index, existing plinth area, and existing density and for permissible activities.
- b) Only a few activities are permitted, such as agriculture; construction of public amenities like schools and facilities which are required by local inhabitants; facilities required for local fishing communities such as fish drying yards, auction halls, etc.
- c) Wherever an NH or SH is passing through the NDZ of CRZ-III areas, temporary tourism facilities such as toilets, drinking water facility and temporary shacks can be taken up on the seaward side of the road. On the landward side in the NDZ, resorts or hotels and associated tourism facilities shall be permitted.
- d) Temporary tourism infrastructure for basic amenities such as toilet blocks, change rooms, drinking water facilities, etc. are permitted in the beaches and NDZ of CRZ III areas, keeping a minimum distance of 10 m from HTL.

Key Sensitivities

Owing to the proximity to Odiyur Lake, the activities planned along the site must be non-polluting and non-contaminating.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

1. **Attraction** – Mudaliarkuppam is a fun tourist destination that attracts both tourists and locals. The boat house offers water sports along with an array of boats like rowboats, pedal boats, water scooters, speed boats, and many more for the visitors. The geographical features of the Coromandel coast especially the East Coast Road attracts many native and migratory bird species from October to March and thus the site is the hot spot to watch birds. Apart from water sports and bird watching, the site lacks any other attraction in the vicinity.
2. **Accessibility** – This boat house is ~95 km away from Chennai and is located along the ECR road which makes connectivity easy. However, there is a lack of public transport to this site. The closest railway station and airport to the site are Melmaruvathur railway station and Chennai International Airport, which is situated at a distance of ~35 km and 90 km from the site. Cabs are easily

available on the site, however, there is no Auto stand in the vicinity. Therefore, the best option and major modes of transport that people prefer to use to commute to the site include cabs and private vehicles.

- 3. **Amenities** – The site has all basic amenities such as washrooms, security, and safety equipment, ticket counter, online transaction facility, information boards, adequate dustbins, and streetlights. However, the site could develop additional facilities to attract and cater to more visitors.

Parking – Vehicles can be parked as they enter the boat house premises just before the complex. The parking area can accommodate 5 cars, 1 bus, and 10 bikes at a time. Parking is charged on an hourly basis.

- 4. **Awareness** – This boat house is one of the most visited attractions from Chennai. It attracts families and large groups who want to spend a day relaxing and enjoying the water sports/activities. Domestic visitors from Kerala, Andhra Pradesh, and Pune also flock to this site. It is recorded that the Mudhaliarkuppam has an approximate footfall of 500 – 1,000 visitors on Sundays and other holidays.

- 5. **Activities** – The site offers various water sports activities such as Banana Boating, Water Scooter, Kayaking, and Speed boat ride. The site is also visited to watch migrating bird species. Apart from these activities, the boathouse complex has a restaurant and a community hall that hosts small events like birthday and anniversary parties. To improve footfall on the site, there is a need to develop new activities and upgrade several existing activity points.

- 6. **Accommodation** – The site lacks any accommodation in the vicinity. The closest accommodation options are available at Mahabalipuram which is ~40 km away from the site. The rates range from around INR 2000 to 4000 per room per night. Most of the visitors prefer to make a one-day trip and head to Chennai. However, the rest stay in Pondicherry or Mahabalipuram.

- 7. **Association with Community** – The site is secluded from any neighbourhood and is only accessible through privately-owned cars and cabs. The non-availability of buses and autos to reach the boat house leads to the loss of local visitors on the site.

Market Offerings

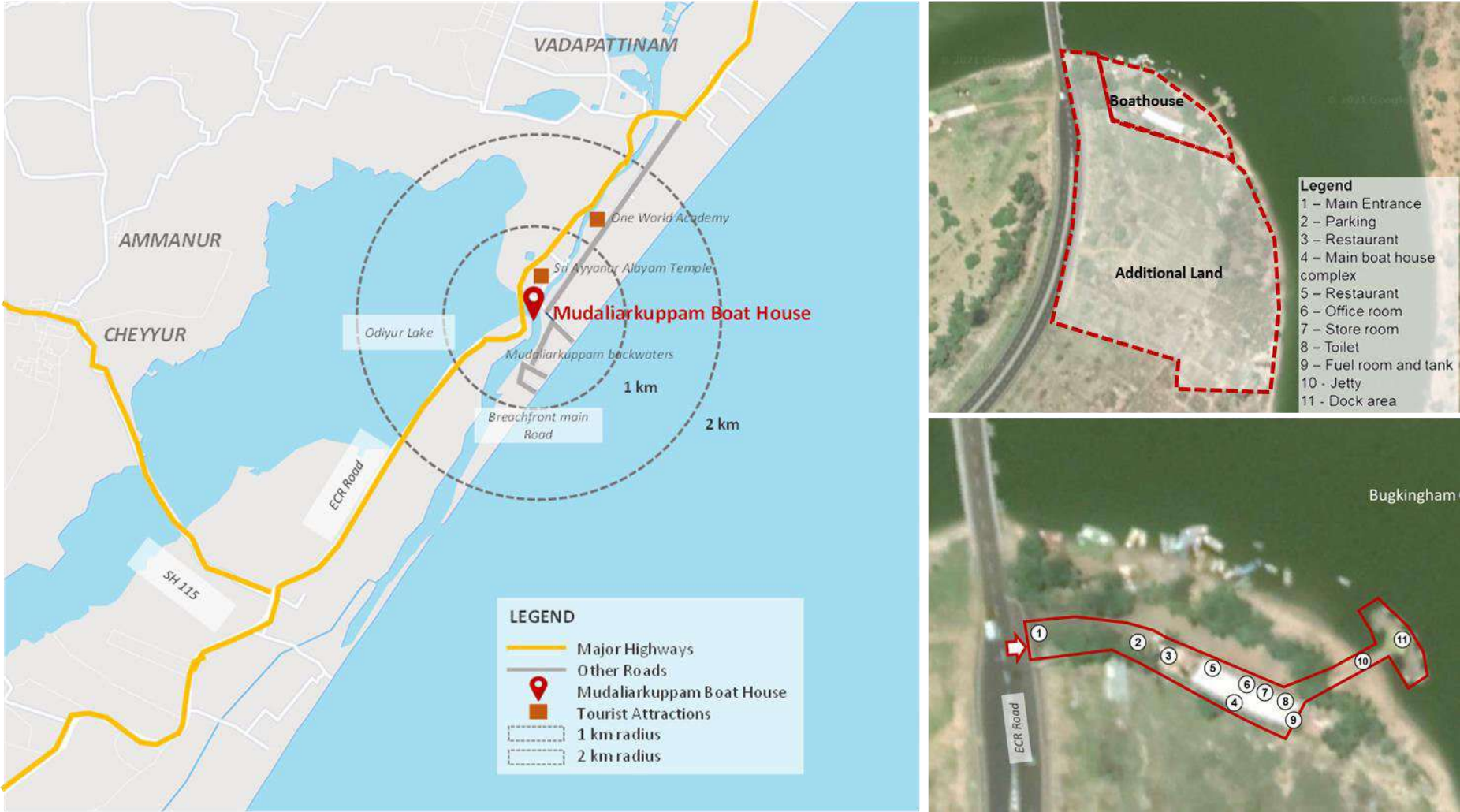
The boat house does not have any accommodation facility. The closest accommodation options are available either in Mahabalipuram or Pondicherry within distance of ~30 km. The market offering in terms of accommodation within ~30 km radius are:

Hotel/ Resort	Category	Tariff (INR)
Nirvana Boutique Hotel	2	1953
Spago Inn	Budget	1404
Hotel Mahabs	2	2110
Hotel Mamalla Heritage	2	1900
Intercontinental Chennai	5	7450
Hotel Sakthi Park	Budget	1851
Mangrove Resorts	4	3500
Chariot Beach resort	4	8000
Chariot Beach Resort	5	8064
OYO 29023	Budget	2292
Four Points by Sheraton Mahabalipuram Resort & Convention Center	3	4841
Radisson Blue Resort	5	8500
Sea Breeze Beach Resort	3	2550

Figure 1-1: Competitive Resorts near the site



Figure 1-2: Location and Existing Layout



Site Pictures





Figure 1-3: Coastal Regulation Zone at Mudaliarkuppam Boat House



Vision for the Site

The Boathouse is a prominent tourist attraction that offers visitors a wide range of sports activities, ranging from row boats, pedal boats, water scooters, speed boats, banana boats, and kayaking. The site has the potential to attract more visitors and enhance their experience by providing leisure activities and a small Eco Resort/Camp. There is a huge opportunity to provide these services as there are 4.5 acres of vacant land available adjacent to the site. The vacant land is located on ECR, in the middle of Chennai and Pondicherry, making it ideal for tourists to spend the night in a waterfront resort.

Since the site lies in CRZ, small eco huts are proposed with temporary structures that can be removed and reinstalled as per requirement. For instance, during monsoon season, huts may be removed from the site for safety reasons. Space for camping and camper vans can be provided to increase activities on the site.

The site shall reflect the natural beauty of the area and remain in harmony with its surroundings to provide an intimate natural experience to the visitors. The existing facilities and attractions within the Boathouse need to be improved to attract more high-value tourists.

- **Target Visitor** – The site currently draws a good number of tourists – both foreign and domestic.

Examining the scope of activities and the kind of development which can take place at the Site, the master plan aims to attract a wide range of tourists, who have a keen interest in Water sports activities and Eco-Tourism. It targets to provide an environmentally immersive experience, where visitors can enjoy the beauty of the site. The target visitors to be captured here are two-fold:

- **Locals** – to provide an attractive setting for locals to enjoy recreational amenities on the site. The site must also act as an attractive urban gathering point, offering engaging activities and spaces for recreation.
- **High-Value Tourists (both Foreign and Domestic)** – who want to engage in eco-tourism while apprehending and appreciating the natural beauty of the site along with the eco-sport activities.

The composition of visitors at the site includes all age groups of visitors and hence, facilities would need to be provided for all (especially for children, Divyaang and elderly).

- **Tourist Projections** – The site is categorized as a **Low Tourism Site with Low HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC’s compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	41	151	416
High Value Tourists (HVT) (Both domestic and foreign)	1	3	8
Maximum Carrying Capacity	402		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Master Plan Concept

- The availability of the largely vacant land next to the boathouse with fully grown trees, picturesque views, and a sizable sandy beach area has huge untapped potential to attract more tourists. Considering the relatively good condition of the boathouse facilities, refurbishment and modernisation of the facilities are proposed where necessary.
- The Eco-Resort will have one main building which will be located just outside the CRZ no development zone. Within the CRZ no development zone, only temporary tourism and recreation-related facilities are proposed that can be removed and reinstalled, leaving behind no permanent mark on the land.

- The design of the refurbished and the new proposed structures and landscape areas shall focus on providing an immersive Eco-Tourism experience. The material and construction techniques for all these structures shall be sustainable, natural, and locally sourced.

Interventions for implementing the Master Plan concept are:

Hard Interventions

- 1. Renovation of Boathouse Facilities** – Though the boathouse has all the amenities yet some of the amenities need to be renovated to attract more high-value tourists. Therefore, renovation of Boathouse, Restaurant, TTDC Office and Bathroom facility is proposed.

Infrastructure created — 300 sqm built-up area

- 2. Waterfront and Beachfront Recreation Facilities** – To enhance tourist footfall, waterfront activities need to be enhanced. Therefore, Jetties, boardwalks, steps along the waterfront, watchtower, and waterfront restaurant/beach shacks are proposed to be developed. This will engage and attract tourists to the site.

Infrastructure created – 150 m long and 4 m wide boardwalk along the waterfront; stone steps leading into water (300 sqm); beach shacks -restaurant (200 sqm built-up area), watchtower (20 sqm built-up area); and 3000 sqm soft landscaping along waterfront and beach area.

- 3. Eco Huts and Campsite** – The hotel reception with an office area and restaurant/kitchen can be built outside the CRZ no development zone. Besides having space for camping and camper vans, the vacant land will be utilised to construct temporary small Eco-Huts that can be removed and reinstalled easily. The land shall not be landscaped conventionally, rather it shall incorporate the existing fauna on the site and enhance its natural beauty. New trees can be planted wherever shading is required. Further, a swimming pool can be added under the trees.

Infrastructure created: 700 sqm built-up area and 2,000 sqm soft landscaping



Eco Cabins, Camper / Campsite, small restaurant and lounge area

Soft Interventions

- 1. Site Promotion** –To enhance the boat house’s visibility, it has to be marketed well. Its location near ECR shall be taken into a maximum advantage by installing signages at appropriate distances on ECR to attract tourists travelling between Chennai and Pondicherry. Increasing visibility with strategies like integration with TN Assist App, etc. Marketing and Advertising at all key sites, CMBT, Chennai International Airport, and Chennai Central Railway Station will also help to enhance tourist footfall and attract high-value tourists.
- 2. Events** – The boat house should be able to provide activities to engage the tourist for an extended period of time. Activities like Light & Sound show, Cultural Performances, more water-based activities can be explored to attract and engage more high-value tourists.
- 3. Day Tour** – The boat house is surrounded by Sri Ayyanar Alayam, Odiyur lake backwaters, and Mudaliarkuppam backwaters. Its proximity to these sites shall be utilized by curating day tours for the visitors. Licensed guides shall be deployed to guide the visitors to various sites.

Amenities Plan

- 1. Signage** – Signage Package 4 is proposed to feature at this site. Both directional signage and informational signage should be used, as per the design guidelines mentioned in Glossary of Interventions.
- 2. Parking** – Though a designated parking facility is available outside the boathouse premises, but it can only accommodate few cars. Considering that the site is accessible only by privately owned vehicles, the parking facility needs to be enhanced. Thus, a designated parking facility will be developed near the hotel reception building that lies just outside the CRZ no development zone. The parking area will have a capacity of 50 car space. *Infrastructure Created: 625 sqm of paved parking yard.*

Trunk Infrastructure

As the Site has direct access from the road, no trunk infrastructure interventions are required.

Please refer to Design Guidelines mentioned in the Glossary of Interventions regarding amenities and urban design.

Project Identified

#	Project Component	Scale
1	Renovation of Boathouse Facilities	300 sqm
2	Board walk (4 m wide)	150 m
3	Stone steps	300 sqm
4	Beach shacks/Restaurant	200 sqm
5	Watch Tower	20 sqm
6	Soft Landscaping	5000 sqm
7	Eco-resort Lobby & Huts	700 sqm
8	Parking (625 sqm paved yard)	50 ECS

Feasibility Assessment

The following considerations have been accounted for the cost projections of proposed interventions at this site:

- Feasibility of the cashflows projected here are accounted only for the additional components master planned.
- The current operating & maintenance cost of the boathouse have not been considered.

Capital Expenditures (CAPEX)

The cost of the different project components proposed in the masterplan is calculated basis the current market price considering the appropriate escalations.

#	Project Component	Cost (INR Lakhs)
1	Waterfront Restaurant	130
2	Hard Landscaping	13
3	Broad Walk and Jetty (6m wide)	100
4	Stepping Stones	26
6	Soft Landscaping	2
7	Signage Package 4	1
8	Parking (paved yard)	19
9	Resurfacing Road (6 m wide)	135
10	Technology Package 1	1
Total		INR 4.25-4.5 Cr

(Note: Cost of all the project components including the Total capex is rounded-off to the nearest whole value.)

Revenues - Proposed projects

(Note: The following considerations are applicable to the below mentioned revenue modules.)

- The revenues considered here are in addition to all the existing revenue currently accrued by the management authority of the boathouse.

- The estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)

1. Boathouse space with waterside beach shacks, retail and F&B rentals
2. Parking
3. Revenues from Eco-resort operations.
4. Tickets to the viewing tower.

The total revenues to the boathouse from the proposed capital projects is projected at an estimated *INR 50-55 Lakhs at Y5*.

Operating Expenditures (OPEX)

(Note: The following considerations are applicable to the below mentioned operational expense modules.)

- The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.
- The operations and maintenance currently undergone by the boathouse for its existing facilities are not considered in this section.
- The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)

The following OPEX is expected for the site:

1. **Manpower costs** – This includes the labour costs incurred to manage and for the upkeep of new facilities.
2. **Facility Maintenance costs** – This includes the costs incurred to maintain the cleanliness and the upkeep of the new facilities.
3. **Repair & Maintenance costs** – This includes the expense incurred over time for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the retail kiosks, community event spaces in the boathouse surroundings.

5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 *percentage* of the total capital expenditure incurred.
6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections of the boathouse.
7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations.

The total operational expenditure incurred by the boathouse from the proposed capital projects is projected at an estimated *INR 40-42 Lakhs at Y5*.

Given that the estimated revenues from the proposed capital expenditure projects exceeds the operational expenses incurred, it can be concluded that the Interventions proposed at the site are Self-Sustainable and therefore beneficial for the upkeep and operations of the boathouse/ proposed Eco-resort space.

Implementation Model

The project is expected to financially viable for a PPP project.

However, given the considerably low initial footfalls, a longer concession period (min. 30 years) might be required to make the project viable for the private player and ensure that adequate revenue sharing with GoTN is facilitated.

Impact on Communities:

¹ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
 - Assumed cost of labour assumed for computation = INR 700 per day

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 19,300¹ man-days of construction labour (*spread across 2-3 years of implementation*)

During Operations: Jobs created during operations will entail, new opportunities for:

- Accommodation Facility = 144 man – days per day²
- Additional personnel deployed at site (Cleaning staff, management, security) = 8 Persons
- Activity Operators = 8 – 10 Persons
- Retail and F&B spaces = 20 Persons³
- Informal Vendors = 15 – 20 Persons

The direct employment generated during operation phase is an estimate. With increase in the tourist footfall at the site, there are chances that the numbers indicated above may increase. Henceforth, it cannot be estimated to complete accuracy.

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – As discussed above
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. It is estimated as per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 48,750 man-days.

- Cumulative labour man-days = 30% * CAPEX / 700

² As per World Bank thumb rule, 12 man-days per day for 10-key 4-star hotel and 20 man-days for 10-key 5-star hotel.

As per HVS Report, in typical India hotels, manpower to room ratio for 4/5 star hotels is 2.11-2.70, for mid-market 1.52 and for budget hotels 0.72. We have assumed 2 for our computation.

³ Assuming average 2.5 persons per kiosk / shop

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both, increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 90 Cr. at the site⁴.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and

supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.

- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

⁴ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

Figure 1-4: Proposed Master Plan – Mudhaliarkuppam Boat House and Eco Resort



- 1 Eco-Resort Lobby
- 3 Eco-Huts
- 4 Back of House
- 5 Restaurant
- 6 Boat House
- 7 Watch Tower
- 8 River Boardwalk & Jetty

2. Silver Beach, Cuddalore

Site Details

District:	Cuddalore
Name of Site	Silver Beach
Site No:	Site 73 of 295
Site Use:	Fisherman Village, Public Recreation, Natural Area
Category:	C (Beaches)
Location:	11.7395, 79.7864
Land Area:	~800 m length
Peak footfalls:	3000 per day
Operator:	Cuddalore Municipality
Site Ownership:	Cuddalore Municipality
Tourist Footfall:	Dom. – 6.5 lakhs (2019) For. – 365 (2019)
Site Revenues:	Undisclosed
Site Orientation:	Tourist
Site Potential:	Medium Tourism Site
HVT Potential:	Moderate HVT Potential
Connectivity:	
a. Railway station:	4 km from Tirupadiripuliyur Railway Station
b. Airport:	170 km from Chennai International Airport
c. Highway:	4 km from NH-49
Trails featured on:	Nil (Weekend Destination)

Silver Beach, lying on the Coromandel coast, is believed to have remained undisturbed by the busy city life. This tourist site is also known for the presence of beautiful backwaters and mangrove forests in its vicinity. It was one of the worst affected areas by the tsunami post which all water activities were prohibited. Currently, the beach doesn't provide many tourist activities and is not highly popular among tourists visiting Tamil Nadu.

However, given the presence of natural endowments like the backwaters and the mangrove forests in its vicinity, the beach has immense potential to develop as a high-value tourist destination with the provision of better infrastructure and introduction of tourist activities.

Existing Condition

Location

Silver Beach is located at Cuddalore, a town ~200 km south of Chennai. It is a beach on the southeast coast of India and is situated ~2 km from downtown Cuddalore, the headquarters of Cuddalore district in the state of Tamil Nadu. The beach is easily accessible via NH-32 that connects Cuddalore to Puducherry & Chennai. The nearest railway station is in Tirupadiripuliyur, ~5 km from the beach. The nearest airport is Chennai International Airport. Other major tourist attractions nearby are St David's fort (~1 km), Puducherry (~25 km), and Mahatma mandir viewpoint (~36km).

Existing Uses & Layout

Silver Beach is ~800 m in length and varies in width between 100 and 200 m. The central portion of the Beach where the access road ends is the widest part and consists mostly of sand, whilst the northern and southern parts largely contain open grass and shrubland. Other uses on the beach include:

- There are about 20 retail shops along the beach selling kids toys, snacks, etc
- Toilet block – There is one toilet block which has 3 men's toilets and 3 female toilets.
- Beach park

- Police outpost
- Children play area which contains small rides
- Sitting area which is in a circular shape

Other Land Available

Apart from the ~800 m long stretch of the beach, there are no other additional vacant land parcels in the vicinity.

Master Planning Considerations

Applicable Regulations

- 1. CRZ⁵ Regulations** – As per CZMP Map, the site lies in CRZ-IB, CRZ-II, and CRZ-IVB.
 - CRZ-IB region - Inter-tidal areas - No development permitted
 - CRZ II – It includes the areas developed up to the shoreline which fall within the Municipal limits. The site lies on the landward side. Permissible Uses: Defence and Security purposes | Construction of buildings on the landward side of existing road/building | reconstruction of authorized buildings without a change in land-use | Temporary tourism facilities
 - CRZ - IVB- Tidally influenced waterbodies
 - Do not put restrictions on traditional fishing by local communities.
 - Land reclamation and bunding are permitted for some activities like ports, harbours defense and strategic purpose, etc.
 - Activities related to the waterfront or directly needing foreshore facilities, such as ports and harbours, jetties, quays, wharves, erosion control measures, breakwaters, and the like are allowed.
 - Construction of memorials or monuments and allied facilities by the concerned State Government in CRZ-IVA areas, in exceptional cases, with adequate environmental safeguards.
- 2. Tamil Nadu Combined Development and Building Rules, 2019** – The master plan for Cuddalore Municipal Area is not available at the moment. It is therefore difficult to judge the land use zone and permissible uses applicable at the site. Henceforth, the following exercise considers the specification of the CRZ only.

- 3. Height Regulations** – AAI height restrictions allow the construction of buildings up to ~142 m. above mean sea level in the temple complex and surrounding areas.

Key Sensitivities

- 1. Local fishing communities** – The local fishermen communities are deeply tied into the activities at the Beach, operating many of the unregulated stalls and hawking here. They also park their boats across the stretch of the beach.
- 2. Disaster Prone Area** – The beach is often affected by heavy rainfalls and high tidal waves. Most of the beach is often submerged by the sea during high tides. Additionally, the beach faces severe waterfront erosion.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

- 1. Attraction** – Silver Beach is the second longest beach on the Coromandel Coast and one of the longest beaches in Asia. Set in a tranquil environment, the beach is still undisturbed by city life. The beach is also known for the presence of backwaters and dense mangrove forests in the vicinity. Among other tourist attractions present near the beach, Fort St. David is very popular among tourists for being one of the three churches built by the Britishers. A few resorts have sprung up in the vicinity, most of which are sponsored by the state government for promoting tourism.
- 2. Accessibility**–Silver Beach is easily accessible from Cuddalore via Beach road. Cuddalore is well connected to other urban areas like Chennai and Puducherry via NH-32. There are town buses which ply frequently between Cuddalore town bus stand and Silver Beach. The beach is also accessible via Taxis and Autos from different parts of the town. The nearest railway station is Tirupadripuliyur Railway Station, ~4km from the Beach. The nearest airport is Chennai International Airport, ~160 km from the Beach.

⁵ Coastal Regulation Zone

3. **Amenities** – The Beach does provide some basic amenities like toilet blocks for both men & women, ~20 retail shops near the entry point, and few sitting areas for tourists. However, it lacks other basic facilities like -
- There are no CCTV cameras or security guards present at the site
However, the beach does have a police outpost present at the site
 - No provision of F&B's or food outlets
 - No fire safety types of equipment

Parking – Designated parking facility is provided at the site.

4. **Awareness** – Despite its beautiful coastline and backwaters, the beach is lesser-known among tourists. As compared to other popular beaches in Chennai & Puducherry, Silver Beach doesn't receive high footfalls. It is mostly visited by locals, regional tourists from Tamil Nadu, and domestic tourists from the neighbouring states of Andhra Pradesh & Karnataka.
5. **Activities** – After the tsunami disaster, most of the activities at the beach were discontinued including boating and other water sport activities. However, few summer festivals are celebrated at the beach from April to May. In addition to this, informal activities like horse riding and camel riding are also provided at the beach.
6. **Accommodation** – Silver Beach has accommodations in all budget categories to suit the need of the travellers. The place offers the best options in luxury hotels as well as low-cost accommodation options. Some of the low-budget hotels around Silver Beach are Hotel Theertha Park, Hotel Durai, and Neyveli Guest House. These hotels offer decent accommodation with rates below INR 1500. Some of the luxurious properties around Silver Beach include Le Pondy, Kailash Beach Resort, and Club Mahindra. These hotels offer rooms available at INR 4000 onwards for a night. However, there are no choices within 200m of the beach.
7. **Association with Community** – The local fishermen communities associate themselves to the beach site for livelihood fulfillment. Additionally, the few retail stalls at the beach are operated by the locals. The locals are also involved in the various activities that are currently present at the beach.

Figure 2-1: Location and Existing Layout



Site Pictures





Figure 2-2: CRZ Boundary



Vision for the Site

Silver Beach with its beautiful coastline, is one of the longest beaches in Chennai. However, after being heavily affected by the tsunami, most of the beach activities were prohibited. Since the beach doesn't have much to offer to the tourists, it receives relatively low footfalls. Nevertheless, the beach along with the backwaters and the mangrove forests have immense potential to tap a larger tourist segment. With an introduction of few regulated activities, the beach could attract high-value tourists. The idea is to introduce multiple activities at the beach to engage tourists. Additionally, the beach area could be properly developed to create inviting spaces and thus attract a larger tourist segment.

The silver beach is part of one of the longest stretches of beach along the Coromandel Coast. The wide-open sandy beach that is easily accessible from the road is largely unspoiled with no commercial development and already a popular recreational destination for the local population. The carrying capacity is large enough to cater to more visitors. However, with no major tourist attractions in the region or any major cities, the focus should lie on making it a more attractive and popular day trip and recreational destination for the population in the region. This can be achieved by upgrading and adding to the existing recreational amenities and making better use of its natural features: the lagoon, the beach, and the sea. The local fishermen community should become an integral part of this recreational beach environment and see an upgrade too in their facilities.

- **Target Visitor** – The site receives significant footfall from locals & regional tourists from Tamil Nadu and the neighbouring states of Andhra Pradesh & Karnataka. Foreigners visiting the site are very minimal. Going forward, the master planning will target high spending tourists, while facilitating better amenities and experience.

As a day trip recreational destination for the local and regional population. Only when Fort St David will be successfully renovated and redeveloped and will attract a much wider domestic and international tourist crowd, the Silver beach could see more high-value tourists making a quick visit to Silver Beach too.

Further, tourist groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang, and elderly).

- **Tourist Projections** – The site is categorized as a **Medium tourism site with Moderate HVT Potential**

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	650	700	745
High Value Tourists (HVT) (Both domestic and foreign)	1	1	1
Maximum Carrying Capacity	7,868		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at the site and expect a higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Master planning approach

- The existing children’s play gardens, toilets, street furniture like the seating and hawker stalls/ shops need to be redeveloped and upgraded and become an integral part of a more coherent and varied Public Space design that makes much better use of its assets: the lagoon, wide beach and sea. An integral public space design with an emphasis on comprehensive landscaping and clear pedestrian routing will lead the visitor through a more varied destination, which has several distinctive areas one can visit.
- The hawker market could be housed under a tensile structure canopy that will create a much more comfortable space for both hawkers and visitors. Tensile canopy structures can also be easily removed again or extended, depending on the demand and the weather conditions.
- Several recreational attractions will be added, most notably a Viewing / Observation Tower placed in the vista from the Beach road, as an iconic landscape feature that will form the heart of the new Silver Beach. Other new features to be added: a pier into the sea, a stage for performances, a lagoon park and the local fishermen community a new quayside/boardwalk for the fishing boats, and a fish auction hall at the lagoon.
- The design of the newly built structures, landscaping, and activities on offer should be Eco Friendly. Educating the visitors about the environment and encouraging responsible behaviour (i.e., no littering) starts with a clean and well-designed public space environment.

Hard Interventions

1. Renovation/Upgradation Hawker Area, Food & Beverage Kiosks and Toilets

Infrastructure created: ~ 1000 sqm built-up area and ~1000 sqm hard landscaped area, and ~1000 sqm soft landscaped area with trees and street furniture.

2. Renovation/Upgradation Children Play Area and Circular Seating

Infrastructure created: ~5000 sqm soft landscaping including eco-friendly interactive play structures and trees plantation for shade, and new shading features above existing circular seating structure.



Hawker Market, Street Vendor Stalls and Children’s Play Area

3. Viewing / Observation Tower

- *Infrastructure created: ~625 sqm built-up area*

4. Open Air Performance Stage and Waterfront Park

- *Infrastructure created: ~300 sqm built-up area and 2000 sqm soft landscaped area*

5. Sea Jetty Pier, Beach Boardwalk, and general Landscaping Edge Beach

- *Infrastructure created: jetty: ~110 m long by 10 m wide on stilts on beach/sea and boardwalk on sand: ~400 m long by 3 m wide, and 1000 sqm hard landscaping with trees and street furniture*

6. Fishmarket Hall / Fish Auction Hall

- *Infrastructure created: ~350 sqm built-up area*

7. Laguna Quayside Park– Fishing Boats Boardwalk

- *Infrastructure created: ~150 m long by 8 m wide fishing boat boardwalk, ~500 sqm hard landscaped area, and ~1000 sqm soft landscaped area.*



Viewing Tower and Performance Stage



Sea Pier and Boardwalk on Beach



Landscaping Edge of Beach Area



Fish Auction Hall and Fishing Quayside / Laguna Boardwalk

Soft Interventions

1. Engaging the Local Community / Cleaning up the Beach – Planning for a dedicated street vending area will give a boost to the local community and is a way to clean up the beach and attract more interest from tourists. No street vendor should be allowed to encroach on the beach nor the fishermen to park their boats. This can be achieved by creating an improved fishing quayside and fish auction hall on the laguna side. The local community needs to be brought in as an active participant in the planning, design, and operations of these two areas. This is the only way to create ownership with important stakeholders and more assurance the maintenance and cleanliness of the beach area will be taken seriously.

Amenities Plan

- 1. Lighting** – The Silver beach area will need a Street Lighting Plan, with an emphasis on different types of lighting and levels of brightness befitting the variety in areas (road, car park, jetty/piers, vendor area, laguna park, events space, beach).
- 2. Street furniture** – An international standard to the design and quality of street furniture should be the benchmark. Street furniture needs to become an integral part of Landscape Design. A detailed Landscape Design Guideline Manual will need to be prepared that will form the standard for all the street furniture from seating benches, shading devices, canopies, dustbins, bollards, paving materials, wayfinding, etc.
- 3. Planting & landscaping** – Strategic tree planting is required along the entrance road, in the area around the laguna waterfront parks, the children’s park, the hawkers and shops, and events spaces, to create more shade to make the site attractive as a destination also during the daytime. More sculptural trees and flowering trees and shrubs should help to beautify the site.
- 4. Signage** – Package 6 set of signages must be deployed at the site. Signage at the Site is proposed to feature Tamil, English, and Hindi. Both directional signage and informational signage should be used, as per the design guidelines. Direction boards can be erected along the main roads in the area indicating the presence of this Site

5. Parking – One large designated parking area near the Beach.
Infrastructure created 3600 sqm built-up area

Trunk Infrastructure

As this site has good accessibility, it does not need any improvements in the trunk infrastructure.

Please refer to Design Guidelines mentioned in the Glossary of Interventions regarding amenities and urban design.

Project Identified

#	Project Component	Scale
1	Renovation/Upgradation Hawker Area, Food & Beverage Kiosks and Toilets	~1000 sqm
	a. Built-up area	~1000 sqm
	b. Hardscaping area	~1000 sqm
	c. Softscaping area	~1000 sqm
2	Renovation/Upgradation Children Play Area and Circular Seating	~5000 sqm
3	Viewing Tower	~625 sqm
4	Open-air Performance Stage and Waterfront Park	~300 sqm
5	a. Sea Jetty Pier,	~110 m
	b. Beach Boardwalk	~400 m
6	Fishmarket Hall / Fish Auction Hall	~350 m
7	Laguna Quayside Park– Fishing Boats Boardwalk	~150 m
	Hardscaped Area	~500 sqm
8	General Landscaping area	~4000 sqm
9	Parking Area	~3600 sqm
10	Signages	Package 6

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in Glossary of Interventions.

#	Project Component	Cost (INR Lakhs)
1	Renovation/Upgradation Hawker Area	14
2	Toilets	20
3	Landscaping	4
4	Renovation/Upgradation Children Play Area	10
5	Seating	5
6	Viewing Tower	18
7	Open-air Performance Stage and Waterfront Park	60
8	Sea Jetty Pier	66
9	Beach Boardwalk	34
10	Fishmarket Hall / Fish Auction Hall	6
11	Laguna Quayside Park– Fishing Boats Boardwalk	26
12	Landscaping	9
13	Parking Area	58
14	Signages	6
Total		263L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- All revenues are unescalated.

- Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

The following revenue sources are expected for the site:

1. **Built-up area rent** – Captures renting out of ~1350 sqm built-up space at an average of INR 3000 per sqm per annum.
2. **Revenue share from activity operators** – Capturing 10 operators at INR 1.5 Lakhs per operator per year.
3. **Parking** – Capturing 150 ECS at 20% occupancy per day at INR 15 per ECS.
4. **Pay per use Toilets** – Assuming that ~15% of the visitors would use the toilets at INR 5 per person.
5. **View tower tickets** – Assuming that ~35% of the visitors would use the toilets at INR 10 per person.
6. **Space on Hire** – Capturing 4 events per month at INR ~20,000 per event.

Considering the above, total additional un-escalated revenues from the site in Y5 is estimated as ~INR 1 Cr.

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.
- The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.
- The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- The costs are un-escalated.

The following OPEX is expected for the site:

1. **Manpower Costs** – Additional manpower will be required at the site to manage the proposed interventions.
 - a. A **helpdesk staff** at the amenity block
 - b. A **security personnel** each for parking, Hawker zone, viewing tower, boardwalk and jetty pier
 - c. **2 Administration staff** to overlook the operations of the of the retail zone.
2. **Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
3. **Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.
6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.
7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175* per kilolitre.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee, if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as *INR 85 Lakhs*.

Feasibility Assessment and Implementation Plan

Given that the estimated additional revenue from the proposed interventions exceeds the operational expenses incurred, it can be concluded that the interventions proposed at the site are **Operationally Self-Sustainable** and therefore beneficial to the community.

The development of the projects is to be taken up by the Town Panchayat in collaboration with private players. Given the significance of the project and strategic importance of Silver beach as a prime recreational space in the Cuddalore district, the development is pertinent and may be taken up by the Town Panchayat. Some revenue generating interventions that need operating expertise can be developed by the Town Panchayat and given to operators on license basis.

Phasing and Funding Agencies

Overall the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Upgradation Hawker Area	14	Y0 – Y2	Town Panchayat
2	Toilets	20	Y0 – Y2	Town Panchayat
3	Landscaping	4	Y0 – Y2	Town Panchayat
4	Upgradation Children Play Area	10	Y0 – Y2	Town Panchayat
5	Seating	5	Y0 – Y2	Town Panchayat
6	Viewing Tower	18	Y0 – Y2	Town Panchayat
7	Open Stage & Waterfront Park	60	Y0 – Y2	Town Panchayat

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
8	Sea Jetty Pier ⁶	66	Y5 – Y7	Town Panchayat, given to operators on license basis
9	Beach Boardwalk	34	Y0 – Y2	Town Panchayat
10	Fishmarket/ Fish Auction Hall	6	Y0 – Y2	Town Panchayat
11	Laguna Quayside Park– Fishing Boats Boardwalk	26	Y0 – Y2	Town Panchayat, given to operators on license basis
12	Landscaping	9	Y0 – Y2	Town Panchayat
13	Parking Area	58	Y0 – Y2	Town Panchayat
14	Signages	6	Y0 – Y2	Town Panchayat
Total		INR 263 L		

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 10,700⁷ man-days of construction labour (spread across 1-1.5 years of implementation)

During Operations: Jobs created during operations will entail, new opportunities for:

- Additional personnel deployed at site (Cleaning staff, management, security) = 5 - 8 Persons
- Activity Operators = 8 – 10 Persons
- Informal Vendors = 15 – 20 Persons

⁶ The development of the Sea pier/Jetty can be taken up at future phases basis the footfall increase on a PPP basis.

⁷ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.

The direct employment generated during operation phase is an estimate. With increase in the tourist footfall at the site, there are chances that the numbers indicated above may increase. Henceforth, it cannot be estimated to complete accuracy.

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – As discussed above
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. It is estimated as per market benchmarks, considering a multiplier effect of 2.5.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both, increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 150 Cr. at the site⁸.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

- As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
- Assumed cost of labour assumed for computation = INR 700 per day

• **Cumulative labour man-days = 30% * CAPEX / 700**

⁸ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and suppliers will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Local Fishing Communities – in terms of diverse opportunities of service provision to the tourists which can include guided recreational fishing/ angling, boat rides into the sea, fishing tours, and training on coastal ornaments making, exhibition and sale
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

Figure 2-3: Proposed Master Plan – Silver Beach, Cuddalore



3. Gudiyam Caves

Site Details

District	Tiruvallur
Name of Site	Gudiyam Kugai
Site No:	Site 142 of 295
Site Use:	Pre-historic Caves
Category:	B (Heritage Site)
Location:	13.2899, 79.8055
Land Area:	~47 acre
Peak footfalls:	~80 per day
Operator:	Forest Dept.
Site Ownership:	Forest Dept.
Tourist Footfall:	Dom. – 1000 (2019 - 20) For. – Nil (2019 – 20)
Site Revenues:	Nil
Site Orientation	Tourist
Site Potential:	Low tourism site
HVT Potential:	Low HVT Potential
Connectivity:	
a) Railway station:	35 km from Tiruvallur Railway Station
b) Airport:	~30 km from Chennai International Airport
c) Highway:	~22 km from SH-114, ~21 km from NH-716
Trails featured on:	Nil (Weekend Destination)

A prehistoric cave site, at a reserved forest area under forest authority, Gudiyam Kugai/ Caves, lacks awareness and receives low footfalls. The destination has an unrealized potential with great archaeological significance and spectacular natural environment and viewpoints.

The scope of interventions and master planning at this site focuses primarily on the ease and facilitation of tourists. A curated experience of the pre-historic site will be promoted and developed with basic visitor amenities as well as improved access to the caves. The site is envisioned to be developed on the ideologies of Eco-Tourism.

Existing Condition

Location

Situated in the Tiruvallur district near the Poondi reservoir, the site is located ~60 km northwest of Chennai and ~25 km northwest of Tiruvallur. Spread across the Allikulli Hill range, the site falls under the Pullikundram Reserved Forest area. Connected via MDR 787, the caves are accessible after traversing a ~3.5 km trek. The site is located amidst a secluded setting nearby Gudiyam Village (~4 km), Poondi Lake, and Dam (~15 km) within the proximity to the Tamil Nadu-Andhra Pradesh border.

Existing Layout

Close to the Gudiyam village, there is a group of 16 caves that lie within the Pullikundram Reserved Forest area. Spread across the Allikulli Hill range, only two caves are currently accessible. The caves are accessed via a trail that crosses the undulated rocky path and thick forest area. Beginning from the Gudiyam settlement, where the vehicles can be parked, the trail starts from a forest watchtower and leads into the forest. The cave that comes first, also popularly called the Gudiyam First Cave (smaller one), is reached by taking a left turn from the main trail. The main trail further leads up to the second cave which is the larger one and has an Amman Temple located beneath it.

Existing Uses

The site is a local attraction visited by locals, tourists, and history enthusiasts. The caves interest scholars and historians. Apart from the historical importance, the site is known for its trek, scenic views from the top of the caves, and serves as a picnic spot for youngsters. The site also interests nature lovers as a variety of bird species can be spotted along the trail leading to the caves. Located ~60 km from Chennai and ~25 km from Tiruvallur, the site is visited as a morning/ evening retreat or a day trip.

Master Planning Considerations

Applicable Regulations

1. **Forest Regulations** – A Forest clearance is required for the development of this site, along with the approval of the Central Government through an online single window platform for application, processing, and tracking of proposals.
2. **Tamil Nadu Eco – Tourism Policy**
 - a. Forest Department will promote Eco-Tourism only in Tiger Reserves, Wildlife Sanctuaries, National Parks and Reserve Forests.
 - b. Activities in non-core areas of the R.F. and National parks can be taken up by the tourism department in consultation with the forest department.
 - c. EDCs can be formulated to assure continuous running of eco-tourism activities in Tiger Reserves, Wildlife Sanctuaries, National Parks, and Reserve Forests.
 - d. **Eco-Tourism Management Plan** – A management plan shall be developed for every Ecotourism site/ destination, to be approved by the SEB, maintaining a fine balance between conservation and tourism.
 - e. **Eco-Tourism Product Development** - The product developed will cater to different target groups and will include hiking, trekking, wildlife sighting, bird watching trails, boating, photography, visit medicinal plants conservation area, craft making, local handicraft, promoting local festivals, and adventure sports. In the coastal wetland sites, activities like snorkelling, scuba diving, walks and boat rides for viewing and appreciating the rich and special flora and fauna can be taken up.
3. **Regulation of Trekking Rules** – The trekking rules identified at the site must follow the specification of the trekking rules, which define the need for

permissions, the procedure for taking permissions, applicable fees, and conditions of trekking, along with prohibited actions and penalties.

Key Sensitivities

The site being located in the reserved forest area, the tourism activities must be planned considering the natural and wildlife sensitivities at the site, as per the suggestions of the TN Eco-Tourism Policy. Being the evidence of rock shelters from the Pre-historic era, the cave sites are also historically important and sensitive archaeologically. Any structural additions planned at the cave site must be done keeping in mind the cave's significance and minimal structural damages.

Key Issues to Address

The key issues at the site identified at the Baseline Stage are summarised below along the 7A Framework:

1. **Attraction** – The site is a prehistoric attraction dating back to the Palaeolithic age. These rock shelters are known for the history associated with prehistoric stone tools and culture. The monument, thus, holds great historical & archaeological value and attracts both domestic & foreign history enthusiasts. Further, the trek to reach the caves, ~4 km from the Gudiyam village, also interests a few. The natural surroundings along with the scenic views add to the attraction value of the site. Thus, apart from history enthusiasts, the site is also visited by people living nearby as well as by people looking for a day trip from Chennai (~60 km) and Tiruvallur (~25 km).
2. **Accessibility** – The site is situated in Tiruvallur District, ~25 km from Tiruvallur and ~60 km from Chennai. The site is accessible via MDR-787, with ~1.25 km of the unpaved road leading up to the site. Last-mile road connectivity for the site is poor. The nearest railway station is at Tiruvallur, located ~30 km away from the site. Chennai International Airport is located ~70 km from the site.

Parking – There is no dedicated parking area available for tourists. Vehicles are often parked around the village in the vacant areas available. Such parking activities often put the tourists as well as the villagers in an unease situation.

Internal Circulation – The trek route defined to access the cave site, is undulated, and has wild vegetation growth around roads traverse through the

site. On top of it, there are very few signages guiding the routes for the tourists. As a result of which there have been several cases where the tourists went missing/lost track.

3. **Amenities** – The site lacks in the provision of every basic amenity that must be there at any tourist location.
 - There are no provisions made for the public toilets or supply of drinking water at the site.
 - There are no means of visitor checking or monitoring at the site. The site does not have any CCTVs cameras, neither are the visitors scanned and checked upon entering the site.
 - The site area is also dull lit, owing to the lack of proper functioning street lights around the site.
 - Despite being located within a reserved forest area, there is ample plastic waste visible while moving around the site. There are no measures adopted for maintaining site cleanliness.

4. **Awareness** – The monument lacks awareness. While the site holds great historical value, it is not promoted as a tourist destination and requires access permission from forest officials. The site is visited by locals and domestic tourists from nearby areas (majorly from Tamil Nadu and Karnataka). It is also visited by a few history enthusiasts, both Indians and foreigners. The site has a small web presence and is mentioned by few travel referral/review aggregators like Tripoto, Trell, etc. The site also finds mention in various travel and history blogs.

A documentary is made on “**Gudiyam Caves – The Stone Age Rock Shelter of Tamil Nadu**”, directed by Ramesh Yantra. The 33 min movie was screened at the Cannes Film festival 2015.

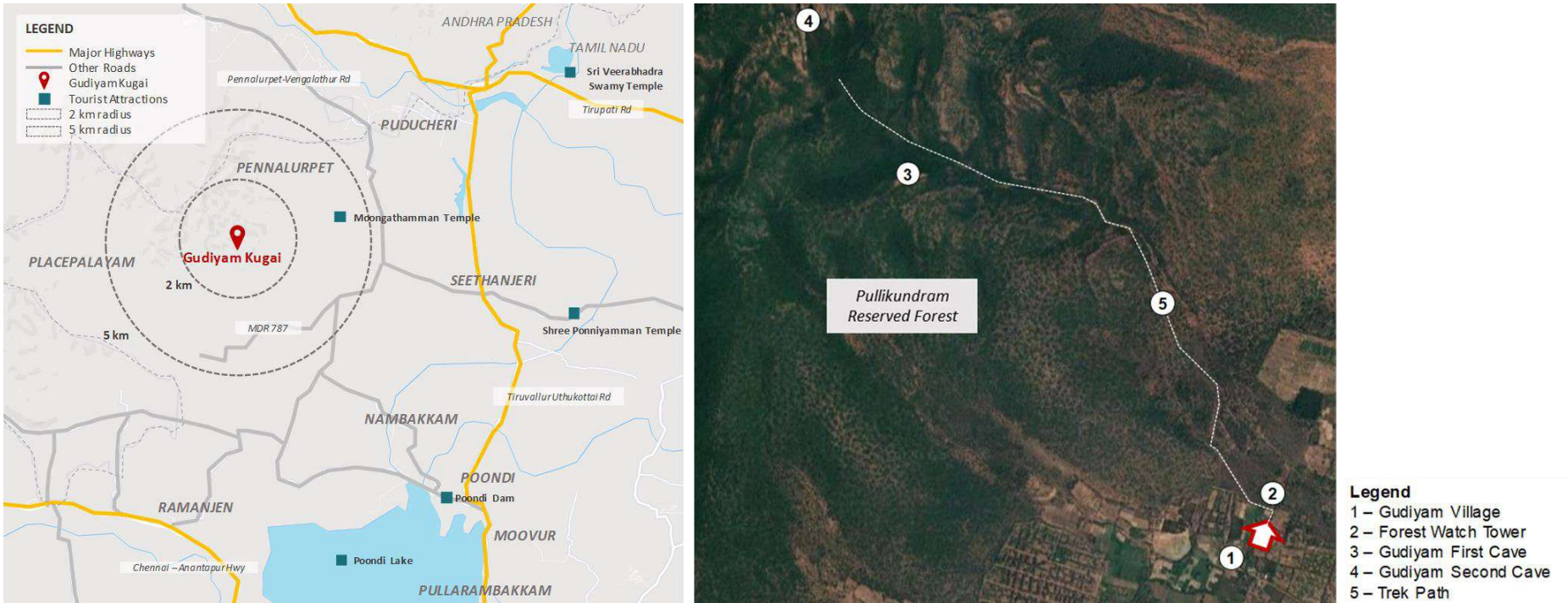
5. **Activities** – The site lacks in the supply of tourist engaging activities. Tourists and locals visit the site for trekking and scenic views & natural surroundings. Occasionally, the site is visited by students and history enthusiasts for studying the prehistoric site.

6. **Accommodation** – There are no accommodation options present in the Being within ~25 km from Tiruvallur and ~60km from Chennai, not many tourists stay

overnight here and tend to leave after visiting. Also, there are no accommodation options nearby.

7. **Association with Community** – the site does not have a remarkably close association with the local community. Several locals being familiar with the forest route, site history, and significance offer services to guide the tourists while trekking to the caves.

Figure 3-1: Location and Existing Layout, Beach Resort Complex



Site Pictures



Vision for the Site

The Gudiyam caves site is a prehistoric cave site, referencing evidence of the rock shelters of the prehistoric era. A well-connected site via major district roads, the site is a historically and archaeologically significant destination. However, the lack of the site’s awareness, its failure in the provision of basic touristy public amenities, disjointed last-mile connectivity, human interference, and vandalism make it a scarcely acknowledged tourist destination.

Utilizing the natural setup of the place, the flora, and fauna available at the site, and its proximity to Chennai (~60 km) and Tiruvallur (~25 km) the site has the potential of being developed on the principles of eco-tourism. It has the potential to be developed as a one-day getaway destination and supply a nature immersive experience to the visitors on the lines of benchmark sites such as **Rajmachi (Maharashtra), Kumara Parvatha (Karnataka), Kanha National Park (M.P.)**

All these locations have developed a jungle hiking route, which helps the tourist by themselves to explore the amazing flora and fauna, as well as guide them and in reaching the final trek destination. The locations have set up a trademark pattern and one-day trekking and camping site.

The Site is undeveloped and the tourist facilities and attraction points in comparison to the site’s significance are minimal, which makes the site less knowledgeable. The already established trekking route along with the site supports the development of properly spaced hiking trails with ancillary infrastructure facilities (tourist resting facilities, the other infrastructure provisions). The Site can be redeveloped into a jungle hiking destination near Chennai with several other attractions and wonderful scenic viewpoints.

- **Target Visitor** – The site currently draws a good number of domestic.

Given the consideration and ideas as described above, the master plan aims to attract:

- **Domestic Tourist** – to advertise and promote this site and its significance at a national level engaging researchers and students to visit and take part.
- **Regional Weekend Tourists** – Who access the site for a one-day or a weekend getaway destination.

The composition of visitors at the site includes all age groups of visitors and hence, facilities would need to be provided for all (especially for children, Divyaang and elderly).

- **Tourist Projections** – The site is categorized as a **Low Tourism Site with Low HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC’s compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	1	4	11
High Value Tourists (HVT) (Both domestic and foreign)	0	0	0
Maximum Carrying Capacity	16,425		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Approach to Masterplanning

Gudiyam Kugai/Caves is a pre-historic site found in Pulikundram Reserve Forest. The site is currently under the control of the forest department, lacks awareness, and receives low footfalls. Though the destination is currently underrated, it has enormous potential owing to its archaeological significance and picturesque setting. A curated experience of the pre-historic site should be promoted and developed with basic visitor amenities as well as improved access to the caves. Interventions must be planned while keeping in mind the natural setting and carrying capacity of the site, found amidst a reserved forest area.

The aim of developing a master plan for this site is:

- Development of an **integrated tourist facilitation space** at the trek initiation point.
- Develop a **nature-binding trekking route through the forest** with ancillary facilities.
- Developing another tourist engaging attraction point at the site to spread awareness about the site and information on its historical and archaeological importance.

Hard Interventions

1. Development of Tourist Facilitation Centre – the existing site as explained above lacks in the provision of all the necessary touristy facilities. A tourist facilitation centre developed on the grounds of an Eco-friendly building might be helpful for the tourists.

- The design of the facilitation center will be such that it fits into the natural environment of the surrounding.
- It can be made from locally available materials.
- The tourist facilitation center can have the following:
 - Ticket sales counter
 - Help desk
 - Guide's station
 - Basic site gallery
 - Souvenir shop
 - F&B Kiosk
 - Luggage room

- Trekking instrument supply room
Infrastructure Created: ~1500 sqft built-up area



Tourist Facilitation Structure

2. Development of a Gudiyam Kugai Museum

- A small museum and interpretation centre, in proximity to the site, to highlight the archaeological relevance of the site.
- The museum design can resemble the informal formations of a cave, and it can be built from locally available rock structures and other materials.
- The museum can have a theatre where a documentary made on Gudiyam Caves can be shown.
- It can be developed beside the tourist facilitation centre.

Infrastructure Created: ~1000 sqft built-up area



Museum Design

3. Development of a facilitated trekking trail – Lack of a proper access route to the caves- undulated rocky trail, no directional boards, meandering paths, etc. makes it difficult for all the diverse kinds of tourists to travel along the path.

- A dedicated trekking trail shall be developed in place of the existing trail with a devoted area for tourist rest stops and supporting infrastructure.
- The trail will be a clear path free from all the hindrances and shall be identified by a pebbled boundary.
- The trekking trail is ~3km. long where tourists can make use of a rest stop at every 75 m.
- The rest stop can be a canopy wood structure with stone benches, giving away a feel of prehistoric times.
- The trekking trail at every 50 m. shall be deployed with dustbins, streetlights, signages, and other information boards.

Infrastructure Created: ~3 km trekking trail, 4 tourist rest stops

4. Development of visitor parking facilities – development of dedicated parking facilities near the facilitation centre and the museum will help in reducing the haphazard parking on the village roads. It will also ease out things for the tourists as everything can be accessed from a single stop before trek initiation.

Infrastructure Created: ~220 sq. m. of parking space

5. Entry Gate & Signages – A high entrance gate to be developed in line with the natural atmosphere and surrounding space. In addition to this, huge signage to be developed with the name of the site for better visibility.

Infrastructure created – Site Entry Gate, Name Board Signage



Stone bounded trekking path



Canopy rest stops along the trekking trail



Entry Gates

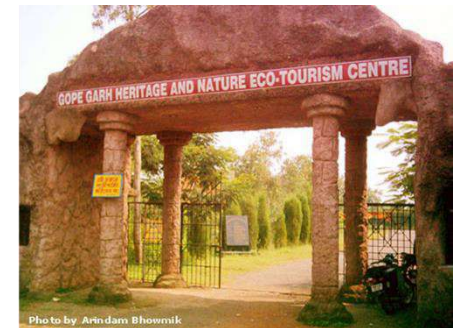


Photo by Arindam Bhowmik

Soft Interventions

1. **Knowledge and Education tours** – The forest department can have a tie-up with local schools for conduction knowledge and education tours. It can also be arranged for tourists on a prior booking basis. The content of these tours can be more based on deciphering the lifestyle and sociological structures of the beings who resided at caves during the neolithic times. Locals from nearby villages and forest officials can be trained for conducting such guided tours
2. **Site access charges** – INR 10 – 20 per person must be charged for entry tickets, which can be collected at the facilitation center.
3. **Site booklet and Map development** – Visitors who wish to take up trekking activity without the assistance of a guide, can be provided with a site booklet and trek route map at a fixed purchase rate.
4. **Guides** – Locals from the surrounding villages can be trained through community programs, and based on their performance in those programs can be hired as a tourist guide for the site.
5. **Regulations on no plastic usage** – Promote site as an environmentally sensitive zone with no plastic usage restrictions. Visitor checking can be done at the entry site or near the ticket collection point.

Amenities Plan

1. **Pay and Use Toilet Blocks** – ~3 units of an identified module of pay and use toilet blocks must be installed at the site.
2. **Drinking-Water Stations** – ~3 units of an identified module of drinking water station must be installed at the tourist facilitation center.
3. **Landscaping** – Local planting is proposed to be used to weather the extreme climate. Planting would be used to beautify open-air exhibit areas, sidewalks, open-air theatre, and other visitor zones.
4. **Paved walkways** – The areas near the site entry where all the common tourist facilities are located, paved pathways must be developed to access those facilities.

5. **Street Lighting** – The entire redeveloped area will need a comprehensive Street Lighting Plan, with an emphasis on different types of lighting and levels of brightness befitting the variety in areas (along the trekking trails and the access road).
6. **Street Furniture** – Adequate street furniture like stone benches, dustbins, etc. are proposed to be provided at rest-stops and every 50m along the trekking trail along with the design guidelines for street furniture.
7. **Signages** – Package 5 signage is proposed to feature in Tamil, English, and Hindi. Both directional signage and informational signage should be used, as per the design guidelines.
8. **Technology Intervention** – the technological conveniences that the site should offer must be as per the Package 1 specifications as defined in Glossary of Interventions for optimal management. These include:
 - a. Electronic visitor counters at entry points
 - b. TN Assist App integration (internet connection, QR scanner)
 - c. CCTV coverage at up to 3 locations

Trunk Infrastructure

The site is currently accessible however, the last ~1.25 km of the access road is unpaved. To enhance and ease vehicular movement to the site, the 1.25 km stretch of the road needs to be paved and provided with sufficient street lighting.

Please refer to Design Guidelines mentioned in the Glossary of Interventions regarding amenities and urban design.

Projects Identified

#	Project Component	Scale
1	Tourist Facilitation Centre	~1500 sqft
2	Gudiyam Kugai Museum	~1000 sqft
3	Trekking Trail	~3 km
4	Rest Stop (wood canopy structure ~10 sq. m.)	~4 units.
5	Parking Area	~220 sq. m.
6	Entry Gate	~1 unit.
7	Signages	Package 5
8	Pay and Use Toilet Blocks	~3 units
9	Drinking-Water Station	~3 units
10	General landscaping	~0.2 acres
11	Paved Walkways	~250 m.
12	Stone Benches	~12 units
13	Dustbins	~35 – 40 units
14	Street Lighting	~4250 m.
15	Paved Road	~1250 m.

Feasibility Assessment

The following considerations have been accounted for the cost projections of proposed interventions at this site:

- Feasibility of the cashflows projected here are accounted only for the additional components master planned.
- The current operating & maintenance cost of the site have not been considered.

Capital Expenditures (CAPEX)

The cost of the different project components proposed in the masterplan is calculated basis the current market price considering the appropriate escalations.

#	Project Component	Cost (INR Lakhs)
1	Tourist Facilitation Centre	20
2	Gudiyam Kugai Museum	50
3	Trekking trail - Rest Stop	1
4	Parking Area	25
5	Entry Gate	1
6	Signages	1
7	Pay and Use Toilet Blocks	20
8	Drinking-Water Station	3
9	General landscaping	1
10	Paved Walkways	5
11	Stone Benches	1
12	Dustbins	1
13	Street Lighting	68
14	Paved Road	375
Total		INR 5.5-6 Cr

(Note: Cost of all the project components including the Total capex is rounded-off to the nearest whole value.)

Revenues - Proposed projects

(Note: The following considerations are applicable to the below mentioned revenue modules.

- The revenues considered here are in addition to all the existing revenue currently accrued by the site management authority.
- The estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)

1. **Retail and F&B kiosks** at the facilitation centre, Museums and the trekking trail.
2. **Parking.**
3. **Pay per use Toilets**
4. **License for operations of various adventure activities**

The total revenues to the site from the proposed capital projects is projected at an estimated **INR 30-35 Lakhs at Y5**.

Operating Expenditures (OPEX)

(Note: The following considerations are applicable to the below mentioned operational expense modules.

- *The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.*
- *The operations and maintenance currently undergone at the site for its existing facilities are not considered in this section.*
- *The expense projections are pegged at Y5 (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)*

The following OPEX is expected for the site:

1. **Manpower Costs** – This includes the additional personnel required to manage the proposed facilities.
2. **Facility Maintenance costs** – This includes the costs incurred to maintain the cleanliness and the upkeep of the new facilities.
3. **Repair & Maintenance costs** – This includes the expense incurred over time for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the retail kiosks at the site.
5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.
6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections of the temple.

7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations.

The total operational expenditure incurred by the site from the proposed capital projects is projected at an estimated *INR 25-30 Lakhs at Y5*.

The estimated revenues and the operational expenses are in par because of the low tourist footfalls received at the site. The capital projects are envisioned to position the site as an adventure/ trekking trail close to Chennai and with adequate promotions of the proposed interventions the site is projected to be profitable in the medium-long term period.

Implementation Model

The development of the projects is to be taken up by Forest department. The operations of museum, facilitation centre and adventure works can be given out to private operator for efficient operations.

Phasing and Funding Agencies

#	Project Component	Agencies in Charge	Phasing of Development
1	Tourist Facilitation Centre	TN Forest Dept.	Y2 – Y5
2	Gudiyam Kugai Museum	TN Forest Dept.	Y2 – Y5
3	Trekking Trail	TN Forest Dept.	Y0 – Y2
4	Rest Stop	TN Forest Dept.	Y0 – Y2
5	Parking Area	TN Forest Dept.	Y0 – Y2
6	Entry Gate	TN Forest Dept.	Y0 – Y2
7	Signages	TN Forest Dept.	Y0 – Y2
8	Pay and Use Toilet Blocks	TN Forest Dept.	Y0 – Y2
9	Drinking-Water Station	TN Forest Dept.	Y0 – Y2
10	General landscaping	TN Forest Dept.	Y0 – Y2
11	Paved Walkways	TN Forest Dept.	Y0 – Y2
12	Stone Benches	TN Forest Dept.	Y0 – Y2
13	Dustbins	TN Forest Dept.	Y0 – Y2

#	Project Component	Agencies in Charge	Phasing of Development
14	Street Lighting	TN Forest Dept.	Y0 – Y2
15	Paved Road	TN Forest Dept / PWD	Y0 – Y2

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 25,700⁹ man-days of construction labour (*spread across 1 - 2 years of implementation*)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Cleaning staff, management, security) = 5 - 8 Persons
- Activity Operators = 8 – 10 Persons
- Retail and F&B spaces = 5 Persons
- Informal Vendors = 15 – 20 Persons

The direct employment generated during operation phase is an estimate. With increase in the tourist footfall at the site, there are chances that the numbers indicated above may increase. Henceforth, it cannot be estimated to complete accuracy.

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – As discussed above

⁹ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.

- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 64,400 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 2 Cr. at the site.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

- As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
- Assumed cost of labour assumed for computation = INR 700 per day
- **Cumulative labour man-days = 30% * CAPEX / 700**

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

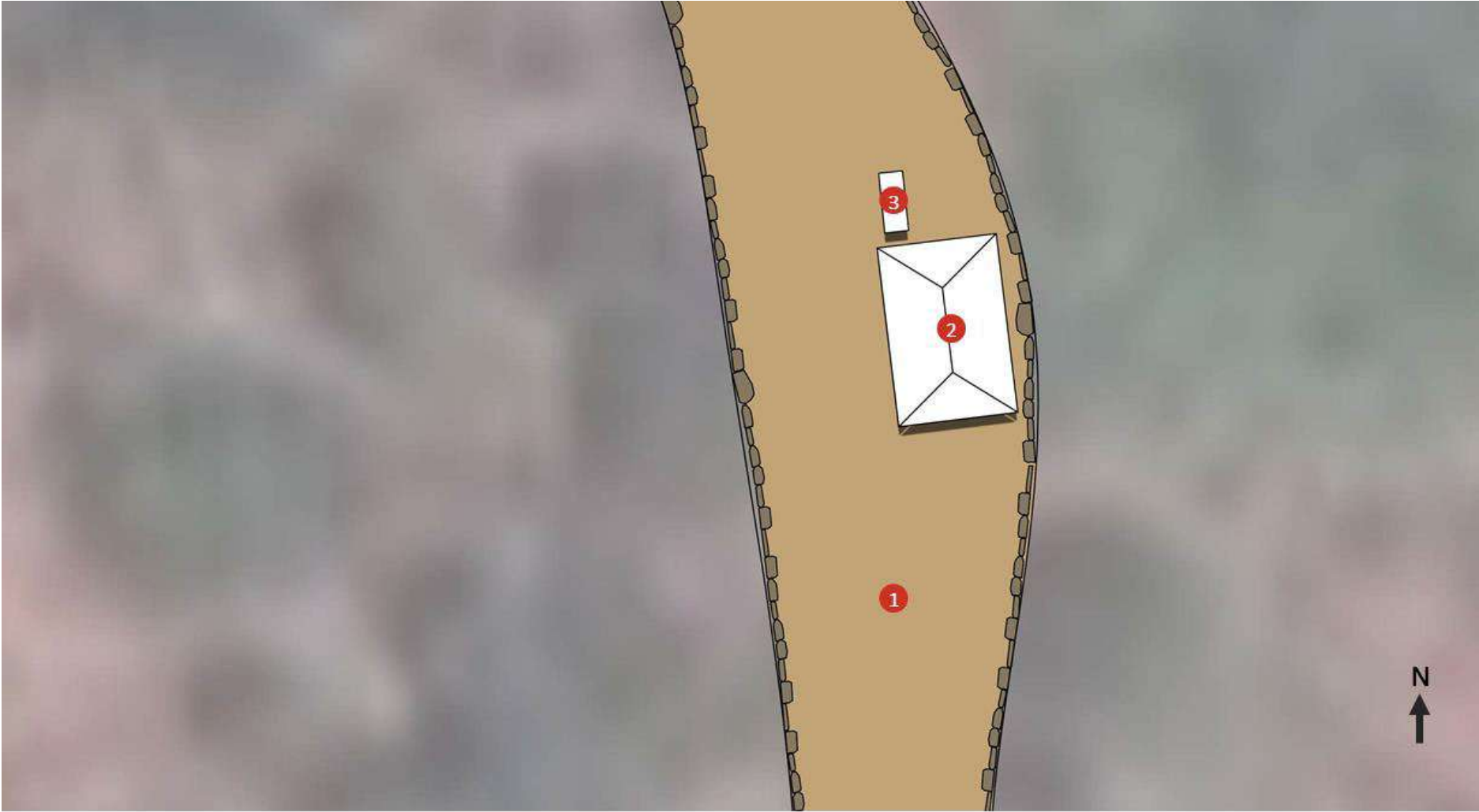
The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and suppliers will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

Figure 3-2: Proposed Master Plan – Gudiyam Caves



Figure 3-3: Proposed Master Plan – Gudiyam Caves – Trekking Route



- 1 Trekking Route
- 2 Tourist Resting Area
- 3 Area for Signage/Dustbin/Lights

4. Kodyampalayam Beach, Mayiladuthurai

Site Details

District:	Mayiladuthurai
Name of Site:	Kodyampalayam Beach
Site No:	Site 151 of 295
Site Use:	Beach
Category:	C (Beach)
Location:	11.3845, 79.8205
Land Area:	No specific records available
Peak footfalls:	500 per day
Operator:	Municipality
Site Ownership:	Municipality
Tourist Footfall:	Domestic tourists– 60,000 (2019-2020) Foreign tourists - Nil (2019-200)
Site Revenues:	Nil
Site Orientation:	Tourist
Site Potential:	Medium Tourism Site
HVT Potential:	Moderate HVT potential
Connectivity:	
a. Railway Station:	17 km from Chidambaram Railway Station
b. Airport:	189 km from Trichy International Airport
c. Highway:	6 Km from NH-227
Trails featured on:	Nil (Weekend Destination)

Kodyampalayam Beach is a beach in Kodyampalam village, close to Pichavaram, on the Indian east coast. The beach is barren and lacks amenities and a proper access road. The beach still draws few people for its quiet and serene environment. The site could be developed as a weekend tourism destination which could be covered along with pichavaram.

Existing Condition

Location

Kodyampalayam is a village in Mayiladuthurai District of Tamil Nadu. It is located ~70km towards North from District headquarters Nagapattinam and ~225km from Chennai. Other attractions close to the site are:

- Thillai Nataraja temple, Chidambaram – ~ 16km
- Thillai Kalli amman temple – ~17km
- Mangrove forest – ~20km
- Thirukadaiyur – ~56km

Existing Layout and Uses

Kodyampalayam beach is located about ~1km from the village and is accessed by an unpaved narrow pathway. Currently, the site is devoid of any amenities and built structures.

The beach area is a point of a rare visit by a few locals and tourists from surrounding areas. Though it lacks any activities for visitors to engage in, it is rarely visited for its natural setting.

Master Planning Considerations

Applicable Regulations

1. **CRZ Regulations** - As per CZMP Map, the site lies in CRZ-IA and CRZ-III.

- CRZ-IA region: Construction of roads on stilts, for strategic purposes | No permanent structures | Eco tourism activities permitted.
 - CRZ III region:
 - Repairs or reconstruction not exceeding existing Floor Space Index, existing plinth area, existing density, and for permissible activities.
 - Agriculture, construction of public amenities like schools and facilities which are required by local inhabitants; facilities required for local fishing communities such as fish drying yards, auction halls, etc.
 - Temporary tourism infrastructure for basic amenities such as toilet blocks, change rooms, drinking water facilities, etc. are permitted in the beaches, along NH, SH, and NDZ of CRZ III areas, keeping a minimum distance of 10 m from HTL (in case of beaches).
 - Beyond NDZ, construction of beach resorts or hotels or tourism development projects; development of airports in wastelands and non-arable lands, with adequate environmental safeguards; construction or reconstruction of a dwelling unit, subject to local town and country planning rules; homestay by local communities, including fishermen and other amenities for the use of local community are permitted.
2. **Tamil Nadu Combined Development and Building Rules 2019** - As per the land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land.

Key Sensitivities

There is no specific environmental/social sensitivity to be addressed at the site.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

1. **Attraction** – The beach is mainly known to locals and is less crowded. It is known for its calm and serene atmosphere.
2. **Accessibility** – This beach is accessible only by private vehicles.
 - Road access –The beach is accessible via inroads through the mangrove forests. The Chidambaram bus stop is over 15 kms away. The 2 km stretch

from the kodiampalayam road to the beach is not tarred and is a mud road which is need of repair.

- Rail access – Chidambaram Railway Station (Cuddalore) – 17 KM
 - Air access – The nearest International airports is in Trichy (189kms). The Chennai airport is 198kms away.
3. **Amenities** – The beach has no amenities in place.
 - Around the site
 - Approach road is non-existent at areas closer to the site.
 - ATM – Present 11km away
 4. **Awareness** – The beach is relatively lesser-known beach among tourists. It is not mentioned in the travel sites or blogs. However, there are few videos available on the YouTube that give site's highlights.
 5. **Activities** – Currently, the site hosts no activities.
 6. **Accommodation** - There are no good hotels in the immediate vicinity. One must go to pichavaram or to Chidambaram for accommodation choices.
 7. **Association with community** - Most of the people belonging to the Kodiampalayam village make a living by fishing and weaving.

Figure 4-1: Location and Existing Layout



Site Pictures

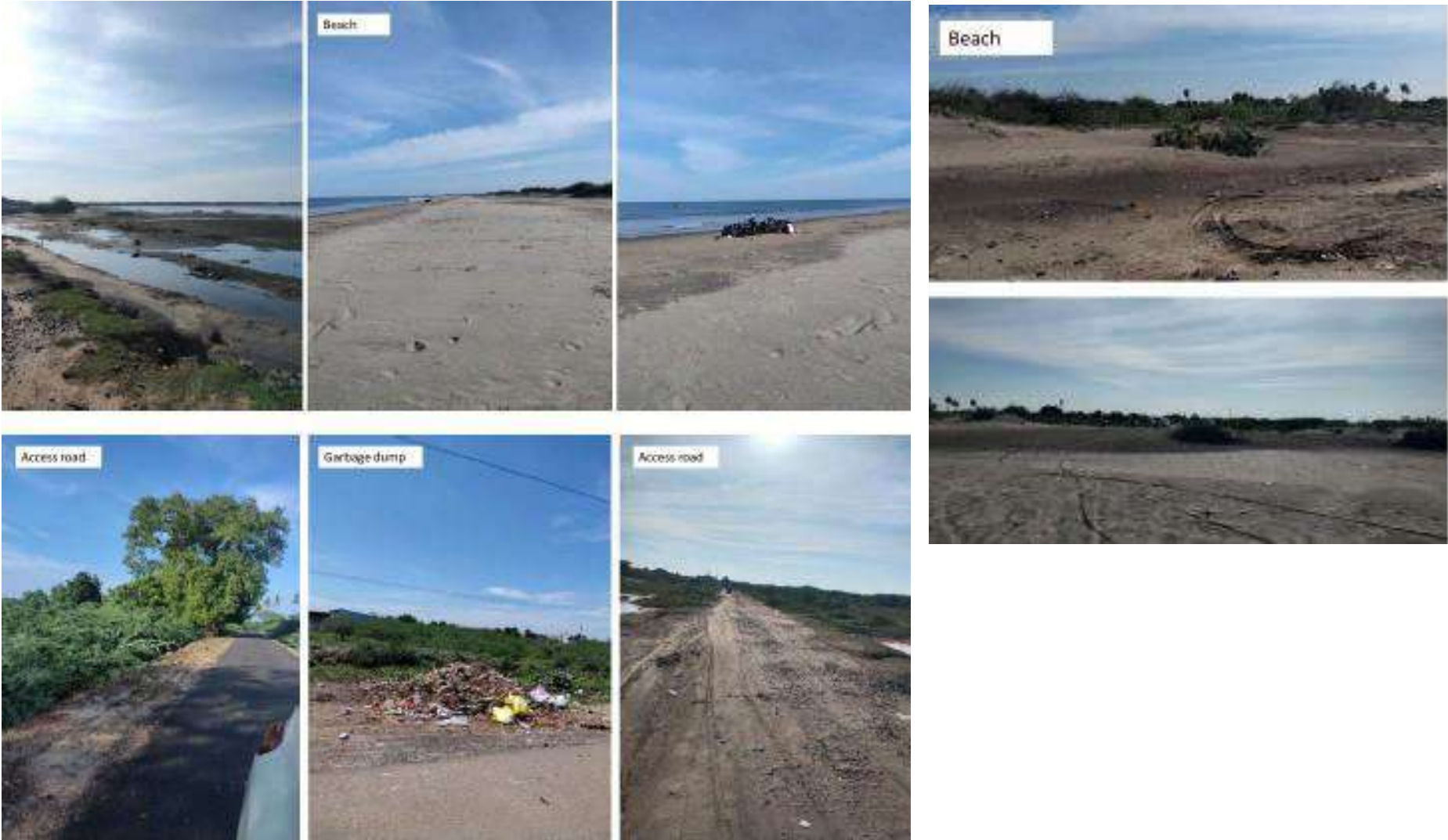


Figure 4-2: Coastal Regulation Zone at Kodyampalayam Beach



Vision for the Site

The Kodyampalayam beach is a barren beach without any amenities. A proper access road is also absent. The beach still draws only a few people for its quiet and peaceful environment. Kodyampalayam village adjacent the beach not only has no facilities aimed at tourists, but it has also hardly any public facilities at all.

Attracting tourists to Kodyampalayam Beach can be done only by combining a visit to the beach with a trip along the backwaters and the nearby Pichavaram mangrove park. By building a jetty/pier, boats from other boathouses can land here and it can function also as a starting point for kayaks and canoes to explore the nearby backwaters. At the beach, a small Eco Camping Site could be promoted.

- **Target Visitor** – Consistent with the target-audience at the boutique hotels nearby, and the typical tourists who come to nearby Auroville and Pondicherry and those who come for surfing and yoga.
- **Tourist Projections** – The site is categorized as a **Medium Tourism Site with Moderate HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	60	163	386
High Value Tourists (HVT) (Both domestic and foreign)	0	2	5
Maximum Carrying Capacity	13,766		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Master Plan Concept

- Considering the limited attraction, the beach holds, tourism should focus on small scale Eco Tourism. By building a jetty/pier, boats from other boathouses can land here and it could also become the starting point for kayaks and canoes to explore the nearby backwaters. At the pier, a small boathouse and toilet facilities and car parking should be planned too.
- Small gazebos can be planned for day trippers who want to have a picnic at the beach.
- A designated area for a small Eco Camping Site could be planned here too (not fenced off), for the more adventurous tourists. Beside a toilet /shower block the camping area should only be seasonal and not leave any permanent mark on the beach. The Eco- Campsite will have limited capacity for travellers who bring their own camper van or tent. Several semi-permanent tents that can be rented out will make up the rest of the camp site.
- The design of the newly built structures, landscaping and activities on offer should be clearly be about an Eco Tourism experience. The materials and building methods used for all buildings and structures should be sustainable and preferably natural and locally sourced.

Hard Interventions

1. Pier/Jetty, Boathouse, Toilets

- Pier/Jetty, Boathouse, Toilets

Infrastructure created – 100 mtr x 4 mtr jetty and 150 sqm built up area.

2. Eco Beach Camping Site / Beach Gazebos

Bathroom / Changing Room, Beach Gazebos

Infrastructure created - 140 sqm built up area.



Small Scale Facilities for Eco Tourism

Soft Interventions

1. **Site Promotion** - Increasing the visibility with strategies like integration with TN Assist App, etc. The local authorities can organize recurring events, associated festivals, etc. which can help publicize and increase awareness.

Amenities Plan

1. **Lighting** – The Kodyampalayam beach area will need a Street Lighting Plan, with an emphasis on different types of lighting and levels of brightness befitting the variety in areas (road, car park, jetty/pier, eco camping beach area).
2. **Street Furniture:** An international standard to the design and quality of the street furniture should be the benchmark. The street furniture needs to become an integral part of the Landscape Design. A detailed Landscape Design Guideline Manual will need to be prepared that will form the standard for all the street furniture from seating benches, shading devices, canopies, dustbins, bollards, paving materials, way finding etc.
3. **Planting & landscaping** – More strategic tree planting is required along the entrance roads, the beachfront promenade to create more shaded areas to make the site attractive as destination also during the daytime. More sculptural trees and flowering trees and shrubs should help to beautify the site.
4. **Signage** - Direction boards can be erected along the main roads in the area indicating the presence of this Site.
5. **Resurfacing Road and Parking** – The road to the Beach needs resurfacing and two small designated parking areas.
Infrastructure created – 400 mtr x 6 mtr road surface and two parking areas of total 600 sqm

Trunk Infrastructure

As the Site has excellent connectivity, no trunk infrastructure interventions are required.

Please refer to Design Guidelines mentioned in the Glossary of Interventions regarding amenities and urban design.

Project Identified

#	Project Component	Scale
1	Pier/Jetty Boathouse, Toilet	100 mtr x 4 mtr 150 sqm
2	Beach Gazebo	140 sqm
3	Signage Package 1	1
4	Drinking Water Station	3
5	Resurfacing Road	400mtr x 6 mtr
6	Parking	600sqm

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in Glossary of Interventions.

#	Project Component	Cost (INR Lakhs)
1	Road resurfacing (Asphalt road)	120
2	Boathouse	49
3	Pier/ Jetty	60
4	Parking	9
5	Drinking water station	2
6	Toilet block	20
7	Signage	1
8	Beach Gazebos	28
Total		INR 290 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- All revenues are unescalated.
- Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

The following revenue sources are expected for the site:

1. **Revenue share from activity operators** – Capturing 10 operators at INR 1.5 Lakhs per operator per year.
2. **Parking** – Capturing 30 ECS at 40% occupancy per day at INR 15 per ECS.
3. **Pay per use Toilets** – Assuming that ~30% of the visitors would use the toilets at INR 10 per person.

Considering the above, total additional un-escalated revenues from the site in Y5 is estimated as INR 20 Lakhs.

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.
- The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.
- The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- The costs are un-escalated.

The following OPEX is expected for the site:

1. **Manpower Costs** – Additional manpower will be required at the site to manage the proposed interventions.
 - a. A **helpdesk staff** at the amenity block

- b. A **security personnel** each at the for the parking and the boathouse.
 - c. An **Administration staff** to oversee the operations of the of the boathouse.
2. **Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
 3. **Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
 4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
 5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.
 6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.
 7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175* per kilolitre.

As discussed in note above, the following existing OPEX, if any, are not considered:

- Salaries and perks of existing employees
- O&M cost of existing site and facilities
- Regulatory fee, if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as INR 20 Lakhs.

Feasibility Assessment and Implementation Plan

Given that the estimated additional revenue from the proposed interventions exceeds the operational expenses incurred, it can be concluded that the interventions proposed at the site are **Operationally Self-Sustainable** and therefore beneficial to the community.

However, considering the low footfalls at the site, the development might not seem attractive to the private players at present, hence the current interventions are directed towards serving the surrounding community by making it a feasible recreational space to cater to their local needs and the development of the same is to be taken up by the Town panchayat under the direction of Tourism SPV.

Given a footfall increase at the site in the future phases, the tourism SPV might find prospective private operators for PPP to develop the proposed boathouse and the jetty facilities.

Phasing and Funding Agencies

Overall the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Road resurfacing	120	Y0 – Y2	Town Panchayat
2	Boathouse ¹⁰	49	Y5 – Y7	SPV/ PPP
3	Pier/ Jetty ¹	60	Y5 – Y7	SPV/ PPP
4	Parking	9	Y0 – Y2	Town Panchayat
5	Drinking water station	2	Y0 – Y2	Town Panchayat
6	Toilet block	20	Y0 – Y2	Town Panchayat

¹⁰ The development of the boathouse and the sea pier/ jetty to be taken up by the SPV/ PPP in future development phases basis the footfalls increase/ financial feasibility of the site.

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
7	Signage	1	Y0 – Y2	Town Panchayat
8	Beach Gazebos	28	Y0 – Y2	Town Panchayat
Total		INR 290 L		

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 12,450¹¹ man-days of construction labour (spread across 1-1.5 years of implementation)

During Operations: Jobs created during operations will entail, new opportunities for:

- Additional personnel deployed at site (Cleaning staff, management, security) = 5 - 8 Persons
- Activity Operators = 8 – 10 Persons
- Informal Vendors = 15 – 20 Persons

The direct employment generated during operation phase is an estimate. With increase in the tourist footfall at the site, there are chances that the numbers indicated above may increase. Henceforth, it cannot be estimated to complete accuracy.

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – As discussed above
- Indirect employment in the sectors supplying inputs to the tourism industries.

¹¹ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day

- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. It is estimated as per market benchmarks, considering a multiplier effect of 2.5.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both, increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 80 Cr. at the site¹².

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

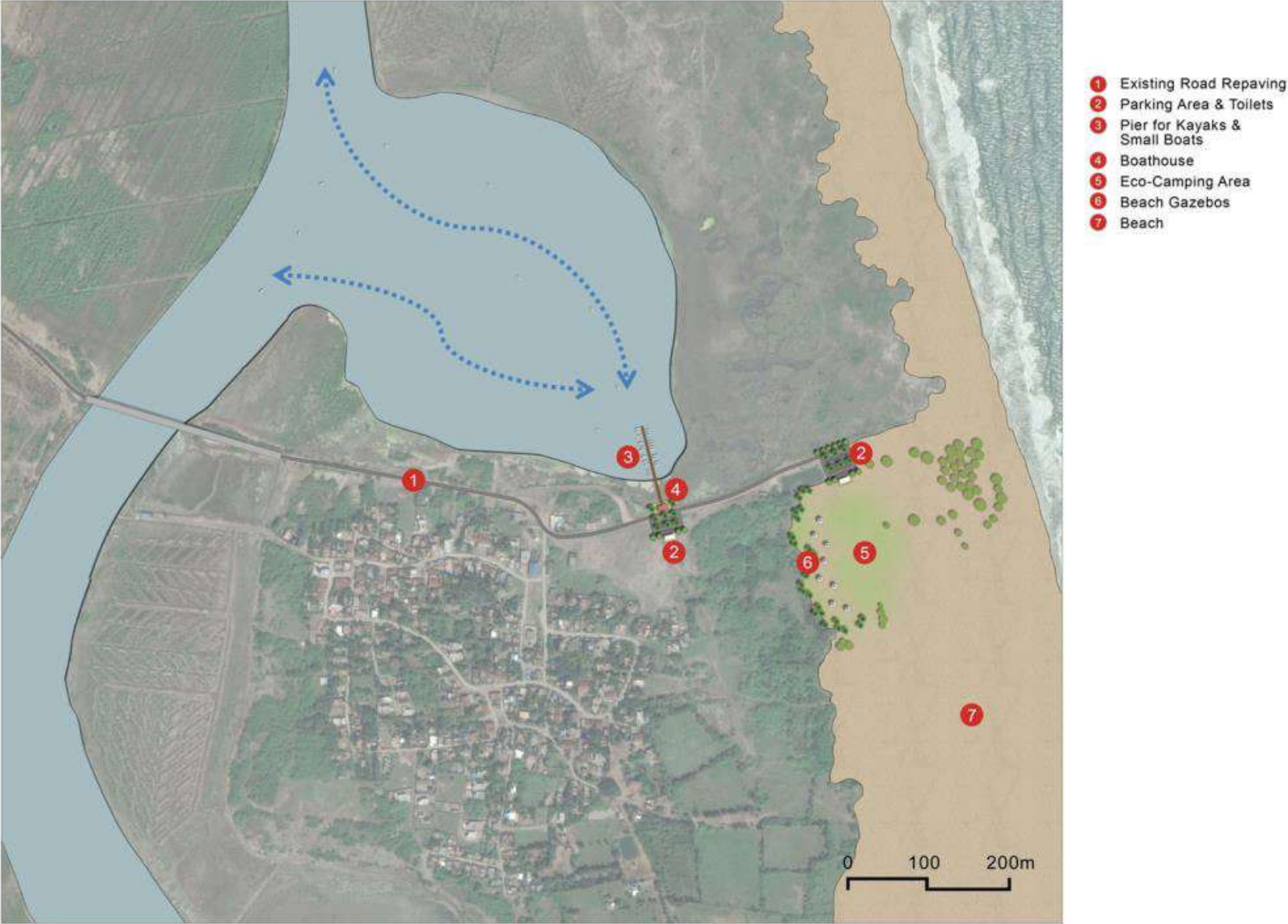
○ Assumed cost of labour assumed for computation = INR 700 per day
 • Cumulative labour man-days = 30% * CAPEX / 700
¹² Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and suppliers will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area. Some of these will be:
 - Handloom weaver

Figure 4-3: Master Layout Plan Kodyampalayam Beach



5. Kodiveri Falls and Park, Erode

Site Details

District:	Erode
Name of Site	Kodiveri Falls and Park
Site No:	Site 185 of 295
Site Use:	Waterfalls and Park
Category:	E (Waterbodies / Boathouse)
Location:	11.4734, 77.2964
Land Area:	~1.5 acres
Peak footfalls:	5000 per day (Public holidays, March–June, November – January)
Operator:	PWD
Site Ownership:	PWD
Tourist Footfall:	Dom. – 8.13 lakhs (2019) For. – ~40 (2019)
Site Revenues:	Nil
Site Orientation:	Tourist
Site Potential:	Medium Tourism Site
HVT Potential:	Low HVT Potential
Connectivity:	
a. Railway station:	50 km from Erode Junction
b. Airport:	70km form Coimbatore International Airport
c. Highway:	~3.5 km from SH-82, ~8 km from NH-948
Trails featured on:	Nil (Weekend Destination)

Kodiveri falls is a broad and shallow, seasonal waterfall along the Bhavani River. As the flow of water in the falls is not heavy and the water underneath is shallow, visitors prefer to take a swim at Kodiveri. Presently, it is majorly visited by locals. Apart from the waterfalls, the site also comprises a park and viewpoints (both run by PWD), making it a suitable one-day picnic spot for visitors. The scope of interventions and master planning at the site includes the provision of integrated tourism amenities and making the park environment tourist engaging.

Existing Condition

Location

Kodiveri Falls and the park is located ~75 km east of Coimbatore, ~60 km northwest of Erode, and ~100 km south of Salem. Kodiveri Dam & Waterfalls is situated to the south of Satyamangalam (~8 km) in Erode district along the Bhavani River.

Existing Layout

- The Kodiveri falls are a result of water flow from the Kodiveri dam which is ~400 m north of the falls. The site's entry point is from the southern side of the dam, whereupon the entry one can encounter a ticket counter near the entrance arch, car parking, and 2 – wheeler parking space on its east and west respectively.
- A small bridge connects the entrance point to the park in the southeast part of the waterfalls. It spans an area of ~1.5 acres which consists of a children's play area, a viewpoint area, watchtowers, and a small temple. The area to the north of the park is prone to flooding during the monsoon.
- Few stalls and a toilet block are located to the east of the park, on a vacant piece of land along the riverbed area. It is the same vacant piece of land from where the visitors can enter the waterfalls to bathe.

Existing Uses

- The site is often visited by tourists for recreational and picnic purposes.
- The park on the eastern bank between the waterfalls and dam has several retail stores to cater to the visitors and recreations for kids to play.
- Informal setup of stalls by locals near the park area also facilitates the tourist needs.

Other Land Available

The vacant land area north of the bridge is part of the river basin and is prone to flooding during the monsoon. There are no other vacant lands surrounding waterfalls that are suitable for planned development.

Master Planning Considerations

Applicable Regulations

1. **Setbacks** – As per the TN Combined Building Rules 2019, all construction activities along the river edge must be done after a distance of 15 m. from the boundary of the river. In cases where construction activities are carried out within 15 from the river edge, appropriate measures must be taken to prevent any contamination or any risk of the drainage of buildings passing into the river.

Key Sensitivities

The site is adjacent to a river body, and therefore any development at the site needs to ensure minimal water-polluting activities and to be constructed in an eco-friendly manner.

Key Issues to Address

The key issues at the site identified at the Baseline Stage are summarised below along the 7A Framework:

1. **Attraction** – The waterfall formed downstream of Kodiveri Dam is a wonderful spot with nice views. The seasonal falls run dry during the summer season/years with below-par rainfall. The park alongside offers recreational facilities like a play area for children, viewpoints, seating areas, and also hosts few retail stores to cater to the needs of tourists. However, the area is prone to foul smell and littering due to fresh fishes, unregulated stalls and hawkers spoil the waterfalls' natural

aesthetics. The dam, the waterfalls, and the park in the same enclosure make the site a good day-long picnic spot to cherish with family and friends.

2. **Accessibility** – The site is easily accessible from Sathyamangalam via road and bus transportation, from Erode and Mettupalayam via rail, and from Coimbatore by air. No interventions are required to augment accessibility to the site.

Parking – Parking is usually done at the parking area as the visitors approach the waterfalls. The designated parking areas lack finishing in terms of pavements and lighting facilities.

Internal Circulation – There are no defined routes for internal circulation within the site. However, the paths visitors usually take to access the waterfalls and park from parking are rough and unpaved.

3. **Amenities** – The condition of tourist amenities within and around the waterfalls and the park is average.
 - The site lacks in the provision of adequate number and good quality of toilets, changing rooms, luggage rooms.
 - There are no information/ safety instructions boards at the site, in addition to below-par management of crowd during peak season (March – June, November – January, Public Holidays).
 - Cleanliness around the park is also poor, due to the littering of wastes by the tourists and non-frequent placement of dustbins.
4. **Awareness** – The site is largely visited by the locals and the domestic crowd from the neighbouring towns and districts. The site is majorly visited for recreational purposes – a shower in the waterfalls. Though it has decent traction among domestic tourists, foreign tourists rarely visit the site.
5. **Activities** – The set of activities that currently take place at the site are:
 - Shower at the waterfalls
 - Swimming in the shallow waters of the Bhavani river
 - Boat rides in Thatched round boats
 - Walk along the Kodiveri Dam

An additional set of activities which the lacks but can be developed for the tourists are:

- Quality cafes/F&B services can be developed
- Picnic terraces can be developed in the park
- A variety of water sport activities can be made available

6. Accommodation – There are accommodation facilities available in the Sathyamangalam town (~8 km). The facilities here are confined to budget hotels (~INR 500 – INR 1000 Per night). Tourists usually prefer a stay at Erode (~60 km) and Salem (~100 km) from the site, with distinct options and availability for accommodation.

7. Association with Community – Association with local communities is through retail activities like the setup of a small food stall and provision of boating activity. It can be enhanced by better skill development programs and training programs.

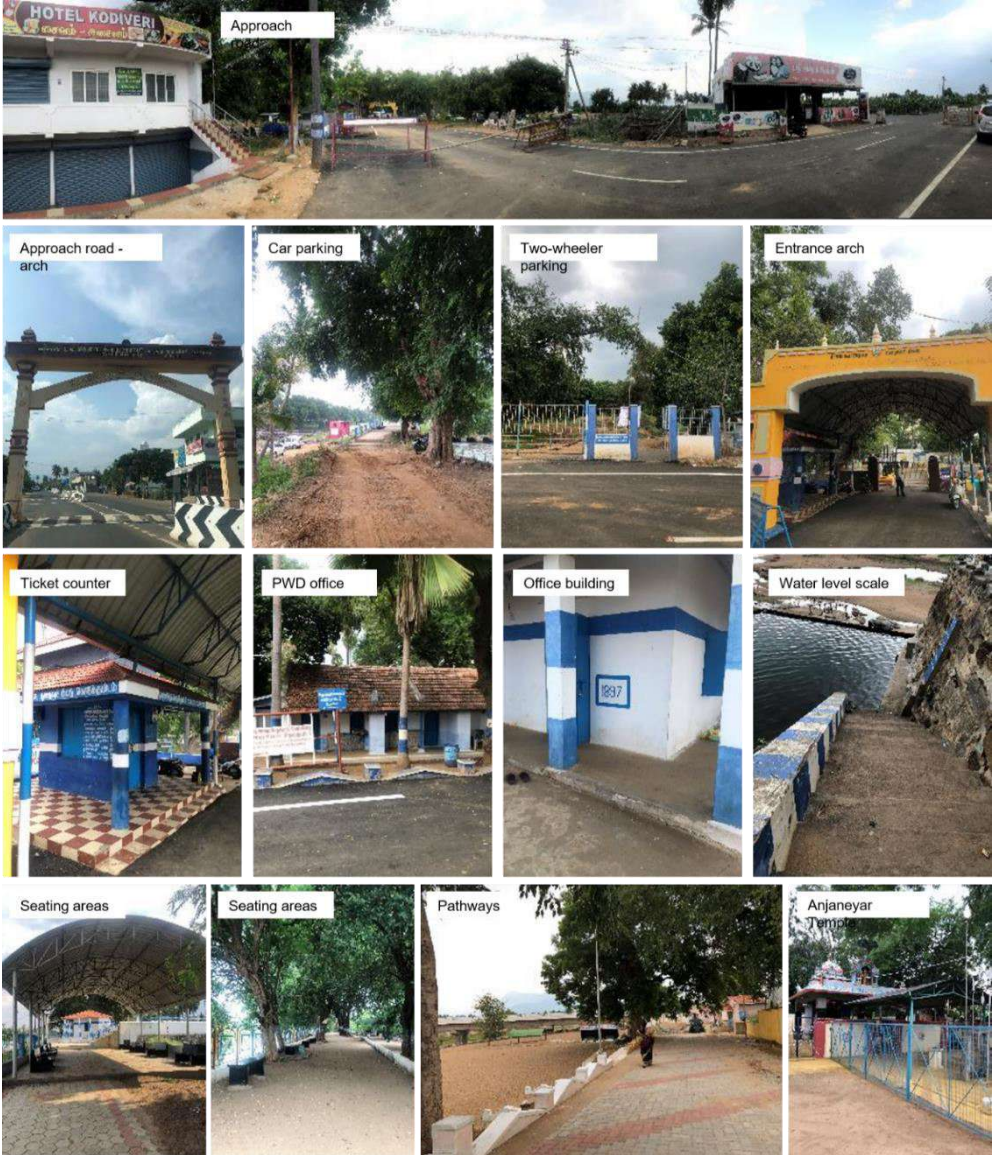
Figure 5-1: Location and Existing Layout



- 1 - Dam
- 2 - Watch towers
- 3 - Snack Stall
- 4 - Car Parking
- 5 - Children Play Area
- 6 - Viewpoint
- 7 - Ticket Counter
- 8 - Bike Parking
- 9 - Toilet Block
- 10 - Bathing Area
- 11 - Way to Waterfalls
- 12 - Temple

Site Pictures





Planning Inspiration

Given the natural attraction of the site and other site features such as:

- The easily accessible waterfront edge
- Short and broad waterfalls – easy to maneuver across all age groups.
- A nature side picnic spot, with the availability of a children’s play area
- Easily accessible and close to Erode, Salem, and Sathyamangalam (~8 km).

And taking into consideration the site weaknesses such as:

- Close to a river body, and frequently prone to flooding
- Low popularity among the foreign tourists
- Feeble maintenance of facilities with dispersed informal stalls.
- Development restrictions due to environmental considerations
- Seasonality of the waterfalls

The site has the potential of being transformed into a domestic recreational and nature immersive one-day picnic spot for the tourists on the lines of **Kerwa Dam (Bhopal), Sardar Sarovar Dam (Gujarat)**, All of these dams have developed a tourist economy around a public infrastructure Dam, and are developed into one day or weekend picnic destinations.

The site transformation would therefore provide an appealing and nature-filled experience to its tourists and the locals. The new waterfall site can offer to its tourist's new spaces for formalizing informal activities, improvements in existing amenities, upliftment of the aesthetic beauty, etc.

Vision for the Site

The waterfalls are currently a popular tourist destination among the locals, unknown to the tourists beyond the surrounding districts. The facilities and the surroundings of the waterfalls are below par that it does not appeal to a tourist. Interventions can be planned in modernizing the existing facilities and audited maintenance of the same. The awareness of the site can be increased by conducting events and fairs along with the vacant spaces available on either side of the waterfalls.

- **Target Visitor** – The site currently draws a large number of domestic tourists. The target visitors to be captured here are domestic tourists from within the country. To develop a well-facilitated picnic spot for the locals offering engaging activities and spaces for recreation.

The composition of visitors at the site includes all age groups of visitors and hence, facilities would need to be provided for all (especially for children, Divyaang and elderly).

- **Tourist Projections** – The site is categorized as a **Medium Tourism Site with Low HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC’s compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	813	1850	2555
High Value Tourists (HVT) (Both domestic and foreign)	0	0	0
Maximum Carrying Capacity	1,477		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Approach to Master Planning

The Kodiveri waterfall also referred to as the ‘Niagara of the South’ is a broad and shallow, seasonal waterfall. The objective behind the development of the masterplan for this site are:

- **To Integrate the dispersed facilities** and activities, the development of the park area.
- **Facilitate a one-day picnic atmosphere** and integrate it with the surrounding landscape for holistic site development.
- Development of soft interventions for **site marketing and community integration**.

Hard Interventions

1. Restaurant/Café in integration with Amenity Block - A waterfall-facing restaurant block in conjunction with amenities block can be developed, integrate all the small activities, and amenities. It can have a Ticket counter, toilets, changing rooms, local retail stores, small souvenir shops, public drinking water, Luggage Room, etc. + some guest rooms for accommodation. The Restaurant/Café can be privately owned and made to overlook for the maintenance of amenities block as well.

Infrastructure Created: ~5000 sqft. of restaurant/café building + ~800 sqft. Of amenity block.

2. Revamping the park – The park area currently looks barren and dead. The local crowd visiting the waterfall site usually visits the site for small one-day picnic purposes. With landscape interventions and creating vibrant family-oriented and children-friendly picnic spaces might bring life to it. It can be done by creating pavements/pathways along the waterfront, adding benches and picnic terraces overlooking the falls, placing a watchtower providing an aerial view of the forests. Some of the extra activities can be added like a toy train, theme gardens, etc. in the park. Some of the useful considerations required while developing the are adequate fencing on the waterside of the park and the creation of rainwater harvesting tanks like rain gardens, to supply water to public drinking spots in the park.

Infrastructure Created: ~350 m. length of paved pathway, ~500 sq. m. of Picnic Terraces area, ~500 sq. m. of theme garden, ~250 - 300 sq. m. of Rain Garden, ~80 sq. m. of children’s play area, 2 watchtowers

3. Development of Waterfall shoreline – Some limits of the waterfront boundary can be developed into an aesthetically beautiful and functional waterfront. It can be landscaped beautifully and have a ticket counter and small amenity block near the boating facilities end of the waterfall.

Facilities for extra activities such as river crossing, zip-lining, can be installed to keep the area active during non-peak season. A small concrete deck with safety signages can be created for waterfront seating areas.

Infrastructure Created: ~50 sq. m. of waterfront deck area, 90m. length of waterfront landscaping, ~50 sq. m. of boating front area development.



Theme Garden



Waterside Decks



Picnic Terrace and Water side Restaurants



Children’s play area and Waterside Landscaping



Ziplining Across the waterfall and river area

Soft Interventions

1. **Site marketing & promotion** – The site can be Integrated with TN Assist App, along with a site documentation brochure which can be set to display at public areas and information centers of nearby major cities such as Erode, Salem, Coimbatore.
2. **Community integration** – The local communities are currently associated with an informal set up with the site. They can be integrated and formalized into the site’s tourism development by enhancing their skills of service provision, conducting skill development workshops, etc.
3. **Site management** – There can be regulations developed on no plastic usage and other restrictions regarding miscreants, vandals, and drinking activities.

Amenities Plan

1. **Lighting** – Ensuring the park area is adequately lit (Solar streetlights can be installed along the pathways and gathering areas).
2. **Circulation** – Ensuring the steps in the parks are accompanied by ramps and other measures of universal accessibility.
3. **Drinking-Water Station** – Adequate number of drinking water stations are proposed to be installed at frequent intervals in the park.
4. **Signages (Package 4)** – The site currently has minimal signages for tourist facilitation. To facilitate tourists, the quality of signages at the site must be upgraded. It must be done as per the standards and guidelines specified under the type 4 signage package (basic for Natural Sites). Signage must feature Tamil, English, and Hindi.
5. **Parking** – Surface parking must be replanned to maximize the number of ECS spots available.
6. **Technology Intervention (Package 1)** – The site being a waterfall site of domestic and local importance, it must follow technological interventions as specified under the guidelines of package – 1. These include:
 - a. Electronic visitor counters & body scanner at entry points

- b. TN Assist App integration (internet connection, QR scanner)
- c. CCTV coverage at up to 3 locations

Trunk Infrastructure

As Kodiveri Dam and Fall site has excellent connectivity, no trunk infrastructure interventions are required.

Please refer to Design Guidelines mentioned in the Glossary of Interventions regarding amenities and urban design.

Projects Identified

#	Project Component	Scale
1	Restaurant Block	~5000 Sqft
2	Facilitation Centre type 3 + (Pay and use toilet block + drinking water station)	~800 sqft (~3 units + ~3 units)
3	Paved Walkways	~350 m
4	Railing type 1	~50 m
5	Street Lighting	~400 m
6	Dustbins	~10 units
7	Seats (Picnic Terraces)	~10 units
8	General Site Landscaping	~0.4 acres
9	Waterfront Promenade	~90 m
10	Sculpture Garden (Theme Garden + Rain Garden)	~700 sq. m
11	Children’s play area	~80 sq. m
12	Signage	Package 4 – Basic
13	Viewing Towers	~2
14	Floating Jetty for Boating	~50 sq. m
15	Waterfront Deck (Stilted)	~50 sq. m
16	Technology Integration	Package 1 – Basic
17	Boundary Fencing	~300 sq. m
18	Civic Upgradation – Community Education Drive	-

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in Volume A.

#	Project Component	Cost (INR Lakhs)
1	Restaurant Block	209
2	Facilitation Centre	21
3	Paved Walkways	7
4	Railing type 1	1
5	Street Lighting	6
6	Dustbins	1
7	Seats (Picnic Terraces)	1
8	General Site Landscaping	1
9	Waterfront Promenade	12
10	Sculpture Garden	18
11	Children's play area	5
12	Signage	1
13	Viewing Towers	36
14	Floating Jetty for Boating	30
15	Waterfront Deck (Stilted)	3
16	Technology Integration	1
17	Boundary Fencing	30
18	Community Education Drive	1
Total		INR 3.85 - 4 Cr.

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- All revenues are unescalated.
- Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

The following revenue sources are expected for the site:

- Built-up area rent** – Captures renting out of ~ 500 sqm built-up space at INR ~ 3200 per sqm per month.
- Revenue share from activity operators** – Capturing 5 operators at INR ~1.5 Lakh per operator per year.
- Pay per entry (View tower/ Sculpture garden)** – Assuming that ~20% of the visitors would use the toilets at INR 20 per person.

Considering the above, total additional un-escalated revenues from the site in Y5 is estimated as INR 90 Lakhs.

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.
- The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.
- The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- The costs are un-escalated.

The following OPEX is expected for the site:

- Manpower Costs** – Additional manpower will be required at the site to manage the proposed interventions.
 - Assuming **3 Help-desk staff** for the facilitation centre, sculpture garden and the boathouse.
 - Assuming **2 security personnel** for the boathouse, and the sculpture garden.
 - Assuming **1 Administration staff** to overlook the operations of the boathouse and the Activity operators.

2. **Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
3. **Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.
6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposal as per the environment norms. It is calculated based on the footfall projections.
7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175* per kilolitre.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee, if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as *INR 55 Lakhs*.

Feasibility Assessment and Implementation Plan

Given that the estimated additional revenue from the proposed interventions is in par with the operational expenses incurred, it can be concluded that the interventions proposed at the site are **Operationally Self-Sustainable** and therefore beneficial to the PWD and the entire Weekend trail.

The development of the projects is to be taken up by the PWD, facilitated by the tourism SPV in collaboration with private players. Given the development of the proposed projects, the site is envisioned to be positioned as a prime recreational space in and around Erode district. Some revenue generating interventions which need operating expertise can be developed by the PWD and given to operators on license basis.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Restaurant Block ¹	209	Y0 – Y5	PWD, Private vendors – Annual Lease
2	Facilitation Centre	21	Y0 – Y2	PWD
3	Paved Walkways	7	Y0 – Y2	PWD
4	Railing type 1	1	Y0 – Y2	PWD
5	Street Lighting	6	Y0 – Y2	PWD
6	Dustbins	1	Y0 – Y2	PWD
7	Seats (Picnic Terraces)	1	Y0 – Y2	PWD
8	General Site Landscaping	1	Y0 – Y2	PWD
9	Waterfront Promenade	12	Y0 – Y2	PWD
10	Sculpture Garden	18	Y0 – Y2	PWD
11	Children's play area	5	Y0 – Y2	PWD
12	Signage	1	Y0 – Y2	PWD
13	Viewing Towers	36	Y0 – Y2	PWD
14	Floating Jetty for Boating	30	Y0 – Y2	PWD – Licensed to activity operators
15	Waterfront Deck (Stilted)	3	Y0 – Y2	PWD
16	Technology Integration	1	Y0 – Y2	PWD
17	Boundary Fencing	30	Y0 – Y2	PWD
18	Community Education Drive	1	Y0 – Y2	PWD
Total		INR 3.85 - 4 Cr.		

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 1.30 L¹ man-days of construction labour (*spread across 2-3 years of implementation*)

During Operations: Jobs created during operations will entail, new opportunities for:

- Additional personnel deployed at site (Cleaning staff, management, security) = 5 - 8 Persons
- Activity Operators = 8 – 10 Persons
- Retail and F&B spaces = 20 Persons²
- Informal Vendors = 15 – 20 Persons

The direct employment generated during operation phase is an estimate. With increase in the tourist footfall at the site, there are chances that the numbers indicated above may increase. Henceforth, it cannot be estimated to complete accuracy.

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – As discussed above
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. It is estimated as per market benchmarks, considering a

multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 3.25 L man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 510 Cr. at the site³.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

¹ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day

- Assumed cost of labour assumed for computation = INR 700 per day
 - Cumulative labour man-days = 30% * CAPEX / 700

² Assuming average 2.5 persons per kiosk / shop

³ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and

supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.

- Local Fishing Communities – in terms of diverse opportunities of service provision to the tourists which can include guided recreational fishing/ angling, boat rides into the sea, fishing tours, and training on coastal ornaments making, exhibition and sale
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

Figure 5-2: Proposed Master Plan – Kodiveri Falls and Park



6. Eraiamman Padithurai to Viravalai Boating, Kanyakumari

Site Details

District:	Kanyakumari
Name of Site	Eraiamman Padithurai (Erayumanthurai) to Viravalai (Virivilai)
Site No:	Site 295 of 295
Site Use:	Waterbody
Category:	E (Waterbodies / Boathouse)
Location:	8.2389,77.1664
Land Area:	~8km (length)
Peak footfalls:	Nil
Operator:	PWD
Site Ownership:	PWD
Site Revenues:	Nil
Site Orientation:	Tourist
Site Potential:	Very Low Tourism Site
HVT Potential:	Moderate HVT Potential
Connectivity:	
a. Railway station:	~13 km from Kuzhithurai Railway Station
b. Airport:	~45 km from Trivandrum Airport
c. Highway:	Starting point of the stretch on SH-179

Trails featured on: **Nil (Weekend Destination)**

The Erayumanthurai to Virivilai boating stretch lies on the Thamiraparani river in the Kanyakumari district. Away from the hustle of crowded tourist spots, the coastal villages of Erayumanthurai and Virivilai are predominantly fishermen settlements. This region is blessed with spectacular views of the backwaters and dense coconut grooves on either side of the Thamiraparani river. Further, the water of Thamiraparani river meets the Arabian sea near Erayumanthurai fishing harbour to form an estuary. The scope of intervention for this site is to develop it as a tourist destination.

Existing Condition

Location

The site is located in Kanyakumari district, at a distance of ~48 km from Nagarcoil and ~45km from Trivandrum. Both Erayumanthurai and Virivilai are very close to the Kerala border. Easily accessible by SH-179, the site is well connected to the nearby towns and cities. Other tourist attractions located near the temple include Thengapattanam Beach (800m), Aattupalli Mosque (~1.2km), Kollemcode Shree Bhadrakali Devaswom (10km) and St. Anthony's Church, Pootteti (15km).

Existing Layout

The site can be approached via SH-179. One of the access points of the boating stretch is near the Ganabathyankadavu Bridge in Virivilai. The area surrounding the river in this stretch (from Virivilai to Erayumanthurai) currently has no major developments. It is blessed with views of backwater set amidst dense coconut grooves. The land parcels on either side of the river are dominantly private lands and have spare development. The Erayumanthurai end of this boating stretch opens upto an active fishing harbour that bustles with fishing and related activities

Existing Uses

Currently, the stretch proposed for boating is under no specific use. The active end of the stretch, Erayumanthurai Fishing Harbour, was recently developed in 2019 and serves as the main landing centre for over 500 deep-sea fishing boats. Since Thamiraparani river opens into the Arabian sea here, the river stretch is mostly used by fishermen to access the harbour. The settlement around the site is inhabited majorly by fishermen communities

Master Planning Considerations

Applicable Regulations

1. **Tamil Nadu Combined Development and Building Rules, 2019** – The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land.
2. **CRZ¹⁶ Regulations** – The southern portion of the river stretch lies within the CRZ Boundary. As per CZMP Map, this part of the site lies in CRZ IV-B
 - a. CRZ IV-B - Tidal influenced waterbodies
 - o CRZ - IV does not put restrictions on the traditional fishing by local communities. But dumping of untreated sewage or solid waste is not permissible in this zone.
 - o Land reclamation and bunding are permitted for some activities like ports, harbours defence and strategic purpose etc.
 - o Activities related to waterfront or directly needing foreshore facilities, such as ports and harbours, jetties, quays, wharves, erosion control measures, breakwaters, pipelines, navigational safety facilities and the like are allowed.
 - o Projects related to Department of Atomic Energy, strategic and defence related projects etc. are allowed.
 - o Construction of memorials or monuments and allied facilities by the concerned State Government in CRZ-IVA areas, in exceptional cases, with adequate environmental safeguards

Key Sensitivities

¹⁶ Coastal Regulation Zone

Local fishing communities – The coastal villages of Erayumanthurai and Virivilai are predominantly fishermen settlements. The region is extensively used by the fishermen community for fishing and related activities. Additionally, since the proposed site opens up to a fishing harbour, the route is majorly used by the nearby fishing communities to access the harbour.

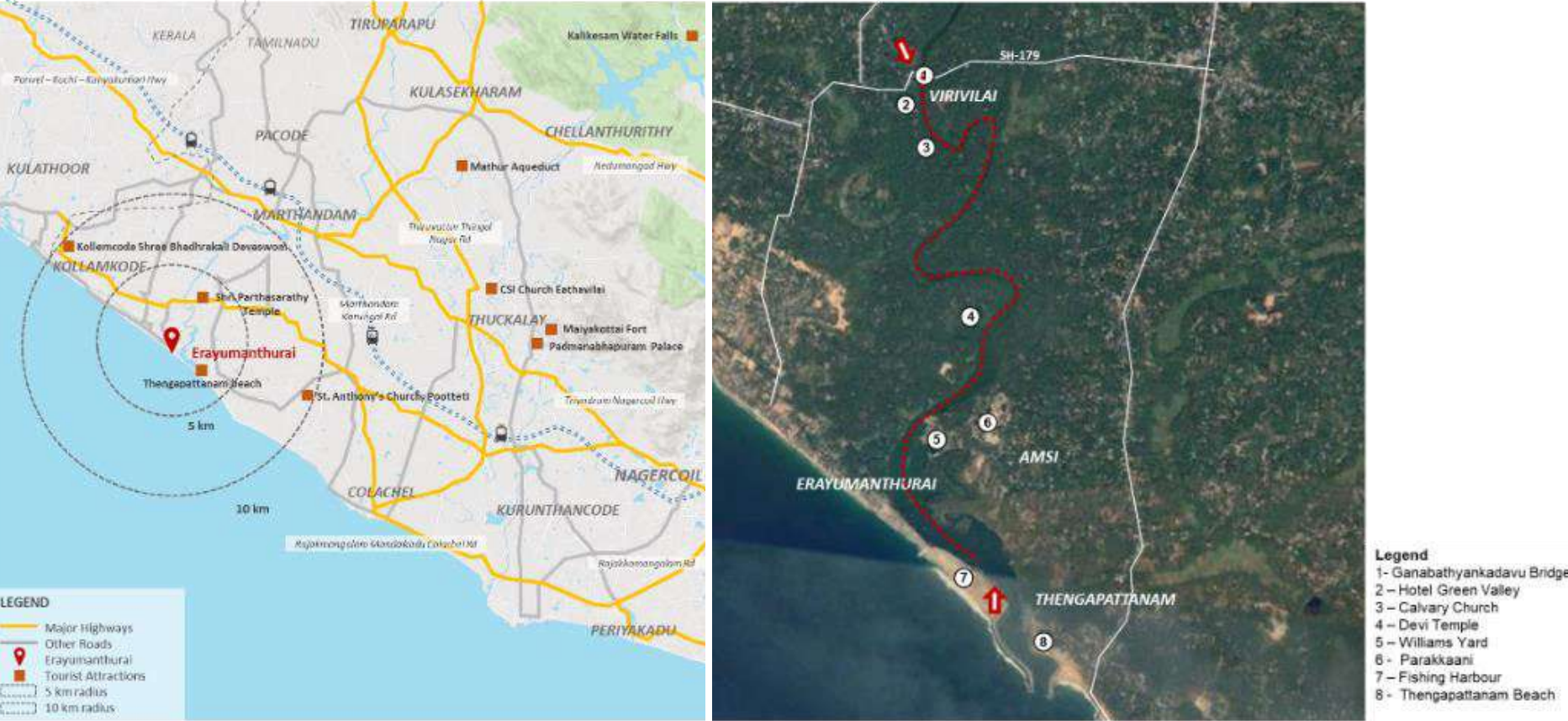
Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

1. **Attraction** – Enveloped in the serene backwaters of Kanyakumari and flanked by the Arabian Sea, the proposed site is a tropical paradise that is currently unexplored. A perennial river surrounded by dense coconut groves provides an opportunity to enjoy nature at its best. The site is situated in a tranquil environment, away from all the city hustles. Unlike other crowded tourist attractions, tourists can relax and rejuvenate while taking a boat ride amidst nature. Additionally, the site also has other popular tourist attractions around, like the Thengapattanam beach. The beach is a popular picnic spot with the beautiful backdrop of coconut trees.
2. **Accessibility & Mobility** – The site is located in Kanyakumari District, situated at a distance of ~48 km from Nagarcoil and 45km from Trivandrum. Easily accessible via SH-179, the site is located amidst dense coconut plantations. The major modes of transport people use to commute to the site include private vehicles, buses and taxis. The nearest bus stop is located in Virivilai, located ~500m from the site. The nearest railway station is located ~13km away in Kuzhithurai. The nearest airport is Trivandrum International Airport, located at a distance of ~45km.
3. **Amenities** – Currently, the site is not developed from the perspective of tourism. Hence, it lacks aa basic amenities. While there are a few facilities near the fishing harbour, they are specifically dedicated to fishing activities- like fish drying sheds, boat docking area etc. Additionally, there is provision of some basic amenities like toilet block, ATMs etc. near Thengapattanam Beach.

4. **Awareness** – While the areas abutting the site are popularly known, the site lacks awareness and is not known as a tourist destination.
5. **Activities** – At present, the site lacks the presence of any activity. While the stretch near Erayumanthurai is active, it is majorly used by the fishermen community for fishing activities and to access the fishing harbour. However, there is great potential to develop tourist activities in the region with boating, floating restaurants, adventure sports, etc. Over time, as the tourist footfalls rise and supporting infrastructure is developed, associated activities are expected to come up. This includes set up of resorts, spa centres, local cuisine restaurants, homestays, etc.
6. **Accommodation** – There are no accommodation options available in proximity to the site. Various accommodation options are available within a radius of 20 km from the site. The nearest accommodation options are available at Kuzhithurai. These are mostly budget hotels with room tariffs ranging from INR 500 to INR 1200. Tourists can find the nearest luxury hotels/resorts in Poovar (~17km from the site), with room tariffs ranging from INR 1500 to INR 3,500.
7. **Association with Community** – The site and its surroundings are home to large fishermen communities. Located on a vast coastline, the people of the surrounding villages are majorly involved in fishing and related activities. After the recent development of the fishing harbour, fishing related activities have increased. There is also a lot of potential for the engagement of locals if the site is developed to attract high tourist footfalls. Potential activities include boat rides into the sea for sunrise/sunset, rowing, angling and introduction of houseboats would immensely increase the employment opportunities for the local fishermen community.

Figure 6-1: Location and Existing Layout of the stretch



Site Pictures





Thamiraparani River



The harbor viewpoint



River view from the bridge

Ezhudesam, TN, India
SH 179, Vilavancode,
Ezhudesam, 629154, TN, India
Lat 8°16'28"N, Long 77°9'40"E
09/24/2020 09:55 AM



Ganabathyankadavu Bridge

Ezhudesam, TN, India
SH 179, Vilavancode,
Ezhudesam, 629154, TN, India
Lat 8°16'28"N, Long 77°9'40"E
09/24/2020 09:55 AM



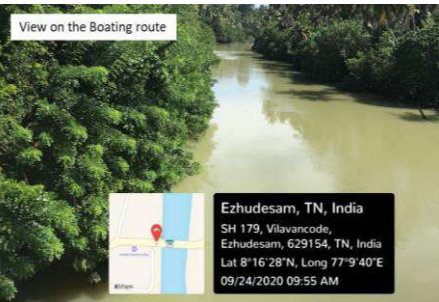
Fishing Harbor Region



Fishing Harbor Region



View on the Boating route



View on the Boating route

Ezhudesam, TN, India
SH 179, Vilavancode,
Ezhudesam, 629154, TN, India
Lat 8°16'28"N, Long 77°9'40"E
09/24/2020 09:55 AM

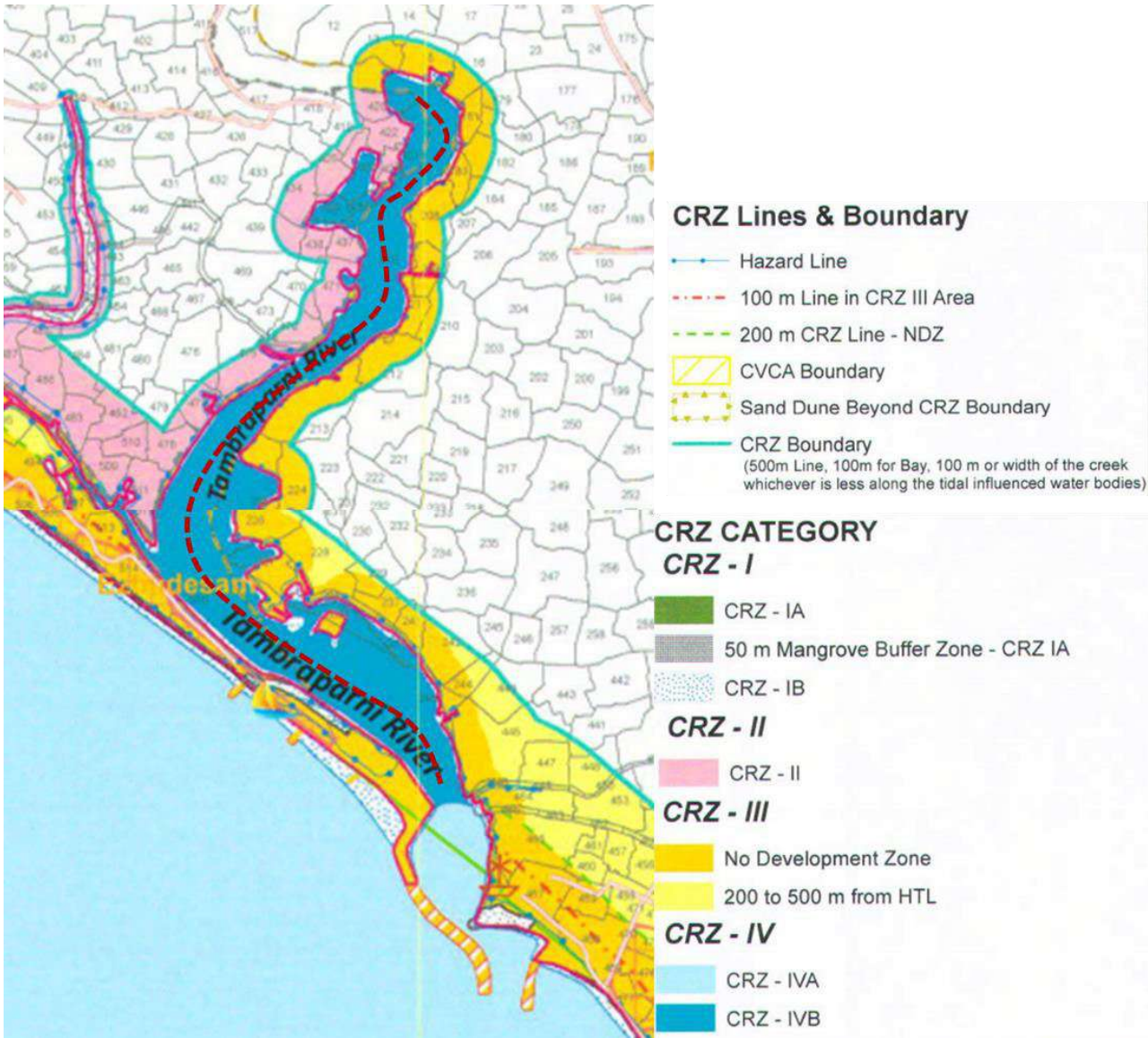


The harbor



Thengapattinam Beach

Figure 6-2: CRZ Boundary



Vision for the Site

Boating as a tourist activity along the Thamiraparani River is not yet explored and considering the untouched beauty of its riverbanks, it has immense unrealized tourism potential. The modern fishing harbor which has been constructed in Erayumanthurai-Thengapattanam in recent years should be able to reserve a small part of its quayside for a few tourist boats.

The river is not part of a wider backwater network and thus has limited carrying capacity. The number of tourist boats therefore should remain limited, to ensure that it does not become detrimental to the quiet & untouched nature of the river and doesn't spoil the boating experience. Considering this, the tourist boat trips should be aimed primarily at High Value Tourists.

To promote this as a proper tourist attraction, the boating experience cannot be limited to just a one-hour back & forth trip. It should be able to offer visitors an extended trip beyond Viralur with hiking and kayaking options.

- **Target Visitor** – The site is largely a tourist site, with no current footfalls. Keeping in mind the nature of the site, the master planning will target Moderate & High spending tourists, while facilitating better amenities and experience.

Examining the scope of activities and the kind of developments which can take place at this site, the master plan aims to attract a wide range of tourists who have a keen interest in nature and eco-tourism. It targets to provide an environmentally immersive experience, where visitors can enjoy the nature and the beauty of the site. The aim is to focus on the segment of International travelers and Higher Value tourists.

Further, tourist groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang, and elderly).

Proposed Master Plan

Master Plan Concept

- The Erayumanthurai side of the harbor is considered less desirable for the departure/arrival point of the Tourist boat as it is dominated by the large Fishing Harbour development. Thus, the Thengapattanam side has been chosen as the preferred location for the departure/arrival of the Tourist Boats, since the approach for tourists here is much more attractive - with wide empty beaches, enough space for the development of a beachfront promenade, and few beachside restaurants as an integral part of the village, away from the fishing harbor.
- The beachside at Thengapattanam would be where the visitors would park their vehicles and enter. This part of the stretch will have a beachfront promenade, restaurant pavilions, and a wide quiet beach which would become in its way, an attractive place for the tourists to visit before and/or after the boat trip.
- Beyond Viralur the boats can go as far as Mankadu, where there is a barrier in the river. From here the tourists can extend their visit with a canoe trip further up the river to Manakalai and/or go on one of the two hiking options up the two hills close by, offering amazing views across the river forest.

Hard Interventions

1. **Beachside Pavilions** – three restaurants/cafes/shops
Infrastructure created - 900 sqm built up area
2. **Waterfront Promenade, Quayside for Tourist Boats** *Infrastructure created – hard landscaped area of 6000 sqm with trees and street furniture*
3. **Boathouse** - A Boathouse is planned along the quayside
Infrastructure created – 400 sqm built up area

Soft Interventions

2. **Promotion** – The Site should be promoted as a tourist destination for those visitors who have a keen interest in eco tourism-related activities and enjoy spending time around nature. The site could be marketed as a leisure and wellness destination. It could be advertised across various platforms like travel blogs, trip aggregator websites and on the Tamil Nadu Tourism website.
3. **Management of the Boat trip Offering** – Considering the limited carrying capacity of the river and the quayside, only a small number of tourist boats can operate here. To ensure the local community profits from this initiative, the boat operator needs to hire local boatmen and crew. By aiming for the higher end of the tourist market, even a small proportion of boats would deem profitable.
4. **Management of Canoe Trips upriver from Mankadu and Hill Top Hiking Trips near Mankadu and Manakalai** – Beyond Viralur the boats can go as far as Mankadu where there is a barrier in the river. From here the tourists can extend their visit with a canoe trip further up the river to Manakalai and/or go on a hiking trip up the two hills close by, offering beautiful views across the river forest.



Restaurants with al-fresco seating overlooking Thengapattanam



Thengapattanam Beachside Promenade



Traditional. small River Boats redesigned for Tourists

Amenities Plan

1. **Lighting** – The redeveloped area will need a comprehensive Street Lighting Plan, with an emphasis on different types of lighting and levels of brightness befitting the variety in areas (car park, quay, boathouse, waterfront promenade).
2. **Street furniture** – An international standard to the design and quality of street furniture should be the benchmark. Street furniture needs to become an integral part of Landscape Design. A detailed Landscape Design Guideline Manual will need to be prepared that will form the standard for all the street furniture from seating benches, shading devices, canopies, dustbins, bollards, paving materials, wayfinding, etc.
3. **Planting & landscaping** – More strategic tree planting is required along the waterfront promenade to create more shaded areas to make the site attractive as a destination also during the daytime. More sculptural trees and flowering trees and shrubs should help to beautify the site.
4. **Signage** - Direction boards can be erected along the main roads in the area indicating the presence of this Site
5. **Parking** – The parking area for tourists near the Boathouse/ Waterfront Promenade.
Infrastructure created - Parking area of 2000 sqm

Trunk Infrastructure

As the Site has direct access from the road, no trunk infrastructure interventions are required.

Please refer to Design Guidelines mentioned in Glossary of Interventions regarding amenities and urban design



Boat trip can be extended with canoe trip up the river and hike up nearby hilltops

Project Identified

#	Project Component	Scale
1	Beachside Pavilions	900 sqm
2	Waterfront Promenade, Quayside for Tourist Boats	6000 sqm
3	Boathouse	400 sqm
4	Parking	2000 sqm
5	Signages	Package 1
6	Street Furniture	Package 2
7	Street Lighting	Package 1

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in Glossary of Interventions.

#	Project Component	Cost (INR Lakhs)
1	Beachside Pavilions	180
2	Waterfront Promenade, Quayside for Tourist Boats	260
3	Boathouse	220
4	Parking	32
5	Signages	1
6	Street Lighting	32
Total		INR 7.25 Cr.

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- All revenues are unescalated.
- Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

The following revenue sources are expected for the site:

1. **Parking** – Capturing 100 ECS at 30% occupancy per day with 2 rotation at INR 15 per ECS.
2. **Revenue share from activity operators** – Capturing 10 operators at INR ~1.5 Lakh per operator per year.
3. **Hawker zone** – Captures renting out of 900 sqm of built-up space at INR 2800 per sqm per annum.

Considering the above, total additional un-escalated revenues from the site in Y5 is estimated as INR 45 Lakhs.

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.
- The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.
- The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- The costs are un-escalated.

The following OPEX is expected for the site:

1. **Manpower Costs** – Additional manpower will be required at the site to manage the proposed interventions.
 - a. Assuming **2 Help-desk staff** for the toilet block and the boathouse.
 - b. Assuming **2 security personnel** for the boathouse, and the parking.

- c. Assuming **1 Administration staff** to overlook the operations of the retail spaces and the Activity operators.
- 2. **Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.
- 3. **Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
- 4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
- 5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.
- 6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.
- 7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175* per kilolitre.

As discussed in note above, the following existing OPEX, if any, are not considered:

- 1. Salaries and perks of existing employees
- 2. O&M cost of existing site and facilities
- 3. Regulatory fee, if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as *INR 45 Lakhs*.

Feasibility Assessment and Implementation Plan

Given that the estimated additional revenue from the proposed interventions is in par with the operational expenses incurred, it can be concluded that the interventions proposed at the site are **Operationally Self-Sustainable** and therefore beneficial to the PWD and the entire Sunny side trail.

The development of the projects is to be taken up by the PWD, facilitated by the tourism SPV in collaboration with private players. Given the untapped potential of the pristine boating channel, the development of the proposed projects would attract tourists and position the site as a prime attraction in the Kanyakumari district. Some revenue generating interventions which need operating expertise can be developed by the PWD and given to operators on license basis.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Beachside Pavilions	180	Y0 – Y2	PWD, Private vendors – Annual Lease
2	Waterfront Promenade, Quayside for Tourist Boats	260	Y0 – Y2	PWD
3	Boathouse	220	Y0 – Y2	PWD – Licensed to operators
4	Parking	32	Y0 – Y2	PWD
5	Signages	1	Y0 – Y2	PWD
6	Street Lighting	32	Y0 – Y2	PWD
Total		INR 7.25 Cr.		

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 31,100¹⁷ man-days of construction labour (spread across 2 – 3 years of implementation)

During Operations: Jobs created during operations will entail:

- Accommodation Facility = 6 man – days per day¹⁸
- Additional personnel deployed at site (Cleaning staff, management, security) = 8 Persons
- Activity Operators = 8 – 10 Persons
- Retail and F&B spaces = 8 Persons¹⁹
- Informal Vendors = 15 – 20 Persons

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above.*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect, and induced effects is estimated as. 77,900 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site. Due to lack of availability of the current site footfalls, it is difficult to project exact number of footfalls in Y5 Y10, as against current undisclosed footfall.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%

- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.

¹⁷ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
 - Assumed cost of labour assumed for computation = INR 700 per day

- Cumulative labour man-days = 30% * CAPEX / 700

¹⁸ As per World Bank thumb rule, 12 man-days per day for 10-key 4-star hotel and 20 man-days for 10-key 5-star hotel.

As per HVS Report, in typical India hotels, manpower to room ratio for 4/5 star hotels is 2.11-2.70, for mid-market 1.52 and for budget hotels 0.72. We have assumed 2 for our computation.

¹⁹ Assuming average 2.5 persons per kiosk / shop

Figure 6-3: Proposed Master Plan – Eraiamman Padithurai (Thengapattanam side)



- 1 Existing Access Road
- 2 Car Parking Area / Toilet Block
- 3 Pedestrian Waterfront Promenade
- 4 Tourists Restaurants / Cafes with AI-Fresco Terraces
- 5 Boathouse & Quay River Cruise Boats
- 6 River Cruises Route

Figure 6-4: Proposed Master Plan – Eraiamman Padithurai (Thengapattanam side) to Viravalai (and Mankadu and Manakalai) Boating Route



- 1 Departure-Arrival River Cruise Boats
- 2 River Cruise Boats Route
- 3 River Barrier - Arrival Boats Jetty
- 4 Walking Trail & Hilltop Viewpoint
- 5 Kayak Route

STANDALONE SITES



Standalone sites are independent destinations located in various districts of Tamil Nadu. It features several categories of sites such as restaurants, religious sites, cultural sites, etc.

These sites have unique characteristics in terms of architecture, history and connection with the local community. The sites can be incorporated with various tours in respective districts or they can be visited as standalone sites as well.

Summary

Sites & their Tourism Potential

All footfalls are in '000s per annum

D = Domestic / Pilgrim | HVT = High Value Tourist (domestic & foreign)

S. No.	Site	District	Site	Product Type	Y0 - D	Y0 - HVT	Y5 - D	Y5 - HVT	Y10 - D	Y10 - HVT	Carrying Capacity	Tourist Positioning	HVT Positioning
1	8	Chennai	Drive-inn Restaurant, Island Grounds	TTDC Hotel	-	-	-	-	-	-	-	-	-
2	78	Nagapattinam	Nagore Dargah	Mosque	1,100	2	1,865	3	2,970	5	19,625	Very low tourism site	Low HVT Potential
3	107	Ariyalur	Fossil Excavation	Cultural Sites	5	0	19	0	50	0	1,825	Low tourism site	Low HVT Potential
4	144	Tiruvannamalai	Natteri Brahmedesam	Temple /Cultural Site	4	0	9	0	17	0	9,850	Very low tourism site	Low HVT Potential
5	145	Chengalpattu	Uthiramerur Inscriptions	Temple	2	0	5	0	10	0	2,775	Low tourism site	Low HVT Potential
6	154	Kanchipuram	Mahendravadi Caves (Ranipet)	Cultural Site	4	0	8	0	17	0	1,825	Low tourism site	Low HVT Potential

S. No.	Site	Estimated CAPEX (INR Cr)	Implementation Agency	Private Sector Projects
1	Drive-inn Restaurant, Chennai	310-320	PPP	Site Development – PPP
2	Nagore Dargah, Nagapattinam	1.6	Wakf Board	-
3	Fossil Excavation, Ariyalur	5.7-6	State Archeology Department	-
4	Natteri Brahmedesam, Tiruvannamalai	0.6	ASI	-
5	Uthiramerur Inscription (Vaikunta Perumal Temple), Chengalpattu	0.3	ASI	-
6	Mahendravadi Caves, Ranipet	1.8-2	ASI	-

Impact

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment Opportunities

The proposed interventions are planned to:

- Increase visitor comfort and convenience to the tourist sites
 - Increase tourist footfalls at the sites
- Promote higher footfall of high-value tourists – thereby increasing overall spending at the sites.

This tourist spending will directly flow to the local economy and communities.



~ 1415k man-days Construction Jobs



~ 1150 man-days per day during operations jobs

(Accommodation, Site maintenance & housekeeping, Activity Operators, Retail and F&B operators, hawkers, vendors etc.)



~ 3545k man-days Indirect & Induced Jobs

created due to multiplier impact of construction and operations jobs

Benefitted Stakeholders



Temple-ware and Souvenir Retail Vendors



Security & Maintenance Staff



F&B Vendors → Farmers



Tour Guides & Operators



Transporters (Taxi/Auto)



Hospitality Staff



Religious Workers

1. Drive-inn Restaurant, Chennai

Site Details

District:	Chennai
Name of Site:	Drive Inn Restaurant
Site No:	Site 68 of 295
Site Use:	Restaurant
Category:	F (Hotel)
Location:	13.0741, 80.2839
Land Area:	~21 acres
Capacity:	500 per day
Operator:	TTDC
Site Ownership:	TTDC & TN PWD
Occupancy:	~94 seats
Site Revenues:	~INR 4.23 Crores (2019 – 20)
Site Orientation:	Tourist
Connectivity	
a) Railway Station:	~5 km from Chennai Central Railway Station
b) Airport:	~20 km from Chennai International Airport
c) Highway:	~3.5 km from SH-114, 12 km from NH-716

Trails featured on: **Nil (Standalone Site)**

The site is one of the most preferred locations for major events held in the city. While it has its locational advantages and good road frontage, it is let down by its lack of amenities and underutilisation of the vacant land.

It has immense potential to be a town centre for government and other city level private events, provided the amenities at the site are upgraded and the full potential of the site with river and road frontage are utilised effectively.

Existing Condition

Location

The restaurant is located on TTDC-operated land in Island Grounds overlooking the Coolum river. It is in Central Chennai, in the proximity of several prominent institutional centres of Government of Tamil Nadu and major tourist landmarks. It is well connected to most parts of the city through a good road network, as well as public transport. Several prominent tourist landmarks of Chennai are nearby, such as MGR Memorial, Anna Memorial, Marina Beach, etc.

Existing Layout

The site has 21 acres of land parcel divided into 2 longitudinal sections by the Coolum River. The two sections are connected by 3 vehicular bridges. The eastern section has 3 site entry points from Flag Staff Road. The western section is accessible via bridges only. The restaurant building is located in the eastern section.

Existing Uses

At present, the majority of the site is vacant. The built structure occupies a small portion of the site, housing the TTDC restaurant.

- **Drive Inn Restaurant** – This is housed in a G+1 building, with BUA of ~12,900 sq. ft. The ground floor houses a 54-seater restaurant and the first-floor house a 40-seater bar. The restaurant is not very popular amongst locals and tourists in Chennai. It receives a major share of its revenue from catering to government offices and government-held events in the city.

- **Fair ground** – The large open area available onsite is used mainly to host fairs and exhibitions, both government-organized and privately organized. The Western Section of the site is adjacent to Island Grounds, a major fair ground in Chennai. At present, ~10 fairs are hosted on the site per year, leaving the grounds unused for nearly half of the year.
- **Depot for TTDC’s fleet** of cars & buses
- **Go-kart track**, currently not operational.

Other Land Available

The site does not hold any additional land for development.

Master Planning Considerations

Applicable Regulations

1. **CRZ¹ Regulations** – As per CZMP Map, the site partially lies in CRZ-II.
 - CRZ-II region – Defence and Security purposes | Construction of buildings on landward side | Temporary tourism facilities.
2. **Tamil Nadu Combined Development and Building Rules, 2019** – The site lies under Institutional and Recreational land-use. The permissible activities are –
 - a. **Institutional** – Art Galleries | Museums | Public Libraries Auditoriums & Theatres | Exhibitions | Fairs & Festive grounds etc
 - b. **Recreational** – Parks & Playgrounds | Open Air theatres | Fairs & Festive Grounds etc.
 - c. **For non-high-rise buildings: Max. FSI – 2 [Applicable on site]**
 - d. **For high-rise buildings: Max FSI - 3.25 | Max ground coverage - 50%**
 - e. **For Institutional Buildings: Max. FSI – 2**

Hence, **Peak development potential of site = 1.8 mn sqft**

3. **Height restrictions** – No height restrictions are imposed here, other than the AAI² restriction of ~100 m (roughly 30 storeys) above mean sea level.

Key Sensitivities

River Flooding – River Coolum divides the site into two parts which make the site prone to seasonal flooding and bad smell as the river is not well maintained and is the inlet to multiple city’s drains. As we understand, the city authorities are considering cleaning and de-silting the river in the future. This will resolve the problem and create an opportunity to develop the river frontage for tourism purposes.

While redeveloping the area, it is important to clean the river patch overlooking and develop it for better aesthetic views.

Key Issues to Address

The baseline stage is summarised below along the 7A Framework:

1. **Attraction** – There is nothing within the site that adds to its attraction value from a tourism perspective. The Site’s attraction value would be derived from its location and its proximity to the following:
 - a. **Island Grounds** – Western Section is adjoining Island grounds, a ~10-acre exhibition ground operated by the Govt. of Tamil Nadu, hosting various prestigious events like the Chennai Trade Fair. The site already benefits from this, hosting some of the stalls and parking from the fairs at Island Grounds. However, the site is unused for half of the year.
 - b. **Tourist hubs** – Some of Chennai’s most prominent tourist locations – Marina Beach, Dr. MGR Memorial monument, Anna Memorial monument, Anna Memorial Museum, Fort St. George, Chepauk Stadium – are within 1 km of the Site.
2. **Accessibility & Mobility** – The site enjoys easy access from all major locations and transport hubs of Chennai, via all major modes of transport people such as buses (public and private), metros, trains, autos, and taxis / private cars. No interventions are required to augment accessibility to the site.

Parking – The Site is frequently crowded during evenings and peak hours. It has no designated parking areas. The existing parking becomes saturated and leads to congestion on Beach Road and adjacent entry points.

¹ Coastal Regulation Zone

² Airports Authority of India

- 3. Amenities** – Of the amenities provided, street & area lighting is adequate in and around Marina Walk. The surroundings of the site have a good level of amenities.

 - Toilets and drinking water fountains are inadequate and poorly maintained.
 - Other facilities like interpretation centre, seating, signage, etc. need to be upgraded and modernised.
 - Limited shading is available.
 - The site is frequently maintained in certain areas and left unattended in the rest.

- 4. Awareness** – While the site is popular, it is mostly frequented by locals and domestic visitors. It hosts prominent fairs and enjoys good footfalls during these periods due to locational advantage. The TTDC restaurant does not attract many visitors due to its poor infrastructure and maintenance.

- 5. Activities** – The site does not offer any activities currently. Previously, a portion of the site had a go-karting facility developed and operated by a private player. Chennai's largest industrial fair - the Tamil Nadu Trade Fair – is held adjacent to (and partially on) the site. The fair enjoys very large attendance and popularity among residents of Chennai and its surroundings. Though heavily patronized, there is a lack of quality infrastructure and facilities.

- 6. Accommodation** – Being in Chennai, the site enjoys a good supply and variety of accommodation options. Within a 3-km radius of the site, there are 10 budget and 3-star hotels available.

- 7. Association with Community** – The residents use the site for showing their local craft during fairs and exhibitions. Given the popularity of the site among the community, it could offer a unique value to tourists – as a place to experience the local culture and urban vibe. However, such aspects need to be highlighted and presented in a good setting.

Figure 1-1: Location & Existing Layout



- Legend**
- 1 – Eastern Section (~14 acre)
 - 2 – Western Section (~7 acre)
 - 3 – Drive Inn Restaurant
 - 4 – TTDC Parking Yard
 - 5 – Go-kart track
 - 6 – Island Grounds
 - a, b, c - Bridges

Site Pictures

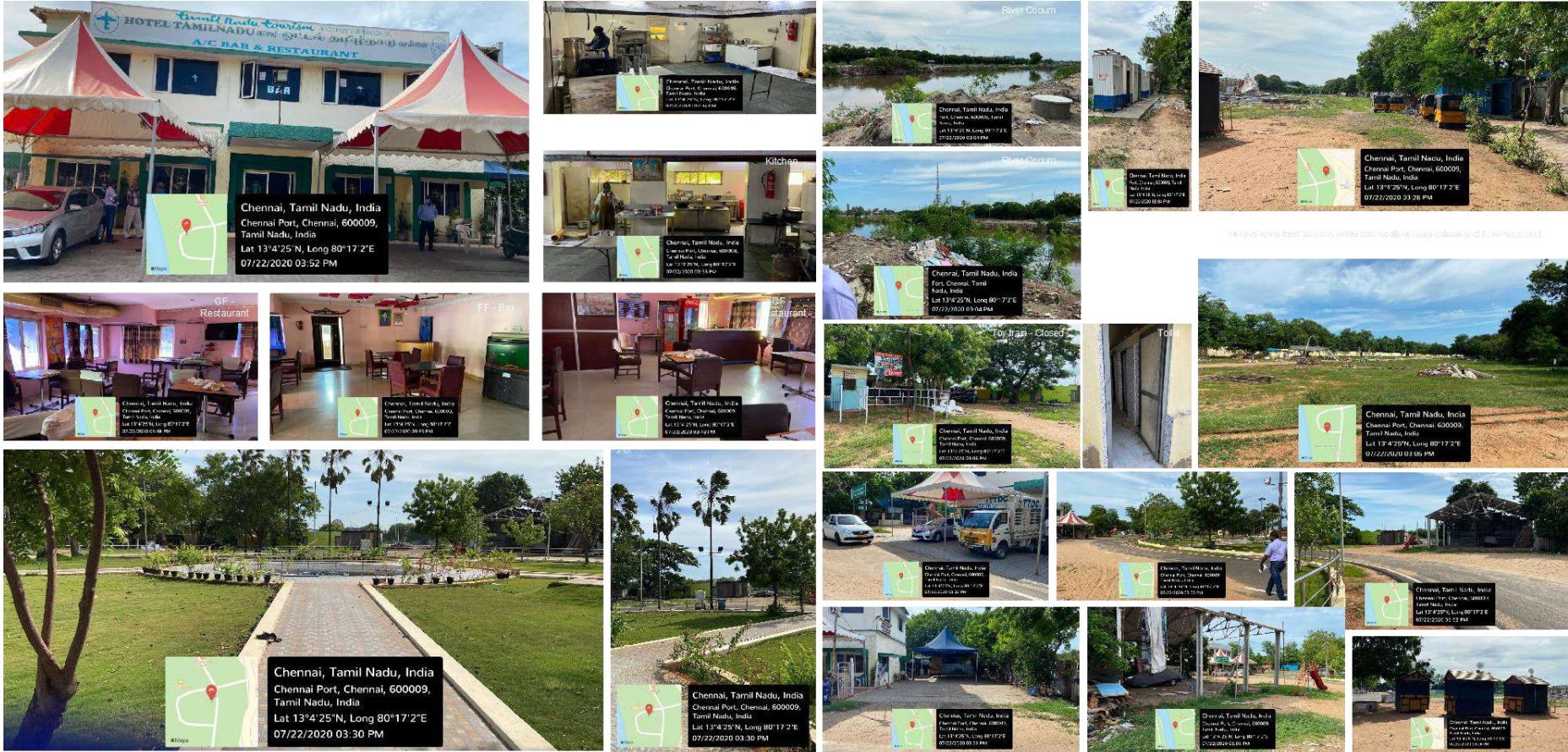
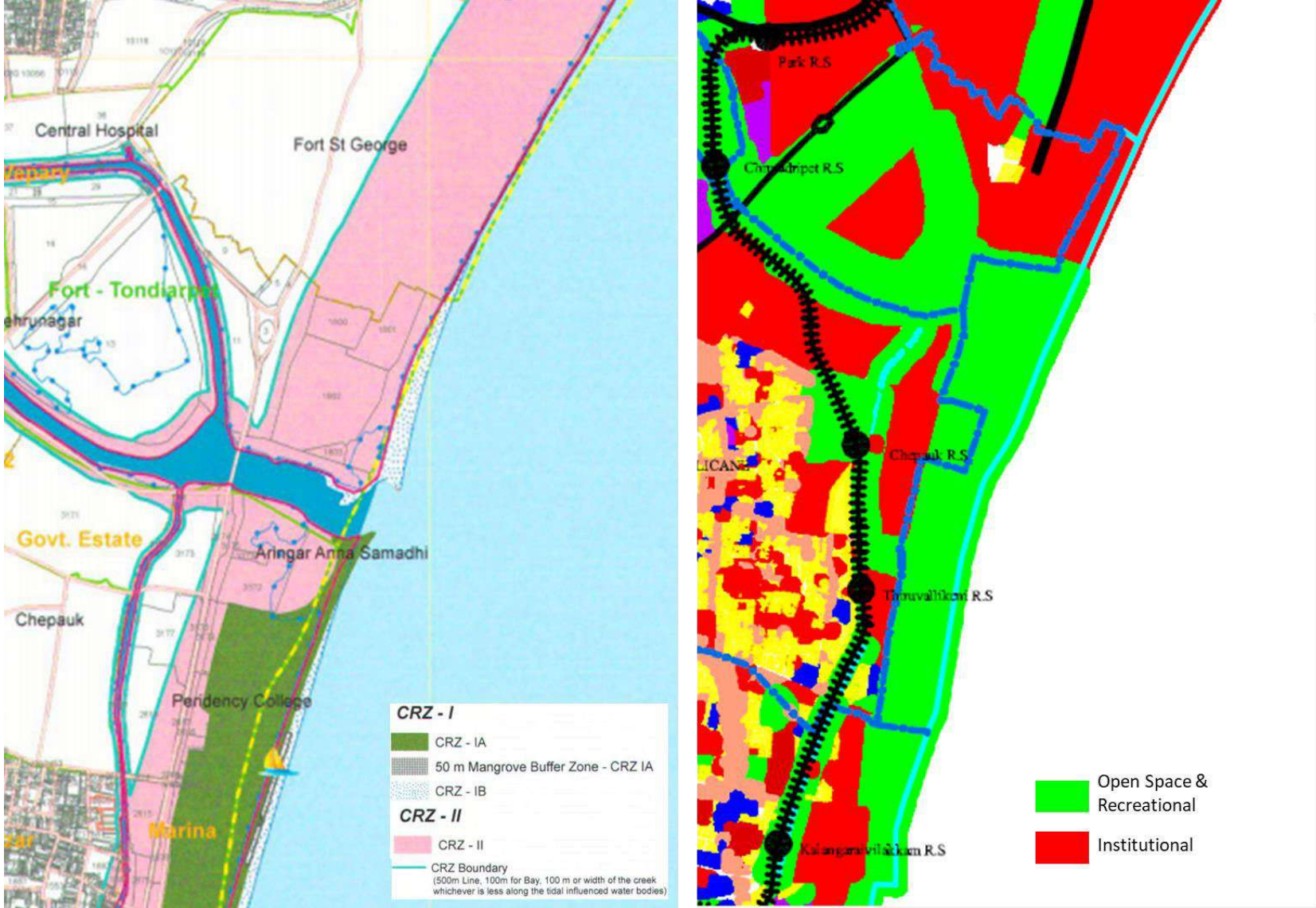


Figure 1-2: Coastal Regulation Zone & Land Uses at Drive-Inn



Planning Inspiration

Given the locational advantage and other attractions at Drive Inn, such as:

- Located in Central Chennai, in the proximity of several prominent institutional centres of the Government of Tamil Nadu.
- Ample amount of vacant land that can be used for conducting fairs and exhibitions.
- Chennai's largest industrial fair - the Tamil Nadu Trade Fair – is held adjacent to (and partially on) the site which enjoys very large attendance and popularity among residents of Chennai and surroundings.

and taking cognisance of its limitations, such as:

- Existing Drive-Inn restaurant has low tourist attraction and is incapable of creating high revenue irrespective of enjoying a good location in the city.
- Underutilization of the available vacant land.
- Lacks basic infrastructure and amenities supporting the activities on site.
- Degraded quality of water in River Coolum, hampering the overall site view.

The existing Drive-Inn restaurant does not create the revenue or footfall that justifies for it to remain operational at this prominent well-connected location in the heart of Chennai which has so much potential. Retaining the building would compromise on the ambition to turn this site into an International standard destination for business class, middle-class residents, visitors and tourists. The old restaurant building sits too close to the entrance at a prime location of the Site and is, therefore, a hindrance to maximizing the full potential of the land area and should therefore be demolished.

Island grounds have great potential to be developed into a vibrant urban centre with a state of art International conference centre & niche spaces for weekend night-market and outdoor fairs and exhibitions, on the lines of global benchmarks like **DLF Cyber Hub (Gurgaon), Paris Expo Porte de Versailles (France) and International Conference Centre (Sydney, Australia)**. All these locations are heavily frequented by locals and have become places for tourists to experience the unique local flavour.

Vision for the Site

The vision for the site is to develop the site as a public experience and recreational centre with an international level of facilities and amenities. This will be achieved by developing an International Events and Entertainment Centre with multiple avenues

like an International Convention Centre, Tamil Dance & Music Museum, Outdoor Evening Handicrafts Market and Coolum Riverfront Promenade.

The site can be positioned as the Meetings, Incentives, Convention and Events (MICE) hub of Tamil Nadu, where multiple aspects of business tourism, Government-to-Government meetings/conferences, local art & craft promotion, recreation events and fairs & exhibitions can be held.

- **Target Visitor** – The target visitors to be captured here are two-fold:
 - **Locals** – to provide an attractive setting for locals to enjoy the fair & exhibitions. Island Grounds must also act as an attractive urban gathering point – offering engaging activities and spaces for recreation.
 - **High Value Tourists (both Foreign and Domestic)** - Drive Inn already attracts a large number of local visitors. The aim is to additionally capture the tourist segment

The composition of visitors at the site includes all age groups of visitors and hence, facilities would need to be provided for all (especially for children, Divyaang and elderly).

Proposed Master Plan

Approach to Masterplanning

The objectives of master planning at this site include:

- **Terminating the ongoing operations of TTDC drive inn restaurant** due to its poor maintenance and incompetent potential to attract tourists.
- **Improving visitors' experience** at the Project Site – through improved circulation, conveniences, and amenities
- **Developing facilities and activities that are complementary to each other with compatible land uses** like Conference Centre, outdoor Weekend Night-market and grounds for Fairs and Exhibitions. This shall promote Chennai as an attractive destination for MICE (Meetings, Incentives, Conferences, Events).
- Developing a place for **promotion and showcasing Tamil Nadu's arts & culture - Music & Dance forms, Handicrafts, etc.**
- Developing **engaging & vibrant activities** at the Site by providing spaces where these can organically develop and create an interactive public realm.

Hard Interventions

1. **Multifunctional Conference Centre** – The location of the Multifunctional International Conference Centre at this prominent location will be at the North-eastern section of the site to promote Chennai as an attractive destination for MICE (Meetings, Incentives, Conferences, Events). The Site is very suitable for the project, because of the central location in the heart of Chennai, near Marina Beach, Fort St George and other major tourist attractions and 5-star business hotels. The Conference Centre will be situated on the landward side of the existing Drive-Inn restaurant, following the CRZ-II regulations.

2. **Music & Dance Museum** - Tamil Nadu has multifield dance forms and music forms (Bharatnatyam, Carnatic Music, etc.) which are very popular and originate from ancient dance & music forms. Therefore, a museum or experience centre should be created to preserve, promote and allow locals and tourists to experience, enjoy and appreciate the rich cultural heritage of Tamil Nadu. Hence, a Dance & Music Experience Centre is proposed which will have galleries for showcasing origination, history, and various milestones of these music & dance forms; stories of veterans in these arts & dance forms; learning centre where workshops on dance and music can be given and interacting experience venues where tourists can appreciate these arts.

3. **Exclusive Member-only Club** - The site is suitable for an exclusive club for members only - where premium facilities like networking sessions, cafes, etc. can be provided. Such club can be developed and operated on a PPP basis.

4. **Business Hotel** - The facilities proposed at the site would need a business / 4-star hotel to complement and provide stay-facilities for the visiting tourists/guests. A 250-300 key hotel is proposed at the site.

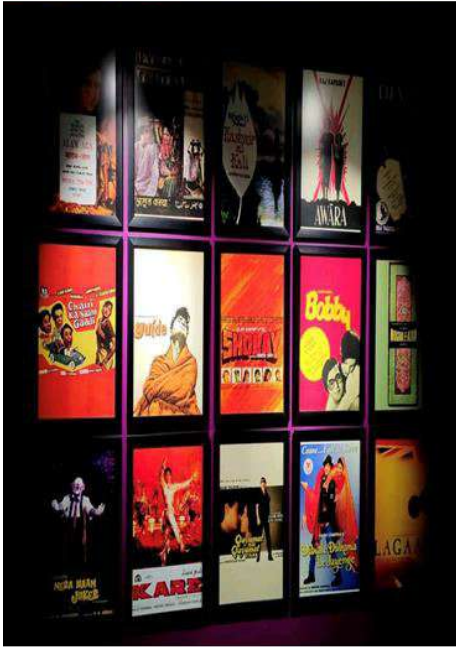
The above buildings, discussed in points 1-4, need to be of high architectural quality, reflecting its status as a business destination of international standards. The buildings could also be broken down into separate wings making the building appear less voluminous and merge better into the green landscape.



Multifunctional International Conference Centre



Business Hotel



Dance & Music Experience Centre

Exclusive Club

5. **Weekend Night-Market** – The area to be developed as a contemporary, trendy Hub for young, local entrepreneurs (chefs, artists, craftsmen, and designers) to offer their creations in a multitude of small shops and eateries. The Night-Market Stalls should be constructed in such a way, that they can easily be dismantled in case the site is needed for something else or the Market fails to attract the footfall needed to be commercially viable. The use of refurbished shipping containers and mobile food trucks are considered options. To retain the spirit of a young and innovative Market, the plots or stalls should only be leased / out to local designers and entrepreneurs and not to large chain retailers.

Infrastructure created - ~5070 sqm built-up area

6. **Night-Market Pedestrian Plaza and Streets** The entire area needs hard landscaping and street furniture which is robust and sustainable.

Infrastructure created – 3310 sqm landscaped Plaza and landscaped streets of 14,290 sqm

7. **MSCP (Multi Storey Car Park) - combined with retail and accessible rooftop.** The existing main entrance to the Site will remain the Gateway to the site and have a large drop-off area for taxis and cars. A multi-storey car parking facility should be built nearby the main entrance, in order not to take up too much valuable space. The largest parking area however will remain on the other side of the river. Visitors can walk directly there via one of the pedestrian bridges. To make MSCP building an integral part of its surroundings, the ground floor can accommodate leasable retail space, whilst the rooftop could be made accessible with a rooftop restaurant to allow visitors a great view across the Site.

Infrastructure created - ~6144 sqm building



Night Market

8. **Riverfront Promenade** – The quality of the water of the Coolum River is likely to be improving in the coming years. In anticipating that the Coolum Riverfront’s edge deserves to be landscaped properly, allowing visitors to enjoy the scenery. This will take a combination of hard landscaped edges as a promenade with street furniture and more soft landscaped areas.
Infrastructure created - 8400 sqm landscaped riverfront

9. **New Pedestrian Bridges** - The existing pedestrian bridges across the Coolum River will no longer suffice and will need to be replaced by modern and more iconic pedestrian-only bridges that will be reflecting the status of the Site as a Leisure and Business Destination of international standard.
Infrastructure created – 3 bridges of a total 990 sqm surface area.

Soft Interventions

1. **Outdoor Fairs & Exhibitions** – The local Corporation or the Tourism Department could organise various events at the beach – such as themed bazaars, small-scale concerts, bonfires, fairs, community events, etc. This would help to popularise the beach to other segments of visitors.
2. **Promotion** – The Tourism Department must promote and advertise activities planned on fairs, exhibitions and events/activities held there.
3. **Coolum River Cleaning** – Coolum River being the prime river flowing through Chennai is an inlet to multiple drains of the city. Therefore, the river is plagued by pollution and poor water quality hampering the atmosphere of the banked areas. At the Project site, the river gets divided into 2 branches and is in dire need of cleaning at least the one branch that is directly flowing between the sites.

This can be achieved by developing a short-term river cleaning project with the support of the Municipal Corporation and the State Government.



Rooftop restaurant / bar MSCP Building



Kuvam Riverfront Edge Development and Pedestrian Bridge



Kuvam Riverfront Edge Development

Amenities Plan

1. **Multifunctional Buildings** – Two multifunctional buildings will be constructed at the Night Market Area that will house the Night Market’s management offices, security CCTV control room, first-aid, toilets and changing rooms, park maintenance equipment, storage, etc. The building can also house other spaces that can be leased out to vendors, organizations linked to the Night Market.
Infrastructure created - ~1550 sqm built-up area
2. **Lighting** – The entire redeveloped area will need a comprehensive Street Lighting Plan, with an emphasis on different types of lighting and levels of brightness befitting the variety in areas (large car parks, fairgrounds, intimate streets and plaza and waterfront promenade).
3. **Street furniture** – Street furniture needs to become an integral part of the Landscape Design. A detailed Landscape Design Guideline Manual will need to be prepared that will form the standard for all the street furniture from seating benches, shading devices, canopies, dustbins, bollards, paving materials, way finding, etc.
4. **Planting & landscaping** – More strategic tree planting is required along the Riverfront to create more shaded areas to make space attractive as a Riverfront promenade during the daytime. More sculptural trees and flowering trees and shrubs should be used to beautify the site.
5. **Signage** – Signage is proposed to feature Tamil, English, and Hindi. Both directional signage and informational signage should be used, as per the design guidelines.
6. **Parking** – The Conference Centre and Hotel will require to accommodate multi-storey underground car parking. One above ground MLCP is planned near the main entrance into the Night Market Site, to allow some car parking for the same. Considering the limited capacity of both parking at the Conference Centre and the MLCP, the planned parking here will be more expensive and is aimed mostly as short-term parking. The majority of (long term) and cheaper parking is taken care of as surface parking at the current parking areas at the northern end of the Fairground Site. This area may need to be replanned to maximise the number of ECS spots available.

7. **Technology Interventions** – Being a flagship tourism site, the development should offer all technological conveniences and employ technological tools for optimal management. These include:
 - Free Wi-Fi
 - Compatibility with TN Assist App
 - CCTV coverage
 - Security beacons / panic buttons at remote parts of Site
 - Electronic visitor counters

Trunk Infrastructure

As the Site has excellent connectivity, no trunk infrastructure interventions are required.

Please refer to Design Guidelines mentioned in the Glossary of Interventions regarding amenities and urban design.

Projects Identified

#	Project Component	Scale
1	Conference centre + Dance & Music Museum + Hotel + Exclusive Club	BUA of 35,000-40,000 sqm
2	Night stall markets	12470 sqm
3	Night market building	1820 sqm
4	Night market events plaza	3310 sqm
5	Multi storey car park	2745 sqm
6	Pedestrian bridges (3 nos)	990 sqm
7	Riverfront Landscaping	8400 sqm

Feasibility Assessment

The following considerations have been accounted for the cost projections of proposed interventions at this site:

- Feasibility of the cashflows projected here are accounted only for the additional components master planned.
- The current operating & maintenance cost of the Site has not been considered.

Capital Expenditures (CAPEX)

The cost of the different project components proposed in the masterplan is calculated basis the current market price considering the appropriate escalations.

#	Project Component	Cost (INR Lakhs)
1	Conference centre + Dance & Music Museum + Hotel + Exclusive Club	30000
2	Night stall markets	70
3	Night market Events Plaza - 3310 sqm	60
4	Street Landscaping - 14290 sqm	500
5	Night market building	310
6	Multi storey car park	920
7	Pedestrian bridges (3 nos. - 990 sqm)	120
8	Riverfront Landscaping - 8400 sqm	110
Total		INR 310-320 Cr

The development of the projects is expected to be taken up on PPP model since the Site has high revenue potential and a private party would be better equipped to monetize the said interventions.

³ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
 - Assumed cost of labour assumed for computation = INR 700 per day

It is recommended to give out the site on PPP basis to a private developer who can design, finance, and develop, operate & maintain the project. Given the strategic location of the site, the project is likely to be considerable feasible. Ideally, for such kind of projects, it is recommended to have a concession period of 40-50 years.

A detailed feasibility study is recommended to be done to assess the viable project structure.

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 13.50 lakh³ man-days of construction labour (*spread across 3-5 years of implementation*)

During Operations: Jobs created during operations will entail:

- Entire O&M team (including housekeeping, admin, sales, booking, catering, civil etc.) = 633 man – days per day⁴
- Retail and F&B spaces = 507 man-days per day⁵

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

- **Cumulative labour man-days = 30% * CAPEX / 700**

⁴ As per World Bank thumb rule, 12 man-days per day for 10-key 4-star hotel and 20 man-days for 10-key 5-star hotel.

As per HVS Report, in typical India hotels, manpower to room ratio for 4/5-star hotels is 2.11-2.70, for mid-market 1.52 and for budget hotels 0.72. We have assumed 2 for our computation.

⁵ Assuming average 2.5 persons per kiosk / shop

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect, and induced effects is estimated as. 34,31,400 man - days.

Increased tourist footfall

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

Figure 1-3: Proposed Master Plan – Drive-inn Restaurant



- | | |
|--------------------------------|---|
| 1 Conference Centre / Hotel | 6 Main Entrance |
| 2 Night Market Stalls | 7 MSCP + Shops + Rooftop Viewing Deck |
| 3 Night Market Buildings | 8 Pedestrian accessible Riverfront Area |
| 4 Night Market Events Plaza | 9 Car Parking Area |
| 5 Fairs and Exhibition Grounds | 10 New Pedestrian Bridges |

2. Nagore Dargah, Nagapattinam

Site Details

District:	Nagapattinam
Name of Site:	Nagore Dargah
Site No:	Site 78 of 295
Site Use:	Mosque
Category:	A (Temples)
Location:	10.8184, 79.8409
Land Area:	6.5 acres
Peak footfalls:	35,000 per day (Kundari festival – 14 days long)
Operator:	Committee (assigned by the Madras High Court)
Site Ownership:	Wakf Board
Tourist Footfall:	Dom. – 11 lakhs (2019 – 20) For. – 903 (2019 – 20)
Site Revenues:	Undisclosed
Site Orientation:	Pilgrim
Site Potential:	Very low Tourism Site
HVT Potential:	Low HVT Potential
Connectivity	
d) Railway Station:	~600m from Nagore Railway Station
e) Airport:	~150km from Trichy International Airport
f) Highway:	~250m from SH-200; 1.5km from NH-32
Trails featured on:	Nil (Standalone Site)

Nagore Dargah is a dargah built over the tomb of the Sufi saint Shahul Hameed, widely known to have performed various miracles and gained public affection. The dargah is located in Nagore, lying within Nagapattinam district, and being well connected to the neighbouring towns. The dargah is a major pilgrimage centre that attracts pilgrims from both Islam and Hinduism, symbolizing peaceful coexistence between the two religions. The five minarets of the dargah are architectural marvels and a local landmark. The most prominent event celebrated here is the festival of Kundari, inviting close to 5 lakhs tourists for 14 days. Proposed interventions are limited to improving the site experience and ensuring visitor convenience.

Existing Condition

Location

Nagore Dargah is located in the coastal town of Nagore, in Nagapattinam district. The Dargah is located at an approximate distance of 6 km north of Nagapattinam, along the coast of the Bay of Bengal. Well accessible from NH-32, the dargah is located in a dense mixed-use neighbourhood, with the following prominent tourist landmarks in its proximity:

- Nagore Beach – ~1 km
- Naganathar Temple Nagore – ~0.4 km
- Nagaopattinam Light House – ~6 km
- Soundarya Raja Perumal Temple – ~6 km
- Karaikal Beach – ~10 km

Existing Layout

The Nagore Dargah covers an area of ~6.5 acres, with access from all four directions and the main entrance on its west. The central part of the dargah is the tomb of saint Shahul Hamid. The other tombs in the shrines are the ones for Shahul's grandson Hassan Alaihis Salam and Abdel Khader Gilani, each located in different chambers. One of the main highlights of the dargah is the five minarets, four inside the main complex and one outside, with the tallest one rising to a height of 40m. Further, the

east side of the dargah precinct hosts Shifa Gunta, the holy tank with stepped approach.

Other Land Available

Other than the Dargah complex, the board also owns ~10 acres of land located ~600m from the site, towards the Chennai-Nagapattinam highway.

There are no developments proposed on this vacant land parcel as the exact details of the plot's location and dimensions is unknown. The land parcel could be used for parking purposes during the Kanduri festival, effectively reducing congestion near the dargah.

Existing Uses

The Dargah is currently used as a place of worship by the residents and religious tourists. The dargah is visited by followers of Islam and Hinduism alike, from most of the states in India and also by people residing in other countries, especially Sri Lanka, Burma and the majority of Gulf countries. Other than its religious activities, the dargah hosts ~40 retail shops in its precinct, on its southern and western periphery. These shops comprise flower stalls, dargah wares retail, souvenirs shops, etc.

Masterplanning Considerations

Applicable Regulations

- Tamil Nadu Combined Development and Building Rules, 2019** – As per Nagapattinam Master Plan, site lies in a Public / Semi-public use, the permissible uses for Public Semi-public include:
Educational Institutions | Govt/Quasi Govt./Private Offices and Institutions | Art galleries | Museums | Public Libraries | Social and Cultural Institutions | Religious buildings | Health institutions | Public & Semi-public open spaces | Public utilities | Residential and commercial spaces | Bus and Railway stations | Parking lots including multi-level parking | Cinema theatres | Kalyana mandapams | Community/Assembly halls | Waterfront Developments | Circuses/Fairs.

Key Sensitivities

- Approvals needed** – The dargah is currently managed by a committee appointed by the Madras High Court and is under Wakf Board. Any intervention at the site would require aligning of their interests and seeking their approval.

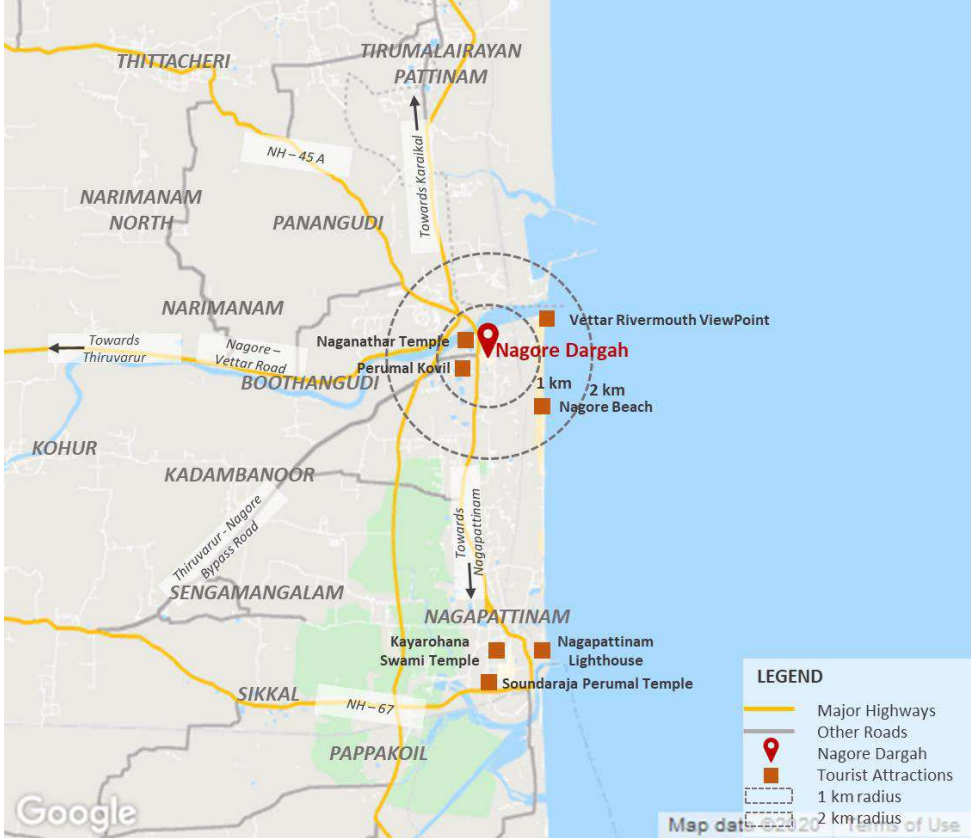
Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

- Attraction** - The dargah is a major pilgrimage centre that attracts pilgrims from both Islam and Hinduism, symbolizing peaceful coexistence between the two religions. The 5 centuries old Islamic Shrine, is known for its association with a highly revered Sufi Saint. The dargah is most famous for its annual Kanduri Festival attracting more than 5 lakhs visitors during 14 days event celebration. During the festival, the entire town wears a colourful and vibrant look. Nagore Dargah is also famous for its Biryani available only during the time of Kanduri festival.
- Accessibility** – The dargah is situated in the town centre and lies close to transport hubs, with the Nagore Railway Station within ~600m distance and bus stop located ~300m away. Autos/cabs are also easily available near the site. While the dargah is well accessible via various modes and connected to NH-32, the approach roads are narrow. The surrounding roads also face traffic congestions frequently as the dargah is located in a dense mixed-use neighbourhood and the surrounding streets are incapable of holding such peak hour loads.
Parking – The dargah lacks a dedicated parking zone and the vehicles generally park along the roads. This further aggravates the traffic issue in the area and causes frequent roadblocks.
- Amenities** – While the dargah houses all basic amenities, some facilities are inadequate and need augmentation / upgradation considering the large footfalls the site receives during the festival time.
 - The site has provision of toilets and drinking water, though the no of toilets needs to be augmented.
 - The site has safety and security measures in place with ~40 CCTV cameras, walled site boundary and fire safety equipment.

- While the dargah has 4-5 wheelchairs available, it does not have the provision of ramps at level differences.
 - The dargah also has a hall inside for visitors to rest or spend time for a short duration, but it lacks a dedicated congregation space to hold the large no of visitors it receives on festival days.
- 4. Awareness** – The Dargah has gained its popularity and belief amongst the devotees. The profile of visitors at this place comprises pilgrims from Andhra Pradesh, Karnataka and Kerala, few foreigners that visit this destination are usually from Malaysia, Singapore, and UAE. On a normal day, the dargah attracts more than 1000 visitors and additional ~5 lakh visitors during the festival of Kanduri. According to the dargah administration, about 50–75 percent of pilgrims visiting the dargah every day are Hindus. The destination is recommended by renowned travel referral / review aggregators such as Lonely Planet, TripAdvisor etc.
- 5. Activities** – On a regular day, the dargah and its surrounding area brims of activities owing to the presence of market to the south of the dargah (most of the shops are owned by the dargah administration and are given on lease/rent for operation). The activities at the dargah reach their height during the Kanduri festival that continues for 14 days, including:
- A saffron flag-carrying ceremony is observed, during which a flag is carried from a devotee's house to the dargah, accompanied by a procession in the streets.
 - In the evening of the ninth day of Akhir month in the Islamic calendar, a chariot containing sandal paste is pulled across the streets of Nagore by pilgrims and devotees, accompanied by the banging of instruments.
 - The 463rd Kanthuri festival was celebrated recently in an extravaganza way, music director AR Rahman, who makes sure to attend this festival whenever he is in the country, was also a part of the event.
- 6. Accommodation** - There are around 10 accommodation facilities available in the 500m radius of the Nagore Dargah. The numerous options available ranges from budget hotels to luxury hotels. The average cost of these stay facilities varies from INR 500 to INR 3000 per night. A wider range of options is available at Karaikal (6 km) in the North and Nagapattinam (10 km) in the South.
- 7. Association with Community** - The festivals and daily rituals enjoy immense participation from the locals. There are also many hawkers and vendors that dot the area around and inside the site premises with carts & stalls and make their living – selling dargah ware, local goods, handicrafts and food items.

Figure 2-1: Location & Existing Layout, Nagore Dargah



Legend
 1 – Main Entrance
 2 – Shops given on Rent
 3 – Pond
 4 – Main Dargah

Site Pictures



Figure 2-2: Land-use Regulation Zone at the Site, as per Nagapattinam Master Plan



Vision for the Site

Given the religious significance of the dargah, such as:

- Large footfalls received on a daily basis
- 14-day long Kanduri Festival that hosts a peak footfall of 35,000 visitors in a day
- The market to the south of the dargah that houses more than 40 shops, selling items used at dargah, footwear stalls, souvenirs, etc.

and taking in cognisance its weaknesses, such as:

- Inadequate facilities to support the large footfalls received
- Lack of parking facilities
- Lack of congregation space to hold large no of visitors
- Approach roads facing frequent traffic congestions
- Unorganized market area

The dargah has the potential to be further developed to improve the visitor experience and convenience at the religious destination. The redeveloped dargah therefore would host better amenities for visitors and facilitate higher time spent at the dargah.

- **Target Visitor** – The site is largely a pilgrim site, with significant footfall from neighbouring areas as well as from other states within India and few countries outside India, due to its rich religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.

Further, pilgrims groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang and elderly).

- **Tourist Projections** – The site is categorized as a **Very Low Tourism Site** with **Low HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC’s compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	1,099	1,886	2,969
High Value Tourists (HVT) (Both domestic and foreign)	2	3	5
Maximum Carrying Capacity	19,625		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Interventions

Approach to Masterplanning

The objectives of Master planning at this Site include:

- **Improving dargah approach and access** – The dargah is situated in a dense mixed-use neighbourhood with a lot of commercial activity in its vicinity. Further, the approach road of the dargah is narrow and has vehicles parked along it, resulting in frequent congestions. Thus, interventions to resolve the same have been taken up.
- **Improving visitor convenience** – with dedicated areas for parking and creation of some resting spaces for the visitors.
- **Creation of community space** – to act as a crowd control measure doubling up as a community event/gathering space
- **Regularizing of the existing market** – The retail area to the south of the dargah complex is currently unorganized and ill-maintained. Thus, interventions for the same have been proposed.

Hard Interventions

1. **Development of an entrance plaza** – To provide for a dedicated entry area, a plaza will be developed at the western (main) entrance of the dargah. The plaza would create an inviting entry for dargah visitors and restrict vehicle parking in front of the main entrance. Further, the plaza would give a clear view of the minaret lying outside the dargah complex from a distance.

Infrastructure created – 380 sqm paved entrance plaza with bollards



2. Development of Dedicated Parking Area – The dargah currently lacks a dedicated parking area, resulting in vehicles parking along the roads and causing traffic congestions. Hence, a dedicated parking area is proposed to house ~50 ECS at the vacant land area on the south-west of the dargah complex.

Currently, there are a few shops at the site’s south-western corner which will have to be relocated to give an entry area for vehicles to park.

Infrastructure created – 1700 sqm paved parking; 120 sqm relocated retail area



3. Development of Congregation / Community Space – The dargah complex currently lacks a congregation space that could act as a crowd management measure for peak loads. The space could be further used for resting on normal days and to host community events when needed. The area to the south-east of the dargah, currently an unpaved vacant space with a few trees, would be developed with soft and hard landscaping. Few seats/benches would be provided here for visitors to rest.

Infrastructure created – 2900 sqm landscaped area; 10 seating units



4. Improvement and regularization of the existing retail area – A retail area lies on both sides of the road abutting the south periphery of the complex. The shops and their access pathway have grown inorganically and are currently unorganized, leading to frequent congestions owing to the vehicles parked and plying on the narrow road between the retail area. Hence, the access way is proposed to be pedestrianised with bollards on both ends and created into a shaded walkway. The shops lying within the dargah compound would be redeveloped and increased in number, with frontage on this shaded pathway.

Infrastructure created – 125 m shaded walkway; 530 sqm retail area



Soft Interventions

1. **Events** – The open space at the site could be open for organizing community events, cultural events, and festivals, which will make the place more alive and vibrant throughout the year.
2. **Site Promotion** - Increasing the site visibility with strategies like integration with TN Assist App and featuring on various online platforms. Further, the Kanduri festival – a major highlight of the dargah could be further promoted with live screening on all 14 days and the creation of a dedicated website by the dargah authorities.
3. **Cleanliness** – The dargah and its surrounding area must maintain cleanliness by adopting several volunteer programs, placement of informative signages at regular intervals, regular space maintenance, monitor loitering of stray animals or cows and taking disciplinary action against those responsible for waste littering.

Amenities Plan

1. **Upgradation of toilets** – While the site has operational toilet blocks in usable condition, augmentation of the facilities is suggested at the same location to suffice the needs of the large footfalls received during peak season.
2. **Landscaping** – Introducing a new landscape within the dargah complex should put greater emphasis on the use of local flora, and should, as far as possible, be the least maintenance-oriented and be self-sustainable.
3. **Street furniture** – Adequate street furniture like benches, dustbins, etc. is proposed to be provided, along with the design guidelines for street furniture.
4. **Signage (Package 1)** – Package 1 set of signages are proposed to be installed at the site. It includes a Site map at entry, directional signage at 4-5 key points on the tourist path, descriptive placard on the Site's importance. All the signages at the site must follow the design specifications of package 1 signages for religious sites. Signage is proposed to feature Tamil, English, and Hindi.

5. **Technology Interventions (Package 1)** – Being a site with religious significance, it is envisioned that the site must fulfil at least all the basic technological requirements for visitor safety and ease. These include:
 - Electronic visitor counters at entry points
 - TN Assist App integration (internet connection, QR scanner)
 - The site is already well covered with CCTV cameras, hence no CCTV cameras to be further installed.

Trunk Infrastructure

As this site has good accessibility, it does not need any improvements in the trunk infrastructure.

Please refer to Design Guidelines mentioned in the Glossary of Interventions regarding amenities and urban design.

Projects Identified

#	Project Component	Scale
1	Entrance Plaza (Paved area)	380 sqm
2	Paved Parking Area (50 ECS)	1700 sqm
3	Relocation of a retail area	120 sqm
4	Landscaped area (Congregation Space)	2900 sqm
5	Benches / Seats (Congregation Space)	10 units
6	Shaded Walkway (Retail Area)	125 m
7	Retail Area	530 sqm
8	Signage (Package 1)	1
9	Technology Intervention (Package 1; without CCTV cameras)	1

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the masterplan is computed basis benchmark rates for the size and scale of the intervention as discuss in previous sections. Standard items are also discussed in Glossary of Interventions.

#	Project Component	Cost (INR Lakhs)
1	Entrance Plaza (Paved area)	6
2	Paved Parking Area (50 ECS)	14
3	Relocation of a retail area	24
4	Landscaped area (Congregation Space)	2
5	Benches / Seats (Congregation Space)	1
6	Shaded Walkway (Retail Area)	2
7	Retail Area	106
8	Signage (Package 2)	1
9	Technology Intervention (Package 2)	1
Total		INR 160 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing, and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.
- Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- All revenues are escalated.
- Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

The following revenue sources are expected for the site:

1. **Built-up area rent** – Captures renting out of ~2,500 sqm built-up space at INR 960 per sqm per annum.
2. **Parking** – Capturing 50 ECS at 30% occupancy per day at INR 15 per ECS.

As discussed in note above, the following existing revenues, if any, are not considered:

1. Mass meals
2. Donations and Sponsorships
3. Sale of maps, guidebooks etc. (assumed to be at cost value)

Considering the above, total additional un-escalated revenues from the site in Y5 is estimated as INR 5 Lakhs.

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.
- The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.
- The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- The costs are un-escalated.

The following OPEX is expected for the site:

1. **Manpower Costs** – Additional manpower will be required at the site to manage the proposed interventions.
 - a. A **security personnel** at the for the parking and the vending zone.
 - b. An **Administration staff** to overlook the operations of the of the retail zone.
2. **Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.

3. **Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.
6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.
7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175* per kilolitre.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee, if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as *INR 15 Lakhs*.

Feasibility Assessment and Implementation Plan

Though the operating expenses are higher than that of the proposed revenues, the interventions planned at the site are largely catered to the magnitude of pilgrims in better crowd management and hence are necessary for the efficient operation of the site.

The interventions proposed at the site are largely for improving amenities and experience of visitors and hence have an associated “**social cause**”. Given the stringent policies of the Wakf Board, PPP is not an option for development and implementation.

Hence, the recommended interventions will have to be implemented and funded by Wakf Board itself.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR Lakhs)	Phasing	Funding Agency
1	Entrance Plaza (Paved area)	6	Y0 – Y2	Wakf Board
2	Paved Parking Area (50 ECS)	14	Y0 – Y2	Wakf Board
3	Relocation of a retail area	24	Y0 – Y2	Wakf Board
4	Landscaped area	2	Y0 – Y2	Wakf Board
5	Benches / Seats	1	Y0 – Y2	Wakf Board
6	Shaded Walkway	2	Y0 – Y2	Wakf Board
7	Retail Area	106	Y0 – Y2	Wakf Board
8	Signage (Package 2)	1	Y0 – Y2	Wakf Board
9	Technology Intervention	1	Y0 – Y2	Wakf Board
Total		INR 160 L		

Impact on Communities:

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 6,900⁶ man-days of construction labour (spread across 1-2 years of implementation)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 5 man-days⁷

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – As discussed above
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect, and induced effects is estimated as. 17,200 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both, increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 595 Cr. at the site⁸.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%

- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.

⁶ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day

- Assumed cost of labour assumed for computation = INR 700 per day

- **Cumulative labour man-days = 30% * CAPEX / 700**

⁷ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

⁸ Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

Figure 2-3: Proposed Master Plan – Nagore Dargah



3. Fossil Excavation, Ariyalur

Site Details

District:	Ariyalur
Name of Site:	Fossil Excavation
Site No:	Site 107 of 295
Site Use:	Museum
Category:	B (Heritage Site)
Location:	11.0723, 79.0708
Land Area:	54 acres
Peak footfalls:	20 per day
Operator:	State Archaeological Department
Site Ownership:	PWD
Tourist Footfall:	Dom. – 5000 (2019 – 20) For. – Nil
Site Revenues:	Nil
Site Orientation:	Tourist
Site Potential:	Low Tourism Site
HVT Potential:	Low HVT Potential
Connectivity	
a) Railway Station:	~600m from Nagore Railway Station
b) Airport:	~150km from Trichy International Airport
c) Highway:	~8 km from SH-139; Located on NH-136

Trails featured on: **Nil (Standalone Site)**

As one of the few museums dedicated to fossils in India, Ariyalur's fossil museum is a unique tourist destination. It shows the natural formation of rocks, and demonstrates the presence of dinosaurs and other similar reptilians 220 million years ago in the Ariyalur region. The site is also unique in being a live excavation site. However, due to limited visitor engagement activities, the museum has limited tourism attractiveness.

Existing Condition

Location

The fossil museum at Varanavasi is located 10 km south of the Ariyalur town. It is located on the highway between Chennai and Tiruchirappalli. The exhibits leverage the rich fossil presence in Ariyalur and Perambalur districts. The surrounding areas are mostly barren and do not have any places of tourist interest. The nearest cities are Perambalur (~38 km), Thanjavur (~35 km), Kumbakonam (~55 km) and Tiruchirappalli (~60 km).

Existing Layout

The museum is a G+1 structure covering ~6,000 sqft of the 54 acres fossil excavation site. The Museum houses display galleries and administrative offices on the ground, a view pane to a dinosaur-like structure in the atrium area for the visitors, a research laboratory and an audio-visual unit, and a mini theatre (3000 sqft) on the first floor.

Other Land Available

In addition to the museum building, the Department of Museum, Tamil Nadu also owns the site under fossil excavations on which the museum is located. The land area exhibits small and big mounds, signifying layers of land formation over millions of years.

Existing Uses

- The Museum is located on the north eastern part of the site. It is a large fossil depository with limited infrastructure dedicated to public services.
- The museum houses a Mini theatre for conducting audio visual shows, galleries, display areas and offices.
- Behind the museum, there is a small building used as staff quarters.
- The maximum site is under open field excavations. The area exhibits fossils, rocks, and minerals from the Precambrian, Jurassic and Cretaceous periods. It also features a display of rocks of marine origin dating back several million years.

Masterplanning Considerations

Applicable Regulations

1. **Tamil Nadu Combined Development and Building Rules, 2019**

The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land.

2. **TN Ancient and Historical Monument and Archaeological sites and remains Act and Rules, 1971**

- Any kind of construction or modification within the area under the jurisdiction of **State Archaeology Department** shall be done with prior permission from the department.
- Any kind of development activities within the site premises under the jurisdiction of **State Archaeology Department** shall be undertaken by the department itself, the owner's right to the property is restricted.
- Activities relating to **conservation/preservation/landscaping or amenity provision** are only set of activities allowed to be undertaken as per the act.

Key Sensitivities

There is no specific environmental/social sensitivity to be addressed at the site beyond the regulations stated above.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

1. **Attraction** – The fossil museum showcases the significance of Ariyalur fossil wealth to the public. It also helps to preserve these fossils and conveys the relevance and importance to the younger generations about pre-historic archaeology and evolution. However, the museum can be improved with ICT interventions and appropriate directed tours and advertisements.

2. **Accessibility & Mobility** – The site can be accessed from Tiruchirappalli - Chennai main road (NH 136) via Lalgudi but it is not well connected via public transport.

Parking – There is no designated parking area. The buses and private vehicles are parked on site on the open ground. A maximum of 2 buses and 5 cars are parked on peak days.

Internal circulation – As the site inclusive of the excavation area is expansive, there are no appropriate routes or pathways in the site for the circulation of the visitors.

3. **Amenities** – Of the amenities provided, street & area lighting is inadequate in and around the Site.

- Toilets and drinking water fountains are inadequate and poorly maintained.
- No additional facilities like interpretation centre, seating, cloak rooms, signage etc. available.
- No measures for safety and security (CCTV, Security guards etc.) for visitors at the site.
- There are inadequate amenities outside the site as well with no provision of dustbins or retail food outlets.

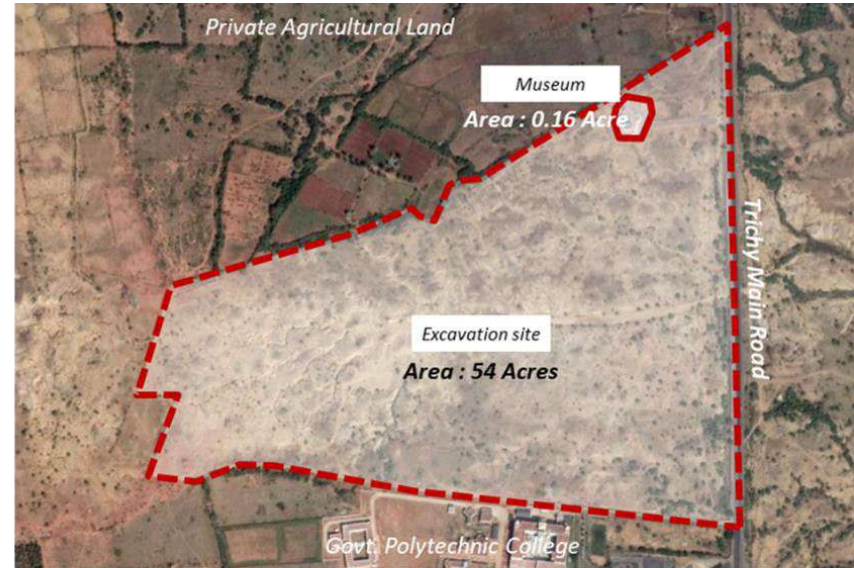
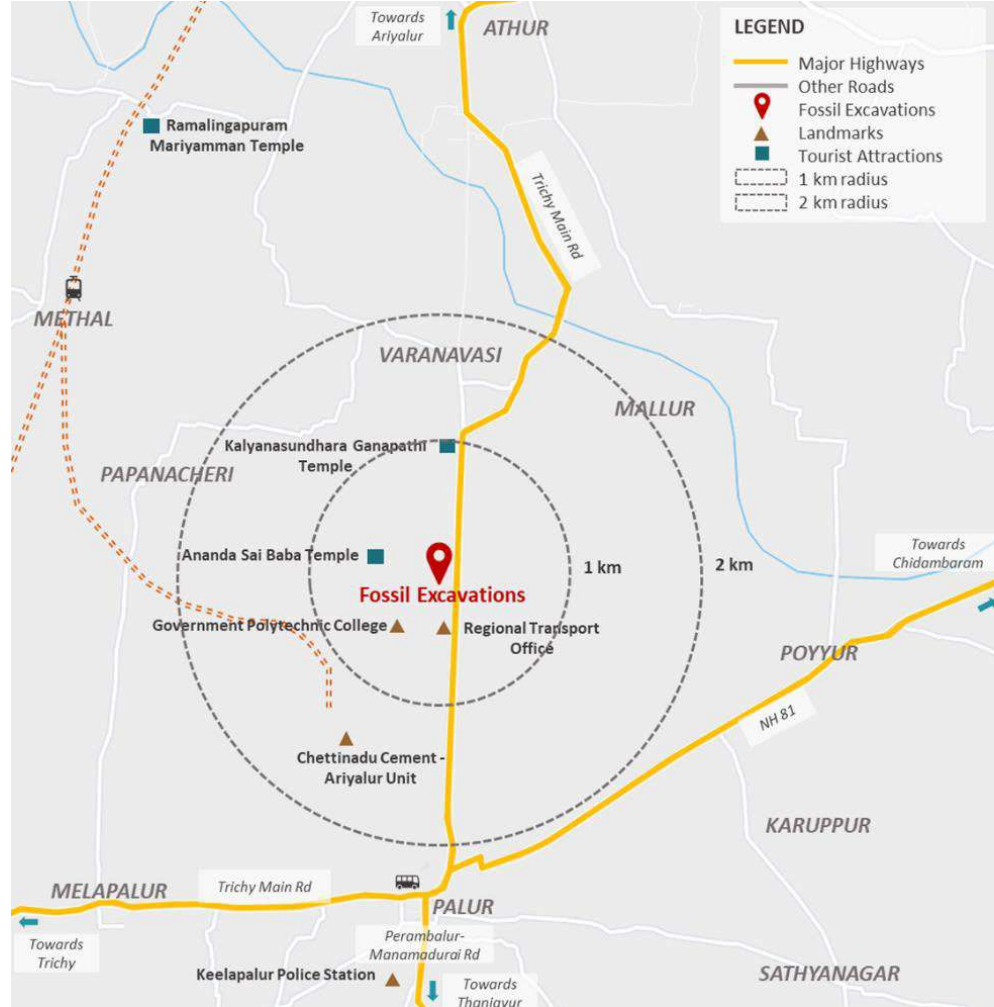
4. **Awareness** – The site is situated 35 km away from Trichy and Thanjavur and is recently inaugurated, therefore lacks visibility and popularity among tourists.

5. **Activities** – The museum does not offer activities on regular days. On occasions and large gatherings, it conducts audio-visual presentations in English and Tamil language in the mini theatre. However, the quality and length of the show is not engaging for the visitors.

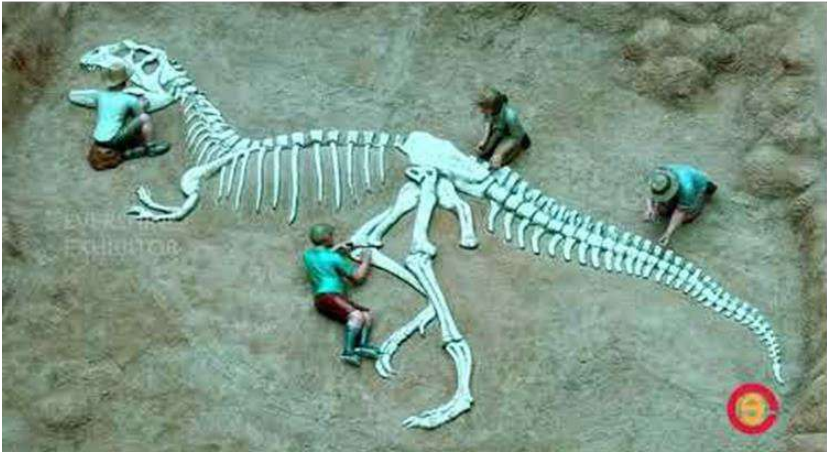
6. **Accommodation** – There are few budget accommodation facilities available in Ariyalur (~10 km away) for visitors like dormitories and budget hotels. A wider range of options and 3-star hotels are available at Tiruchirappalli (~35 km).

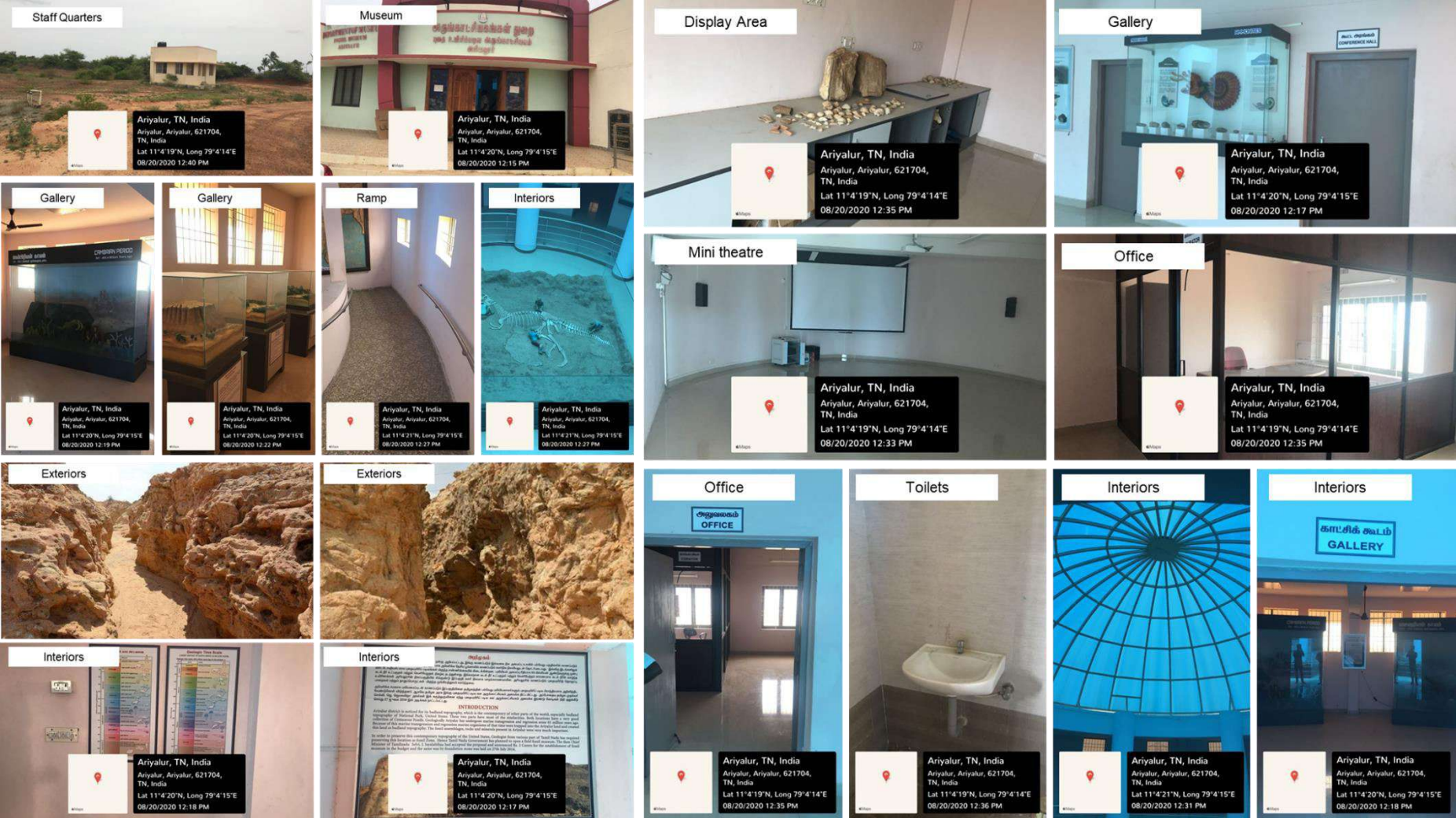
7. **Association with Community** – As the site is located in the outskirts of the Ariyalur region, it does not engage any of the local communities in daily operations.

Figure 3-1: Location & Existing Layout



Site Pictures





Planning Inspiration

Given the historic and archaeological attractions at the site, such as:

- It is the first museum in India dedicated to fossil assemblages, rocks and minerals that are widely spread across- Ariyalur, Perambalur, Tiruchirappalli and Cuddalore districts of Tamil Nadu.
- The museum showcases the region’s fossil wealth, with the help of natural samples and plaster replicas.
- Helps to preserve these fossils and conveys the relevance and importance to the younger generations about prehistoric archaeology and evolution.

and taking cognisance of its limitations, such as:

- Not well connected via public transport.
- No tour guides available for descriptive information about various displays in and around the museum.
- The museum does not have enough artefacts/ fossils to attract tourists to a remote town such as Ariyalur. Also, the state of public amenities in the museum is below par.
- Development restrictions due to state archaeological department on the excavated land.

Fossil Museum has great potential to be promoted and advertised at the national level because of its rich collection of ancient fossils and corals. It can be revamped on the lines of global benchmarks like **Field Museum (Chicago)** and **Wyoming Dinosaur Centre (Wyoming)**. All of these locations are heavily frequented by locals and have become **places for tourists to experience the unique local flavour**.

In India, **Indroda Dinosaur and Fossil Park (Gujarat)** was recently inaugurated which can be referenced and used as a benchmark for this development. These museums have promoted experiential and interactive visits into the fossil parks and museum areas by

- developing outdoor and engaging 3D sculpture arenas,
- conducting 5D virtual shows and
- involving the younger generation in a hands-on excavation experience.
- Participatory excursions

This gives the much-needed visual as well as an experiential treat to the visitors.

Vision for the Site

The vision for the site is to develop it as an exceptional and interesting standalone site for tourists coming down to Thanjavur – Trichy region. The site can be well promoted and advertised in tourist centres of this region and devolve a large amount of domestic and regional tourists with its fresh experiential concept.

- **Target Visitor** – The site does not attract a large share of a crowd as compared to other tourist destinations in the region

The target visitors to be captured here are two-fold:

- **Regional Tourists** – By providing an attractive setting for tourists visiting the Thanjavur region as a one-day tour offering and engaging them in interactive activities.
- **Domestic Tourists** – to advertise and promote this museum at a national level engaging researchers and students to visit and participate.
- **Students & Researchers** – to promote the regional context and rich history of pre-historic archaeology.

The composition of visitors at the site includes all age groups of visitors and hence, facilities would need to be provided for all (especially for children, Divyaang and elderly).

- **Tourist Projections** – The site is categorized as a **Low Tourism Site** with **Low HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC’s compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	5	18.7	51.6
High Value Tourists (HVT) (Both domestic and foreign)	0	0	0
Maximum Carrying Capacity	1,825		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Masterplan

Approach to Master Planning

The objectives of master planning at this Site include:

- **Creating an experiential visit** – incorporation of ICT and AR/VR technology with planned site tours for a holistic, interactive, and live excavation experience
- **Remodelling of existing museum building** – This can be achieved by reutilizing and revamping the existing building spaces within the museum.
- **Developing a satellite experience centre** – In addition to the on-site interventions, a satellite centre will also be developed in the city of Thanjavur for Museum's advertisement and promotion.

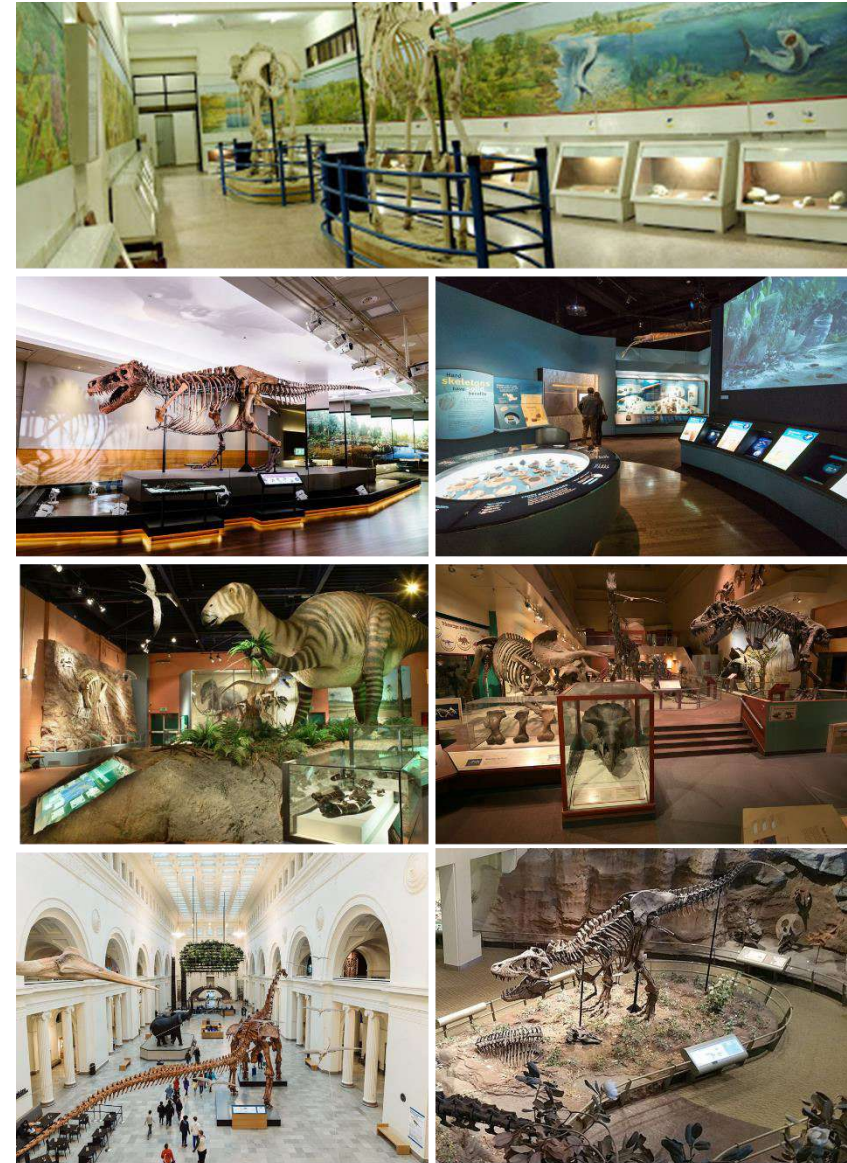
Hard Interventions

No hard interventions can be proposed at the site considering the State Archaeology regulations. Therefore, the amendments and remodelling are proposed within the existing museum and no changes or extension of building are proposed on site.

1. Refurbishment of the existing museum – The museum covers a minuscule area of 6000 sqft. It houses display galleries and administrative offices with a mini theatre. The museum fails to create an experiential visit for the tourists therefore upgradation and refurbishment of the existing museum will develop a new immersive experience with the latest mixed-reality technology and AR/VR. This will bring the boundless potential for a dynamic collection of digital interventions. The following measures are undertaken –

- **Developing theme-based displays** – E.g. Big themes in science: evolution, extinction, ecology, and Earth processes or chronological themes.
- **Linear linked display areas** – Sequenced display areas with detailed information about the artefacts from their origin to extinction.
- **Inclusion of modern technology** – Developing gaming consoles, Integrating mobile apps and virtual kiosks into the exhibits. Digital labels or touchscreen tables and the creation of 3D films and 360° virtual reality presentations.
- **Depiction through Sculptures** – Develop life-size replicas that can throw light on the size, shape, habits and habitat of these creatures.
- **Media Centre** – set up and equipped with computer stations for accessing digital artworks, digital education, interpretive materials
- **Library/ Bookstore/ Reading Area**- archive can be developed within the existing museum near the office area
- **Film center** – Museum's film and video library could include documentary & fictional productions encompassing all aspects of the Museum's story. This can be integrated with the existing mini theatre.
- Information desk at the entrance with catalogues and brochures of the museum.

Infrastructure created – Refurbishment and rearrangement of internal spaces in the museum



Remodelling of Museum interiors

2. **Arch Gate & Signages** – A high entrance gate to be developed in line with the outdoor exhibits of the museum and park. In addition to this, huge signage to be developed with the name of the museum overlooking the NH for better visibility.

Infrastructure created – Museum Gate, Name Board Signage

3. **Boundary Wall and Fencing** – Construction of boundary wall along the museum protecting it from stray animals and illegal activities. Fencing will be done between the outdoor exhibits and excavation site keeping them safe and intact. This will also restrain visitors from mishandling the artefacts.

Infrastructure created – Boundary Wall - 450 m, Fencing – 190 m

4. **Outdoor Displays Areas / Fossil Park** – This will improve site attractiveness with 3D robust sculptures which will be installed outside the site in sand embedded dunes (sand craters). This will add to the look and feel of the exhibits. This will be beautified with rock landscaping around complimenting the theme of the park.

Additionally, an interesting fossil maze/Jurassic maze can be developed in the outdoors for an interactive experience with the children visiting the site. This is planned to be developed at the backside of the museum.

Infrastructure created – ~A total of 9,000 sqm outdoor exhibit area on both sides of the internal road.

5. **Tourist Facilitation Centre** – A temporary canopy-style small cafeteria and refreshment area should be developed with a view of the surrounding excavation site and displays. This should be developed with ticketing block, cloakroom, toilet block and other essential facilities. An open deck will be created with open seating for visitors to enjoy the view of the outdoor exhibits. This shall be a two-storey building at the entrance of the site.

A beautifully landscaped garden will be developed around the centre facing the fossil park and developing a picturesque viewing angle from the seating arrangements at the deck.

Infrastructure created – ~800 sqm building footprint & 2000 sqm landscaped area around.



Fossil Arch Gate and Signage



Fossil Maze



Excavation Site Route



Hands-on Excavation Experience

Soft Interventions

1. **Curated Experience at Excavation Site** – The site entails fossil excavations that exhibit small and big mounds, signifying layers of land formation over millions of years. A curated tour should be developed at the excavation site that should entertain and inform the visitors. All of these will stimulate the senses and provide the much-needed wow factor.

This is achieved by developing standalone experience spots in the excavation site with a dedicated route that is well-lit for foot traffic. Use of infographics and labels that create a picture of the exhibits. Use of VR Technology and QR codes at spots for interactive and exciting experiences. Guided tours with certified guides and self-sustaining Audio-Visual Guided Tours.

2. **Marketing & Promotion** – The site to be Integrated with TN Tourism Assist App, along with photo and video documentation. This can be advertised at all key public locations and online platforms.
3. **Satellite Experience Centre** – A satellite experience centre for the museum will be constructed in Thanjavur to promote and advertise the site. This will expose the peculiarity of the site and outlay it on a higher tourist attraction platform.

Amenities Plan

1. **Drinking-Water Station** – Sufficient number of drinking water stations must be provided at the tourist facilitation centre, a module of which can be as per the design guidelines.
2. **Lighting** – Streetlighting is proposed to be provided along with the entire excavation site especially along the designated route of exhibits.
3. **Signage** – Signage Package 2 is proposed to feature at this site. Both directional signage and informational signage should be used, as per the design guidelines mentioned in Glossary of Interventions.
4. **Parking** – A designated parking space must be developed for accommodating the maximum number of vehicles with good lighting and pavement. This will be near the entrance of the site with a holding capacity of 85 cars and 6 buses.



Outdoor Exhibit Area (Fossil Park)

5. **Safety & Security** – Firefighting supplies – Fire Extinguishers, Sand Buckets, Emergency Exits etc, CCTV's should be installed at all entry/exit points, galleries, display areas and key open field excavation points. A monitoring control room within the museum.
6. **Technology** – As the site is large in scale and is proposed to attract large number of tourists, therefore Package 2- Basic is proposed to feature on this site, as per the design guidelines mentioned in Glossary of Interventions.

Trunk Infrastructure

As Fossil Museum is accessed via NH -136 but lacks connectivity via public transport, a bus stop should be developed outside the site.

Please refer to Design Guidelines mentioned in the Glossary of Interventions regarding amenities and urban design.

Project Identified

#	Project Component	Scale
1	Remodelling of Existing Museum	4000 sqft
2	Arch Gate	1
3	Entrance Signage	1
4	Parking	85 ECS
5	Drinking water station	2
6	Outdoor Exhibits	9000 sqm
	i. Landscaped Area	20
	ii. Artefacts	700 sqm
7	Restaurant Block	800 sqm
8	Boundary Wall	450 m
9	Fencing	190 m

Feasibility Assessment

The following considerations have been accounted for the cost projections of proposed interventions at this site:

- Feasibility of the cashflows projected here are accounted only for the additional components master planned.
- The current operating & maintenance cost of the site have not been considered.

Capital Expenditures (CAPEX)

The cost of the different project components proposed in the masterplan is calculated basis the current market price considering the appropriate escalations.

#	Project Component	Cost (INR Lakhs)
1	Remodelling of Existing Museum	120
2	Arch Gate	1
3	Entrance Signage	1
4	Parking	25
5	Drinking water station	5
6	Outdoor Exhibits - Landscaped Area	7
7	Outdoor Exhibits - Artefacts	7
8	Outdoor Exhibits - Jurassic Maze	15
9	Restaurant Block	360
10	Boundary Wall	25
11	Fencing	6
Total		INR 5.7-6 Cr

(Note: Cost of all the project components including the Total capex is rounded-off to the nearest whole value.)

Revenues - Proposed projects

(Note: The following considerations are applicable to the below mentioned revenue modules.

- *The revenues considered here are in addition to all the existing revenue currently accrued by the site management authority.*
 - *The estimated revenue projections are pegged at Y5 (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)*
1. **Retail and F&B kiosks** at the facilitation centre and Museums.
 2. **Tickets for Remodelled museum.** *(Not considered as the existing museum tickets would be factored in the current revenues of the site)*
 3. **Parking.**
 4. **Restaurant space rent.**

The total revenues to the site from the proposed capital projects is projected at an estimated **INR 45 Lakhs at Y5.**

Operating Expenditures (OPEX)

(Note: The following considerations are applicable to the below mentioned operational expense modules.

- *The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.*
- *The operations and maintenance currently undergone at the site for its existing facilities are not considered in this section.*
- *The expense projections are pegged at Y5 (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)*

The following OPEX is expected for the site:

1. **Manpower Costs** – This includes the additional personnel required to manage the proposed facilities.
2. **Facility Maintenance costs** – This includes the costs incurred to maintain the cleanliness and the upkeep of the new facilities.
3. **Repair & Maintenance costs** – This includes the expense incurred over time for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.

4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the retail kiosks at the site.
5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.
6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections of the temple.
7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations.
The utilities for the rental kiosks and the community hall are pegged to the rental revenues earned from the respective sources.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of **INR 175** per kilolitre.

The total operational expenditure incurred by the site from the proposed capital projects is projected at an estimated **INR 35 Lakhs at Y5.**

Given that the estimated revenues from the proposed capital expenditure projects exceeds the operational expenses incurred, it can be concluded that the Interventions proposed at the site are Self-Sustainable and therefore beneficial to the management authority

Implementation Model

The development of the projects is to be taken up by State Archaeology department.

Phasing and Funding Agencies

#	Project Component	Agency in charge	Phasing of development
1	Remodelling of Existing Museum	State Archaeology	Y0 – Y2
2	Arch Gate	State Archaeology	Y0 – Y2
3	Entrance Signage	State Archaeology	Y0 – Y2
4	Parking	State Archaeology	Y0 – Y2
5	Drinking water station	State Archaeology	Y0 – Y2
6	Outdoor Exhibits i. Landscaped Area ii. Artefacts iii. Jurassic Maze	State Archaeology	Y0 – Y2
7	Restaurant Block	State Archaeology	Y0 – Y2
8	Boundary Wall	State Archaeology	Y0 – Y2
9	Fencing	State Archaeology	Y0 – Y2

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 25,700⁹ man-days of construction labour (spread across 1 - 2 years of implementation)

During Operations: Jobs created during operations will entail:

⁹ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.

- Additional personnel deployed at site (Cleaning staff, management, security) = 5 - 8 Persons
- Activity Operators = 8 – 10 Persons
- Retail and F&B spaces = 10 Persons
- Informal Vendors = 15 – 20 Persons

The direct employment generated during operation phase is an estimate. With increase in the tourist footfall at the site, there are chances that the numbers indicated above may increase. Henceforth, it cannot be estimated to complete accuracy.

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – As discussed above
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect and induced effects is estimated as. 64,400 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of 10.32 Cr. at the site.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
- Assumed cost of labour assumed for computation = INR 700 per day
- **Cumulative labour man-days = 30% * CAPEX / 700**

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and suppliers will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

Figure 3-2: Master Plan – Fossil Excavation Site, Ariyalur



4. Natteri Brahmedesam, Tiruvannamalai

Site Details

District:	Tiruvannamalai
Name of Site:	Natteri Brahmedesam (Rajendran Cholan Temple)
Site No:	Site 144 of 295
Site Use:	Temple
Category:	A (Temple)
Location:	12.8308, 79.5200
Land Area:	~4.5 acres (Temple)
Peak footfalls:	~ 100 per day
Operator:	Archaeological Survey of India
Site Ownership:	Archaeological Survey of India
Tourist Footfall:	Dom. – 3750 (2019 – 20) For. – Nil (2019 – 20)
Site Revenues:	Nil
Site Orientation:	Pilgrim
Site Potential:	Very low Tourism Site
HVT Potential:	Low HVT Potential
Connectivity	
a) Railway Station:	~25 km from Kanchipuram Railway Station
b) Airport:	~150km from Trichy International Airport
c) Highway:	~2.2 km from MDR- 666, 8.5 km from NH-48

Trails featured on: **Nil (Standalone Site)**

Natteri Brahmedesam also known as Rajendran Cholan Temple is the only attraction in Brahmedesam Natteri village. It is dedicated to Lord Shiva and Brahmedesam serves as the memorial of King Rajendra Chola. Though the temple is known as the “Miniature temple to The Big Temple (Brihadeeshwara Temple), Thanjavur”, it does not possess a developed ecosystem of public amenities. The site is marked by ASI under protected areas therefore, the scope of interventions is limited to the provision of basic amenities that will enhance tourist's convenience and experience on the site.

Existing Condition

Location

The temple is in Brahmedesam village in Tiruvannamalai district, ~24 km from Kanchipuram, ~11 km from Ocheri, and ~14 km from Vembakkam. The village is accessible from Vembakkam as well as Kanchipuram. A road from Ocheri on Chennai-Bengaluru National Highway leads to the monument. The temple is surrounded by agricultural and vacant land parcels. Major tourist attractions located nearby are Sri Sundara Kamakshi Amman Temple, Nallur Sivan Temple and Tajpura Mosque & Dargah.

Existing Layout

The temple is spread across 4.5 acres and has the following prominent characteristics:

- The complex houses a sand gopuram (main gopuram) which was built by the Pallavas.
- There is also a stone inscription and a diminishing oil lamp which is a rich source of information about the Cholas.
- The site houses two Shiva Lingas which are from the 7th and the 11th Century with a Nandhi statue facing the lingas in a stone extension.

- The site houses a pond that is in poor condition and needs immediate renovation.
- There is an accommodation facility in the complex which is poorly maintained and not functional.
- The complex also houses a cemetery dedicated to Rajendra Chola I.

Existing Uses

The site privately serves as a temple. However, at night, it serves as a drinking ground for locals. The temple does not organize any festivals throughout the year. The temple's infrastructure is poor and apart from religious use, it houses the following uses:

- Administration office
- Cemetery
- Pond
- Accommodation Infrastructure
- Garden

Other Land

The temple does not own any additional land other than the 4.5 acres of the temple complex.

Masterplanning Considerations

Applicable Regulations

The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land. However, the site is marked by ASI under protected areas, therefore ASI regulations are applicable on this site.

1. **ASI Regulations** – The site is an ASI protected monument, as per Ancient Monuments, Archaeological Sites and Remains Act:
 - a) New construction is not permissible within the prohibited area (beginning at the limit of the protected monument and extending to a distance of 100 m in all directions)
 - b) Reconstruction or repairs or renovation of existing buildings within the prohibited area requires prior permission from the Competent Authority under the act.

- c) Construction of new buildings, reconstruction or renovation or addition to/alteration/modification of existing buildings within the regulated area (200m from the prohibited area limit) requires prior permission of the National Monument Authority under the AMASR Act.

Key Sensitivities

There is no specific environmental/social sensitivity to be addressed at the site.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

1. **Attraction** – The site enjoys significant historical importance. It serves as the final resting place for the Chola king, Rajendra Chola I. The complex houses several additional amenities which have immense potential for development – lodging infrastructure, garden complex, and pond. The other attractions at the site include a cemetery, sand gopuram, and the inscriptions serving as a rich source of information about the Chola kings. Apart from this, the site does not have any tourist attraction in the vicinity.
2. **Accessibility** – The temple is located in the village of Brahmedesam which is accessible from Vembakkam as well as Kanchipuram. The bus stand is available at a distance of ~2 km. Regular state-operated/private buses ply between the town and Kanchipuram. The average fare to reach the temple from Kanchipuram is INR 20 by bus. The site enjoys decent rail access. The major modes of transport people use to commute to the site include taxi and private/hired transport.
3. **Amenities** – The temple has poor tourist amenities available within and around the temple premises. The temple lacks the following facilities:
 - No tourist Information center.
 - No Toilets
 - No drinking water facility.
 - No dustbins in and around the site.
 - No luggage/cloakroom.
 - No power backup facility
 - No ramps and wheelchairs on the site.

- No rest/relaxing areas.
- No directional, wayfinding, and information signages.
- No boundary wall
- No safety and security measures like CCTV's
- Insufficient lighting within and outside temple premises.
- No guides/ self-guides.
- No retail/souvenir and F&B shops.

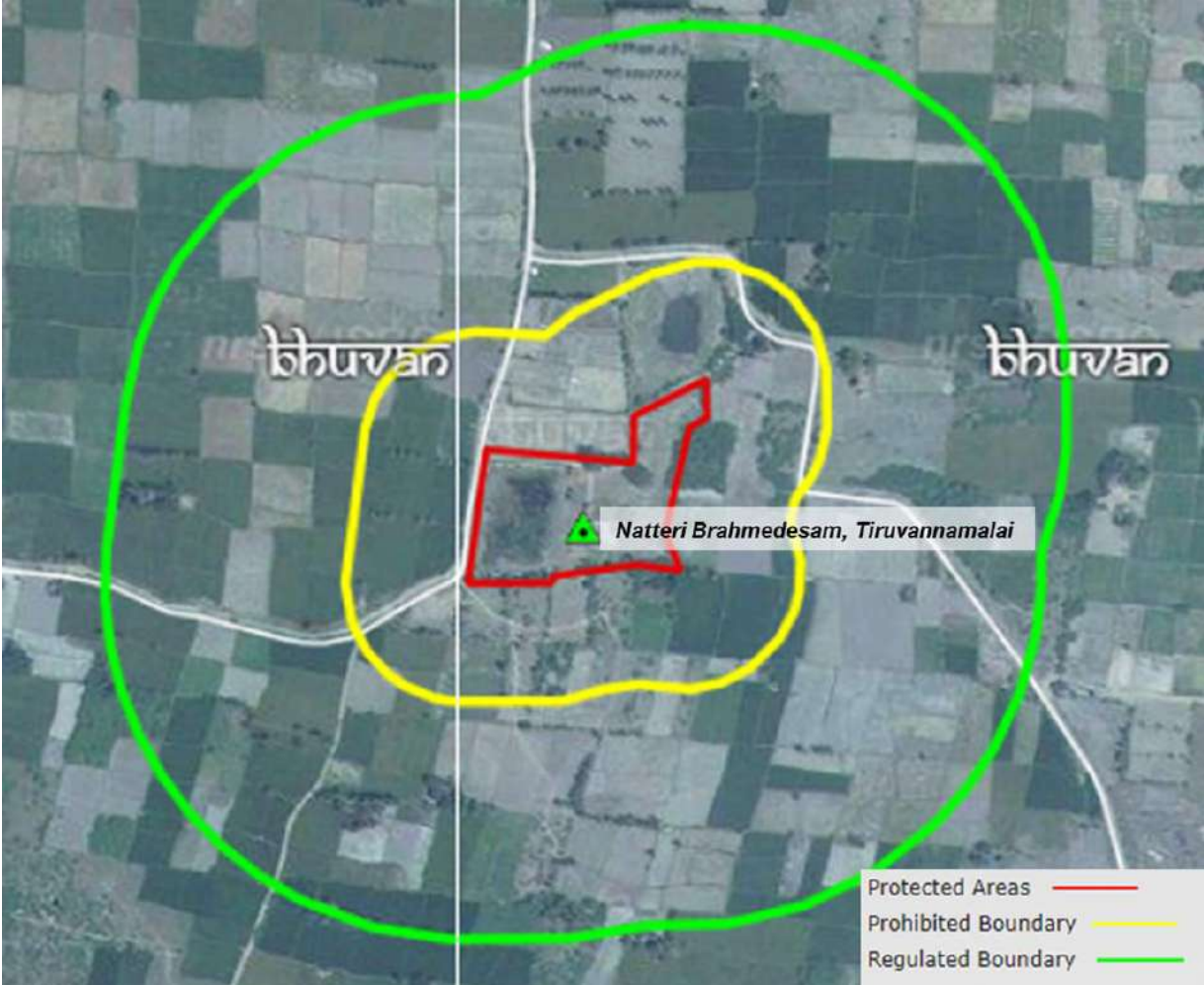
Parking – The temple does not have any designated parking area. Currently, street parking is prevalent on the site.

- 4. Awareness** – The temple is not popular with tourists and receives a very low footfall. It is generally visited by solo travelers and families. It witnesses a footfall from all domestic travelers, mostly from Tamil Nadu, Karnataka, and Andhra Pradesh. The temple lacks presence in popular travel journals like Trip Advisor. However, it has an online presence on portals like TravelMyGlobe which provides details about the temple.
- 5. Activities** – The temple does not host any activities for its visitors. It is mostly visited for regular darshan. No major festivals are celebrated here. Currently, the site serves as a drinking ground for locals at night.
- 6. Accommodation** – The temple has its accommodation block within its premises. However, the condition of the accommodation block is poor as it is not maintained, thus resulting in its non-functionality. Apart from that, there is no accommodation facility in the surrounding areas. The nearest accommodation facility is available in Arakonam and Arcot. Most of the people tourists visiting the temple prefer to stay in Kanchipuram.
- 7. Association with Community** – Currently the site witnesses negligible community association. Moreover, the temple does not host any festivals or events. The site has become the drinking grounds for the locals at night.

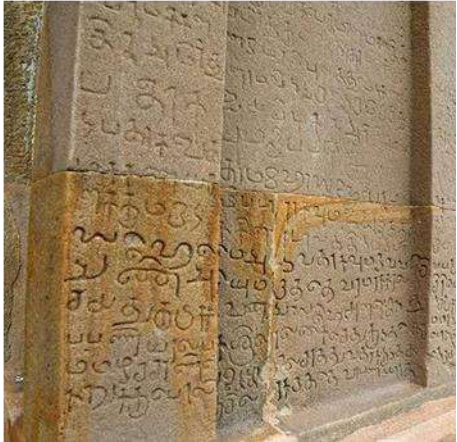
Figure 4-1: Location & Existing Layout

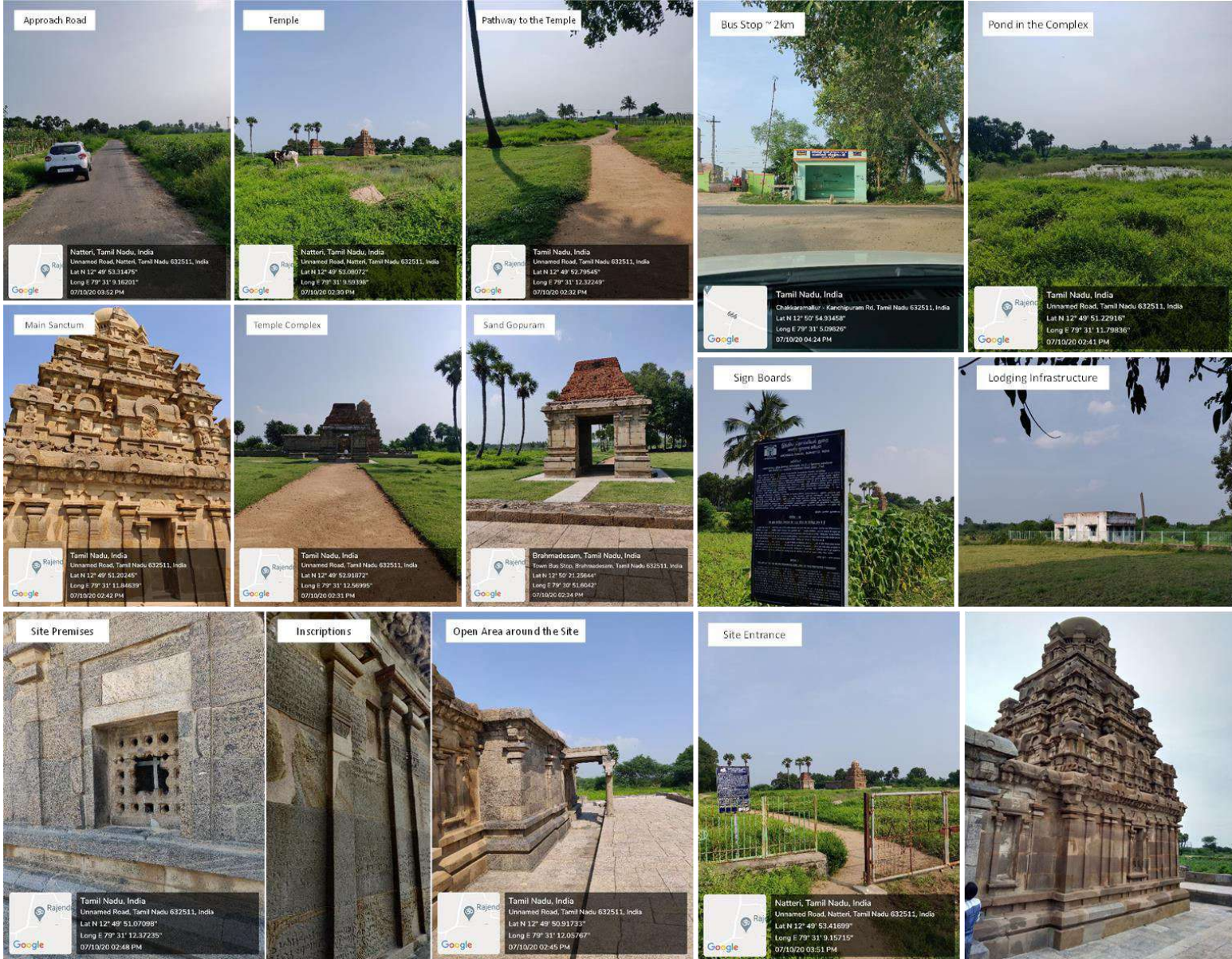


Figure 4-2: ASI Regulation at the Site.



Site Pictures





Vision for the Site

The Rajendran Cholan Temple (Chandramouleeswarar Temple), dedicated to Lord Shiva and serves as the memorial of King Rajendra Chola I. The site contains the last remains of the great Chola king. The temple has great historical and architectural significance, however, it attracts very low footfall and lacks in providing basic facilities to its visitors.

The temple complex has huge potential to enhance its facilities considering the availability of the huge vacant land within the temple premises. However, due to restrictions imposed by ASI, the site is left with limited opportunities. Therefore, interventions proposed are bare minimum requirements that need to be provided on the site for tourists convenience and experience.

The vision for the site is to improve visitor's experience, convenience, and movement on the site. Therefore, the provision of basic amenities with the development of landscaped areas and pond rejuvenation will be carried out to create engaging spaces for tourists on the site.

- **Target Visitor** – The site is largely a pilgrim site, with low footfall from neighbouring areas due to its religious significance. Going forward, the master planning will target higher spending from pilgrims, while facilitating better amenities and experience.

Further, pilgrims groups typically include visitors from all age groups and hence, the master plan would need to create facilities for all (especially for children, Divyaang, and elderly).

- **Tourist Projections** – The site is categorized as a **Very Low Tourism Site** with **Low HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC's compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	4	9	17
High Value Tourists (HVT) (Both domestic and foreign)	0	0	0
Maximum Carrying Capacity	9,850		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Approach to Masterplanning

Given the site's historical significance, the concept of the masterplan includes:

- **Improving safety measures on the site** by providing boundary wall and CCTV's through technological interventions.
- **Enhancing visitor's experience** at the temple – by providing needed facilities of toilet, drinking water station, seating areas and parking.
- **Improving movement on the site** by providing shaded pathways and directional signages.
- **Enhancing visitor's engagement on the site** by providing landscaped garden, paved pathways around the pond and benches in the garden to sit and relax.

Hard Interventions

1. **Boundary wall** – The temple site is not enclosed within the boundary wall. As a result, some locals use the site as a drinking ground possessing a threat of damage to the temple infrastructure. Therefore, a boundary wall enclosing the entire site is proposed for the safety of visitors and temple infrastructure. An aluminum gate will be provided for the site's entrance.
Infrastructure created: ~650 m long boundary wall of 2 m height along with 1 Aluminium Gate.

- 2. Temple Pond Rejuvenation** – The temple has a huge beautiful pond that can be utilized to create a recreational engaging space for tourists as well as locals. Therefore pond rejuvenation is proposed wherein, the pond will be cleaned and maintained to make it attractive. Techniques of rainwater harvesting can be used to rejuvenate water for the pond. The aesthetic appeal of the pond will be enhanced by installing water fountains in the pond. Aquatic flora and fauna can be accommodated to make the site much more attractive. A walking pathway will be constructed on the periphery of the pond that can be used by visitors for peaceful walks.

Infrastructure Created – 3 m wide and 300 m long walking path around the pond.



Pond rejuvenation and pathways along pond

- 3. Inscription Signages** – The temple has inscriptions from the Chola period of Rajadhiraja Chola I's son stating that the wife of Rajendra Chola I, Queen Viramadeviyar, committed Sati upon his death and her remains were also interred in the same tomb as Rajendra Chola I. These inscriptions need to be displayed in different languages for the awareness of the visitors. Therefore, special signages translating the inscriptions in English and Tamil will be installed at the site. The signage shall not disturb the view of any architectural element of the monument and its design will be done considering the architecture of the temple.

Infrastructure Created – 2 specially designed signages describing inscriptions.



Special Signages translating inscriptions

- 4. Shaded Pathways** – To improve movement within the site, paved pathways connecting entrance, parking areas, pond, temple, and accommodation block will be constructed. This will enhance the aesthetic appeal of the site as well as provide visitors with ease of movement within the site. The pathways shall be shaded with natural shading material like trees. Pavement shall be done using locally sourced material. *Infrastructure Created – A 3 m wide and ~150 m long pathways will be constructed.*



Paved-Shaded Pathways

- 5. Landscaped Garden** – The vacant land in front of the temple will be utilized to develop landscaped garden which will include naturally shaded seating areas and pathways for peaceful walks. This will enhance the aesthetic appeal of the temple and will allow visitors to spend more time on the site, resulting in attracting visitors and enhancing temple revenue. The landscaping will be done using native flora and locally sourced pavers.

Infrastructure Created – A ~2200 sqm of landscaped garden with 9 number of shaded-benches.

Soft Interventions

1. **Maintenance of the Accommodation block** – The temple has an accommodation block located within the temple premises. The accommodation facility is in poor condition due to its non-maintenance. Therefore, maintenance of accommodation block is suggested to restore its functionality and thus enhance tourists convenience.
2. **Audio-Visual Tour** – A self-guided audio tour provision shall be present on the site to portray the rich history of the site. These audios shall aware tourists of the inscriptions by translating them into visitor preferred language. The tours shall be self-guided walking tours with a site map. The audio guide shall be facilitated by the QR code that shall be displayed along with all key locations within the site.
3. **Marketing and Promotion** – The temple has poor awareness. The unique aspects and the historical significance of the temple need to be marketed well. Advertisement and promotion of the temple should be done at railway stations, airports, bus stands, and other popular tourist spots in neighbouring towns and cities. The temple complex can be used to host cultural/religious/ folk events on World Tourism Day or other such days to attract tourists. A light and sound show may be conducted at the site to demonstrate the life and history of Rajendra Chola I and the Chola kingdom. Monthly heritage walks by students and cultural programs at the sites could fetch revenue for temple administration. The district administration can join hands with Tourism Department to organize heritage tours to such historically significant places.

Amenities Plan

1. **Drinking-Water Station** – As the site lacks provision of drinking water, therefore, temporary drinking water kiosk will be installed along the existing accommodation block. A module of which can be referred from the design guidelines mentioned in the Glossary of Interventions. The location of the drinking water station is indicative and will be approved by the ASI administration.
Infrastructure Created – 1 unit of temporary/removable drinking water kiosk.
2. **Toilet Blocks** – As observed on-site, there are no toilets in and around the site. Therefore, 1 unit of male/female toilet and one handicapped toilet is proposed

to be installed along the existing accommodation block. It will be a standalone unisex unit based on modern technologies and standards having paid access and automated self-cleaning. The design guidelines for Toilet Block are mentioned in the Glossary of Interventions. The location of the toilet block is indicative and will be approved by the ASI administration.

Infrastructure Created – 1 unit of male/female toilet and 1 unit of the handicapped toilet.

3. **Illuminating the temple** – The site is observed to be dull during the night. Initial surveys also suggest the lack of adequate streetlights that can illuminate the streets. Therefore, appropriate lighting within the temple along with streetlights at appropriate positions is proposed to be installed to illuminate the entire temple premises and thus improve accessibility at night. Sustainable means can be adopted, and the temple and surrounding streets can be kept illuminated by deploying solar lights wherever possible.
4. **Dustbin** – As observed on the site, there are no dustbins inside and outside the temple premises. This results in the littering of the site and its surroundings. Therefore, an adequate number of dustbins will be provided within and outside the site to maintain cleanliness around it. The design and material of dustbins will be as per the design guidelines mentioned in the Glossary of Interventions.
Infrastructure Created: A total of 5 dustbins will be provided.
5. **Shaded Seating** – As the temple lacks any seating area for its visitors, therefore, benches along with the pathway in the landscaped garden will be provided for the convenience of the visitors. These will be shaded using natural shading material such as trees.
Infrastructure created – 5 benches to be provided.
6. **Signages** – As the temple lacks awareness, therefore directional and informational signages should be installed on the approach road, Major District Road (MDR) 666, NH 48, bus stand, and Kanchipuram Railway Station. Further, illustrative signages and boards imparting the historic background of the legend associated with the temple should be installed erected within the site at the appropriate place. Signage Package 1 is proposed to feature for this site. Both directional signage and informational signage should be used, as per the design guidelines mentioned in Glossary of Interventions.

- 7. Parking –** There is no designated parking on the site. Currently, vehicles are parked on the street. Therefore, to regulate the parking, a designated parking area will be assigned within the temple premises near the entrance of the site to curb the on-street parking issue. It shall not obstruct the view of the monument and must remain far from it.
- 8. Technology Interventions –** For tourist's awareness on the site, audio tours are proposed, which will require technological facilities. Moreover, the site lacks CCTV's. Therefore, Technology Package 1 is proposed for this site. These shall include:
- CCTVs
 - Free WiFi
 - Compatibility with TN Assist App

Trunk Infrastructure

As the Site has direct access from the road, no trunk infrastructure interventions are required.

Please refer to Design Guidelines mentioned in Glossary of Interventions regarding amenities and urban design.

Projects Identified

#	Project Component	Scale
1	Boundary Wall (2 m high)	650 m
2	Temple pond rejuvenation <ul style="list-style-type: none"> • Paved pathway (3 m wide) 	300 m
3	Inscription Signages	2
4	Shaded Pathways (3 m wide)	150 m
5	Landscaped Garden	2200 sqm
6	Drinking Water Station (temporary structure)	1
7	Toilet Block (1 Male/ Female and 1 Handicapped unit)	1
8	Dustbin	5
9	Shaded seating area (benches)	5
10	Signage Package 1	1
11	Technology Package 1	1

Feasibility Assessment

Capital Expenditure (CAPEX)

CAPEX of the different project components proposed in the master plan is computed basis benchmark rates for the size and scale of the intervention as discussed in previous sections. Standard items are also discussed in Glossary of Interventions.

#	Project Component	Cost (INR Lakhs)
1	Boundary wall	36
2	Paved pathway - Temple tank	6
3	Shaded pathways	3
4	Signage Package 1	1
5	Landscaping	2
6	Drinking water station	3
7	Smart toilet	4
8	Toilet block	5
9	Shaded seating area - Seats	1
10	Shaded seating area - Shading structures	1
11	Technology package 1	1
Total		INR 60 L

Note: It must be noted that the cost outlined above is indicative only. The actual cost of construction / implementation of the interventions will depend upon site conditions, sizing and detailed design.

Revenues

The following considerations are applicable to the below mentioned revenue modules.

- Since a detailed log of existing revenues and their sources are not available, existing revenues have not been accounted here in this computation. Hence, the revenues considered here are in addition to all the existing revenue currently accrued by the site.
- Estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- All revenues are unescalated.

- Revenues are indicative and based on preliminary understanding of market demand and understanding. A detailed feasibility assessment is suggested before making investment decision or before implementing proposed revenue.

There are no additional revenue streams pegged to the interventions proposed at this temple since it is limited to the basic amenities to uphold the hygiene factors followed across the sites undertaken.

As discussed in note above, the following existing revenues, if any, are not considered:

1. Prasadam sale
2. Puja tickets
3. VIP tickets
4. Mass meals
5. Donations and Sponsorships
6. Sale of maps, guidebooks etc. (assumed to be at cost value)

Operating Expenditures (OPEX)

The following considerations are applicable to the below mentioned operational expense modules.

- The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.
- The operations and maintenance expenditure currently made at the site for its existing facilities is not considered in this section.
- The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase).
- The costs are un-escalated.

The following OPEX is expected for the site:

1. **Manpower Costs** – Additional manpower will be required at the site to manage the proposed interventions.
 - a. A **Helpdesk staff** at the toilet block.
2. **Facility Maintenance costs** – This includes the housekeeping costs incurred to maintain the cleanliness and the upkeep of the new facilities including open areas and buildings.

3. **Repair & Maintenance costs** – This includes the expense incurred for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the site.
5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.
6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections.
7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations. The utilities for the rented spaces are not considered since that will be a part of rental revenue.
The electricity consumption charges are benchmarked at the current commercial market prices while the water is estimated at a cost of *INR 175* per kilolitre.

As discussed in note above, the following existing OPEX, if any, are not considered:

1. Salaries and perks of existing employees
2. O&M cost of existing site and facilities
3. Regulatory fee if any

Considering the above, total additional un-escalated OPEX from the site in Y5 is estimated as *INR 5 Lakhs*.

Feasibility Assessment and Implementation Plan

Though the operating expenditure incurred is more than that of the revenues earned through the proposed capital projects, the interventions planned at the temple are directed to cater to the needs of the pilgrims and to uphold the hygiene factors followed across all the sites undertaken in the Chola Nadu trail.

Also, since the amenities are limited, it is recommended that the interventions will have to be implemented and funded by ASI itself.

Phasing and Funding Agencies

Overall, the following funding mechanism is proposed:

#	Project Component	Cost (INR L)	Phasing	Funding Agency
1	Boundary wall	36	Y0 – Y2	ASI
2	Paved pathway - Temple tank	6	Y0 – Y2	ASI
3	Shaded pathways	3	Y0 – Y2	ASI
4	Signage Package 1	1	Y0 – Y2	ASI
5	Landscaping	2	Y0 – Y2	ASI
6	Drinking water station	3	Y0 – Y2	ASI
7	Smart toilet	4	Y0 – Y2	ASI
8	Toilet block	5	Y0 – Y2	ASI
9	Shaded seating area - Seats	1	Y0 – Y2	ASI
10	Shaded seating area - Shading structures	1	Y0 – Y2	ASI
11	Technology package 1	1	Y0 – Y2	ASI
Total		INR 60 L		

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 2,570¹⁰ man-days of construction labour (*spread across 2 – 3 years of implementation*)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 2 man-days¹¹

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – *As discussed above.*
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect, and induced effects is estimated as. 6,450 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of INR 3.5 Cr. at the site¹².

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.

Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and suppliers will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.

¹⁰ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.
 - As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day

○ Assumed cost of labour assumed for computation = INR 700 per day

- **Cumulative labour man-days = 30% * CAPEX / 700**

¹¹ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

¹² Assuming average spending at a site by pilgrim = INR 1000, Domestic tourist = INR 2,000 and average spending by High Value Tourism = INR 5,000 on a trip. This includes stay, lodging, boarding, travel, food and entertainment.

Figure 4-3: Proposed Master Plan- Natteri Brahmedesam



5. Uthiramerur Inscription (Vaikunta Perumal Temple)

Site Details

District:	Chengalpattu
Name of Site:	Uthiramerur Inscription (Vaikunta Perumal Temple)
Site No:	Site 145 of 295
Site Use:	Temple
Category:	A (Temple)
Location:	12.6148,79.7551
Land Area:	0.7 acres (Temple)
Peak footfalls:	50 per day
Operator:	Archaeological Survey of India
Site Ownership:	Archaeological Survey of India
Tourist Footfall:	Dom. – 2000 (2019 – 20) For. – Nil (2019 – 20)
Site Revenues:	Nil
Site Orientation:	Tourist
Site Potential:	Low Tourism Site
HVT Potential:	Low HVT Potential
Connectivity	
a) Railway Station:	~8 km from Sholinghur Railway Station
b) Airport:	~87 km from Chennai International Airport
c) Highway:	~8.5 km from SH-128; 23 km from NH-48

Trails featured on: **Nil (Standalone Site)**

Vaikunta Perumal Temple, popularly known as Uthiramerur Inscriptions, is an ancient Hindu temple. The site is known for its historic inscriptions that describe the ancient self-governance system and the democratic practices of electing representatives. The temple was declared a protected monument by ASI. Even with such a rich history, the temple fails to attract tourists. Scope for interventions includes creating more awareness about the temple and provision of amenities for a better experience for visitors and tourists.

Existing Condition

Location

Vaikunta Perumal Temple, popularly known as Uthiramerur Inscriptions, is located in a small panchayat town of Chengalpattu district. The temple is located in Uthiramerur, which is ~28km from Chengalpattu and ~60km from Mahabalipuram. The temple can be accessed from Uthiramerur road which connects the temple to the nearby cities/towns. The temple is situated in a mixed-residential neighbourhood. The major important tourist destinations and landmarks around the temple are Varadaraja Perumal Temple, Kallakuruthi Amman Temple, Varatharaja Kaliyuga Perumal Temple.

Existing Layout and Uses

Vaikunta Perumal temple covers an area of about 0.7 acres. The sanctum houses the image of Vaikuntanatha in a seated posture along with Sridevi and Bhudevi on his sides. The unique feature of this temple is that there are no supporting pillars at this temple and the roof is supported solely by walls. The other prominent characteristics of the site are as follows:

- The main entrance to the temple is from the east side.

- The entire main sanctum is placed on a raised platform in the centre of the complex.
- The main sanctum has a small vimana on its roof.
- There is a small mandapam in front of the main shrine.
- There is an assembly hall inside the temple. The inscriptions from the Chola period are inscribed on the walls of this hall.
- The inscriptions are to be found on the outer walls of the temple, inside the assembly hall, and on the mandapam.

Existing Uses

Vaikunda Perumal Temple enjoys popularity mostly among locals. The temple is spread across more than half an acre of land and is only visited for temple worship & inscriptions.

Other Land Available

Apart from the 0.7-acre temple complex, the temple does not own any additional land.

Master Planning Considerations

Applicable Regulations

The land parcel lies outside the development control area of any city, therefore falls under the category of unplanned land. However, the site is marked by ASI under protected monuments therefore ASI regulations are applicable on this site.

1. **ASI Regulations** – The site is an ASI protected monument, as per Ancient Monuments, Archaeological Sites and Remains Act:
 - a) New construction is not permissible within the prohibited area (beginning at the limit of the protected monument and extending to a distance of 100 m in all directions)
 - b) Reconstruction or repairs or renovation of existing buildings within the prohibited area, requires prior permission from the Competent Authority under the act.
 - c) Construction of new buildings, reconstruction or renovation or addition to/alteration/modification of existing buildings within the regulated area

(200m from the prohibited area limit) requires prior permission of the National Monument Authority under the AMASR Act.

Key Sensitivities

There is no specific environmental/social sensitivity to be addressed at the site.

Key Issues to Address

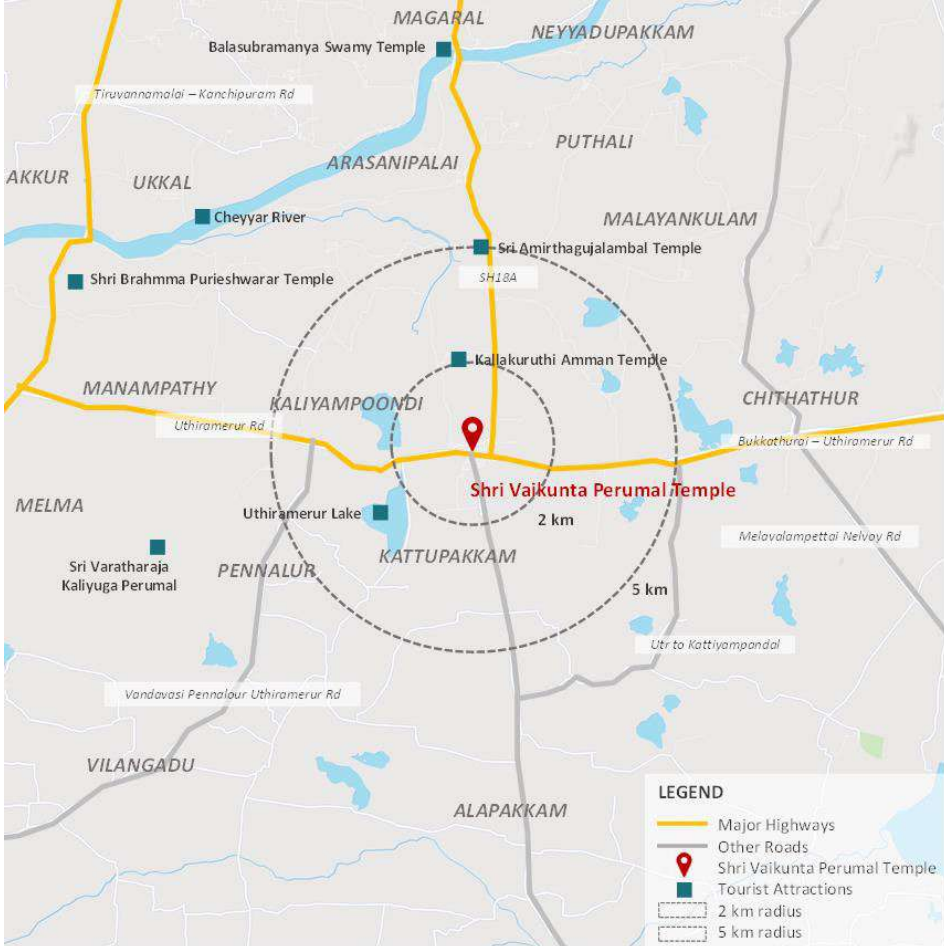
The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

1. **Attraction** – Vaikunda Perumal Temple is majorly known for its inscriptions indicating the democratic practices of electing representatives for the village bodies during the regime of Parantaka Chola. Built around the 9th century, the walls of this temple have inscriptions that describe a self-governance structure that existed during Chola's rule. Apart from this, there is no other attraction or amenities provided by the temple that can engage tourists on the site.
2. **Accessibility** – The temple is located on the outskirts of Chennai and does not have good connectivity. It is situated on the Uthiramerur road about 30 km from Chengalpattu. The temple is accessible from nearby towns/cities via SH-118. The Bus and Auto stand are approached at a distance of ~100m from the site. The major modes of transport people use to commute to the site include private vehicles (own or hired) as bus service is not regular.
3. **Amenities** – The temple is clean and has adequate dustbins placed on the site. However, the condition of tourist amenities within and around the temple is poor. The site lacks the following amenities.
 - No drinking water kiosk.
 - No safety and security measures such as CCTV, fire safety equipment present in the temple.
 - No power backup facility.
 - No temple souvenir/F&B shop.
 - No ramps for elderly and physically challenged visitors.
 - No tourist information center, luggage/cloakroom on site.
 - Footpaths are present but encroached by vehicles.
 - The approach road does not have adequate streetlights.

Parking – The temple does not have any designated parking space. There is one municipality parking lot available near the Vadaraja Perumal temple which is ~400m away. The parking charge is INR 25 per vehicle which is why visitors do not prefer to park there instead they park on-street, outside the temple.

4. **Awareness** – The temple receives very little footfall and mostly attracts local people. During peak seasons, the temple receives a footfall of ~50 visitors in a day. The site is visited mainly by locals and domestic tourists from Tamil Nadu and Puducherry. However, it is recommended by renowned travel referral/review aggregators such as Lonely Planet, TripAdvisor, etc.
5. **Activities** – The site lacks activities to engage the visitors. The site is under the administration of ASI, further restricting activities carried out at the temple.
6. **Accommodation** – There aren't any lodging facilities available within proximity to the site. The nearest lodging options are available in Chengalpattu, which is ~30 km from the site. Chengalpattu has varied options, ranging from luxury hotels to budget hotels and dormitories.
7. **Association with Community** – The site lacks association with the community

Figure 5-1: Location and Existing Layout



Site Pictures



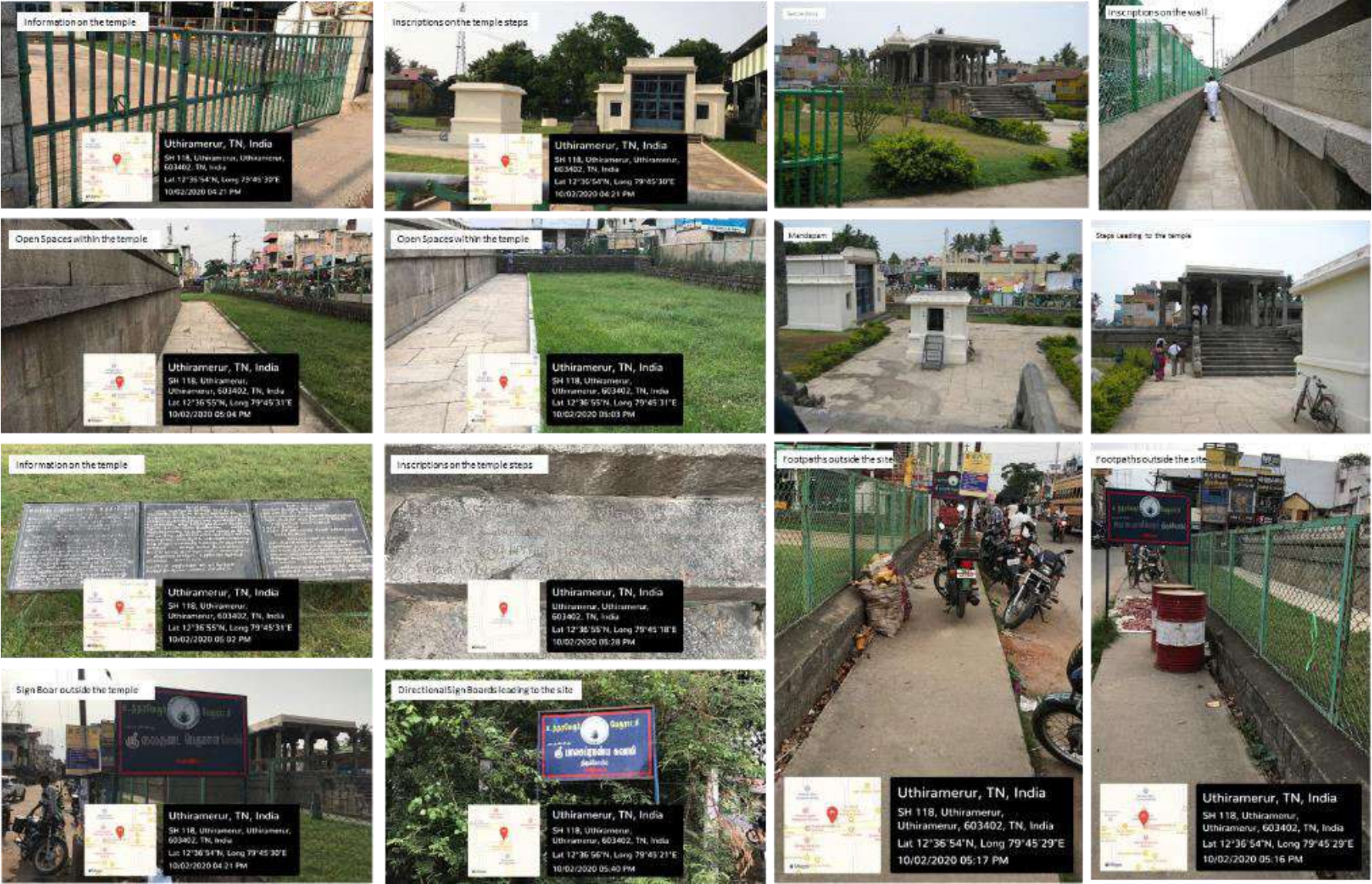


Figure 5-2: ASI Regulation at the Site



Vision for the Site

- The temple is one of its kind as the inscriptions found at the temple date back to the regime of the Chola dynasty and describe the democratic practices of electing representatives for the village bodies. However, the temple fails to promote the unique architecture of the inscriptions which depict the rich cultural history. Moreover, the temple lacks in providing visitors with basic amenities such as drinking water, toilets, parking, etc.
- Although the temple has vacant land within its premises because the site lies within ASI protected area, it limits the scope of development that can be done within the temple premises. However, by providing basic amenities, the site can be made tourist-friendly. Also, through marketing and promotion, the temple has good potential to improve the footfall of religious tourists visiting Chennai.
- The vision for the site is to develop it as a religious tourist attraction by:
 - a) Enhancing basic infrastructure by providing amenity block with the inclusion of all basic tourist amenities.
 - b) Improving site awareness through signages, audio-visual tours, strategic promotion, and marketing, etc.
- **Target Visitor** – The site currently the site draws a good number of domestic tourists. The target visitor group envisioned at the site are:
 - **Pilgrims:** Visiting the temple for its religious value.
 - **Domestic Tourists:** For the historical value of the temple.

Having said that, given the location of the site and its rich historical value, there is a significant potential to increase the tourist footfalls by improving the quality of experience and amenities at the site.

The composition of visitors at the site includes all age groups of visitors and hence, facilities would need to be provided for all (especially for children, Divyaang and elderly).

- **Tourist Projections** – The site is categorized as a **Low Tourism Site** with **Low HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC’s compiled data. Based on the available data about the

historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	2	4.8	9.5
High Value Tourists (HVT) (Both domestic and foreign)	0	0	0
Maximum Carrying Capacity	2,774		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Masterplan Concept

Given that the site is not much popular and is visited mostly by locals, the objective is to drive religious tourist footfall and to adequately cater to the already captured traffic. Therefore, the concept for masterplan is:

- **Improving visitor’s experience** at the temple – through improved circulation, conveniences, and amenities.
- **Improving visitor footfall** through appropriate marketing and promotion.

Hard Interventions

1. **Amenity Block** – A small amenity block including an inquiry desk, cloak/luggage room, changing room, drinking water kiosk and pay & use toilet can be developed for tourist convenience and ease at the site. It can be placed on the north-east corner of the temple premises. The location of the amenity block is indicative and will be developed only on approval by ASI.
Infrastructure Created: ~40 sqm of building.

Soft Interventions

1. **Site Promotion** – The inscriptions at the temple reflect the rich history of our country. However, the temple lacks awareness. To improve footfalls, the temple

must be marketed well by increasing temple visibility with strategies like integration with TN Assist App, etc. Marketing and Advertising at all key religious sites, CMBT, Chennai International Airport, and Chennai Central Railway Station will help to improve tourist footfall.

2. **Audio-Visual Tour** – Audio-Visual tours on-site can be initiated to aware visitors of the significance and importance of the temple’s history. These audios shall aware tourists of the inscriptions by translating them into visitor preferred language. The tours shall be self-guided tours with a QR code.
3. **Visitor Charges** - Visitors can be charged an entry fee of INR 150-20 per ticket. Further, ASI already charges a parking fee of INR 25 per slot - Which leads to people parking on-street. A strict no parking & towing rule may be applied for street parking. Further, the parking charges should be reduced to INR 15-20. The entry ticket to the monument may be waved / discounted for people parking in the allotted parking.

Amenities Plan

1. **Drinking-Water Station** – As the site lacks provision of drinking water, therefore drinking water kiosk will be developed along the amenity block on the north-east corner of the temple complex. A module of which can be referred from the design guidelines mentioned in Glossary of Interventions. The location of the toilet block is indicative and will be developed on approval.
2. **Pay and Use Toilet Blocks** – As observed on site, there are public toilets in close vicinity but are not well maintained. Therefore 1 unit of the toilet block is proposed to be provided along the proposed amenity block. It will be a standalone unisex unit based on modern technologies and standards having paid access and automated self-cleaning. The design guidelines for Pay and Use Toilet Blocks are mentioned in Glossary of Interventions. The location of the toilet block is indicative and will be developed on approval.
3. **Landscaping** – Landscaping will be done on the land surrounding the main temple shrine. The landscaping shall be done using native flora and paving material. This space will act as a tourist engagement/ relaxation space.

4. **Signage (Package 1)** – The temple lacks signages that depict the rich history of the temple and unique inscriptions on its outer wall. To cater to this issue, Signage Package 1 is proposed to feature at this site that will convey detailed information to tourists. Both directional signage and informational signage should be used, as per the design guidelines mentioned in Glossary of Interventions.



Amenity Block with toilets and drinking water kiosk



Information and directional signages

5. **Street Lighting** – The site is observed to be dull during the night. Initial surveys also suggest the lack of adequate streetlights that can illuminate the streets. Therefore, streetlights at appropriate positions can be placed to make the street surrounding the temple illuminated and thus improve accessibility at night. Sustainable means can be adopted, and the streets can be kept illuminated by deploying solar streetlights.
6. **Safety and Security** – The site lacks security safety and measures, therefore firefighting supplies such as fire extinguishers, sand buckets, emergency exits, etc, should be installed at all entry/exit points, inside and outside the temple.
7. **Technology** – As the site is small in scale and does not attract large number of tourists, therefore Package 1- Basic is proposed to feature on this site, as per the design guidelines mentioned in Glossary of Interventions.

Trunk Infrastructure

As the Site has direct access from the road, no trunk infrastructure interventions are required

Please refer to Design Guidelines mentioned in Glossary of Interventions regarding amenities and urban design.

Project Identified

#	Project Component	Scale
1	Amenity Block	40 sqm
2	Drinking-Water Kiosk	1
3	Pay and Use Toilet block	1
4	Signage (Package 1)	1
5	Street Lighting	100 m
6	Technology (Package 1-Basic)	1

Feasibility Assessment

The following considerations have been accounted for the cost projections of proposed interventions at this site:

- Feasibility of the cashflows projected here are accounted only for the additional components master planned.
- The current operating & maintenance cost of the temple have not been considered.

Capital Expenditures (CAPEX)

The CAPEX of the different project components proposed in the masterplan is calculated basis the current market price considering the appropriate escalations.

#	Project Component	Cost (INR Lakhs)
1	Amenity Block	5
2	Drinking-Water Kiosk	3
3	Pay and Use Toilet block	20
4	Signage (Package 1)	1
5	Street Lighting	1
6	Technology (Package 1-Basic)	1
Total		INR 30 L

Revenues - Proposed projects

(Note: The following considerations are applicable to the below mentioned revenue modules.)

- *The revenues considered here are in addition to all the existing revenue currently accrued by the temple.*
 - *The estimated revenue projections are pegged at Y5 (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)*
1. **Kiosks** – 1 leasable kiosk units at the proposed Amenity block with a rental earning of *INR ~2 Lakhs*.
 2. **Pay per use Toilets** – Assuming about an average of 15% of the visitors using the proposed pay per use toilet, would earn the temple an estimated *INR ~1 Lakhs*.

3. **Parking** - Already charged by ASI at INR 25 per slot and hence is not factored in this computation. We recommend this to be decreased to INR 15-20 per slot.
4. **Entry Ticket** - An entry ticket for tourists not using a parking facility may be charged at INR 15-20 per ticket. Again, this has not been factored in analysis here.

The total revenues from the proposed capital projects are projected at an estimated **INR 3 Lakhs at Y5**.

Operating Expenditures (OPEX)

(Note: The following considerations are applicable to the below mentioned operational expense modules.

- *The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.*
- *The operations and maintenance currently undergone by the temple for its existing facilities are not considered in this section.*
- *The expense projections are pegged at Y5 (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)*

The following OPEX is expected for the site:

1. **Manpower Costs** – This includes the additional personnel required to manage the proposed facilities.
 - a. A **Help-desk staff** at the Amenity block.
The projected costs incurred is estimated at **INR 2 Lakhs**.
2. **Facility Maintenance costs** – This includes the costs incurred to maintain the cleanliness and the upkeep of the new facilities.
 - a. Maintenance of the **Open area**, which includes cleaners, gardeners, etc. for upkeep of the landscape in the temple.
 - b. Maintenance of the **Amenity block** - the cleaning of toilets, wash areas and drinking water stations.
The projected costs incurred is estimated at **INR 1 Lakh**.
3. **Repair & Maintenance costs** – This includes the expense incurred over time for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing,

refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.

The projected costs incurred is estimated at **INR 50,000**.

4. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations.

The projected costs incurred is estimated at **INR 50,000**.

The total operational expenditure incurred by the temple from the proposed capital projects is projected at an estimated **INR 5 Lakhs at Y5**.

The OPEX is estimated as nearly the same as the estimation revenue from the site and hence is considered as marginally sustainable. However, as the tourists increase in future, the revenue is expected to increase and eventually a higher entry ticket may be charged to compensate for higher operational costs.

Implementation Model

The development of the projects is to be taken up by ASI and the implementation of these can be carried out as follows:

1. The implementation of the **Technology package** (i.e., Smart-App integrations, Virtual guides, NFC tags, etc.) at the site would be taken up by the SPV provisioned by the tourism department.
2. The **kiosk units** at the facilitation centre can be leased/ rented out to private operators to host souvenir shop.
3. The **Parking facility** is to be undertaken by the temple body (ASI) and the respective cost incurred by the management is included in the operating expenses.

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 1,300¹³ man-days of construction labour (spread across 1 year of implementation)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Housekeeping, management, security) = 2 Persons¹⁴
- Retail and F&B spaces = 3 man-days per day¹⁵

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – As discussed above
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect, and induced effects is estimated as. 3,200 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of 2 Cr. at the site.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and supplied will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

¹³ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.

- As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
- Assumed cost of labour assumed for computation = INR 700 per day

• **Cumulative labour man-days = 30% * CAPEX / 700**

¹⁴ Assumed 2 man-days for small temples, 5 man-days for medium sites, 12 man-days for large sites.

¹⁵ Assuming average 2.5 persons per kiosk / shop

Figure 5-3: Proposed Master Plan – Uthiramerur Inscription (Vaikunta Perumal Temple)



6. Mahendravadi Caves, Ranipet

Site Details

District:	Kanchipuram
Name of Site:	Mahendravadi Caves
Site No:	Site 154 of 295
Site Use:	Caves
Category:	B (Heritage Site)
Location:	12.9895, 79.5416
Land Area:	~2.3 acres
Peak footfalls:	100 per day
Operator:	Kanchipuram Vaikunda Perumal Office ASI
Site Ownership:	Kanchipuram Vaikunda Perumal Office
Tourist Footfall:	Dom. – 3550 (2019 – 20) For. – Nil (2019 – 20)
Site Revenues:	Nil
Site Orientation:	Tourist
Site Potential:	Low Tourism Site
HVT Potential:	Low HVT Potential
Connectivity	
d) Railway Station:	~8 km from Sholinghur Railway Station
e) Airport:	~87 km from Chennai International Airport
f) Highway:	~8.5 km from SH-128; 23 km from NH-48

Trails featured on: **Nil (Standalone Site)**

Mahendravadi Rock Cut Cave Temple is a Hindu Temple dedicated to Lord Vishnu. The cave temple is formed by completely scooping out a large freestanding boulder. The sanctum sanctorum houses an image of Lord Narsimha. Among the seven rock-cut caves accompanying the inscriptions of Mahendravarman I (Pallava king), Mahendra-Vishnugriha is the lone rock-cut cave temple dedicated to Vishnu (Murari).

The scope of interventions for the site majorly includes the provision of basic amenities, space allocations based on the current tourists and local community needs without resisting the ASI guidelines, as this cave temple is maintained by ASI.

Existing Condition

Location

The temple is in Mahendravadi Village in Ranipet, ~60 km from Vellore city, ~30 km from Kanchipuram, and ~ 90 km from Chennai. Located at a diversion from the Sholinghur – Kaveripakkam Road, the town enjoys excellent road connectivity. Regular state-operated/private Arakkonam Railway Station Connecting Rd, Arakonam, Tamil Nadu buses ply between the town and nearby cities of Nemili, Banavaram, Sholinghur, and Arrakonam every 30 – 45 mins. The nearest major railway station is Sholinghur Railway Station (~ 8km). The nearest airport is the Chennai International Airport (~90 km).

Existing Layout and Uses

The rock-cut temple covers an area of 2.3 acres standing amongst green paddy fields. The east-facing temple has been formed by scooping out of a large free-standing granite boulder. The entrance of the cave is divided into three parts by two pillars.

The site serves as a temple, with accompanying uses of parking and administration office.

Other Land Available

No Additional Land available other than 2.3 acres site area.

Master Planning Considerations

Applicable Regulations

1. **ASI Regulations** – The site is an ASI protected monument, under the Ancient Monuments, Archaeological Sites and Remains Act:
 - a. New construction is not permissible within the prohibited area (beginning at the limit of the protected monument and extending to a distance of 100 m in all directions)
 - b. Reconstruction or repairs or renovation of existing buildings within the prohibited area requires prior permission from the Competent Authority under the act.
 - c. Construction of new buildings, reconstruction or renovation, or addition to/alteration/modification of existing buildings within the regulated area (200m from the prohibited area limit) requires prior permission of the National Monument Authority under the AMASR Act¹⁶.
2. **National Conservation Policy** – Monument Conservation activities can be taken up by the competent state authority. It shall be permissible inside the premises of protected monuments as per the National Policy for Conservation of Ancient Monuments and Archaeological Site Remains, 2014¹⁷

Key Sensitivities

The site does not have any pressing issues of sensitivity in and around the complex, which need to be addressed while preparing the master plan.

Key Issues to Address

The key issues at the Site identified at the Baseline Stage are summarised below along the 7A Framework:

1. **Attraction** – This is a monolithic rock-cut cave temple. Among the 7 rock-cut caves accompanying the inscriptions of Mahendravarman I, this is the only rock-cut temple dedicated to Vishnu. The site does not offer any other substantial means of tourist attraction. ASI sign boards are rusted and difficult to read.
2. **Accessibility**- Located on MDR-577, the site enjoys easy access from all major locations in Kanchipuram. Kanchipuram is ~32 km away from the site with good connectivity. The Chennai International Airport is a 87 km / ~2-hour drive away from the Mahendrawadi Caves. Tamil Nadu buses ply between the town and nearby cities of Nemili, Banavaram, Sholinghur, and Arrakonam every 30 – 45 mins.
3. **Amenities** – The quality of amenities present at the site is poor.
 - The site lacks in the provision of basic tourist facilitation amenities such as drinking water, shaded resting areas, luggage rooms, toilets, etc.
 - The site is neither equipped with wayfinding boards nor information signages.
 - It is unsafe to visit the site during dark hours due to the lack of adequate lighting and security measures at the site.

Parking – The temple offers a designated undeveloped parking space with a capacity of 50 cars. The provided parking space is realized to be sufficient even during peak seasons. However, the space is informal.
4. **Awareness** – The temple is not very popular with locals and receives a footfall of ~100 during festivals. It is frequented by families from nearby areas. In 2019, it witnessed a meagre footfall of 3550, all locals.
5. **Activities** – On normal days, the temple does not offer any activities. Being an ASI-protected monument there is no other ritual or celebrations at the temple. It is mostly a tourist place with rich historical importance.
6. **Accommodation** – Located in a village the site does not have any accommodation options nearby. However, Kanchipuram has a range of accommodation facilities. The hotels in Kanchipuram are majorly of the budget

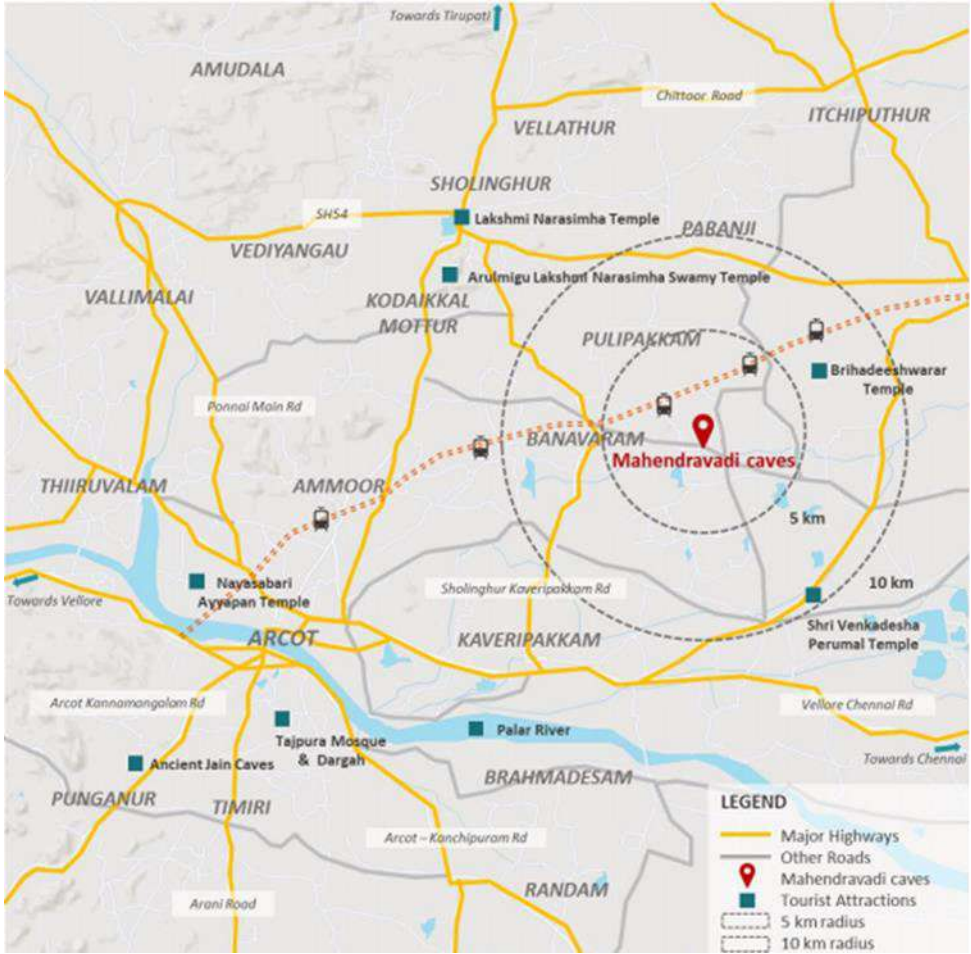
¹⁶ https://en.unesco.org/sites/default/files/inde_act24_1958_enorof.pdf

¹⁷ <https://asi.nic.in/wp-content/uploads/2018/11/national-conservation-policy-final-April-2014.pdf>

category, operated by standalone / regional players. Sriperumbudur (located ~35 km away from Kanchipuram) has a well-developed hotel ecosystem, with many reputed brands, such as Citrus, Mercure, Fairfield by Marriott, etc.

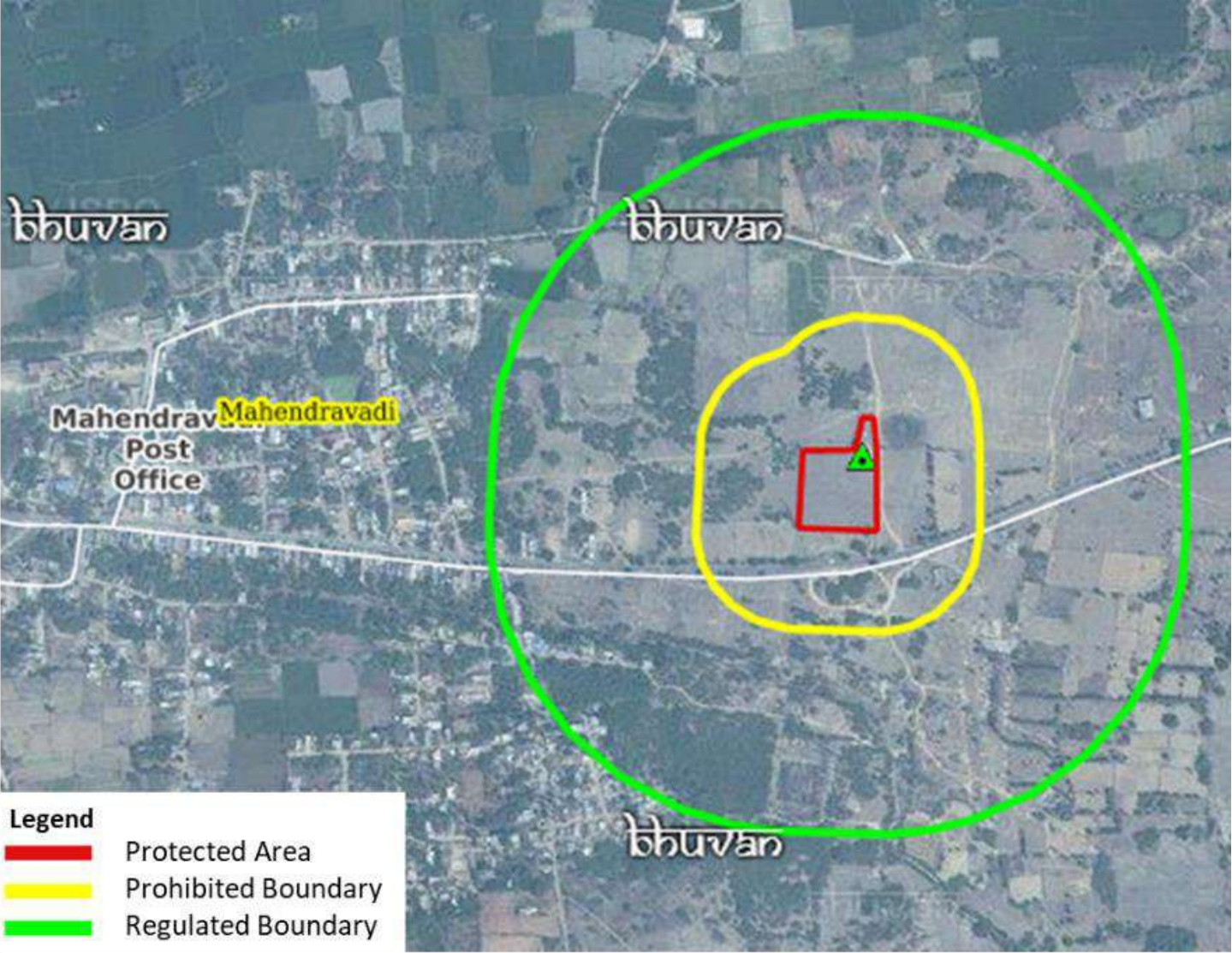
- 7. Association with Community** – Currently the site witnesses negligible community association. The site has become the drinking grounds for the locals at night and a shelter for beggars.

Figure 6-1: Location and Existing Layout



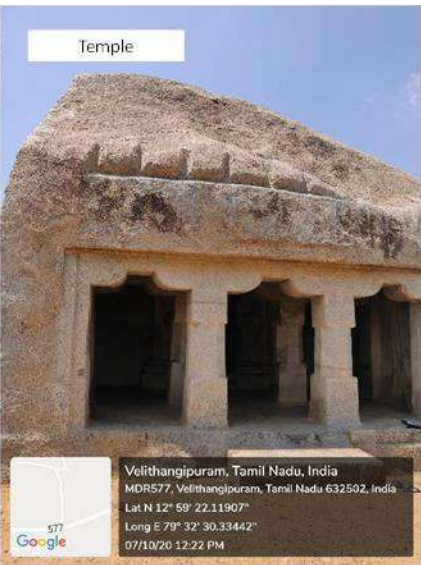
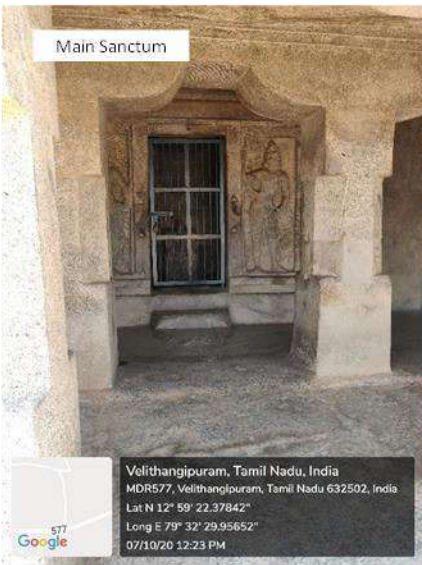
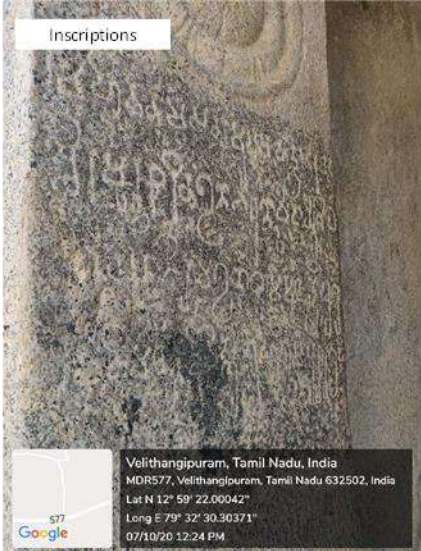
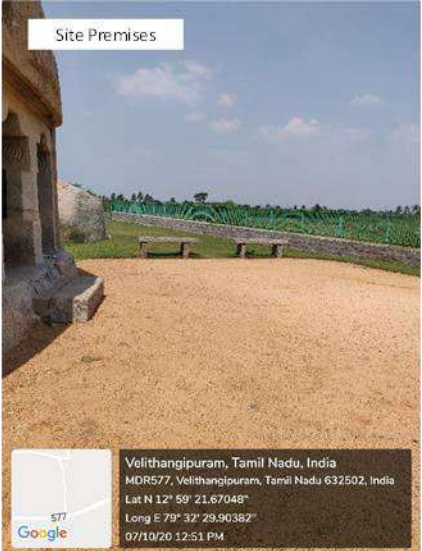
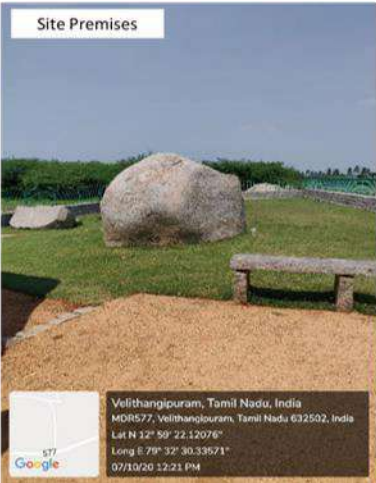
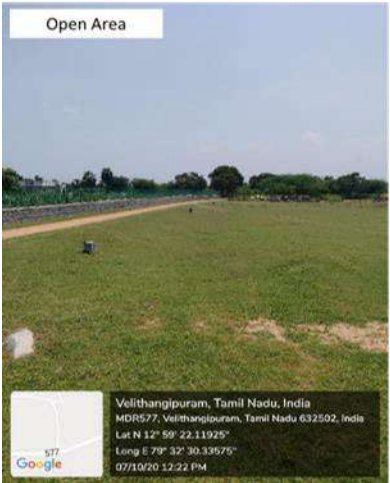
Legend
 1 – Site Entry
 2 – Main Temple
 3 – Parking
 4 – Mill
 5 – Bus Stand

Figure 6-2: Protected, Prohibited, and Regulated areas around the monument



Site Pictures





Planning Inspiration

Considering the existing site situation and limitations such as:

- Being one of the few monolithic rock-cut temples in a quiet neighbourhood.
- Poor awareness and popularity of the site, poor online presence
- Absence of wayfinding, directional, informative, and layout signage boards
- Absence of basic tourist facilitation amenities.
- Prevalent activities like drinking at the site, at nights
- Developmental restrictions imposed at the site by the TN State Archaeological Department and the Archaeological Survey of India

The site is an ASI site, with low tourist footfalls as well as low identified tourist potential for high-value tourists, the scope of interventions includes some basic design specifications.

The site exhibits the potential to be turned into a domestic and local destination of interest within the outskirts of Vellore (~ 60 km) and Kanchipuram (~30 km). The site can turn out to be of importance with space regularisation and rearrangement along with the development of primary facilities and interesting site information dissemination.

Vision for the Site

Monolithic rock-cut temple, Mahendravadi caves are dedicated to Lord Vishnu and constructed by Pallava king, Mahendrarman I. The site is occasionally visited by locals in and around Mahendravadi. The temple does not have a developed ecosystem of public amenities and is not architecturally significant. The scope of interventions is limited to the provision of basic amenities and the development of a landscaped park.

- **Target Visitor** –The master plan targets attracting an additional local crowd and disseminating the historical importance of the site and developing the area to be a rural local picnic spot, where domestic tourists can enjoy the taste of rural outskirts near Kanchipuram.

Having said that, given the rich historical value of the site, there is a significant potential to increase the tourist footfalls by improving the quality of experience and amenities at the site.

The composition of visitors at the site includes all age groups of visitors and hence, facilities would need to be provided for all (especially for children, Divyaang and elderly).

- **Tourist Projections** – The site is categorized as a **Low Tourism Site** with **Low HVT potential**.

Past footfall data for the site has been received from sources like the site manager and TTDC’s compiled data. Based on the available data about the historical growth rates and other inputs from the 7A assessment framework (during the Baseline Stage), the following visitor projections have been made:

Segment	Per Annum Footfalls (000s)		
	Current	Y5 (P)	Y10 (P)
Domestic	3.5	8.3	16.6
High Value Tourists (HVT) (Both domestic and foreign)	0	0	0
Maximum Carrying Capacity	1,825		

Note:

- Domestic – All Indian origin visitors – Mix of pilgrims and tourists
- High Value Tourists – A new definition proposed to capture estimated footfall of foreign and domestic visitors who can spend more at site and expect higher quality of site amenities and experience. The HVT footfall is estimated as 2 times the foreign footfalls at sites.

Proposed Master Plan

Approach to Master Planning

The objectives of master planning at this site include:

- **Formalization and organization of spaces** around the temple
- Developing the site upon the idea of a **recreational and one-day picnic spot** from Vellore and Kanchipuram.
- **Provision of basic facilities** to the site visitors.

Hard Interventions

The site has the potential to attract tourists for one-day picnic purposes from Vellore (~60 km), Kanchipuram (~30 km), and nearby villages too. Considering that and the site being an ASI-protected monument, the minimal set of interventions identified for the site are majorly design guidelines and temporary.

1. Outdoor display area connected with community garden area – Despite being architecturally unique as compared to other ASI sites in the surrounding, there are no dedicated site information boards present for disseminating the site’s interesting information. A small open display area with display boards can make the space more interactive to tourists. It can be further connected to the children’s play area and a community park which can be utilized by tourists and locals for recreational purposes.

Infrastructure Created: ~300 sq. m. of paved display area with 10 units of display boards, ~5000 sq. m. of a lawned community garden with ~80 sq. m. of children’s play area.

2. Development of a Road Connection – The existing road within the site boundary connecting the access road and parking area is unfinished and narrow for a 2-way movement of cars. It can be widened, and a well-paved connection can be established between the access road and formalized parking space. It can be developed out of prefabricated concrete blocks to make it weatherproof and pressure resistive.

Infrastructure Created: ~ 0.1 km of 4.5 m. wide concrete road

3. Development of Parking Space – In the current situation visitor vehicles are parked at dispersed locations across the site in a cluttered fashion. Few of the visitors in an urge to walk less even take the vehicles close to the monument. As a result of which there are chances that the monument and the landscape in the surrounding areas might degrade, owing to vehicular emissions. A separate dedicated parking area would likely help in monument preservation and formalize the parking activity to just one place facilitating the tourists.

Infrastructure Created: ~800 sq. m. of paved parking yard accommodating ~50 ECS at one time.

4. Small Food Court and Toilet Block – The site as such currently lacks in terms of any tourist engaging activities and facilities. A small temporary movable structure for F&B provision to the tourists and movable toilets in the area towards the north of the site would engage tourists for a longer period. The F&B outlet/kiosk can be accompanied by an outdoor informal seating arrangement. The operator of the F&B outlet can be made responsible for the maintenance of pay and use toilet facilities.

Infrastructure Created: ~20 sq. m. for F&B kiosks, ~2 units of pay and use toilet block, and 1 drinking water station.



Outdoor Information display area



Outdoor Temporary Food court areas

Soft Interventions

1. **Promotion** – TN Assist App may be integrated with the site. The site also needs to be included in the regional tourism circuit in TN (Kanchipuram – Vellore Region).
2. **Site management** – The site must be managed by the respective management authorities in the aspects of placing restrictions on waste littering at the site and tourist loitering at the site. It can be done by deploying adequate full-time security staff at the site.
3. **Site Boundary** - 50% of the site with walled boundaries, the remaining is done with old fencing style. The site being enclosed by open plots on all the sides makes it easy for trespassers and people who want to consume alcohol to enter the site during the night. All the boundaries of the site must be fenced properly to ensure minimal to no issues of site loitering during the dark.

Amenities Plan

1. **Lighting** – Street lighting is proposed to be provided along with the entire site, for concerns related to visitor security in the evening.
2. **Signages** – Package 1 set of signages are proposed to be installed at the site. It includes a Site map at entry, directional signage at 4-5 key points on the tourist path, descriptive placard on the Site's importance. All the signages at the site must follow the design specifications of package 1 signages for cultural sites.
3. **Tourist Convenience** – Pay and use toilet blocks and drinking water stations are deployed towards the northern side of the site near F&B kiosks for facilitating the tourists. The location of the toilets shown in the master plan is an indicative representation.
4. **Landscaping** – Local planting is proposed to be used to weather the extreme climate. Planting would be used to beautify the community garden and outdoor seating area. Trees would also be used to demarcate boundaries and segregate paved and unpaved areas.

5. **Street Furniture** – Adequate street furniture like benches and dustbins. are proposed to be provided, along with the design guidelines for street furniture at cultural sites.
6. **Technology Interventions (Package 1)** – Being a site with low tourist footfall in the current times as well as in the projected period, it is envisioned that the site must fulfill at least all the basic technological requirements for visitor safety and ease. These include:
 - a. Electronic visitor counters at entry points
 - b. TN Assist App integration (internet connection, QR scanner)
 - c. CCTV coverage at up to 3 locations

Trunk Infrastructure

The site has good connectivity. No trunk infrastructure interventions are required.

Please refer to Design Guidelines mentioned in Glossary of Interventions regarding amenities and urban design.

Projects Identified

#	Project Component	Scale
1	Pay and Use Toilet Block	~2 units
2	F&B Kiosk	~2 units
3	Drinking water station	~1 unit
4	Paved Road (single lane – 4.5 m. wide)	~0.1 km.
5	Paver block – display area	~300 sq. m.
6	Site Information display boards	~10 units
7	Dustbins	~5 units
8	Seats	~5 units
9	General Site Landscaping	~0.1 acres
10	Community Park	~5000 sq. m.
11	Children’s Play Area	~80 sq. m.
12	Signage	Package 1
13	Parking Paved Yard	~800 sq. m.
14	Technology Interventions	Package 1
15	Street Lighting	~250 m
16	Site boundary (Stone)	~ 250 m

Feasibility Assessment

The following considerations have been accounted for the cost projections of proposed interventions at this site:

- Feasibility of the cashflows projected here are accounted only for the additional components master planned.
- The current operating & maintenance cost of the site have not been considered.

Capital Expenditures (CAPEX)

The cost of the different project components proposed in the masterplan is calculated basis the current market price considering the appropriate escalations.

#	Project Component	Cost (INR Lakhs)
1	Pay and Use Toilet Block	20
2	F&B Kiosk	3
3	Drinking water station	3
4	Paved Road (single lane – 4.5 m. wide)	30
6	Paver block – display area	60
7	Site Information display boards	1
8	Dustbins	1
9	Seats	1
10	General Site Landscaping	1
11	Community Park	35
12	Children’s Play Area	5
13	Signage	1
14	Parking Paved Yard	12
15	Technology Interventions	1
16	Street Lighting	4
17	Site Boundary	14
Total		INR 1.8-2 Cr

(Note: Cost of all the project components including the Total capex is rounded-off to the nearest whole value.)

Revenues - Proposed projects

(Note: The following considerations are applicable to the below mentioned revenue modules.

- The revenues considered here are in addition to all the existing revenue currently accrued by the site management authority.
 - The estimated revenue projections are pegged at **Y5** (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)
1. **Retail and F&B kiosks.**
 2. **Parking.**
 3. **Pay per use Toilets.**

The total revenues to the site from the proposed capital projects is projected at an estimated **INR 15-20 Lakhs at Y5.**

Operating Expenditures (OPEX)

(Note: The following considerations are applicable to the below mentioned operational expense modules.

- The operating expenses considered here are subject to only the new interventions/ facilities proposed in the masterplan.
- The operations and maintenance currently undergone at the site for its existing facilities are not considered in this section.
- The expense projections are pegged at **Y5** (exit of short-term Y0-Y5 phase) and are subject to the current market prices.)

The following OPEX is expected for the site:

1. **Manpower Costs** – This includes the additional personnel required to manage the proposed facilities.
2. **Facility Maintenance costs** – This includes the costs incurred to maintain the cleanliness and the upkeep of the new facilities.
3. **Repair & Maintenance costs** – This includes the expense incurred over time for the repairs done to the facilities to minimize the deterioration. This may include a variety of labour and material intensive work such as plumbing, refurbishment of broken components, etc. and is pegged at 1.5 percentage of the total capital expenditure incurred.
4. **Marketing costs** – This includes the expense incurred for the advertisement and marketing of the retail kiosks at the site.
5. **Administrative and Management costs** – This includes the expense in administration and management of the new facilities. This may include expenses such as payroll, subscriptions to vendor services, taxes, etc. and is pegged at 2 percentage of the total capital expenditure incurred.
6. **Waste Management costs** – This includes the expense incurred in waste collection, segregation, recycling & reusing (water and solid waste) and responsible disposable as per the environment norms. It is calculated based on the footfall projections of the temple.

7. **Utility costs** – This includes the expense incurred in electricity consumed for the general site premises and the water consumed by the visitors at wash area, toilets and drinking water stations.

The total operational expenditure incurred by the site from the proposed capital projects is projected at an estimated **INR 12-15 Lakhs at Y5**.

Overall, it can be concluded that the Interventions proposed at the site are Self-Sustainable.

Implementation Model

The development of the projects is to be taken up by ASI department and the implementation of these can be carried out as follows:

1. The implementation of the **Technology package** (i.e., Smart-App integrations, Virtual guides, NFC tags, etc.) at the site would be taken up by the SPV provisioned by the tourism department.
2. The **kiosk units** can be leased/ rented out to private operators to host souvenir shops to display and sell souvenirs and packaged F&B to cater to the tourists.
3. The **Parking facility** is to be undertaken by the ASI through the addition of a security personnel, the additional workforce for parking management is included in the operating expenses (*Manpower cost*).

Phasing and Funding Agencies

#	Project Component	Agencies in Charge	Phasing of Development
1	Pay and Use Toilet Block	ASI	Y0 – Y2
2	F&B Kiosk	ASI	Y0 – Y2
3	Drinking water station	ASI	Y0 – Y2
4	Paved Road (single lane – 4.5 m. wide)	ASI	Y0 – Y2
5	Paver block – display area	ASI	Y0 – Y2
6	Site Information display boards	ASI	Y0 – Y2
7	Dustbins	ASI	Y0 – Y2
8	Seats	ASI	Y0 – Y2
9	General Site Landscaping	ASI	Y0 – Y2

#	Project Component	Agencies in Charge	Phasing of Development
10	Community Park	ASI	Y0 – Y2
11	Children’s Play Area	ASI	Y0 – Y2
12	Signage	ASI	Y0 – Y2
13	Parking Paved Yard	ASI	Y0 – Y2
14	Technology Interventions	ASI	Y0 – Y2
15	Street Lighting	ASI	Y0 – Y2
16	Site Boundary	ASI	Y0 – Y2

Impact on Communities

Employment opportunities

The proposed interventions are expected to create substantial employment opportunities for the local communities.

Employment opportunities during Implementation: 8,600¹⁸ man-days of construction labour (*spread across 1 - 2 years of implementation*)

During Operations: Jobs created during operations will entail:

- Additional personnel deployed at site (Cleaning staff, management, security) = 5 - 8 Persons
- Activity Operators = 8 – 10 Persons
- Retail and F&B spaces = 5 Persons
- Informal Vendors = 15 – 20 Persons

The direct employment generated during operation phase is an estimate. With increase in the tourist footfall at the site, there are chances that the numbers

¹⁸ Estimated basis following assumptions:

- Market norm for cost of labour = 20%-40% of CAPEX (Assumed as ~30% of computation)
- Cost per labour
 - Minimum wage in Tamil Nadu for construction of buildings & roads = INR 330 per day.

indicated above may increase. Henceforth, it cannot be estimated to complete accuracy.

Employment is typically generated at 3 levels:

- Direct employment in the tourism at site – As discussed above
- Indirect employment in the sectors supplying inputs to the tourism industries.
- Induced effect on employment as a result of subsequent rounds of spending because of incomes generated to people involved in value chain.

As per market norms, multiplier effect is used to assess the indirect and induced effect of employment. As per market benchmarks, considering a multiplier effect of 2.5, total employment in the project, basis direct, indirect, and induced effects is estimated as. 21,500 man-days.

Increased tourist footfall

As discussed above, the improved quality of services and visitor amenities will aid to improvement / increase in footfalls to the site.

Both increase in overall number of visitors and increase in high value tourists is expected to push the overall tourism spending at the site. It is expected that the additional visitors will generate an additional spending of 3.5 Cr. at the site.

As per a survey conducted, after reaching the site for an overnight stay, pilgrims spend their money across:

- Transport – 9%
- Shopping and Religious Activities – 13%
- Food & Drink – 7%
- Stay – 26%

- As per Tamil Nadu PWD Schedule of Rates 2020, minimum wage for Mason – INR 769 per day; Mazdoor = INR 502 per day
- Assumed cost of labour assumed for computation = INR 700 per day
- **Cumulative labour man-days = 30% * CAPEX / 700**

As per a survey conducted, after reaching the site for an overnight stay, tourists spend their money across:

- Transport – 22%
- Shopping and Religious Activities – 26%
- Food & Drink – 17%
- Stay – 35%

This spending will percolate to various stakeholders in the tourism value chain in the local catchment.

Indirect and Induced Impact of increased tourism spending

The increased tourism spending will result in impact on other sectors of the local economy. Again, the direct spending of tourists will translate into 2.5 times indirect + induced spending, which will benefit sectors including:

- Agriculture – in terms of increased supply of dairy (milk and milk products), poultry, fruits and vegetables, cereals and pulses and flowers.
- Local suppliers – Who supply goods and consumables to stakeholders who directly get benefitted by increased tourism spending. Such vendors and suppliers will include transporters, logistics and warehousing players, paper industry, textile industry, wood works etc.
- Artisans – Visitors will also benefit local artisans involved in arts and crafts in the surrounding area.

Figure 6-3: Proposed Master Plan – Mahendravadi Caves, Kanchipuram



- 1 Site Entrance Gate
- 2 Parking
- 3 F&B Area
- 4 Theme Garden / Community Garden
- 5 Open Display Area

Annexure: Proposals for Planning Interventions

This chapter captures a glossary to guide through various interventions planned / proposed at the sites.

1.1 Glossary of Proposed Interventions

This section contains standard proposals for the following:

1. Tourist Facilitation Centres
2. Stand-alone Conveniences
 - a. Community Toilet Block
 - b. Pay & Use Toilet Block
 - c. Smart Toilet
 - d. Drinking Water Station
 - e. Changing Area
 - f. Activity Operator's Booth
 - g. Footwear Stand
 - h. Footwear Storage
3. Circulation & Landscaping
 - a. Circulation
 - b. Paved Walkway in flat terrains
 - c. Paved Walkways in hilly terrains
 - d. Boardwalks
 - e. Stilted Boardwalks
 - f. Canopy Walks
 - g. Pedestrian Over-Bridge
 - h. Ropeway
 - i. Paved Road
 - j. Waterfront Promenade
 - k. Traffic Island
4. Rest Areas
 - a. Holding Area (Crowd Management)
 - b. Shading Device Type 1 (Tensile Structures)
 - c. Shading Devices Type 2 (natural material)
 - d. Beach Shack
5. Street Furniture
 - a. Railings (Steel)
 - b. Railings (Wooden)
 - c. Street Lighting
 - d. Yard Lighting
 - e. Monument Lighting
 - f. Dustbins
 - g. Seats
 - h. Bollards
6. Landscaping
 - a. General Site Landscaping
 - b. Street Landscaping
 - c. Sports Courts
 - d. Skating Rink
7. Events / Community uses
 - a. Bandstand
 - b. Paved Event Area
 - c. Community Park
 - d. Children's Play Area
 - e. Community Gathering Area
 - f. Cultural Halls
 - g. Sculpture Garden
 - h. Amphitheatre
 - i. Swimming Pool

8. Signage

- a. Temple / Cultural Site
- b. Natural Site

9. Parking

- a. Paved Yard
- b. Multi-Level Car Parking (MLCP)
- c. E-Cycle Parking / Fixed Cycle Stand
- d. EV Hub
- e. Bus / EV Stop

10. Retail & F&B

- a. Retail Kiosk
- b. Retail Zone
- c. F&B Kiosk
- d. Dine-in Restaurant
- e. Outdoor Dining Area
- f. Hawker Zone

11. Site Attractions

- a. Viewing Tower
- b. Floating Jetty
- c. Selfie Spots

12. Technology

- a. Packages for security, Wifi, TN Assist App, visitor counter and audio guides

13. Sustainability Measures

- a. Solar Power Systems
- b. Rainwater Harvesting

14. Civic Upgradation

- a. Community Education Drive
- b. Clean-up Drive
- c. Covered Stormwater Drains
- d. Underground Electrical Lines
- e. Sewage treatment Plant

15. Site Boundary

- a. Boundary Wall
- b. Fencing
- c. Gate Complex

16. Capital Projects

- a. 3 Star Hotels
- b. 4/5 Star Hotels
- c. Yatri Niwas
- d. Wayside Amenities

17. Tourism Desks

- a. Airport
- b. Railway Station

1.2 Prototypes – Amenities

This section would cover standardised interventions to be implemented across various sites. The following glossary contains the broad specifications, cost and reference images for such standard interventions.

1.2.1 Tourist Facilitation

- One of the major aspects of Tamil Nadu's tourism experience that needs to be improved on is the lack of proper amenities, tourist information and engaging background information at most of the Temple Sites, Heritage Sites, Nature Parks and other Preserved Habitats.
- To address all the above issues, Tourist Facilitation Centres are proposed at many sites throughout the state.
- While at few sites it might be possible to reuse existing dilapidated and/or underutilized buildings to house a Tourist Facilitation Centres, these will need to be newly developed at most of the sites. Thus, by creating a prototype or template design that can be easily replicated (with small adjustments to its size and layout, based on local site conditions and functional requirements), an effective cost saving can be made in the construction costs of Tourist Facilitation Centres.
- The Tourist Facilitation Centre's structure, over time, is also expected to become a familiar landmark for travelling tourists throughout the state.
- Further, considering the varied mix of sites with large differences in footfalls, six prototypes are suggested and detailed out in the following section.

1. Facilitation Centre Type 1

Type – Basic Facilitation Centre

Location – Large Pilgrim Temples

Components

- Ticket sales counter
- Helpdesk
- Gallery with displays to explain the heritage & cultural importance of the site
- Temple wares retail (pooja items, prasadam)
- Shoe Stand & Cloak Room

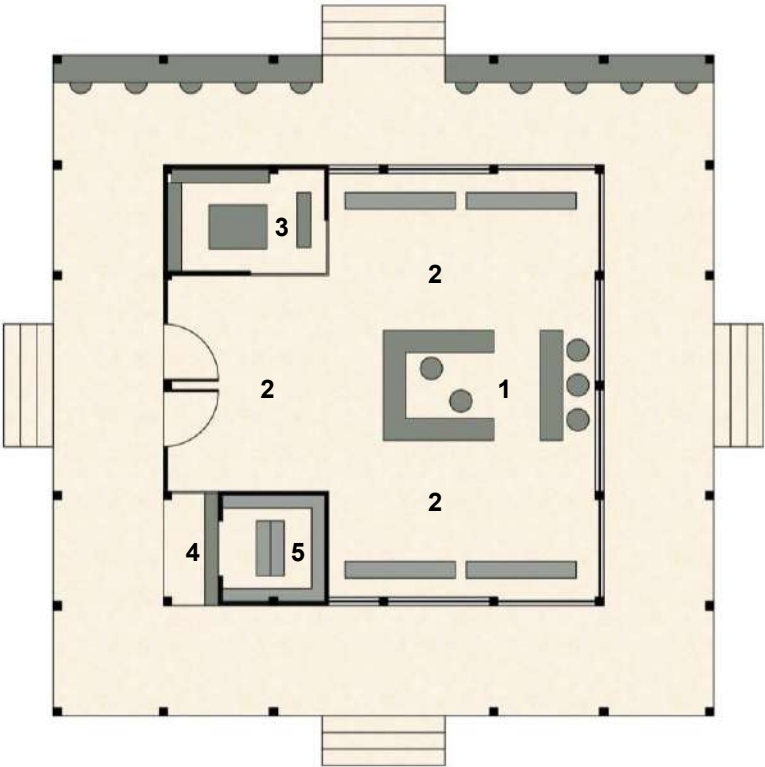
Design & Layout

- A newly built structure, the Centre could be located inside or just outside Temple premises (depending on land availability), in path of visitor movement.
- Covering a built-up area of ~150 sqm and an indoor space of ~60 sqm, the building will be built as a standalone structure that can be flexibly modelled as per vacant space available on site (reduced in size, for sites that do not have enough vacant land).
- A prototype plan, housing requisite amenities for visitor facilitation, has been detailed out along with suggestive elevations & views.

Broad Specifications

The building will be architecturally modern in design but inspired by the historic building traditions and built in keeping with the temple architecture. The objective is to achieve minimal visual disturbance due to the addition of a new structure to the original built fabric of the temple.

Lump sum cost for module – INR 15-17 L



- 1. Help Desk & Ticket Sales Counter
- 2. Site Gallery (Basic)
- 3. Temple Ware Retail
- 4. Shoe Stand
- 5. Cloak Room





Front Elevation – Main Entrance



Side Elevation – Secondary Entrance



Side Elevation – Secondary Entrance



Back Elevation – Secondary Entrance



Typical Components: Tourist Facilitation Centre Type 1

2. Facilitation Centre Type 2

Type – Advanced Facilitation Centre

Location – Large Tourist and Pilgrim Temples

Components

- Ticket sales counter + audio guides + guides' station
- Helpdesk
- Site galleries with large format displays & VR experiences to explain the heritage and cultural importance of the site
- Temple wares retail (pooja items, prasadam) and Souvenir retail
- Shoe storage & protective foot cover distribution
- Cloak Room

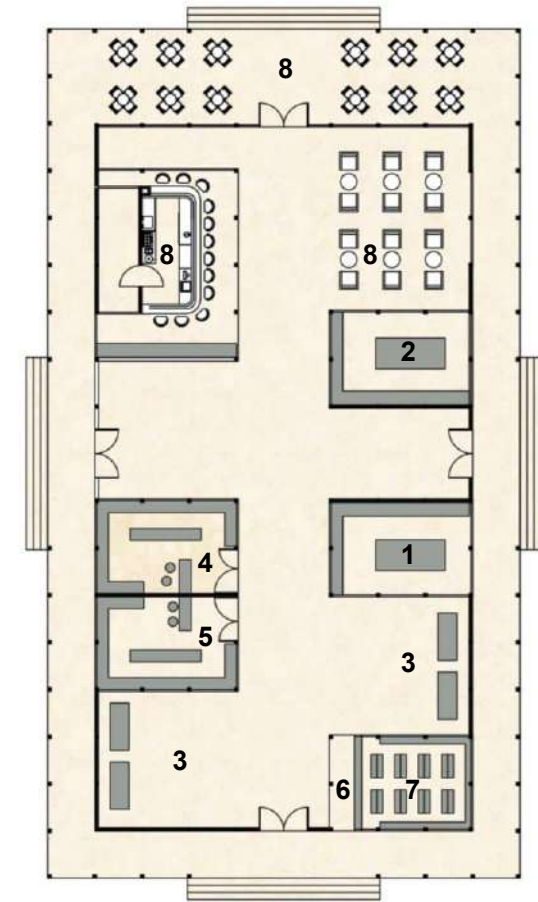
Design & Layout

- A newly built structure, the Centre could be located inside or just outside Temple premises (depending on land availability), in path of visitor movement.
- Covering a built-up area of ~750 sqm and an indoor space of ~330 sqm, the building will be built as a standalone structure that can be flexibly modelled as per vacant space available on site.
- A prototype plan, housing state of the art facilities for visitor facilitation and engagement, has been detailed out along with suggestive elevations & views.

Broad Specifications

- The building will be architecturally modern in design but inspired by the historic building traditions and built reminiscing the temple architecture.
- The objective is to achieve minimal visual disturbance due to the addition of a new structure to the original built fabric of the temple.
- The building should be sustainable with low-waste and preferably off-grid systems.

Lump sum cost for module – INR 40-45 L



1. Ticket Sales Counter + Audio Guides + Guides Station
2. Helpdesk
3. Site Gallery w ith large format displays & VR Experiences.
4. Souvenir Retail
5. Temple Retail
6. Shoe Storage & Protective Cover Distribution
7. Cloak Room
8. F&B Stall and Seating Space

0 1 2 4 METERS



Front Elevation – Main Entrance



Side Elevation – Secondary Entrance



Back Elevation – Secondary Entrance



Architectural Design Features



Typical Components: Tourist Facilitation Centre Type 2

3. Facilitation Centre Type 3

Type - Basic Facilitation Centre

Location – Natural sites with local tourists only

Components

- Ticket sales counter
- Helpdesk
- Guides' station
- Site gallery with displays to explain the ecological importance of the site
- Cloak room
- F&B kiosks

Design & Layout

- A newly built structure, the Centre could be located close to the site entrance and/or in path of visitor movement.
- Covering a built-up area of ~150 sqm and an indoor space of ~60 sqm, the building will be built as a standalone structure that can be flexibly modelled as per vacant space available on site.
- A prototype plan, housing requisite amenities for visitor facilitation, has been detailed out along with suggestive elevations & views.

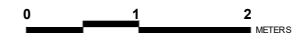
Broad Specifications

- The building will be architecturally modern in design but inspired by the natural beauty of its surrounding landscape.
- The building should be constructed with natural and locally sourced materials as much as possible to best blend in and be sustainable, preferable with off-grid mechanisms and low-waste generation.

Lump sum cost for module – INR 20-25 L



1. Help Desk and Ticket Station
2. Guides Station
3. F&B Kiosk
4. Site Gallery (Basic)
5. Cloak Room





Front Elevation – Main Entrance



Side Elevation – Secondary Entrance



Side Elevation – Secondary Entrance



Back Elevation – Secondary Entrance



Typical Components: Tourist Facilitation Centre Type 3

4. Facilitation Centre Type 4

Type – Advanced Facilitation Centre

Location – Natural sites with local and high-value tourists

Components

- Ticket sales counter
- Helpdesk
- Guides’ station
- Site galleries with large format displays & VR experiences to explain the ecological importance of the site
- Souvenir retail
- Dining area
- Cloak room
- Window for activity operators (optional)

Design & Layout

- A newly built structure, the Centre could be located close to the site entrance and/or in path of visitor movement.
- Covering a built-up area of ~700 sqm and an indoor space of ~350 sqm, the building will be built as a standalone structure that can be flexibly modelled as per vacant space available on site.
- A prototype plan, housing state of the art facilities for visitor facilitation and engagement, has been detailed out along with suggestive elevations & views.

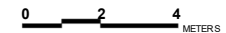
Broad Specifications

- The building will be architecturally modern in design but inspired by the natural beauty of its surrounding landscape.
- The objective is to achieve minimal visual disturbance due to the addition of a new structure to the natural setting of the site.
- The building should be constructed with natural and locally sourced materials as much as possible to best blend in and be sustainable, preferable with off-grid mechanisms and low-waste generation.

Lump sum cost for module – INR 50-55 L



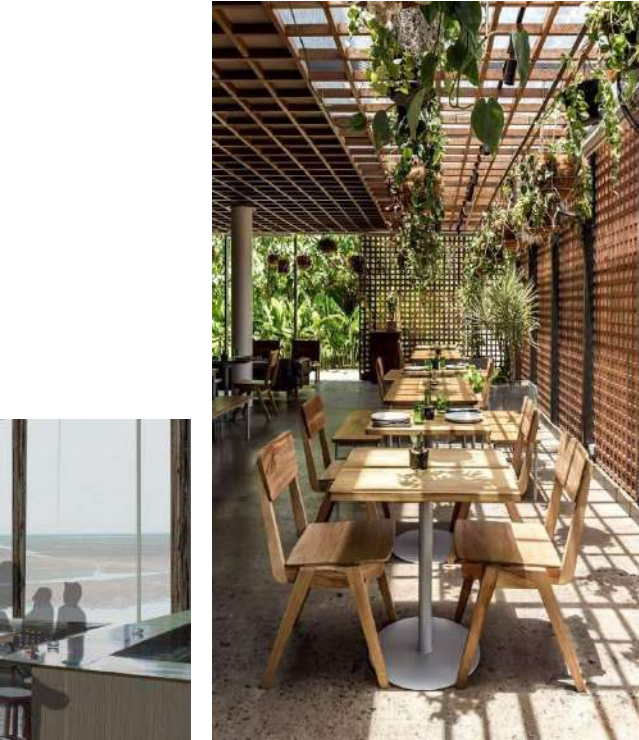
1. Ticket Sales Counter
2. Helpdesk
3. Guides Station
4. Site Gallery with large format displays & VR Experiences.
5. Souvenir Retail
6. Dining Area
7. Cloak Room
8. Activity Operators and storage







Architectural Design Features



Typical Components: Tourist Facilitation Centre Type 4

5. Facilitation Centre Type 5

Type - Basic Facilitation Centre

Location – Heritage sites with local tourists only

Components

- Ticket sales counter
- Helpdesk
- Guides' station
- Site gallery with displays to explain the heritage and cultural importance of the site
- Cloak room
- F&B kiosks

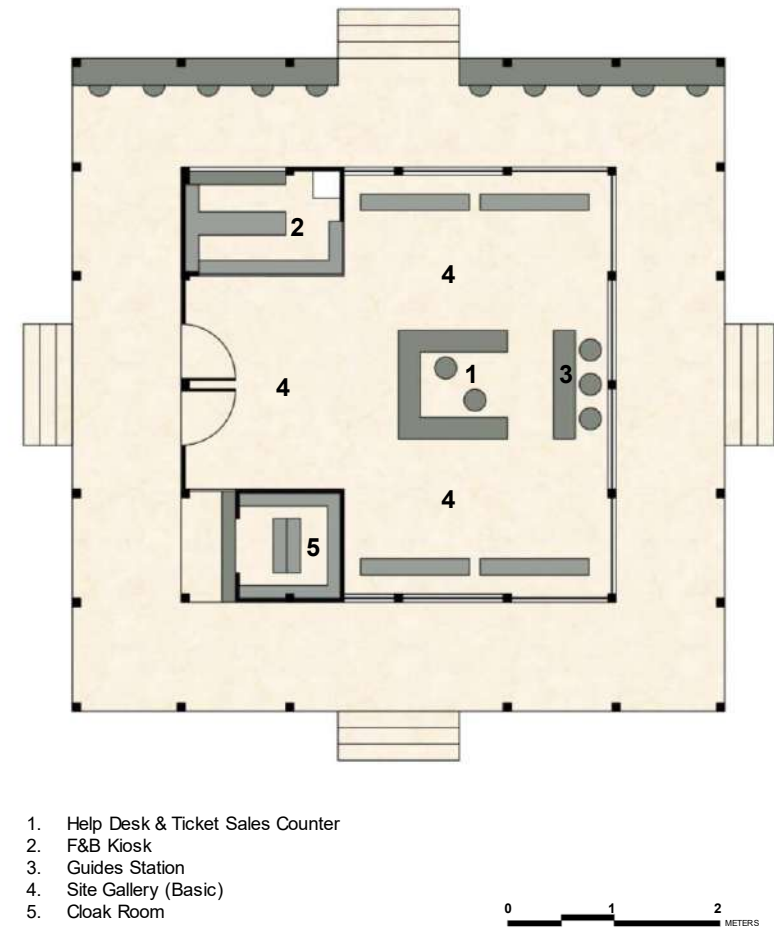
Design & Layout

- A newly built structure, the Centre could be located close to the site entrance and/or in path of visitor movement.
- Covering a built-up area of ~150 sqm and an indoor space of ~60 sqm, the building will be built as a standalone structure that can be flexibly modelled as per vacant space available on site.
- A prototype plan, housing requisite amenities for visitor facilitation, has been detailed out along with suggestive elevations & views.

Broad Specifications

- The building will be architecturally modern in design but inspired by the historic building traditions and reminiscent of local architecture.
- The objective is to achieve minimal visual disturbance due to the addition of a new structure to the original built fabric of the heritage site.

Lump sum cost for module – INR 20-25 L



1. Help Desk & Ticket Sales Counter
2. F&B Kiosk
3. Guides Station
4. Site Gallery (Basic)
5. Cloak Room

0 1 2 METERS



Front Elevation – Main Entrance



Side Elevation – Secondary Entrance



Side Elevation – Secondary Entrance



Back Elevation – Secondary Entrance



Typical Components: Tourist Facilitation Centre Type 5

6. Facilitation Centre Type 6

Type – Advanced Facilitation Centre

Location – Heritage sites with local and high value tourists

Components

- Ticket sales counter
- Helpdesk
- Guides' station
- Site galleries with large format displays & VR experiences to explain the heritage and cultural importance of the site
- Souvenir retail
- Dining area
- Cloak Room
- Window for activity operators (optional)

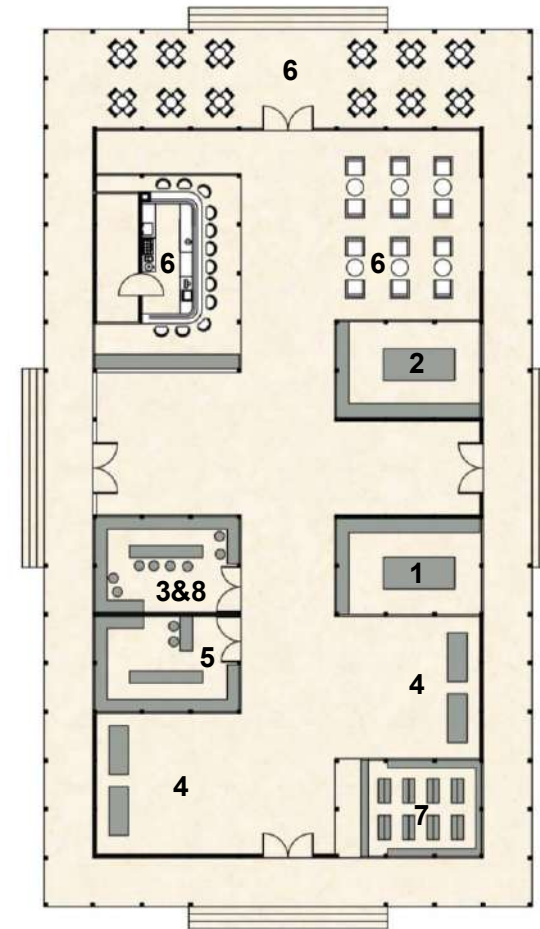
Design & Layout

- A newly built structure, the Centre could be located close to the site entrance and/or in path of visitor movement
- Covering a built-up area of ~750 sqm and an indoor space of ~330 sqm, the building will be built as a standalone structure that can be flexibly modelled as per vacant space available on site.
- A prototype plan, housing state of the art facilities for visitor facilitation and engagement, has been detailed out along with suggestive elevations & views.

Broad Specifications

- The building will be architecturally modern in design but inspired by the historic building traditions and reminiscent of local architecture.
- The objective is to achieve minimal visual disturbance due to the addition of a new structure to the original built fabric of the heritage site.

Lump sum cost for module – INR 50-55 L



1. Ticket Sales Counter
2. Helpdesk
3. Guides Station & Activity Operators Room
4. Site Gallery with large format displays & VR Experiences.
5. Souvenir Retail
6. Dining Area
7. Cloak Room

0 1 2 4 METERS



Front Elevation – Main Entrance



Side Elevation – Secondary Entrance



Back Elevation – Secondary Entrance



Architectural Design Features



Typical Components: Tourist Facilitation Centre Type 6

1.2.2 Stand-alone Conveniences

1. Community Toilet Block

Type – Basic Toilet Block with free access

Design & Specifications

- A community toilet block, separated into male and female facilities, could be built for local community & visitors at sites that are heavily visited by locals and/or located close to residential localities lacking such facilities.
- The female facility could house three WCs and three washbasins, while the male facility area could contain a WC, three urinals and three washbasins.
- A prototype plan, housing the requisite fixtures, has been detailed out.
- The toilet block could be built with locally sourced materials to reduce cost and be sustainable.

Lump sum cost for module – INR 4-6 L



2. Pay & Use Toilet Block

Type – Basic Toilet Block with nominal entry fee

Design & Specifications

- A pay & use toilet block could be built for tourists at sites that receive high tourist footfalls.

- The block, segregated into male and female facilities, could house at least one wheelchair compatible unisex toilet.
- The female facility could house three WCs and three washbasins, while the male facility area could contain a WC, three urinals and three washbasins.
- Further, depending on the land availability and site footfalls, nursing room with baby changing station could also be provided.
- An all-inclusive prototype plan, housing the requisite fixtures, has been detailed out.
- These toilet blocks provided across the state, could be built in bulk as prefabricated portable structures to save on cost and installation time.

Lump sum cost for module – INR 20-25 L



3. Smart Toilet

Type – High-tech Unisex Toilet Unit with paid access

Location – Anchor Sites

- A major issue faced by high value tourists across Tamil Nadu, highlighted in the baseline surveys, is the lack of uncontaminated, hygienic and well-maintained toilets at tourist destinations. Further, there is a willingness to pay for such quality amenities amongst this category of tourists.
- Thus, smart toilet unit could be installed at sites with high HVT footfalls. The high-tech unit will be a self-contained, self-cleaning, unisex toilet.

Design & Specifications

- A standalone unisex unit could be located close to tourist facilitation centre/ other tourist amenities. The unit will be designed for universal access with provisions for barrier free accessibility and wheelchair usage.
- The high-tech unit could be enabled with the following features:
 - Card/Coin validator system
 - Auto-flush and automatic surface cleaning mechanism to clean the toilet before and after usage
 - In-built water tank and roof-top solar PV
 - Motion sensors and LED indications to notify the user about the status of the system: ready, occupied, cycling (self-cleaning), or out of service.
 - Voice Guidance to help the user to operate the toilet without manual assistance
 - Display boards where instructions in Hindi and English shall be written for the aid of the user
 - GPRS Connectivity to help in the monitoring the health status of the unit
- These toilet blocks provided across the state, could be built in bulk as prefabricated portable structures to save on cost and installation time.

Unit Cost – INR 4-5 L



4. Drinking Water Station

Type – Basic Modular Unit with free access

- As highlighted by many tourists in the baseline surveys, availability of free drinking water was a major issue at tourist sites.
- Hence, drinking water stations with RO water coolers could be installed at all sites (except for the ones that already have functional drinking water facility).

Design & Specifications

- A standalone drinking water station could be located close to tourist facilitation centre/ other tourist amenities and in case of large sites, it could be located at various points in path of visitor movement. The unit could be designed for universal access.
- The drinking water unit could be a semi-walled unit with a roof over the water fountain area and concealed RO water purifier & cooler.
- For ease of procurement and installation, the water station could be a modular unit with number of water fountains decided as per the site footfalls.
- The unit could be built with locally available materials and adapted to site architecture.

Lump sum cost for module – INR 2.5-3 L



5. Changing Area

Type – Basic with nominal entry fee

Location – Beaches, waterfalls, temples with ablution / dress restrictions etc.

Design & Specifications

- A changing area block could be developed with 2 dry stalls, 2 shower rooms and 20 lockers in each module (segregated male & female modules). In addition to this, one wheelchair-compatible stall could be developed per block.
- The block could be located close to the beach/ waterfall or near the entrance of the temple, for the convenience of tourists.
- The changing area blocks could be built in keeping with the site & surroundings:
 - For beach / waterfall – the building could be built with natural and locally sourced materials, blending in with the surroundings. The block could be made sustainable with preferably off-grid systems and low-waste generation.
 - For temple sites – the building could be inspired by the historic building traditions and built in keeping with the temple architecture. The objective is to achieve minimal visual disturbance due to the addition of a new structure to the original built fabric of the temple.

Lump sum cost for module – INR 5-7 L



6. Activity Operator’s Booth

Type – Basic

Location – Sites with existing / proposed activities run by operator(s)

Design & Specifications

- A block for activity operators(s) could be built close to the area where activity is to be conducted, keeping in mind the path of visitor movement.
- The block could house information and booking counter for tourists along with a storage area for the operator’s usage.
- An itinerary/ brochure stand could be installed for public access, to disseminate information on various activities possible in and around the site.

Lump sum cost for module – INR 5-6 L



7. Footwear Stand

Type – Basic stand with free access

Location – Temples, Beaches, Waterfalls etc., with low footfalls

Design & Specifications

- Footwear stands could be provided (free of cost) for sites having footwear restrictions.
- The footwear stand could be placed near the site entrance, specifically near the area post which footwear restriction would be imposed.
- A modular stand could ensure easy replication and capacity addition based on the footfalls of the respective site.
- Each footwear stand could have 3-4 racks to ensure optimal usage as well as easy access.
- Seating area could be provided near the stand (optional) for ease of usage.

Lump sum cost for module – INR 1-1.5 L



8. Footwear Storage

Type – Manned facility with nominal fee

Location – Temples, Beaches, Waterfalls, etc., with high footfalls

Design & Specifications

- Manned footwear storage facility could be provided for high value sites having footwear restrictions.
- The facility could be placed near the site entrance, specifically near the area post which footwear restriction would be imposed.
- The storage facility could accommodate a footwear deposit & collection desk and shoe storage slots with associated token system.
- Seating area could be provided near the facility for ease of usage.

Lump sum cost for module – INR 2-3 L



1.2.3 Circulation & Landscaping

1. Circulation

Paved walkways

- Walkways could be developed with paver blocks at all tourist sites, except for sites with hilly / sloping terrain
- A standard width of 3m could be followed to achieve ease of movement for all
- The colour of the blocks could be decided as per the site and local colour palette
- Unit rate – INR 2,000 per m (for a standard width of 3m)



Paved walkways at hilly sites

- Concrete walkways could be developed at hilly sites/ site areas with sloping terrain
- A standard width of 3m could be followed to achieve ease of movement for all
- The walkway will be finished to ensure a levelled and non-slippery surface
- Unit rate – INR 2,750 per m (for a standard width of 3m)



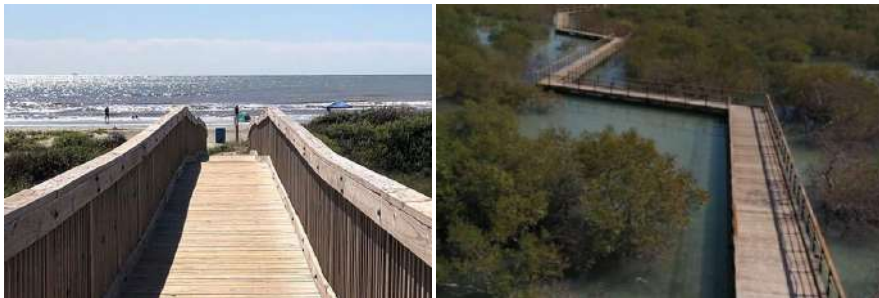
Boardwalks

- Boardwalks could be developed at sites with wet, loose, fragile, or marshy land to enable pedestrians to traverse the area
- These boardwalks could be built of wooden planks sourced locally, having a standard width of 3m
- Unit rate – INR 8,500-9,000 per m (for a standard width of 3m)



Stilted Boardwalks

- Boardwalks could be developed on stilts for sites where pedestrian movement is desired on water or through sensitive areas like mangroves
- The walkway could be built with a parapet/ railing on both sides for safety
- The stilted boardwalk could have a standard width of 3m for ease of movement
- Natural and locally sourced materials could be used for the construction of this elevated walkway
- Unit rate – INR 50,000-60,000 per m (for a standard width of 3m)



Canopy Walk

- Canopy walk, in essence a pedestrian bridge, could be developed at forest/ birdwatching sites as an eco-tourism attraction
- The elevated structure, usually built high above the ground, could provide pedestrian access to a forest canopy and allow tourists to experience nature in its entirety
- Built of natural and locally sourced materials, the walk could maintain a standard width of 3m and have extended areas at important viewpoints along the walk
- Unit rate – INR 35,000-40,000 per m (for a standard width of 3m)



Pedestrian over-bridge

- A pedestrian over-bridge could be built at sites where crossing an area over a considerable height is desired and/or as an attraction offering viewpoints to tourists
- A standard width of 3m could be followed to achieve ease of movement for all
- The design and materials of the bridge could be decided as per the site and its surroundings
- Unit rate – INR 1,20,000-1,50,000 per m (for a standard width of 3m)



Ropeway

- Ropeway could be developed at hill sites with high footfalls or sites where physical access is barred because of natural constraints, to aid access and offer aerial views of the surroundings.
- Motorized passenger cable cars, accommodating 4 to 8 passengers, suspended and pulled by cables could transport tourists to and fro.
- Two stations, with ticket sales facility, could be developed at both ends.
- Unit rate – INR 15-20 Cr per km



Paved road

- Asphalt paved roads could be developed at sites facing accessibility issues due to unpaved roads and/or bad quality of roads reaching up to the site.
- While the number of lanes could be decided as per the traffic flow, each lane to have a standard clear carriageway width of 3.75m.
- Further, to achieve a smooth paved road, the following steps could be observed:
 - Demolition and removal of the existing surface
 - Grading and sloping for appropriate drainage
 - Preparation of sub-base to support the asphalt surface
 - Addition of binder layer
 - Installation of the new asphalt surface
 - Smoothing of the transitions to existing driveways
 - Smoothing and compacting
- Unit rate – INR 3-3.2 Cr per lane-km

Waterfront promenade

- A waterfront development could be planned at sites abutting water bodies like lake, river, dam, ocean.
- A continuous paved walkway along the waterfront with landscaping, seating, shaded spaces and activity areas could be developed as a great destination for locals and tourists alike.
- The promenade could activate the waterfront area and be used throughout the day for activities like walking, jogging, outdoor exercising & yoga, observing sunrise / sunset, holding cultural events, evening markets, etc.
- Unit rate – INR 13,000-15,000 per m (for a standard width of 3m)



Traffic island

- A traffic island could be developed at major junctions in and/ or around the site, to channelize traffic and provide a refuge to pedestrians.
- While the size of the island could be decided as per the site and traffic flows, a minimum width of ~1.8m is suggested to safely accommodate a waiting pedestrian with a buggy.
- At major junctions, these traffic islands could also become landmarks with landscaping and / or decorative art / sculpture(s).
- Module cost – INR 1.5-1.7 Cr



2. Rest Areas

One of the essential components of circulation are the resting areas, especially for large tourist sites. The resting areas could include common holding areas or specific shaded areas within the site premise.

Holding area (Crowd management)

- Holding area could be a large semi-open space within the site which could act as resting areas during the non-peak season, doubling as a crowd management measure during the peak season.
- The holding area could be a typical module of ~500 sqft with seating facilities, provided as per site requirements and availability of space, strategically located in path of visitor movement.
- Module cost – INR 2-2.5 L

Shading devices type 1 (Tensile structures)

- Tensile structures could be used as shading devices for sites where temporary shading is required.
- These are typically polyethylene-based fibre sheets supported by tensile-stressed cable that can span across large areas.
- While the structure could be provided as per site requirements, a typical module could maintain a standard width of 3m.
- These structures could be used to accommodate seating areas, walkways, play areas, F&B kiosks, temporary markets, etc.
- Unit rate – INR 12,000-15,000 per m (for a standard width of 3m)



Shading devices type 2 (Natural Materials)

- Shading devices with natural materials could be used at sites with natural setting like forests, waterfalls, etc.
- The materials for these structures could be sourced locally to achieve sustainability and aim to blend in with the surroundings.
- While the structure could be provided as per site requirements, a typical module could maintain a standard width of 3m.
- Unit rate – INR 4,000-6,000 per m (for a standard width of 3m)



Beach Shack

- Beach shacks could be temporary structures provided at beach sites.
- These structures could have thatched roof, built using the locally sourced natural materials.
- At high value tourist sites which receive high footfalls, these shacks could also accommodate seating, lounge chairs, F&B kiosks, retail outlets, etc.

- A typical module could cover an area of 2m by 2m. The dimensions and number of modules could be modelled as per the site footfalls and availability of space.
- Module cost – INR 65,000-80,000



3. Street furniture

Railings type 1

- Mild steel railings could be installed at all sites, except natural sites
- These could be provided to ensure safety and support, with a standard height of 1.0 m.
- Unit rate – INR 2,500 per m



Railings type 2

- Railings made of natural and locally sourced materials could be installed at natural sites.
- These could be provided to ensure safety and support, with a standard height of 1.0 m.
- Unit rate – INR 2,000 per m



Street Lighting

- Streetlights could be installed at all sites that are accessible after sunset, to ensure safety and security.
- Ornamental light-post with energy-efficient luminaries and solar panel integrated system could be installed.
- An optimum height of 6m could be kept with a standard spacing of ~30 m between light poles.
- Unit rate – INR 1,600 per m (one light pole every ~12m)



Yard Lighting

- Yard lighting could be provided at sites that require lighting over a large area.
- The luminaires could be mounted at a minimum height of 20 m with a standard space-height ratio lying between 2.5 to 3.
- Unit rate – INR 4,000 per sqm (one light pole per 100 sqm)



Monument Lighting

- Monument lighting could be provided at high value sites and / or sites with architectural or historical significance.
- While the type of lighting to be installed is dependent on a variety of site-specific factors, the aim is to create orientation points for visitors that are visible from a distance and bring the history & culture of the structure to light.
- Lump sum cost of module – INR 20-25 L



Dustbins

- Dustbins, in sufficient quantity, could be provided at all sites to maintain the site and keep the surroundings clean.
- A modular unit, with a bin cover and segregated wet and dry compartments, could be procured in bulk for all sites across the state.
- These dustbins could be fixed at a standard distance of 100m, achieving an effective distance of maximum ~50m from any point along the visitor’s path.
- Unit cost – INR 2,000



Seats

- A modular unit with 3 seats could be designed and built in concrete at all sites.
- The seating could be provided in path of visitor movement to offer rest and convenience to visitors.
- The number of units and their locations could be decided as per site footfalls and space availability.
- Unit cost – INR 10,000



Bollards

- Bollards could be installed to prevent automobile traffic mixing with pedestrian movement.
- These could be located at sites where such mixing is to be restricted and / or where pedestrianization of a certain area is desired.
- Bollards could also be mounted to control overspill parking onto sidewalks.
- These could be spaced near enough to block ordinary cars/trucks, but spaced widely enough to permit wheelchairs, bicycles, and pedestrians to pass through.
- Unit cost – INR 5,000



4. Landscaping

General Site Landscaping

- General site landscaping, with soft landscaping elements like trees, shrubs, ornamental plants and turf, could cover ~10% of the site area.
- This green cover ensures rainwater absorption into the ground, air purification, reduction of ambient noise & temperature and offers a calm environment.

- Unit rate – INR 3.5-3.75 L per acre



Street Landscaping

- Street landscaping could be provided in case of large sites with internal streets and / or ~500m radius of high value tourist sites
- The street-sides could be developed as a continuous landscaped zone, with road-side curbs, planting strips, tree pits and trees that provide shade.
- Unit rate – INR 1-1.25 L per m



Sports Courts

- Sports courts could be developed at sites where such facilities are desired for visitor engagement and space activation.
- Concrete-paved multi-sports courts could be developed for flexibility of use.
- A modular 15m X 28m court could host a variety of sports, including basketball, volleyball, tennis, etc.
- Further, the size and type of sports court to be provided at the site could be decided on a case to case basis.

- Lump sum cost for module – INR 4-5 L



Skating rink

- Skating rink for public recreational purpose could be developed at sites where such facilities are desired for visitor engagement and space activation.
- Concrete flooring could be finished to ensure a smooth, slip-resistant and durable surface.
- While a sports rink could be developed of a minimum standard size of 15m X 30m and go up to 25m X 50m, dimensions for a recreational rink could vary from 10m X 10m to 20m X 20m. The size and type of rink could be decided according to the intent and availability of space at the site.
- Lump sum cost for module – INR 50-55 L (for a 210m long and 6m wide rink)



5. Events / Community uses

Bandstand

- Bandstand, a platform covered from top, could be developed at sites with large landscaped areas.
- Originally conceptualized to host band/ music performances, the semi-enclosed structured could be used as a resting space, picnic area, gathering zone.
- While the structure could be developed in any shape and size, it is typically built in a circular or polygonal plan.
- Lump sum cost for module – INR 3.5-4 L



Paved event area

- Event area could be developed at sites that host various events/ festivals throughout the year and have enough vacant area available in or around the site.
- A small stage with plug-n-play facility could be developed within a large open area to host the event.
- The size of stage and associated event area could be decided as per vacant land area available and peak footfalls received at the site.
- Unit rate – INR 1,800-2,000 per sqm



Community park

- Community park could be developed at sites that are located close to habitation(s) and have a large pool of vacant land available.
- The park could be used by the locals as well as tourists, for rejuvenation and recreation purposes.
- The size and activities hosted at the park could depend on the area of vacant land available and requirements of the local community.
- A typical community park could be developed with a combination of hard & soft landscaping and variety of activity areas like open gymnasium, OAT, gazebos, children’s play area, etc.
- Unit rate – INR 700 per sqm



Children’s play area

- Children’s play area could be developed to engage the younger segment of visitors and increase the family-friendliness of the site.

- A typical play area is designed to provide a safe environment for play and could include recreational equipment such as the seesaw, merry-go-round, swing set, slide, jungle gym, chin-up bars, sandbox, spring rider, etc.
- Lump sum cost for module – INR 5-6 L



Community gathering area

- Community gathering areas could be modelled as per the availability of space and site requirements.
- These could range from a small seating area around a tree to stepped seating area used for community congregation.
- Lump sum cost for module (small seating area around a tree) – INR 5-6 L



Cultural Halls

- Cultural halls could be developed, to host weddings or events, at sites where such facilities are desired and vacant land area is available in or around the site.
- The cultural hall could be developed with basic infrastructure in place, including electrical & water connection, toilets, parking area, etc.
- Lump sum cost for module – INR 60-80 L (2,000 sqft hall)



Sculpture garden

- Sculpture garden is an outdoor exhibit area, usually accommodating several permanently sited installations made in durable materials and set in a landscaped setting.
- Sculpture gardens could vary greatly in size and scope, generally revolving around a site-specific theme.
- Unit rate – INR 2,200 per sqm



Amphitheatre

- An amphitheater, also known as open air theater (OAT), could be developed as an open-air venue with a central stage to host events, community gatherings, performances, etc.
- Usually, it requires an average of 7.5 sqft per person, including the seating area and the space for aisle-ways.
- The size of amphitheater could be decided as per site requirements and space availability.
- Unit rate – INR 20,000 per sqm



6. Swimming pool

- Swimming pool could be developed where such facility is desired at a site
- A standard swimming pool with 5 swimming lanes could be developed with a width of 12.5m and length of 25m.
- Further, the size of the pool could vary greatly and be decided as per site requirements and land availability.
- Lump sum cost for module – INR 5-8 L



1.2.4 Signage

1. Package 1 – Small Temple / Cultural site

- A basic package of signages could be installed at all small temple / cultural sites.
- This package could include the following:
 - Site map at entry
 - Directional signage at 4-5 key points on tourist path
 - Descriptive placard on Site's importance
- The signages could be in theme with the historic setting of the site, in terms of materials used, shapes, graphic design, etc.
- The signages to be weather-proof & low maintenance
- Lump sum package cost – INR 65,000



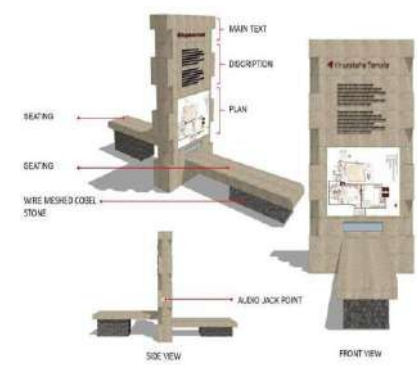
2. Package 2 – Intermediate | Temple / Cultural site

- An intermediate package of signages could be installed at all intermediate temple and cultural sites with good footfalls.
- This package could include the following:
 - Site map at entry & 4-5 key points on tourist path
 - Directional signage at 25-30 key points
 - 5 descriptive placards on Site's importance & important highlights
- The signages could be in theme with the historic setting of the site, in terms of materials used, shapes, graphic design, etc.
- The signages to be weather-proof & low maintenance
- Lump sum package cost – INR 3,20,000



3. Package 3 – Anchor | Temple / Cultural site

- An all-inclusive package of signages could be installed at all anchor sites.
- This package could include the following:
 - Site map at entry & 4-5 key points on tourist path
 - Directional signage at 25-30 key points
 - 5 descriptive placards on important highlights
- The signages could be in theme with the historic setting of the site, in terms of materials used, shapes, graphic design, etc.
- The signages could have a premium finish with Glass and / or Brass Inlay along with LED lighting. The signages to be weather-proof & low maintenance
- Lump sum package cost – INR 6,00,000



4. Package 4 – Basic | Natural site

- A basic package of signages could be installed at all small natural sites.
- This package could include the following:
 - Site map at entry
 - Directional signage at 4-5 key points on tourist path
 - Descriptive placard on Site’s importance
- The signages could be in theme with the natural setting of the site, in terms of materials used, shapes, graphic design, etc.
- The signages to be weather-proof & low maintenance
- Lump sum package cost – INR 65,000



5. Package 5 – Intermediate | Natural site

- An intermediate package of signages could be installed at all intermediate natural sites with good footfalls.
- This package could include the following:
 - Site map at entry & 4-5 key points on tourist path
 - Directional signage at 25-30 key points
 - 5 descriptive placards on Site’s importance & important highlights
- The signages could be in theme with the natural setting of the site, in terms of materials used, shapes, graphic design, etc.
- The signages to be weather-proof & low maintenance
- Lump sum package cost – INR 3,20,000



6. Package 6 – Anchor | Natural site

- An all-inclusive package of signages could be installed at all anchor / high value natural sites.
- This package could include the following:
 - Site map at entry & 4-5 key points on tourist path
 - Directional signage at 25-30 key points
 - 5 descriptive placards on important highlights
- The signages could be in theme with the historic setting of the site, in terms of materials used, shapes, graphic design, etc.
- The signages could have a premium finish with Glass and / or Brass Inlay along with LED lighting
- The signages to be weather-proof & low maintenance
- Lump sum package cost – INR 6,00,000



1.2.5 Parking

1. Paved Yard

- Designated parking area with a paved yard could be developed at all sites that currently lack adequate parking facility.
- The no. of ECS to be provided calculated as per TN Unified Building Bylaws and type of development (existing as well as proposed).
- The dimension of the parking stall for different vehicles, as per TN Unified Building Bylaws, shall be:

Vehicle Type	Breadth (in m)	Length (in m)
Car	2.5	5.0
Two-Wheeler	1.0	1.8
LCV	3.5	7.0
Lorry/ Bus	3.5	10.0

- Two ECS, for parking of vehicles of differently abled people, to be provided near entrance with a minimum width of 3.6m.
- Unit rate – INR 1,600 per sqm



2. Multilevel Car Parking (MLCP)

- MLCP could be developed at high footfall sites that are currently facing parking issues along with scarcity of land available in & around the site.
- MLCP could be either conventional or automated/ mechanized type, depending on which efficient space utilization and cost estimation could be made.
- Unit rate – INR 15,000 per sqm



3. E-cycle Parking | fixed cycle stand

- E-cycles/ cycle parking stands could be provided at sites that fall under holistic mobility plans, forming an integral part of promoting sustainable modes of transportation.
- A single cycle U-rack could park 2 cycles at a time with two cycles covering an area of 0.8m X 2.1m. These racks could be spaced at a standard distance of 1.2m.
- For E-cycles, stands could be fitted with charging points, occupying an area of 1.8m X 1.8m per unit that accommodates two e-cycles.
- Unit cost – INR 15,000-18,000



4. EV Hub (with charging point)

- Electric vehicle hubs could be developed as part of a holistic mobility plan, forming an integral part of promoting sustainable modes of transportation.
- An EV hub is essentially a stand for EVs with charging stations installed.

- The dimension of a parking stall for a six-seater EV shall be 1.5m X 3.5m.
- Unit rate – INR 10,000 per sqm

5. Bus / eV Stop

- Bus/ EV stops could be developed as part of a larger mobility plan, placed strategically to aid visitor conveyance.
- A typical stop could be developed as a shaded seating area used for boarding and alighting a bus/ EV, preferably located at a distance of ~1.5m from the curb.
- Lump sum cost for module – INR 20-22 L (2,000 sqft hall)



1.2.6 Retail & F&B

1. Retail Kiosk

- Retail kiosk(s) could be developed at sites that attract good footfalls, to render higher visibility to local products as well as increase visitor engagement and spending at the site.
- Standard module(s) of 3m X 3m could be installed as per space availability and site footfalls.
- Further, the placement of these retail kiosks could be done while keeping in mind the path of visitor movement, in order to achieve maximum visibility.
- Unit cost – INR 1.5-2 L



2. Retail Zone

- A dedicated retail zone could be developed at high value sites, offering souvenirs and local products to high footfalls received at the site.
- A standard module could include a row of shops located in path / view of visitor movement.
- This retail offering would not only improve tourist experience at the site but will also add a source of revenue generation.
- Unit rate – INR 20,000 per sqm



3. F&B Kiosk

- F&B kiosk(s) could be developed at sites for tourist convenience, especially at secluded sites.
- Standard module(s) of 3m X 3m could be installed as per space availability and site footfalls.
- Unit cost – INR 1.5-2 L

4. Dine-in Restaurant

- A typical restaurant could include an entrance area, dining area, kitchen, storeroom, hand washing area and staff & customer toilets.
- While a restaurant requires an average area of ~1.5 sqm per seat, the type of restaurant and number of seats provided could vary as per site requirements and footfalls expected.
- Unit rate – INR 45,000 per sqm

5. Outdoor dining area

- Outdoor dining area could be developed as an extension to an indoor dining area and/or associated with F&B kiosk(s).
- A typical outdoor dining area could be developed as a paved open space with fixed benches, trees and dustbins installed, along with a toilet block and drinking water fountain located in proximity.
- Unit rate – INR 3,300 per sqm



6. Hawker Zone

- Hawker zone could be developed to provide a dedicated space for local road-side vendors and hawkers.
- A typical hawker zone could be developed as a paved open space with hawkers' platforms, doubling as lockable storage spaces.
- Other ancillary developments could include fixed benches, trees and dustbins, along with a toilet block and drinking water fountain located in proximity.
- Unit rate – INR 1,400 per sqm

1.2.7 Site Attractions

1. Viewing tower (natural sites)

- Viewing tower(s) could be developed at sites that offer picturesque views from a height, especially at natural sites like forests, beaches, dams, etc.
- These towers could be developed with locally sourced materials like bamboo, locally available wood, etc; reaching a standard height of 6m and hosting a 3m X 3m enclosure at the top.
- Lump sum cost for module – INR 20-25 L



2. Floating Jetty (waterbodies)

- A floating jetty, essentially a platform / walkway projecting from land out into water, could be developed at sites that host a large waterbody. It could be used to access boats and various other water rides possible at the site.
- Floating jetties could be developed in a whole range of sizes and shapes to cater to vessels ranging from a small canoe to an ocean-going trawler. It could be built in sizes ranging from 6m to 12m and widths varying from 1.5m to 3.5m.
- Unit rate – INR 60,000 per sqm



3. Selfie Spots

- Selfie spots could be created at tourism sites to attract the millennial and gen z generation visitors. In this new social media age, such attractions would also get featured and automatically promoted on various online platforms.
- These spots could be created with walls murals, swings placed at picturesque locations, frames and signs like “I ♥ Chennai”.
- Unit cost – INR 0.5-1 L



1.2.8 Technology

1. Package 1 – Basic (all sites)

- A basic package of technology integration could be installed at all sites.
- This package could include the following:
 - Electronic Visitor Counter at entry point
 - TN Assist App integration at site, with internet connection and QR scanner

- CCTV coverage at up to 3 locations
- Lump sum package cost – INR 0.6-1 L

2. Package 2 – Basic (large sites)

- For large sites, a basic package of technology integration adapted to a larger area could be installed.
- This package could include the following:
 - Electronic Visitor Counter at entry points
 - TN Assist App integration at site, with internet connection and QR scanner
 - CCTV coverage at key locations
 - WiFi bollards and/or enclosures at key locations
- Lump sum package cost – INR 7-10 L

3. Package 3 – Anchor Sites

- For anchor sites sites, an advanced package of technology integration could be installed.
- This package could include the following:
 - Electronic Visitor Counter and body scanner at entry points
 - TN Assist App integration at site, with internet connection and QR scanner
 - CCTV coverage servicing the entire site area
 - WiFi bollards and/or enclosures across the site
 - Audio Guides with RFID points at all key attractions within the site
- Lump sum package cost – INR 12-15 L

1.2.9 Sustainability measures

Green measures could be implemented as much as possible at all locations, and specifically at locations with environmental sensitivities (hill stations, coastal towns, riverfront towns, etc.)

1. Solar Power Systems

- Solar power systems are, in essence, a set of installations where photovoltaic (PV) panels are used to harvest solar power. These could be installed on ground as a standalone development and/or on rooftop of built structures.

- Ground-mounted solar farms are generally large-scale installations that supply power at utility level, while the rooftop mounted installations supply power locally to the building and associated developments.
- Depending on the availability of vacant land and serviceable rooftop area, solar power systems could be installed at all sites.
- Unit rate – INR 5,000 per sqm



2. Rainwater harvesting

- Rainwater harvesting measures could be taken within all site premises (roof top and campus) for conservation of rainwater. The standards to be followed for rainwater harvesting structures are described in TN Unified Building Bylaws.
- A typical system consists of collection from roof-like structure and redirection to a tank, cistern, deep pit (well, shaft, or borehole), aquifer, or a reservoir with percolation.
- Unit rate – INR 1,750 per sqm

1.2.10 Civic Upgradation

1. Community education drive

Community education drive(s) could be programmed to deliver basic skills to tourism-based communities, like cleanliness, basic service techniques, etiquette, communication skills, first aid, business skills, etc.

- The intent is to build a large pool of workforce with basic tourist skills, suitable for the large number of entry level jobs in various segments.
- For example, training camps could be set up for Kanchipuram silk saree weavers and sellers. They could be trained in basic skills as well as specialised skills like

how to engage tourists in tours of weaving units, selling the products at right price, etc.

- Further, general awareness campaigns could make the local community aware about impact of good tourism on their livelihoods and the ways in which they can be a part of the tourism ecosystem.
- Lump sum one-time mobilization cost – INR 35,000

Such camps, imparting free training to all, could be organized every 6 months on alternating basis between flagship hubs / rural tourism linked hubs. Such trainings could be championed by the DoT, delivered through authorized training service providers or NGOs.

2. Clean-up drive

Clean-up drive(s) could be programmed to raise community awareness on the importance of cleanliness and inculcate a sense of responsibility towards the city & surroundings.

- The intent is to achieve a sustainable system of maintaining cleanliness, mobilized through activating the community spirit.
- For example, cleanliness drives could be organised at Marina Beach, involving govt. staff, school / college students, etc.
- These drives could be accompanied with mid-day meal distribution.
- Lump sum one-time mobilization cost – INR 45,000

Such drives could be organized every 6 months at anchor sites / popular landmarks in the city. These could be championed by the DoT, delivered through govt. departments, private sponsors or NGOs.

3. Covered Stormwater drains

Stormwater drains are designed to drain excess rain and ground water from impervious surfaces. Covered stormwater drains offer various advantages over surface drains, including reduction in organic & inorganic pollution of water, breeding of disease-causing agents, growth of aquatic weeds, etc.

- Thus, stormwater drains with a drain cover could be ensured across all sites and their immediate surroundings.
- Stormwater drain's capacity (dictating its size and slope) could be decided as per the area to be served and rainfall intensity.
- Unit rate – INR 18,00,000 per km



4. Underground electrical lines

Underground electrical lines offer various advantages over overhead cables that are generally used. This includes, less susceptibility to external weather conditions (storm, rain, snow) and better aesthetics. While undergrounding of power lines can increase the initial costs of electric power transmission and distribution, it can decrease operational costs over the lifetime of the cables.

- Undergrounding of electrical lines could be done in 500m buffer area of anchor sites.
- This could ensure uninterrupted views of the monument and render better aesthetics to the surroundings, creating an inviting experience for the visitors.
- Unit rate – INR 14-16 L per km

5. Sewage Treatment Plant (STP)

Sewage treatment is the process of removing contaminants from municipal wastewater, containing mainly household sewage plus some industrial wastewater. Physical, chemical, and biological processes in an STP are used to remove contaminants and produce treated wastewater that is safe enough for release into the environment.

- STP(s) could be installed, wherever necessary, to treat wastewater before it can be discharged into the environment.
- Such measures could be implemented as much as possible at all locations, and specifically at locations with environmental sensitivities (coastal towns, riverfront towns, beaches, boathouses, etc.)
- Lump sum module cost – INR 1 L per MLD

1.2.11 Temple Tanks Restoration

Temple tanks was an ancient technology that formed integral part of the temple architecture in various part of India. Often they are considered as sacred and hence many rituals are associated with the tanks. They were used to collect water to recharge the aquifer, to later be extracted through personal wells. These tanks served as a benchmark of the city’s underground resource, making its fluctuating level visible. These tanks played three important roles:

- As a storage, which acted as an insurance against low waterfall periods and helped recharge the ground water in the surrounding area
- Prevented soil erosion and wastage of runoff waters during heavy rainfalls, thus, acted as flood control instrument.
- As a device crucial for maintaining the overall ecosystem of the area. This includes maintaining the microclimate of the area, playing important role in socio-cultural activities at community level.

Nataraja Temple, Chidambaram & Mylapore Temple in Tamil Nadu and Bhoga Nandeeshwara Temple in Bangalore are some of the prominent examples of temple tanks.



Current Issues

Today, urbanization has resulted into depletion of ground water levels due to increased surface run-off of the rainwater. These traditional systems have been forgotten leading to interrelated disasters of floods, drought and pollution. These urban conditions have impacted the temple tanks

- **Loss of water in the wells** – Most of the temple tanks are experiencing the loss of water. This can be attributed to the following
 - **Surface run-off** – Rainwater is not being allowed to recharge the aquifers resulting into run-off.
 - **Clogged inlets** -Direct collection of rainwater is limited so these tanks rely on the feeding lines to feed them with water from the surrounding catchment. Due to lack of awareness, the feeding lines have been clogged with debris, garbage and encroachment.
 - **Government ignorance** – The government’s focus has been to store water for festivals rather than focusing on recharge. This has resulted into sealing of inlets for storage and using concrete at the base of the tank.
- **Cleanliness** – Due to lack of awareness among the masses and lack of maintenance, these reservoirs have become dumping grounds for garbage. Also, the catchment area has been encroached with activities like parking, shops and public utilities. This has resulted into contaminated water entering from these areas into the reservoir.

Restoration

The restoration of temple tanks is needed to be taken up to resolve the issues of cleanliness and tanks drying up. Several methods such as use of bioswales, cleaning of water inlets, growing plantation around the water body, fencing, etc. Bioswales are ditch with vegetation and a porous bottom. They help capture rainwater from large areas by filtering out pollution.

HR&CE has recently taken up restoration of 15 temple tanks in Chennai. The restoration has included:

- De-silting of tanks
- Creation of chambers around tank to divert runoff water from street and roof top of neighboring houses to the tank
- Recharge wells (4-10 wells per tank) at bottom of the tanks

The cost allocated for the work is INR 2.03 Cr for 15 tanks i.e. ~INR 12-15 L per tank.

1.2.12 Site Boundary

1. Boundary wall

- Boundary wall, typically built of masonry blocks, could ensure safety & security at all sites.
- A standard boundary wall of 2m height could be built along the periphery of the site, barring the entrance point(s).
- Unit rate – INR 4,000-6,000 per m

2. Fencing

- In case of large sites, like forests, wildlife sanctuaries, etc., fencing could be done to mark the site boundary and avoid encroachments.
- A standard fencing of 2m height, typically built in wrought iron, could be provided along the periphery of the site.
- Unit rate – INR 3,000-3.500 per m

3. Gate complex

- For sites that currently lack a dedicated entrance gate, gate complexes could be developed.
- A typical module of in and out gates, with a highly visible signage announcing the site, could be developed.
- The signage could be designed as per the site and be reflective of its offerings.
- Lump sum module cost – INR 1.5-2 L

1.2.13 Capital Projects

1. Hotels

Accommodation is an important component of the tourism landscape. It contributes to the overall tourism experience through the standards of facilities, amenities and services offered.

3-star Hotels

- 3-star hotels are associated with the following typical characteristics:
 - Above-average accommodation facilities
 - High quality amenities
 - Variety of services

- Spacious public area
- As per the checklist issued by MoT, 3-star hotels would have to incorporate the following facilities:
 - Min. 130 sqft bedroom, min. 36 sqft bathroom
 - Min. one multi-cuisine restaurant cum coffee shop and 24-hour room service
 - Provision of visitor services like valet parking, paid transportation on call, left luggage facilities
- Unit rate – INR 30-35 L per key

4 / 5-star Hotels

- 4 / 5-star hotels are associated with the following typical characteristics:
 - Luxury accommodation facilities
 - Premium amenities
 - Personalised services and intensive guest care
 - Quality finishes and attention to detail
- As per the checklist issued by MoT, 4 / 5-star hotels would have to incorporate the following facilities:
 - Min. 140 / 200 sqft bedroom, min. 36 / 45 sqft bathroom
 - Min. one multi-cuisine restaurant cum coffee shop, one specialty restaurant and 24-hour room service
 - Provision of visitor services like valet parking, paid transportation on call, left luggage facilities laundry, fitness area
 - Provision of facilities like business centre, swimming pool, conference facilities
- Unit rate – INR 65 L – 1 Cr per key

2. Yatri Niwas (pilgrim accommodation)

Yatri Niwas generally provides affordable accommodation to pilgrims and travellers visiting the city. Such affordable accommodations could be developed, especially in temple towns like Kanchipuram that host large no of pilgrims throughout the year.

- The development could include dormitories, rooms with attached washrooms and communal dining areas.
- The no of keys could be decided as per site area and tourist footfalls in the region.
- Further, community halls and open areas could also be accommodated within the development, to host community festivals and events.
- Unit rate – INR 15-20 L per key

3. Wayside amenities

Majority of the tourists in Tamil Nadu move around the state via road. While Tamil Nadu has a well-developed road network, it is lacking in passenger services along the highways. Thus, wayside amenities, for the convenience of travellers, could be built on major state routes.

- As per the availability of land, development could have the following components:
 - Fuel station
 - F&B area – restaurant(s), food court, kiosks
 - Toilet block & drinking water facility
 - Parking area
 - Motel rooms & dormitory for drivers
 - Retail arcade
 - Village Haat / Farmer’s market / handicraft shops
 - Tourist information kiosk
 - First aid & bank ATM



1.2.14 Tourism Desk

1. Airport

Tourism desks could be developed at airports, preferably located near the baggage concourse in the arrivals area.

- It could be developed as a module of information desk set against the backdrop of an attractive mural, representing varied TN tourism offerings.
- Operational 24*7, the helpdesk could provide information with free leaflets, brochures & maps of destinations and aid visitors in planning their itinerary.
- The facility will cater to high value tourists and thus high level of services could be offered.
- Lump sum module cost – INR 1-2 L



2. Major railway station

Tourism desks could be developed at major railway stations to aid the domestic as well as foreign tourists travelling via trains.

- It could be developed as a module of one kiosk built in theme of TN tourism.

- Operational 24*7, the helpdesk could provide information with free leaflets, brochures & maps of tourism destinations and aid visitors.
- Lump sum module cost – INR 0.8-1 L



1.3 Urban Design Guidelines

Traffic Calming and Pedestrianisation

Temple Towns – Respecting the original Urban Design

- The analysis of the Temple Towns of Tamil Nadu, in relation to its urban context, demonstrates the need for a solution that tackles the problems of urban congestion, disorder, and ambiguity of access and circulation in a religious setting. There is a multidimensional challenge of designing for order amidst the chaos of the dense and animated street culture of a temple town. By developing an infrastructural language that welcomes the progressive urban trends of commercialization and growth, while maintaining a sensitivity that caters to the traditionally bound culture, a new urban vernacular is proposed. The intent is to preserve the sacredness of the South Indian spiritual experience while allowing for a layered cultural experience, that can be enjoyed by all kinds of people; from local residents and visitors of the temples, to pilgrims and tourists.
- A large tower or gopuram, often ranging from 50 - 250 feet high, stands as a transition from the end of a long temple street tightly knit in the urban fabric to the sacred entrance of the temple. The monumentality of the temple tower allows for a permanent landmark to which city dwellers and outsiders can easily navigate, especially as the religious space remains deeply embedded within the complex urban fabric.
- Often known as Sannadhi Street, the main temple street is often lined with permanent, air-conditioned stores, that dissolve into informal vendor stalls as one approaches the temple gopuram and gateway into the temple. With this, any devotee can buy what they need at stalls right before entering the sacred place, creating an interesting urban condition on the main temple street. Thus, the street edges and surface serves as infrastructure for a variety of commercial activity, ranging from pavement vendors to concrete buildings.
- The main gopuram is one of the main attractions for tourists when visiting the Temples and can only be admired from a distance. To allow for the gopuram to shine and take centre stage in the Pilgrims' and Tourists' experience upon arrival, the overall strategy to the Public Space planning around the Temples in Tamil

Nadu should be to focus on a clear Pedestrianisation, Traffic Calming and Parking Management Strategy. The interventions should focus on the Sannadhi Street: using its historical, cultural & spatial significance and to bring back some of its faded glory, by giving visitors the space to walk up to the Temple unhindered by traffic and parked vehicles. This allows Pilgrims to buy their Temples offering at their leisure and tourist to frequent Tourist Shops & small eateries along the way, which will also help the local business community to benefit more from the visitors to the Temple.

- The strategy is for all visitors to comfortably disembark their vehicle at the first part of the Sannidhi Street where, through Traffic Calming measures, more pedestrian space is created and cars are only allowed to drive in one direction. The second part of Sannidhi Street, closest to the Temple, should be completely pedestrianized.
- Available (Temple or Government owned) plots in the area could become designated Car Park areas.



Sannadhi Streets: with and without traffic and parking

Pedestrianisation

- Converting a regular street or an area to pedestrian-only use is called pedestrianisation. Pedestrianisation usually aims to provide better accessibility & mobility for pedestrians and enhance the amount of shopping & other business activities in the area. Further, the intent of pedestrianisation is to improve the attractiveness of the local environment in terms of better aesthetics, reduced air pollution & noise and increased safety; avoiding the danger of crashes involving motor vehicle with pedestrians.
- The process of Pedestrianisation and removing car-parking / vehicular access to the front of shops has always been a contentious issue with the local shop owners. However, for decades now Pedestrianisation has been implemented in historic cities the world over and has always proven to benefit the local shop owners too, with significant increase of footfall.
- Addition of soft & hard landscaping and proper street furniture to the place often turns the pedestrianized street into a popular public place in a city, to visit and spend time.

Traffic Calming

- Traffic calming uses physical design and other measures to improve safety for pedestrians and cyclists. It is a tool to combat speeding and other unsafe behaviours of drivers in areas with high footfalls. It aims to encourage safer, more responsible driving and potentially reduce traffic flow.
- In case Pedestrianisation is not possible due to specific traffic circulation in the area or the need for cars to access certain buildings, Traffic Calming can be the right solution to improve the pedestrian friendliness without entirely restricting cars from the street.
- The physical measures recommended in some of the historic parts of tourists centres with high footfalls include widening of pedestrian space significantly, allowing a narrower carriageway for motorized vehicles (often one-way only) and demarcating dedicated drop-off and pick up zones.
- Double car parking on the carriageway is no longer possible since this would obstruct all traffic flow. Bollards and planters are generally used to ensure that motorized vehicles remain out of the pedestrian only space.



Pedestrianisation



Traffic Calming

Hill Stations and other Heritage Towns

- For most Tourist Sites in Tamil Nadu the strategy is how to increase tourist footfall, Tamil Nadu's Hill Stations have the opposite problem: too many tourists during the peak season now overwhelm the Hills Stations' infrastructure, roads, streets, parks and viewpoints, which have reached their maximum carrying capacity. The strategy for Tamil Nadu's Hill Stations to manage these large tourist numbers better is to encourage tourists to use other types of transportation than private cars and to encourage visiting outside the peak season.
- Pedestrianisation of the most popular commercial streets in the Hill Stations is the only way forward to bring back some of the original charm to these old towns. The comprehensive Pedestrianisation and Beautification of the old Mall Road in Shimla is one of the good examples in India, that highlights the difference that removal of vehicular traffic and car parking can make to the tourist's experience of a Hill Station.
- Pedestrianisation of the most popular commercial streets means that MLCP(s) at key locations will need to be constructed, in combination with wider Traffic Calming measures like one-way traffic circulation and wider pedestrian footpaths in the central areas with the highest footfall.
- An important more sustainable solution to the limited carrying capacity of roads, streets, parks and natural viewpoints of the Hill Stations is ultimately to bring down the number of tourists arriving by private vehicle. A solution that could be considered is to start selling a maximum number of day/weekend tickets during peak season for private cars and buses to enter the Hill Station. The ticket can be easily purchased via the TN Assist App on Smartphone and to be checked at entry point in the Hill Station. Higher tourist taxes linked to vehicles depending on the season could also be used to encourage tourists to come in the low season and come more often by train, public bus or taxi & not by private vehicles.



Pedestrian Mall – Shimla, Himachal Pradesh



No dedicated Pedestrian Space at Bazaar Roads, Ooty

Urban Conservation

- A shift in mind set is required in heritage conservation policies - to be not just about protecting the large monuments of great historical importance. The vast amount of built heritage that consists of private properties (primarily homes) is left mostly unprotected, whilst it's these buildings that have shaped over centuries the historic fabric of towns and neighbourhoods most popular with tourists. Tourism has actually been one of the major driving forces behind the resurgence of the popularity of historic old towns and cities around the world. Tamil Nadu's cities, towns and villages have a tremendous built heritage to offer that goes beyond the Temples, Churches and Forts. Urban Conservation should not be considered as a policy that is just about preservation and hampers economic prosperity but be understood as the smart and sustainable way it has proven the world over to draw in new business and to create many meaning jobs for the local community.
- With so much heritage buildings and structures being lost to rapid commercialization, it's high time that Heritage Protection is taken more seriously. This could be done by improving the general Planning Guidelines of existing urban areas to include more Area Specific Urban Design and Landscape Design Guidelines for historic areas with large concentrations of heritage buildings and streetscapes.
- Public Buildings of historical importance that will lose or have already lost their original use should be conserved, restored and given a new use. After renovation, these could be given on long term lease or sold for Tourist related activities (museum, coffee bar, restaurant, bakery, souvenir shop, hotel, art gallery, etc), via PPP and be managed & operated by professional businesses in Hospitality and Tourism, Retail, Leisure.
- The PPP professional (developers/business in hospitality, retail and leisure) will be able to professionally renovate, operate and maintain the buildings on a long-term lease. The buildings could become a hub of (middle to high end) tourist shops, cafes, restaurants, bakeries, art galleries, theater, boutique hotel etc.
- Buildings of historical importance that are private property (for example private residences) should also be preferably restored to their former glory. They can

remain either a private property or be sold to a professional hospitality operator. In case the building is retained by same private owner, the public funding of renovation should allow for at least certain opening hours for visitors. Incentives could be put in place for owners to rent out rooms as Bed & Breakfast or start small business as Tourist Shop, Café, and Gallery etc. Financial and regulatory incentives could also attract professional hospitality operators to buy, renovate and operate historically significant buildings as Hotel-Resort. (3-5 star hotels) With this, higher spending tourist groups could be attracted. (Benchmark: Fort Cochin, Puducherry, Galle Fort, Sri Lanka).



Tourists Shopping in Historic Urban Environment



Historic Buildings turned into Heritage Hotels and Restaurants

Façade Beautification Strategy 1: Restoration Street Facades Heritage Buildings

- Most Historic Urban Streetscapes in India (with the exception of the most important Monuments e.g. the Temple or Palace) are severely neglected and have lost their glory to unsightly additions to the facades (like hoardings & AC units), unsympathetic modern redevelopment and simple lack of maintenance. As described in the previous paragraphs, this aspect of historic conservation needs careful consideration.
- While enough of the historic buildings have survived the test of time, a concerted effort by all stakeholders is required to bring the important heritage streets' architectural beauty back to its original state. The ensemble of the individual buildings and facades make up the historical character that really epitomizes the unique essence of a city or place that attracts tourists as much as the main attraction.
- Examples of this type of façade restoration of entire streets, in recent years, have been successfully executed in the Fort /Ballard Estate (Mumbai), the streets opposite the City Palace of Jaipur and in Little India in Singapore.



Restoration street facades of heritage buildings

Façade Beautification Strategy 2: Rebuilding Street Façade in Traditional Architecture

- Some streets that are historically significant and attract a lot of tourist footfall (eg the main Urban Plaza, Sannadhi or Bazaar), over time, have lost most of their original buildings to modern redevelopment or in some cases have never had a fitting street façade at all. In these cases, a more radical approach could be appropriate, involving a reconstruction or complete recreation of new building facades that look historically and architecturally more appropriate. In this way a stronger uniformity can be brought to the historic area, celebrating the architecture of the main monument nearby or taking inspiration from other remaining original historic buildings in the area.
- Examples of this type of façade reconstruction of entire streets have successfully been executed along the Golden Temple Road and Front Plaza (Amritsar) and in major historic areas of several cities in Europe after WW2 (e.g. Warsaw, Poland).



Reconstruction street façades in traditional architecture

Mixed Use Tourism and Leisure Node Master Planning

Introduction

- For many years, tourism and leisure related facilities grew organically near the most popular tourist spots of great cultural, natural, or recreational significance. In the last decade, however, the surge in global tourism, on the back of cheap air travel and the exponential growth in demand from the burgeoning middle class in the region, has left the authorities looking for ways to increase and geographically spread their tourism facilities in a more strategic manner. The carrying capacity of some nature parks, beaches, and islands in India and Southeast Asia have reached their limit and public infrastructure is buckling under the pressure of unchecked development. Various Hill Stations in India, like Ooty, are buckling under the volume of traffic, piles of litter, and cheap commercialization. Besides, eco-systems in nature parks are under threat across the region.
- One important step forward in the development of a more sustainable approach for handling the growth in the tourism sector is to plan for large-scale Tourism Nodes with a concentration of resorts, leisure, and tourist attractions along with the coastal and lakeside areas around the State. Focusing on the concentration of development in particular areas gives the opportunity to be more restrictive of development in the nearby natural countryside areas. This will help in retaining its quiet natural form, undisturbed by haphazard tourism development.

Master planned Tourism Development versus unplanned small-scale Tourism Development

- The perception might be that the large green sites planned and developed in a relatively short span of time, by the nature of their size could become old-fashioned and car-centric developments, which results in loss of relationships with native landscapes, cultures and peoples. However, the opposite is true, when planned in a smart and sustainable way.
- Scale of development shall consider the efficiency principle, the carrying capacity of the local environment and respect the human scale on the urban design level. Mostly small scale, plot by plot, organically grown green site developments form endless ribbons of tourism accommodations along thoroughfares. This results in a non-walkable tourist centre/destination, leaving behind no public space to walk comfortably. The ribbon development of small



Large Scale Master Planned Pedestrian Friendly Coastal Tourism

scale individual hotels, private villas (airbnb) being built randomly along the ECR in south of Chennai is a prime example of lack of strategic regional planning and unsustainable tourism. The only way to get there and around is by private vehicle, whilst the natural beauty of the area is being compromised by over-commercialization. Moreover, the capacity of public utilities and infrastructure including sewage, potable water, solid waste collection, roads and public transit is often not keeping up with the incremental and haphazard tourism development which causes even greater damage to the local environment.

Master planned Tourism Developments as a Sustainable Alternative

- In large scale planned tourism developments, utilities and infrastructure are an integral part of the Master plan. The economies of scale make it financially more interesting for the authorities and private stakeholders to invest in such a large scale planned development. The investment in all the infrastructure, utilities and recreational open space is shared in these kinds of developments.
- Large masterplan developments provide the opportunity to plan for an entire pedestrian friendly network of streets, plazas and boulevards. Forms of sustainable local tourist transportation can be incorporated which includes electric shuttle buses, bicycle sharing schemes, water transport and cable cars, instead of solely relying on taxis and private vehicles to get around.
- A well thought out urban design of the built fabric for any large-scale tourism development will ensure that it respects the human scale. With an emphasis on low rise buildings, narrow shaded streets and small building footprints, conducive for a personal sense of safety, comfort and interest will entice people to explore the area by foot. The larger scale of the development along with a walkable environment will guarantee the footfall and therefore, the commercial success for a wider variety of leisure, hospitality, and restaurant businesses that will thrive in each other’s close proximity.
- For large Greenfield tourism developments, the rich natural and/or cultural context of a site (or its lack thereof), are critical to addressing the quest to find a new tourism development’s Unique Selling Propositions. The idea of ‘theme-parking’ by randomly borrowing historical elements and juxtaposing them onto incongruous functional and visual elements needs to be avoided. Architecture and landscape design always need to focus on authenticity, incorporating historical, cultural and traditional elements sensibly, while addressing contemporary planning needs and building methods.



New Hill Stations: Eco Friendly Lakeside Tourist Hubs

Coastal Tourism: New Tourism and Leisure Node Developments

- The Tourism Nodes should be provided along with the Pedestrian Friendly Environment. A mixture of different attractions and facilities that can engage people and keeps them occupied for a 3-4-day stay shall be provided. Besides leisure resorts, and hotels, tourist shops, restaurants, events, nightlife, water sports, active recreation, wellness, nature and culture shall be provided.
- These new Nodes or Tourism Hubs should be planned in areas with the highest tourist footfall from domestic and international travellers. These should remain in proximity to the big cities to catch the urban middle-class market of Tamil Nadu, looking for a short weekend break or relaxing leisure holiday not too far from home.
- The following areas are considered to have huge potential:
 1. Along coast between Chennai - Puducherry: eg. Kovalam, Muttakadu, Mamallapuram (Kanchipuram District);
 2. Along coast on south of Puducherry (Cuddalore and Nagapattinam District);
 3. Near Rameshwaram: eg. Mandapam Beach, Gulf of Mannar Marina National Park (Ramanathapuram District);
 4. Near Thiruchendur (Thoothkuddi District);
 5. Near Kanyakumari: eg. Kovalam Beach, Mutton Beach (Kanyakumari District)

Hill Stations: New Tourism and Leisure Node Developments

- The carrying capacity (of accommodation and recreation and tourism attractions) of the Hill Stations can be diversified and increased by looking at new Tourism Hubs at nearby Lakes, Reservoirs and Parks, since they provide the Leisure and Recreation opportunities one can't find in the Hill Stations themselves. Since the impact on the natural environment in the mountains is an essential consideration, these Tourism Nodes will be a combination of Leisure Tourism with Eco, Nature, Adventure, Agri and Wellness Tourism.
- The following areas are considered to have most potential:
 1. Near Ooty/Connoor (Avalanche Lake etc);
 2. Near Kodaikanal/Palani Hills;
 3. Near Yercaud;
 4. Near Yelagiri;
 5. Near Valparai;
 6. Sathanur Dam



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