NIKITA LAAD

5 Star Resort

Vishakhapatnam, Andhra Prasesh , India

Dec, 2025

5 Star Hotel

Vishakhapatnam, Andhra Prasesh, India

BACHELOR OF ARCHITECTURE

NIKITA LAAD
211110028

DEPARTMENT OF ARCHITECTURE AND PLANNING
MAULANA AZAD NATIONAL INSTITUTE OF TECHNOLOGY, BHOPAL
DEC 2025

DETAILED PROJECT REPORT

BEACHFRONT TOURISM RESORT

Beach Road, Visakhapatnam, Andhra Pradesh , India

Submitted by –

Nikita laad

211110028

Bachelor Of Architecture

10thSemester, 5th Year

Under the Guidance Of

Dr. Premjeet Das Gupta

DEPARTMENT OF ARCHITECTURE AND PLANNING

MAULANA AZAD NATIONAL INSTITUTE OF TECHNOLOGY

BHOPAL (MP) - 462003

© MAULANA AZAD NATIONAL INSTITUTE OF TECHNOLOGY, BHOPAL – 2025 ALL RIGHTS RSERVED

DEPARTMENT OF ARCHITECTURE AND PLANNING

MAULANA AZAD NATIONAL INSTITUTE OF TECHNOLOGY, BHOPAL

CANDIDATE DECLARATION

The Thesis Project in the subject ARC 511, entitled "**5 Star Resort, Vishakapatnam, Andhra Pradesh, India"**, is being submitted in partial fulfilment of the requirement for the award of degree of Bachelor of Architecture by the undersigned for evaluation.

The matter embodied in this project is a record of my own work. If, in future, it is found that the above statement is false, then I have no objection in withdrawal of Bachelor of Architecture Degree awarded to me by the Institute.

Date: 2nd Dec, 2025

Nikita Laad
211110028

RECOMMENDATION

Based on the above declaration of the student, the undersigned recommends that the work submitted by the candidate may be considered for the final end term examination of the subject ARC-511, Thesis Project.

Date: 2nd Dec, 2025

Dr. Premjeet Das Gupta
Thesis Guide

CERTIFICATION OF EXAMINATION

The Bachelor of Architecture Thesis Viva-Voce examination of Ms. Nikita Laad, Scholar No.211110028, was held on 2/12/2025.

Dr. Nakul Dhagat
Head of Department

Dr. Vicky Lalramsangi
Thesis Coordinator

ABSTRACT

This thesis explores the architectural planning, design, and regulatory integration of a 5-star beachfront resort, convention centre, and waterfront entertainment hub located along Beach Road, Visakhapatnam, Andhra Pradesh. Developed under a Public-Private Partnership (PPP) model by the Visakhapatnam Metropolitan Region Development Authority (VMRDA), the project aims to transform a strategic 7.97-acre coastal site into a world-class tourism and business destination. Anchored by the principles of sustainable development, universal accessibility, and regional contextualism, the design proposal responds to both global hospitality standards and local planning frameworks.

The literature survey includes an in-depth review of relevant statutory guidelines such as the Coastal Regulation Zone (CRZ) notifications, National Building Code (NBC 2016), Andhra Pradesh Tourism Policy 2020–25, and Visakhapatnam's Master Plan 2041. International space planning references including Neufert's Architects' Data and Time-Saver Standards (TSS) are employed to guide the spatial program and functional zoning. The proposed resort includes a 2500-capacity convention hall, 200+ luxury guest rooms, multiple F&B outlets, spa and wellness facilities, and a vibrant waterfront zone with cafés, amphitheatres, and exhibition areas. A parametric design approach is adopted to reflect fluidity and harmony with the coastal terrain while integrating energy-efficient systems, water reuse strategies, and climate-responsive architecture.

This thesis also evaluates site-specific design constraints such as CRZ-mandated building setbacks, ecological buffers, wind corridors, and infrastructural connectivity. Emphasis is placed on inclusive tourism design, employing barrier-free planning and user-centric space experiences. The final architectural proposal represents a synthesis of government objectives, user needs, technical regulations, and environmental stewardship, showcasing a contemporary coastal tourism model for India's eastern seaboard.

ACKNOWLEDGEMENT

First and foremost, I would like to express my sincere gratitude to **Dr. Premjeet Das Gupta**, my thesis guide, for his invaluable support, guidance, and mentorship throughout the course of this project. His insightful feedback, critical observations, and constant encouragement played a pivotal role in shaping the direction and depth of this thesis.

I am deeply thankful to the **Department of Architecture and Planning, MANIT Bhopal**, and our respected Thesis Coordinator **Ar. Vicky Lalramsangi** for providing a conducive academic environment and the resources necessary to carry out this research. I extend my gratitude to all the faculty members who have inspired and supported me during my architectural journey.

Special thanks to my friends and batchmates for their constant motivation, creative discussions, and emotional support, especially during challenging phases of this thesis. Your presence made this journey meaningful.

Lastly, I owe heartfelt gratitude to my **family**, whose unwavering faith, patience, and encouragement have been the backbone of my academic pursuits. Their belief in me has always pushed me to strive harder and stay focused on my goals.

This thesis is not just the culmination of months of effort, but also the result of all the support and belief that I have received from the people around me.

Nikita laad

B.Arch , 10th Semester

Scholar No. 211110028

Contents

ACKNOWLEDGEMENT 10
CHAPTER 1 : INTRODUCTION 14
OVERVIEW – 14
BACKGROUND – 15
Problem Statement – 16
Challenges to Overcome – 16
AIM & OBJECTIVES – 17
1.5 Methodology – 19
CHAPTER 2 : DESIGN BRIEF 21
OVERVIEW 21
5.3 Project Components and Space Requirements - 21
5.4 Site-Specific Design Constraints 22
5.4 Site-Specific Design Constraints - 23
Analytical Components of the Design Brief 23
CHAPTER 3 : LITERATURE REVIEW 25
2.1 Project Overview - 25
2.2 Development Philosophy - 25
3.1 Urban and Regional Development Controls - 25
3. Design Approach: Context and Literature Insights – 27
4. Regulatory Framework – 27
4.2 Coastal Regulation Zone (CRZ) Guidelines – 28
4.4 Neufert Standards (Architects' Data) - 28
Project Scope 41
NBC 2016 Standards and Protocols Relevant to Coastal Developments - 41
CRZ Norms (Coastal Regulation Zone Rules) 42
Contemporary Theories and Design Considerations in Coastal Hospitality Architecture 43
CHAPTER 4 : SITE INVENTORY 47
4.1 Location and Accessibility 47
4.2 Site Surroundings and Context - 48
4.3 Physical Site Characteristics 48
4.4 Climate and Environmental Conditions – 49
4.5 SWOT Analysis – 49
4.6 Legal and Regulatory Conditions - 50
4.7 Design Implications 50
References & Sources - 57
CHAPTER 5 : CASE STUDY 58
5.1 CASE STUDY 1 : NOVOTEL VIZAG 58

Directions - 58
5.2 CASE STUDY 2 :TAJ CIDADE DE GOA 77
5.3 CASE STUDY 3 : Taj Exotica Resort & Spa, Goa 91
5.4 CASE STUDY : KUMARAKOM RESORT 101

Department of Architecture
Maulana Azad National Institute of Technology
Copyright © 2023 Nikita Laad
All Rights Reserved

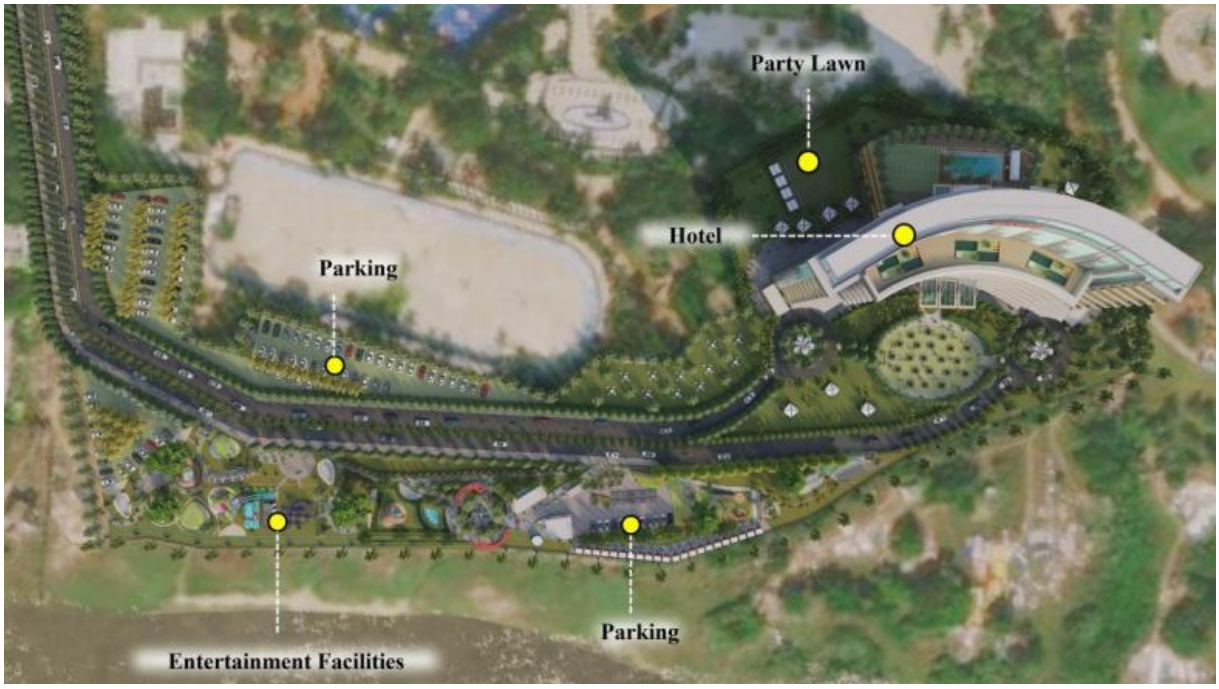
CHAPTER 1 : INTRODUCTION

OVERVIEW –

The thesis entitled “Design of a 5-Star Beachfront Resort and Convention Centre in Visakhapatnam” investigates the intricate requirements of establishing a high-end tourism and business facility on Vizag’s coastline. The nearly 8-acre coastal site is viewed through the lens of Andhra Pradesh’s sustainable tourism expansion, positioning it as an economic and cultural landmark. The work primarily addresses the layers of constraints and opportunities posed by environmental regulations, particularly those related to coastal protection, as well as hospitality standards and urban context.

Developed under a Public-Private Partnership (PPP) mechanism with VMRDA’s involvement, the project utilizes a comprehensive planning methodology that advances sustainability, operational efficiency, and universal accessibility. Key facilities in the proposal include an expansive convention hall for 2,500 delegates, luxury accommodations meeting national and international benchmarks, and an assortment of leisure, culinary, and public recreational amenities, including open-air venues by the waterfront.

The research starts with a comparative review of statutory documents such as CRZ notifications, NBC 2016, Neufert’s standards, and recent tourism policies, grounding the design in contextual relevance. Attention is also paid to state-of-the-art construction materials, like Glass Reinforced Concrete panels, and to strategies for climate responsiveness and inclusivity, aiming for a resort that is resilient, welcoming, and future-proof.



BACKGROUND –

As global travel patterns shift toward experiential, sustainable, and regional tourism, coastal cities like Visakhapatnam are witnessing a redefinition of their identity. No longer perceived solely as industrial or port-centric, Vizag today finds itself at the intersection of economic transformation and cultural revival. The city's picturesque coastline, coupled with its emerging urban fabric, presents untapped potential for tourism-led urban regeneration.

In recent years, the coastal zone along Beach Road has evolved from a local recreational edge into a focal point for large-scale urban interventions. These interventions are no longer limited to beautification or promenade upgrades—they now seek to anchor hospitality infrastructure that can compete with national and international standards. Within this context, the idea of a 5-star resort and convention centre is not just a functional requirement, but a symbolic gesture of repositioning Vizag in the league of global coastal cities known for their lifestyle, leisure, and event-based tourism.

However, the challenge lies in how such aspirations can be balanced with the coastal region's inherent fragility. Environmental regulations, urban development controls, and the increasing pressure on land along the shore demand a sensitive architectural response. The design must go beyond the superficial—addressing deeper issues of ecology, mobility, spatial equity, and identity.

This thesis situates itself at this critical juncture. It is an attempt to explore how a singular site, when thoughtfully designed, can act as both a destination and a landscape—blurring the boundaries between built form, public realm, and natural edge. The project therefore becomes an exploration not only in hospitality design but in crafting a contemporary narrative for coastal India.

Problem Statement –

In the wake of expanding coastal tourism and the growing demand for high-end hospitality infrastructure, the need to create a resort that is both environmentally responsive and experientially rich has become increasingly critical. The proposed 5-star beachfront resort and convention centre in Visakhapatnam presents a unique design opportunity—but also a complex architectural challenge.

The core issue lies in reconciling **luxury development** with the **ecological sensitivity of a coastal zone**, where regulations such as the Coastal Regulation Zone (CRZ) Act impose spatial, functional, and material restrictions. In addition, the project must adhere to the standards set by HRACC (for 5-star classification), comply with NBC 2016, and align with the broader urban vision set by VMRDA's Master Plan 2041.

This thesis aims to address how a large-scale tourism project can be designed to integrate with its coastal landscape while maintaining functional efficiency, regulatory compliance, and cultural relevance. The task is not just to design a resort—but to design **an architectural narrative that respects the shoreline, supports local tourism economies, and enhances the user experience** without degrading the natural environment.

Challenges to Overcome –

1. CRZ Regulations and Setback Constraints -

- Maintaining prescribed building setbacks from the High Tide Line (HTL)
- Restricting permanent construction within CRZ-III zones
- Integrating lightweight, non-permanent structures in active recreational zones

2. Ecological and Environmental Sensitivity -

- Preserving the natural terrain, soil conditions, and wind patterns
- Controlling stormwater runoff, coastal erosion, and salt-laden air damage
- Balancing built mass with open green areas and buffer zones

3. Functional Zoning within a Compact Site -

- Efficiently organizing public, semi-public, private, and service zones within a limited 7.97-acre plot
- Managing circulation for guests, staff, services, and VIPs
- Ensuring acoustic separation between event spaces and relaxation zones

4. Climatic Responsiveness -

- Designing for a hot-humid coastal climate with passive cooling strategies
- Maximizing natural light and ventilation while minimizing heat gain
- Using materials suitable for coastal weathering (e.g., GRC panels)

5. Infrastructure & Mobility Integration -

- Integrating the resort with widened access roads and traffic patterns
- Providing sufficient surface/basement parking without overwhelming open space
- Ensuring barrier-free access for differently-abled users (PwD Act compliance)

6. Sustainability & Green Building Compliance -

- Incorporating rainwater harvesting, solar energy, wastewater recycling
- Meeting minimum green building requirements without compromising on luxury
- Aligning with international best practices in eco-resort design.

7. User Diversity & Experience Design -

- Catering to business travelers, tourists, event guests, families, and foreign visitors
- Creating seamless transitions between indoor and outdoor spaces
- Maintaining privacy in rooms while offering openness in public areas.

AIM & OBJECTIVES –

Aim -

To design a sustainable, CRZ-compliant 5-star beachfront resort and convention centre in Visakhapatnam that harmonizes luxury hospitality with environmental sensitivity, regional identity, and functional versatility, while contributing to the city's tourism and MICE potential**.**

Objective –

1. **To analyze the site's geographical, environmental, and regulatory context**, particularly its classification under CRZ zones and development control rules under VMRDA and the Andhra Pradesh Tourism Policy 2020–25.
2. **To study spatial and functional requirements of 5-star resorts and convention centres** based on HRACC norms, Neufert standards, Time-Saver Standards (TSS), and National Building Code (NBC 2016).
3. **To develop a comprehensive space program** that efficiently organizes the resort, convention, and entertainment zones across the 7.97-acre site while maintaining privacy, hierarchy, and experiential quality.
4. **To integrate climate-responsive strategies and sustainable design principles**, including passive ventilation, solar orientation, water conservation, and material selection suitable for coastal conditions.
5. **To explore design solutions that balance permanent and temporary structures** as per CRZ guidelines, promoting minimal ecological impact and enhancing outdoor recreational usability.
6. **To create a resort that is universally accessible**, inclusive, and aligned with the Persons with Disabilities (PwD) Act, 1995 and UNCRPD standards.

7. **To develop an architectural language and form that reflects coastal fluidity**, regional aesthetics, and a contemporary resort identity through the use of parametric design tools and local materials like GRC.
8. **To demonstrate how large-scale tourism infrastructure can be integrated into the urban coastline** without compromising natural ecosystems, visual openness, and public access.

1.4 SCOPE AND LIMITATIONS –

1. **Architectural Design Focus**:
   The thesis will focus on the architectural planning and spatial organization of a 5-star resort, convention centre, and waterfront entertainment zone across a 7.97-acre beachfront site in Visakhapatnam, Andhra Pradesh.
2. **Integration of Norms and Guidelines**:
   The project will incorporate and respond to regulatory frameworks including CRZ Notification 2011 and 2019 (draft), National Building Code (NBC 2016), HRACC 5-star classification standards, Andhra Pradesh Tourism Policy 2020–25, and Visakhapatnam Master Plan 2041.
3. **Space Programming & Zoning**:
   The design will include a detailed area program for key functional zones—resort accommodation, convention facilities, F&B spaces, recreation and wellness zones, staff and service areas, and public entertainment spaces.
4. **Sustainable & Climate-Responsive Architecture**:
   Emphasis will be placed on designing for coastal climatic conditions using passive strategies, environmentally sensitive site planning, rainwater harvesting, solar integration, and green infrastructure.
5. **Parametric and Contextual Design Approach**:
   A contemporary architectural vocabulary will be developed using parametric and organic form-finding techniques that respond to site constraints, user movement, and visual porosity.
6. **Inclusive Design**:
   The project will be universally accessible, addressing the needs of differently-abled individuals as per PwD Act, 1995 and UNCRPD standards.
7. **Material and Construction Strategy**:
   Innovative coastal materials such as GRC panels and lightweight assemblies for temporary structures will be explored to align with CRZ and environmental conditions.

Limitations -

1. **Structural and Services Detailing**:
   The thesis will focus primarily on architectural design. Structural systems, HVAC, MEP, and detailed engineering services will be addressed at a conceptual level only.
2. **Exact Budgetary Estimation**:
   A detailed cost estimate and financial feasibility study will not be a part of the thesis due to the complexity of real-world financial modeling in PPP projects.

3. **Execution & Legal Clearances**:
   The project will assume theoretical approval for design purposes. It will not include legal approval procedures, tender stages, or final CRZ clearance documentation.
4. **Post-Occupancy Factors**:
   The study will not evaluate long-term user behavior, operational performance, or revenue generation metrics post-construction.
5. **Time Constraints**:
   Due to the academic nature and limited semester duration, the project scope will be limited to the schematic design, spatial layout, and concept-level form development.

1.5 Methodology –

The methodology adopted for this thesis follows a structured design-research approach that integrates site analysis, policy and regulation study, literature review, case studies, and iterative design development. Each phase has been designed to guide the architectural proposal in a manner that is both academically sound and contextually grounded.

1. Preliminary Research

- **Problem Identification**:
  Understanding the need for high-end tourism infrastructure along the Vizag coastline and the implications of building in a CRZ-regulated zone.
- **Site Selection & Justification**:
  Selection of the 7.97-acre beachfront site along Beach Road, Visakhapatnam, based on strategic location, accessibility, urban visibility, and tourism potential.

---

2. Literature Review

- **Analysis of Regulations**:
  Detailed study of relevant statutory documents including:
  - Coastal Regulation Zone (CRZ) Notification 2011 & 2019 draft
  - National Building Code (NBC 2016)
  - Andhra Pradesh Tourism Policy 2020–25
  - VMRDA Master Plan 2041 and G.O. guidelines
  - HRACC classification norms for 5-star hotels
- **Space Standards & Design References**:
  Extraction of spatial norms and design data from Neufert's Architects' Data, Time-Saver Standards (TSS), and global benchmarks in resort and convention centre design.

---

3. Site Analysis

- **Physical Analysis**:
  Studying landform, dimensions, topography, climate, vegetation, and viewshed.
- **Contextual Study**:
  Documenting adjacent land use, beach interface, approach roads, and utilities.

- **Climatic Response**:
  Evaluation of wind direction, solar exposure, humidity, rainfall, and local weather data to inform passive design strategies.

4. Case Studies

- **Primary Case Studies (On-Site Visits)**:
  observations of comparable luxury resorts in coastal regions of India such as:
  - NOVOTEL , Vizag.
  - Taj Cicade , Goa.
- **Secondary Case Studies / Desk appraisals** :
  Comparative analysis of international resorts and convention spaces using architectural journals, drawings, and publications.

---

5. Program Development

- **User Profiling**:
  Identifying target users—business travelers, tourists, families, conference delegates—and their spatial needs.
- **Area Programming**:
  Creating a comprehensive list of spaces with approximate area requirements based on function, standards, and zoning.

---

6. Design Conceptualization

- **Concept Derivation**:
  Formulating a central idea through sketches, mood boards, diagrams, and narrative exploration based on coastal form, fluidity, and spatial transition.
- **Zoning & Massing**:
  Dividing the site into functional zones (resort, convention, entertainment, service) and testing built-form volumes using parametric design logic.

---

7. Design Development

- **Plans, Sections, Elevations**:
  Preparation of conceptual architectural drawings that demonstrate spatial hierarchy, user movement, and environmental response.
- **Material and Structural Strategy**:
  Exploring construction systems suitable for coastal weather (GRC panels, pile foundations, etc.) and sustainable finishes.
- **Landscape Integration**:
  Designing outdoor public spaces, green buffers, water bodies, and transition zones between built and open spaces.

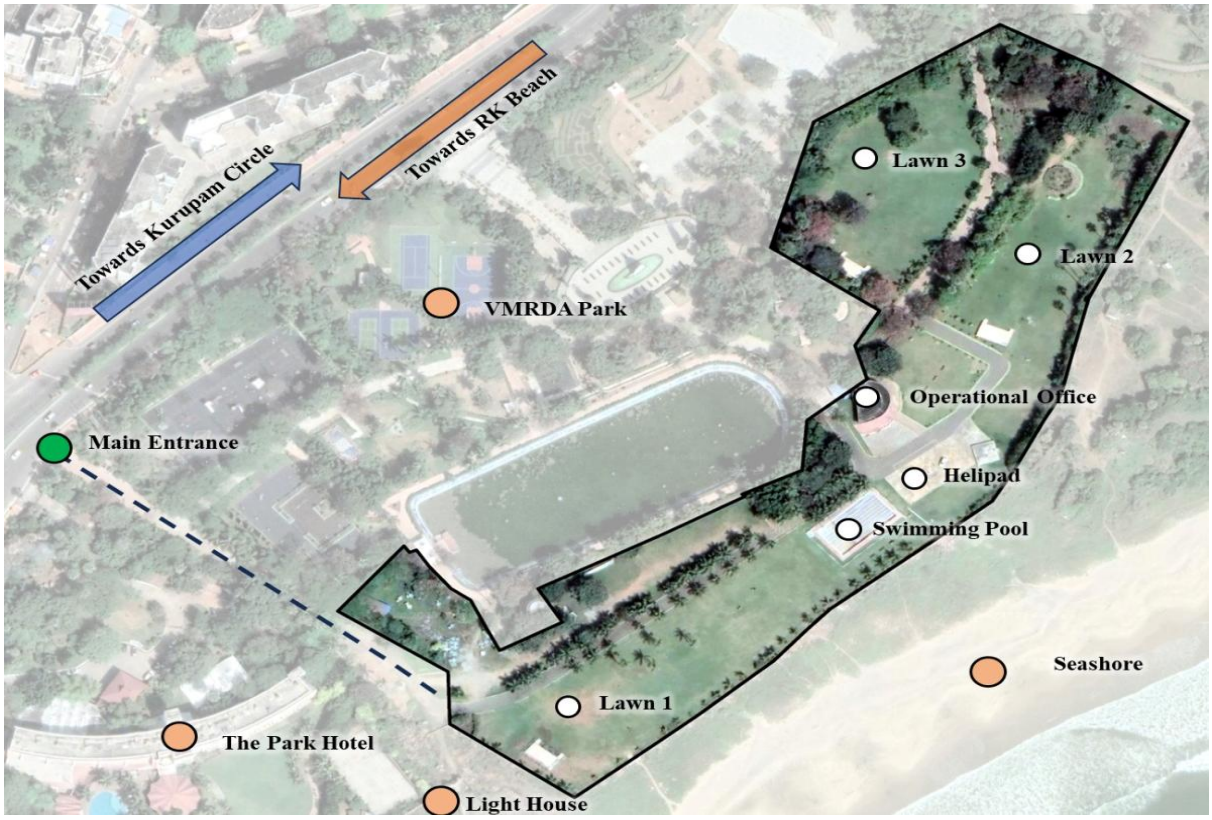
---

8. Visualization & Documentation

- **3D Views and Diagram.**

CHAPTER 2 : DESIGN BRIEF

OVERVIEW



A coastline. A blank canvas of wind, salt, and movement.

Somewhere along Vizag's beach road, tucked between city noise and the endless sea, sits a 7.97-acre site—raw, exposed, and full of potential. This isn't just a site to build on, it's a site to listen to. The project brief, given under VMRDA's tourism development plan, asks for more than a resort. It asks for an experience. A luxury destination that blends a 5-star resort, a 2,500-seat convention centre, waterfront entertainment spaces, and public leisure zones—all while playing by the strict rules of CRZ regulations and sustainability codes.

But the brief isn't about constraints. It's about possibility. How do we create a space where tourists, business travelers, and locals all find something that belongs to them? How do we preserve the breeze, the openness, the sound of waves, and still make room for built form?

The challenge is in the balance—between private and public, temporary and permanent, built and untouched. It's in the rhythm of transitions, the layering of experiences, and the honesty of materials.

5.3 Project Components and Space Requirements -

1. Convention Centre

- Multipurpose hall (flexible partitions) – capacity 2,500 pax
- Breakout halls / seminar rooms

- Pre-function lobby / waiting lounges
- Admin and support offices
- Green rooms and back-of-house.

2. 5-Star Resort Block

- Minimum 200 guest rooms (variety: deluxe, suites, sea-view)
- Reception and check-in lobby
- Business lounge
- Restaurant(s) – fine dining + multi-cuisine
- Spa and wellness zone
- Fitness centre, swimming pool, recreational deck
- Staff and service areas (kitchen, laundry, admin, etc.)
- Basement or service bay for logistics and housekeeping.

3. Waterfront Entertainment Zone

- Amphitheatre (open-air, ~500 seating)
- Party lawns and event spaces
- Shack-style cafés/restaurants
- Flea markets / seasonal kiosks
- Art plaza / cultural display zones
- Boardwalk / viewing decks along beach edge

4. Outdoor and Landscape Design

- Arrival drop-off and parking (surface + stilt/basement)
- Landscape lawns with native vegetation
- Transition pathways and shaded corridors
- Water features, sculptures, seating areas
- Jogging/walking track and beachfront seating
- Green buffer for wind and CRZ boundary line

5.4 Site-Specific Design Constraints

- **CRZ Guidelines:**
  Permanent structures must maintain setback from HTL
  Only non-permanent entertainment structures allowed closer to the beach
- **Road Access & Movement:**
  Existing 11 m access road to be upgraded to 18 m ROW
  Design must allow service and emergency vehicle access without disturbing guest areas
- **Environmental Considerations:**
  High water table, salt-laden air, and wind load influence structural choices
  Sustainable drainage, ventilation, and waterproofing critical

- **Universal Design Mandate:**
  Project must comply with **PwD Act (1995)** and **UNCRPD** for accessibility
  All public zones (toilets, lobbies, amphitheatre) must be barrier-free

5.4 Site-Specific Design Constraints -

- **CRZ Guidelines:**
  Permanent structures must maintain setback from HTL
  Only non-permanent entertainment structures allowed closer to the beach
- **Road Access & Movement:**
  Existing 11 m access road to be upgraded to 18 m ROW
  Design must allow service and emergency vehicle access without disturbing guest areas
- **Environmental Considerations:**
  High water table, salt-laden air, and wind load influence structural choices
  Sustainable drainage, ventilation, and waterproofing critical
- **Universal Design Mandate:**
  Project must comply with **PwD Act (1995)** and **UNCRPD** for accessibility
  All public zones (toilets, lobbies, amphitheatre) must be barrier-free

The Role of the Design Brief in the Thesis Process

- **Operational Planning Tool:**
  It translates macro-level goals (e.g., tourism growth, urban branding) into micro-level spatial programs—detailing what spaces are needed, how large they should be, and how they will interact.
- **Interface Between Theory and Practice:**
  The design brief emerges out of **literature review, site analysis, and regulatory frameworks**, ensuring the final proposal is both visionary and viable.
- **Critical Lens for Spatial Strategy:**
  It defines key drivers—such as **sustainability, accessibility, experiential quality, and coastal resilience**—that shape zoning, massing, and materiality.

Analytical Components of the Design Brief

1. **Project Definition and Purpose**
   - Identifies the core ambition of the resort: to serve as a hybrid hospitality and cultural hub.
   - Aligns with government initiatives such as the **Andhra Pradesh Tourism Policy 2020–25** and **VMRDA's Vision Plan 2041**.

2. **Client and Stakeholder Goals**
   - VMRDA (Visakhapatnam Metropolitan Region Development Authority) functions as the proposing and regulating authority.
   - Project developed under a **Public-Private Partnership (PPP)** model, which introduces budgetary constraints and commercial expectations alongside design freedom.
3. **User Profiling and Behavioural Insight**

- Primary users: business travellers, tourists, event attendees, and local visitors.
- Design must accommodate varying scales of occupancy, diverse cultural expectations, and multi-functional usage across the year.

4. **Site and Environmental Context**
    - Coastal topography, high humidity, saline air, and CRZ restrictions directly influence architectural form, materiality, and orientation.
    - Proximity to natural and cultural landmarks increases the site's potential for becoming a landmark destination.
5. **Regulatory Integration**
    - CRZ II/III guidelines restrict permanent construction close to the High Tide Line (HTL), requiring precise **site zoning** and elevation planning.
    - NBC 2016 standards inform **fire safety, accessibility, and structural design**.
    - The **UNCRPD and Persons with Disabilities Act, 1995** shape inclusive design parameters.
6. **Functional Program and Spatial Requirements**
    - The design brief includes **a detailed area statement**, broken into categories: accommodation, convention spaces, F&B zones, recreation, services, staff areas, and public interfaces.
    - Reference to **Neufert**, **Time-Saver Standards (TSS)**, and HRACC guidelines ensures compliance and comfort.
7. **Sustainability and Performance Expectations**
    - Passive cooling, solar energy, rainwater harvesting, and biodiversity integration are not optional—they are embedded within both the **client brief** and **state tourism policy.**
8. **Design Ethos and Architectural Language**
    - The brief encourages a **parametric yet contextual approach**: one that expresses contemporary design sensibility while maintaining harmony with the coast.
    - The transition between **public and private**, **indoor and outdoor**, and **temporary and permanent** must feel intuitive and fluid.

CHAPTER 3 : LITERATURE REVIEW

2.1 Project Overview -

According to the **Request for Proposal (RFP)** issued by VMRDA (Dec 2023), the project entails the **Design, Finance, Build, Operate and Transfer (DFBOT)** of:

- A **Convention Centre** with a flexible multi-purpose hall for 2500 persons
- A **5-Star category hotel/resort** with at least 200 rooms
- **Waterfront entertainment facilities** including:
    - Shack cafés/restaurants
    - Amphitheatre & party lawns
    - Flea markets & exhibition areas

This mix of business, leisure, and cultural spaces promotes Vizag as a major MICE (Meetings, Incentives, Conferences, and Exhibitions) and tourism destination.

2.2 Development Philosophy -

The resort must incorporate **sustainable design principles**:

- Rainwater harvesting
- Energy-efficient systems
- Water recycling
- Universal accessibility standards (UNCRPD and Persons with Disabilities Act, 1995)

2.3 Applicable Tourism Policies -

- **Andhra Pradesh Tourism Policy 2020–25**: Encourages tourism-led development along the coast with focus on ecotourism, heritage tourism, and entertainment infrastructure.
- **National MICE Promotion Board**: Recognizes the role of high-end convention centers in boosting the Indian economy through business tourism.

3.1 Urban and Regional Development Controls -

As per the tender, the following master plans and orders are applicable:

- **G.O. Ms. No.119 MA&UD (2017)** – governing land use zoning and coastal area development
- **G.O. Ms. No.136 MA&UD (2021)** – outlining the VMRDA Perspective Plan 2051 and Master Plan 2041
- **Development Control Regulations (DCRs)** applicable to VMRDA Zone

3.2 Coastal Regulation Zone (CRZ) Guidelines -

- **CRZ Notification 2011** (currently applicable)
- **CRZ Notification 2019** (to be implemented once AP CZMP is finalized)

- All development must comply with CRZ-III/CRZ-II zoning, as applicable
- Permanent structures like the hotel must be set back from the High Tide Line (HTL); temporary structures (shacks, lawns) can be allowed as per CRZ norms.

3.3 National and International Building Standards -

- **NBC 2016 (National Building Code of India)** – Fire safety, building height, accessibility, services
- **Neufert: Architects' Data** – Space planning guidelines for:
    - Hotel rooms (min. 30–36 sqm per room for 5-star rating)
    - Conference halls (1.0–1.5 sqm/person in theatre layout)
    - Kitchen and service cores
- **TSS (Time-Saver Standards)** – Space standards for resorts, restaurants, and entertainment venues

3.4 Building Certification Standards -

- **HRACC (Hotel and Restaurant Approval & Classification Committee)** under Ministry of Tourism, Government of India
    - 5-Star Classification requires:
        - Min. 200 guest rooms
        - Multi-cuisine restaurant, banquet hall
        - Business center, recreational facilities, concierge, 24-hour services.

4. Site-Specific Design Guidelines (Derived from RFP) –

Component	Guideline/Requirement
Convention Hall	Min. 2500 pax, flexible partitions, min. 15 ft ceiling height.
Resort Rooms	Min. 200 rooms, 5-Star HRACC certified.
Waterfront Entertainment	Allowed as per CRZ: cafes, lawns, amphitheater, flea market.
Green Building Features	Mandatory: water reuse, solar energy, sustainable design.
Accessibility	Mandatory compliance with PwD Act, 1995 and UNCRPD.
Road Infrastructure	Access road widened from 11m to 18m by developer.

3. Design Approach: Context and Literature Insights –

3.1 Coastal Resort Typology

According to international design literature and case studies (e.g., Time Saver Standards for Building Types), resorts in coastal areas must be:

- **Contextually integrated** with the surrounding natural landscape
- Built using **lightweight, non-invasive materials**
- Designed to maximize **visual and physical access to waterbodies**
- Flexible in function, especially when combined with business (MICE) infrastructure

Design inspirations may be drawn from tropical hospitality architecture across Bali, Maldives, and Goa, adapted to local building traditions of coastal Andhra Pradesh.

3.2 5-Star Hospitality Standards -

The **Hotel and Restaurant Approval & Classification Committee (HRACC)** of the Ministry of Tourism, Government of India, provides comprehensive norms for 5-star resorts. These include:

- **Minimum of 200 rooms**, each with a carpet area of ~36–40 sqm
- **Luxury guest amenities** (swimming pool, spa, gym, business centre)
- On-site **restaurants, banquet halls**, and **concierge services**
- **Room automation, energy monitoring**, and 24-hour front desk
- **High service-to-room staff ratio**

4. Regulatory Framework –

4.1 VMRDA Guidelines and Development Control Regulations

The VMRDA, as the statutory planning authority, mandates that all design proposals align with the following:

- **G.O. Ms. No.119 (2017)** – Local land use zoning and building regulations
- **G.O. Ms. No.136 (2021)** – Master Plan 2041 and Perspective Plan 2051
- **VMRDA Development Control Regulations (DCRs)** – Floor Area Ratio (FAR), coverage, setbacks, and open space.

Implication for design:

- Building height and massing must be regulated in accordance with local visual corridors and skyline impact.
- Setbacks and permeable surfaces must adhere to urban flood mitigation and ventilation logic.

Key Components –

- A **2500-seat Convention Centre**
- A **200+ room 5-Star Hotel or Resort**
- **Beach-facing shacks, cafés, flea markets, amphitheatre**, and other waterfront amenities
- Support facilities like internal roads, parking, green zones, and service areas

4.2 Coastal Regulation Zone (CRZ) Guidelines –

The site falls under the purview of **Coastal Regulation Zone (CRZ)**, which mandates preservation of ecological zones along India's shoreline. The applicable regulations include:

- **CRZ Notification 2011** – Currently in force.
- **CRZ Notification 2019** – Awaiting implementation upon Andhra Pradesh's approval of the revised CZMP (Coastal Zone Management Plan).

CRZ Compliance Parameters:

Parameter	Requirement
Minimum Setback from HTL.	200m (CRZ-III) or 100m (CRZ-II) depending on classification.
Permitted Built-up Activity	Temporary shacks, amphitheaters, pathways, landscaping.
Prohibited Activities	Permanent structures in No-Development Zone (NDZ).
Green Norms	Mandatory plantation buffer, native species, and low-impact foundations.

4.4 Neufert Standards (Architects' Data) -

Neufert provides benchmark space standards that assist in the layout and functional efficiency of the resort:

Function	Area Standard (per unit)	Application in Project
5-Star Hotel Room	36–40 sqm	Min. 200 rooms planned
Reception + Lobby	1.5 sqm per expected user	Grand arrival experience
Conference Hall	1–1.5 sqm per person seated	2500 pax flexible space
Restaurant Seating	1.4–1.6 sqm per chair	Indoor + outdoor dining
Kitchen & BOH	40–50% of dining area	Efficient circulation
Swimming Pool (Outdoor)	1.2 sqm per guest (design load)	Overlooking sea vista

Development Guidelines from Tender -

Development Component	Norms / Requirements
Minimum Investment	₹240 Crores
Construction Timeline	36 months
Concession Period	33 years + 3-year build time
Mandatory Facilities	Convention Hall, 5-star hotel, waterfront leisure
Land Use Restrictions	CRZ + VMRDA Master Plan 2041
Annual Lease Rent	₹2.28 Cr (1% of SRO land value, subject to 5% increment every 3 yrs).
Additional Development Premium	Minimum 5% of gross annual revenue or fixed ADP, whichever higher.
Performance Guarantee	₹6 Crores.

2 BID SUMMARY

S. No	Key Information	Details
	Project Details	
1	**Project Title**	Development of a Convention Centre with not less than 5 Star Category Hotel / Resort & other Waterfront Entertainment Facilities on prime land along Beach Road at Visakhapatnam, Andhra Pradesh, India on Public Private Partnership (PPP) Basis
2	**Authority**	Visakhapatnam Metropolitan Regional Development Authority (VMRDA), Visakhapatnam, Andhra Pradesh.
3	**Project Site**	7.97 Acres (approx.) of land along Beach Road at Visakhapatnam, Andhra Pradesh
4	**Minimum Development Obligations (MDOs)**	**1. Convention Centre & 5 Star Category Hotel / Resort** Within Thirty Six (36) months* of the Agreement date, following shall be implemented: **(i) <u>A Convention Centre comprising:</u>** a) Multi-purpose Convention Hall, air-conditioned Main Hall (with the ceiling of minimum 15 feet high; area to accommodate minimum 2500 persons in theatre-style seating) b) This multi-purpose hall shall have no fixed seating and shall be with partitions for flexibility in conducting multiple events simultaneously c) The multi-purpose hall must be capable of hosting and catering to Meetings, Events, Exhibitions of National & International level. **(ii) <u>5 Star category Hotel / Resort comprising:</u>** a) Not less than 200 guest rooms b) Obtain not less than 5 Star category certification from the Hotel and Restaurant Association Classification Committee (HRACC), Ministry of Tourism, India, within 180 days of commencement of operations **2. <u>Other Water Front Entertainment Facilities:</u>** Within Thirty Six (36) months* of the Agreement date, following shall be implemented:

S. No	Key Information	Details
		(i) Water Front Entertainment Facilities (in the form and manner as permissible under the applicable CRZ Norms) such as: a) Shack Restaurant(s), Café(s) (with temporary structures / canopies, etc.) b) Party Lawns with landscaping / hardscaping (including Amphitheatre, etc) for outdoor events c) Flea Market d) Exhibition Venue The above specified MDOs are subject to the Applicable Development Control Regulations as applicable from time to time. Further, in addition to the MDOs, the Concessionaire shall be permitted to develop any other additional tourism facilities as listed in the Andhra Pradesh Tourism Policy 2020-2025 (in the form and manner as permissible under the applicable CRZ Notification) *In case any of the MDOs that are currently not permissible as per the currently applicable Development Control Regulations / applicable CRZ Notification, the timeline for the implementation of the same shall commence from the date of such amendment / notification permitting the same.
5	**Other Obligations / Conditions**	**a.** Adopt water conservation, water recycling & reuse, rainwater harvesting, if possible, zero discharge of wastewater; and also incorporate Energy efficient designs & utilities. **b.** The Project shall be user friendly and provide eased access to differently able persons to all the project facilities in accordance with "Persons with Disabilities Act, 1995" with subsequent amendments and 'UN Convention for Rights of Persons with Disabilities (UNCRPD)'. **c.** Obtaining all the applicable statutory approvals, licenses and clearances shall be the responsibility of the

S. No	Key Information	Details
		Concessionaire.
6	**Estimated Project Cost**	The Estimated Landed Project Cost for development as per the Minimum Development Obligations (MDOs) is **₹240.00 Crore (Indian Rupees Two Hundred and Forty Crore only)**. However, there is no restriction on higher investments based on the Concessionaire's market assessment subject to applicable development controls. (Estimated Project Cost includes the Pre-Construction and Construction Costs, Project Development Fees & Interest During Construction etc.) The assessment of actual costs, however, will have to be made by the Bidders
7	**Development Controls & Regulations**	The Selected Developer shall undertake to develop the Project in conformity to the Development Control Regulations as applicable to the Project Site from time to time. As on current date, the following development control regulations shall apply: • G.O. Ms.No.119, MA&UD, dt. 28.03.2017 issued by Municipal Administration and Urban Development Department, GoAP • G.O. Ms.No.136 dated 08.11.2021, MA&UD – VMRDA Perspective Plan 2051 & Master Plan 2041, and subsequent amendments, if any. • Coastal Regulatory Zone Notification by the Ministry of Environment & Forest, GoI, 2011[$] • Coastal Regulatory Zone Notification by the Ministry of Environment & Forest, GoI, 2019, as and when made applicable in the State of Andhra Pradesh, and subsequent amendments, if any • A.P. Tourism Policy 2020-25 • Any other rules / regulations of State, Central & LocalAuthorities [$]***Bidders are required to take note that the Government of Andhra Pradesh is in the process of taking up necessary steps including but not limited to updating CRZ Maps, Tourism Plan, Coastal Zone***

S. No	Key Information	Details
9	**Implementation Format**	Public Private Partnership (**PPP**)
10	**Concession Format**	Design, Finance, Build, Operate and Transfer (**"DFBOT"**)
11	**Institutional Structure for Implementation**	Incorporation of a Special Purpose Company (SPC) under the Companies Act, 2013 by the Preferred/Selected Bidder (Sole Bidder/ Consortium), for the exclusive implementation of this Project
12	**Concession Period**	33 Years (excluding 03 (three) years Construction Period) from the date of execution of Concession Agreement, extendable, with Right of First Refusal (RoFR) and as per terms and conditions prevailing at that point of time.
13	**Lease Period**	33 Years (excluding 03 (three) years Construction Period) and co-terminus with the Concession Period including extensions, if any.
14	**Project Completion Period**	MDOs shall be completed within Thirty Six (36) months from the date of signing of Concession Agreement. However, in case of the MDOs that are currently not permissible as per the currently applicable Development Control Regulations / applicable CRZ Notification, the timeline for the implementation of the same shall commence from the date of such amendment / notification permitting the same.
Eligibility Criteria		
15	**Minimum Technical Eligibility Criteria**	This invitation of Bid is open to all interested Bidders, who may either be a single entity (**"Sole Bidder"**) or a consortium of maximum 2 (two) entities (**"Consortium"**), coming together to implement the Project. **a.** In the case of Sole Bidder, it shall have to meet the technical and financial eligibility requirements. **b.** In case of a Consortium, the Consortium members shall together satisfy the technical and financial eligibility requirements through any one of the below mentioned models: **i.** The Lead Member of the Consortium shall qualify the financial eligibility requirement and the other member of consortium shall qualify the technical eligibility requirement mentioned in the bid document **(OR)**

S. No	Key Information	Details
		ii. The Lead Member shall qualify (minimum) 50% of the financial eligibility requirement and other member shall each qualify (minimum) 25% of the technical eligibility requirement. **Minimum Technical Eligibility:** The Bidder (Sole Bidder or the Consortium together), shall be required to meet the following: 1. Experience eligibility criteria in **"Eligible Project(s)"** of cumulative value not less than **₹480 Crores (Indian Rupees Four Hundred Eighty Crore only)**, i.e twice the estimated project cost, from: a. **Development and/or construction experience, where:** i) All the eligible projects shall have been executed within past 10 (Ten) years prior to the date of issuance of this RFP document. ii) Development shall mean responsibility for financing/investing in a project, and planning, designing, constructing, commissioning etc. of the Project directly or through a contractor. iii) Only such projects are considered eligible where the project cost is not less than **₹48 Crores (Indian Rupees Forty Eight Crore Only)**, i.e. 20% of the estimated project cost. Here, the **"Eligible Project(s)"** shall mean: i. **At least 50% of criteria for project experience should be met through either:** a) MICE Projects/ Convention Centers/ Hotels / Resorts projects b) Any other Tourism Infrastructure Projects as defined in the Andhra Pradesh Tourism Policy 2020-25 ii. **Whereas rest can be met through other and core sector projects such as:** a) Shopping malls, Commercial Complexes, Multiplex, Office / IT Parks, Schools, Colleges, Hospitals, Government Buildings, sports complexes and real estate development (apartment complexes, etc, excluding plotted land

S. No	Key Information	Details
		development). b) Core Sector projects include power, telecom, ports, airports, railways, metro rail, industrial parks/estates, logistic parks, pipelines, irrigation, water supply, sewerage, etc. **And/or** **b. <u>Collection and Appropriation of Revenues from operations of "Eligible Project(s)" where:</u>** i) All the revenues from the eligible projects shall be <u>within past 10 (Ten) years</u> prior to the date of issuance of this RFP document. ii) Only such project revenues are considered eligible which are not less than **₹48 Crores (Indian Rupees Forty Eight Crore Only)**, within the past 10 (Ten) years prior to the date of issuance of this RFP document. Here, the **"Eligible Project(s)"** shall mean: a) MICE Projects/ Convention Centers/ Hotels / Resorts projects b) Any other Tourism Infrastructure Projects as defined in the Andhra Pradesh Tourism Policy 2020-25 2. As on the Bid Due Date, the Bidder (Sole Bidder / Consortium) shall be either Owning or Operating Hotel(s) in the category of not less than 5 Star (or equivalent) either nationally or internationally, such that the cumulative number of rooms shall not be less than 200 numbers, together in not more than 3 such Hotels. ***(for the avoidance of doubt, the Bidder shall be entitled to claim experience as per the definition of "Affiliate" specified in this RFP)***
16	**Minimum Financial Eligibility Criteria**	The Bidder (Sole Bidder or the Consortium together) (subject to terms at Sl. No.15 hereof the Bid Summary), shall have to meet the following financial eligibility criteria for submission of RFP - ***A.*** **Minimum Net–Worth**

S. No	Key Information	Details
		(Subscribed and paid-up Share Capital + Reserves and Surplus) – (Revaluation Reserves + Miscellaneous expenditure not written off + Deferred Revenue Expenditure + Deficit in P & L Account if any) of the Sole Bidder / the Consortium must be at least one fourth of the estimated project cost i.e. **₹60 Crore (Rupees Sixty Crore)**. The net worth should be certified by the statutory auditor /Chartered Accountant (CA). ***(Note - For the avoidance of doubt, Net Worth for the purpose of this RFP shall exclude any valuation of land asset holdings)***
17	**Qualifications through Affiliates (If any)**	The Bidder (and in case the Bidder is a Consortium then each of the members of the Consortium) can draw upon the Technical Experience and Financial Capability of one or more of its **Affiliates**. In either case, the ownership relation between the Bidder and the Affiliate(s) must be explained. For purposes hereof, **"Affiliate"** means with respect to a specified Person, any Person which is a holding company or subsidiary of such specified Person, or any Person which directly or indirectly, (a) owns or controls such specified Person, (b) is owned or controlled by such specified Person, or (c) is owned or controlled by the same Person, who, directly or indirectly, owns or controls such specified Person. For the purposes of this Document, the terms "holding company" and "subsidiary" shall have the meaning ascribed to them under Section 2 of the Companies Act, 2013 and the term "control" shall mean: i. Control over the composition of majority of board of directors of a company; or ii. Control of more than 50% (fifty percent) of the voting shares of such Person and with respect to a Person which is not a company or corporation, the power to direct the management and policies of such person, whether by operation of law or by contract or otherwise.
18	**Lock - In Period**	**a.** Lock – In period is defined as a period of five years post Commercial Date of Operations (CoD). **b.** Commercial Date of Operations is the date on which the project is open to Public on a commercial basis, after

S. No	Key Information	Details
		due testing, trial running and commissioning, as more fully described in the Concession Agreement. i. In case of a Sole Bidder, it shall retain minimum of 51% as equity contribution in the SPC/SPV throughout the lock–in period. ii. In case of Consortium, the total equity contribution put together by the consortium members in the SPC formed, shall not be less than 51% throughout the lock–in period, subject to the equity contribution from each Member of the Consortium in the SPC formed, shall not be less than 26% throughout the lock in period.
19	**Annual Lease Rent (ALR) Amount**	**a.** The Annual Lease Rental shall be fixed as 1% of the SRO (Sub Registrar Office) value of the land (Project Site), as on the date of this RFP. The Annual Lease Rental would be payable from the date of handing over of Project Site to the Successful Bidder/ Concessionaire, as per the terms of the Concession Agreement. **b.** Accordingly, the Annual Lease Rental for the base year shall be **₹2,28,00,000 (Indian Rupees Two Crore Twenty Eight Lakhs Only)**, i.e., 1% of Sub-Registrar Office (SRO) Value of the land (7.97 Acres @₹28,55,60,000 per Acre (i.e. **₹59,000 per Square Yard**)). Applicable taxes, including the GST on the above shall also be paid by the Concessionaire over and above the Annual Lease Rental. **c.** The Annual Lease Rental (ALR) shall be enhanced by 5% in a block of every 3 years for the entire Concession Period. **d.** The Concessionaire shall pay Annual Lease Rentals to the Authority commencing from the date of signing of Concession Agreement up to the end of the concession period / date of early termination, if any. The ALR shall be paid in advance, on a quarterly basis.
20	**Additional Development Premium (ADP)** **(BID PARAMETER)**	**a.** The parameter for bidding shall be the **"Additional Development Premium (ADP)"**, which shall be a percentage of Annual Gross Revenue of the Project or Minimum Annual Assured Amount, whichever is Higher.

4.2.6 Minimum Development Obligations (MDOs):

4.2.6.1 Convention Centre with not less than 5 Star Category Hotel / Resort

Within Thirty Six (36) months* of the Agreement date, following shall be implemented:

(i) **A Convention Centre comprising:**

a) Multi-purpose Convention Hall, air-conditioned Main Hall (with the ceiling of minimum 15 feet high; area to accommodate minimum 2500 persons in theatre-style seating)

b) This multi-purpose hall shall have no fixed seating and shall be with partitions for flexibility in conducting multiple events simultaneously

c) The multi-purpose hall must be capable of hosting and catering to Meetings, Events, Exhibitions of National & International level.

(ii) **A not less than 5 Star category Hotel comprising:**

a) Not less than 200 guest rooms

b) Obtain not less than 5 Star category certification from the Hotel and Restaurant Association Classification Committee (HRACC), Ministry of Tourism, India, within 180 days of commencement of operations

4.2.6.2 Other Water Front Entertainment Facilities:

Within Thirty Six (36) months* of the Agreement date, following shall be implemented:

(i) Water Front Entertainment Facilities (in the form and manner as permissible under the applicable CRZ Norms) such as:

a) Shack Restaurant(s), Café(s) (with temporary structures / canopies, etc.)

b) Party Lawns with landscaping / hardscaping (including Amphitheatre, etc) for outdoor events

c) Flea Market

d) Exhibition Venue

The above specified MDOs are subject to the Applicable Development Control Regulations as applicable from time to time. Further, in addition to the MDOs, the Concessionaire shall be permitted to develop any other additional tourism facilities as listed in the Andhra Pradesh Tourism Policy 2020-2025 (in the form and manner as permissible under the applicable CRZ Notification)

Note - **In case of the MDOs that are currently not permissible as per the currently applicable Development Control Regulations / applicable CRZ Notification, the timeline for the implementation of the same shall commence from the date of such amendment / notification permitting the same.*

Main Convention Hall (2500 pax)	2500	Can be subdivided
Pre-function Area	500	Circulation + informal gathering
Green Rooms (2 nos)	100	For speakers/VIPs
Service Corridor	150	Staff & utility access
Banquet Kitchen	300	Adjacent to event space
Toilets	100	Male/Female/Accessible

C. Resort Accommodation Block -

Space	Area (sqm)	Remarks
Guest Rooms (200 rooms x avg 36 sqm)	7200	Min. 5-star HRACC requirement
Premium Suites (10 x 60 sqm)	600	Sea-facing luxury suites
Vertical Circulation	500	3–4 floors with lifts/stairs
Housekeeping, Linen, Pantry	400	Per floor

C. Food & Beverage –

SPACE	Area (sqm)	Remarks
All-Day Dining Restaurant	300	100 covers (indoor)
Outdoor Café (Shack-style)	200	On beach-facing side
Fine Dining Restaurant	250	Thematic design
Bar / Lounge	180	Internal + deck seating
Kitchen (Main + Service)	600	Separate veg/non-veg + prep
Bakery / Patisserie	80	Optional

D. Recreation & Wellness –

SPACE	AREA (sqm)	REMARKS
Spa & Ayurveda Centre	300	Sea view therapy rooms
Gymnasium + Yoga Studio	200	Connected to spa
Outdoor Swimming Pool	400	Infinity-edge
Kids' Play Area	100	Outdoor shaded zone

E. Waterfront Entertainment Zone –

SPACE	AREA (sqm)	REMARKS
Amphitheatre	500	~300 max, facing sea
Party Lawn	800	Open air events
Flea Market Stalls (20 x 9 sqm)	180	Modular kiosks
Art Gallery / Exhibition Zone	200	Temporary displays

F. Administrative and Back-of-House –

SPACE	AREA (sqm)	REMARKS
Admin Office	150	Management and accounts
Staff Dining + Locker Rooms	300	For 100+ staff
Maintenance & Engineering	200	Equipment control
Laundry	150	In-house
Store Rooms	200	Dry and cold storage

Project Scope -
The project envisions a 5-star resort and convention centre on a 7.97-acre beachfront site in Vizag, integrating luxury hospitality with public waterfront entertainment. Key components include a 2500-seater convention hall, 200+ room resort, cafés, flea markets, and green zones. The design balances CRZ compliance, sustainability, and user experience. It aims to become a landmark coastal destination aligned with Vizag's tourism vision**.**

Design Intent

- To create a coastal hospitality destination that blends luxury, sustainability, and cultural vibrancy.
- Integration of business (MICE) tourism, leisure tourism, and local community engagement through multifunctional, inclusive spaces**.**

NBC 2016 Standards and Protocols Relevant to Coastal Developments -

1. NBC Classification for Coastal Zones -

According to NBC 2016:

- Coastal zones are climatically classified as "Warm and Humid" zones.
    - Key climatic parameters:
        - Average RH > 65%
        - High rainfall (1000–2500 mm/year)
        - Prevailing winds from the sea

This directly influences building orientation, ventilation, material use, and shading requirements.

---

2. NBC Part 8 – Building Services (Section 3: Water Supply, Drainage, and Sanitation)

- Provisions for rainwater harvesting, especially in areas with monsoonal overflow.
- Greywater reuse systems are encouraged for landscape irrigation and toilet flushing.
- Wastewater disposal must avoid contaminating coastal groundwater and marine ecosystems.
- Septic tanks or soak pits near coastal lines must be designed at safe distances from HTL and per the groundwater vulnerability index.

---

3. NBC Part 9 – Plumbing Services

- Saltwater intrusion is a concern—dual piping systems may be used for potable and utility water.
- Stormwater drainage must follow natural contours and include grating, soak pits, and bioswales in landscape zones.
- Backflow prevention valves are essential in flood-prone areas.

---

4. NBC Part 4 – Fire and Life Safety

- Mandatory for all resorts to follow minimum egress width and protected escape routes.
- Firefighting systems (hydrants, sprinklers, hose reels) must be located at regular intervals.
- Coastal wind pressures must be considered in ventilation shaft/fire shaft detailing.
- Open-air venues like amphitheatres must provide safe exit routes and fire break zones.

5. NBC Part 3 – Development Control Rules & General Building Requirements

- Setbacks and minimum open space requirements must be adjusted based on CRZ norms.
- Barrier-free access is mandatory in all public-use zones per UNCRPD and PwD Act, 1995.
- Ventilation standards must use cross-ventilation principles instead of only mechanical cooling due to energy efficiency goals.
- Use of non-reflective surfaces and glare control on large sea-facing façades is advised.

6. NBC Part 10 – Structural Design

- Wind loads must be calculated using IS 875 (Part 3), especially in cyclone-prone coastal areas.
- Salt-laden air increases corrosion risk:
    - Reinforced concrete must use anti-corrosive rebars or epoxy-coated steel
    - Steel structures must use hot-dip galvanizing or weathering steel
- **For soil with high water tables:**
    - Pile or raft foundations recommended
    - Waterproofing membranes and cavity drainage advised for basements or service zones

CRZ Norms (Coastal Regulation Zone Rules)

As per CRZ Notification 2011 and amendments in 2019 (MoEFCC):

1. Classification:

- Your site likely falls under CRZ-II or CRZ-III, depending on prior development status.
- **In CRZ-II:**
    - Development allowed on the landward side of existing roads/buildings
- **In CRZ-III (Rural/Undeveloped):**
    - No Development Zone (NDZ) of 50 m from HTL must be maintained
    - Only temporary tourism structures allowed closer to the HTL

2**. Permissible Activities (Tourism):**

- Construction of resorts, shacks, public amenities, toilets, and walkways is allowed with proper environmental clearance.
- Permanent structures must maintain a minimum setback as per HTL survey by the Coastal Zone Management Plan (CZMP).

3**. Design Implications**:

- Green buffer zones are to be maintained along beach edges.
- No groundwater extraction allowed within 200 m of HTL unless with permission.
- Use of solar energy, minimal hardscaping, and eco-sensitive sewage treatment is encouraged.

1. HRACC Guidelines (5-Star Classification) – Ministry of Tourism

- Minimum 200 rooms
- Banquet facilities, recreational areas, multi-cuisine restaurants
- Emphasis on **sustainability, local employment, and universal access**

2. ECBC (Energy Conservation Building Code) for Warm-Humid Climates

- Encourages:
    - **Shading coefficients < 0.4** for glass
    - External shading, thermal mass optimization
    - Cool roofs and ventilated facades

3. IS 15498: Guidelines for Environmental Impact Assessment

- Applicable for large coastal projects
- Requires analysis of impact on **marine life, local livelihoods, and erosion potential**

Contemporary Theories and Design Considerations in Coastal Hospitality Architecture

1. Tourism & Urban Development Linkages

- How luxury resorts impact local urban growth, infrastructure, and employment.
- Case examples where hospitality projects influenced real estate or public realm improvement (e.g., Goa, Kerala, Pondicherry).

Reference:

- **UNWTO reports on tourism-driven urban regeneration**
- **India Tourism Statistics (Ministry of Tourism, GoI)**

2. Post-COVID Design in Hospitality

- Shift toward low-contact services, digital check-ins, open-air venues, and flexible-use spaces.
- Emphasis on biophilia, air circulation, outdoor dining, and health-conscious architecture**.**

Reference:

- **McKinsey's Hospitality Outlook 2023**
- **IHCL & EHL Whitepapers on post-pandemic hotel design**

3. Cultural Integration in Coastal Architecture

- Use of local materials, regional craftsmanship, vernacular forms (e.g., sloping roofs in Andhra).
- Design strategies that respect coastal culture, rituals, food zones, festivals etc.

Reference:

- **"Cultural Landscapes in Coastal India" (INTACH Journal)**
- **Geoffrey Bawa's tropical design philosophy.**

4. Climate-Responsive Design in Warm-Humid Zones

- Passive cooling strategies: courtyard planning, raised structures, cross-ventilation
- Landscape buffers, wind corridors, and orientation strategies

Reference:

- **Givoni's "Climate and Architecture"**
- **Manual of Tropical Housing and Building by Koenigsberger.**

5. Smart Resort Technologies

- Integration of tech in luxury resorts: energy management systems, smart locks, app-based concierge, AR tours.
- IoT for predictive maintenance and personalized guest experiences.

Reference:

- **Cornell Hospitality Research Reports**
- **Smart Cities India publications**
- Use of local materials, regional craftsmanship, vernacular forms (e.g., sloping roofs in Andhra).

Design strategies that respect coastal culture, rituals, food zones, festivals etc

6. Hospitality Design Typologies

- Difference between urban hotels, boutique resorts, eco-retreats, and convention hotels.
- Spatial requirements, circulation patterns, and service zone segregation.

Reference:

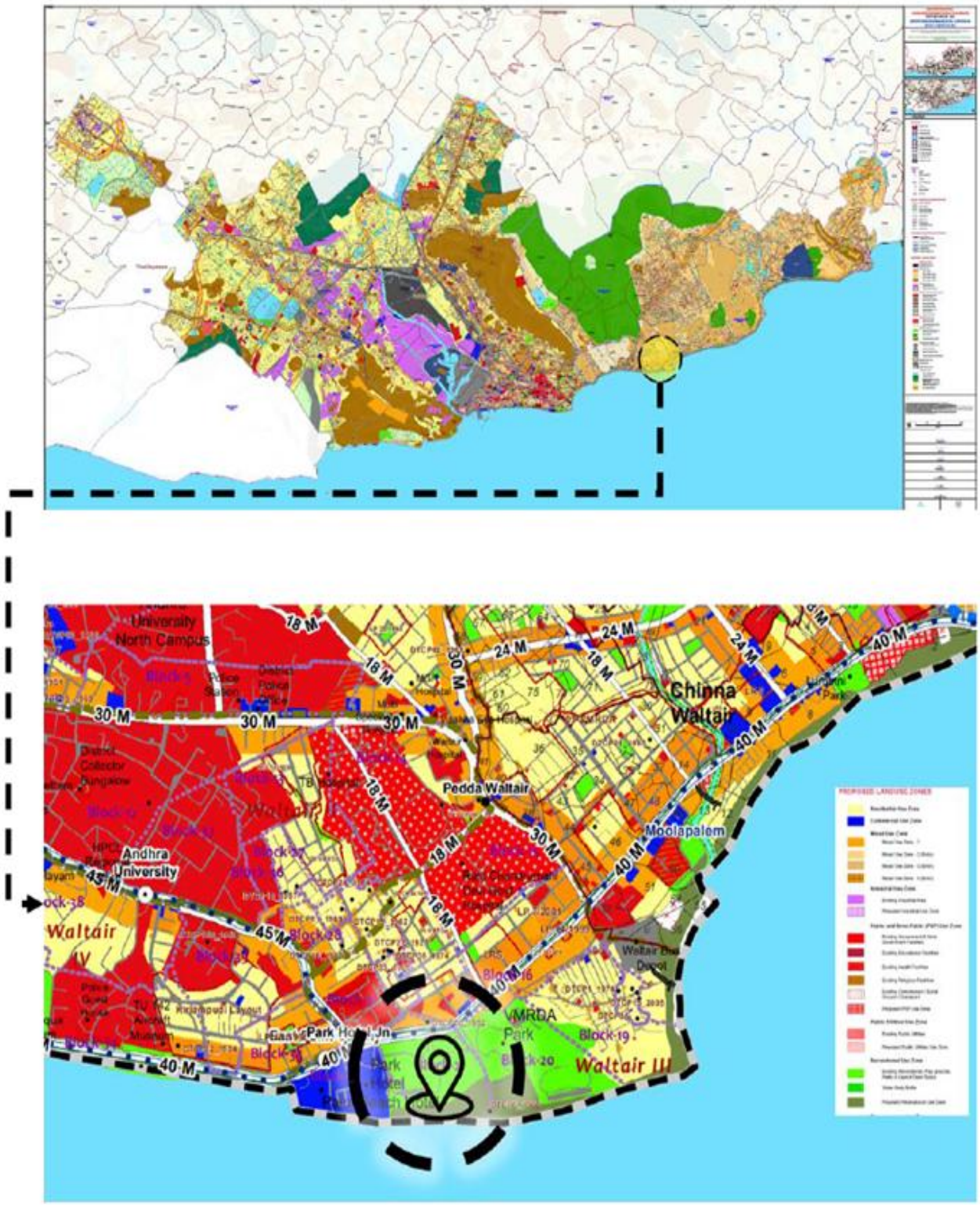
- **Neufert's Architect Data (Hotel & Convention Centre sections)**
- **Time-Saver Standards for Building Types – Resort/Hotel chapters.**

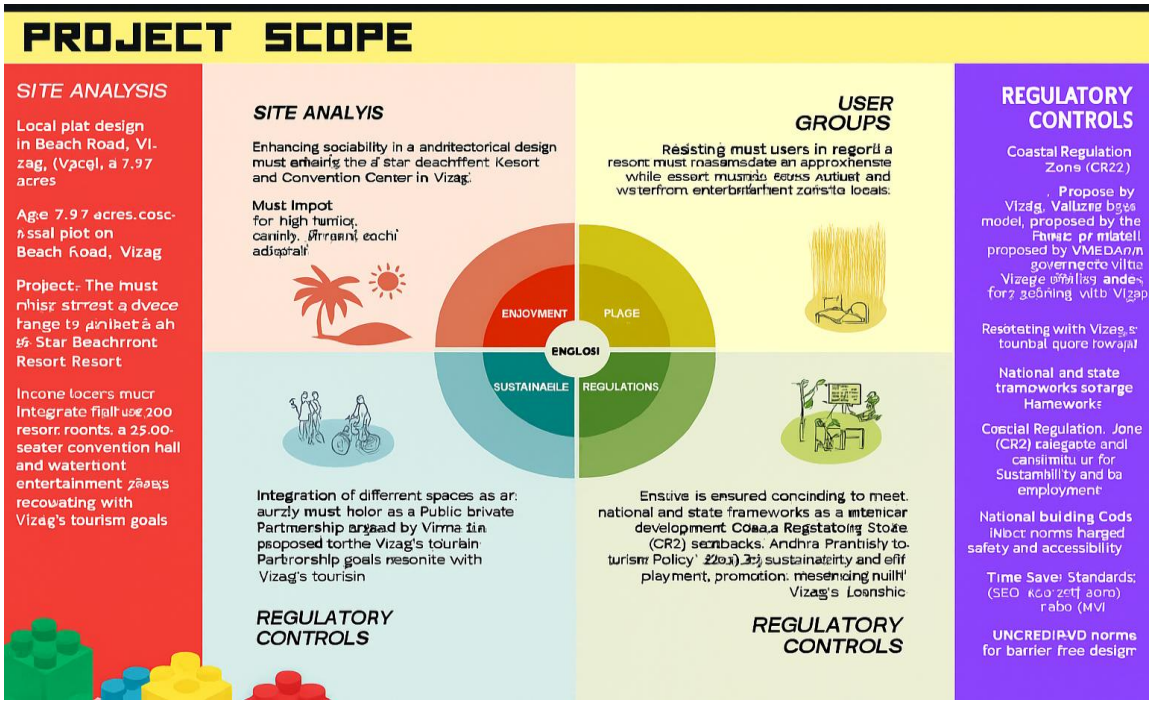
7. Economic and Social Impact of Tourism Infrastructure

- How large resorts affect local jobs, resource use, community identity.
- Gentrification or displacement risks; CSR initiatives and mitigation**.**

Reference:

- **WTO & UNDP reports**
- **Andhra Pradesh Tourism Development Corporation (APTDC) policy documents.**


University North Campus
Andhra University
Waltair
Pedda Waltair
Chinna Waltair
Waltair III
Moolapalem
VMRDA Park
Block-19
Block-20
18 M
24 M
30 M
40 M
45 M

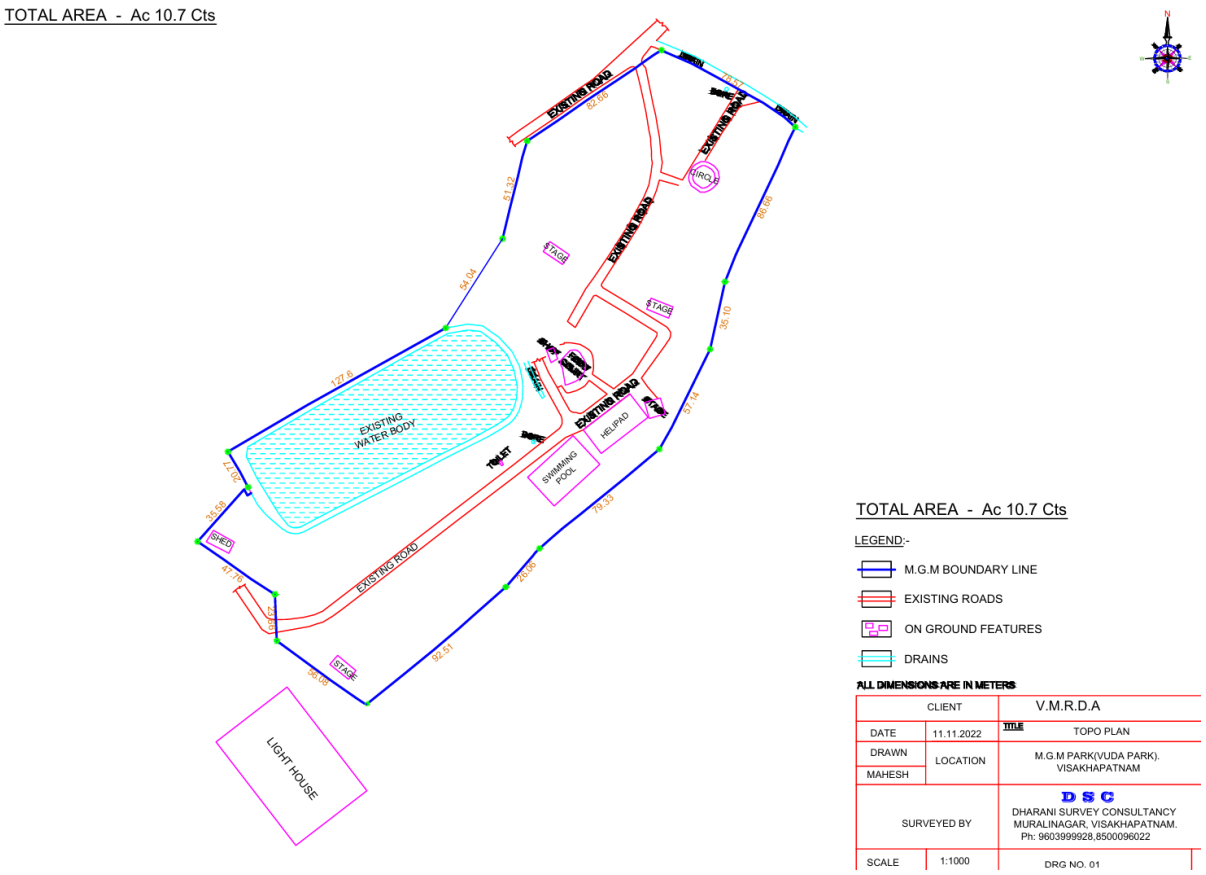


SWOT Analysis of the Site (Beach Road, Vizag)

STRENGTHS	WEAKNESSES
🌊 **Prime beachfront location** offers direct views and access to the Bay of Bengal.	🌀 **Vulnerability to coastal erosion**, cyclonic activity, and saline corrosion.
📍 **Strategic connectivity** to airport, railway, and highway.	🌴 **Limited existing vegetation** may require additional landscaping.
🌇 **Sunrise-facing orientation** ideal for guest experience and architectural framing.	🧱 Development control may be **limited by CRZ (Coastal Regulation Zone)** norms.
🛣️ Part of **VMRDA's planned tourism zone**, easing land use approvals.	🚧 Seasonal tourist flux may impact consistent occupancy.
🧘 Potential for **integrated wellness and cultural tourism experiences.**	🔕 Noise and crowding during peak tourist season may affect exclusivity.

OPPORTUNITIES	THREATS
🌎 Scope for **sustainable tourism model**: eco-conscious design, rainwater harvesting, green roofs.	🌀 Exposure to **natural disasters**: cyclones, storm surges, coastal flooding.
🏞️ Integration with local culture (fishing villages, cuisine, arts) offers **authentic user experience.**	🏗️ Overdevelopment of surrounding coastal belt may dilute luxury positioning.
🪩 Rising domestic and international demand for **luxury wellness resorts** post-pandemic.	⚖️ Legal compliance and **environmental clearance delays** could stall execution.
💼 Public-private partnerships via VMRDA can offer **policy and funding support.**	🏞️ Risk of disrupting local ecology and marine habitats if improperly planned.

CHAPTER 4 : SITE INVENTORY



4.1 Location and Accessibility

- Site Address: Beach Road, Visakhapatnam, Andhra Pradesh
- Coordinates: Approx. 17°42'48.0"N, 83°19'08.0"E
- Total Site Area: 7.97 acres (approx. 32,258 sq.m.)
- Site Ownership: VMRDA (Visakhapatnam Metropolitan Region Development Authority)
- Development Model: Public-Private Partnership (PPP)
- Accessibility:
    - 11 m wide existing approach road (to be widened to 18 m as per tender)
    - Easy access from city centre (~7 km from RK Beach)
    - Proximity to Visakhapatnam Railway Station (8 km) and Airport (14 km).



4.2 Site Surroundings and Context -

Direction	Context / Landmarks
North	Open green land; scattered built-up areas
South	Road access, small-scale commercial Activities
East	Bay of Bengal (open sea)
West	Urban neighbourhood, educational Institutional , residential.

Nearby Attractions:

- Kailasagiri Hill Park (~3.5 km)
- Ramakrishna Beach (~6 km)
- INS Kursura Submarine Museum (~6.5 km)
- VUDA Park and Tenneti Park within 2 km.

4.3 Physical Site Characteristics

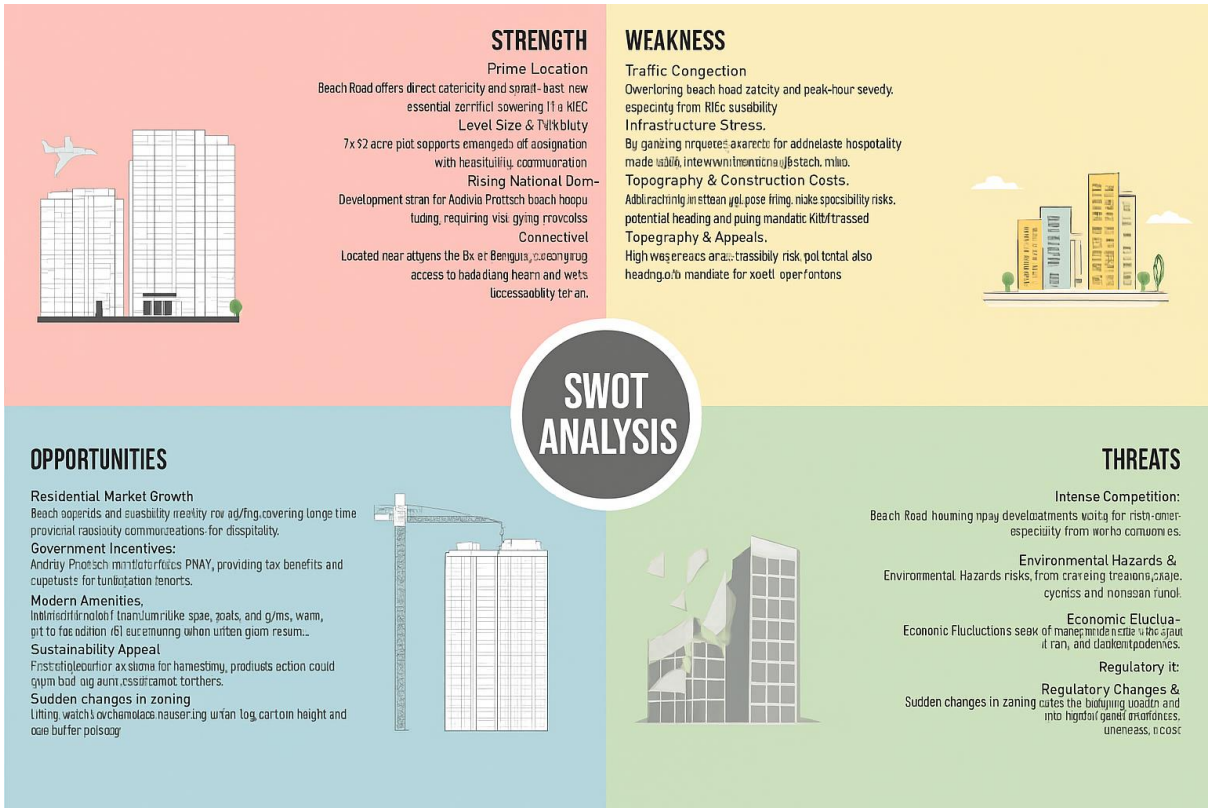
- **Topography:**
  Mostly flat with gentle undulations toward the eastern beachfront edge. Slight natural slope allows for drainage toward the coast.

- **Soil Type:**
  Sandy loam with good percolation; suitable for pile or raft foundation due to coastal proximity.
- **Vegetation:**
  Sparse natural vegetation; a few coastal shrubs and casuarina trees along the boundary. Site is partially barren.
- **Water Table:**
  High water table expected due to proximity to sea—requires waterproofing and foundation protection.

4.4 Climate and Environmental Conditions –

- **Climate Zone: Warm and humid tropical**
- **Avg. Summer Temperature:** 32°C – 38°C
- **Avg. Winter Temperature:** 18°C – 26°C
- **Relative Humidity:** 70% – 85%
- **Prevailing Winds:** From the **southeast (sea to land)**—ideal for cross ventilation
- **Rainfall:** Approx. 1100–1200 mm annually, mainly during **June to September (SW monsoon).**

4.5 SWOT Analysis –



4.6 Legal and Regulatory Conditions -

- **Coastal Regulation Zone (CRZ) Classification:**
  Site falls under **CRZ-II or CRZ-III**, requiring:
  - Permanent structures to maintain **minimum setback from High Tide Line (HTL)**
  - Temporary shacks, lawns, and performance zones allowed closer to the shore
  - **No development zone (NDZ)** to be maintained as per site-specific conditions.

- **Applicable Guidelines:**
  - **NBC 2016**: Safety, accessibility, structural design
  - **HRACC Classification Norms**: For 5-star approval
  - **VMRDA DCRs**: Zoning, green area, setbacks
  - **Andhra Pradesh Tourism Policy 2020–25.**

4.7 Design Implications

- Orientation of rooms, public spaces, and amphitheatre should prioritize sea views and prevailing wind direction
- CRZ setbacks must be carefully mapped—permanent and temporary structures to be zoned accordingly.

NBC Norms & Hospitality Guidelines (India)

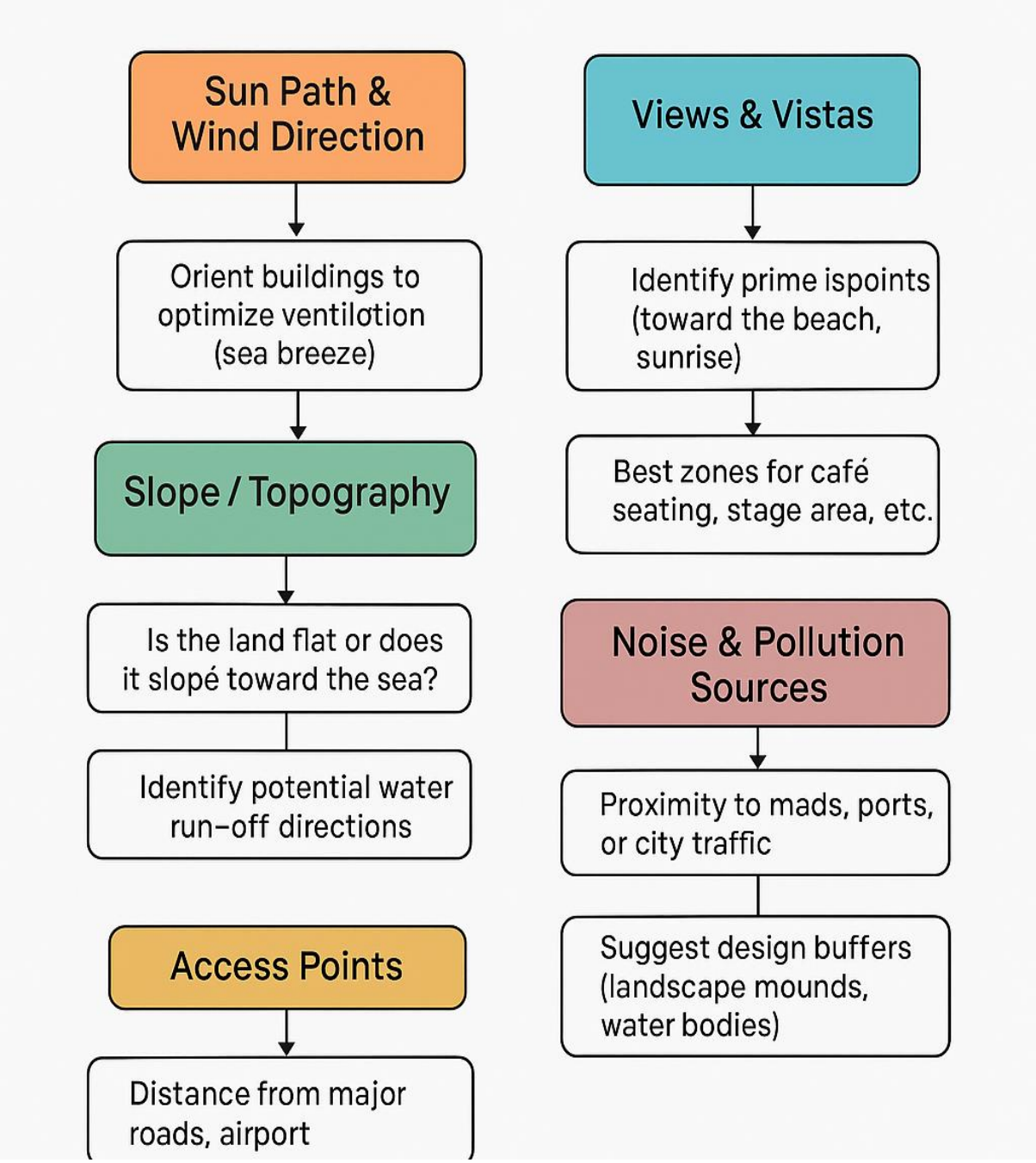
- Room sizes: 30–45 sq.m. min for luxury category
- Corridor width: 1.5 m minimum
- Fire safety: Min 2 staircases for guest blocks
- Minimum open space: 35–40% for resorts in sensitive zones

Parametric Architecture for Coastal Sites

- Algorithms based on wind/sun-path data to generate responsive roof forms, shadings, or skin treatments.
- Examples include Zaha Hadid's fluid resorts or morphogenetic pavilions.

4. Sustainability Norms (GRIHA / LEED)

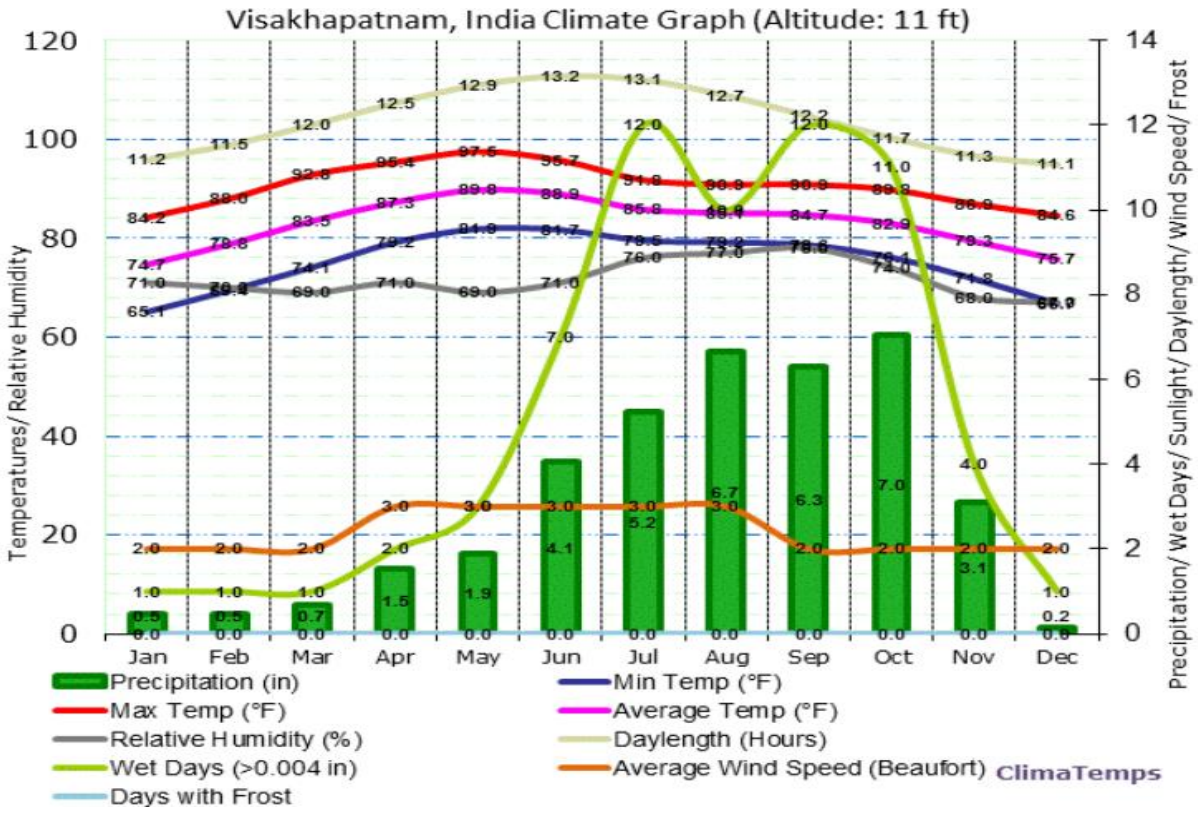
- Emphasis on passive design, minimal excavation near coastal sites.
- Use of STP, rainwater harvesting, and native landscape species.



Design Inferences

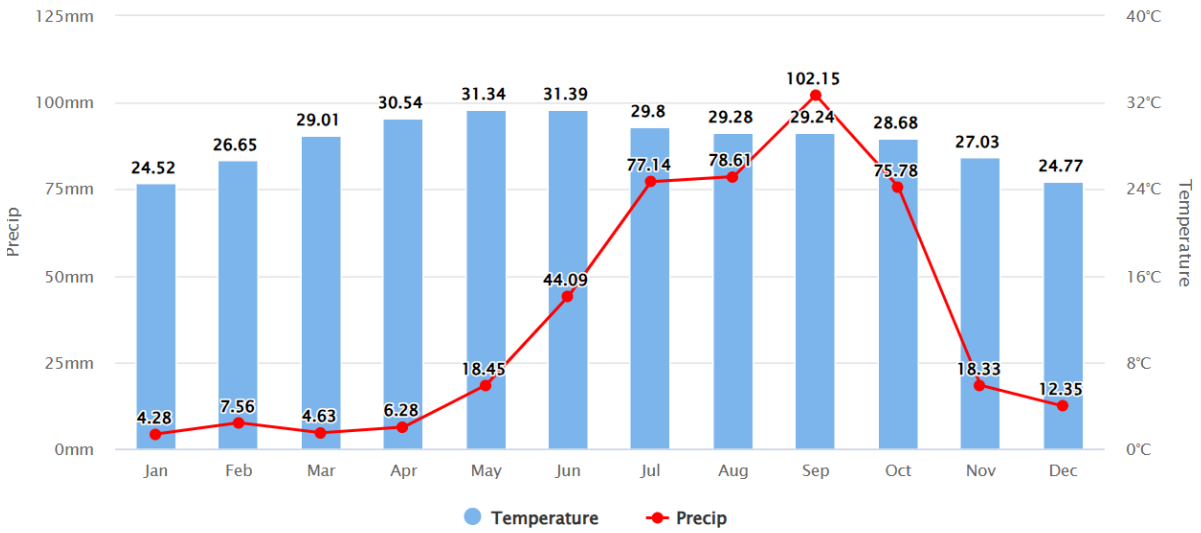
- Locate **heavy structures** (convention centre, resort core) toward the inner side (west/central portion).
- Reserve **ocean-facing edge** for **lightweight elements**: café decks, lawns, flea markets.
- Include **buffer landscapes** for thermal comfort and visual privacy from public beach activity.
- Utilize **central wind corridors** for passive cooling and experiential path design.
- **Cultural interpretation zones** (e.g., amphitheatre or art walk) can be placed near southern vista zones for openness and symbolism.

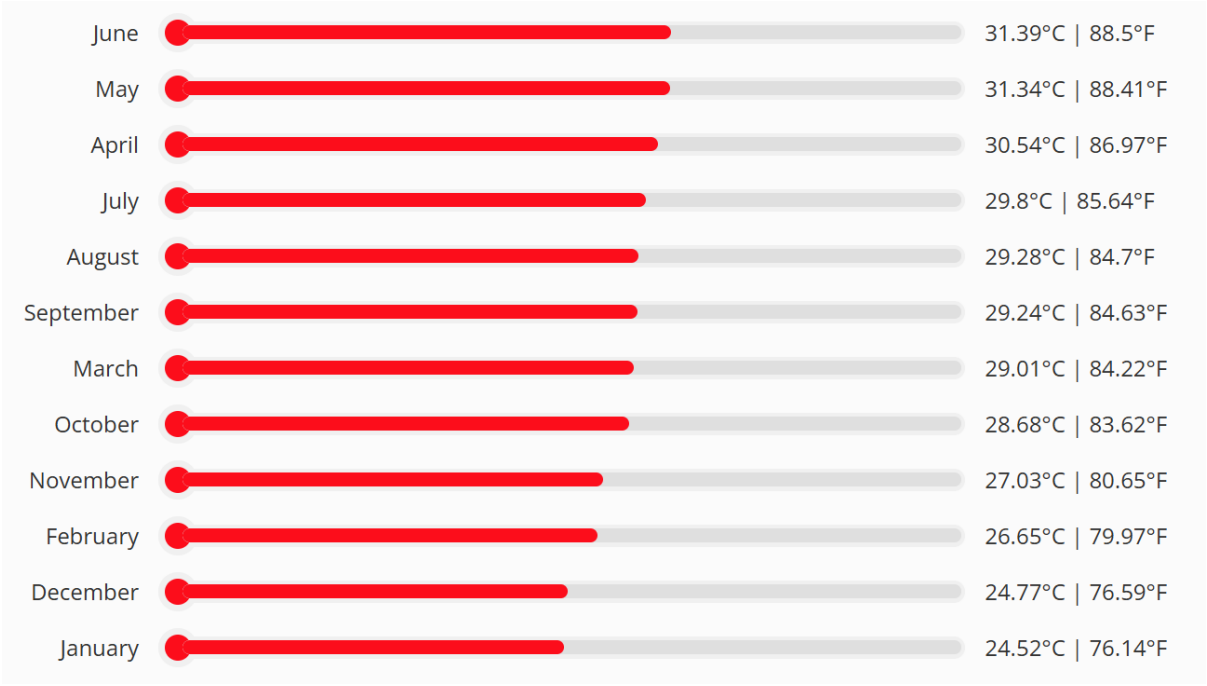
Data and graphs for weather & climate in Vishakhapatnam -



Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Nov	Oct	Dec	Year
Record high °C (°F)	29.0 (84.2)	32.0 (89.6)	33.0 (91.4)	35.0 (95.0)	35.0 (95.0)	37.0 (98.6)	34.0 (93.2)	34.0 (93.2)	33.0 (91.4)	32.0 (89.6)	31.0 (87.8)	28.0 (82.4)	37.0 (98.6)
Average high °C (°F)	26.23 (79.21)	28.22 (82.8)	30.75 (87.35)	32.37 (90.27)	33.06 (91.51)	32.98 (91.36)	31.06 (87.91)	30.53 (86.95)	30.38 (86.68)	29.96 (85.93)	28.56 (83.41)	26.32 (79.38)	30.03 (86.05)
Daily mean °C (°F)	24.52 (76.14)	26.65 (79.97)	29.01 (84.22)	30.54 (86.97)	31.34 (88.41)	31.39 (88.5)	29.8 (85.64)	29.28 (84.7)	29.24 (84.63)	28.68 (83.62)	27.03 (80.65)	24.77 (76.59)	28.52 (83.34)
Average low °C (°F)	21.06 (69.91)	23.27 (73.89)	25.7 (78.26)	27.32 (81.18)	28.49 (83.28)	28.72 (83.7)	27.6 (81.68)	26.72 (80.1)	27.1 (80.78)	26.31 (79.36)	24.04 (75.27)	21.55 (70.79)	25.66 (78.19)
Record low °C (°F)	17.0 (62.6)	20.0 (68.0)	21.0 (69.8)	23.0 (73.4)	23.0 (73.4)	23.0 (73.4)	23.0 (73.4)	20.0 (68.0)	21.0 (69.8)	23.0 (73.4)	18.0 (64.4)	17.0 (62.6)	17.0 (62.6)
Average precipitation mm (inches)	4.28 (0.17)	7.56 (0.3)	4.63 (0.18)	6.28 (0.25)	18.45 (0.73)	44.09 (1.74)	77.14 (3.04)	78.61 (3.09)	102.15 (4.02)	75.78 (2.98)	18.33 (0.72)	12.35 (0.49)	37.47 (1.48)
Average precipitation days (≥ 1.0 mm)	0.55	1.27	0.82	1.0	1.36	5.36	6.91	6.82	6.45	5.27	1.36	1.09	3.19
Average relative humidity (%)	67.13	64.58	67.32	71.13	74.72	70.84	73.99	76.0	77.16	73.18	68.39	67.9	71.03
Mean monthly sunshine hours	8.55	9.35	11.86	12.68	12.93	12.68	12.1	11.83	11.02	10.68	9.33	8.49	10.96

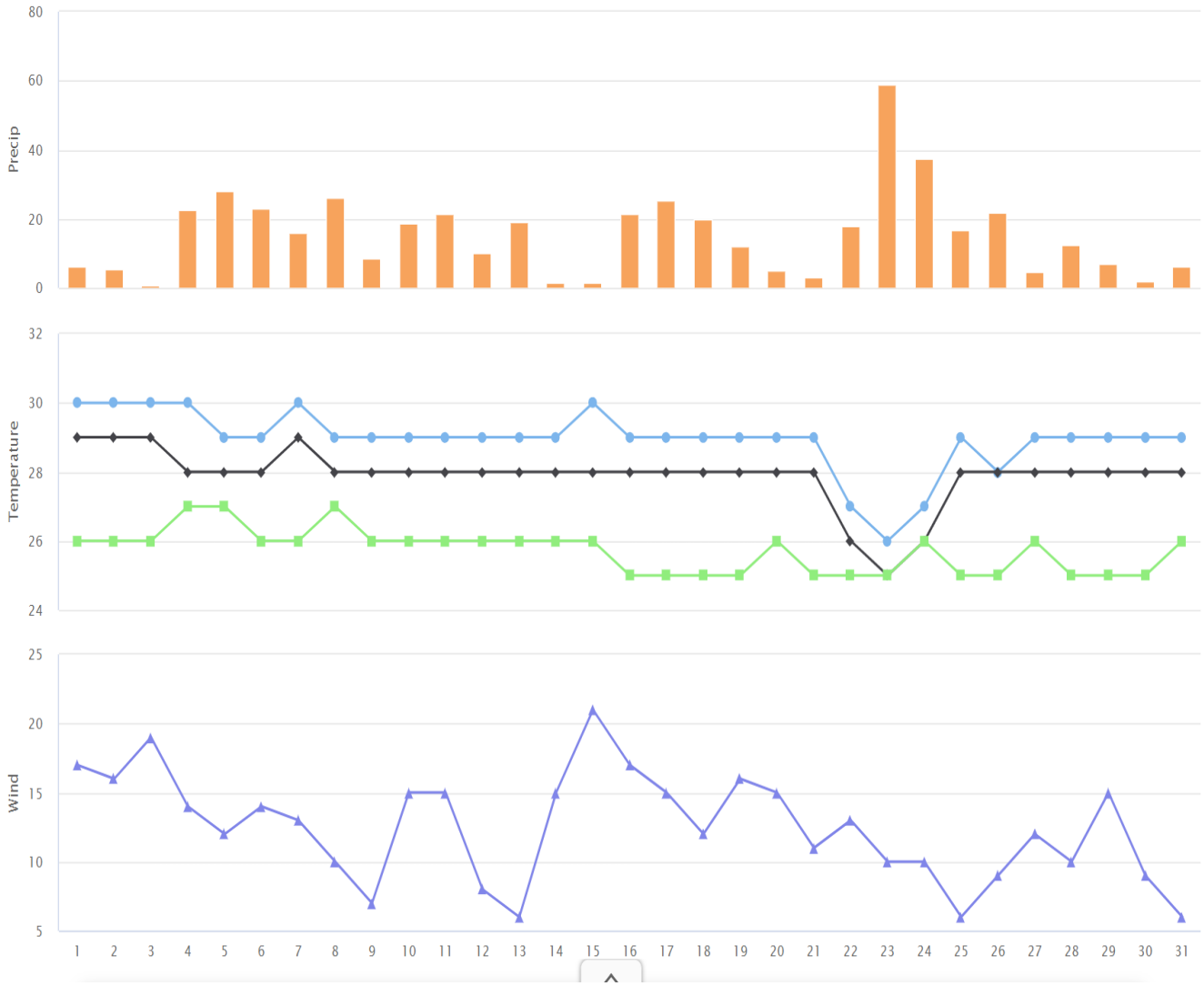
	January	February	March	April	May	June	July	August	September	October	November	Decembe
Min. Water Temperature	25.4	25.9	27.3	28.3	29	28.8	28.3	28.1	28.9	28.4	26.9	25.6
°C (°F)	77.7	78.6	81.1	82.9	84.2	83.8	82.9	82.6	84	83.1	80.4	78.1
Avg. Water Temperature	25.6	26.5	27.9	28.7	29.4	29.3	28.5	28.5	29.1	29.3	27.8	26.2
°C (°F)	78.1	79.7	82.2	83.7	84.9	84.7	83.3	83.3	84.4	84.7	82	79.2
Max. Water temperature	25.9	27.3	28.3	29	29.6	29.9	28.8	28.8	29.6	29.6	28.4	26.9
°C (°F)	78.6	81.1	82.9	84.2	85.3	85.8	83.8	83.8	85.3	85.3	83.1	80.4

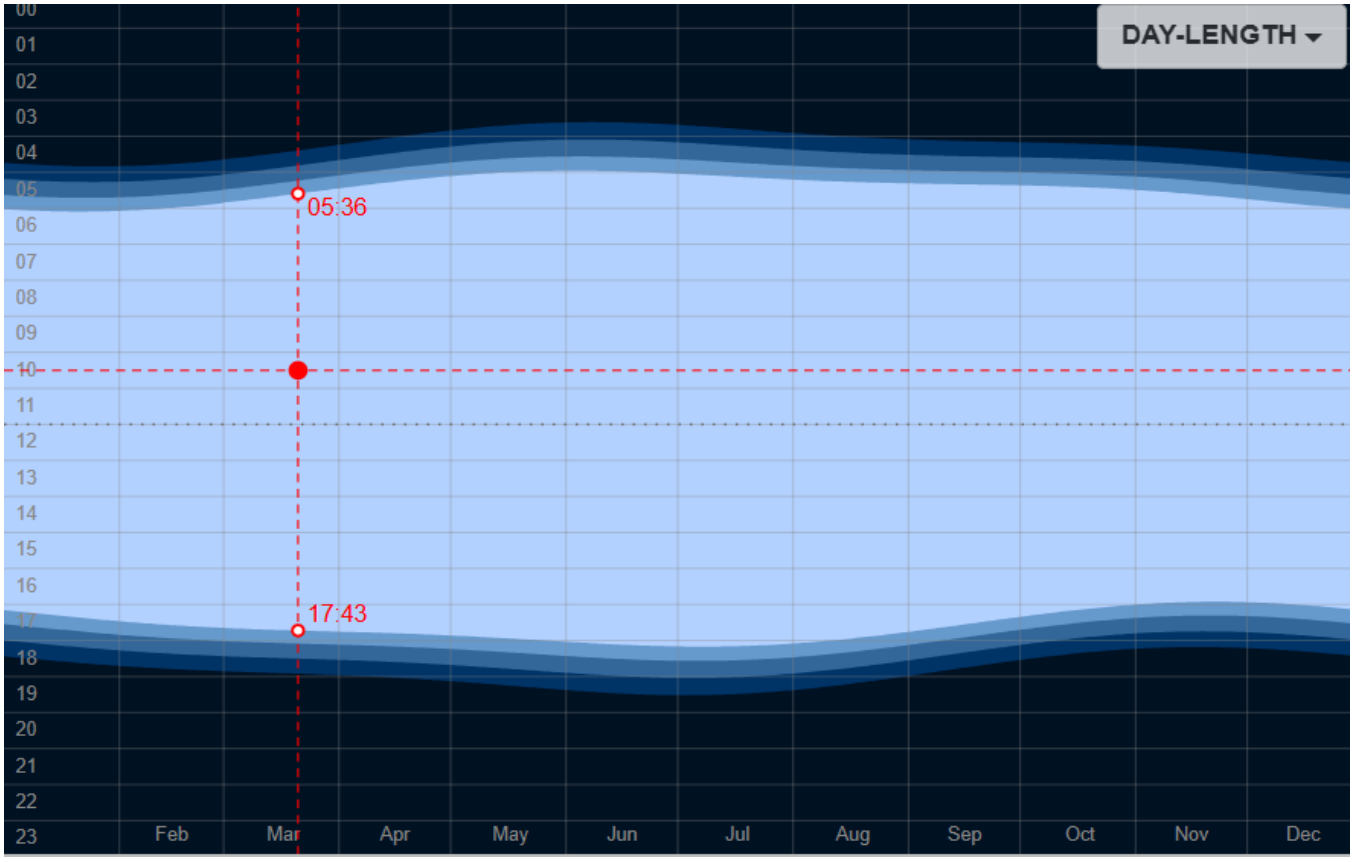


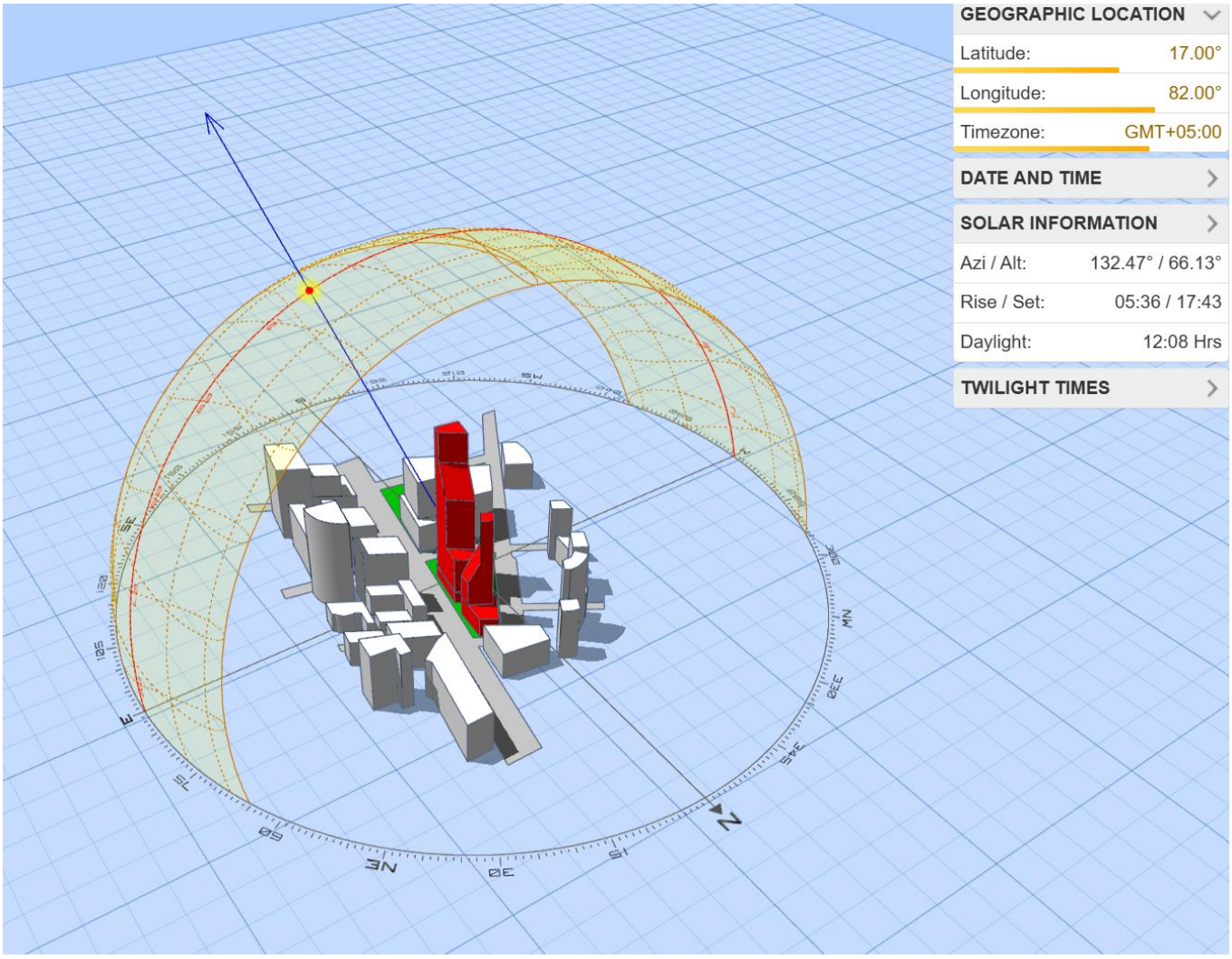


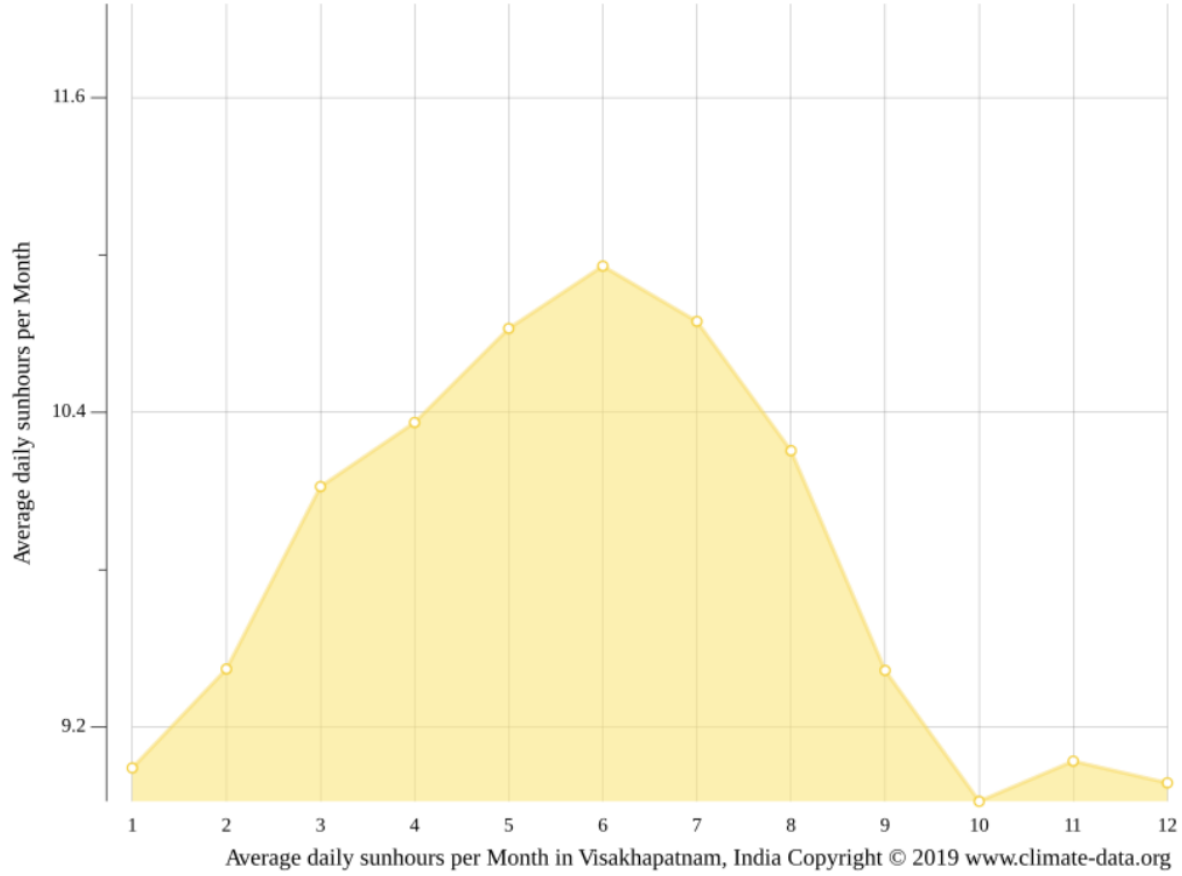
	January	February	March	April	May	June	July	August	September	October	November	December
Avg. Temperature °C (°F)	22.7 °C (72.9) °F	24.7 °C (76.4) °F	27.5 °C (81.4) °F	29.4 °C (84.9) °F	30.9 °C (87.5) °F	29.8 °C (85.6) °F	28.2 °C (82.7) °F	27.7 °C (81.9) °F	27.6 °C (81.6) °F	26.8 °C (80.2) °F	24.9 °C (76.8) °F	23.1 °C (73.5) °F
Min. Temperature °C (°F)	18.9 °C (66) °F	20.6 °C (69.2) °F	23.9 °C (75) °F	26.3 °C (79.4) °F	27.9 °C (82.2) °F	27.3 °C (81.1) °F	26.2 °C (79.1) °F	25.8 °C (78.5) °F	25.6 °C (78) °F	24.3 °C (75.7) °F	21.8 °C (71.2) °F	19.6 °C (67.3) °F
Max. Temperature °C (°F)	26.6 °C (79.9) °F	29 °C (84.2) °F	31.8 °C (89.3) °F	33.6 °C (92.4) °F	34.9 °C (94.8) °F	32.9 °C (91.2) °F	30.6 °C (87.1) °F	30 °C (86) °F	30 °C (86) °F	29.6 °C (85.3) °F	28.1 °C (82.6) °F	26.6 °C (79.9) °F
Precipitation / Rainfall mm (in)	11 (0)	12 (0)	10 (0)	10 (0)	51 (2)	125 (4)	187 (7)	205 (8)	182 (7)	163 (6)	87 (3)	28 (1)
Humidity(%)	73%	71%	70%	73%	72%	73%	79%	81%	83%	80%	74%	72%
Rainy days (d)	2	2	2	1	3	10	14	14	14	12	5	2
avg. Sun hours (hours)	9.0	9.4	10.1	10.4	10.7	11.0	10.7	10.3	9.4	8.9	9.1	9.0

Temperature	Max	Average	Min	
Max Temperature	30.0°C (86.0°F)	28.94°C (84.09°F)	26.0°C (78.8°F)	
Avg Temperature	29.0°C (84.2°F)	27.9°C (82.22°F)	25.0°C (77.0°F)	
Min Temperature	27.0°C (80.6°F)	25.71°C (78.28°F)	25.0°C (77.0°F)	
Dew Point	**Max**	**Average**	**Min**	
Dew Point	25.0°C (77.0°F)	23.52°C (74.34°F)	23.0°C (73.4°F)	
Precipitation	**Max**	**Average**	**Min**	**Sum**
Precipitation	59.0mm | 2.32in	15.54mm | 0.61in	0.8mm | 0.03in	481.8mm | 18.97in
Snowdepth	0.0mm | 0in	0.0mm | 0in	0.0mm | 0in	0.0mm | 0in
Wind	**Max**	**Average**	**Min**	
Wind	21.0kmh | 13.05mph	12.52kmh | 7.78mph	6.0kmh | 3.73mph	
Gust Wind	28.0kmh | 17.4mph	18.0kmh | 11.18mph	7.0kmh | 4.35mph	
Sea Level Pressure	**Max**	**Average**	**Min**	
Sea Level Pressure	59.0mb	15.54mb	0.8mb	




DAY-LENGTH
05:36
17:43
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec


GEOGRAPHIC LOCATION
Latitude: 17.00°
Longitude: 82.00°
Timezone: GMT+05:00
DATE AND TIME
SOLAR INFORMATION
Azi / Alt: 132.47° / 66.13°
Rise / Set: 05:36 / 17:43
Daylight: 12:08 Hrs
TWILIGHT TIMES



Climate Zone

- Warm-Humid Tropical Zone
- Coastal maritime influence due to proximity to the Bay of Bengal
- Classified under Zone 3 – Warm & Humid in NBC 2016

Temperature

- **Average Annual Temp**: 26°C to 32°C
- **Summer (Mar–Jun)**: 30°C–42°C (hot and humid)
- **Monsoon (Jul–Oct)**: Heavy rainfall with high humidity
- **Winter (Nov–Feb)**: Pleasant; lows of 18°C to 22°C

Wind Patterns

- **Prevailing Wind Direction**: South-East (from the sea)
- **Summer**: Cool sea breeze; crucial for natural ventilation
- **Monsoon**: Strong south-west winds, occasional cyclonic storms
- **Design Inference**: Maximize openings facing sea breeze; use wind corridors

Rainfall

- **Average Annual Rainfall**: ~1,200 mm
- Monsoonal and cyclonic rainfall concentrated in June–November
- **Implication**:
    - Use of sloped roofs or drainage channels and elevated plinths.

References & Sources -

1. Banerjee, R. (2019). *Eco-architecture in Indian coastal zones: A sustainable approach*. Indian Journal of Environmental Design, 12(3), 45–52.
2. Government of India. (2011). *Coastal Regulation Zone Notification*. Ministry of Environment, Forest and Climate Change. https://moef.gov.in
3. Government of India. (2019). *CRZ Notification Amendment*. Ministry of Environment, Forest and Climate Change. https://moef.gov.in
4. Government of Andhra Pradesh. (2020). *Andhra Pradesh Tourism Policy 2020–25*. Andhra Pradesh Tourism Department. https://aptourism.gov.in
5. Mukherjee, A. (2021). *Energy-conscious design in hospitality: Passive strategies in tropical regions*. International Journal of Building Design, 8(1), 33–44.
6. Naidu, S., & Thomas, L. (2020). *Water management strategies for coastal buildings*. Journal of Sustainable Urban Planning, 15(2), 78–85.
7. National Building Code of India. (2016). *Volume 1 & 2*. Bureau of Indian Standards. https://www.bis.gov.in
8. Rao, V., & Iyer, P. (2019). *Use of GRC and lightweight systems in saline environments*. Indian Concrete Journal, 93(4), 29–37.
9. Sharma, M. (2018). *Tourism and sustainable development in Eastern Himalayan resorts*. Ecotourism and Mountain Development, 3(1), 21–35.
10. Singh, R. (2018). *Integrating culture in sustainable tourism: The Indian coastal context*. Journal of Regional Planning and Development, 19(2), 99–108.
11. Thapa, D., & Joshi, R. (2020). *Rainwater harvesting in resort developments: Lessons from coastal Kerala*. Environmental Infrastructure Review, 6(4), 110–117.
12. UNCRPD. (2006). *United Nations Convention on the Rights of Persons with Disabilities*. https://www.un.org/development/desa/disabilities/convention-on-the-rights-of-persons-with-disabilities.html
13. HRACC. (2022). *Hotel and Restaurant Approval & Classification Criteria for 5-Star Hotels*. Ministry of Tourism, Government of India. https://tourism.gov.in
14. VMRDA. (2023). *RFP Document for 5-Star Resort at Beach Road, Vizag*. Visakhapatnam Metropolitan Region Development Authority.
15. Vishakhapatnam climate data and analysis - https://weatherandclimate.com/india/andhra-pradesh/visakhapatnam
16. Climate charts -https://en.climate-data.org/asia/india/andhra-pradesh/visakhapatnam-2804/
17. SUN PATH https://andrewmarsh.com/apps/staging/sunpath3d.html

CHAPTER 5: CASE STUDY

5.1 CASE STUDY 1 : NOVOTEL VIZAG (A.P)



Located adjacent to Varun Inox Multiplex and close to the airport, Novotel Visakhapatnam Varun Beach has a panoramic view of Bay of Bengal. All 225 rooms overlook the ocean, offering a comfortable environment to business and leisure travellers with Wi-Fi access, three restaurants, an executive lounge, bar and spa. With over 3600 sqm of indoor & outdoor space, the hotel provides the largest banqueting facility in the region, and is able to cater for business and social events of up to 4000 people.

Directions -

Visakhapatnam Airport is located 12km East of Novotel Visakhapatnam Varun Beach. From the airport, head east on GNT road, turn left at the scindia and continue onto Port Main road. At the roundabout, take the third exit, turn left to Waltair road, then make a right onto Nowroji road and at the T junction turn left onto the beach. You will find Novotel Visakhapatnam Varun Beach on your right hand side.

VISION:
To establish ourselves as the nation's BEST International Voice Carrier through seamless scalability that will enable our customers' success.

GOALS:

• Implementing right technology with scalability options.
• Maintaining high-redundancy zero-failover network.
• Setting up International Standard for Quality Services and create an industry benchmark.
• Creating win-win partnerships by bridging business models with technology.

Continuous growth of the organization through real-time care for the customers, improvement in the services level, exploring new business
opportunities.
• Improved communication within intra and inter departments for harmonious operation.
• Become one of the best Corporate Citizens.

Internal Environment

Rooms: 225 rooms

Superior Room

Executive Room

Executive Floor

Suite

Restaurant & Bar:

The Square

Zaffran

1. Vue
2. Infinity
3. Sugarr

A Health Gateway:

- Steam & Sauna
- Relaxation rooms
- Outdoor infinity pool with sunken bar
- Outdoor Jacuzzi overlooking the sea
- Beauty & salon spa with 4therapy rooms

Kids activity zone:

- Kids Play X-Box
- Rock Climbing
- Commando Net
- Slackline

- **Recreation facilities:**
- Pool & sea facing gym
- Infinity pool
- Jogging track

Banquet halls:
V-Convention Hall 1,2,3
Pearl 1,2
Coral 1,2,3
Eureka & Summit

- **Services & leisures -**

Relaxation and fitness
Sauna
Jacuzzi
Fitness centre
Outdoor unheated pool
Massage (paying)

Other sports activities
Bicycle hire facilities (paying)

Entertainment
Video game area

Parking
Private indoor parking
Private enclosed outdoor parking

Meeting:
Board Rooms.
Conventions(3).
Coral(2).
Pearl(3).

Fittings
24 hour security staff
Video camera at bldg entrance
Video surveillance in hallways
Ramp access
Reduced mobility facilities
Wi-Fi at the hotel (paying)
Porter
Shoe shine machine
Dry cleaning / Ironing (paying)
Currency exchange
Smoke alarm in public areas

Novotel is having its branches at different locations like:

- Bangalore
- Hyderabad
- Mumbai
- Visakhapatnam.



Project Details -

Feature	Details
Name	Novotel Visakhapatnam Varun Beach
Location	Beach Road, adjacent to Varun Inox Multiplex, Visakhapatnam
Operator	Accor Group
Opened On	December 7, 2011
Developer	Sea Valley Resorts Pvt. Ltd
Room Count	225 rooms, all sea-facing
Total Built-Up Area	3600+ sq. m of banqueting and convention space
USP	Panoramic sea views, infinity pool, large banquet halls
Rating	5-star

3. Spatial Zoning and Facilities –

Accommodation Typology

- Superior Rooms: 159
- Premier Rooms: 23
- Long Stay Rooms: 32
- Executive Suites: 9
- Presidential Suite: 1

All rooms are sea-facing with amenities like LED TVs, iPod docks, and high-speed internet.

Food & Beverage

- The Square (all-day dining)
- Zaffran (specialty)
- Vue (bar/lounge)
- Infinity (poolside bar)
- Sugarr (confectionery)

Recreational Facilities

- Infinity pool & Jacuzzi
- Sea-facing gym
- Jogging track
- Spa & beauty salon

Banquet & Convention Spaces

- V-Convention Halls (3)
- Coral Halls (3)
- Pearl Halls (2)
- Eureka & Summit Board Rooms

Total capacity: up to **4000 guests**

4. Design Features and Planning –

Principle	description
Site Orientation	Maximized sea-facing rooms for views and ventilation.
Layout	Fluid transition between indoor and outdoor spaces.
Materials	High durability finishes to withstand saline air.
Accessibility	Barrier-free access, ramps, wide corridors
Safety	24x7 surveillance, smoke alarms, fire exits.

4. Sustainable and Operational Aspects –

- Water Conservation: Use of low-flow fixtures, treated greywater in landscaping
- Energy Use: LED lighting, central HVAC optimization
- Green Practices: Association with Green Globe Certification, waste segregation
- Digital Systems: Central booking, smart access, IP telephony.

6. Organizational Structure

Departments involved in operation:

- Front Office
- Housekeeping
- Food & Beverage Service
- Human Resources
- Finance
- Marketing & Sales
- Security
- Engineering & Maintenanc

7. Strengths as a Case Study

- Coastal and urban interface (similar to your site)
- Smart room planning and functional zoning
- Balance between business and leisure users

- Exemplifies sustainable coastal architecture in India
- Detailed organization structure and service integration

---

8. Key Learnings for Design

- Maximize orientation and ventilation from sea breeze
- Buffer spaces near public zones to control noise
- Zoning must cater to privacy, accessibility, and operational flow
- Integration of recreation, dining, and convention seamlessly
- Emphasis on branding, aesthetics, and guest experience in planning

---

9. References & Sources

- Internal Novotel Training Documentation
- Accor Group Hotel Portfolio – www.accorhotels.com
- Case Study Document: *sana-150505051602-conversion-gate01.docx*
- Green Globe Certification Info – www.greenglobe.com

- Due to the increasing competition in the hospitality industry, novotel is bound to establishing the most efficient and effective marketing strategies. In modern days, business entities in the hospitality industry are adopting modern marketing strategies; whereby the Novotel hotel should not be exempted. Following extensive research and market analysis carried on the performance of the novotel it has been evident that novotel is facing stiff competition from Hyatt Regency Birmingham, City Inn Birmingham, and Jurys Inn Birmingham. This stiff competition has led to poor performance over the years. Unfortunately, it's evident that novotel adopts old management and strategies for marketing. This aspect has led to its undesirable competitiveness in the market. From these facts, it's not only beneficial but also mandatory for the Novotel to formulate and implement the best strategies for future marketing. This paper will discuss the aims and objectives of Novotel hotel future marketing direction (2009).



- Some of the key marketing strategies which can be adopted by the novotel include the Business to consumer marketing and the business to business marketing. In the case of business to consumer marketing, the hotel will be focused in building better relationship with

its consumers as well as boosting the image of the services being offered. On the other hand, business to business marketing establishes good relationship with other businesses; thus placing itself in better position to increase sales

- With the current effects of globalization and market liberation, there is every need for novotel to revise its marketing strategy so as to encroach new markets and more so the international market. The strategic marketing direction will as mean new clients for its services as well as retaining its present clients. The primary aim of the novotel future strategic marketing is to increase their clients, widen its investment, as well as expanding its markets. These aims are highlighted as follows;

- Firstly, the novotel hotel is aimed at increasing its sales and establish new markets. In this case, by adopting new strategies in marketing the novotel will be able to expand its operations even to many other foreign countries. This concept can be realized through the internet advertisement as well as use of the media. The future strategic marketing direction adopted by the novotel is also a strategy for growth. This is so because, by marketing in the international market, the novotel will to expand its operations in other countries

- Another aim for the future strategic marketing direction is also aimed at positioning the company's image among its clients. In this case, the company's image will be boosted in the eyes of the clients thus establishing a sustainable market.

- The future strategic marketing direction is also aimed at adventuring new ventures as well as an entrepreneurship strategy. The present stiff competition does not allow the novotel to focus on one field of market rather look for new venture. In relation with this phenomenon, the company will be able to look for new services and products thus strengthening its stability

- The hotel is aimed at positioning itself to counter its opponents. By adopting efficient marketing strategies the company will be able to counter the competition its opponents in terms of sales and profit. This aspect is developed from market research and competitor analysis; whereby the novotel was able to know the weakness, strengths and strategies of its opponents. With this information, the novotel will be able to adopt the most efficient and most effective strategies. For instances, aspects of pricing, branding and market positioning will be taken care of.

- To maximize the values of its transactions and gain consumer trust. In this regard, the future marketing direction is aimed at increasing value and benefit to the company from its operations. On another perspective, the company is also aimed at building loyalty and trust among the customers. On the other hand, a market strategy involving novotel and other business is aimed at nourishing its relationship with those businesses thus benefiting form increased sales and widened target market.

- From the above highlighted factors, it's clearly evident that the main motives or aims of the future marketing direction are aimed at widening the market of the novotel. By adopting the new marketing direction, the company will be assured of improving its relationship with the clients. This will facilitate loyalty and trust among the two company and its clients. In the hospitality industry, the competition for market share has been very stiff; whereby expertise and professionalism is vital in executing any strategy. From another perspective, the company will also be able to enjoy a sustainable market in future

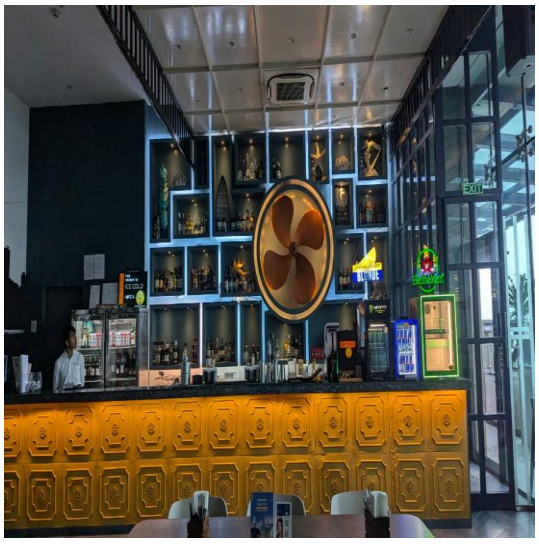












Place:

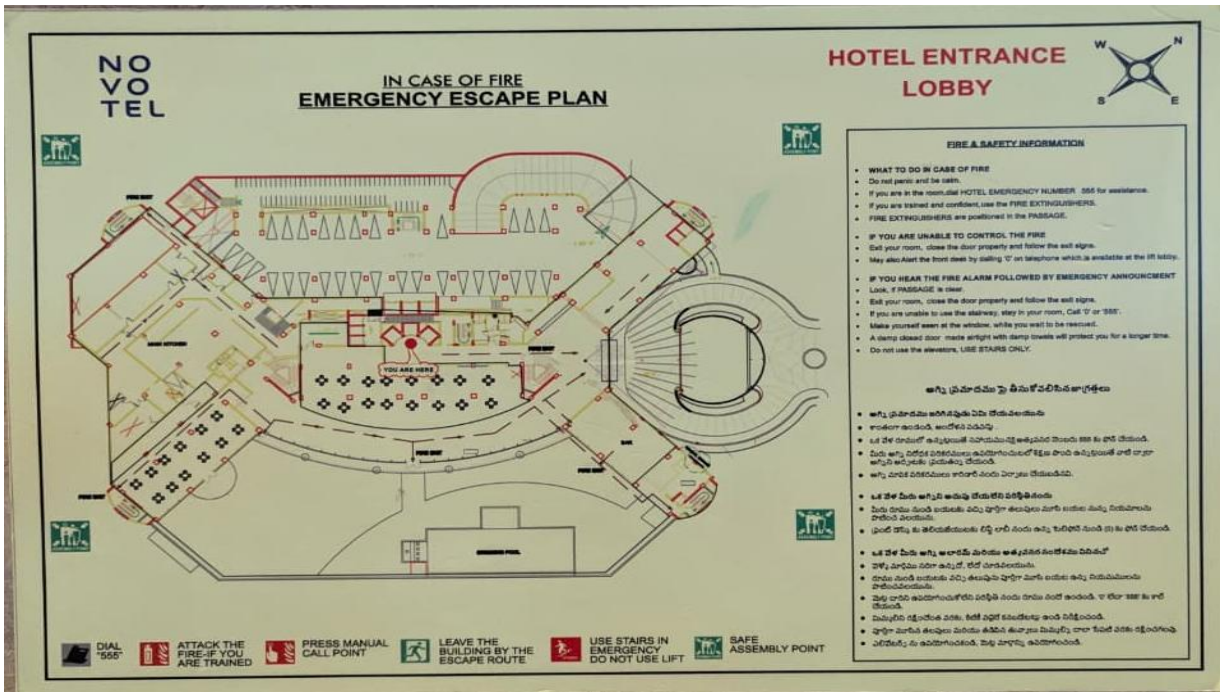
Location of t

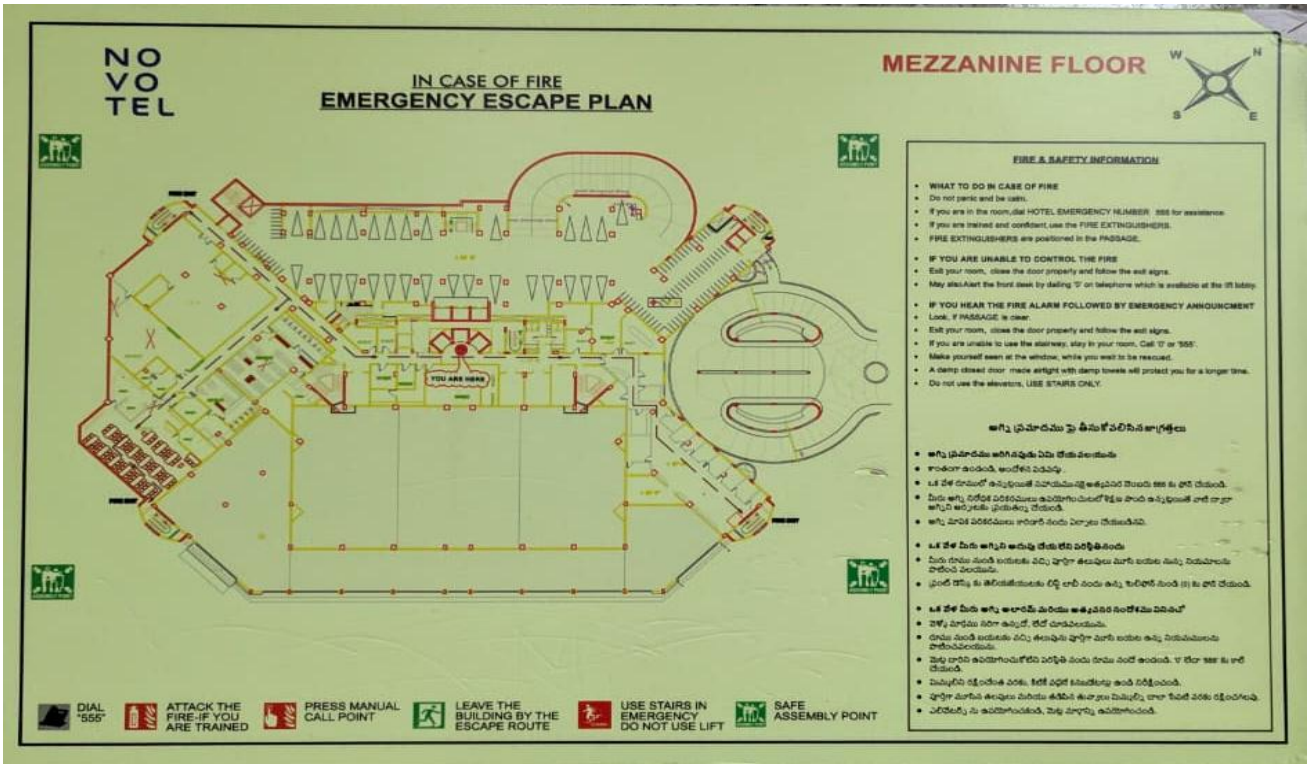
- All 225 rooms overlook the Bay of Bengal, offering a comfortable environment to business and leisure travelers with Wi-Fi access, three restaurants, an executive lounge, bar and spa. With over 3600 sqm of indoor & outdoor space, the hotel provides the largest banqueting facility in the region, and is able to cater for business and social events of up to 4000 people.

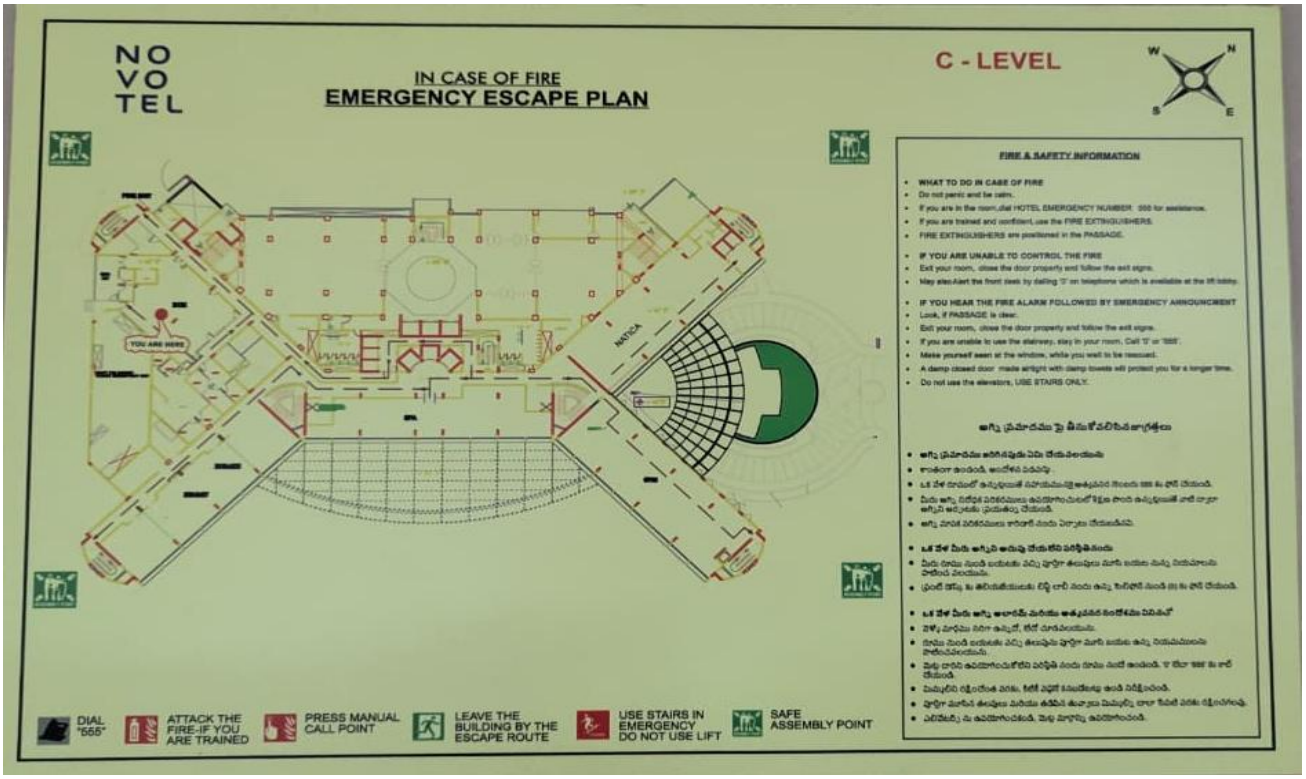
Hotels stay innovative in the peripheral service

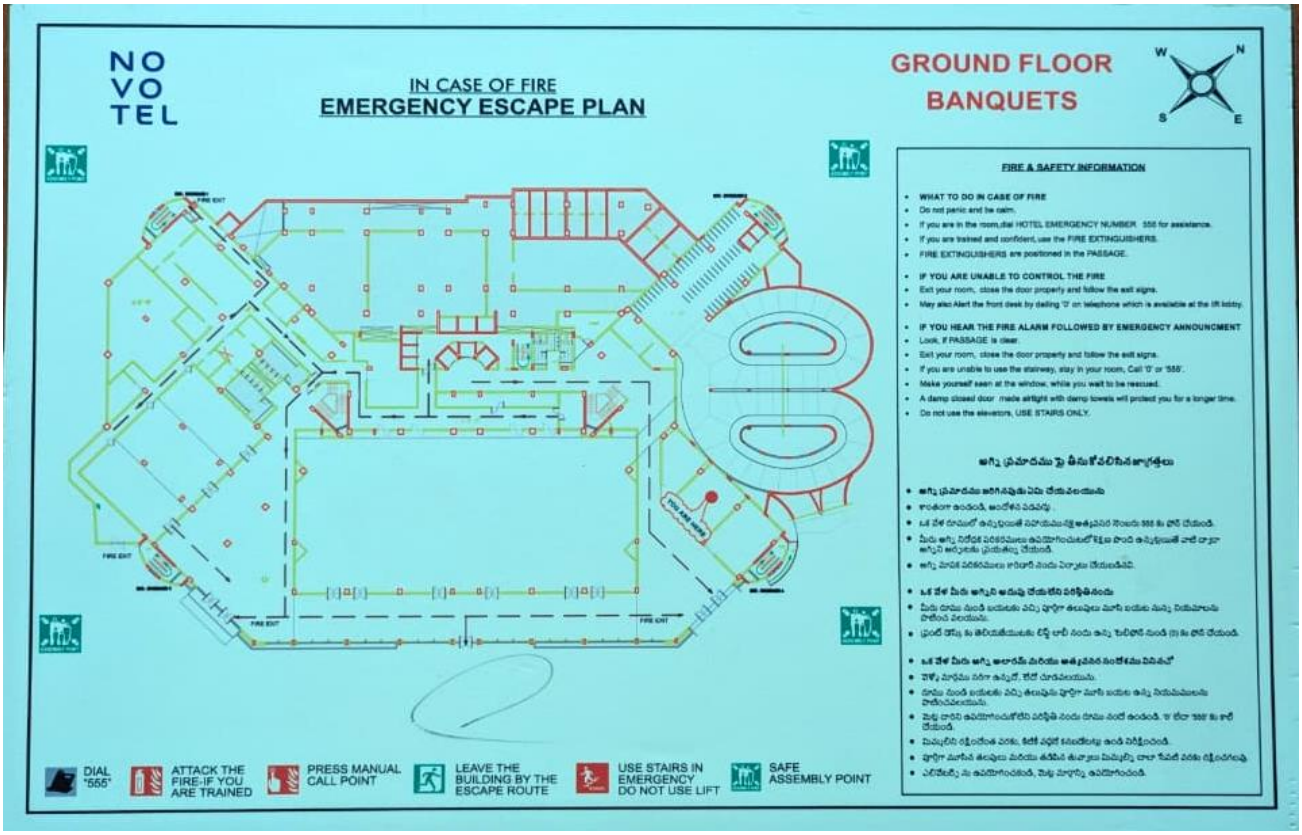
Novotel is having excellent Banqueting Facilities, Resto-Bar,
Room Total 225 sea facing rooms. In that
159 superior Rooms ,
23 Premier Rooms,
32 Long Stay Rooms,
9 Executive Suites,
1 Presidential Suite and for Special guests
Flat screen 32" LED TV ,
iPod docking station and satellite channels.
Dedicated 8 mbps wi-fi and broadband internet connectivity
11 Baquet halls:
V-Convention 1,2,3
Coral 1,2,3
Pearl 1,2
eureka & summit,
Board rooms.

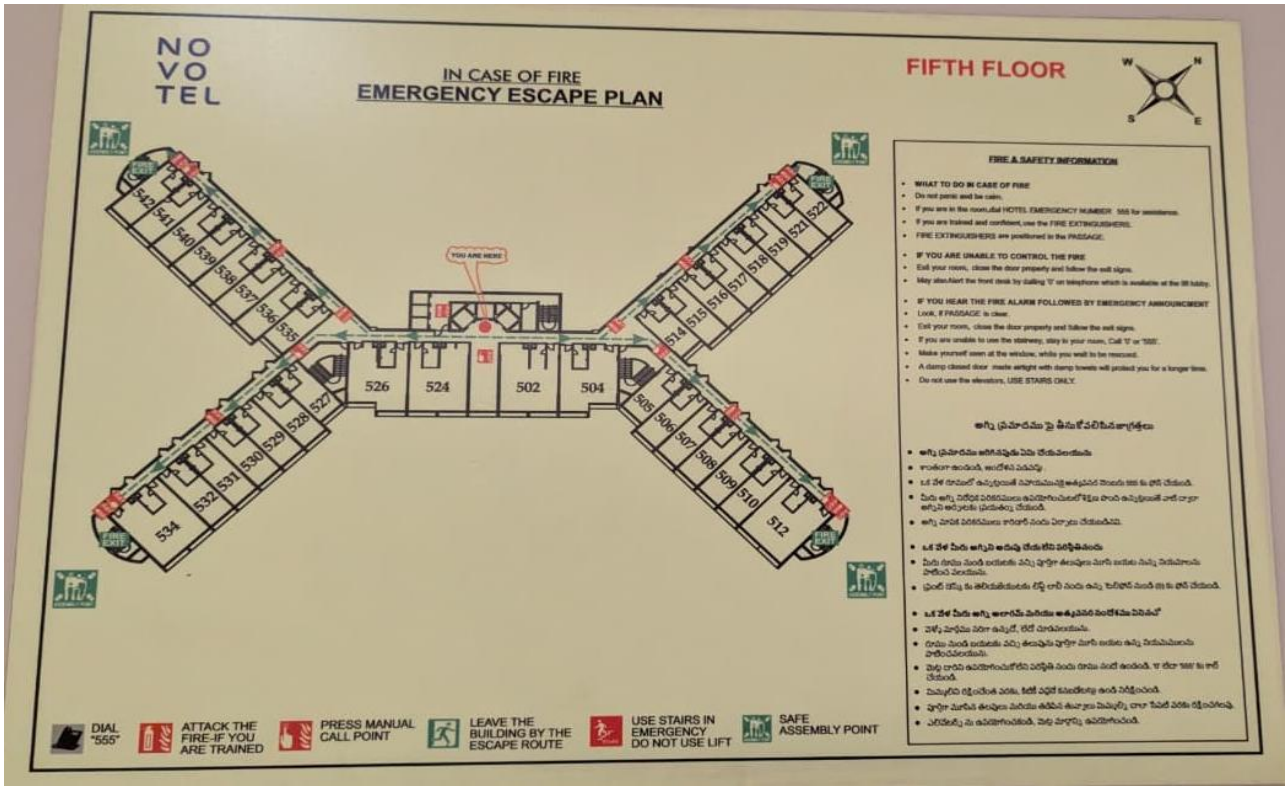
FLOOR PLANS –




NO VO TEL
IN CASE OF FIRE
EMERGENCY ESCAPE PLAN
MEZZANINE FLOOR
W
N
S
E
YOU ARE HERE
FIRE & SAFETY INFORMATION
WHAT TO DO IN CASE OF FIRE
Do not panic and be calm.
If you are in the room,dial HOTEL EMERGENCY NUMBER 555 for assistance.
If you are trained and confident,use the FIRE EXTINGUISHERS.
FIRE EXTINGUISHERS are positioned in the PASSAGE.
IF YOU ARE UNABLE TO CONTROL THE FIRE
Exit your room, close the door properly and follow the exit signs.
May also Alert the front desk by dialing '0' on telephone which is available at the lift lobby.
IF YOU HEAR THE FIRE ALARM FOLLOWED BY EMERGENCY ANNOUNCMENT
Look, if PASSAGE is clear.
Exit your room, close the door properly and follow the exit signs.
If you are unable to use the stairway, stay in your room. Call '0' or '555'.
Make yourself seen at the window, while you wait to be rescued.
A damp closed door made airtight with damp towels will protect you for a longer time.
Do not use the elevators, USE STAIRS ONLY.
DIAL "555"
ATTACK THE FIRE-IF YOU ARE TRAINED
PRESS MANUAL CALL POINT
LEAVE THE BUILDING BY THE ESCAPE ROUTE
USE STAIRS IN EMERGENCY DO NOT USE LIFT
SAFE ASSEMBLY POINT


NO VO TEL
IN CASE OF FIRE
EMERGENCY ESCAPE PLAN
C - LEVEL
W
N
S
E
YOU ARE HERE
MATICA
FIRE & SAFETY INFORMATION
WHAT TO DO IN CASE OF FIRE
Do not panic and be calm.
If you are in the room,dial HOTEL EMERGENCY NUMBER 555 for assistance.
If you are trained and confident,use the FIRE EXTINGUISHERS.
FIRE EXTINGUISHERS are positioned in the PASSAGE.
IF YOU ARE UNABLE TO CONTROL THE FIRE
Exit your room, close the door properly and follow the exit signs.
May also Alert the front desk by dialing '0' on telephone which is available at the lift lobby.
IF YOU HEAR THE FIRE ALARM FOLLOWED BY EMERGENCY ANNOUNCMENT
Look, if PASSAGE is clear.
Exit your room, close the door properly and follow the exit signs.
If you are unable to use the stairway, stay in your room. Call '0' or '555'.
Make yourself seen at the window, while you wait to be rescued.
A damp closed door made airtight with damp towels will protect you for a longer time.
Do not use the elevators, USE STAIRS ONLY.
DIAL "555"
ATTACK THE FIRE-IF YOU ARE TRAINED
PRESS MANUAL CALL POINT
LEAVE THE BUILDING BY THE ESCAPE ROUTE
USE STAIRS IN EMERGENCY DO NOT USE LIFT
SAFE ASSEMBLY POINT


NO VO TEL
IN CASE OF FIRE
EMERGENCY ESCAPE PLAN
GROUND FLOOR
BANQUETS
W
N
S
E
FIRE & SAFETY INFORMATION
WHAT TO DO IN CASE OF FIRE
Do not panic and be calm.
If you are in the room,dial HOTEL EMERGENCY NUMBER 555 for assistance.
If you are trained and confident, use the FIRE EXTINGUISHERS.
FIRE EXTINGUISHERS are positioned in the PASSAGE.
IF YOU ARE UNABLE TO CONTROL THE FIRE
Exit your room, close the door properly and follow the exit signs.
May also Alert the front desk by dialing '0' on telephone which is available at the lift lobby.
IF YOU HEAR THE FIRE ALARM FOLLOWED BY EMERGENCY ANNOUNCMENT
Look, If PASSAGE is clear.
Exit your room, close the door properly and follow the exit signs.
If you are unable to use the stairway, stay in your room, Call '0' or '555'.
Make yourself seen at the window, while you wait to be rescued.
A damp closed door made airtight with damp towels will protect you for a longer time.
Do not use the elevators, USE STAIRS ONLY.
అగ్ని ప్రమాదము పై తీసుకోవలిసిన జాగ్రత్తలు
అగ్ని ప్రమాదము జరిగినప్పుడు ఏమి చేయవలయును
శాంతంగా ఉండండి, ఆందోళన పడవద్దు .
ఒక వేళ గదిలో ఉన్నట్లయితే సిబ్బందిని అత్యవసర నెంబరు 555 కు ఫోన్ చేయండి.
మీరు అగ్ని నిరోధక పరికరములు ఉపయోగించటంలో శిక్షణ పొంది ఉన్నట్లయితే వాటి ద్వారా అగ్నిని అదుపులకు ప్రయత్నించు చేయండి.
అగ్ని మాపక పరికరములు ఆరిపోని సందు ఏర్పాటు చేయబడినవి.
ఒక వేళ మీరు అగ్నిని అదుపు చేయలేని పరిస్థితిలోనుండు
మీరు గదిని నుండి బయటకు వచ్చి ద్వారా తలుపులు మూసి బయట ఉన్న సిబ్బందిని పిలిచి వివరించండి.
ఫ్రంట్ డెస్క్ కు తెలియజేయుటకు లిఫ్ట్ లాబీ నందు ఉన్న టెలిఫోన్ నుండి (0) కు ఫోన్ చేయండి.
ఒక వేళ మీరు అగ్ని ఆవరణ మీదుట అత్యవసరంగా ఏమిచేయాలి
వెళ్ళే మార్గము సరిగా ఉన్నచో, లేదో చూడవలయును.
గదిని నుండి బయటకు వచ్చి తలుపులు ద్వారా మూసి బయట ఉన్న సిబ్బందిని పిలిచి వివరించండి.
పెట్టి దారిని ఉపయోగించలేకపోతే వచ్చిన గదిని నందు గదిని ఉండండి. '0' లేదా '555' కు కాల్ చేయండి.
పొగ్గిలిని తట్టివచ్చే వరకు, కిటికీ వద్దకే వచ్చి కనబడేలాగ ఉండి సిద్ధపడండి.
ద్వారా మూసిన తలుపులు మరియు తడిపిన తువ్వాలు పెట్టుకొని రాగా కొంత వరకు రక్షించుకోవచ్చు.
ఎలివేటర్స్ ను ఉపయోగించరాదు, మెట్ల మార్గాన్ని ఉపయోగించండి.
DIAL "555"
ATTACK THE FIRE-IF YOU ARE TRAINED
PRESS MANUAL CALL POINT
LEAVE THE BUILDING BY THE ESCAPE ROUTE
USE STAIRS IN EMERGENCY DO NOT USE LIFT
SAFE ASSEMBLY POINT


NO VO TEL
IN CASE OF FIRE
EMERGENCY ESCAPE PLAN
FIFTH FLOOR
W
N
S
E
YOU ARE HERE
542
541
540
539
538
537
536
535
526
524
502
504
522
521
519
518
517
516
515
514
527
528
529
530
531
532
534
505
506
507
508
509
510
512
FIRE & SAFETY INFORMATION
WHAT TO DO IN CASE OF FIRE
Do not panic and be calm.
If you are in the room,dial HOTEL EMERGENCY NUMBER 555 for assistance.
If you are trained and confident, use the FIRE EXTINGUISHERS.
FIRE EXTINGUISHERS are positioned in the PASSAGE.
IF YOU ARE UNABLE TO CONTROL THE FIRE
Exit your room, close the door properly and follow the exit signs.
May also Alert the front desk by dialing '0' on telephone which is available at the lift lobby.
IF YOU HEAR THE FIRE ALARM FOLLOWED BY EMERGENCY ANNOUNCMENT
Look, If PASSAGE is clear.
Exit your room, close the door properly and follow the exit signs.
If you are unable to use the stairway, stay in your room, Call '0' or '555'.
Make yourself seen at the window, while you wait to be rescued.
A damp closed door made airtight with damp towels will protect you for a longer time.
Do not use the elevators, USE STAIRS ONLY.
అగ్ని ప్రమాదము పై తీసుకోవలిసిన జాగ్రత్తలు
అగ్ని ప్రమాదము జరిగినప్పుడు ఏమి చేయవలయును
శాంతంగా ఉండండి, ఆందోళన పడవద్దు .
ఒక వేళ గదిలో ఉన్నట్లయితే సిబ్బందిని అత్యవసర నెంబరు 555 కు ఫోన్ చేయండి.
మీరు అగ్ని నిరోధక పరికరములు ఉపయోగించటంలో శిక్షణ పొంది ఉన్నట్లయితే వాటి ద్వారా అగ్నిని అదుపులకు ప్రయత్నించు చేయండి.
అగ్ని మాపక పరికరములు ఆరిపోని సందు ఏర్పాటు చేయబడినవి.
ఒక వేళ మీరు అగ్నిని అదుపు చేయలేని పరిస్థితిలోనుండు
మీరు గదిని నుండి బయటకు వచ్చి ద్వారా తలుపులు మూసి బయట ఉన్న సిబ్బందిని పిలిచి వివరించండి.
ఫ్రంట్ డెస్క్ కు తెలియజేయుటకు లిఫ్ట్ లాబీ నందు ఉన్న టెలిఫోన్ నుండి (0) కు ఫోన్ చేయండి.
ఒక వేళ మీరు అగ్ని ఆవరణ మీదుట అత్యవసరంగా ఏమిచేయాలి
వెళ్ళే మార్గము సరిగా ఉన్నచో, లేదో చూడవలయును.
గదిని నుండి బయటకు వచ్చి తలుపులు ద్వారా మూసి బయట ఉన్న సిబ్బందిని పిలిచి వివరించండి.
పెట్టి దారిని ఉపయోగించలేకపోతే వచ్చిన గదిని నందు గదిని ఉండండి. '0' లేదా '555' కు కాల్ చేయండి.
పొగ్గిలిని తట్టివచ్చే వరకు, కిటికీ వద్దకే వచ్చి కనబడేలాగ ఉండి సిద్ధపడండి.
ద్వారా మూసిన తలుపులు మరియు తడిపిన తువ్వాలు పెట్టుకొని రాగా కొంత వరకు రక్షించుకోవచ్చు.
ఎలివేటర్స్ ను ఉపయోగించరాదు, మెట్ల మార్గాన్ని ఉపయోగించండి.
DIAL "555"
ATTACK THE FIRE-IF YOU ARE TRAINED
PRESS MANUAL CALL POINT
LEAVE THE BUILDING BY THE ESCAPE ROUTE
USE STAIRS IN EMERGENCY DO NOT USE LIFT
SAFE ASSEMBLY POINT



GROUP SITE PHOTOGRAPHS



SERVICES

---

1. Basement Parking & Vehicular Access

- **Parking Facilities**: The property provides **free on-site parking**, including both **valet and self-parking options**, with dedicated **wheelchair-accessible spaces** and an **EV charging station**
- **Capacity & Flow**: Although exact numbers aren't public, the parking design supports both guest vehicles and service vehicles with smooth ingress and egress.
- **Placement**: Parking is conveniently placed near the entrance, allowing efficient separation of guest arrival flows and service logistics while maintaining the beachfront visual and pedestrian character of the site.

2. Fire Safety Norms & Emergency Systems

- **Fire Extinguishers & Smoke Detectors** are installed across guest rooms, public areas, and back-of-house zones
- **Security & Surveillance**: 24-hour security, CCTV monitoring, fire alarms, and smoke sensors across public and service zones
- **Accessibility & Escape Design**: Emergency exits are barrier-free and accessible per the **PwD Act and UNCRPD**, with visual and braille signage and well-lit, wide exit paths.

3. Water Supply & Sewage Treatment

- **Greywater Recycling**: The hotel operates a **greywater recycling system** that treats and reuses water for landscape irrigation and non-potable uses, reducing freshwater demand by an estimated 30–40%
- **Water-Efficient Fixtures**: Low-flow faucets, dual flush toilets, and regulated shower systems are part of the water conservation strategy
- **Rainwater Harvesting & Drainage**: Although specifics are not detailed online, the property's coastal location and high rainfall climate strongly suggest usage of roof rainwater harvesters and permeable paving systems (aligned with eco-performance standards noted)

4. Energy, Waste & Sustainability Services

- **Energy Management**: At least **80% of lighting uses LED fixtures**, complemented by **renewable energy sources**, likely including rooftop solar panels for common areas
- **Waste & Plastic Policy**: Strong no-single-use plastic policies are enforced—ban on plastic bottles, disposable stirrers, straws—with **recycling practices**, **bulk dispensers for toiletries**, and sustainable cleaning protocols
- **Green Certification**: The hotel is associated with environmental certifications and invests at least **10% of profits in community and sustainability initiative.**

INFERENCES –

vizaghotels.netgohotels.comHotels.com.

MakeMyTripPlanet of Hotels.

travel-code.comReservations.com.

Reservations.com.



Construction & Services key Notes –

Slab Work Schedule

1. **Reinforcement** – Today
2. **Electrical Layout** – Ongoing
3. **Concrete Casting** – Saturday

Key Functional Zones in Resort Design

- Banquet Halls
- Restaurants
- Guest Rooms
- Service Areas (Back-of-House)

Main Services of the Mall/Resort

- Staff Canteen
- Laundry
- Podium Level Service Integration
- Land Area Requirements
- Brand Requirements (franchise standards)
- Room Size Standards – One room unit standards to be met as per hotel star category.

HVAC System

- To be centrally managed with energy-efficient zoning and ductwork

Parking Infrastructure

- **2 Floors of Parking**
- **3 Basement Levels for Parking**
- Compliance as per **NBC Guidelines**
- Segregation of guest and service parking

Floor-to-Floor Height

- **Residential Units**: 3.1 – 3.5 m
- **Commercial Areas**: 4.0 – 4.5 m
- **Service Floors (MEP)**: ~10 m clear height for installations

Dedicated Service Floors

- **G-2 Level (Basement 2)** includes:
    - **Pressure Pumps**
    - **Water Tanks**
    - Floor-to-floor height: **10 meters**

Construction Schedule (Slab Work)

1. **Reinforcement** – Scheduled for today
2. **Electrical Layout** – To follow reinforcement
3. **Concreting** – Scheduled for Saturday

Functional Program (Zones)

- Banquet Halls
- Restaurants
- Guest Rooms
- Service Areas

Back-of-House Services

- Staff Canteen
- Laundry
- Podium Level Integration
- Land Area Requirements
- Accommodation standards for hotel brand affiliation
- Standard Room Size Requirements (per 5-star guidelines)

Mechanical Services (MEP)

- Centralized **HVAC System**
- Electrical distribution and fire suppression systems per NBC

Parking Design

- 2 floors dedicated to surface or semi-basement parking
- 3 full levels of **basement parking**
- Compliant with **NBC standards**

- Segregation of residential, commercial, and service traffic

Floor-to-Floor Heights

- **Residential Zones**: 3.1 m to 3.5 m
- **Commercial Areas**: 4.0 m to 4.5 m
- **Service Floors (MEP)**: 10 m (for major installations)

Dedicated Service Floors

- **G-2 Level** includes:
    - Pressure pumps
    - Water tanks
    - Floor-to-floor height: 10 m

Mechanical & Building Management Services

1. Plant Control Panel (Level -2)

- Centralized control system for plumbing, HVAC, and fire services.
- Fire pipes of **500 mm diameter**, size varies as per building capacity.
- Plumbing and mechanical ducts are clearly segregated and color-coded.

2. Water Level Monitoring

- Managed through the **Building Management System (BMS)** located in the control room.
- Automated alerts and adjustments for efficient water use and tank levels.

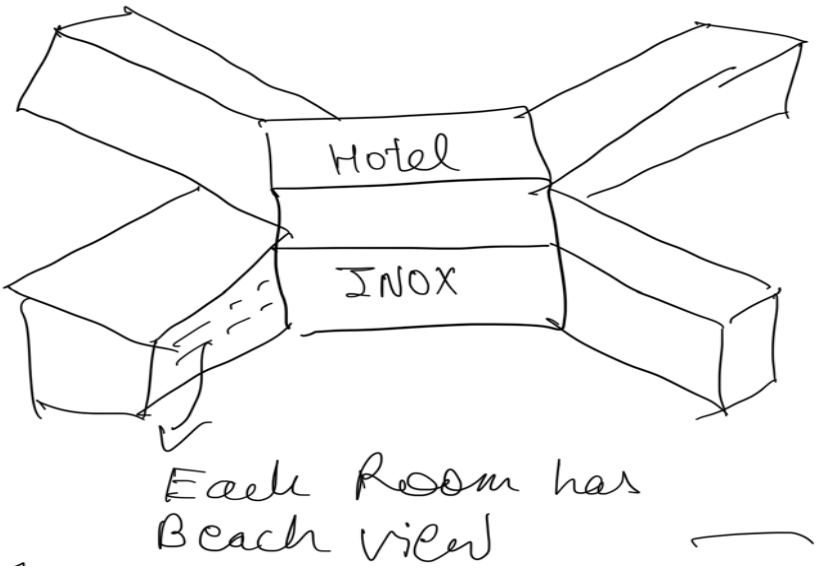
4. HVAC System

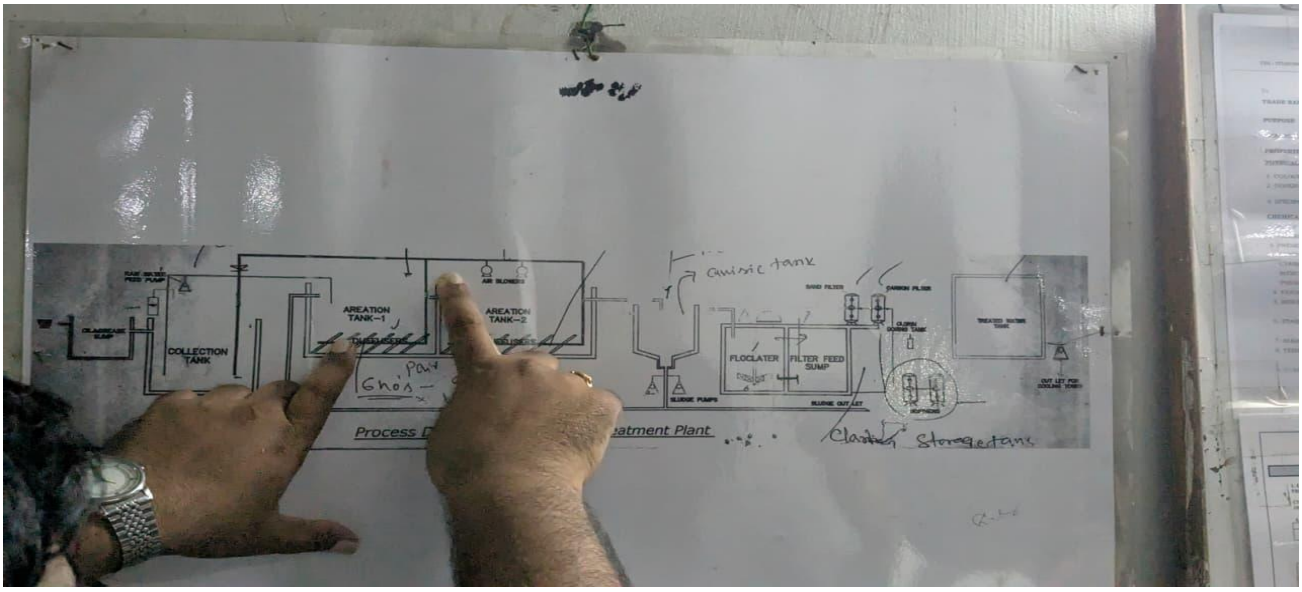
Banquet Level is equipped with 58 AHUs (Air Handling Units) for large occupancy and event load.

Other levels have FCUs (Fan Coil Units) and AHUs sized based on:

- Footfall density
- Functional requirements of each zone (rooms, restaurants, etc.)




Hotel
INOX
Each Room has
Beach view


AREATION TANK-1
AREATION TANK-2
COLLECTION TANK
FLOCLATER
FILTER FEED SUMP
Process
Treatment Plant


Fire Hydrant
Fire hose reel



1. Awards & Recognition -

- **Best Coastal Hotel in India (2022)**: Awarded by *Haute Grandeur Global Hotel Awards*—a prestigious recognition based on guest feedback and expert reviews. Highlights the hotel's excellence in coastal luxury hospitality
- **Best Contribution to Hospitality in South India (2022)**: Awarded by *SIHRA (Southern India Hotel & Restaurants Association)*—signals regional leadership in tourism and service quality.
- **India's Best Seafront Luxury Wedding Destination**: Awarded by *India Travel Awards*—further emphasizes its reputation as a premier venue for destination weddings .

2. Wellness & Recreational Experiences

- **Calm Spa & Salon**: Offers holistic treatments—Vinotherapy, Aromatherapy, Balinese, Thai massages—and bridal beauty services with views of the sea .
- **In Balance Gym & Rooftop Jogging Track**: 24/7 fitness facilities with sea views; a rooftop jogging track enhanced with landscape elements making it fit-for-purpose for movement and wellness.
- **Infinity Pool**: Ocean-facing pool with loungers and umbrellas; acts both as guest amenity and iconic visual element in landscape planning.

3. Meeting & Event Spaces

- **V-Convention Centre (1, 2, 3)**: A column-free convention hall of **11,200 sq ft** that can be divided, seating up to 1,700 in theatre style or 520 in banquet setup; includes a **4,500 sq ft pre-function area** and AV support (projectors, microphones, flip-charts) .
- **Nautica Banquet Hall**: Smaller intimate space (~120 pax banquet, 50 U-shape), with scenic views of the bay—a valuable study for tiered event design .
- **Avenue**: Roof-top open-air venue of 3,584 sq ft, ideal for dining under the stars; seating capacity up to 470 people.

4. Food & Beverage Outlets

- **The Square**: All-day buffet dining with European décor, live cooking counters, teppanyaki, and wood-fired pizza station.
- **Zaffran**: Upscale Indian cuisine.
- **Red Bowl** (Pan Asian rooftop venue) and **Herbour Vue** lounge bar overlooking the ocean.
- **Sugarr**: On-site bakery and café offering desserts and local refreshments

5. Service & Venue Versatility

- **Multi-event capability**: The hotel caters to a broad range of events—from high-end weddings and corporate conferences to cultural performances and festival gatherings—thanks to its modular spaces and seamless hospitality support .
- **In-house DJ and catering policies**: Exclusively uses in-house services for food and entertainment, ensuring quality control and streamlined operation for all types of events .

INFRERENCES -

HospiBuz.
luxuryabode.com.
Hotelier India.
Novotel Visakhapatnam Varun Beach
Hotelier India.
Novotel Visakhapatnam Varun Beach
NativePlanetweddingaffair.co.in.
VenueLookweddingaffair.co.in.

6. Noteworthy Sustainability Initiatives (Beyond Basics)

- **Green Key Certification (July 2025)**: Recognized by the *Foundation for Environmental Education* and aligned with *Global Sustainable Tourism Council (GSTC)* standards. This globally acknowledged eco-label underscores the hotel's practices in renewable energy, water conservation, waste management, and sustainable sourcing.

- **Operational Integration**: Sustainable measures are integrated not as add-ons but as lifestyle elements—from staff practices and community outreach to design decision-making—consistent with Accor's *Planet 21* sustainability program

Aspect	Details
Awards & Recognition	Haute Grandeur, SIHRA, India Travel Awards
Wellness Amenities	Spa & Salon, rooftop gym, infinity pool.
Event Spaces	V-Convention, Nautica, Avenue
F&B Diversity	The Square, Zaffran, Red Bowl, Harbour Vue, Sugarr.
Operational Policies	In-house catering/DJ, flexibility across event types
Sustainability Practices	Green Key certification, renewable energy, waste & water protocols

Conclusion –

The case study of Novotel Visakhapatnam Varun Beach reveals a successful integration of luxury, sustainability, and coastal contextuality in resort architecture. Its strategic siting, efficient spatial planning, and adherence to international hospitality standards make it a benchmark for seafront development. From service infrastructure to guest experience, the project demonstrates how thoughtful design and operational excellence can create a resilient, eco-conscious, and commercially viable resort model—offering valuable insights for the design of similar hospitality projects along India's coastline.

5.2 CASE STUDY 2 :TAJ CIDADE DE GOA (Live Case study)



- Luxurious resort on Vanguinim Beach – Goa (India)
- Designed By well known Architect – **Charles Correa.**

1. Introduction & Legacy -

- Located amidst the pristine hillocks of Dona Paula and the shimmering shoreline of Vainguinim Beach, Taj Cidade Goa, Goa is an architectural marvel celebrating the true spirit of paradisiacal Goa. Offering a staggering 500 rooms, state of the art facilities and a host of award-wining leisurely pursuits, the hotel is a harmonious blend of authentic Goan hospitality and world-class opulence.
- Taj Cidade de Goa Horizon, an exquisitely designed luxurious haven stands tall on a densely forested hillock overlooking the magnificent Arabian Sea. Complementing the Maje Horizon, the iconic Taj Cidade de Goa Heritage, originally designed by the legendary Charles Correa in 1982 adorns the tranquil coast of Vainguinim with its enchanting architectonics.

2. Spatial & Architectural Planning –

- Heritage property reflects traditional Goan-Portuguese architecture: terracotta-tiled roofs, vibrant façades, chequered flooring, and internal courtyard.
- Horizon property is a modern resort typology with sleek massing, landscaped terraces, and minimalistic interiors infused with local motifs.
- Both properties maintain direct beach access, water-facing pools, and lush gardens bridging built and natural environments.

3. Accommodation & Spatial Capacity

- Heritage: 186 rooms + 15 suites, including both sea-view and garden-view rooms; some rooms offer private sit-outs overlooking Vainguinim Beach.

- Horizon: 282 rooms + 17 suites, with dedicated Taj Club rooms, butler service, and ergonomic workstations designed for “bleisure” travelers.

4. Recreational Facilities & Wellness -

- **Dual resort pools**: ocean-facing Heritage pool and a rooftop infinity pool at Horizon set against the sea
- **J Wellness Circle Spa**: Offers holistic therapies like *Trupti*, *Vishramā*, *Shringaar Bridal*, and couple rituals—combining Ayurveda with modern treatments
- **Fitness & Yoga**: Fully equipped gym, rooftop jogging track, yoga classes, sauna, steam room

5. Dining & Culinary Experience -

- **Heritage**: Restaurants include Alfama (Portuguese), Café Azul, Laranja, and Bar Latino—alongside beachfront BBQ dinners and garden dining.
- **Horizon**: Four restaurants and bars—BLD (multicuisine), The Banyan Eat Bar, C2C (coastal cuisine), and DPB rooftop bar; signature experience: **sunset dining at The Edge** terrace with panoramic sea views.

6. Meetings, Events & Entertainment -

- **Banquet & Conference Spaces**:
  - Horizon: Pillarless halls, breakaway rooms, dedicated event entrance—conference capacity up to 4,306 sq ft
  - Heritage: Frequent hosts to weddings and cultural gatherings with lush lawns and indoor banquet halls.
- **Cinema at Horizon**: Goa’s only private 30-seat theatre within a resort for film events and private screenings.
- **Entertainment**: Live performances (Fado music, local cultural acts), evening theatre by the beach, themed experiences like Feni tastings or candlelit dinners under the stars.

7. Landscape & Environmental Features -

- Heritage landscaping: lush lawns, native coastal trees, colorful tropical flowers, garden furniture, picnic zones, terraces, BBQ pits, and direct beach deck access.
- Horizon integrates vertical gardens, water features, fountains, and greenery along the hillside footprint—maintaining coastal ecology while enhancing guest experience.

8. Services & Guest Amenities -

- Accessibility: Wheelchair ramps, braille signage, accessible bathrooms, lifts, and pet-friendly zones in both hotels.
- Guest Services: Round-the-clock front desk, concierge, currency exchange, laundry, multilingual staff, tour desk, EV charging, doctor on call, shuttle service to Panaji.
- Family Facilities: Children's pool, playground, indoor game room, kids’ buffet zones, babysitting and child services, bicycle rental, tennis and badminton

9. Sustainability & Operational Practices -

- Heritage is **EarthCheck certified**, and Horizon has received **Green Key certification** highlighting energy efficiency, water management, and environmental practices.

- Free shuttle, beach cabanas, valet parking, and complimentary beach towels enhance operational efficiency and comfort.

10. Distinctive Experiences & Design Interpretation -

- **Heritage** evokes traditional Goan charm through architecture, textures, and cultural experiences; **Horizon** balances contemporary minimalism with Goan warmth and coastal serenity.
- Signature experiential offerings: *Rooftop dining at sunset*, *spa therapies*, *cinema*, *adventure treks*, *cruises on Arabian Sea*, and *heritage cultural walks* orchestrated in partnership with local artists and travel curators like "Make It Happen".

- **A Comparison between Taj Cidade de Goa Heritage and Taj Cidade de Goa Horizon Wings –**

Aspect	Heritage Wing	Horizon Wing
Rooms & Suites	186 rooms + 15 suites	282 rooms + 17 suites
Architectural Style	Goan-Portuguese heritage architecture	Contemporary hillside minimalism
Wellness Facilities	Large spa, kids pool, fitness centre	Rooftop spa, infinity pool, jogging deck
Dining Outlets	Alfama, Café Azul, Laranja, Bar Latino	BLD, The Banyan, C2C, DPB, Sunset dining
Event Spaces	Garden lawns + banquet hall	Large pillar-free convention + cinema
Unique Features	Cultural performances, heritage cues	Cinema, vertical gardens, elevated pool
Sustainability	EarthCheck certified	Green Key certified
Accessibility	Full universal access	Fully accessible public and guest zones
Activities & Tours	Beach sports, family games	Cruises, treks, Feni tastings, bespoke classes

INFERENCES –

- https://www.tajhotels.com/en-in/hotels/taj-cidade-de-goa-horizon?utm_source=chatgpt.com.
- https://www.tajhotels.com/en-in/hotels/taj-cidade-de-goa-heritage?utm_source=chatgpt.com
- https://www.vivantahotels.com/content/tajhotels/en-in/our-hotels/hotels-in-goa.html?utm_source=chatgpt.com.
- https://cidade-de.thegoahotels.com/us/?utm_source=chatgpt.com.



The Heritage and Horizon showcase varied facets of the signature Taj hospitality to the discerning traveler in search of new evocative experiences. Each tastefully designed haven articulates its own singular aesthetic language and yet seamlessly converses with the other to relate an untold story of Goa that poetically narrates its historic past, vibrant present and glorious tomorrow.

Taj Cidade de Goa Heritage, Goa

Design –

Goa's rich history is an inexhaustible spring from which the multiple visual stories unfold through sunlit corridors of the iconic Taj Cidade de Goa Heritage, Goa. The late Charles Correa, renowned for his indelible contribution to contemporary Indian architecture, offers a deeper understanding of Goa's layered past in dramatic hues and awe-inspiring patterns.

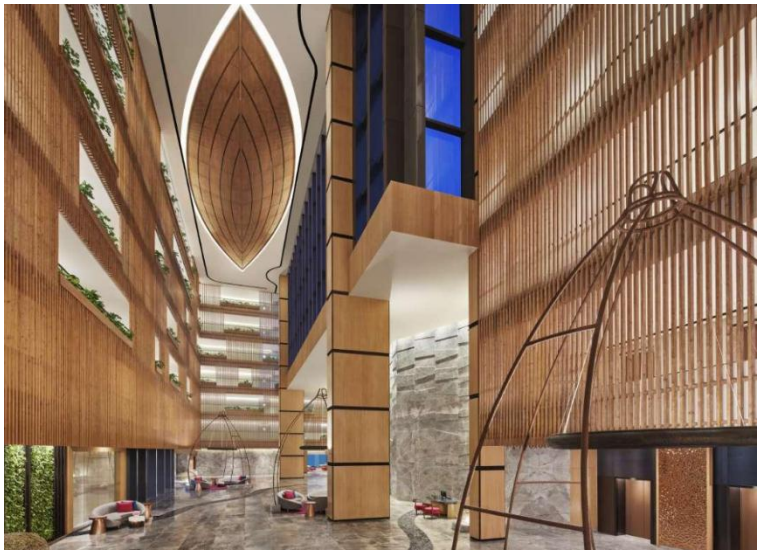
- Paying homage to the intertwined histories and key moments that shaped Goa's cosmopolitan cultural identity, the intricate design was outlined to embody the 'City of Goa'.
- Vibrant hued Quartos (quarters or rooms), poetic spaces, gastronomic indulgences telling of Goa's flavorsome culinary legacy and experiences immersed in local culture conjoin with oceanic environs blend seamlessly to create the perfect Goan escapade.

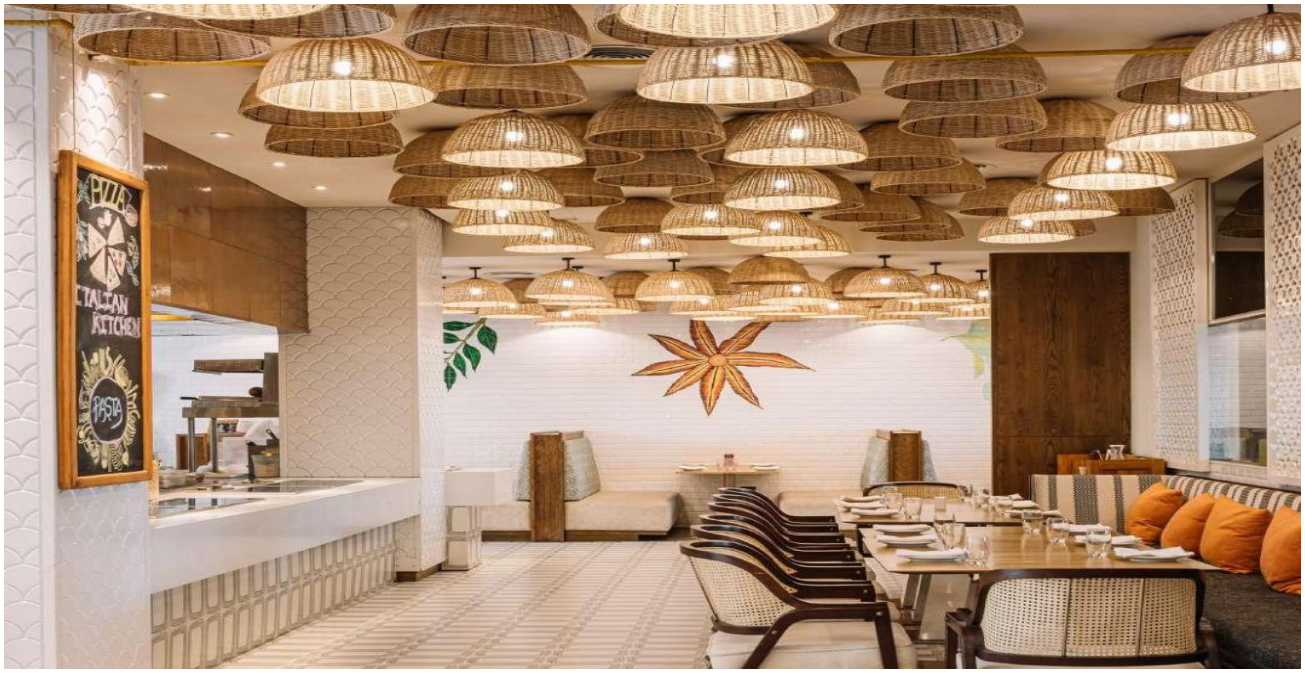
- Murals inspired from anecdotes of the past and charming by lanes like the Rue de Sol (way of the sun) adorn the hotel's corridors and winding aisles.
- The enthralling tale of the land comes to life with vivid imagery – from Vasco Da Gama's sea route to the splendor of House of Kadamba and House of Adil Shah.
- One such depiction is the three life size statues of Vasco Da Gama, representing the many facets of the man as explorer, statesman and philosopher, stand as if in conversation with each other in the lobby.

A Plethora Of Flavours –

- Named after the historic quarter of Lisbon with its labyrinth of winding lanes and houses atop steep bylanes, Alfama is designed, both aesthetically and acoustically, to offer a Portuguese inspired experience. Guests can sit around a central plaza, at different levels, on terraces and balconies, in different houses overlooking the central square where Fado, a soulful style of music evoking saudade, the Portuguese expression of nostalgia and longing, is performed once every month.
- The menu of this specialty restaurant offers not only mere dishes but an invitation to journey into another time, another culture, a nod to its rich past that has found its way into the unique cuisine of Goa.
- In blues and whites, the poolside Café Azul serves up a fresh feel, of both food and mood. The multi-cuisine menu is young here and keeps evolving every six months. Chefs keep up with the pulse of our times offering unusual dishes like the very popular Sandwich with Granny Smith apples as a filling. Apart from newer flavours, the long-standing celebrated restaurant continues to serve up old favourites to please their old-time regulars repeatedly visiting for over four decades.
- Bar Latino, the bohemian style pool bar and Barbecue, offering the fresh catch of the day served in Indian or Western flavours among other grilled options are seasonal outlets, open only when Goa's heavy monsoon recedes. The spacious coffee shop, Laranja in vivid hues of tangerine showcases a gourmet spread of buffets for breakfast, lunch and dinner.
- Capturing the laidback mood of Goa, the typical Goan Taverna pays homage to the local in new ways, proud to offer spirits brewed and distilled in Goa including homegrown beers, gins, (a nod to the gin renaissance sweeping the world), and whiskies.
- A menu of light bar bites tides guests over susegad afternoons and gorgeous sunsets overlooking the beach accompanied by live music.







BLD, an all-day dining restaurant at Taj Cidade De Goa Horizon, Goa

EPICUREAN SAGA –

An all-day dining, BLD offers three kitchens - Asian, Goan and Western where diners can see their food being prepped and interact with the Chefs. With an emphasis on brisk seamless service, the restaurant extends to an alfresco terrace fronting gorgeous sea views. The multi-cuisine dining offers sumptuous buffets for Breakfast, Lunch and Dinner as well as a specially crafted menu with global flavours.

The Banyan, Eat-Bar derives its name from a 200year-old banyan tree, a landmark in the property. Inventive cocktails, high teas, delectable nibbles and a spectacular backdrop converge to offer a quick business luncheon or an intimate evening soiree. Inspired by nature, the bar and its menu highlight the wisdom of sustainable sustenance.

Embark on a culinary journey from coast to coast at the specialty dining, C2C. With double height ceilings hung with fishing nets, light fixtures creatively placed inside lobster cages and elegantly reimagined sea motifs, the restaurant showcases coastal inspired fine dining and invigorating cocktails. The multi-sensory experience is only available in the evening apart from a generous brunch.

LEISURE IN TRUE GOAN SPLENDOR –

Delve into a slice of quintessential Goa with an array of experiences seeped in local culture and heritage. From historic Goan architecture to traditional occupations and handcrafted artefacts to age-old culinary techniques, unfold the pages of yesterday with itineraries curated to narrate the untold story of Goa.

Cinephiles can delight in the 30-seater onresort cinema while fitness enthusiasts have access to state-of-the-art fitness centres. Unwind with expansive swimming pools strategically located to showcase mesmerizing sunset vistas and the brilliance of nature.

Elevate your senses with The J Wellness Circle, holistic rejuvenation inspired by ancient Indian healing wisdom. Immerse in soothing luxury with a selection of carefully recreated treatments drawn on the rich and wellness heritage of India. Undertake the journey within, through an array of enlivening holistic treatments, meaningful rituals and ceremonies for a truly calming experience.

A resplendent collage of tropical beauty and refined elegance, no matter what the heart desires, the opulent sanctuary ensures plenty to make each moment exceptional. Experience Goa it in all its magnificence at Taj Cidade de Goa.



C2C Restaurant at Taj Cicade De Goa Horizon, Goa

Taj Cidade de Goa, in both Heritage and Horizon formats, sets a rich precedent in coastal resort design. It blends **traditional regional character** with **modern luxury**, incorporates **diverse service offerings**, and exemplifies sustainability, cultural integration, and spatial flexibility.

For your thesis, it stands out as a case study in achieving harmony between **heritage identity**, **guest experience**, and **environmental responsibility**—offering transferable insights for designing a responsible, landmark coastal resort in Vizag.



Site plan and floor plans of Taj Cidade de Goa

SITE PHOTOGRAPHS –



Terrace view



Entrance Looby



Terrace floor





Pool View



Corridor view



Architectural Philosophy: Charles Correa's Vision for Taj Cidade de Goa

1. "A Village Within a Resort": The Conceptual Framework -

Correa conceived Cidade de Goa not as a monumental resort but as a "mini-village"—a **living collage of shared paths, courtyards, and open-air sequences**, cascading toward the sea. He infused the layout with **the spatial character of Goan settlements**, where communal life unfolds through courtyard networks and shared alleys.

2. Climate-Responsive and Human-Centred Design

His ethos—**"form follows climate"**—is manifest in the siting and orientation of guest blocks, courtyard ventilation, low-rise forms, and breezy corridors. Rooms overlook courtyards rather than corridors, facilitating natural airflow and shaded light throughout the day.

3. Syncretic Cultural Imagery and Artistic Integration

Correa layered history and local culture through every detail: hand-painted murals by local signboard artist Bhidekar, friezes depicting Kadamba and Islamic motifs, and trompe-l'œil street murals in corridors that transform walls into imagined Goan streets—a narrative journey from arrival to room.

4. Spatial Narratives & Path Experience

Aligned with Correa's philosophy that "a path is a pilgrimage," circulation was designed as a deliberate journey—meandering walkways, levels, and platforms punctuated by glimpses of sea, courtyards, and art installations. The entry gateway (demolished but once iconic) served as a ceremonial intro to this experiential voyage.

5. Materiality with Local Resonance

Use of **laterite** and terracotta styling was not purely aesthetic. It linked the structure to Goa's earth, climate, and heritage. These materials—hand-textured, earth-toned—create a tactile continuity between landscape, building, and coastline.

6. Fragmented Views & Architectural Sequence

Reflecting Cubist sensibilities, Correa broke the resort into interlocking volumes—balcões, stepped terraces, courtyards—with each fragment offering a unique vista. His layered massing reveals and conceals views, creating a sense of discovery as one moves through the resort.



Services & Construction Insights -

1. Fire Safety & Emergency Planning

- Managed in accordance with Goa's **State Fire Services**, requiring a valid **NOC for fire safety clearance** from the Directorate of Fire and Emergency Services (Goa).
- While specifics for Taj aren't public, large resorts in Goa typically include:
    - Multiple hydrants, wet risers, and interior sprinklers
    - Accessible fire escape routes through open courtyards and visible stairwells
    - Dedicated fire assembly zones in landscaped areas and near banquet lawns
- Smoke detectors, fire alarms, and clear signage fulfilling **NBC Part 4** safety norms are standard in the Heritage and Horizon wings.

2. Water Supply & Wastewater Systems -

- **Rainwater harvesting systems** are logically integrated across the 30-acre site given Goa's heavy rainfall; though not explicitly documented, this practice aligns with IHCL sustainability policy and EarthCheck/Green Key norms.
- **Greywater recycling** serves irrigation purposes in lawns and planter zones, reducing potable water usage.
- Given the luxury scale, it's probable that Taj employs **dual plumbing systems**, backflow valves, and decentralized pumps for consistent pressure.

3. Construction Materials & Techniques

- The Heritage wing **utilizes laterite-derived ochre plastered walls**, hand-textured to mimic Goan Portuguese façades—chosen for climate compatibility and visual identity.
- Wall murals are executed in **Kaavi-style engraving**, incised red-oxide motifs on lime plaster—rooted in Konkani tradition.
- Layout features responsive **courtyard clusters with vaulted terraces, balcãos, and open galleries**, built in low-rise fragmented blocks to break wind load and optimize shadowing.
- For the **Horizon wing**, modern concrete frame construction is used—minimalist geometry, vertical gardens, rooftop overhangs, and sculptural elements (suspended boat hull) reflect advanced structural detailing.

4. Mechanical Systems & MEP Zoning

- Utility and plant rooms are likely **located in basement/sub-basement levels**, serving both wings and accessible via service corridors.
- **Pressure pumps**, storage tanks, AHUs, and FCUs are integrated within concealed service zones, supporting climate control in ballrooms, pool deck, and guest areas.
- **Landscape irrigation** is managed through drip and sprinkler systems fed from harvested and recycled sources.

Landscape Concepts in Taj Cidade de Goa -

1. Integration with Natural Topography -

The site is perched on a coastal cliff along **Vainguinim Beach**, with gentle slopes descending toward the Arabian Sea. Instead of leveling the land, Charles Correa allowed the **terraced terrain** to dictate the layout. The landscape flows **with the contours**, creating tiered gardens and platforms at different levels.

2. Courtyard & Cluster Philosophy -

Correa's planning introduced **Goan-style internal courtyards** planted with coconut palms, bougainvillea, and stone paving. These micro-landscapes offer **cool pockets of shade**, social interaction zones, and visual rhythm. They also allow natural ventilation and light into surrounding rooms.

3. Tropical Plant Palette -

The planting design mimics local ecosystems rather than imported symmetry. Trees and plants used:

- **Coconut palms**, **frangipani**, **hibiscus**, **bamboo clusters**
- Low groundcover like **tulsi**, **banana shrubs**, **Areca palms**
- **Climbers** and **creepers** hugging balustrades and balconies.

4. Axial Views & Vistas -

The entire property is carefully choreographed with **visual corridors**:

- Framed sea views between buildings
- Garden paths that end in a sculpture or water body
- Palm-lined walkways that widen into oceanfront lawns.

Strategically placed lawns and waterbodies also act as **firebreaks** and buffer zones. The green edge between built mass and cliff reduces wind-borne salt impact while protecting from fire spread.

6. Materiality & Texture in Hardscape

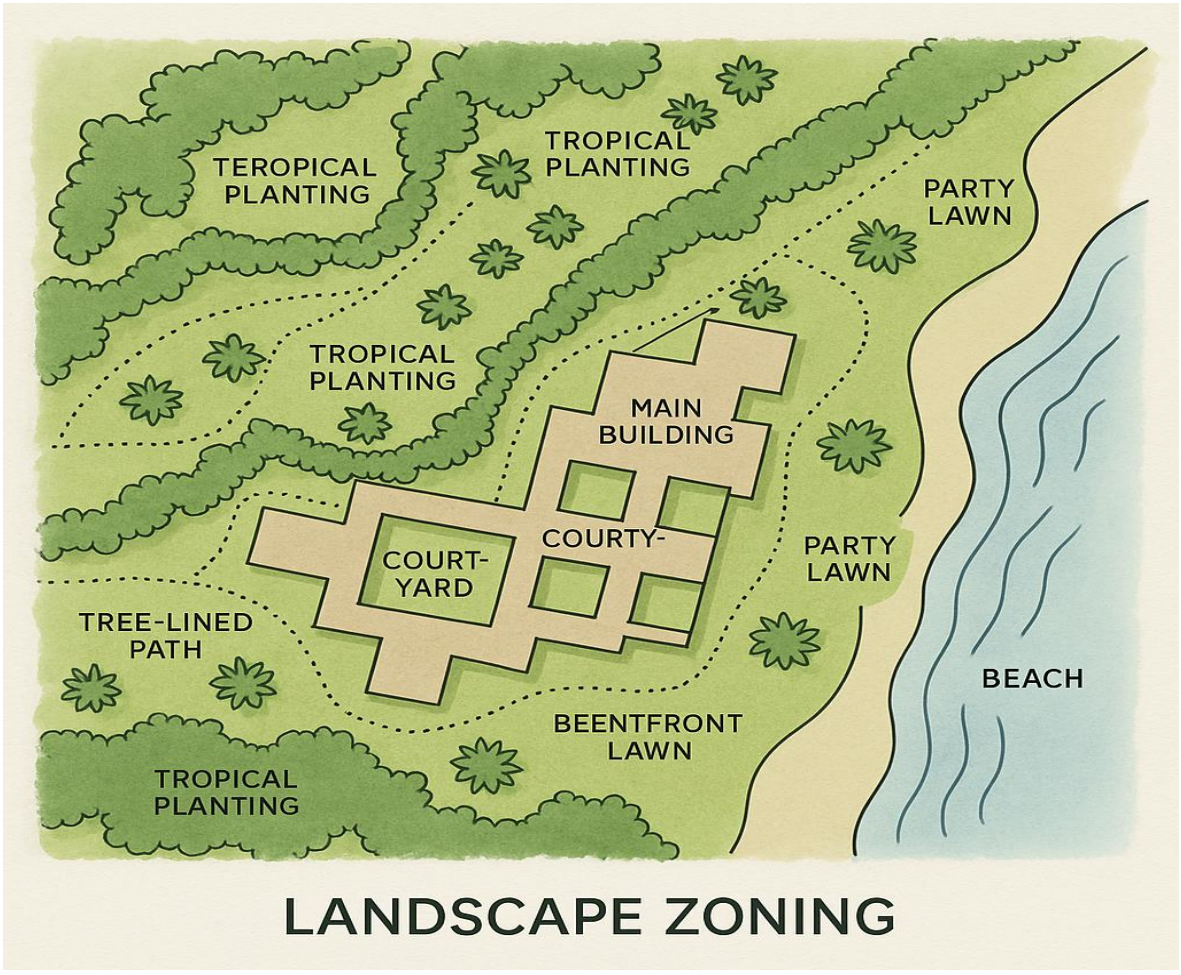
Landscape elements are not ornamental—they are **walkable, tactile, and lived-in**:

- **Laterite stone steps**
- **Terracotta tiles**
- Locally carved **granite benches**
- Pebbled or cobbled walkways with uneven edges—intentionally rustic to slow walking pace





Plantation used in the Resort Premises.



5.3 CASE STUDY 3 : Taj Exotica Resort & Spa, Goa (DESK APPRAISAL)



Overview & Context -

Nestled alongside **Benaulim Beach**, Taj Exotica spans roughly **56 acres** of landscaped gardens and lawn terraces overlooking the Arabian Sea.

- **Location**:
  Calwaddo, Benaulim Beach, Salcete, South Goa, Goa 403716, India
  It is located directly along the pristine Benaulim Beach on the western coast of Goa, about 27 km from Goa International Airport (Dabolim).
- **Architect:**
  The resort was **conceptualized by the Taj Group's in-house design team** in collaboration with consultants from international hospitality specialists, though an individual architect's name is **not publicly disclosed** like in signature projects (e.g., Charles Correa's work). The design reflects a blend of **Mediterranean influences** with **Portuguese–Goan colonial architecture**.
- • **Site Area**:
  Approximately **56 acres** of lush green beachfront property.
- • **Developer**:
  Indian Hotels Company Limited (IHCL) – parent company of the Taj Hotels Group.
- • **Opening Year**:
  1999, and has been consistently renovated and upgraded to meet luxury resort standards.

- **Classification**:
  5-Star Deluxe Beach Resort under the **Taj Luxury segment**.

Overview of Accommodation – 140 keys

Type	Unit	Size (Sq.mt)
Villa Room Garden View	42	56
Deluxe Room Sea View *(Main Building)*	21	56
Premium Villa Room Garden View	38	56
Premium Room Sea View *(Main Building)*	13	59
Villa Room Garden View with Plunge Pool	4	56
Premium Villa Room with Plunge Pool	4	56
Indulgence Villa Room with Plunge Pool	10	56
Junior Suite *(Main Building)*	2	92
Executive Suite *(Main Building)*	2	110
Luxury Suite *(Main Building)*	2	115
Two Bedroom Presidential Villa with Plunge Pool	2	164






Overview of Food & Beverage Outlets

- 03 Restaurants & 01 High-Energy Bar:
  - **Sala da Pranzo** – All day Diner serving world cuisine to cater to our global guests
  - **Miguel Arcanjo** – Our Award Wining Goan & Portuguese Speciality restaurant open for Dinner Service only. The restaurant also features a lively show kitchen.
  - **Lobster Village** - Our seasonal beach front Grill Restaurant offering choicest of the seafood locally sourced from the neighbouring fishermen community.
  - **Adega Camoens** – High Energy Eclectic Bar, offering the widest variety of Wines and Liquor around the world. One can enjoy the beautiful sunsets while sipping cocktails at the balcony of the bar and nibbling the chef' special knick-knacks








Venue	Dimensions W x L x H	Area Sq. Ft	Theatre Seating	Classroom seating	U-shape	Round table seating
Sala Grande	57x80.66x13.78	4600	450	175	100	160
Saleta I	22.64x34.45x10	780	40	24	25	24
Saleta II	22.64x34.45x10	780	40	24	25	24
Sala Media	39.4x56.7x9.2	2000	80	45	45	48



	privacy in a coastal plot

Landscape Strategy	Gardens woven through built form soften transitions and reinforce climate logic
Event Zoning	Frequency of sea-view lawns and pillar-free halls inform flexible spatial programming
F&B Layout	Distributed eateries activate zones and create layered guest experience
Wellness Integration	Jiva Spa and yoga decks demonstrate landscape-health synergy



Spread across 56 acres of landscaped gardens, the Mediterranean-style Taj Exotica Resort & Spa, Goa sits along a private beach overlooking the Arabian Sea. It is conveniently located at a distance of 4km from Goa Chitra Museum and 10 km from Margao. Taj Exotica Resort & Spa has a full-service spa, a large swimming pool and a fully equipped fitness centre along with a meeting room with wireless internet connectivity, conferencing facilities etc.

The resort offers 24-hour front desk, travel desk, currency exchange, laundry, dry cleaning, car rental, room service and parking facility. Recreational facilities include cemented tennis court, badminton court and cricket ground. Taj Exotica Resort & Spa houses 34 rooms and 6 Suites along with 98 villas and 2 Presidential villas. The luxurious accommodation units at the resort are elegantly designed with refreshing views of the garden and sea. All rooms are fitted with modern amenities like flat-screen TVs with satellite channels, mini bar, complementary Wi-Fi, private balconies and bathrooms with luxury bath amenities.

Swimming Pool
09 Executive Golf Course
Cycling
Taj kids
Tennis court
Cricket





ACTIVITIES

Venue	Dimensions W x L x H	Area Sq. Ft	Theatre Seating	Classroom seating	U-shape	Round table seating
Sala Grande	57x80.66x13.78	4600	450	175	100	160
Saleta I	22.64x34.45x10	780	40	24	25	24
Saleta II	22.64x34.45x10	780	40	24	25	24
Sala Media	39.4x56.7x9.2	2000	80	45	45	48




CONFERENCING FACILITIES

"Taj Exotica Resort & Spa, located on the serene Benaulim Beach in South Goa, is a sprawling 56-acre luxury retreat developed by the Indian Hotels Company Limited. Designed with Mediterranean and Portuguese colonial influences, the resort integrates heritage charm with tropical landscape planning, offering a refined yet relaxed beachfront experience"

- ITC GROUP

OUTLETS



- **Sala da Pranzo** is an all-day dining restaurant that serves some delicious cuisines around the world.

Cusine – World Cusine

Dress Code – Smart casual

Breakfast – 07:30 to 10:30 hours

Lunch – 12:30 to 15:30 hours

Dinner – 19:00 to 22:30 hours



- **Lobster Village** serves seafood seasonal dishes overlooking the beach.

Cusine – Grills

Dress code – Smart Casual

Timings – 16:00 – 22:45 hours



- **Miguel Arcanjo** - Award Winning Goan & Portuguese restaurant open for Dinner Service only. The restaurant also features a lively show kitchen.

Cusine – Goan-Portuguese Cuisine.

Dress Code – Smart Casual

Lunch – 12:30 -14:45

Dinner – 19:30 - 22:45



- **Adega Camoens** is an exclusive lounge bar which serves a wide range of wine, vodka and beer along with finger foods.

Cusine – Finger food, Cocktails

Dress Code – Smart Casual

Timings: 16:00 to 23:30 hours

Design Concept & Methodology: Taj Exotica Resort & Spa, Goa

1. Conceptual Approach -

At its core, **Taj Exotica** is an architectural meditation on **leisure, luxury, and light**—crafted not just to house guests, but to immerse them in Goa's slower rhythms and natural beauty. The concept revolves around three pillars:

- **"Escape to Tranquility"** – offering physical and psychological distance from the urban world
- **"Architecture as a Garden"** – buildings are placed like pavilions in an extended tropical garden
- **"Luxury in Layers"** – every spatial layer, from entrance lobby to beach lawns, unfolds a different aspect of the guest experience

This "quiet luxury" was a conscious shift from the urban grandeur of Taj city hotels. The architects avoided monumental gestures and instead chose **spread-out pavilions, white stuccoed walls, deep overhangs**, and **verandahs** that invite stillness and shadow.

2. Design Methodology -

The planning was executed in phases, following a **site-responsive methodology** that emphasized **low-density development**, **climate responsiveness**, and **user zoning**. The resort is deliberately **horizontally expansive**, respecting the topography and reducing visual dominance.

a. Zoning & Programmatic Distribution

- **Arrival & Administrative Zone**: Situated near the main entrance, facing the internal waterbody and garden
- **Hospitality & Guest Wings**: Radiate outward in a U-shape toward the sea, ensuring sea views from most rooms
- **Private Villas**: Placed at the periphery for seclusion, some with plunge pools and garden walls
- **Recreation & Wellness Zone**: Jiva Spa, golf green, sports courts located toward the quieter east wing
- **Events & Celebration Lawns**: Set between the villa zone and the beachfront to isolate noise without compromising access

"Spatial logic emphasizes privacy gradients—high activity zones are buffered from personal stay areas using vegetation, water channels, and low fences."

b. Climatic Sensitivity -

- Structures are **north–south oriented** to reduce direct solar heat gain
- **Shaded verandahs** and **pergolas** act as thermal buffers
- **Terracotta roofs** reflect solar radiation and resist moisture accumulation
- **Cross-ventilation corridors** channel sea breeze into guest blocks

c. Cultural Reference

While the Mediterranean white-stucco form dominates, subtle **Goan cultural references** are infused:

- **Red Mangalore roof tiles**
- **Colonnaded corridors**
- **Courtyard trees and alcoves**
- **Sculptural fountains** inspired by Indo-Portuguese architecture

The resort becomes a canvas that speaks of Goa without imitating it—**a modern reinterpretation of a colonial beachside estate**.

3. Guest Experience as Design Narrative

Every aspect of the resort was planned as a **sequential spatial journey**:

- From **tree-lined driveway** → to **courtyard-style lobby** → to **open garden walkways** → to **private verandahs**
- No elevator towers, no corridors with dead ends—**everything is interconnected, immersive, and horizontal**

The site becomes a **slow discovery**—a walkable experience through meandering gardens, lily ponds, and sunlit patios. The methodology was not to impress, but to **comfort and cradle**.

4. Landscape-Led Architecture

The buildings were designed **around** the landscape rather than the other way around. Each architectural mass is placed to:

- Frame a **specific view**
- Cast strategic **shadows**
- Interact with the **gardens and lawn levels.**

"The large central lawn acts like a breathing void—hosting weddings by day and misty stillness at night"

5. Construction & Phasing Strategy -

- Constructed in phases to **preserve the mature coconut groves**
- Phase I: Lobby block + central rooms + restaurant and spa
- Phase II: Villas and celebration lawn zones
- Phase III: Redesign of recreation courts and adding beach shacks

The low-impact construction methodology involved:

- **Prefabricated roofing**
- Local laterite and lime-plaster
- **Water-permeable landscape pavers** for sustainability
- Deep foundations to handle coastal moisture levels



Swimming pool view

Overall Concept & Design Philosophy -

- Spanning **56 acres** along **Benaulim Beach**, the resort embodies a vision of **"Architecture within a garden"**—where buildings nestle amidst lush greenery and open vistas to the Arabian Sea. Its design philosophy consciously avoids vertical density, favoring horizontal sprawl and tranquil visual layering.
- The aesthetic is a refined blend of **Goan-Portuguese colonial motifs**—whitewashed walls, red-tiled roofs, shaded verandahs—that echo local vernacular while communicating understated, timeless luxury

Project Team & Design Credits -

- While the overall masterplanning is credited to Taj's in-house architectural team and international hospitality consultants, specific interiors (such as the wellness and dimensional lounge) were created by **FBEYE Design Studio**, led by Principal Shreya Jakhotiya along with team members Jayshree Solanki and Shraddha Mahadik.
- This collaboration resulted in spaces that honor both Goan context and global luxury standards.

- Local storytelling is embedded in curated culinary journeys—Chef Miguel Arcanjo's signature Goan menu, aromatic signature Jiva spa therapies, and horticultural tours with staff bring contextual richness to the guest stay



Presidential Villa (Inventory - 2 / 1785 sq ft/ 166 sq mt)



Presidential Villa (Inventory - 2 / 1785 sq ft/ 166 sq mt)



CHAPTER 8

5.4 CASE STUDY : KUMARAKOM RESORT (DESK APPRAISAL)



1. Project Overview & Location -

- **Location**: Kumarakom, on the banks of **Vembanad Lake**, Kottayam District, Kerala—approximately 14 km from Kottayam city.
- **Site Area**: Approximately **25–40 acres** of lakeside land straddling canals and water channels.
- **Architect**: Designed by **Tony Joseph** (Calicut-based architect), with master-planning support and conceptual input from **Studio Morphogenesis** (Manit & Sonali Rastogi).

2. Concept & Architectural Intent -

- The design honors Kerala's **vernacular architecture**—employing **nalukettu typology**, **kettuvallam (houseboat)** spatial form, and heritage wood elements from historic Kerala homes.
- Buildings are placed with minimal disturbance to the land—**stilted structures**, interwoven waterbody channels, and elevated walkways preserve existing ecology.

3. Accommodation & Spatial Layout -

- **59 villas and rooms**, each inspired by traditional Kerala "manas" and even houseboats—reassembled from real historical homes.
- **22 meandering pool villas** line a 250 m-long pool bordered by landscaped lawns. Each connects to the pool via micro-bridges or private steps.
- The ancestral **Ettukettu mansion (200-year-old)** houses the main multi-cuisine restaurant (~115 seat capacity). Similarly, **Ayurmana spa** is situated in a restored heritage nalukettu

4. Landscape & Environmental Strategy -

- The landscape consists of **buffalo grass, canals, tropical groves, and heritage trees**, with stone-lined pathways and small internal islands.
- **Internal waterways and pedestrian bridges** interlace built and landscape zones, creating micro-ecological pockets and sanctuary-like spaces.

5. Guest Services & Amenities -

- Facilities include:
    - **Ayurmana spa** (Ayurvedic center in a heritage nalukettu)
    - **Infinity pool**, leisure walking trails, cycling paths
    - **Backwater cruises, water sports**, and sunset boat rides
    - **Conference facilities / business center** for up to 180 guests.

6. Sustainability & Operations -

- The resort employs **biophilic wastewater management**, **rainwater harvesting**, and solid waste composting. Organic farming within property supports kitchen and garden.
- High sustainability standards earned multiple accolades: “India’s Best 5-Star Resort” (National Tourism Awards), and World Travel Awards’ "India's Green Resort."

7. User Experience & Design Philosophy -

- Movement logic is deeply relational: paths meander through water and landscape, encouraging reflection and calm. Bridges and courtyards deepen spatial intimacy.
- Interiors incorporate **local joinery traditions**, high-ceiling rooms with verandahs, heritage timber, and natural textures forming a sensory narrative.
- The experience evokes a heritage retreat—privacy, wellness, and cultural immersion in one seamless design.



ACCOMODATION :

1. **PRESIDENTIAL SUITS – 2**
2. **HERITAGE LAKE VIEW VILLAS WITH PRIVATE POOL – 7**
3. **HERITAGE VILLAS WITH PRIVATE POOL – 15**
4. **MEANDERING POOL VILLAS – 22**
5. **MEANDERING POOL DUPLEX VILLAS – 4**
6. **VILLAS FOR PWD – 1**
7. **LUXURY PAVALLION ROOMS – 8**
8. **HOUSE BOATS – 5**

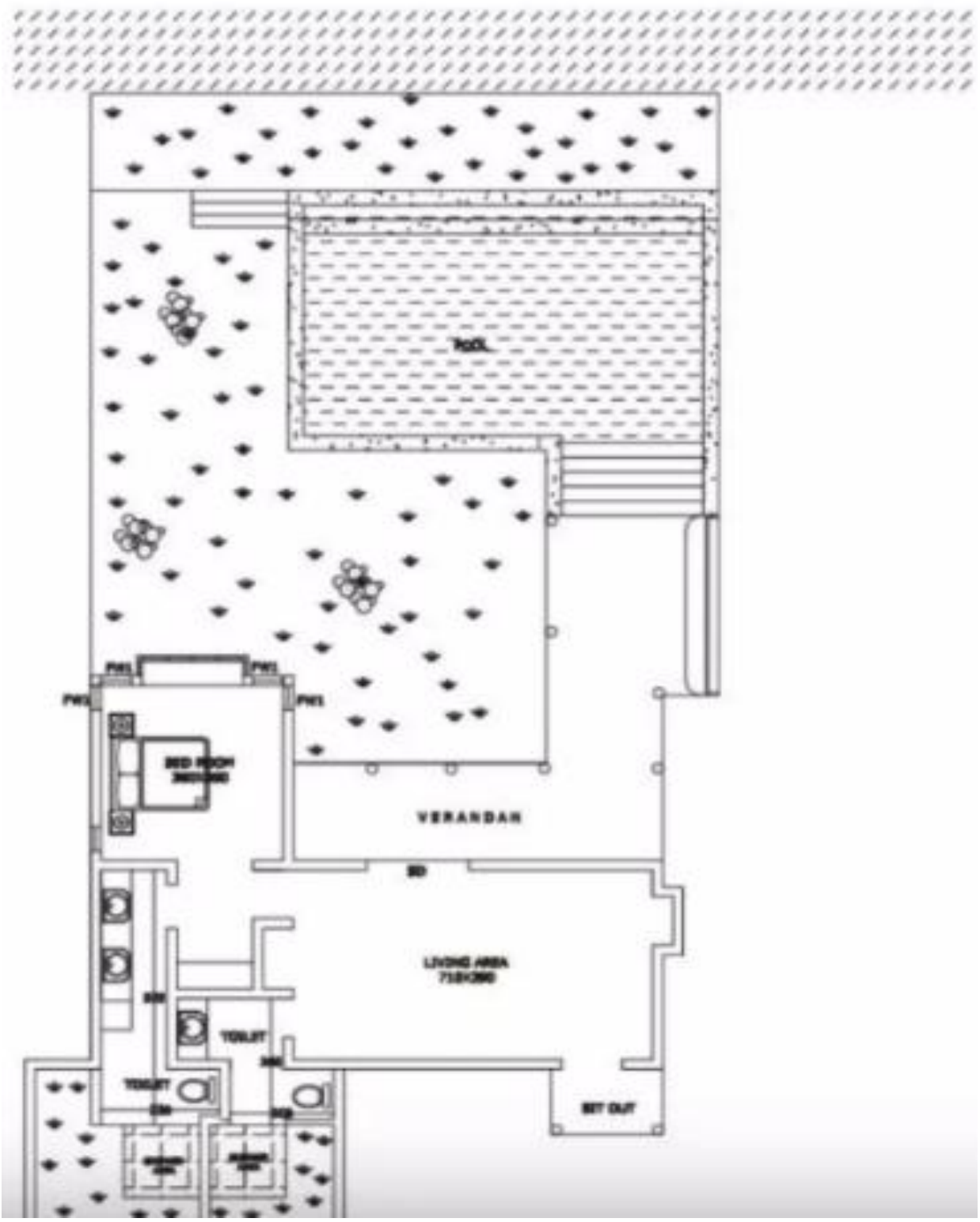
The Resort features an Ayurvedic Treatment center which houses A Yoga center, Beauty Salon Consultation and Massage rooms an Infinity Swimming pool, a conference center and a concierge service.

The resort scheme has reconstructed a mini village of traditional architecture and adapted it to the resort's programmed the architecture and with their use of materials. The site is completely gated off from the outside world in order to create a private internal space for the resort's guests. This is not ideal for my scheme es the project attempts to connect the guests to the local community.

1. PRESIDENTIAL SUITE -

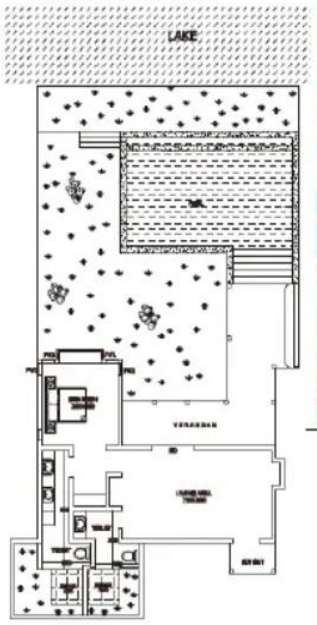
- The Presidential Suite, each in its own royal seclusion, is the final word in traditional architectural charm, luxury and the ultimate in self-indulgence With its very own view of the lake, a private pool, a private courtyard and regal interiors that exude the splendors of a prosperous era gone by, set yourself free and relish exotic brilliance.
- LIVING ROOM - 710 X 380
- BED ROOM - 380 X 360
- TOILET 1 - 280 X 209
- TOILET 2 - 238 X 525

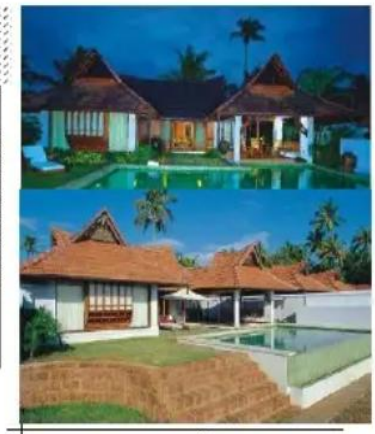




FLOOR PLAN OF PRESIDENTIAL SUITE

PRESIDENTIAL SUITES



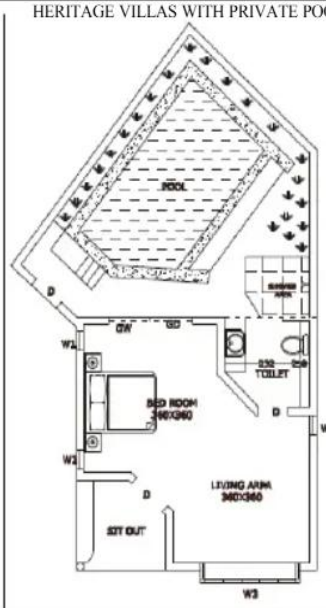






HERITAGE LAKE VIEW VILLAS WITH PRIVATE POOL

HERITAGE VILLAS WITH PRIVATE POOL











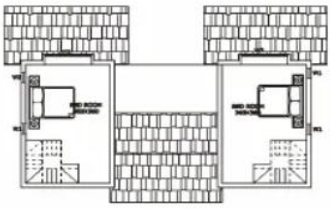


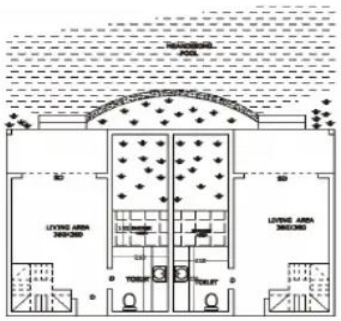
MEANDERING POOL VILLAS

Case Study :- Kumarakom Lake Resort

SESSION
2013-14

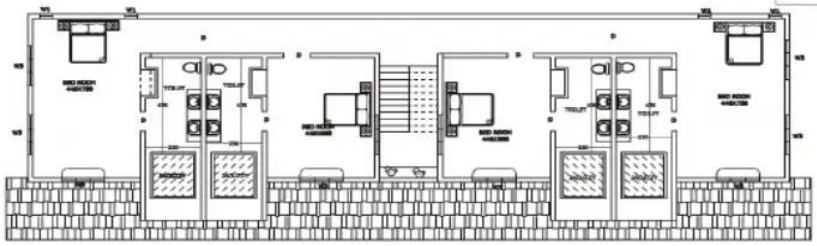
MEANDERING POOL DUPLEX







LUXURY PAVILION ROOMS



FIRST FLOOR PLAN



GROUND FLOOR PLAN

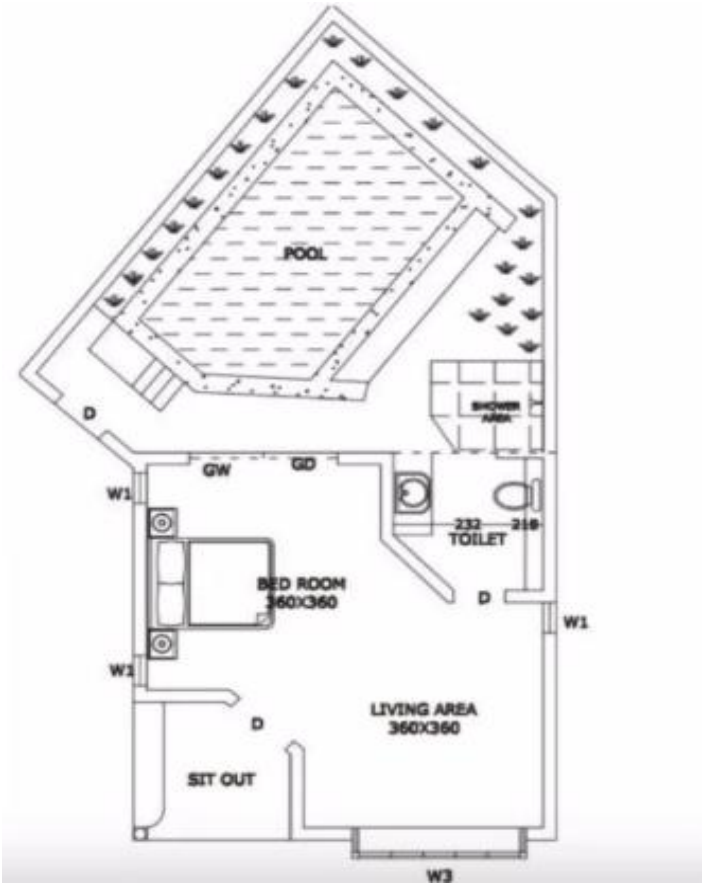




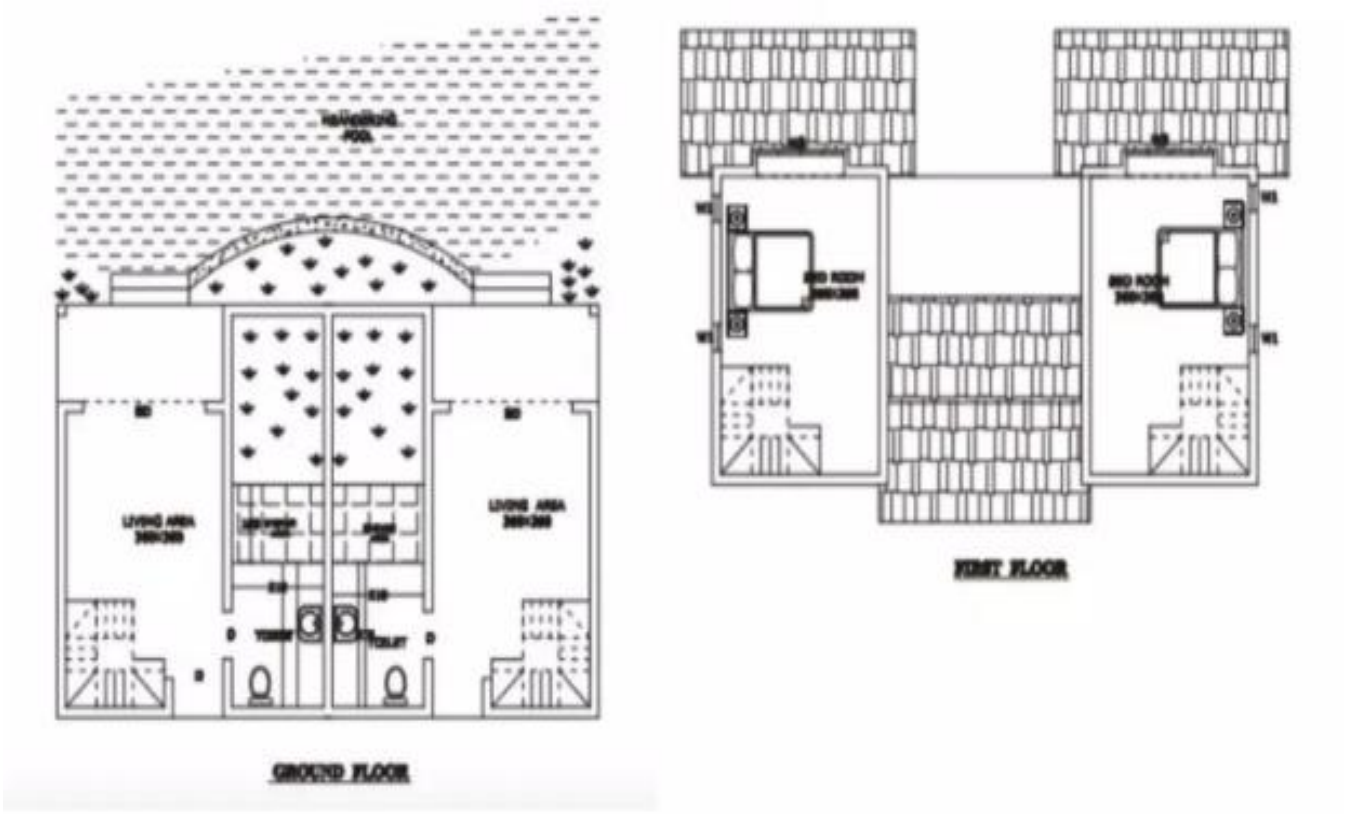
Case Study :- Kumarakom Lake Resort

HERITAGE LAKE VIEW VILLAS WITH PRIVATE POOL

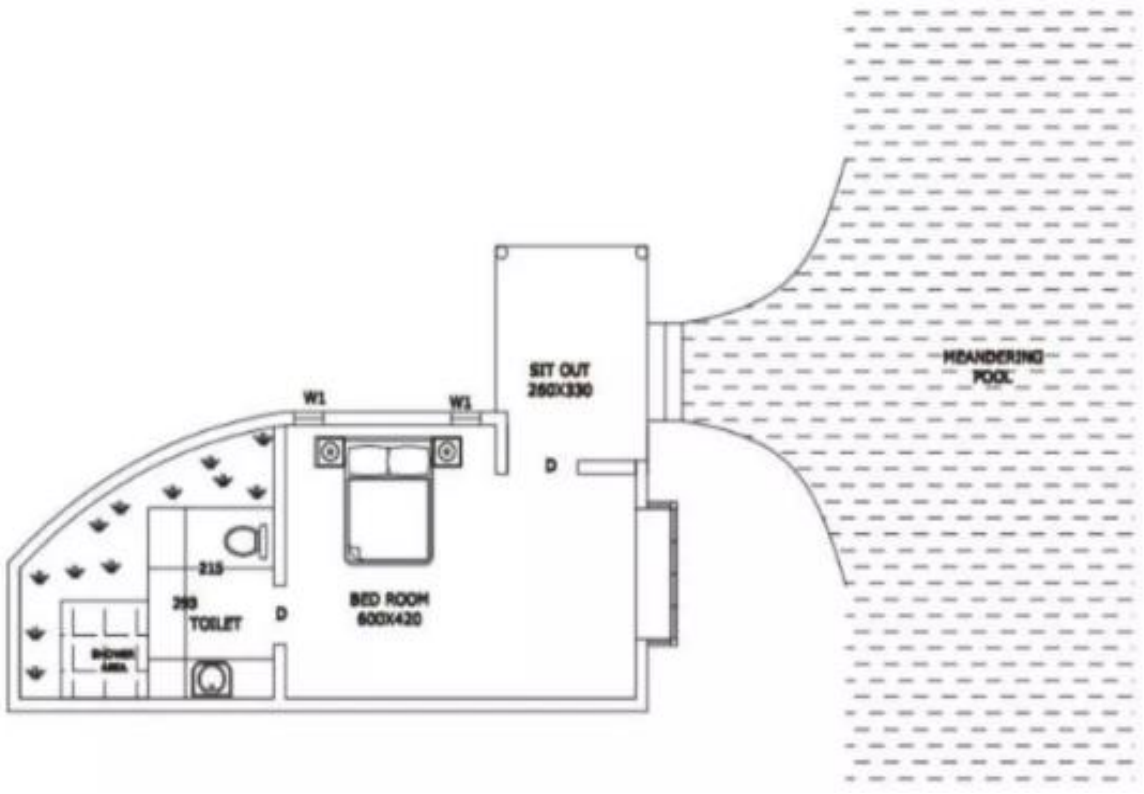








MEANDERING POOL DUPLEX VILLA PLAN



LUXURY PAVALLION ROOMS

LUXURY PAVALLION PHOTOS





Landscape Philosophy & Concepts

1. **Vernacular Integration**
    - The landscape design respects Kerala's traditional **Vastu and regional architectural grammar**. Courtyards, axial alignments, and water bodies are central to the layout.
    - Structures are surrounded by **lush native flora** like coconut palms, areca nut trees, and banana plantations, preserving the ecological character of the backwaters.
2. **Water as a Design Element**
    - **Vembanad Lake** serves not just as a visual backdrop but defines the resort's entire spatial and experiential identity.
    - Meandering canals, lily ponds, and reflective pools are strategically placed to mirror traditional Kerala **"Tharavadu"** homes which always engaged with water.
3. **Pathways & Movement**
    - Organic curves, stone pathways, and wooden bridges over water channels create a **serene walking experience** while maintaining **visual connectivity** with key vistas.
    - The layout allows **slow movement and contemplation**, key to the Ayurvedic and wellness philosophy of the resort.
4. **Zoning through Landscaping**
    - **Privacy through landscaping**: Trees, hedges, and natural barriers define zones like villas, spas, restaurants, and houseboats without harsh architectural separations.
    - Buffer zones use dense planting between built forms and activity zones to maintain quietness and exclusivity.
5. **Tropical Palette & Aromatic Planting**
    - The selection of plants includes **frangipani, jasmine, champa, and hibiscus** to add color and fragrance.
    - Night-blooming plants are placed near walkways for **nocturnal sensory experience**.
6. **Sustainability & Water Management**
    - The resort uses **rainwater harvesting ponds** as landscape features.
    - Traditional **bio-swales and reed bed systems** are integrated for natural stormwater filtration and reuse.
7. **Cultural Narratives in Landscape**
    - The **Ettukettu mansion** is surrounded by cultural landscaping — pathways mimicking temple processional routes and traditional ceremonial spaces.
    - The presence of **sacred groves (Sarpakavu-inspired)** pockets enhances the spiritual dimension of the resort.

3. MEANDERING POOL VILLAS –

Set on the twists and turns of a 250-m long meandering pool, each of the Traditionally styled yet luxuriously modern Meandering Pool Villas at Kumarakom Lake Resort has to the pool from individual and private bathing coves and coy sit outs. The traditionallv furnished Meandering Pool .Duplex Villas merge the past with the present with its luxurious bedroom overlooking the 25O-meter long meandering swimming pool . Each duplex villa possesses direct, individual access to the pool from its very own bathing cove and private sit-outs,



MEANDERING POOL DUPLEX VILLAS – B

The traditionally furnished Meandering Pool Duplex Villas merge the past with the present. Its luxurious bedroom overlooks the 250-meter long meandering swimming pool, and each possesses direct, individual access to the pool from its very own bathing cove.

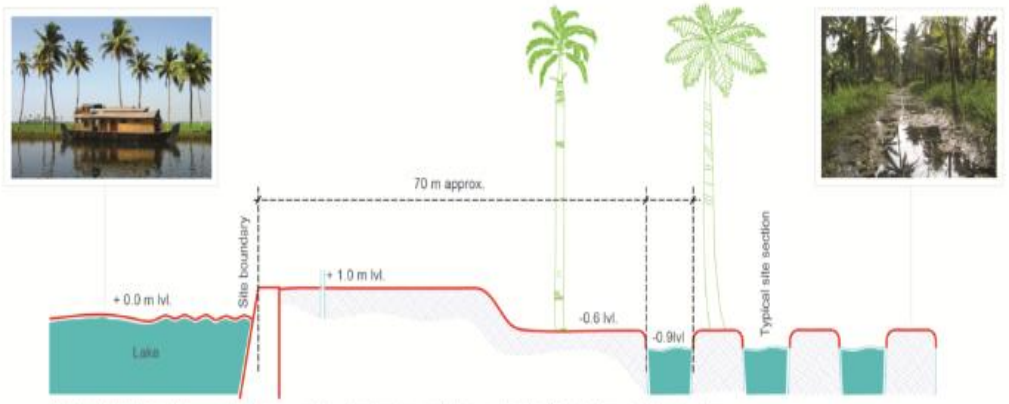
DESIGN IMPLICATION AND CONCEPT , METHODOLOGY BY MORPHOGENESIS -

The design brief called for a luxury eco-resort in Kumarakom, Kerala. As a boutique project, in close proximity to the Arabian Sea, the objective was to offer an indulgent retreat experience, of life amidst the backwaters.

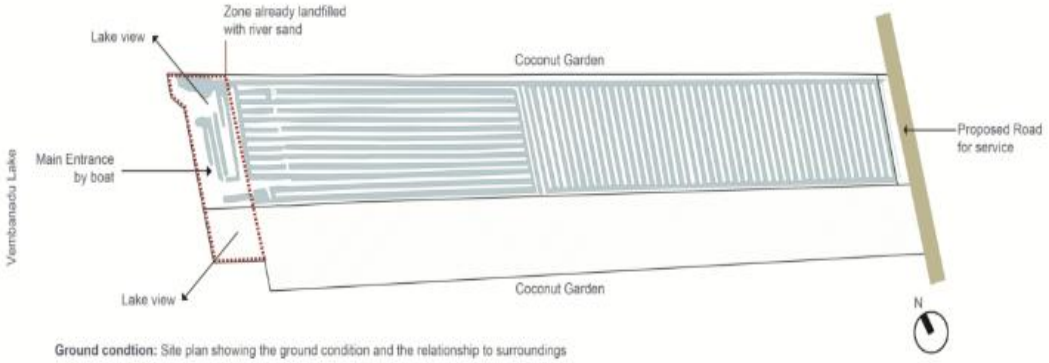
Physical and Visual Engagement with the natural setting laid the foundation for the development of the globally unique design set amidst a serene landscape.

Context

The land is striated with alternating strips of land and water which provides safety from uncertain high floods. The proposal works within and retains this context.



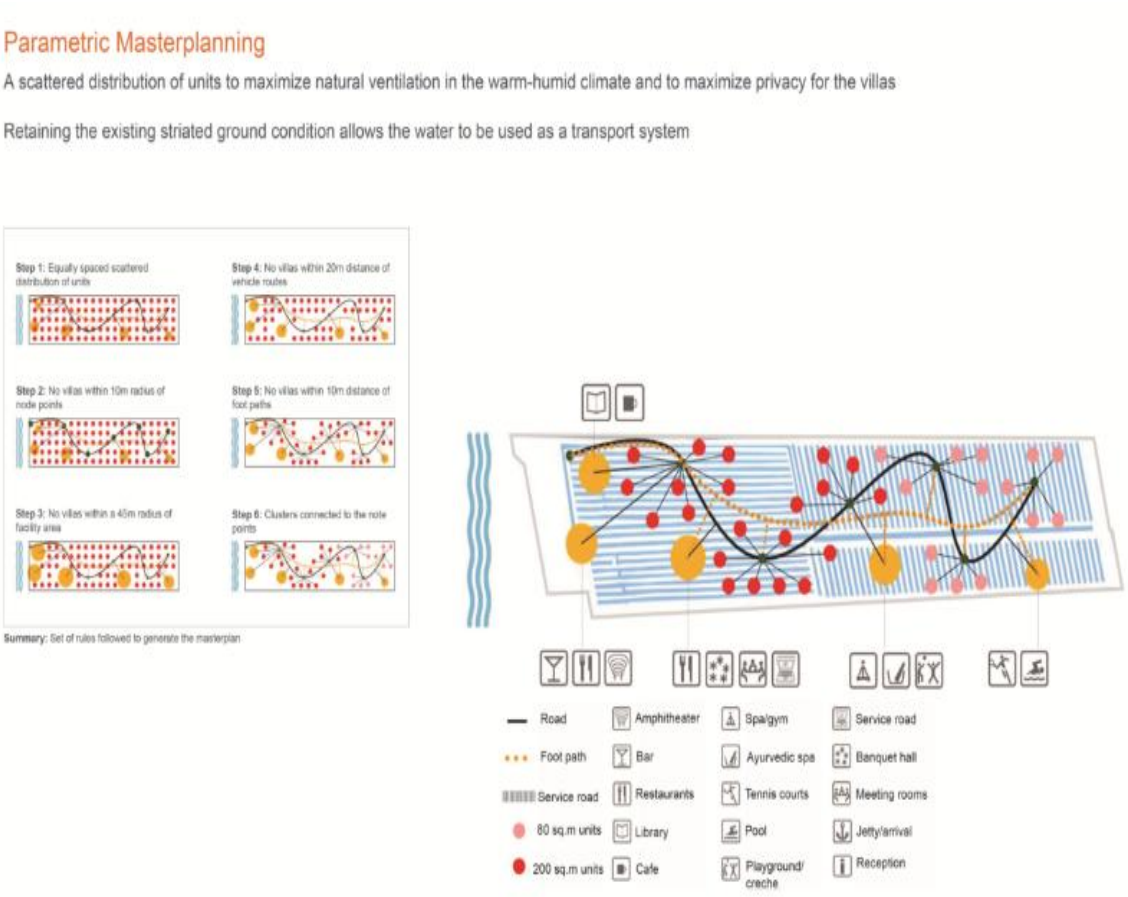
Sectional detail : The 40 acres site is below water level and requires a retaining wall for its 270 m frontage to the backwaters.



Ground condtion: Site plan showing the ground condition and the relationship to surroundings

- The 40-acre site on the man-made Puthenkayal island lies facing the Vembanad lake backwaters (approx. 270m of frontage).
- 4.2m wide water channels run through the site with alternate strips of land and water. High flood levels within the site, to touch the earth lightly and the intent to retain the unique character of the striated water and land channels,
- helped to determine the stilted nature of the built up structures and connecting pathways, in order to provide safety from the uncertain high flood level of the site.





Parametric Masterplanning -

- In order to craft a built volume within the natural site scape, this natural landscape is retained and exploited for primary movement, as the site is predominantly flooded for most part of the year. Along with this, the condition of no vehicle movement inside the site and a clear distinction within the location of facilities and villas helped to construct the master plan.
- A script was developed with the given conditions and to maintain a sense of peace and individual habitation, rules were set out to determine the location of the villas. (Such as placement of node points, vehicle routes connecting the node points, pedestrian movement connecting all the nodes by the shortest route, placement of facilities etc.)
- The Location of the villas is over-layered with the water channel running through. The result was a master plan with Interlocking movement systems of road and pathways periodically hyphenated with nodes

  connecting to a tertiary movement system linking villas.

Passive Strategy

The villas are inspired by the vernacular building tradition of Kerala. For example, the inspiration for the roofs came from the traditional Kerala boats, that have evolved to provide shade and to maximize the possibility of natural ventilation.



Inspiration: A traditional Kerala boats

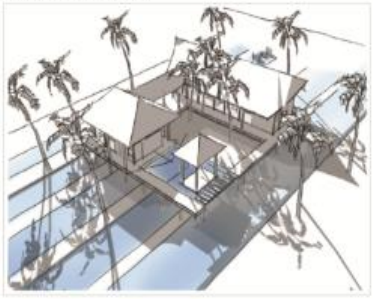


Proposal:
Warm air naturally rises up, and a high well-ventilated ceiling creates the best condition for thermal comfort in a warm-humid climate.

Villa type 1: 80 sq.m villa



Villa type 2: 200 sq.m unit



Villa type : 200 sq.m villas

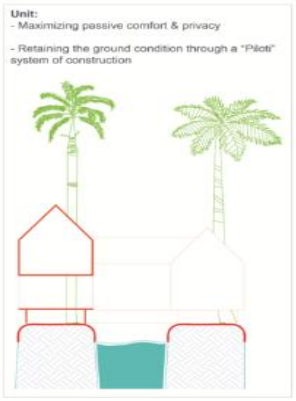


Passive Strategy –

- Traditional references have informed the design of the villas; such as the basic module Nalukettu, where four blocks built around a courtyard into which the roof slopes on four sides, protecting an internal verandah from rain and sun.
- The covered pathways and villas allow one to experience the rain without getting wet.

Cluster and unit design

Interlocking movement systems of road and pathways periodically hyphenated with nodes connecting to a tertiary movement system linking villas.

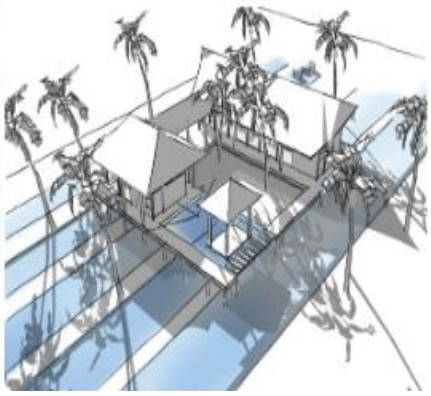




Cluster: Part plan showing the organization of a cluster













- Environmental concerns dictated the form development and help to regulate the microclimate within the resort. Location and orientation of the villas, is optimized to achieve maximum porosity to westerly winds, leading to wind movement acceleration throughout the site.
- The roof form has been derived from a tree, where the foliage spread is used to provide shade, whilst simultaneously creating a wind tunnel effect to regulate the temperature.
- This aerodynamic, retractable roof form with large perforated cantilevers traps the wind and filters the sun, thus increasing the thermal circulation of the space, yet maintaining light quality in the internal spaces, and further emphasizing on the views. During the day, when the winds are strong, the roof of the inner volume can be retracted, to allow the thermal regulation of the interior space. At night, when the winds are less prevalent, the roof can be retracted to divide the whole volume into two individual spaces, thereby providing the option to control the interior environment mechanically/manually.
- High humidity levels are countered by air-conditioning the internal environment. Rain Protection is provided with the help of covered walkways throughout the site.



1. Contextual Landscape Design

The landscape is deeply inspired by **traditional Kerala architecture**, particularly the **"nalukettu"** layout with open courtyards and water bodies. Every landscape element—be it a pathway, canal, or tree—is planned to reflect the heritage of Kerala's lush backwaters and cultural richness.

2. Integration with Water Systems

Water is a **central feature**:

- Meandering canals run between villas, just like the natural canals of Kumarakom village.
- **Infinity pools, lily ponds**, and connecting bridges bring water into close dialogue with built structures.
- **Houseboats** are parked within the landscaped areas to blur the line between land and water.

Use of Native Tropical Flora

The landscape includes:

- Coconut palms, banana plants, frangipani, jasmine, and hibiscus.
- Carefully chosen native and **medicinal plants** (for the Ayurvedic spa areas).
- The planting style is **naturalistic**, mimicking Kerala's rural and semi-wild character.

4. Zoning Through Green Buffers

- **Private villas** are screened using bamboo groves, hedges, and palm clusters.
- Public areas like restaurants and spas are surrounded by open lawns, flowering trees, and soft transition spaces like pergolas and verandas.

5. Cultural & Symbolic Elements

- The landscape around the **Ettukettu restaurant** is curated like a temple courtyard, invoking sacredness and royalty.
- **Sarpakavu (sacred grove)**-inspired planting in select pockets reflects traditional ecological beliefs.

6. Traditional Materials & Forms

- Pathways are made using **cobblestone, red oxide, laterite, and teakwood decking**, blending architecture and nature.
- Courtyards use **terracotta pots, brass lamps, and flowering vines** to evoke a domestic village charm.

7. Environmental Sensitivity

- The resort uses **rainwater harvesting**, **reed-bed filtration**, and **sustainable drainage systems**.
- **Low-impact lighting**, solar power features, and waste segregation support the eco-sensitive image of the resort.

8. Experiential Movement

- Landscape is choreographed for **slow movement**: winding paths, sudden lake views, shaded resting spots, and birdwatching points enhance the sense of peace.
- **Floating pavilions, gazebos**, and shaded decks by the lake promote leisure and intimacy with nature.

Design Principles Used -

Kumarakom Lake Resort's design reflects several key architectural principles:

a. Vernacularism

Use of indigenous forms, materials, and construction techniques. Timber, laterite, clay tiles, and brass fixtures have been used extensively.

b. Sustainability & Adaptive Reuse

Instead of constructing new buildings, traditional homes were reused – an early example of sustainable architectural practice in luxury hospitality.

c. Contextualism

The design responds to the context in terms of scale, proportion, form, and material. The layout, open pavilions, and even landscaping mimic a Kerala village.

d. Symmetry and Geometry

Nalukettu houses, with their strict axial planning and symmetrical open-to-sky courtyards, lend a deep geometric order to the overall planning.

e. Biophilic Design

Integration of natural elements – flowing water, indigenous plants, open-to-sky courtyards, and passive ventilation enhance the human-nature connection.

Design Philosophy -

The architectural philosophy behind Kumarakom Lake Resort is rooted in **"heritage reinterpretation"**, which focuses on **preserving and celebrating the regional identity** through sensitive spatial planning, adaptive reuse of heritage elements, and contextual materiality.

The resort celebrates:

- **Timelessness of vernacular architecture**
- **Sustainability through reuse of traditional materials**
- **Harmony with nature**, especially the surrounding water bodies
- **The experience of Kerala's architectural storytelling** through courtyards, sloped tiled roofs, wooden columns, and carved panels.

The core idea was to provide an immersive cultural experience, where architecture becomes the medium to connect the visitor with the history and lifestyle of Kerala.

Concept Behind the Design

The concept is built around the idea of **"a heritage village experience by the backwaters"**. Each cottage or villa is crafted using the remains of centuries-old **'nalukettu'** houses — the traditional homesteads of Kerala nobility — which were dismantled from their original sites, restored, and reconstructed at the resort.

Key Conceptual Elements:

- **Restoration Architecture**: Instead of building afresh, the designers used salvaged architectural elements from ancient Kerala homes.
- **Water-centric planning**: The resort is planned around water – canals, lagoons, pools – evoking the essence of backwater life.
- **Modular village typology**: Each cottage acts as a standalone 'home' within a larger 'village', promoting privacy and immersion.

The resort becomes an architectural narrative of how **past and present can coexist** in a symbiotic manner.

Use of Forms and Their Evolution

Traditional Forms Used:

- **Nalukettu**: A quadrangular home with a central courtyard (nadumuttam) — symbolic of openness and spiritual connection.
- **Sloping Roofs**: Designed to respond to Kerala's heavy monsoon, these roofs are aesthetic and functional.
- **Verandahs (Chuttu Verandha)**: Open corridors around buildings, providing shade and creating semi-open transitional spaces.
- **Gabled Windows and Ventilators**: Allow light and ventilation while adding to the stylistic features of the form.

Modern Interpretation:

- Cottages were modified with **glass panels**, **Jacuzzis**, and **infinity plunge pools**, merging tradition with modern luxury.
- Open-to-sky bathrooms and courtyard dining spaces reinterpret ancient forms with modern usage patterns.
- Instead of pure replication, architects introduced **subtle asymmetries**, **planter boxes**, and **recessed lighting**, which evolved the form into a **contemporary-traditional hybrid**.

Spatial Planning and Zoning -

The resort is zoned to maintain privacy, hierarchy, and interaction with nature.

- **Reception Zone**: A large open verandah with traditional décor welcomes guests.
- **Residential Units**: Arranged along internal water canals or the lakefront, designed to provide views and privacy.
- **Dining and Recreation**: Over-water pavilions house restaurants, spas, and pools. These zones blend into the landscape with minimal visual impact.
- **Service Areas**: Tucked into the periphery, screened using landscaping buffers and thick foliage.

Landscaping Approach -

Landscape is integral to the design of Kumarakom Lake Resort. It doesn't just beautify — it **enhances the storytelling**.

Landscaping Concepts:

- **Tropical Kerala Flora**: Coconut palms, banana plants, lotuses, and water lilies maintain regional authenticity.
- **Backwater Canals**: Artificial canals run through the property, recreating Kerala's aquatic village experience.
- **Framed Views**: Architectural elements and landscaping frame views toward Lake Vembanad.
- **Walkways and Bridges**: Stone-paved walkways and wooden bridges connect cottages, echoing a village trail.

The landscaping is layered, providing **microclimate control**, **acoustic insulation**, and **visual comfort**.

Architectural Materials and Techniques

- **Primary Materials**: Timber (Jackfruit and Rosewood), Clay roofing tiles, Laterite stone, Terracotta, Lime plaster.
- **Construction Methods**: Traditional joinery, wooden locking systems, and hand-carved brackets and beams.

The use of these materials offers **thermal comfort**, **visual warmth**, and a tactile connection to heritage.

Sustainability Aspects

Even though it was developed before the sustainability wave, Kumarakom Lake Resort naturally embraces several green principles:

- **Reused building components**: Carbon footprint minimized by salvaging homes.
- **Passive cooling**: Cross ventilation, shaded verandahs, tiled roofs.
- **Rainwater harvesting & canal reuse**
- **Organic kitchen garden** used for in-house culinary experiences.

Cultural Integration

Cultural programming and spatial settings work hand-in-hand:

- **Kathakali & Mohiniyattam performances** in open courtyards
- **Ayurvedic wellness center** within a traditional wooden mansion
- **Artisan workshops** and **Kerala-style dining** in restored granaries

These create a **multi-sensory immersion** where architecture supports cultural continuity.

Architectural Significance -

Kumarakom Lake Resort is an excellent case of:

- **Restoration and adaptive reuse in hospitality**
- **Luxury integrated with regional heritage**
- **Architectural storytelling and guest experience**

The project proves that **contemporary needs can be fulfilled without erasing the cultural soul** of a place.

CHAPTER 8

6.4 CASE STUDY : MAYFAIR RESORT, DARJEELING (DESK APPRAISAL)



Objective of the Case Study

The aim of this case study is to analyze the architectural language, spatial organization, historical relevance, and contextual integration of MAYFAIR Darjeeling. By examining how this heritage resort adapts to its terrain, climate, and socio-cultural setting, the study provides insights into the adaptive reuse of historical buildings and the design of experiential spaces in a sensitive mountain context.

Location MAYFAIR Darjeeling is located at The Mall, opposite the Governor's House (Raj Bhawan), in Darjeeling, West Bengal. Nestled at an altitude of approximately 2,042



Location, Mayfair Resort

Historical Context -

Originally the summer retreat of the Maharaja of Nazargunj in the early 1900s, the property was later converted into a luxury heritage resort. The architecture retains its colonial-era charm with significant preservation of historical elements, offering a blend of nostalgia and luxury. Site Analysis

Geographical Context:

• Climate: Temperate, with mild summers (max 25°C), cold winters (min 2°C), and heavy monsoons (June–September).

• Topography: Hilly terrain with steep gradients and terraced land. • Soil Type: Predominantly loamy soil with good drainage—ideal for tea plantations.

• Vegetation: Lush evergreen forest species including oak, sal, and subtropical flora. Accessibility:

• Air: Bagdogra Airport (80 km; 3 hours)

• Rail: New Jalpaiguri (NJP) Railway Station (75 km) • Road: Connected via NH55 from Siliguri Proximity to Attractions: • Observatory Hill – 800 m • Mall Road (Chowrasta) – 1.1 km

Surroundings and Context

The resort is surrounded by a mix of institutional and residential zones, with Raj Bhawan as a significant adjacent landmark.

The site benefits from unobstructed vistas of Himalayan peaks and lush green valleys, enhancing the spatial and visual experience.



Figure 46 Surroundings



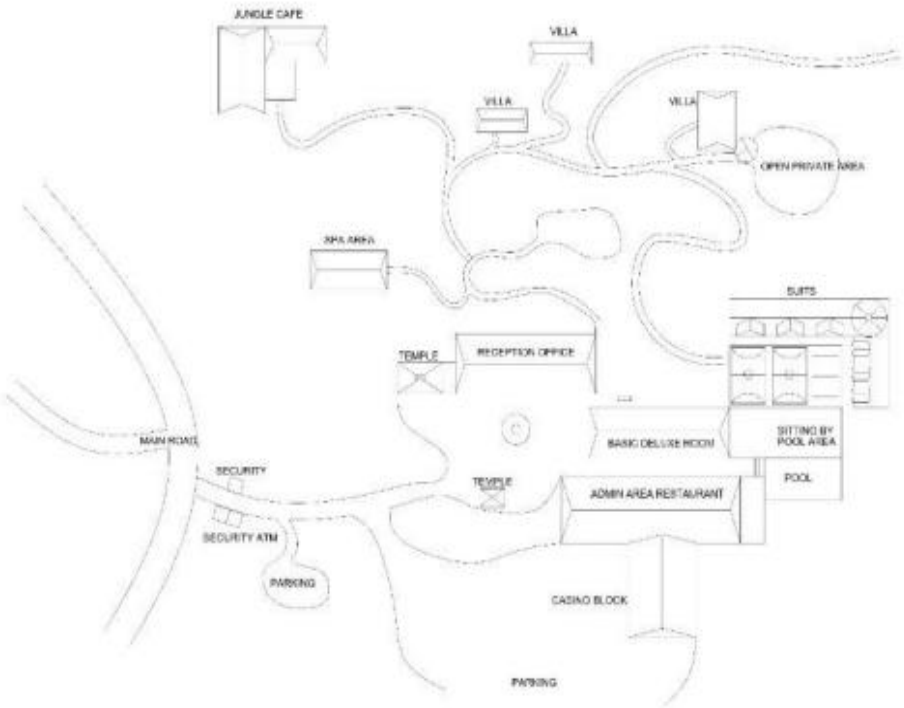
Figure 47 Views within Resort



Mayfair Manur Jungnana, Darjeeling

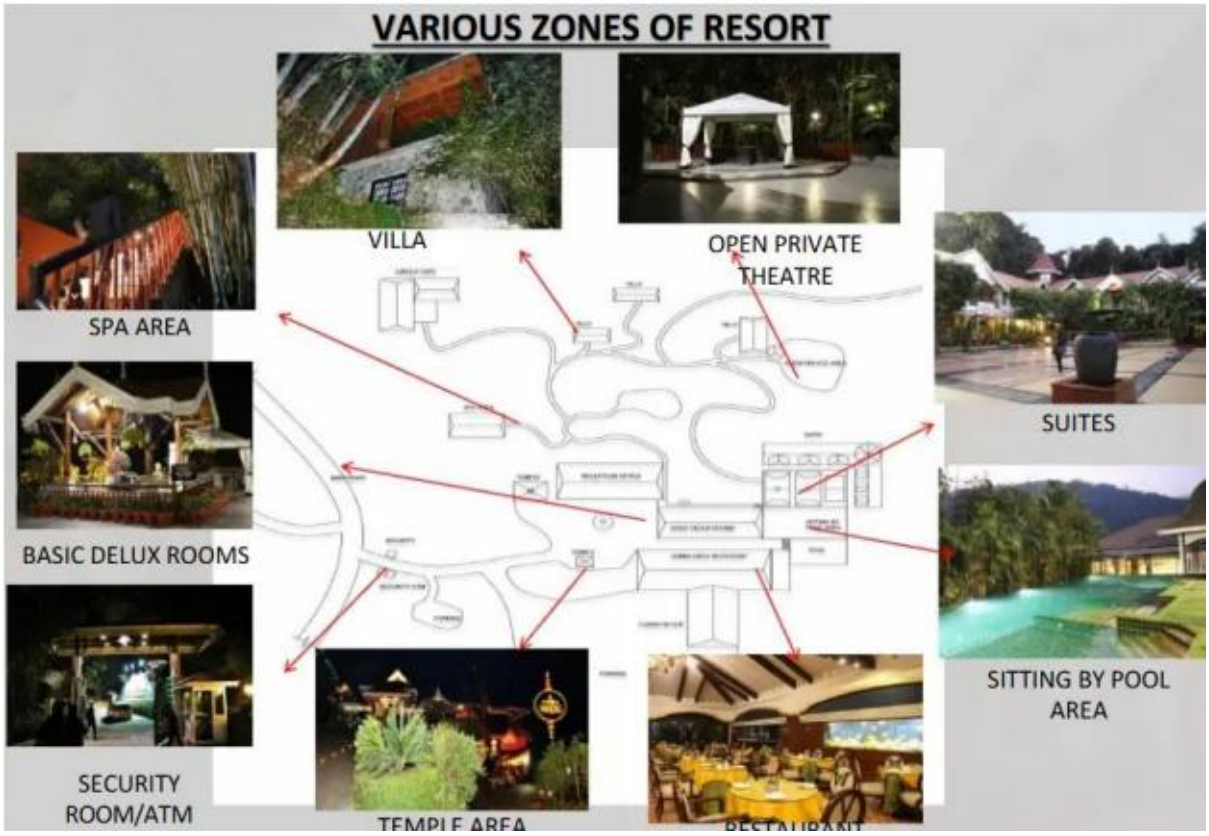
Design Theme

The overarching theme is “heritage luxury,” wherein the opulence of the colonial past is blended with modern hospitality amenities to create a timeless guest experience.



SITE PLAN

Master Plan and Zoning –



Resort Zoning

The resort is strategically zoned to separate private, public, and service areas while enhancing connectivity and views.

• Accommodation Zones: Rooms and cottages positioned to maximize privacy and landscape views.

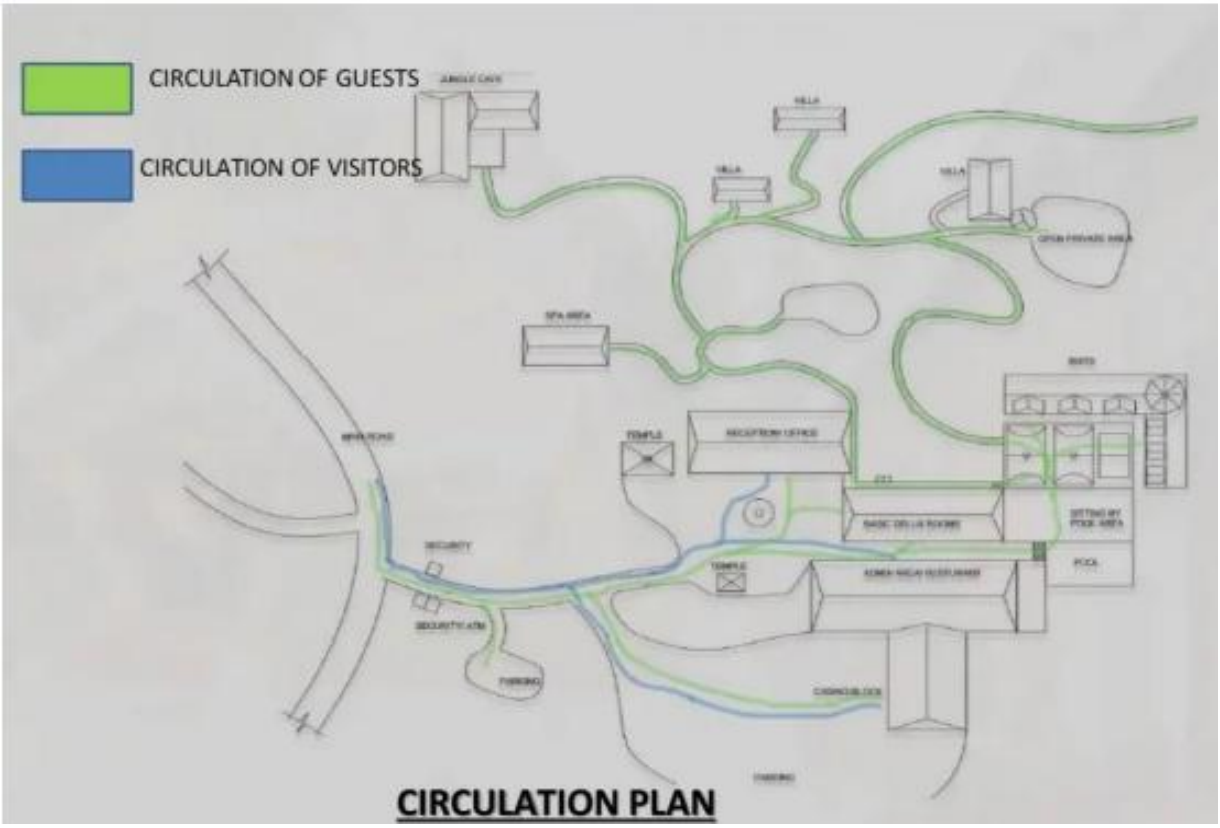
• **Recreational Areas**: Centrally located for easy access—includes spa, gym, library, and games room.

• **Dining Areas**: Multi-cuisine restaurant and lounge/bar areas overlooking scenic landscapes. • Service Areas: Back-of-house functions are located discreetly to avoid interfering with guest zones. Circulation

• **Pedestrian Movement**: Paved walkways with seating nodes; designed for relaxed movement across varying terrain.

• **Service Routes**: Separate entries and circulation paths for staff to ensure operational efficiency.

• **Vehicular Access:** Designated parking areas and drop-offs maintain a pedestrian-friendly environment.



Circulation Plan

Facilities and Amenities

• **Accommodation**: Includes Deluxe Rooms, Heritage Rooms, Lloyd's Cottages, Executive Rooms, Family Rooms, and Suites. Room sizes range from 280–538 sq. ft., each equipped with modern amenities.

• **Dining:** A multi-cuisine restaurant and in-house bar/lounge offer local and international fare.

• **Wellness and Recreation**: Spa, fitness center, library, bonfire zone, and indoor game areas.

• **Business Facilities**: Business center, banquet hall, and meeting rooms for events and conferences.

• **Family-Friendly Features**: Kids' play area and family rooms with interconnected spaces. Landscape Design o Manicured Gardens: Integrates local flora to enhance biodiversity and visual appeal.

Water Features: Fountains and water bodies create focal points and promote tranquility. o Green Spaces: Lawns and terraces support outdoor activities while respecting site topography.



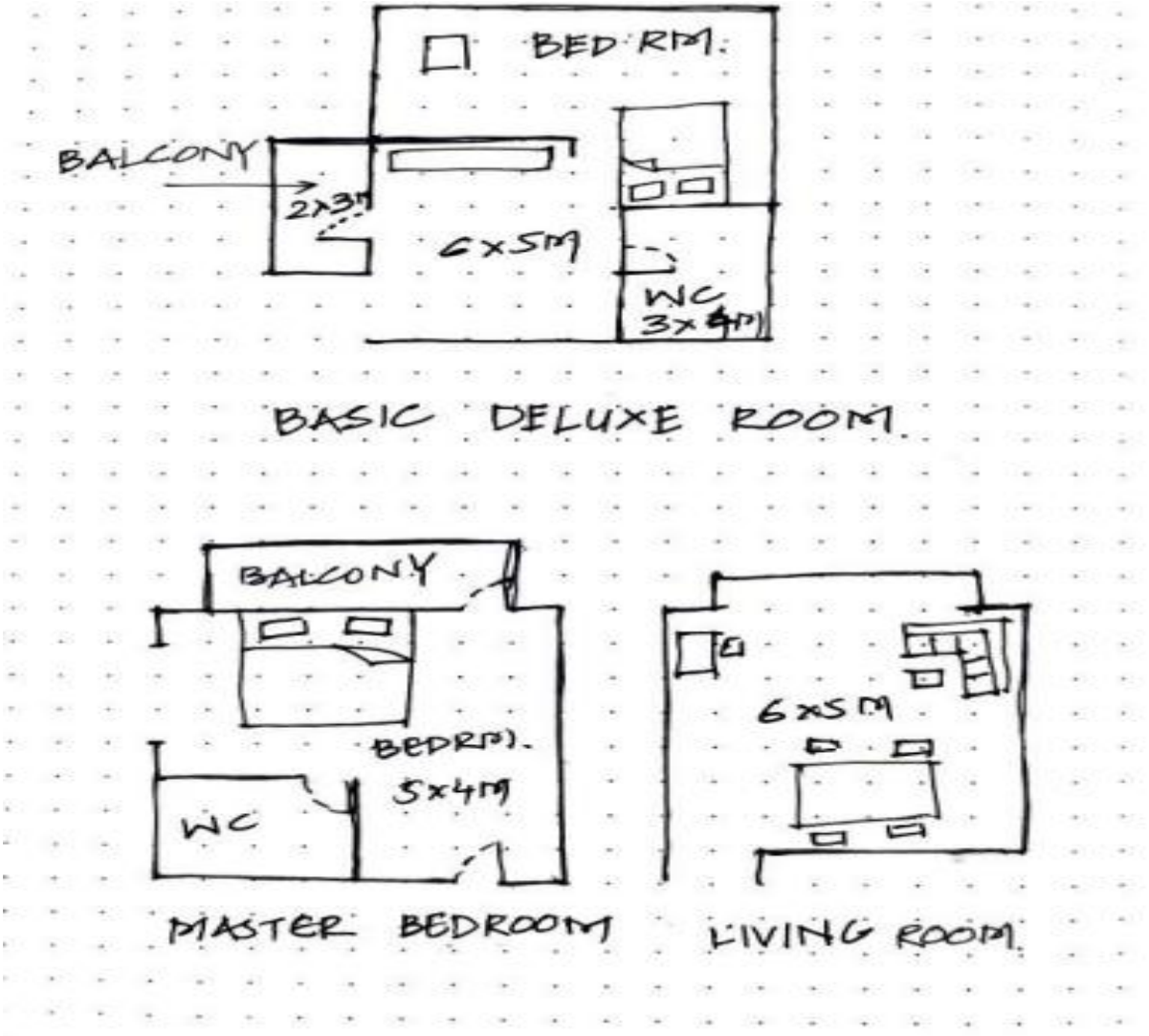


Landscaping at Mayfair Resort , Darjeeling

Architecture and Built Spaces

o Designed in colonial heritage style, blending luxury with traditional aesthetics.

o Structures follow natural contours, ensuring minimal disruption to the terrain.



Room Layouts

Room Typologies -

o **Deluxe Campbell Room (387 sq. ft.)** – 5 units, accommodates 3 adults.

o **Heritage Attic (280 sq. ft.)** – Located in heritage building, for 3 guests.

o **Deluxe Orchid Room (345 sq. ft.)** – Views of orchid fields.

o **Heritage Room (377 sq. ft.)** – With fireplaces, in main building.

o **Lloyd's Cottage (398 sq. ft.)** – Valley view, private cottages. o Executive Anderson Room (312 sq. ft.) – 11 rooms, near facilities.

o **Executive Campbell Room (290 sq. ft.)** – 10 rooms, close to conference hall.

o **Family Room (495 sq. ft.)** – Interconnected rooms for 4 guests.

o **Suite (538 sq. ft.)** – Separate living space, balcony.

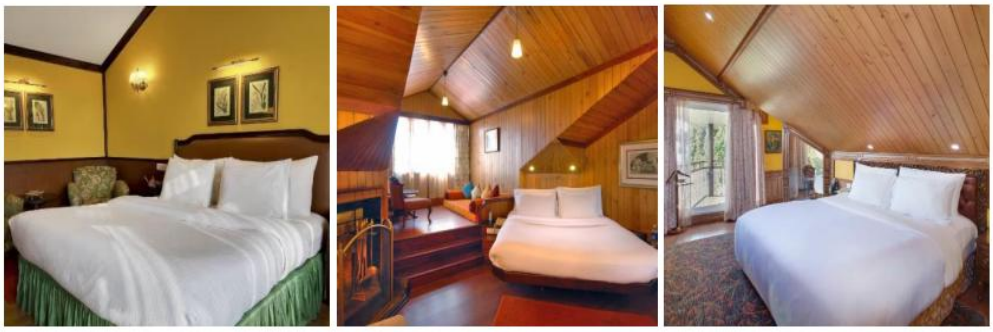


Figure 5416 Deluxe Campbell room, Heritage Attic Room, Deluxe Orchid Room



Figure 5517 Heritage room, Lloyd's cottage, Executive Anderson room



Figure 56 18 Executive Campbell Room, Family room ,Suite

Amenities -

o **Dining**: Multiple restaurants and cafes with diverse cuisines.
o **Wellness:** Spa offering holistic treatments.
o **Fitness:** Gym and yoga area.
o **Recreation**: Games room, children's zone, library, tea boutique.
o **Business Facilities**: Banquet hall for conferences/events.



Figure 57 19 Doglass Bar, Magnolia

Construction and Design Features

Interiors: Wooden flooring, fireplaces, and colonial furnishings create a heritage ambience.



Figure 58 20 Interior Material Palette

- **Exteriors:** Use of traditional motifs and antique artifacts maintains the resort's vintage character.

• **Exteriors:** Use of traditional motifs and antique artifacts maintains the resort's vintage character. Sustainability

• **Design follows natural topography**; use of local materials indicates eco-conscious intent.

• **Ventilation and daylighting** strategies reduce energy use. Lighting & Ventilation

• **Natural Lightin**g: Large windows and balconies minimize artificial lighting needs.

• **Cross Ventilation**: Promotes comfort and air quality.

• **Artificial Lighting**: Soft ambient lighting complements interior aesthetics.

Interir Design



Figure 59 21 Bathroom Interiors

- Colonial elegance with modern comfort.
- **Guest Rooms:** Equipped with heating, ceiling fans, tea/coffee makers, etc.
- **Common Areas:** Library, tea boutique, and games room designed for relaxation and ease of movement.
- **Special Features:**
  - *Banquet Hall:* Stylish and functional for events.
  - *Decor:* Rich in local artwork and antique pieces.

Guest Experience

- **Check-In/Out:** Efficient with express service options.
- **Recreation:** Games room, children's play area, tea boutique, library, and fitness center.
- **Dining:** Multi-cuisine restaurant and in-house bar with ambient settings.

Events



Figure 60 Views of Banquet Hall



- Spacious banquet hall for weddings, conferences, and cultural events.

Environmental & Cultural Integration

- Colonial architecture blends with Darjeeling's landscape and heritage.
- Use of local materials and crafts supports regional identity.
- Acquisition of Jungpana Tea Garden integrates tea tourism.
- General CSR policy includes environmental stewardship.

Strengths

1. **Architectural Harmony:** Colonial aesthetics suit local heritage and terrain.
2. **User-Centric Design:** Functional zoning and guest-friendly amenities.
3. **Cultural Relevance:** Strong connection to local art, tea culture, and history.
4. **Event & Dining Appeal:** Well-developed hospitality infrastructure.
5. **Sustainability:** Implicit through materials and layout design.

Weaknesses

1. **Limited Biodiversity Focus:** No detailed strategy for flora/fauna conservation.
2. **Accessibility Issues:** Hilly terrain and limited transport options.
3. **Modern Eco-Practices:** Lack of solar/waste management solutions; more transparency needed.

Lessons Learned

- Harmonize traditional and modern design elements.
- Prioritize functionality and comfort in layouts.
- Celebrate local identity through materials and decor.
- Include visible and measurable sustainability measures.
- Leverage events as a revenue and engagement strategy.

Application to Thesis

- Emphasize cultural identity and environmental consciousness.
- Design multifunctional, user-friendly spaces.
- Adopt detailed sustainability frameworks in resort planning.

5.1.2 STERLING RESORT DARJEELING

Objective of the Case Study

This case study explores the architectural design and development of **Sterling Resort Darjeeling** (Sterling Silver Oaks) to understand its relevance to resort architecture in hill stations. It analyzes the resort's integration with the environment, sustainability practices, and guest experience, offering insights for designing eco-sensitive, culturally grounded resorts in hilly regions.

Location Details:

- **Name:** Sterling Resort Darjeeling (Sterling Silver Oaks)
- **Address:** Ghoom, Darjeeling, West Bengal, India
- **Altitude:** 7,598 ft above sea level
- **Key Features:** Offers panoramic views of the Kanchenjunga Range, located near Ghoom Monastery, ~0.6 miles from Ghoom Railway Station



Figure 61 Location on Google maps

Historical Context :

Sterling Darjeeling, part of the renowned Sterling Holidays group, has been serving guests in the region for several years. Though its exact establishment date is unclear, the resort is known for blending luxury with the natural charm of Darjeeling. Strategically located near Ghoom Monastery, it offers serene surroundings and iconic views of Kanchenjunga, catering to travelers seeking both relaxation and access to key attractions.



Figure 62 Sterling Resort Darjeeling View

Owner & Architect :

Owner: Sterling Holidays, a leading hospitality brand in India.

Architect: Not publicly disclosed; typically collaborates with expert designers to blend local context with luxury.

Site Analysis – Sterling Resort Darjeeling:

Climate: Temperate; cool summers (15–25°C), cold winters (~0°C), heavy monsoon rains.

Topography: Elevated at 7,598 ft, with steep slopes and panoramic views.

Soil: Loamy, slightly acidic – ideal for tea and diverse flora.

Vegetation: Rich in rhododendrons, orchids, pine, and Himalayan wildlife.

Accessibility:

Nearest Hubs: Ghoom Railway Station (0.6 mi), Bagdogra Airport (67 km), Darjeeling bus station (11 km).

Nearby Attractions: Ghoom Monastery, Kanchenjunga views, tea estates, Darjeeling city center (~10 km).

Surroundings:

Land Use: Residential, agricultural, tea plantations, and forested areas.

Notable Features: Kanchenjunga Range, Ghoom Monastery, lush forests, terraced tea gardens.

Views:

External: Kanchenjunga, tea gardens, forests.

Internal: Landscaped gardens, scenic courtyards with hill views.

Architectural Style:

A mix of vernacular and modern styles, reflecting local heritage and natural harmony with luxury comfort.



Figure 63 22 Interior View

Vernacular Elements:
Incorporates traditional hill station features like sloping roofs, timber framing, and the use of local materials such as wood and stone, blending seamlessly with the natural surroundings.

Modern Design:
Includes clean lines, large glass windows, and open spaces for scenic views. Luxury amenities like a spa, fitness center, and spacious suites enhance guest comfort.

Eco-Friendly Practices:
Focuses on sustainability through rainwater harvesting, waste management, and energy-efficient lighting and materials to minimize environmental impact.

Inspiration:
The resort draws from Darjeeling's **cultural heritage, colonial history**, and **natural beauty**, reflecting the essence of the Eastern Himalayas in both form and function.



Figure 6423 View

Cultural:
Reflects Darjeeling's Tibetan and British colonial influences—Tibetan rooflines and detailing, colonial room layouts, and a tranquil atmosphere inspired by nearby Ghoom Monastery.

Natural:
Inspired by tea plantations, forests, and Kanchenjunga views. Large windows and terraces ensure harmony with nature and maximize scenic vistas.

Historical:
Echoes the colonial legacy of Darjeeling as a hill station, incorporating traditional stone and timber materials for a nostalgic yet luxurious feel.

Theme:

Luxury:

Designed for high-end comfort with modern amenities, spacious suites, fine dining, and wellness facilities like spas and fitness centers.

Wellness:

Emphasizes rejuvenation with spa treatments, nature-based relaxation, yoga, trekking, and birdwatching to promote mental and physical well-being.

Master Plan & Zoning:

Zoning:

Thoughtful spatial planning integrates guest comfort and operational efficiency, organizing accommodations, wellness, dining, staff, and green areas while preserving the site's natural hilly contours.

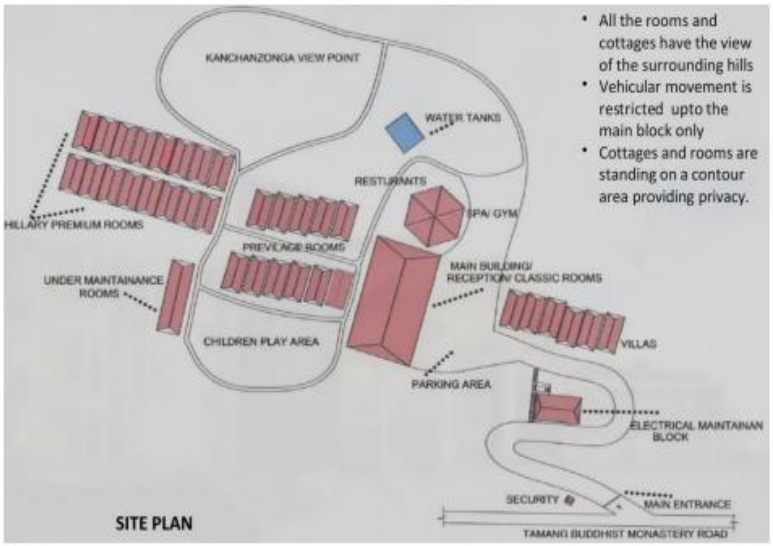


Figure 65 24 Site Plan

Residential Areas :

Sterling Resort Darjeeling offers a range of accommodations—deluxe rooms, suites, cottages, and heritage rooms—strategically positioned to provide privacy and scenic views. These residential units are arranged in clusters across the property, maintaining a low-density layout to preserve tranquility and reduce visual clutter. Located away from active zones, they ensure a peaceful, immersive experience for guests.

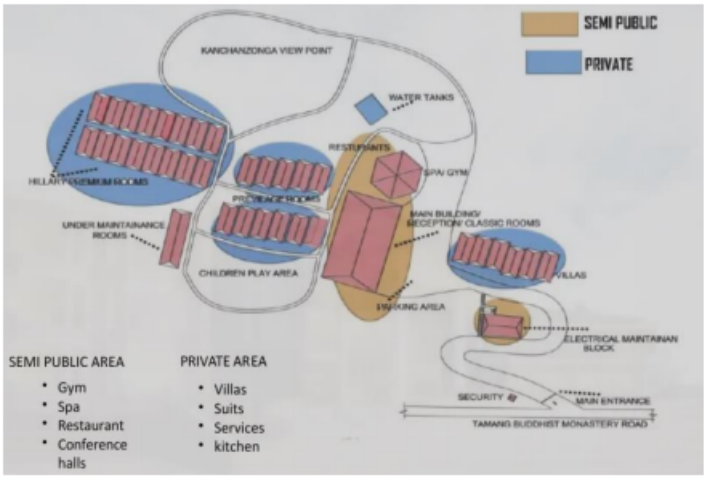


Figure 66 25 Semi Public & Private Area division in resort

Recreational Zones:

Recreational spaces are thoughtfully integrated into the resort to offer guests opportunities for relaxation and leisure. These include:

Spa and Wellness Center:

A dedicated wellness area that offers therapeutic treatments, massages, and relaxation therapies. The spa is designed to provide a serene atmosphere with views of the surrounding greenery and mountains.

Indoor Games Area:

This area features games such as chess, table tennis, and other indoor activities for guests of all ages.

Fitness Center:

A modern gymnasium is available, equipped with exercise machines and equipment for guests who wish to maintain their fitness routines during their stay.

Bonfire Area:

A designated outdoor area for evening bonfires, allowing guests to enjoy a cozy social atmosphere under the stars.



Dining & Service Areas:

Dining:

Delicaci Restaurant: Multi-cuisine dining with Indian, Tibetan, Chinese, and European options.

Bar/Lounge: A scenic, relaxed setting for beverages and leisure.

Service Areas:

Includes reception, admin offices, housekeeping, laundry, staff rooms, and kitchens—strategically placed out of sight to ensure guest privacy and operational efficiency.

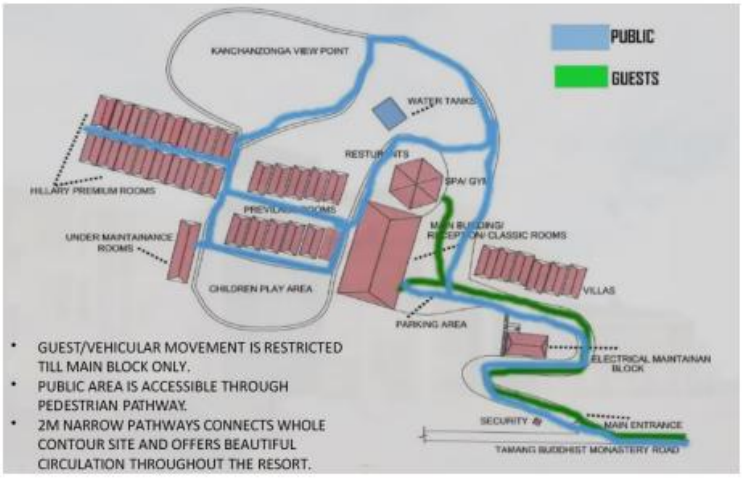


Figure 68 27 Circulation Plan of the resort

Circulation:

Sterling Resort Darjeeling ensures smooth and separate circulation for guests, staff, and vehicles. **Guest pathways** are pedestrian-friendly, scenic, and accessible, with view corridors enhancing the walking experience. **Staff circulation** includes discreet service paths and peripheral staff parking to avoid guest disruption. **Vehicle circulation** features a designated drop-off zone and a well-planned parking area near the entrance. The resort is also **accessibility-friendly**, with wheelchair-accessible paths, rooms, and clear signage throughout.

Landscaping:

The resort's landscaping complements the natural surroundings with lush greenery, enhancing aesthetics and creating a seamless connection between built spaces and the environment.

Sterling Resort Darjeeling features manicured **gardens** with native flora, **green spaces** for relaxation, **water bodies** for ambiance and biodiversity, and **terraced gardens** that follow the natural slope, blending aesthetics with sustainability.



Figure 69 Landscaping

Room Layouts – Sterling Resort Darjeeling:

The resort offers spacious, well-appointed rooms focused on luxury and views.

Deluxe Rooms (250–300 sq. ft.) include large windows, king/twin beds, seating, a work desk, and modern bathrooms—blending comfort with scenic hill views.



Figure 70 28 Deluxe Room

Deluxe Rooms (250–300 sq. ft.), **Heritage Rooms (300–350 sq. ft.)**, **Cottages (400–500 sq. ft.)**, and **Suites (600–800 sq. ft.)**—each designed for comfort, privacy, and scenic views. Room clusters are spaced for privacy, overlooking tea gardens or Kanchenjunga.

Amenities include the multi-cuisine *Delicaci Restaurant*, a cozy bar/lounge, full-service spa, modern gym, scenic outdoor pool, and business facilities.

Materials blend rustic charm and luxury—exteriors use local stone and timber; interiors feature wood, natural stone, and soft textiles, with large glass windows to connect with nature.

Sustainability is integral: energy-efficient systems, rainwater harvesting, composting, and local sourcing reduce the ecological footprint.

Lighting and Ventilation combine large windows, skylights, and natural ventilation with energy-saving artificial systems to maintain comfort year-round.



Figure 71 29 View from Dining room- Natural Lighting

Lighting, Ventilation & Interior Design – Sterling Resort Darjeeling:

The resort emphasizes **natural lighting** through large windows, balconies, and terraces, reducing daytime energy use. **Artificial lighting** includes warm ambient setups like pendant lights and floor lamps to enhance the resort's cozy atmosphere.

Ventilation is achieved through passive design—cross-ventilation via well-placed windows and vents—alongside efficient **HVAC systems** for year-round comfort.

Interior Design blends colonial charm with modern luxury. Using **natural materials**, handcrafted wooden furniture, and warm tones, the design creates a welcoming, elegant space that reflects local culture and provides upscale comfort.



Figure 72 30 Traditional Furnishing and interior details

Color Scheme:
Earthy tones (terracotta, beige, brown) with green accents reflect the tea gardens; soft blues and purples echo the misty hills, promoting calm and relaxation.

Decor Elements:
Blends colonial charm and Himalayan influences with wood carvings, brass fixtures, woven rugs, and art showcasing Darjeeling's heritage and landscapes.

VISHAKHAPATNAM SITE PHOTOS -









ALL THE DRAWINGS ARE ATTACHED AHEAD -