



**EVEN
SEMESTER
2026**

SEMESTER SPOTLIGHT



SPA VIJAYAWADA

SPA Vijayawada is one of the three institutes of national importance, under the Ministry of Education (MoE), Government of India, offering education in the fields of Planning and Architecture. The School has distinguished itself and has grown as a role model in the professional education offering undergraduate, post graduate and doctoral programmes in the fields of planning and architecture, while at the same time fostering quality research in these domains. SPA Vijayawada is ranked one of the best technical institutes in the country by National Survey and Ranking, India Today Group, as well as holds the 16th position in the 2024 NIRF Ranking nationwide for Architecture and Planning.



Message from the

BOG Chair Person

Ar. Dr. Amogh Kumar Gupta is a practicing Architect and Valuer currently based in Bhopal. Having done his graduation course of B. Architecture and subsequent post graduation course of M. Architecture (PHE including Environmental Planning) from Maulana Azad National Institute of Technology Bhopal (Formerly known as Maulana Azad College of Technology, Bhopal) in the years 1985 and 2001 respectively, he completed his Doctoral research on "Validation of Traditional Indian Knowledge of Home Building". Being a pro-active and dynamic individual, he is an important member of many professional and social organizations and bodies. He is currently serving as the Chairman, Board of Governors of School of Planning and Architecture Vijayawada, an Institute of National Importance. He has also been appointed as an Independent Director at two places, namely, DBL Infrastructure (Dilip Buildcon Limited), a pioneering company at national level in the field of Infrastructure Development; and Satna Smart City Project for the city of Satna in Madhya Pradesh. Having a strong inclination and flair for academia, he has previously been associated with many educational bodies and has been an active member of the Board of Governors of several Institutes of national acclaim and importance like the Maulana Azad National Institute of Technology Bhopal, the School of Planning and Architecture Bhopal, Samrat Ashok Technology Institute Vidisha, M.P. Chairman Sub Committee Indian Architectural Heritage in NiScPR (under CSIR, DST). He has also held many prominent positions in the past, the most noteworthy being former Chairperson, Board of Governors, School of Planning and Architecture, Delhi; National Junior Vice-President of the Indian Institute of Architects; Council Member (representing Madhya Pradesh) and Executive Committee Member in the Council of Architecture, India; Chairman of Discipline Committee of the Council of Architecture, India and President of Vigyan Bharati Madhya Bharat pranth.

Ar. Dr. Amogh Kumar Gupta
BOG Chair Person
SPA, Vijayawada

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Message from the

Director

As we conclude the Semester, I take immense pride in reflecting on the growth, energy, and excellence that have marked these past few months at SPA Vijayawada. This semester has been defined by renewed momentum, one that has manifested in both academic rigor and the vibrant culture of learning that thrives within our campus. We witnessed a series of thought provoking events that enriched our intellectual landscape. The Architectural Practices Symposium served as a dynamic platform for critical conversations between academia and the profession, while our guest lecture series throughout the entire semester also brought in distinguished international speakers who shared cutting-edge perspectives on design, sustainability, and innovation. These engagements not only expanded our students' horizons but also deepened our collective understanding of architecture's evolving role in society.

I am also pleased to note the tangible improvements in our campus infrastructure, aimed at enhancing both learning environments and everyday student life. These upgrades reflect our commitment to providing a space that inspires creativity, collaboration, and well-being. At SPA Vijayawada, we remain steadfast in our mission to foster thoughtful architects and designers, individuals who are not only technically adept but also rooted in cultural awareness, sustainability, and social responsibility. I commend our faculty, staff, and students for their dedication and resilience in pushing these ideals forward.

As we look ahead, let us continue to challenge norms, explore possibilities, and shape a future of architecture that is inclusive, resilient, and deeply contextual.

Dr. Ramesh Srikonda
Professor, Director,
SPA, Vijayawada



Message from the

Head of Department Architecture

It is my pleasure to introduce the third volume of Semester Spotlight, a testament to the vibrant academic and extracurricular life within our institution. This edition captures the essence of our department's dynamic activities, showcasing the creativity, innovation, and dedication of our students, faculty, and staff.

School of planning and Architecture, Vijayawada takes pride in fostering an environment that encourages holistic development. From academic achievements to extracurricular triumphs, our community consistently pushes boundaries. This publication highlights the remarkable events, workshops, seminars, and study tours that have enriched our learning experience.

I commend the editorial team for their efforts in bringing this volume to life. I am confident that Semester Spotlight will continue to serve as a valuable record of our SPA Vijayawada's journey and a source of inspiration for all who read it.

Dr. Amitava Sarkar
Head of department
Professor, Architecture
SPA, Vijayawada



Message from the

Dean Academics

It is with great pride and immense pleasure that I present the spotlight edition of the Department of Architecture, School of Planning and Architecture, Vijayawada. This publication is more than just a collection of achievements, it is a reflection of the vibrant and dynamic spirit of the architecture department and the creative minds that continue to shape the future of architecture.

At SPA Vijayawada, we believe that architecture is not only about design, it is about creating spaces that inspire and impact the world around us. We are a community that values the integration of traditional knowledge with cutting-edge innovation, while constantly being mindful of the cultural, social, and environmental responsibilities we bear as architects. This year, our students have once again showcased their exceptional talent and skill on national and international platforms. I am thrilled to share that several of our students have brought laurels to the institute with their outstanding performances at prestigious events such as the National Association of Students of Architecture (NASA), Namami Gange on "Re-imagining Urban Rivers" and the Bhartiya Paramparik Awas Uthan Award competitions. These achievements are a testament to the high level of creativity and excellence that our students consistently display. These awards are not only a reflection of our students' hard work but also of the strong academic foundation, mentorship, and encouragement they receive here at SPA Vijayawada. Our faculty members, with their rich academic and professional backgrounds, play an integral role in guiding our students towards these successes, and I am deeply grateful for their continued dedication. I invite you to delve into the pages of this spotlight edition and celebrate the remarkable achievements of our students and faculty.

Thank you for your continued support, and I hope you enjoy this edition of spotlight as much as we have enjoyed creating it.

Dr. Lilly Rose A
Dean (Academic)
Associate Professor, Architecture
SPA, Vijayawada



Message from the

Head of Department Planning

We are pleased to introduce the another Semester Spotlight, the magazine of SPA Vijayawada, which highlights the dynamic academic and other activities, accomplishments, and stories shaping our institution into a thriving center of learning and academic distinction. By emphasizing spatial planning, we have forged engaging partnerships with industry leaders and various academic & research-based institutions, bringing valuable guest lectures and workshops to students of all batches. It's gratifying to see our students achieve success, landing placements and internships at prestigious companies—a reflection of their diligence, commitment, and creative problem-solving, alongside the guidance of our dedicated mentors. Additionally, we are proud of the progress made by the AMRUT Capacity Building Cell, established by MoHUA at SPA Vijayawada. The cell has reached notable milestones through faculty-led capacity building initiatives and research projects tackling spatial planning challenges in southern India. I express sincere gratitude to our faculty for their unwavering commitment to fostering student growth. Your expertise, passion, and dedication have cultivated a learning atmosphere that's both supportive and stimulating. As we commemorate our successes, I extend best wishes for your continued academic and professional growth. May Semester Spotlight motivate us to keep innovating, exploring fresh perspectives, and pursuing excellence.

Prof. Dr. Adinarayanan R
Head of department
Planning, Professor,
SPA, Vijayawada



Message from the

Dean Research

At the School of Planning and Architecture, Vijayawada, research lies at the core of our academic mission and institutional ethos. As Dean of Research, I take great pride in creating a supportive and welcoming environment where research, teamwork across disciplines, and new ideas are encouraged and valued. This semester, our faculty and students have demonstrated remarkable dedication through a wide array of research projects and publications that address both global and regional challenges. Their contributions exemplify our commitment to generating knowledge that is academically rigorous, socially relevant, and forward-looking. SPA Vijayawada continues to excel in academics, research, and consultancy across a wide range of disciplines, including Architecture, Urban and Regional Planning, Transportation and Environmental Planning, Urban Design, Housing, Heritage Conservation, Landscape Architecture, Energy Studies, and Climate Change. In furthering the domains of urban planning, capacity building, and sustainable development, SPA Vijayawada is privileged to host the AMRUT Centre of Urban Planning for Capacity Building (A-CUPCB-SPAV), established under the aegis of the Ministry of Housing and Urban Affairs (MoHUA), Government of India. We are currently in the process of formalizing multiple Memoranda of Understanding (MoUs) with various institutions and government bodies, and look forward to expanding such alliances to further strengthen our research ecosystem and collaborative impact. I extend my heartfelt appreciation to all faculty members, researchers, and students for their outstanding contributions this semester and encourage the continued pursuit of excellence in research and knowledge creation.

I also convey my warmest wishes to the editorial team and contributors of the Semester Spotlight magazine.

Dr. M. Banu Chitra
Dean (Research)
Associate Professor, Architecture
SPA, Vijayawada



Message from the

Dean Student Affairs

We are delighted to bring out another edition of Semester Spotlight, a glimpse into the energy, creativity, and hard work that define life at SPA Vijayawada. Over the semester, the institute has remained deeply engaged with the world beyond the classroom, building connections with industry experts and academic institutions. These partnerships have translated into enriching guest lectures, hands-on workshops, and meaningful interactions for students from every batch.

One of the most rewarding aspects of the semester has been watching our students step confidently into the professional world. Many have secured internships and placements with well-known organizations, reflecting not only their talent and determination but also the constant support of their mentors and faculty.

My heartfelt thanks go to the faculty members whose dedication shapes the learning journey of our students every day. Your enthusiasm and guidance have created an environment that encourages curiosity, innovation, and growth. As we look back on the semester, I wish everyone continued success ahead. May Semester Spotlight inspire us to keep learning, experimenting, and reaching new heights.

Warm regards,
Best wishes

Dr. Uma Sankar Basina
Dean (Student Affairs)
Associate Professor, Architecture
SPA, Vijayawada



Message from the

Dean Faculty Welfare

I am pleased to note the release of the Semester Spotlight Newsletter by the School of Planning and Architecture. This initiative reflects the vibrant academic and creative environment of the Institute and provides a meaningful platform to showcase the achievements, innovations, and engagements of our students and faculty members. The accomplishments highlighted in this newsletter spanning academic excellence, research, co-curricular and extra-curricular pursuits are a testament to the commitment, talent, and perseverance of our students, as well as the dedicated mentorship provided by our faculty. Such collective efforts contribute significantly to nurturing a culture of excellence, critical inquiry, and professional responsibility within the institution.

SPA Vijayawada continues to grow as a centre of learning distinguished by its academic rigour, collaborative spirit, and national and international engagements. The institution's strength lies not only in its infrastructure and curriculum, but more importantly in its people students who aspire to make meaningful contributions to society and faculty who guide them with vision and integrity.

I appreciate the editorial team for their efforts in bringing out this newsletter and commend the both the departments of Architecture and Planning for fostering a culture of documentation, reflection, and celebration of achievements. I extend my best wishes to all students and faculty for continued success in their academic and professional endeavours.

With warm regards and best wishes.

Dr. Rajakumari Muthusamy
Dean (Faculty Welfare)
Associate Professor, Architecture
SPA, Vijayawada



Message from the

Dean Planning & Development

As I begin my tenure as the Dean (Planning and Development) at SPA Vijayawada, I extend my warmest greetings to the student body, faculty, staff, alumni, and all stakeholders of this vibrant academic community. It is an honour to take on this responsibility during a period of growth, reflection, and reinvention—both institutionally and nationally. My vision for Planning and Development is rooted in structured growth, design excellence, and sustainable infrastructure development. SPA Vijayawada has always stood for innovation in architecture, planning, and design education. It is now our shared duty to translate that spirit into the physical and strategic fabric of our campus. Our foremost focus will be on planning and executing the expansion of campus facilities. This includes preparing and reviewing proposals and estimates for civil, electrical, sanitary, and IT network systems with utmost transparency and precision. Strategic infrastructure planning will align with the academic vision and spatial aspirations of the school. This new semester brings with it opportunities to strengthen the backbone of our academic ecosystem. With dedication, clarity of purpose, and collective support, we shall ensure that Planning and Development at SPA Vijayawada remains responsive, resilient, and visionary. Let us work together to build a campus that reflects not only our legacy but our shared future.

Warm regards

Prof. Dr. Anil Kumar Chilakapati
Dean (Planning & Development)
Professor, Department of Architecture
SPA, Vijayawada



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January **HIGHLIGHTS**



EVENT:

ROAD SAFETY AWARENESS PROGRAMME

The Andhra Pradesh Traffic Police Department successfully conducted a Road Safety Awareness Programme. The programme witnessed active participation from faculty members, staff, and students of the institute. The awareness session aimed at sensitizing participants to the importance of road safety, traffic rules, and responsible behaviour on roads, with special emphasis on preventing road accidents and ensuring public safety. Officials from the Andhra Pradesh Traffic Police Department shared valuable insights, real-life case examples, and best practices related to safe driving, pedestrian safety, and compliance with traffic regulations.

The programme was highly informative and interactive, helping participants understand their role in promoting road safety and adopting safer practices in daily life. The initiative reflects SPA Vijayawada's commitment to creating awareness on social responsibilities and fostering a culture of safety among the academic community.





21 JANUARY 2026

CEREMONY:

KAJARIA KEROVIT MERITORIOUS STUDENT AWARDS 2025

The Kajaria Kerovit Meritorious Student Awards 2025 were successfully conducted at Krishnaveni Sabhagar (Auditorium). The event was organized with the objective of recognizing and celebrating academic excellence among students, while strengthening industry-academia collaboration. The programme was held under the esteemed patronage of Prof. Dr. Ramesh Srikonda, Director, SPA Vijayawada, and was graced by senior representatives from Kajaria Kerovit, including Mr. Yamandeep Singh, Senior Manager, Mr. P. Ravi Sankar Reddy, General Manager, and Mr. Paladugu Prabhakar, Assistant General Manager. The presence of the distinguished guests added great value to the event and inspired the student community.

The ceremony began with the lighting of the lamp and the rendition of the SPAV anthem, followed by a formal welcome and introduction by Prof. Dr. Srinivas Daketi, Head of the Department of Architecture. The event proceedings included a curtain-raiser video highlighting the vision and contributions of Kajaria Kerovit, setting the tone for the felicitation ceremony. The awards were presented to Harshitha N Kumar and Dharani S Patil in recognition of their outstanding academic performance and merit. The awardees shared their experiences and expressed gratitude for the encouragement and recognition received, motivating fellow students to strive for excellence.

Addressing the gathering, Prof. Dr. Ramesh Srikonda emphasized the importance of industry support in nurturing young talent and acknowledged Kajaria Kerovit's initiative in promoting academic excellence. The event concluded with a vote of thanks followed by the National Anthem, and was followed by high tea. The Kajaria Kerovit Meritorious Student Awards 2025 served as a meaningful platform to honor merit, inspire students, and reinforce SPA Vijayawada's commitment to academic excellence and industry engagement.





23 JANUARY 2026

CELEBRATIONS: REPUBLIC DAY

77th Republic Day on 26 January 2026 with patriotic fervour and a programme that brought to-gether students, faculty, staff and invited guests to honour the nation's constitutional ideals. The event began with the ceremonial hoisting of the National Flag on campus, followed by the singing of the National Anthem, after which the Director/Principal addressed the gathering to reflect on the values of democracy, unity and civic responsibility.





26 JANUARY 2026

February **HIGHLIGHTS**



EVENT:

INTACH MEMBERSHIP CARDS AWARDED TO SPAV STUDENTS

Student Membership Cards from Indian National Trust for Art and Cultural Heritage (INTACH). The membership recognises the students' interest and commitment towards the conservation, protection, and promotion of India's rich cultural and architectural heritage. Through this association with INTACH, students will gain valuable opportunities to participate in heritage awareness activities, documentation programmes, workshops, and conservation initiatives that enhance their academic learning and professional exposure.

INTACH, a premier national organization dedicated to safeguarding India's natural, built, and cultural heritage, encourages young students to actively contribute to heritage preservation. The distribution of membership cards marks an important step in fostering heritage sensitivity, research engagement, and community participation among SPA Vijayawada students. The institute appreciates INTACH for extending this opportunity and looks forward to continued collaboration in promoting heritage education, conservation practices, and cultural awareness among future planners and architects.





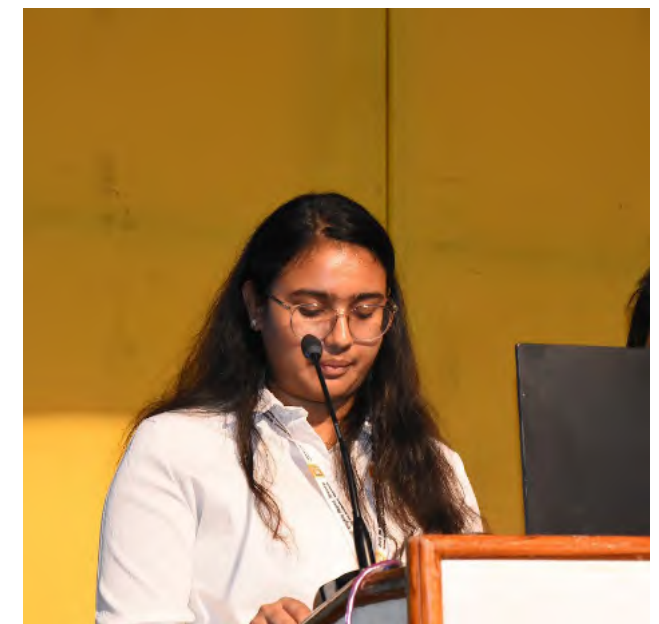
12 FEBRUARY 2026

EVENT:

THE IGBC STUDENT CHAPTER ORIENTATION PROGRAM

The programme aimed to orient students towards sustainable design practices, green building concepts, and responsible material usage, fostering awareness and academic engagement in the field of sustainable architecture. The event featured insightful lectures by industry experts, including Mr. Praveen Kumar Soma, Principal Counsellor – CII-IGBC, who spoke on "Paradigm Shift in Design Thinking of Building Materials," and Ms. Sandeepani Vajje, CEO – Chinoy Design, who delivered a talk on "From Awareness to Action: The New Era of Sustainable Development." The session provided a valuable platform for interaction, knowledge exchange, and capacity building among students, faculty, and research scholars, strengthening the institute's commitment to sustainability and green building initiatives.





18TH FEBRUARY 2026

EVENT:

NATIONAL SCIENCE DAY 2026

“Can AI Design Better Cities Than Humans?”

The programme was organized in collaboration with the Institution's Innovation Council (Ministry of Education Initiative) and VIBHA – Vijnana Bharati (VIBHA India). The event focused on the role of Artificial Intelligence in urban planning and city design, encouraging students and faculty to explore innovative approaches for developing smarter and more sustainable cities. The programme witnessed active participation from students and faculty members, making the event a meaningful and insightful celebration of National Science Day 2026 at SPA Vijayawada.





28 FEBRUARY 2026

March **HIGHLIGHTS**





CELEBRATION: INTERNATIONAL WOMEN'S DAY 2026

successfully organized an Interactive Talk on 'Women and Young Adult Health Awareness' The event brought together distinguished speakers and experts who shared valuable insights on important health issues affecting women and young adults, creating awareness among students and participants. The programme witnessed enthusiastic participation and provided an engaging platform for discussion on health, well-being, and empowerment





6 MARCH 2026

EVENT:

PRE-INYAN 2026

Marking a vibrant and energetic prelude to the much-awaited annual cultural fest, INYAN 2026.

The event featured an engaging lineup of activities and performances, setting the tone for the grand celebrations ahead. Students actively participated in a variety of events, showcasing their creativity, talent, and enthusiasm. The campus came alive with dynamic performances, interactive sessions, and a festive spirit that reflected the cultural diversity and artistic excellence of SPA Vijayawada.

Pre-INYAN served as a platform to build excitement and momentum for the main fest, bringing together students, faculty, and organizers in a collaborative and celebratory environment. The event also highlighted the organizational efforts of the student teams, whose dedication ensured its smooth execution and success.

The overwhelming participation and positive response from attendees made Pre-INYAN 2026 a grand success, paving the way for an even more spectacular INYAN 2026.





23 MARCH 2026

EVENT:

INYAN 2026

INYAN 2026 witnessed an impressive array of events spread across the campus, bringing together students, faculty, and participants in a dynamic and festive atmosphere. The day featured a diverse mix of activities including creative workshops, exhibitions, competitions, and interactive experiences such as treasure hunt, cycling events, market spaces, puppetry workshops, and immersive sessions, reflecting the interdisciplinary spirit of SPA Vijayawada.

The evening was highlighted by the much-anticipated Main Stage Events, which showcased a series of captivating performances. From energetic dance acts and musical performances to monologues and club presentations, each segment reflected the immense talent and dedication of the students. Special segments such as the Investiture Ceremony, Felicitation, Academic Awards, and Vote of Thanks added a formal and celebratory dimension to the event. The grand finale, featuring a musical performance with dance, created an electrifying ambiance and brought the fest to a memorable close. The event also included unique experiences like "A Night Under the Stars", making the celebration truly unforgettable.

INYAN 2026 stands as a testament to the creativity, collaboration, and organizational excellence of the students of SPA Vijayawada. The enthusiastic participation and overwhelming response from the campus community made the event a resounding success, leaving behind cherished memories and setting a benchmark for future editions. INYAN 2026 – A celebration of talent, culture, and togetherness.





24 MARCH 2026

WORKSHOP:

URBAN COMPLEXITY AND DIGITAL TWINS FOR INCLUSIVE PLANNING



Prof. Eric Leclerc (University of Lille, France)



Ar. Ravi Kumar Reddy K (Practicing Planner, Hyderabad)

The Department of Planning, the workshop focused on emerging approaches in urban planning, particularly the transition from Urban Digital Twins (UDT) to Social Digital Twins (SDT). The sessions emphasized the integration of real-time human experiences, social media analytics, and behavioral data into urban systems, promoting a shift from infrastructure-centric models to more inclusive, human-centered planning frameworks. The workshop featured distinguished speakers, Prof. Eric Leclerc (University of Lille, France) and Ar. Ravi Kumar Reddy K (Practicing Planner, Hyderabad), who delivered insightful lectures on the application of digital technologies in shaping sustainable and responsive urban environments. Their sessions provided valuable perspectives on leveraging data-driven tools for better decision-making in planning practice. The programme included technical sessions, interactive discussions, panel review of student studio works, and student presentations, encouraging active participation and knowledge exchange among students, faculty members, researchers, and professionals. The event witnessed enthusiastic engagement from participants and served as a meaningful platform for exploring innovative, inclusive, and future-ready urban planning strategies, reflecting SPAV's continued commitment to academic excellence and research-driven learning.



26 MARCH 2026

The background of the page is a faded, light-colored photograph of a modern building. The building features large, multi-paned windows and a balcony with a glass railing. The overall tone is soft and architectural.

April **HIGHLIGHTS**



EVEN HARIT 2026:DAY-1

HARIT 2026 - ENVIRONMENT CONDUCTIVE DESIGN AND PLANNING FOR SUSTAINABLE LIVING

The day commenced with registration followed by an inaugural session featuring the lighting of the lamp, welcome address, and contextual insights into the theme of sustainable living through indigenous practices. The session was graced by distinguished dignitaries and experts, including keynote addresses and remarks by eminent academicians and policymakers.

The conference progressed with a keynote address setting the tone for in-depth discussions on sustainability. This was followed by three thematic sessions focusing on: Climate-responsive design and planning, emphasizing adaptive and resilient design strategies

Traditional wisdom and sustainability, highlighting the integration of indigenous knowledge systems into modern practices, Environmental psychology and sustainable development, and exploring human behavior and its role in creating sustainable environments. Each session featured expert talks, panel discussions, and interactive engagements, enabling meaningful knowledge exchange among participants from academia, government, and professional practice. The day concluded with active participation and insightful discussions, reinforcing the importance of blending traditional wisdom with contemporary planning approaches to address environmental challenges.





16 APRIL 2026

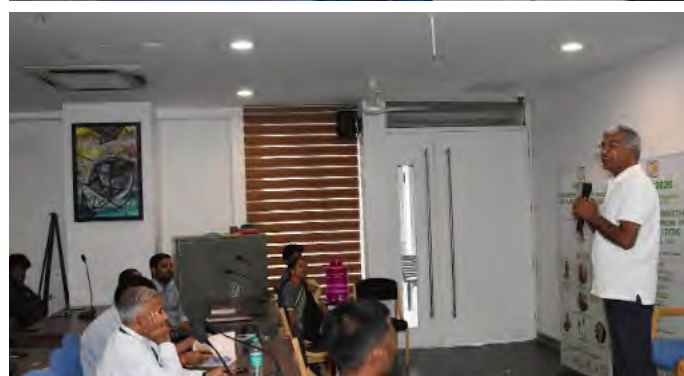
EVENT HARIT 2026: DAY-2

HARIT 2026

The second day of the conference continued with engaging discussions and knowledge exchange, focusing on advancing sustainable practices in the built environment. The day began with Session 4 on “Healthy Built Environment,” which emphasized the importance of harmony with nature, climate-sensitive planning, and the role of traditional settlements in promoting sustainable living.

This was followed by Session 5 on “Innovations and Technology,” where experts highlighted the integration of modern technologies, including emerging tools and approaches, to enhance resilience and sustainability in urban planning and design. Post lunch, the conference featured Session 6 on “Traditional Materials and Modern Construction Technology,” which explored the relevance of indigenous materials and techniques in contemporary construction practices, promoting eco-friendly and resource-efficient solutions.

Each session included expert presentations and interactive discussions, fostering collaboration among academicians, practitioners, and participants. The exchange of ideas reflected a strong commitment to bridging traditional knowledge with modern innovations for sustainable development. The conference concluded with a Valedictory Session, where key recommendations were presented, followed by concluding remarks and a vote of thanks. The event ended on a collaborative note with networking interactions among participants. Overall, Day 2 reinforced the significance of integrating innovation with tradition to create sustainable and resilient built environments, marking a successful conclusion to HARIT 2026.





17 APRIL 2026

WORKSHOP :

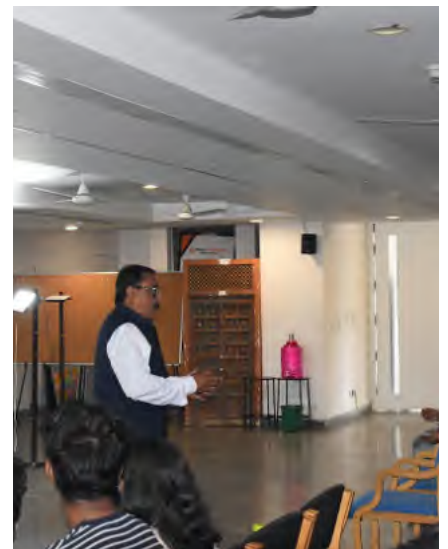
URBAN HOUSING AS CITY-MAKING: FROM POLICY TO SPATIAL STRATEGY

The workshop was led by Prof. Dr. Subrata Chattopadhyay (Professor Emeritus, IIT Kharagpur), who delivered an insightful session on the evolving role of urban housing in shaping cities through the integration of policy frameworks and spatial planning strategies.

The session provided a comprehensive understanding of how housing policies influence urban form and highlighted the challenges in translating policy into effective ground-level implementation. It emphasized the importance of inclusive, sustainable, and context-responsive housing approaches in contemporary urban development. The workshop also encouraged critical discussions on bridging the gap between governance, planning, and design practices.

The event witnessed enthusiastic participation from students, faculty members, and academic professionals, making it an engaging platform for knowledge exchange and learning. It further reinforced the institution's commitment to fostering academic excellence and addressing real-world urban challenges through meaningful dialogue and expert-led discussions.





27 APRIL 2026



June **HIGHLIGHTS**



EVENT

WORLD ENVIRONMENT DAY 2026

On the World Environment Day, a Training & Stakeholder Consultation Workshop on "Clean Mobility Pathways for Cities of Andhra Pradesh" was successfully held on at the Exhibition Hall, School of Planning and Architecture, Vijayawada (SPAV).

The workshop was organized as part of the Andhra Pradesh Sustainable Electric Mobility Policy 4.0 initiative. The program was conducted by The Habitat Emprise, New Delhi, in collaboration with the School of Planning and Architecture, Vijayawada, bringing together stakeholders to discuss sustainable and clean mobility solutions for the future of cities in Andhra Pradesh.

The workshop focused on promoting electric mobility, sustainable transportation practices, and environmentally responsible urban development, contributing towards cleaner, greener, and more sustainable cities.





05 JUNE 2026

EVENT

PLANTATION CEREMONY

Plantation Ceremony on 5th June 2026 as part of the World Environment Day 2026 celebrations under the theme "Inspired by Nature. For Climate. For Our Future." The initiative highlighted the importance of environmental conservation, sustainability, and creating a greener future through collective responsibility.

The event was hosted by SPA Vijayawada in association with the Rose Society of Andhra Pradesh under the guidance of Chief Patron Dr. Ramesh Rikonda. Faculty, staff, and members of the Rose Society of Andhra Pradesh actively participated in the plantation drive, reflecting their commitment towards protecting nature, improving green spaces, and promoting ecological awareness.

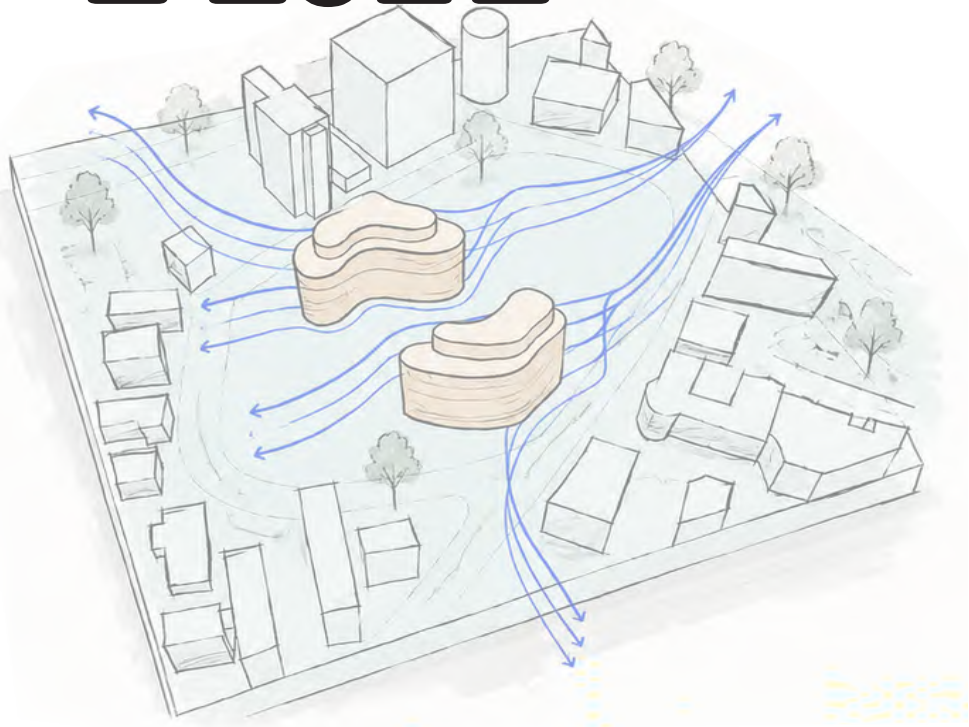
The ceremony served as a meaningful step towards encouraging sustainable practices and strengthening the bond between the community and the environment for a healthier future.





05 JUNE 2026

STUDY TRIP



ARCHITECTURE

1ST YEAR

2ND YEAR

3RD YEAR

4TH YEAR

1ST YEAR

2ND SEMESTER

BHOPAL, MADHYA PRADESH

SUBJECT: BASIC DESIGN II

**FACULTY: PROF.DR. AMITAVA SARKAR, PROF.DR. SRINIVAS DAKETI,
AR. MADHAVA RAO T, AR. KOMAL GILDA, MR. SANTOSH KUMAR,
AR. CHARITHA Y, AR. APURUPASVI.**

The study trip to Bhopal was designed as an experiential extension of the Basic Design II studio, carefully curated to expose students to diverse architectural contexts. Each site was selected for its ability to illustrate fundamental design principles form, space, scale, proportion, orientation, and spatial organization while also demonstrating how architecture responds to cultural, social, and environmental factors. The journey combined direct observation with interactive sessions, ensuring that students not only documented spaces but also critically reflected on their design significance.

The visit to Bharat Bhavan, designed by Charles Correa, was chosen to highlight how architecture can embody cultural identity while serving as a functional institution. The building's terraced levels, open courtyards, and fluid circulation exemplify Correa's philosophy of creating spaces that invite exploration. Students learned how transitions between enclosed and open areas establish spatial hierarchy, and how light and orientation shape the experience of art and performance. This reinforced the idea that architecture is both a process of design and a product of cultural expression.

At the Indian Institute of Forest Management (IIFM), designed by Anant Raje, students encountered a campus that integrates seamlessly with its natural surroundings. The choice of this site was deliberate, as it demonstrates contextual design and ecological sensitivity. The use of brick and exposed concrete, shaded courtyards, and carefully proportioned enclosures illustrated how architecture can respond to climate while fostering interaction. Students sketched and discussed how scale and proportion are manipulated to balance enclosure with openness, learning that institutional architecture can harmonize with landscape rather than dominate it.

The heritage trail through Taj-ul-Masjid, Moti Masjid, and Gauhar Mahal provided





lessons in monumental scale, symmetry, and cultural symbolism. These historic structures were selected to help students understand how architecture communicates collective identity and spiritual meaning. Observing their spatial hierarchy revealed how religious and civic buildings reinforce social order and cultural values.

The evening at Upper Lake and Chowk Bazaar added another dimension, showing how natural landscapes and marketplaces contribute to urban life, emphasizing the integration of environment and community in design.

The Vidhan Sabha, another landmark by Charles Correa, was included to illustrate civic architecture as a democratic expression. Its domes, courtyards, and axial alignments symbolize openness and authority, while its spatial organization balances monumental presence with accessibility. Students analysed how Correa's design philosophy translates into civic identity, learning that architecture must embody both institutional power and inclusivity. The interaction there further contextualized these lessons, allowing students to compare their observations with academic discourse.

The Museum of Mankind (IGRMS) and the Madhya Pradesh Tribal Museum were selected to demonstrate how architecture can narrate cultural stories. Their layouts guide visitors through thematic journeys, reflecting indigenous traditions and vernacular forms. Students applied the principle of "reading a building" to interpret hierarchy, symbolism, and cultural storytelling embedded in the design, added to the same they also visited Shaurya Smarak a memorial for soldiers. These museums illustrated how architecture can serve as a bridge between past traditions and contemporary exhibition practices, reinforcing the importance of cultural context in design.

The visit to the Sanchi Stupa was a highlight of the trip, chosen to connect students with ancient architectural heritage. The stupa's harmonious proportions, symbolic gateways, and axial alignments embody timeless design principles. Experiencing the monument in person allowed students to appreciate how architecture conveys spiritual meaning across centuries. A live sketching class conducted by Mr. Santosh Kumar at the site added immense value, as students learned techniques for accurately representing scale, proportion, and detail in architectural sketches. This exercise emphasized that sketching is not merely a visual record but a method of deeply understanding a building's design. The evening light-and-sound show further enriched the experience, bringing history alive and reinforcing the continuity of cultural narratives.

This trip was carefully curated to expose students to a spectrum of architectural experiences—from modern institutions by Charles Correa and Anant Raje to historic monuments and ancient heritage sites. Each building was chosen for its ability to illustrate specific design lessons: contextual responsiveness, spatial hierarchy, cultural symbolism, civic identity, and timeless proportion. The interactive sessions and the live sketching class at Sanchi Stupa ensured that students engaged actively with their observations, transforming them into design thinking. The trip thus enriched their academic foundation, instilling both technical understanding and cultural appreciation, essential for their growth as future architects.

2ND YEAR

4TH SEMESTER

BHAGAMANDALA, KARNATAKA

SUBJECT: RURAL CONTEXT STUDIO

FACULTY: DR. LILLY ROSEDR, BANU CHITRA, DR. PRASHANTI RAO, DR. FAIZ AHMED C, AR. PUSHPENDRA KUMAR, AR. SOMAINA ISLARY, AR. KAUSHAL KUMAR & AR. DIVYA YADAV

The study trip to Bhagamandala, Karnataka, was organized as an experiential extension of the Rural Context Design Studio, enabling students to understand the relationship between architecture, culture, landscape, and community within a traditional rural settlement. Situated at the confluence of the rivers Kaveri, Kannike, and Sujyoti, Bhagamandala offered a unique opportunity to study how vernacular architecture evolves in response to climate, topography, local materials, and cultural traditions. The trip was carefully designed to expose students to various aspects of rural life, including settlement patterns, housing typologies, construction practices, public spaces, religious architecture, and local livelihoods.

A primary focus of the study was the documentation and analysis of the village settlement structure. Students mapped streets, public spaces, circulation networks, and community gathering areas to understand the spatial organization of the settlement. Through observation and field surveys, they learned how rural settlements develop organically in response to environmental conditions, social interactions, and economic activities. The study of movement patterns and spatial hierarchy revealed how streets, courtyards, and open spaces contribute to the social and functional life of the village.

The documentation of vernacular houses provided valuable insights into traditional building practices and climate-responsive design. Students measured and recorded rural homes to understand the relationship between built form, materiality, and local lifestyles. The houses demonstrated the use of regionally available materials such as timber, stone, clay tiles, and laterite, reflecting an architecture deeply rooted in its environmental context. Features such as sloping roofs, deep verandahs, shaded





transitional spaces, and internal courtyards illustrated how traditional construction techniques respond effectively to the heavy rainfall and climatic conditions of the Kodagu region. Through technical drawings and sketches, students examined scale, proportion, construction details, and spatial organization, gaining an appreciation for the efficiency and sustainability of vernacular architecture.

The study of construction techniques formed an important component of the fieldwork. Students observed structural systems, wall construction methods, roofing assemblies, joinery details, and material applications used in traditional buildings. These observations highlighted how indigenous knowledge and locally sourced materials contribute to durable and environmentally responsive architecture. The exercise reinforced the understanding that construction is not merely a technical process but also a reflection of cultural identity, resource availability, and environmental adaptation.

The study also explored the relationship between architecture and the surrounding landscape. Bhagamandala's setting amidst forests, agricultural lands, and river systems provided a valuable context for understanding how natural features influence settlement growth and livelihood patterns. Students documented agricultural activities, public infrastructure, and community facilities to examine how rural economies and environmental resources shape the built environment. This helped reinforce the principle that architecture and planning must emerge from a thorough understanding of both ecological and socio-cultural contexts. Interactions with local residents offered insights into everyday life, traditional practices, and changing patterns of habitation. Students gained an understanding of how modernization, tourism, and economic transitions are influencing rural settlements while traditional values and building practices continue to shape the village character. These discussions highlighted the importance of preserving cultural heritage while accommodating contemporary needs. The final stage of the study involved the synthesis of field observations through drawings, mapping exercises, analytical diagrams, and comparative assessments. Students consolidated their findings to evaluate settlement structure, housing typologies, construction techniques, public spaces, and cultural landmarks. This process transformed field documentation into design knowledge, enabling students to identify the principles that contribute to the resilience, sustainability, and identity of rural environments.

The Bhagamandala study trip provided students with a comprehensive understanding of rural architecture and settlement systems. Through the study of vernacular houses, traditional construction methods, community spaces, and the Bhagamandala Temple Complex, students gained valuable insights into the ways architecture responds to climate, culture, and context. The experience strengthened their ability to observe, document, and interpret the built environment while fostering a deeper appreciation for rural heritage and indigenous knowledge systems. As an extension of the Rural Context Design Studio, the trip enriched their academic learning and reinforced the importance of contextual sensitivity in architectural design.

3RD YEAR

6TH SEMESTER

AHMEDABAD & VADODARA, GUJARAT

REDESIGN OF THE APSRTC/BSRTC BUS STAND ,MANGALAGIRI

**FACULTY: DR. RNS MURTHY, KARTHIK CHADALAVADA,
DR. UMA SANKAR BASINA, MR. DEEPAK KUMAR, TANAYA PAUL, CH DHEERAJ
VENKATA MANIKANTA, MONISHA VALLIVILA,, ABHINAV BHOLE**

The visit was helpful in supporting the studio project dealing with the redevelopment of APSRTC/BSRTC Bus stand at Mangalagiri. Ahmedabad has been chosen as it has well established urban planning system, good transport infrastructure, civic architecture and architectural heritage. The purpose of the study tour was to gain an understanding of the effective operation of public buildings, transit hubs, educational institutions, and heritage structures in the context of climate, user movement and urban context.

The visit covered relevant institutional offices like the District Panchayat Office, HUDCO Building and ATMA Building, as well as transportation infrastructure such as Ahmedabad BRTS and the Vadodara Bus Stand. The visit was also extended to visit some heritage and cultural places like Sabarmati Ashram, Old City of Ahmedabad, Lakshmi Vilas Palace, and Akshardham. The case studies gave insights into circulation planning, design in response to climate, structural systems, zoning, public interaction and user comfort.

The main goal of the study tour is to comprehend planning and operation of large public infrastructure and transport systems. The purpose of the visit was to learn about circulation patterns, handling of passengers, public interaction spaces and urban connections. The other crucial goal was that the institutional and civic structure adapts to administrative needs whilst staying useful and comfortable to the user.

The tour also emphasized the need for climate appropriate building design, facade treatments, shading and ventilation systems, as well as for hot and dry climates. Structural systems, services, accessibility, use of materials, and spatial hierarchy





were all documented by the students in order to help them understand aspects of real-world architectural practice.

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Sabarmati Ashram: During the study tour, the first stop was at Sabarmati Ashram. The ashram embodies the ideals of simplicity, discipline and community life championed by Mahatma Gandhi. The campus is situated on the banks of the Sabarmati River, which is considered a holy river. The building form and open courtyards, shaded walkways and little architectural language, results in a calm and contemplative environment.

The visit highlighted the ability of heritage spaces to sustain historical and cultural values, through a sense of simplicity and human scale in planning. The ashram also emphasized the need for creating a serene atmosphere and open spaces to enhance visitor experience.

CEPT University, GUFA, and Kanoria Centre for Arts: The visit to CEPT University introduced the concepts of studio based learning, open campus planning and interactive learning environment. The campus is designed in a humane manner, and is based on the concept of collaboration, creativity and informal learning, which is mainly inspired by the work of B.V. Doshi.



GUFA presented an unusual architectural structure that allows for the enhancement of the artistic expression through the structure. In the same way, Kanoria Centre for Arts showcased the facilitation of exhibitions, workshops and public interaction through cultural institutions. These visits revealed the interconnections of Architecture, Art, Education and Community Engagement.

District Panchayat Office: The District Panchayat Office, Ahmedabad was taken up as a big scale civic and administrative building. This building has several departments and receives a lot of public traffic. The study was on circulation systems, staff movements, service integration and spatial organisation. Clear zoning between public and administrative spaces was identified. There was horizontal circulation via corridors linking waiting halls, offices and service areas, and vertical circulation by stairs and lifts. Heavy public use was made possible with the use of RCC and steel structure in the building. Problems such as low personalization of way finding, ventilation issues and old administrative systems decreased efficiency and comfort for users. The visit highlighted the need for modernization of the Civic Buildings and better planning of circulation.

Old City of Ahmedabad: The Old City of Ahmedabad offered insights into traditional urban planning and dense settlements. Walkable and climate responsive streets are narrow, shaded and streets are mixed use, as well as the system of pol housing. The study showed that traditional urban fabrics are conducive to social interaction, pedestrianization and good community living. The ability to connect heritage, culture and everyday life in the Old City accounts for its activity and functionality.

HUDCO and ATMA Buildings: The HUDCO Building was essentially an institutional office building for multi-disciplinary working. Organized corridor systems, centralized vertical circulation and climate-responsive façades were used in the building to gain efficient office spaces. Long working hours and professional functioning were facilitated by integrated services such as electrical, HVAC and plumbing.



Likewise, the ATMA Building showcased contemporary design which was responsive to climate with overhangs, verandahs and shaded terraces. There is a clear hierarchy of circulation within the building with separation of public circulation and administration. The study demonstrated that institutional architecture can be designed to be both effective and environmentally friendly.

Ahmedabad BRTS: The Ahmedabad Bus Rapid Transit System (BRT) is an example of how public transport infrastructure can help enhance urban mobility. Organized bus routes and stations, and dedicated bus corridors enhanced speed, accessibility and reliability. The study emphasized the need for segregated traffic flow, restricted pedestrian access, and effective traffic management planning. The steel and concrete modular structures ensured durability and quick construction. The BRTS also demonstrated the impact of transport systems on the urban development and life around it.

Vadodara Bus Stand: The Vadodara Bus Stand was a significant model of a transport and commercial centre, built in PPA. Multi-level terminal circulation, retail, food court and passenger facilities. Clean separation between passengers' flow and shopping activity facilitated circulation efficiency. There were effective connections between the various levels by means of escalators, lifts and stairs. But problems with fire safety systems, lack of staff facilities and lack of signage highlighted problems in the management of large public infrastructure.

The study tour to Ahmadabad was very enriching in terms of civic, institutional, transport, cultural and heritage architecture. The visits enabled students to appreciate the relationship between architecture and public movement, the urban context, climate and user needs. The core learning points were on the importance of zoning, circulation planning, accessibility, structural clarity and climate responsive design.



4TH YEAR

8TH SEMESTER

BHUBANESWAR

THE INSTITUTIONAL CAMPUS PLANNING

FACULTY IN CHARGE: AR. KAPIL NATAWADKAR, DR. JANMEJOY GUPTA, AR. SIDDHESH MUNDLE, AR. THUSHARA P. T., VIJESH KUMAR V., DR. VENKATA KRISHNA KUMAR SADHU, DR. K. TUNGUNG, AND AR. V. SHANMUKA TEJA.

The study trip took place as part of the architectural campus design studio. The design of an institutional campus involves understanding spatial hierarchy, circulation system, climatic responsiveness and relationship between built and open spaces. Educational campuses serve as an all-encompassing space where students' learning, housing, recreation, and socialization activities are interwoven. Thus, the purpose of the study was to gain insight into the successful campus to develop functional, comfortable, and interactive learning environments.

It was found that the city of Bhubaneswar is a budding educational and cultural centre in the eastern part of India and was found to be suitable for the study of the contemporary institutional architecture. The campuses visited on the trip were of varying scale and planning. Students learned how architecture reacts to the climate, movement and social interaction through observations of courtyards, shaded pathways, studio spaces, libraries, hostels, and landscape systems.

The main goal of the visit was to explore aspects of the organization of space and principles of campus planning in institutional settings. Students learned about the zoning of academic, administrative, residential and recreational zones, pedestrian and vehicular circulation systems.





The visit also aimed at the understanding of the interconnection between landscape, courtyards and open spaces and their role in providing interactive learning spaces. Other infrastructure systems including drainage, water, access, fire and waste were also noted. The study explored design strategies for dealing with the conditions of climate change such as orientation, the use of transitional spaces, passive cooling and material choice.

The group has reached Bhubaneswar with the first day and visited the KIIT School of Architecture. The visit started with a welcome session and interaction with the faculty and students. Campus walkthroughs helped gather information on large-scale planning and circulation systems within institutions. The students noticed the various spaces, including the academic blocks, the residential blocks, the library and the recreational spaces within the campus. The KIIT Central Library in particular, showcased the significance of spatial organization and user-friendly design in an academic setting. Documentation exercises were carried out during the course in the School of Architecture where the students learned about layout of classrooms, studio planning, circulation and built/ open space relationship.

The second day was completely devoted to NIFT Bhubaneswar. Pupils completed a series of academic blocks, workshops, studios and landscape systems in groups. The campus proved to be well designed and planned in a climate responsive way and sustainable layout, with the introduction of courtyards, shaded walkways, semi-open spaces and



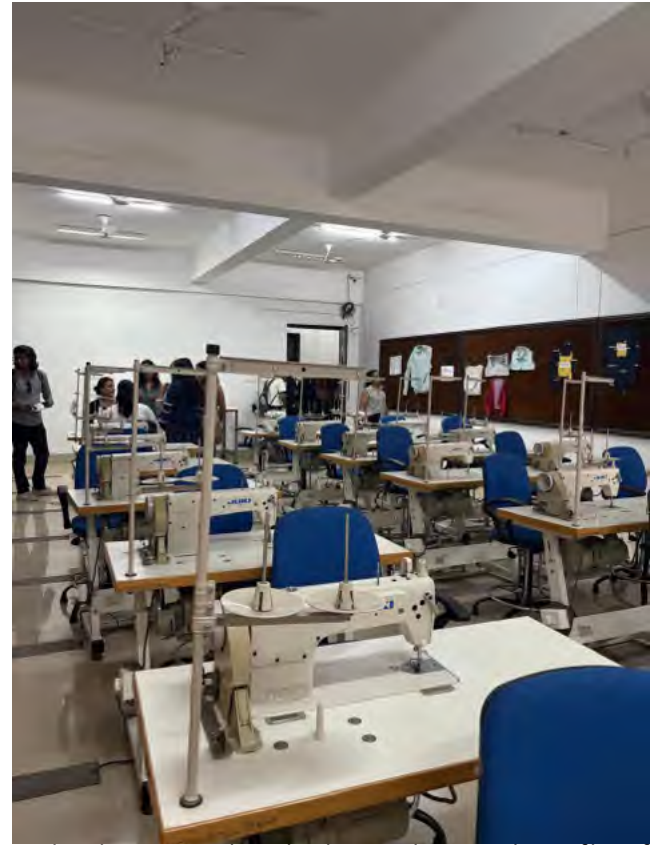


landscaped gathering areas. Students saw the proposed design studios arranged to allow for flexibility and interaction with others, promoting a creative and collaborative environment. Natural day lighting, ventilation and open spaces were integrated to provide a comfortable learning environment that is appropriate to design education. The visit also involved an interaction with students and the faculty, which gave valuable inputs on the requirements of the functional aspects of a design institute.

The third day was devoted to visiting IMI Bhubaneswar to learn another model of institutional campus planning. The campus showcased the seamless blending of learning, living, and leisure areas in a functional and compact design. Students witnessed on campus circulation system, integration with landscape, and green building strategies. Thermal comfort and the improved microclimate on the campus was provided by water bodies, shaded pathways and landscaped open areas. At night, the students visited Kala Bhoomi and the Lingaraj Temple, where they witnessed numerous traditional architectural features, temple planning principles, the creation of space hierarchy, and stone detailing.

On the fourth day, the group visited some of the culturally important places of Odisha. Students learned how axial planning, processional movement and circulation of crowd in the temple complex occurred in Jagannath temple, Puri. Visited Raghurajpur Artist Village which gave an





idea about the traditional settlement pattern, vernacular houses, street character and crafts of the village. Students visited the Konark Sun Temple to learn more about the temple's geometry, sculptural ornamentation and the interplay of structure and ornamentation in historic architecture.

Courtyards and semi open spaces were identified as significant interaction spaces and spaces for informal learning. Shaded paths and verandahs were a great improvement to thermal comfort in hot and humid climates. Landscape elements were a significant factor in helping to control the microclimate and promote social interaction. The study also highlighted the need to strive for pedestrian-friendly circulation, access, flexible open spaces, and good way-finding in large campuses.

To sum up, the Bhubaneswar study visit gave an insight into campus planning, climate-responsive architecture, integrating landscape and institutional designs. Observations and documentation conducted in the NIFT campuses, KIIT and IMI enhanced the students' understanding of spatial arrangement, user experience and environment responsiveness. These learnings will be directly applicable to the current design studio project on campus for Amaravati, to create campuses that are functional, sustainable, socially interactive and contextually responsive.





M.DESIGN

2ND YEAR

4TH SEMESTER

DELHI - KANPUR

LEARNING DESIGN THROUGH PRACTICE

The study tour to Delhi and Kanpur was organized to provide students with firsthand exposure to diverse design environments and professional practices. The tour aimed to bridge the gap between classroom learning and real-world applications by introducing students to leading academic institutions, research facilities, industry-oriented design centers, and socially driven manufacturing organizations. Through visits to SPA Delhi, IIT Delhi, FDDI Delhi, IIT Kanpur, and ALIMCO Kanpur, students gained valuable insights into the multifaceted nature of design and its role in addressing contemporary challenges.

The visit to the School of Planning and Architecture (SPA), Delhi, offered an opportunity to understand the academic culture of one of India's premier design and planning institutions. Students explored design studios, research projects, and academic facilities while interacting with faculty and students. The visit highlighted the importance of critical thinking, research-driven design, material experimentation, and contextual problem-solving. Observing ongoing student projects enabled participants to understand how design ideas evolve from conceptual exploration to detailed development and implementation.

At IIT Delhi, students experienced an interdisciplinary approach where design intersects with technology, engineering, and innovation. Exposure to research laboratories, collaborative projects, and innovation ecosystems demonstrated how design can be integrated with scientific and technological advancements to create impactful solutions. The visit emphasized the significance of research, experimentation, and evidence-based design methodologies in solving complex societal and technological problems.

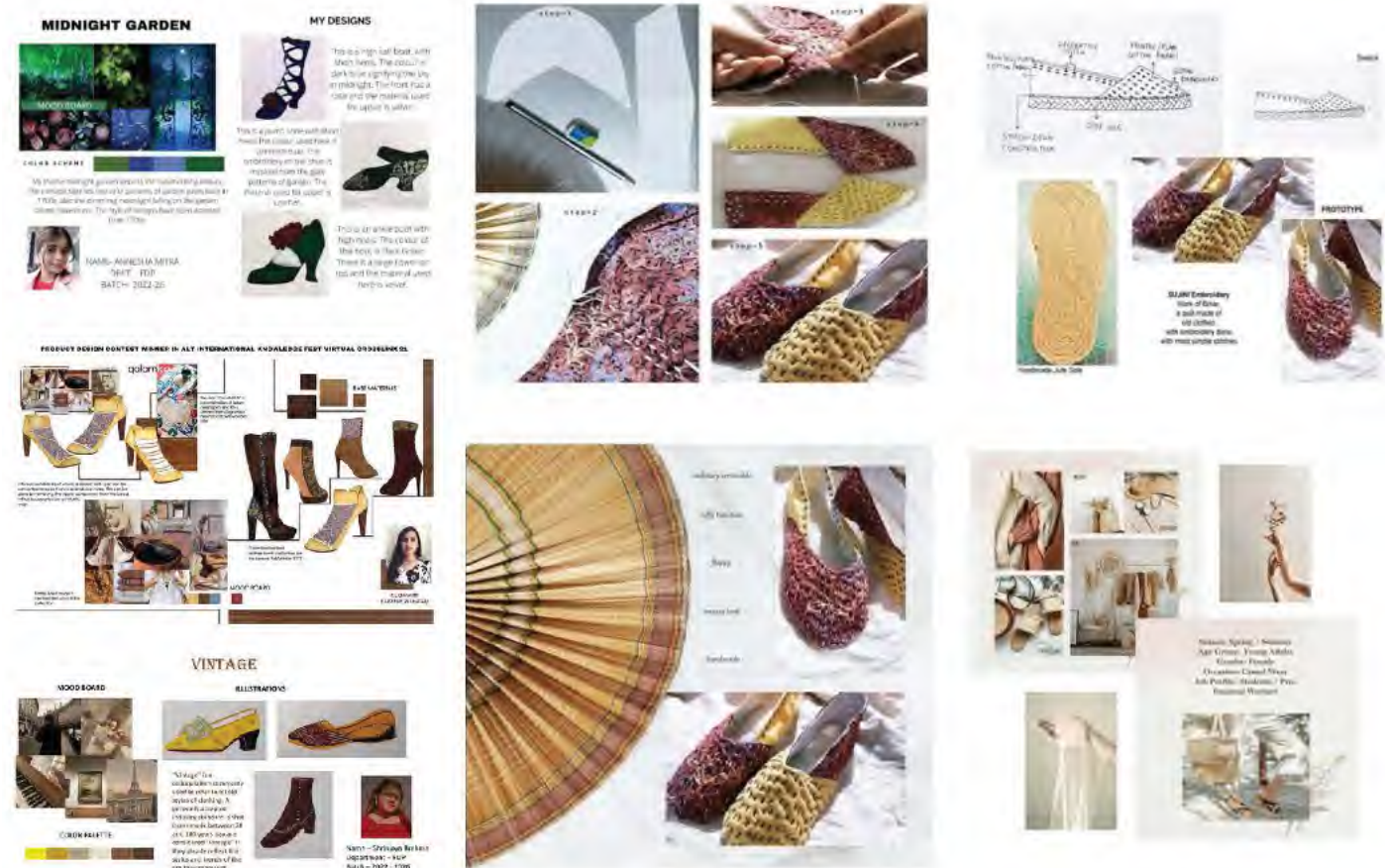
A key highlight of the tour was the visit to the Footwear Design and Development Institute (FDDI), Delhi. Here, students gained an understanding of specialized design education related to footwear, fashion accessories, and lifestyle products. The institute showcased the complete design and production cycle, including concept development, material selection, pattern making, prototyping, CAD/CAM applications, and manufacturing processes. The exposure broadened their understanding of how creativity, technology, and production requirements come together in the development of commercially viable products.

The visit to IIT Kanpur further reinforced the importance of innovation and research in design practice. Students explored advanced laboratories and innovation centers that foster interdisciplinary collaboration and technological experimentation. The institution's emphasis on problem-solving, systems thinking, and user-centered design provided valuable lessons on the role of designers in addressing emerging challenges through research and innovation.

One of the most meaningful experiences of the study tour was the visit to the Artificial Limbs Manufacturing Corporation of India (ALIMCO), Kanpur. As a government-owned organization dedicated to producing assistive devices for persons with disabilities, ALIMCO demonstrated the profound social impact of design.

Students observed the manufacturing processes involved in developing prosthetic limbs, orthotic devices, wheelchairs, hearing aids, and other rehabilitation aids. The visit provided a deeper understanding of inclusive design principles and highlighted the importance of empathy, accessibility, affordability, and user well-being in design practice. Witnessing how design can directly improve quality of life reinforced the ethical and social responsibilities of designers.

Beyond academic and industrial learning, the study tour encouraged students to engage with different institutional cultures, exchange ideas with professionals and peers, and develop a broader perspective on design as a discipline. The experiences gained through site visits, discussions, observations, and interactions enriched students' understanding of design processes, innovation ecosystems, manufacturing systems, and social impact initiatives. The Delhi-Kanpur study tour was a highly enriching educational experience that expanded students' perspectives on the diverse possibilities within the field of design. It strengthened their appreciation for research, technology, industry collaboration, and inclusive practices while inspiring them to approach future design challenges with creativity, critical thinking, empathy, and social responsibility. The knowledge and insights gained during the tour will continue to inform and influence their academic pursuits and professional development as emerging designers.



Studio

Highlights



BACHELOR OF ARCHITECTURE

Studio Brief

Architectural Design II: Basic Design Studio

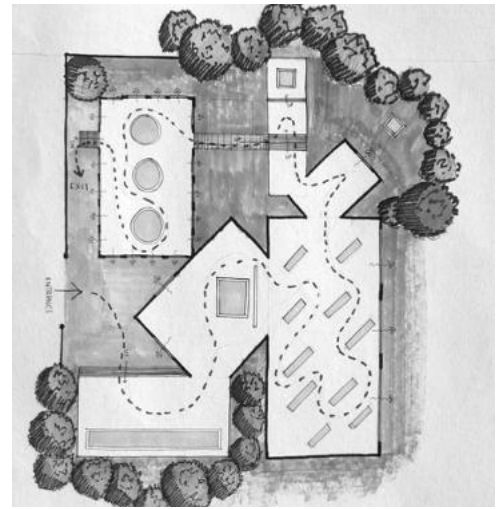
This semester introduces students to architectural design as both a creative process and a built outcome, emphasizing the relationship between form, space, order, and human experience. Through a series of exploratory exercises, students investigate emotional expression through form, spatial organization, experiential sequencing, and the interpretation of architecture. The studio culminates in the design of a canteen at the Indian Institute of Forest Management (IIFM), Bhopal, where students translate their understanding of spatial narratives, site conditions, landscape integration, and human interaction into an architectural proposal. The project encourages experimentation, contextual sensitivity, and the creation of meaningful spatial experiences that respond to both functional needs and the unique character of the site.



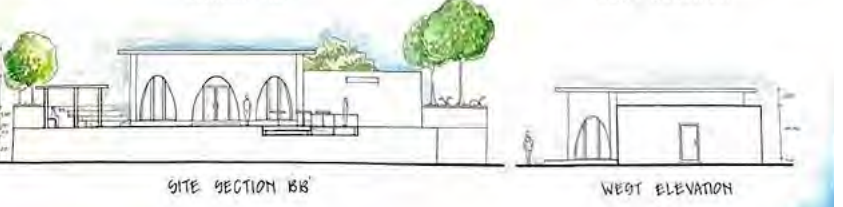
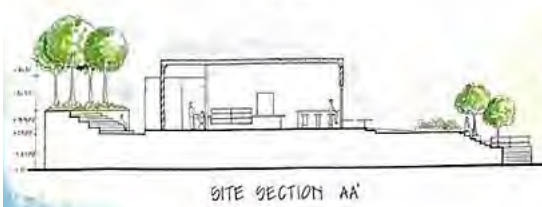
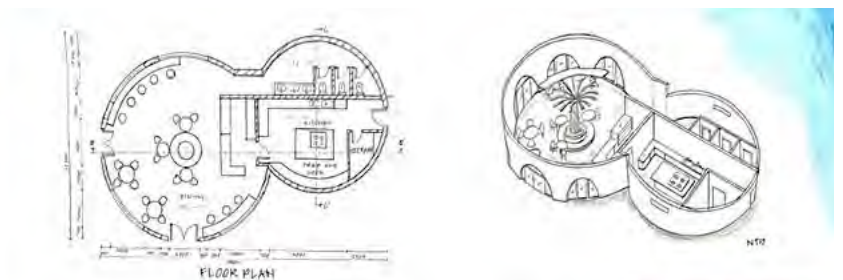
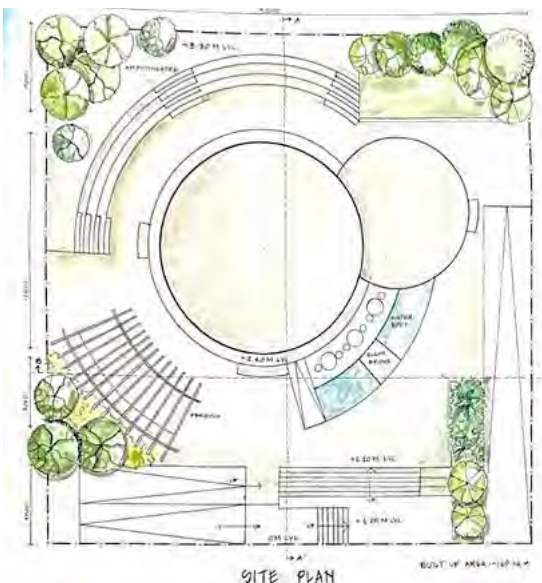
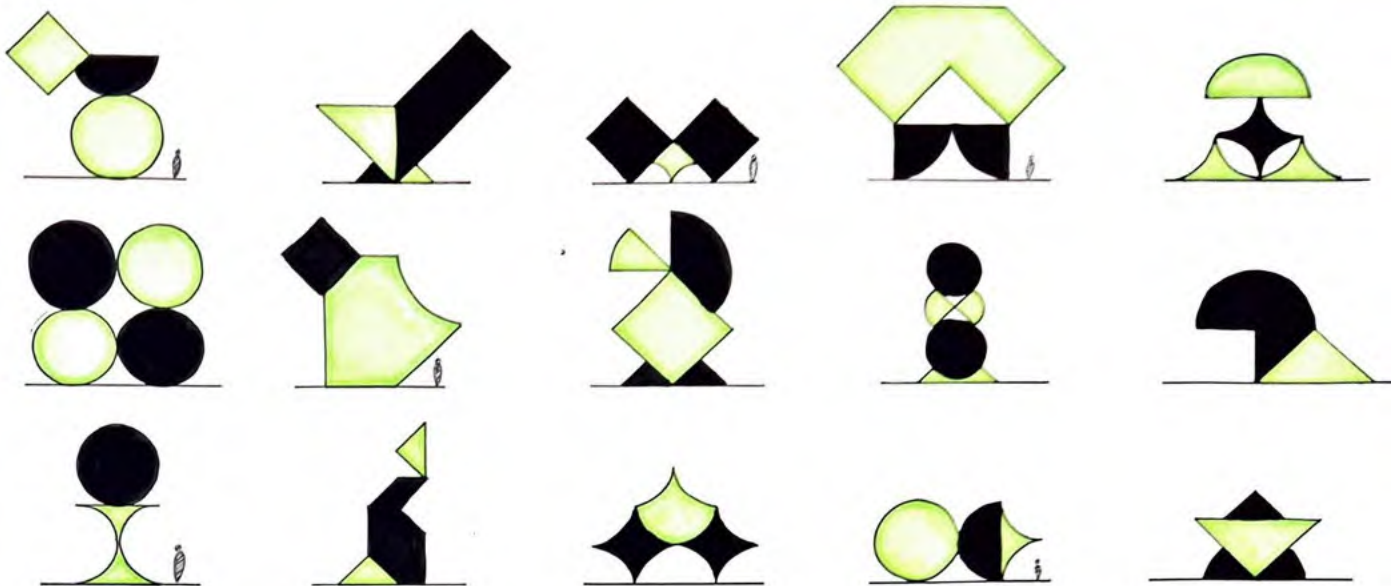
Expressing Emotion Through Form

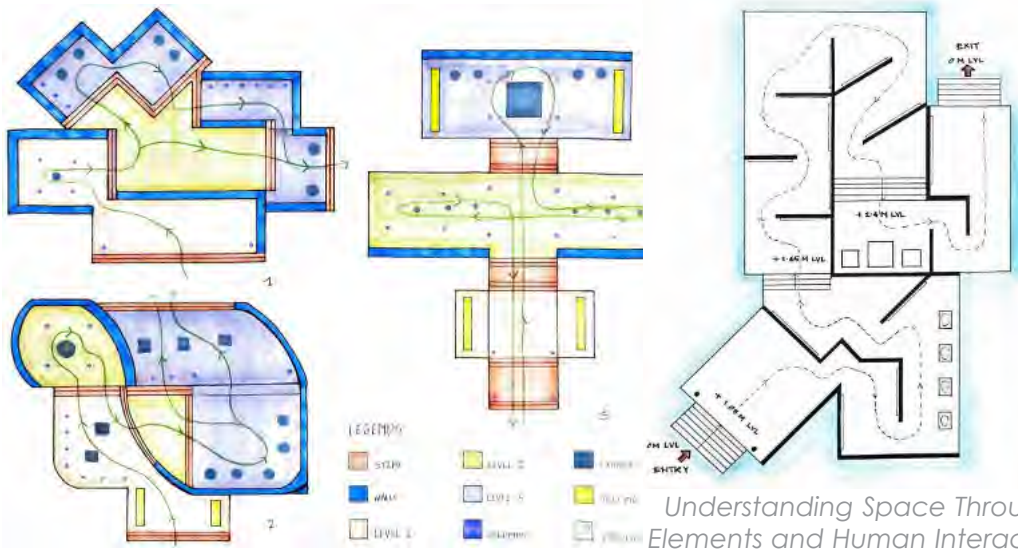


Understanding Order in 2D & 3D Compositions



Understanding Space Through Elements and Human Interaction

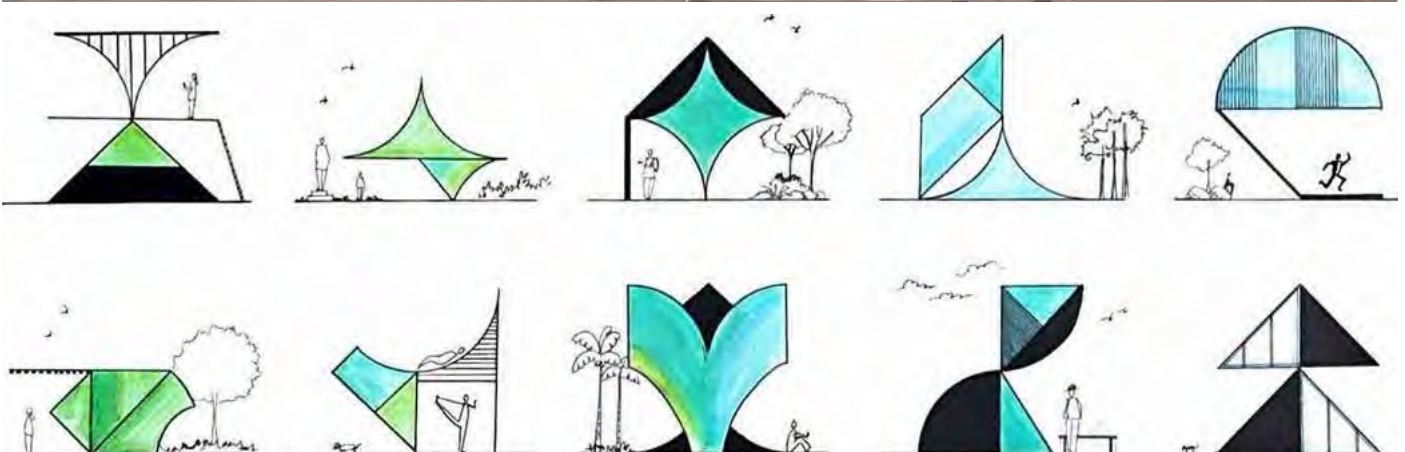
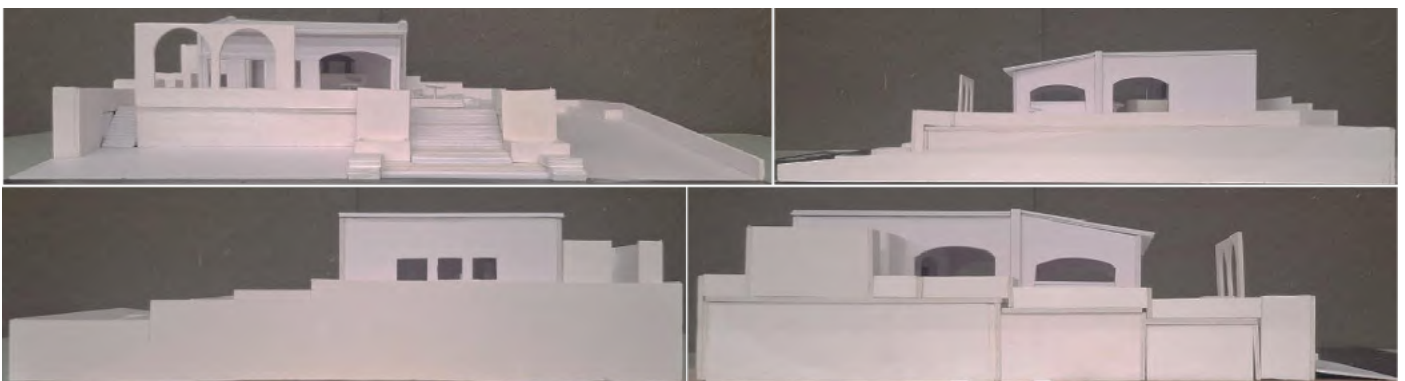
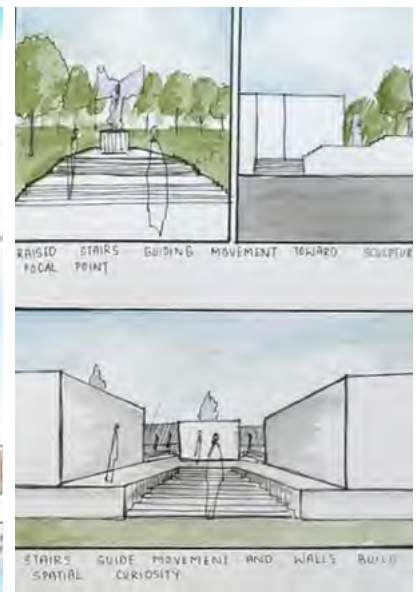
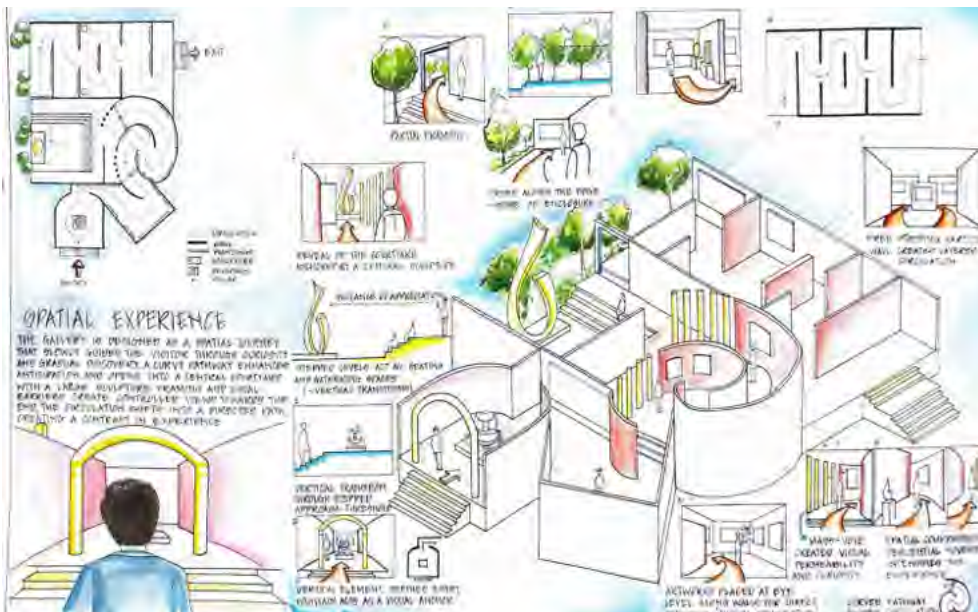


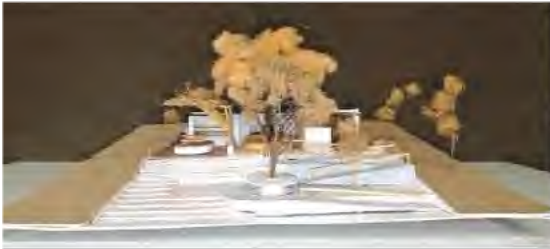


Understanding Space Through Elements and Human Interaction

Progressive design

process understanding form, space, and human experience to interpreting architecture & its context. Through exploration, analysis, and experimentation, students transform abstract design ideas into meaningful architectural spaces that respond to people, place, and purpose.





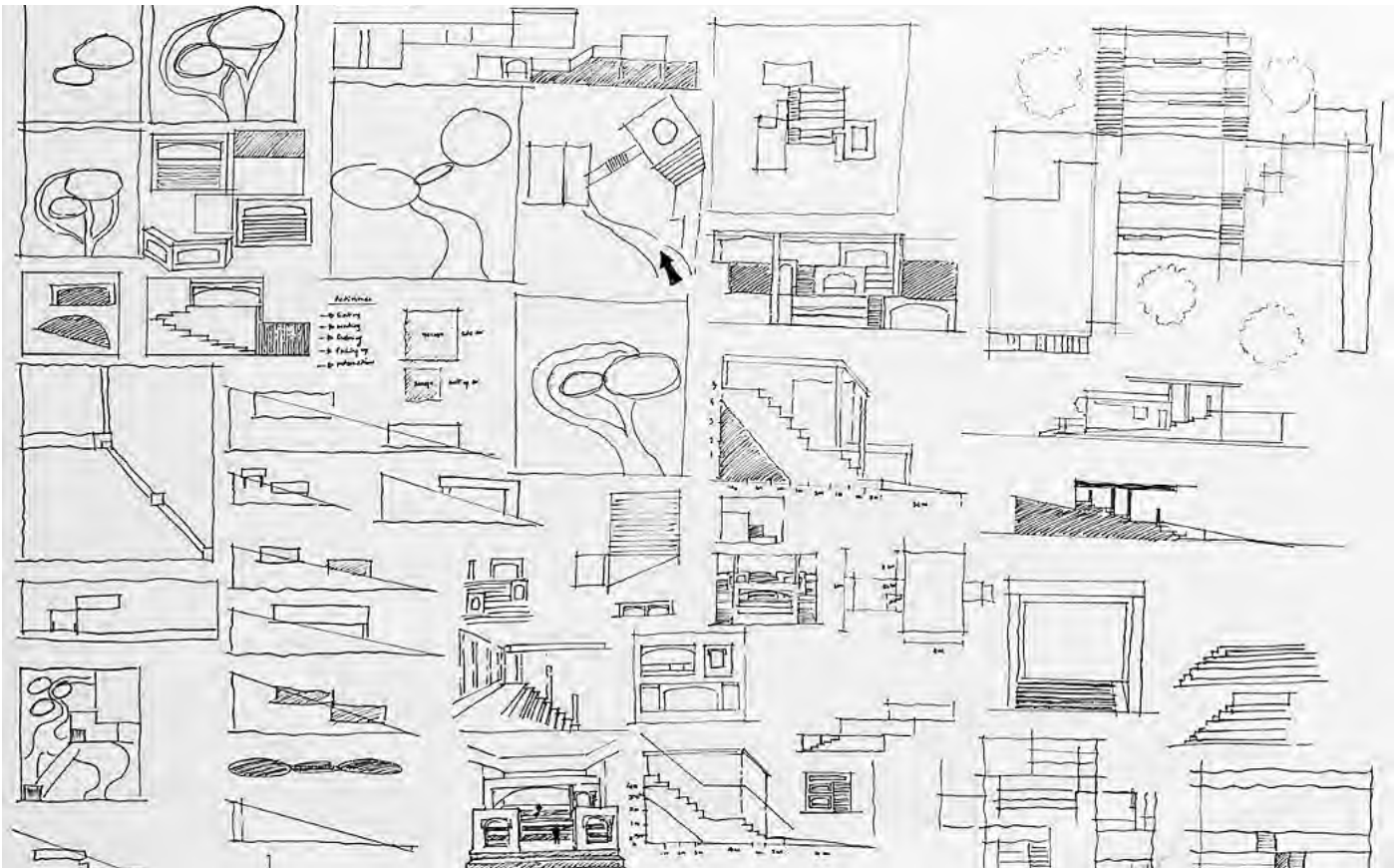
Nestled within the forested landscape of the IIM campus, The Glade emerges as an extension of the terrain rather than an object placed upon it. Conceived as a quiet space within nature, the project responds to the slope, vegetation, and existing hydrological patterns of the site to create an atmosphere of retreat, gathering, and reflection.

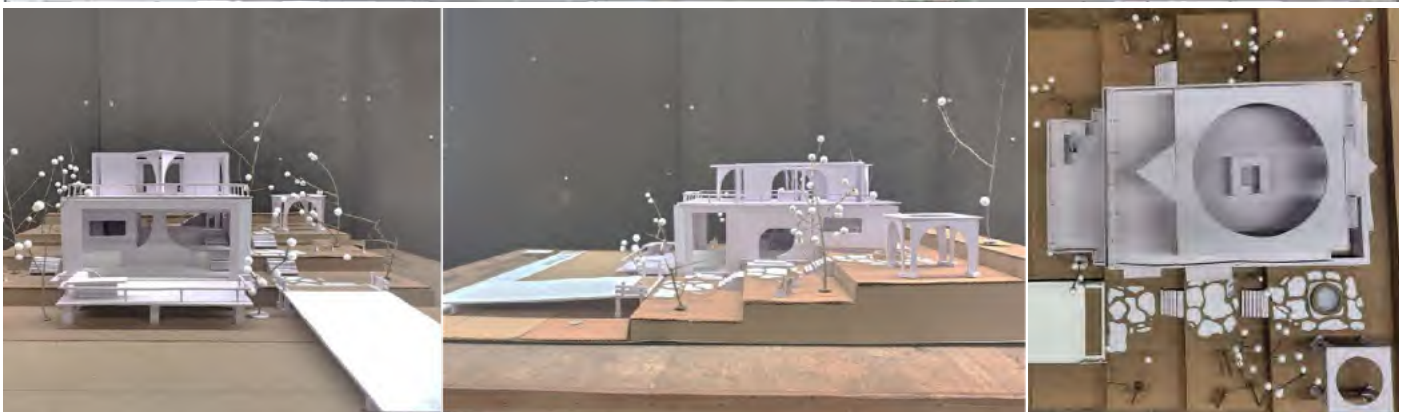
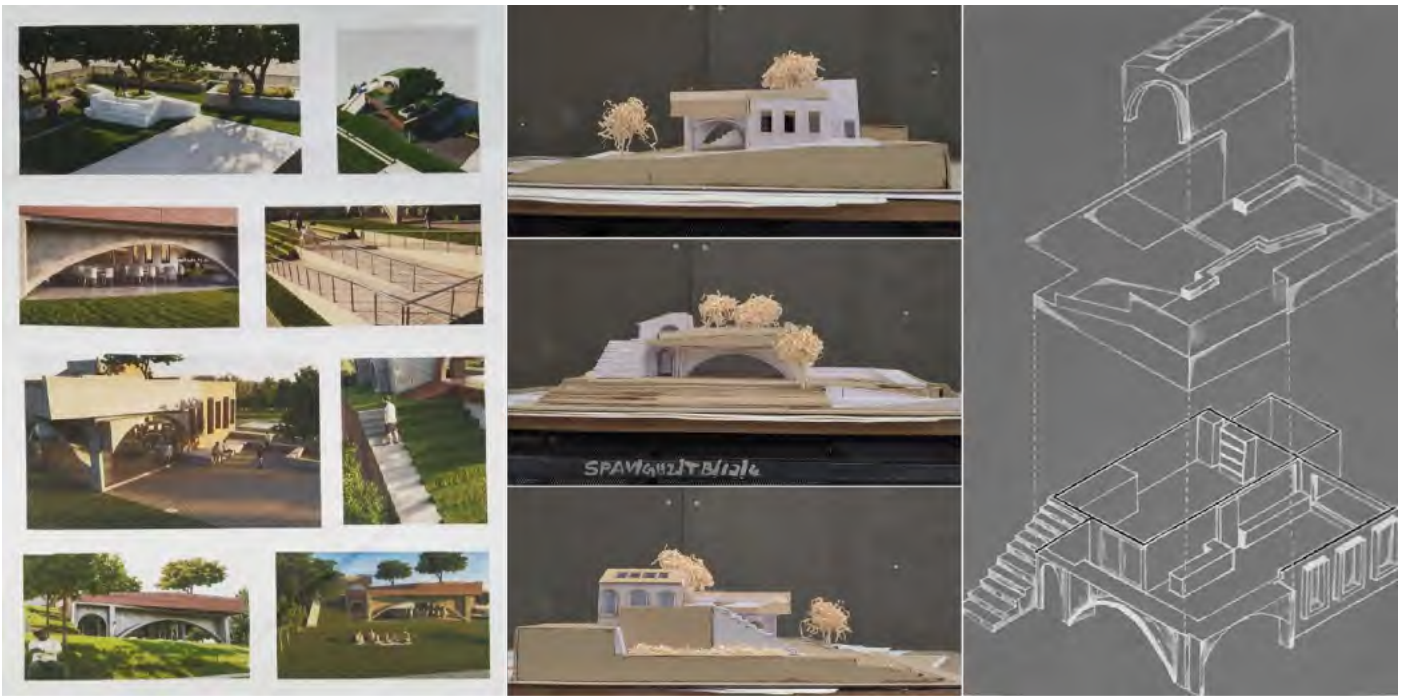
The architecture is guided by the line of dissolving boundaries between the built and the natural. Instead of resisting the terrain, the structure articulates into the slope, allowing the land itself to shape movement, spatial hierarchy, and experience. Approaching the Glade becomes a gradual transition through layers of trees, filtered light, textured ground, and shifting soundscapes, creating a sense of immersion long before entering the built space.

At the heart of the project lies Aquatic Whorls, a flowing water feature designed not as an isolated intervention, but as part of the site's larger ecological narrative. Water gently traverses the contours of the slope, weaving through the architecture before reuniting with the existing water body downhill. The movement of water introduces continuity and calm, treating moments of reflection through sound, light, and motion. It acts as both a sensory anchor and a connective element, binding the project to its surroundings.

The material and spatial language of The Glade seeks warmth, restraint, and utility. Open wings frame views into the forest while channeling transitional spaces where the experience between interior and exterior. The project endures, lingering rather than passing through, fostering sustained interaction, solitude, and collective pause amidst the dynamic environment.

With their embrace, The Glade is envisioned as an understated landscape intervention. A place where architecture retreats enough for nature, movement and human experience to take precedence.





Studio

Highlights



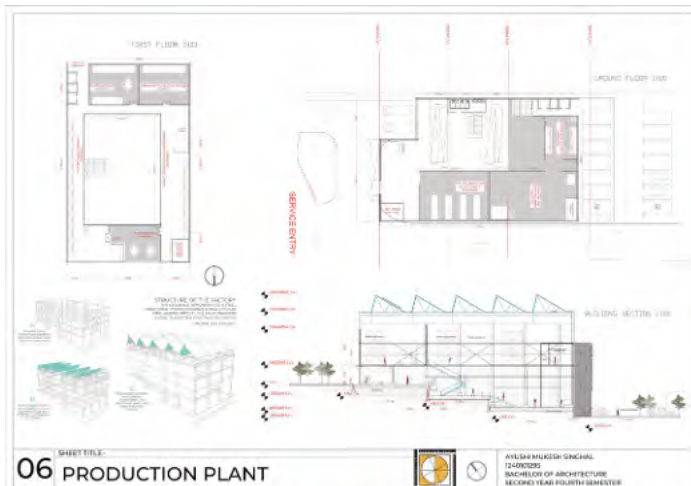
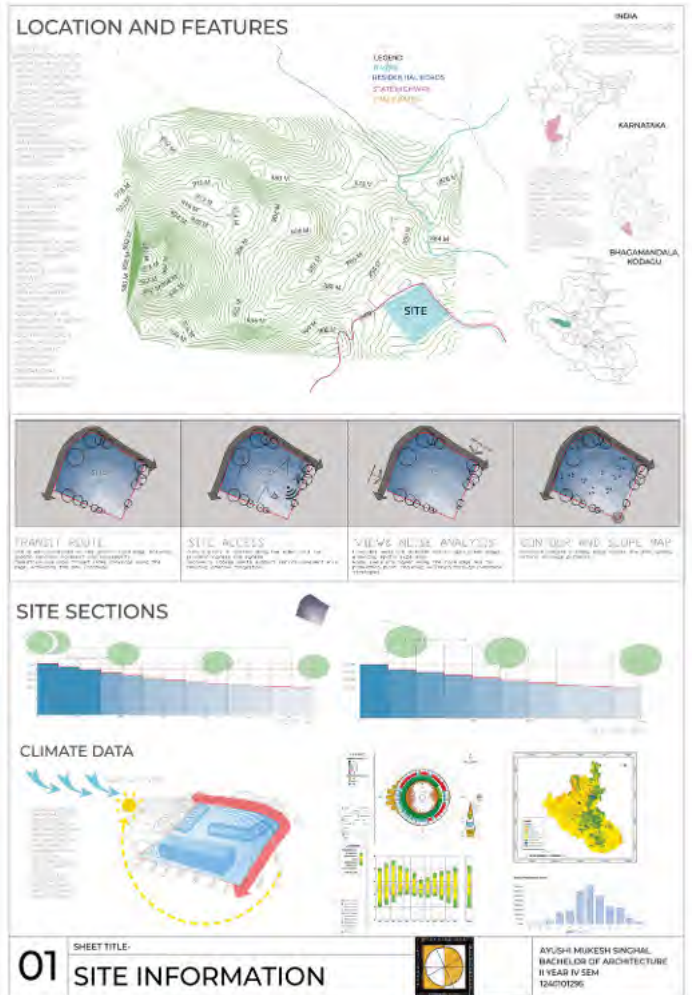
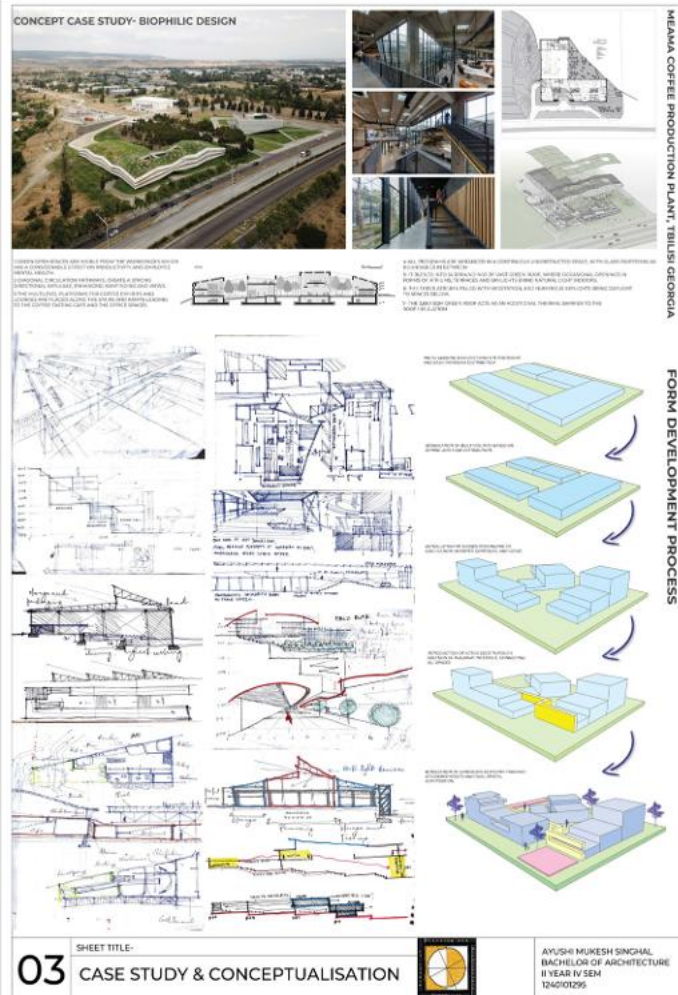
Studio Brief

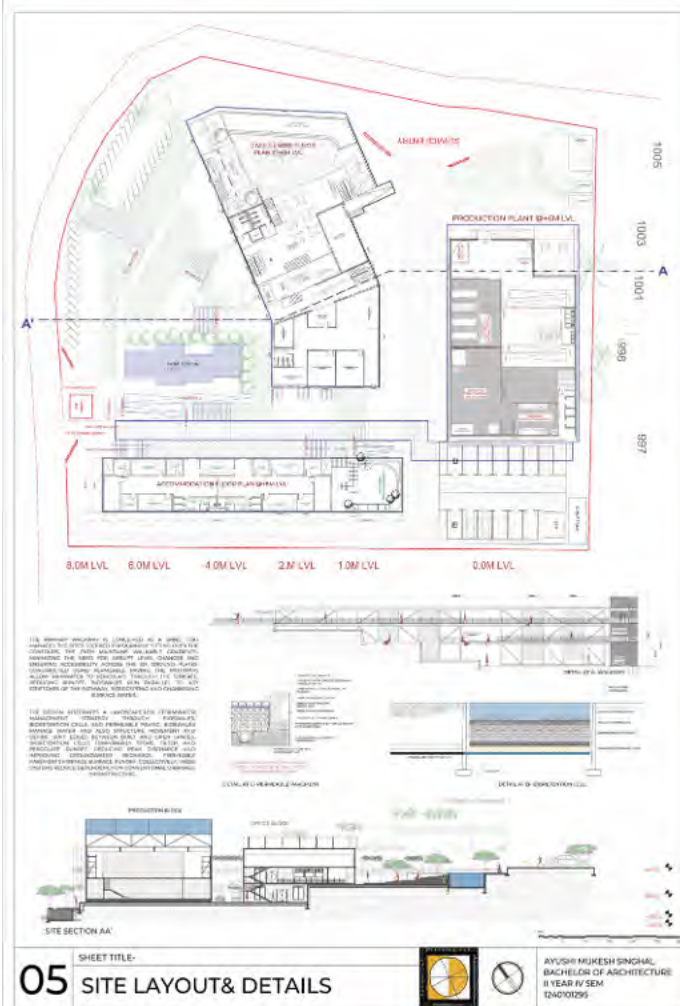
Architectural Design IV: Rural Context Studio

Architectural Design within rural contexts, emphasizing architecture that responds to culture, climate, community needs, and local construction practices. The studio focuses on inclusive, environmentally responsive public architecture in Bhagamandala, Coorg, Karnataka, encouraging students to develop context-sensitive solutions rather than urban-centric approaches.

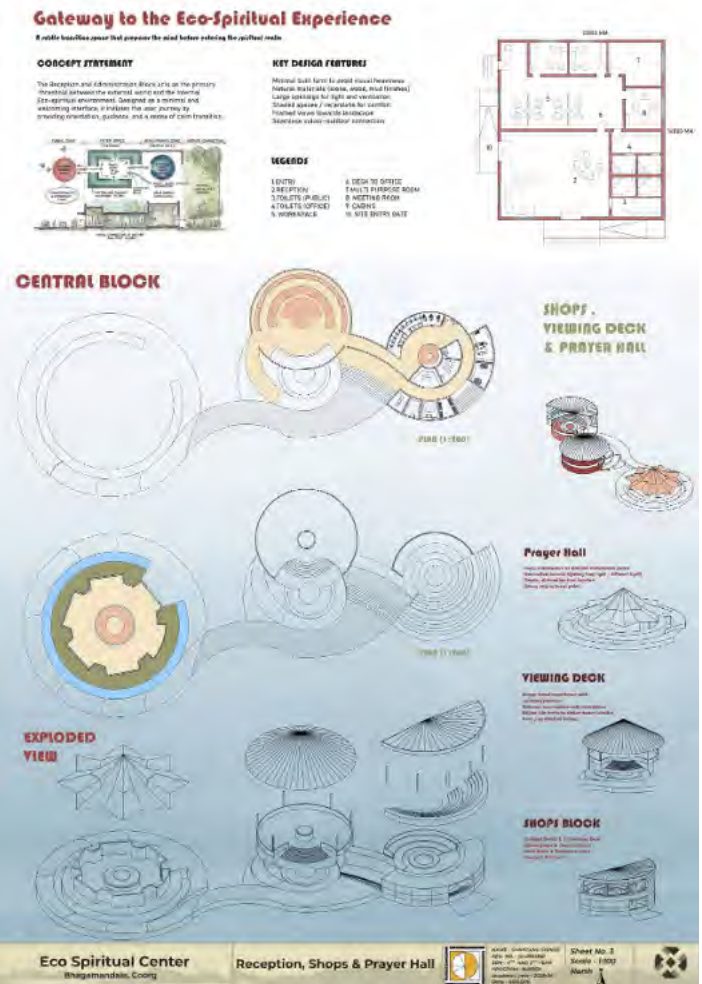
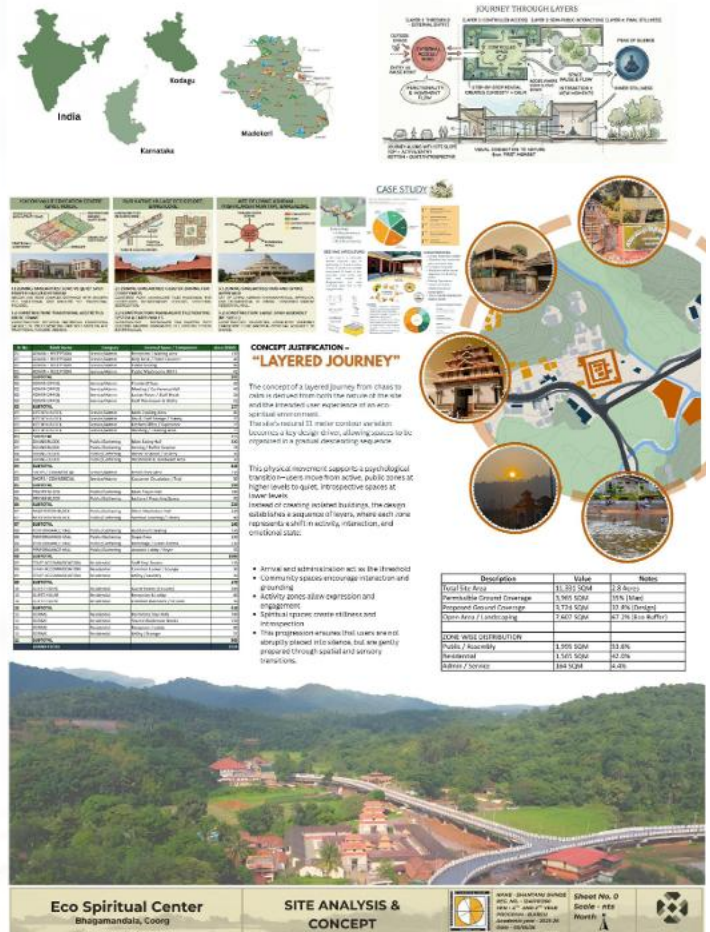
Students will design one of four projects: a Coffee Brewery, Chocolate and Honey Production Facility, Spiritual Eco-Centre, or Botanical Centre. These projects explore relationships between built form, landscape, ecology, and community while integrating accessibility, universal design, and climate-responsive strategies.

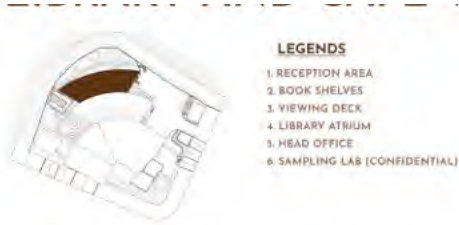
The studio includes site analysis, context studies, user and activity mapping, case studies, concept development, schematic planning, climate-responsive design, material and structural integration, detailing, and final presentation. Students are expected to produce site plans, floor plans, sections, climate diagrams, accessibility details, models, and technical documentation. The studio emphasizes design process, technical resolution, communication skills, and contextual architectural thinking.





Concept, Zoning and Area Programming





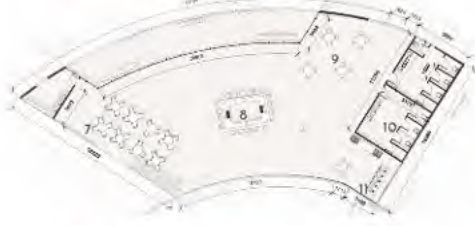
LIBRARY KEY PLAN



CAFE KEY PLAN



FIRST FLOOR LIBRARY (+12150 LEVEL)



FIRST FLOOR CAFE (+12150 LEVEL)



GROUND FLOOR LIBRARY (+8450 LEVEL)



UNDER CAFE (+9000 LEVEL)

A WARM WELCOME (14)



Stepping beneath the timber canopy, the coffee journey begins. This open-air reception seamlessly blends the natural landscape with the comforting hum of the brew bar, offering visitors an immediate, warm greeting.

UNFOLDING HISTORY (13)



An interactive space to discover coffee's roots. Visitors can spin the central cylinder to read about the bean's origins, while the warm, stepped platforms showcase the beautiful evolution of vintage brewing machines.

CRAFT & CARRY (12)



Located under the main cafe, this vibrant, market-style zone lets visitors finish their journey hands-on. Guests can explore different roasts, weigh fresh beans, and hand-pack their own custom bags of coffee to take home.



SECTIONAL ELEVATION AA'



SECTIONAL ELEVATION AA'

DETAILS



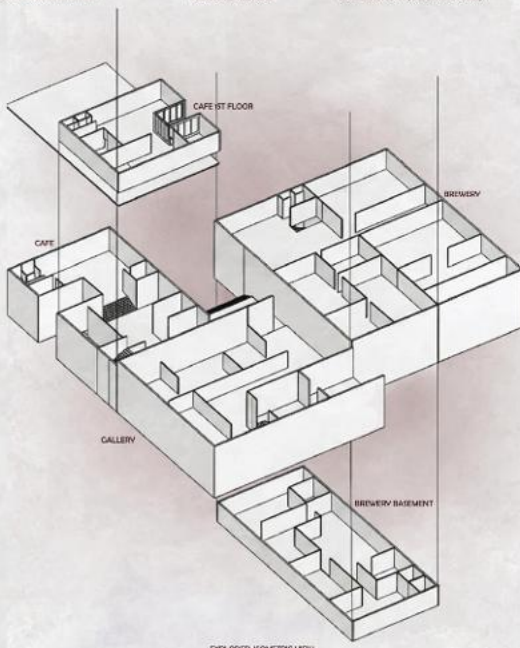
MADRAS ROOF TREATMENT



MANGLORE TILE ROOF



LATERITE STONE (ASHLAR MASONRY)



EXPLODED-ISOMETRIC VIEW



THE ENTRANCE COURTYARD OF THE COFFEE BREWERY GALLERY CREATES A CALM TRANSITION SPACE, BLENDING STONE PATHWAYS, NATURAL GREENERY, AND TRADITIONAL COFFEE ARCHITECTURE TO IMMERSIVE VISITORS IN THE ESSENCE OF COFFEE CULTURE. DESIGNED AS AN INTERACTIVE THRESHOLD, THE GALLERY INTRODUCES THE JOURNEY OF COFFEE CULTIVATION WHILE FOSTERING A STRONG CONNECTION BETWEEN NATURE, HERITAGE, AND



THE SHARED SANITARY BOX SERVES AS A CENTRAL TICKETING THRESHOLD, CREATING A CLEAR AND ORGANIZED ENTRY EXPERIENCE. IT REDUCES CONFUSION, IMPROVES CROWD FLOW, AND ENSURES SMOOTH, EFFICIENT VISITOR MOVEMENT.



THE COURTYARD IS EDGED WITH A BUILT BOUNDARY THAT DOUBLES AS INFORMAL SEATING, ENCOURAGING UNINTENTIONAL SOCIAL INTERACTION. WHILE A GENTLY INTEGRATED RAMP ENSURES UNIVERSAL ACCESSIBILITY THROUGH A NATURE-INFUSED SPATIAL FLOW.



THE SPACE INCLUDES A SMALL OUTDOOR SEATING AREA THAT ALLOWS VISITORS TO ENJOY VIEWS OF THE SURROUNDING COFFEE PLANTATIONS. IT ENHANCES THE OVERALL EXPERIENCE BY CREATING A CALM VISUAL CONNECTION WITH THE LANDSCAPE.



THE EXTERNAL PARKING STRATEGY KEEPS ALL VEHICULAR MOVEMENT AT THE PERIPHERY, ENSURING A CALM, PEDESTRIAN-FRIENDLY ENVIRONMENT WITHIN THE SITE. IT MINIMIZES CONGESTION, ENHANCES SAFETY, AND ALLOWS UNINTERRUPTED



THE DESIGN HAS A SMOOTH RAMPED PATHWAY THAT MAKES IT EASY FOR EVERYONE TO MOVE AROUND, WHILE ALSO SHOWING SIMPLE INFORMATION ABOUT COFFEE MAKING ALONG THE WAY. THE PLAZA CREATES A COMFORTABLE SPACE WHERE PEOPLE CAN SIT, RELAX, AND INTERACT, MAKING THE PLACE BOTH USEFUL AND

A COMMUNAL ATRIUM



Serving as the campus's intellectual hub, this light-filled atrium physically and visually connects the two floors. Framed by warm timber trusses and expansive glazing, it guides visitors from quiet indoor study zones to the open-air reading landscape. It remains an inviting space where solitary reading and community connection seamlessly coexist.

CLIMATE & CONNECTION

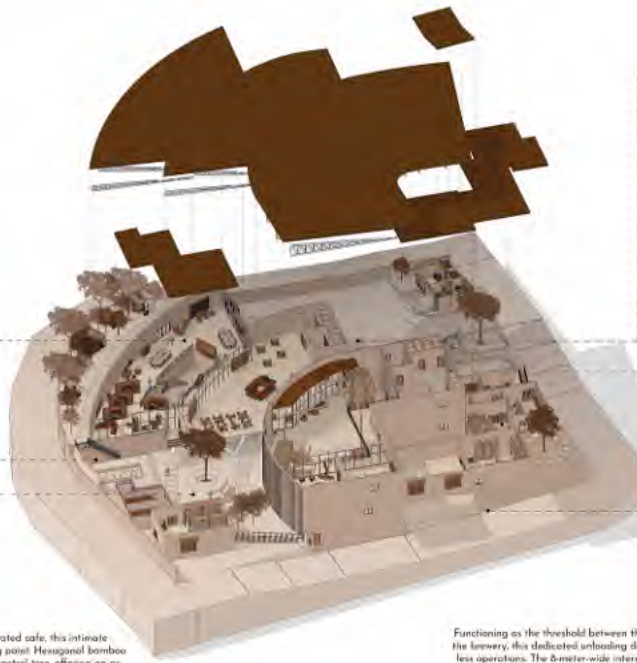


Positioned to intercept prevailing winds, this terraced water installation acts as a natural cooling engine, channeling chilled breezes into the semi-open truss roofs. Beyond its climatic role, it serves as a tranquil stopping point. Whether gathering outside or observing through the library's curtain wall, it creates a shared moment of pause.

A COMMUNAL RESPITE



Nestled beneath the elevated cafe, this intimate brew bar is a vital resting point. Hexagonal bamboo seating wraps around a central tree, offering an accessible, shaded space for visitors to pause. Passively cooled by the adjacent cascades, it fosters human connection, blending architectural comfort with the natural landscape.



CAFE VANTAGE



This elevated cafe utilizes floor-to-ceiling glazing to frame the arrival sequence below. Guests enjoy a clear visual connection with the concrete Admin Block and the dynamic movement of the site. Serving as a vital vantage point, this vantage point allows patrons to relax and anchor their experience in quiet observation.

THE LOCAL HARVEST



Housed within the logistics block, these transparent silos celebrate the crucial first step of the coffee-making journey. Sourced directly from local households, raw beans are proudly displayed rather than hidden away. This industrial aesthetic serves as a visual tribute to the community's direct contribution to the brewery.

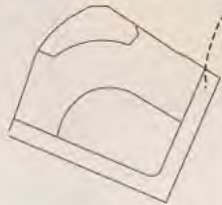
UNLOADING DOCK



Functioning as the threshold between the community and the forewery, this dedicated unloading dock ensures seamless operations. The 8-meter-wide internal road easily accommodates smaller trucks delivering fresh materials directly from local households. Tucked away by the logistics wing, it supports local suppliers without interrupting the visitor experience.



MODIFIED CONTOUR



TO ACCOMMODATE FLAT FLOOR PLATES FOR BREWERY MACHINERY, THE SITE'S NATURAL CONTOURS WERE MODIFIED INTO A SERIES OF STRUCTURAL STEPS. THIS TERRACED APPROACH RESPECTS THE ORIGINAL GRADIENT WHILE NATURALLY ZONING THE PRODUCTION PLINTHS BELOW AND ELEVATED PUBLIC SPACES ABOVE.



ORGANIC MASSING EVOLUTION

ISOLATING PRIMARY ZONES BASED ON SITE CONTOURS



INTERSECTING MASSES ALONG THE NATURAL GRADIENT



ESTABLISHING A CONTINUOUS TERRACED FLOW



INITIAL ATTEMPTS TO WEAVE CURVILINEAR FORMS ALONG THE CONTOURS CREATED PROGRAMMATIC HINDERANCES. THIS SHIFTED THE DESIGN TO A STEPPED MASSING, RESOLVING SITE CONSTRAINTS WHILE DIRECTLY MIRRORING THE SEQUENTIAL STAGES OF COFFEE PRODUCTION AND CHOREOGRAPHING A LAYERED SPATIAL EXPERIENCE.



SECTION BB'



STRATEGICALLY POSITIONED TO HARNESS PREVAILING WESTERLY WINDS, THE WATER INSTALLATION CHILLS THE INCOMING BREEZE THROUGH NATURAL EVAPORATIVE COOLING. THE SITE LAYOUT INTENTIONALLY DIRECTS THIS COOL, HUMIDIFIED AIRFLOW STRAIGHT INTO THE MAIN PRODUCTION UNIT, PASSIVELY REGULATING THE FACILITY'S HEAVIEST WORKING ZONES.

THE TIMBER LOUVRE FACADE ACTS AS A PERMEABLE SKIN, CAPTURING PREVAILING WESTERLY WINDS THAT HAVE BEEN PRE-COOLED BY THE ADJACENT WATER INSTALLATION. WORKING WITH AN OPEN ROOFING SYSTEM, IT DRAWS THIS CHILLED AIR DEEP INTO THE PRODUCTION HOUSE FOR PASSIVE THERMAL REGULATION. ABOVE, A SWEEPING BUTTERFLY ROOF EFFICIENTLY DRIVES AWAY HEAVY RAINWATER. SIMULTANEOUSLY, THIS ORCHESTRATED WIND PATTERN CATCHES THE BREWERY'S RICH AROMA, NATURALLY DISPERSING IT ACROSS THE SITE FOR AN IMMERSIVE SENSORY EXPERIENCE.



Studio

Highlights



Studio Brief

Architectural Design VI: Integrated Bus Station ,Mangalagiri

The design of a Mixed-Use Transportation and Municipal Complex in Mangalagiri, Andhra Pradesh, a rapidly developing urban node within the Amaravati Capital Region. The project proposes the integration of an intercity bus station, municipal administration offices, retail spaces, commercial functions, and dedicated areas for the promotion of Mangalagiri's renowned textile and handloom industry.

The studio challenges students to rethink conventional public infrastructure by creating a civic destination where mobility, governance, commerce, and culture coexist within a single architectural framework. The design must respond to the contrasts between movement and permanence, informality and order, and citizen and state, while creating a vibrant public realm.

Located on a strategically significant six-acre site along the Vijayawada–Guntur corridor, the project demands a sensitive response to the existing urban fabric, climatic conditions of coastal Andhra Pradesh, circulation networks, and the symbolic importance of the site. Students are expected to develop innovative architectural solutions that integrate advanced building services, structural systems, sustainability strategies, universal design principles, and contemporary construction technologies. The outcome should be a landmark civic complex that serves as both a transportation hub and a democratic public space, reflecting the evolving identity of Mangalagiri and its regional significance.

SITE ANALYSIS
 LOCATION: MANGALAGIRI, ANDHRA PRADESH
 COORDINATES: 16°26'01.96"N 80°13'56.00"E



CONCEPT: FLOW THROUGH VOID
FORM FOLLOWS FUNCTION: LOUIS SULLIVAN

VERTICAL ZONING



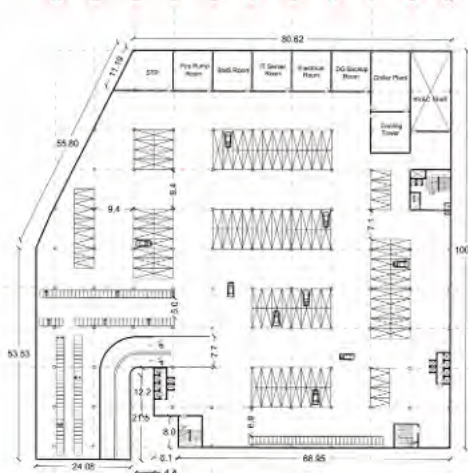
FORM DEVELOPMENT



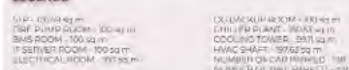
MATERIALS



BASEMENT PLAN



LEGENDS



ISOMETRIC SECTION



SIXTH FLOOR PLAN



LEGENDS

1. GROUND ROCKET (13.5 m) 15.5 m
2. MALE TURTLE (1.5 m) 1.5 m
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SOFTWARE: ANTI-PAGE CORRUPTIONS

- | SOCIAL AREA, PART, COMPONENT | TAX AND OTHER PROPERTY | ELECTRIC EQUIPMENT | TELEPHONE EQUIPMENT |
|------------------------------------|--|------------------------------------|---|
| 26. CLERICAL BATH - 463.5 sq. ft. | 24. TAX RECORD ROOM - 105 sq. ft. | 42. ASSISTANT CASHIER - 11 sq. ft. | 48. STUDENT COUNSEL ROOM (2) - 12 sq. ft. |
| 27. RECORD ROOM - 463.5 sq. ft. | 25. PROPERTY RECORD ROOM - 105 sq. ft. | 43. OFFICE CASHIER - 11 sq. ft. | 49. OFFICE CASHIER (2) - 12 sq. ft. |
| 28. OFFICE CASHIER - 11 sq. ft. | 26. OFFICE CASHIER - 11 sq. ft. | 44. RECORD ROOM - 463.5 sq. ft. | 50. RECORD ROOM - 463.5 sq. ft. |
| 29. ASSISTANT CASHIER - 11 sq. ft. | 27. ASSISTANT CASHIER - 12 sq. ft. | 45. CLERICAL - 463.5 sq. ft. | 51. CLERICAL - 463.5 sq. ft. |
| 30. WAITING CASH - 11 sq. ft. | 28. OFFICE CASHIER - 11 sq. ft. | 46. OFFICE CASHIER - 11 sq. ft. | 52. RECORD ROOM - 463.5 sq. ft. |
| 31. WAITING CASH - 11 sq. ft. | 29. ASSISTANT CASHIER - 11 sq. ft. | 47. RECORD ROOM - 463.5 sq. ft. | 53. RECORD ROOM - 463.5 sq. ft. |
| 32. EMPLOYER'S CASH - 11 sq. ft. | 30. PUBLIC COUNSEL - 11 sq. ft. | 48. WAITING AREA - 11 sq. ft. | 54. RECORD ROOM - 463.5 sq. ft. |
| 33. PUBLIC CASH - 11 sq. ft. | 31. WAITING AREA - 11 sq. ft. | | |

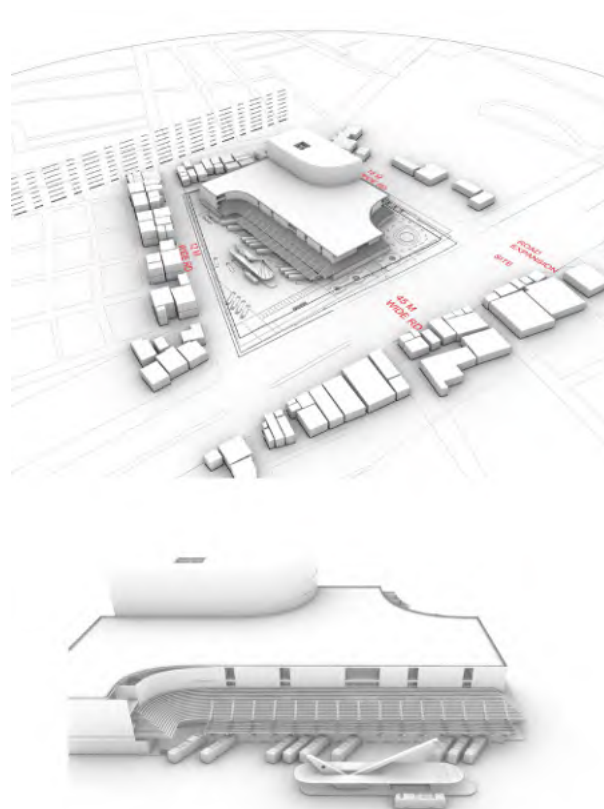
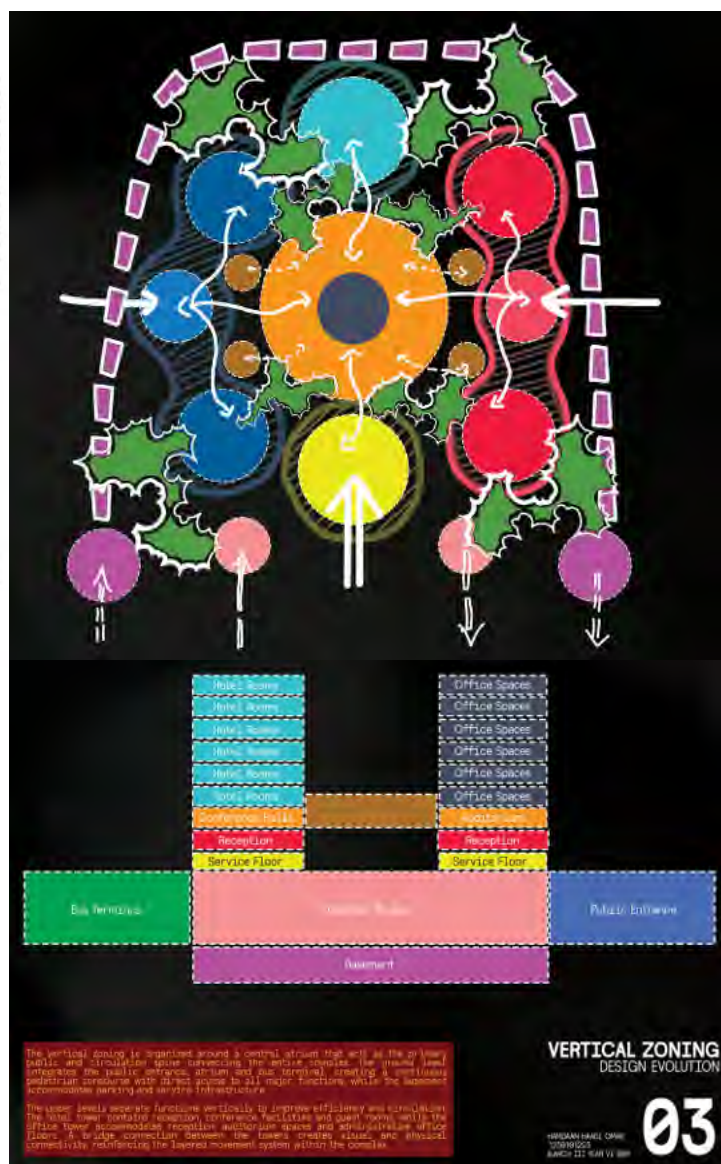
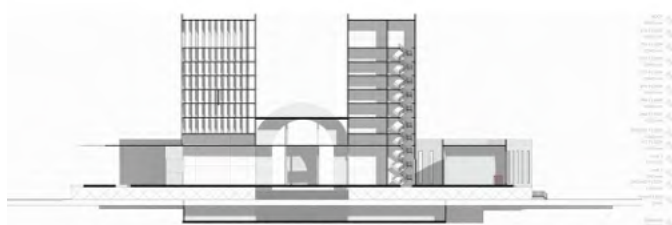
SOUTH ELEVATION



MAIN ENTRANCE



GROUND FLOOR SITTING



Studio

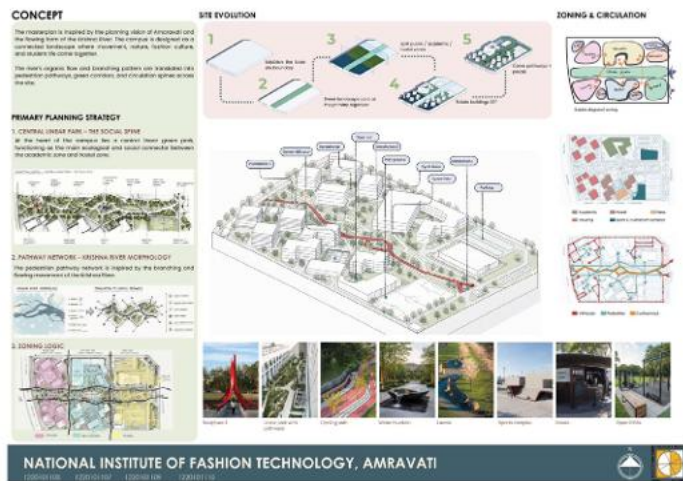
Highlights



Studio Brief

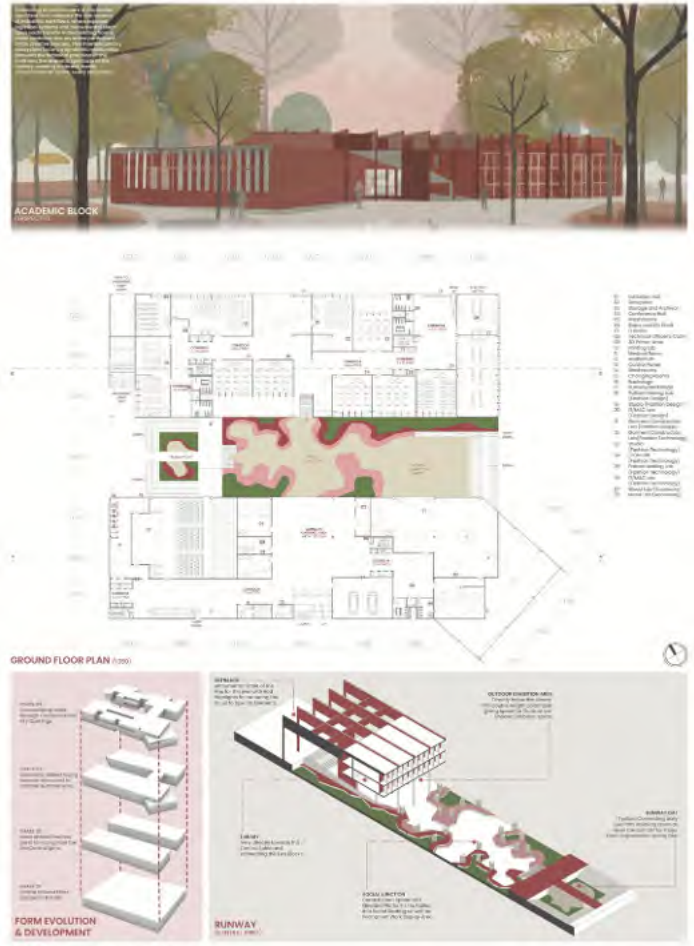
Architectural Design VIII: National Institute of Fashion Technology (NIFT), Amaravati

The studio focuses on the planning and design of a National Institute of Fashion Technology (NIFT) campus in Amaravati, Andhra Pradesh. The project introduces students to large-scale campus planning by integrating academic, residential, administrative, and recreational functions within a sustainable environment. Students explore relationships between built forms, open spaces, circulation networks, and infrastructure while addressing contemporary educational needs. Through site analysis, case studies, study tours, and design exercises, they develop context-sensitive proposals. The studio emphasizes flexibility, inclusivity, passive design strategies, environmental responsiveness, and energy efficiency, preparing students for real-world architectural and campus planning challenges.





01 Concept, Zoning & Landscape



04 Academic Block



Thesis

Highlights



Architectural Design X: Thesis

definition of Spice

Spices are aromatic plant derivatives (seeds, bark, roots, fruits) used for flavor, preservation, medicine, and ritual.

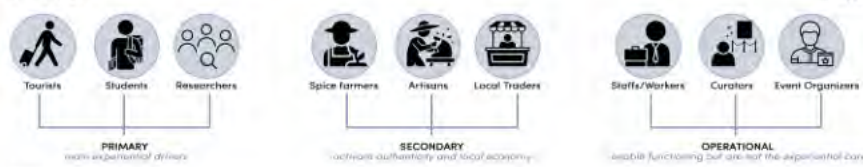


How?



Spice is experienced, not displayed. Spice is understood through smell, touch, taste, sight, and sound. The project spatializes these senses through processing courts, tactile materials, culinary engagement, chromatic landscapes, and the maritime ambience of Beypore Harbour. In the humid climate of Kozhikode, atmosphere amplifies aroma and texture, making climate an experiential catalyst.

User Groups



Why?

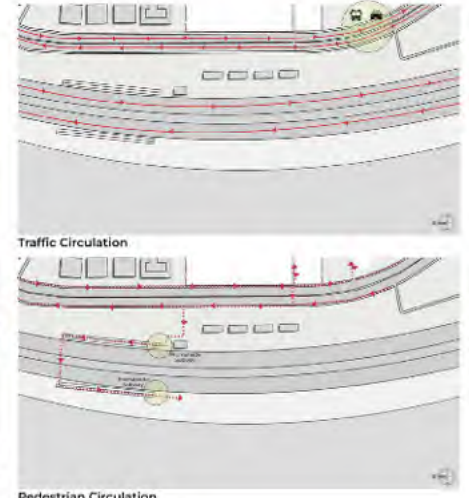
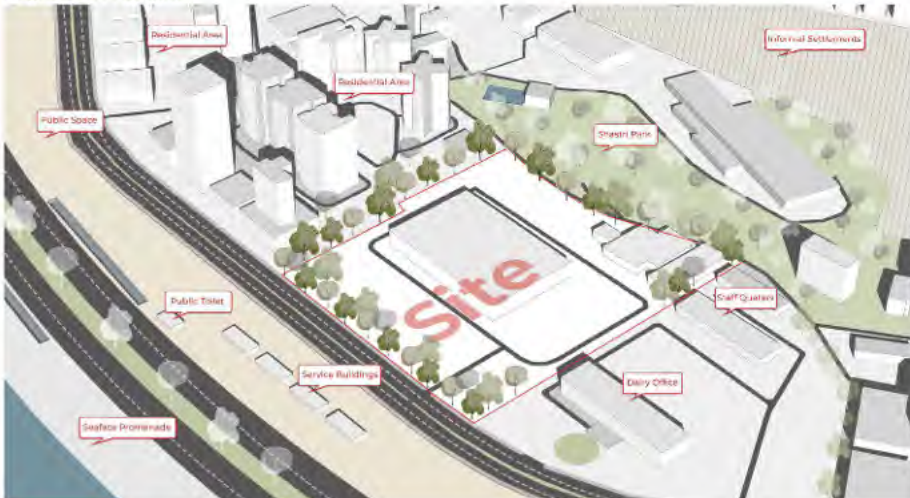
Despite Kozhikode's historic role in the global spice trade, there is no spatial platform that interprets spice as a cultural, ecological, and experiential phenomenon. Tourism remains fragmented, and working landscapes are disconnected from public engagement. The absence of an integrated cultural-spatial platform limits the experiential understanding of spice in Beypore.



Site Sections

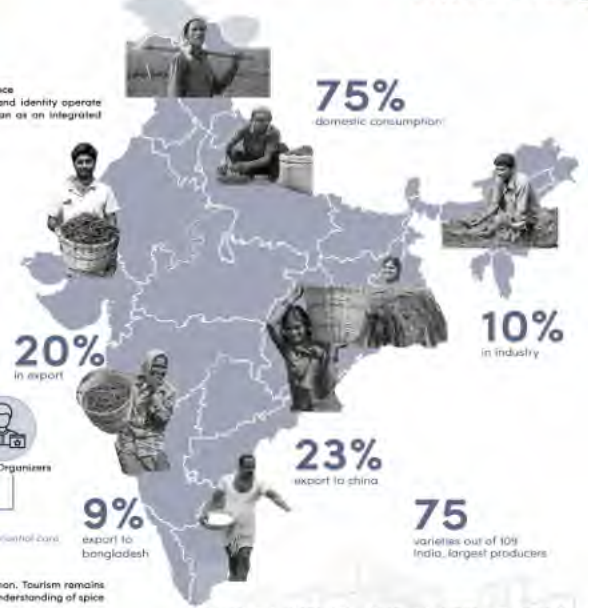


Neighbourhood Context



Experiencing Spice through Culture and Space: An Experiential Tourism Hub

Beypore, Kerala



Site Introduction

Site Identification and Justification



Why Mumbai?

Strategic Central Location: Worli sits between South Mumbai and BKC, making it ideal for a high-intensity mixed-use development with strong connectivity.

Underutilized Government Land: The dairy site presents an opportunity to unlock valuable public land through redevelopment and urban intensification.

Mixed-Use Urban Context: Surrounded by residential, commercial, and coastal recreational zones, the site naturally supports a live-work-play model.

Coastal Edge & Open Space Opportunity: The site offers scope to integrate public realms, climate-responsive design, and waterfront-oriented urban spaces.

High Development Pressure & Land Scarcity: Mumbai's limited land availability and rising density make Worli an appropriate test ground for compact, vertical urban redevelopment.

Urban Regeneration Value: Redevelopment supports Mumbai's need for land optimization while improving neighborhood infrastructure and public amenities.

Issues / Need for Redevelopment



The site remains largely vacant and underutilized, despite being located in one of Mumbai's most valuable and well-connected precincts.



The precinct lacks public realms, open spaces, and pedestrian-oriented environments, limiting community engagement.



The site shows poor urban integration with surrounding residential, commercial, and waterfront context.



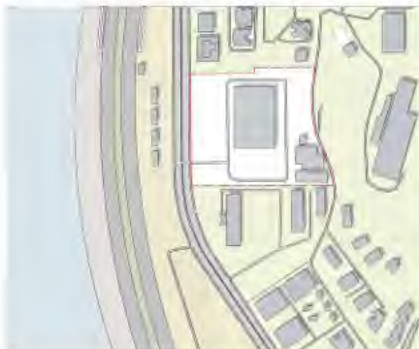
The area experiences high development pressure, demanding balanced density and land-use optimization.



The surrounding fabric lacks visual continuity, skyline coherence, and contextual built form integration.



There is an opportunity to introduce a mixed-use live-work-play model that supports continuous urban activity.



Site



Landuse (Existing), Source: Mumbai Development Plan, 2034

ICONIC WORLI

Plots of Worli Dairy admeasuring approx. 6.40 Ha. owned by Dairy Development Dept. GoM.

Utilise the Worli Dairy plots for generating revenue by executing iconic project, which will generate employment opportunity and assist economic growth of Mumbai. MMRDA shall use this revenue for implementing vital infrastructure projects.

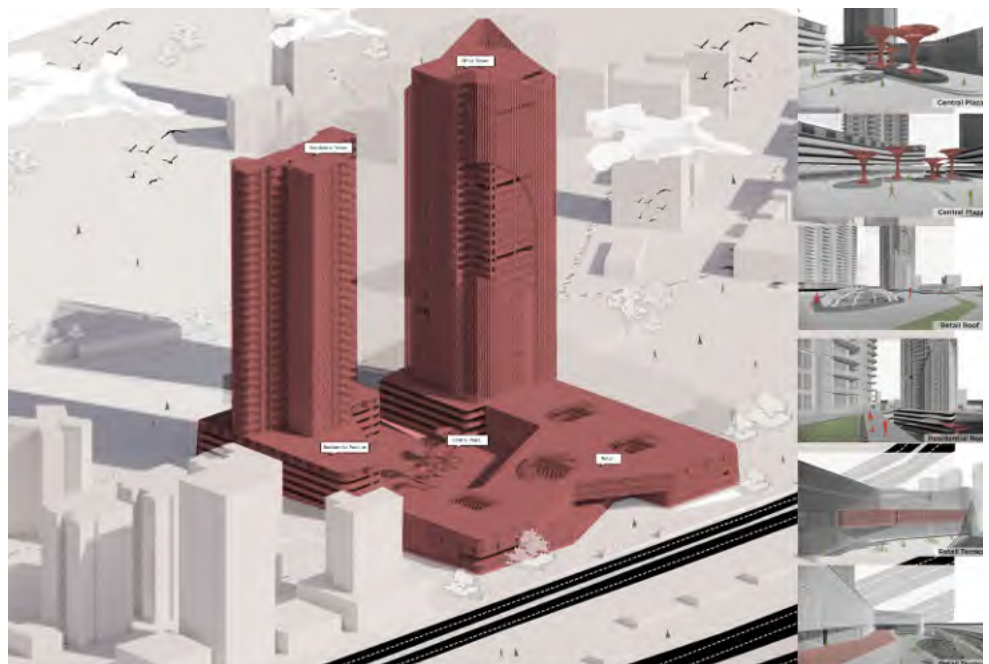
Salient Features

- Area - Land Area - 6.40 Ha
- Sanctioned Land-use per dairy: part govt. staff quarters, part rehabilitation & resettlement
- Ownership: Mahan Dairy, presently vacant & unutilized
- Proposed land-use - mixed land-use
- Awaiting Mumbai coastal road project. Worli Bantwa was low and many others

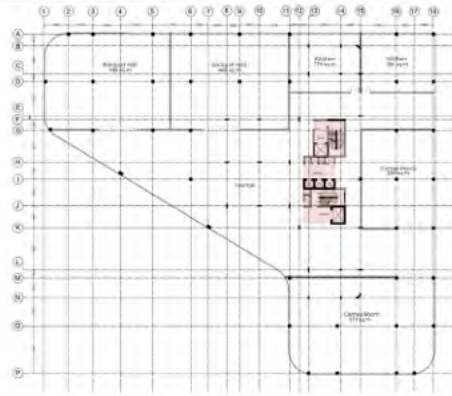
Landuse (Proposed), Source: MMRDA

Vision

To reimagine Worli Dairy as a high-density mixed-use urban hub integrating living, working, retail, and public life through a layered built form. It promotes vibrant public spaces, seamless vertical connectivity, and a live-work-play urban environment.



Vertical Garden and Clubhouse

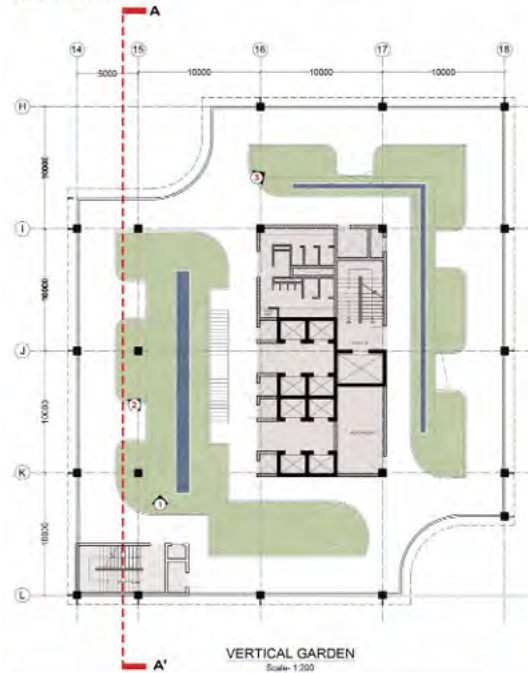


CLUBHOUSE
Scale: 1:500

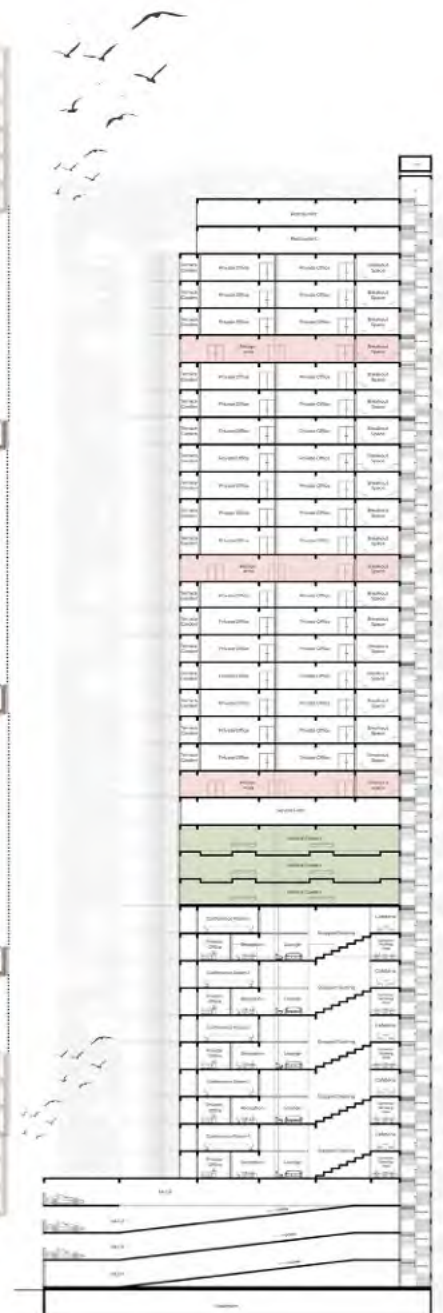
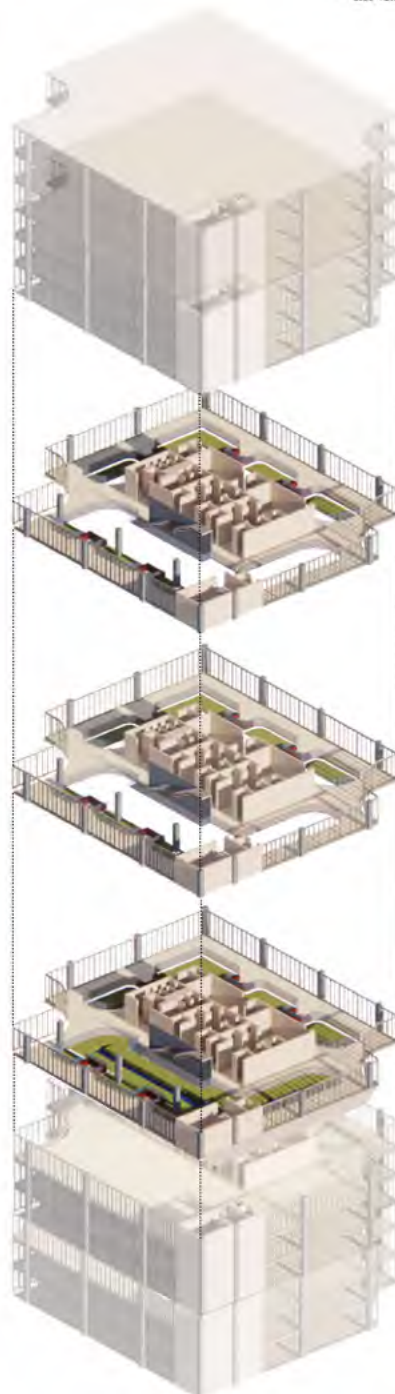


PODIUM PLAN
Scale: 1:200

Vertical Garden

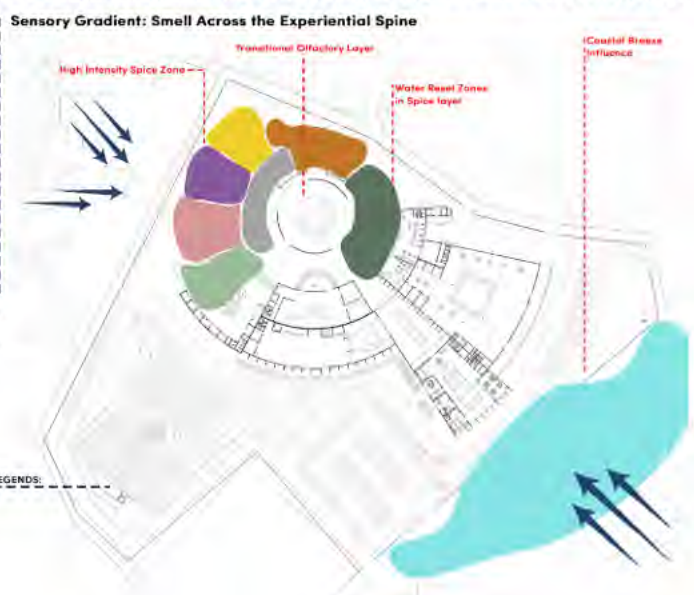
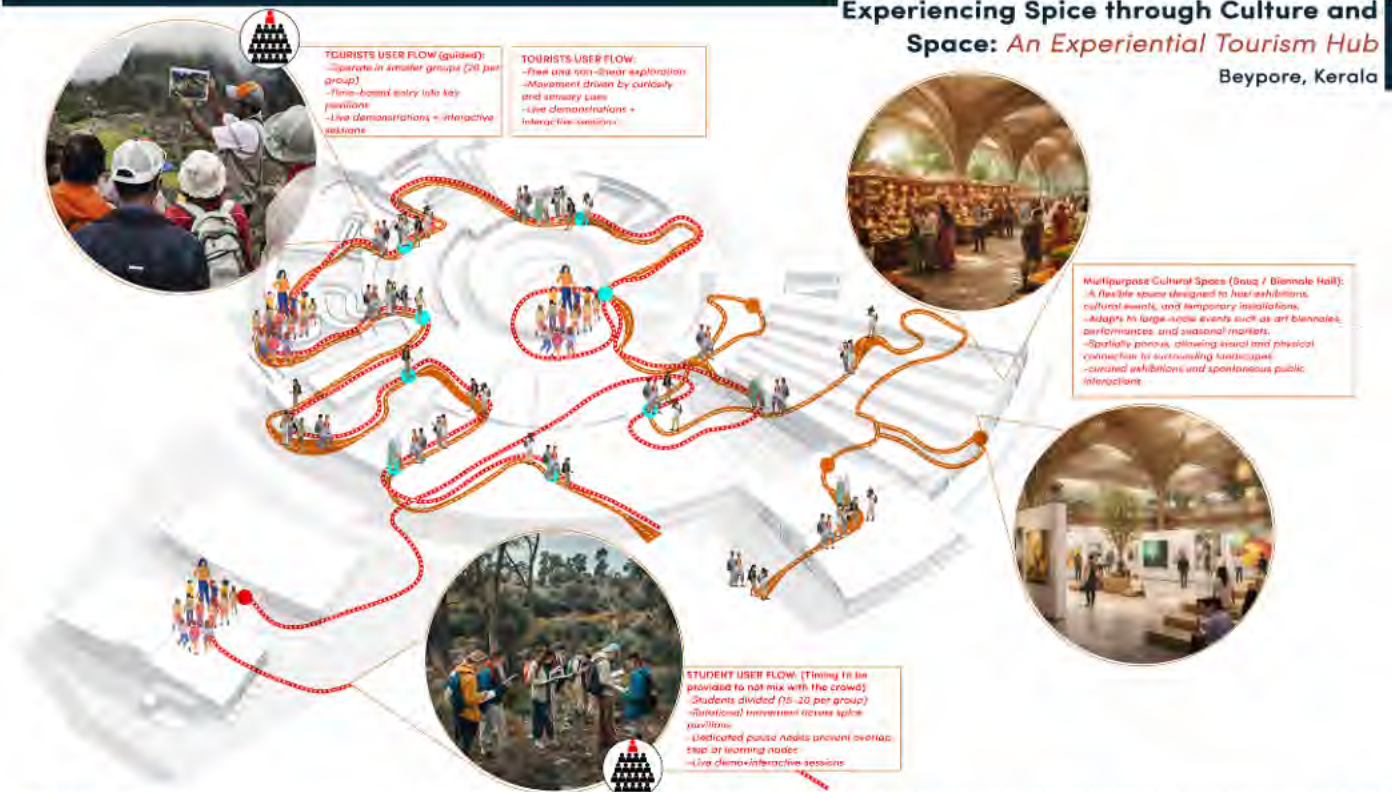


VERTICAL GARDEN
Scale: 1:200



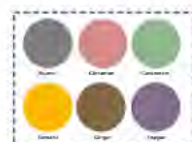
Experiencing Spice through Culture and Space: An Experiential Tourism Hub

Beypore, Kerala



Smell is mapped as a dynamic gradient across the site, where spice zones, landscape, and coastal breeze interact to create an evolving olfactory field that guides movement and enhances experiential immersion.

Each programmatic zone generates a distinct smell identity, ranging from earthy and root-based notes in ginger and turmeric areas, to sharper, more intense aromas in pepper and cardamom zones, and rich, blended culinary scents around the food spaces.



Studio

Highlights



MASTER OF ARCHITECTURE

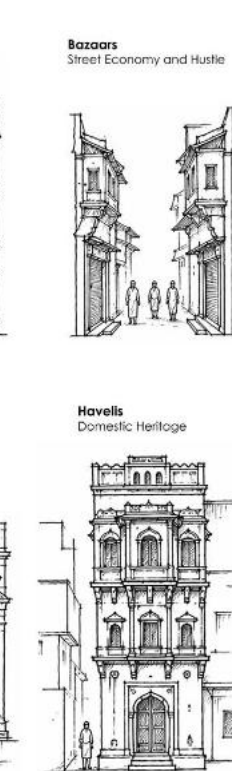
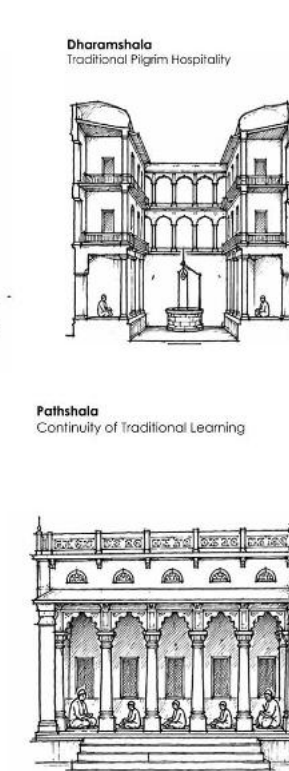
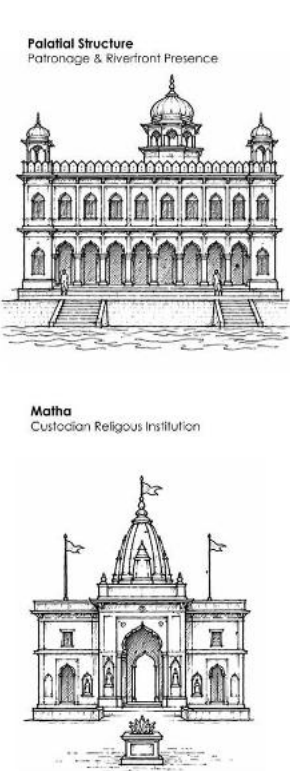
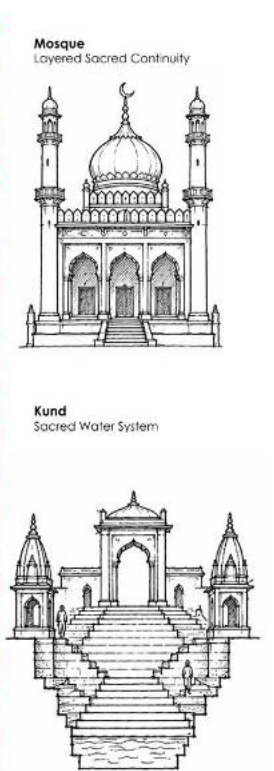
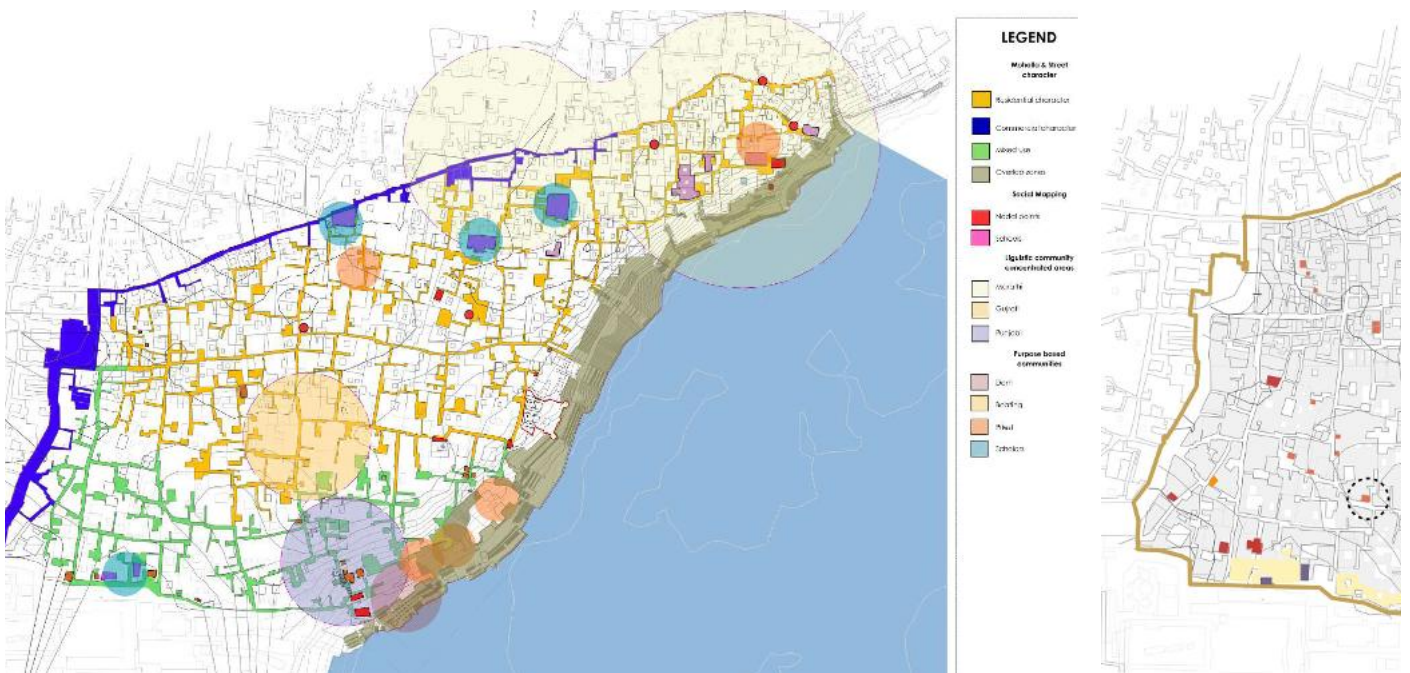
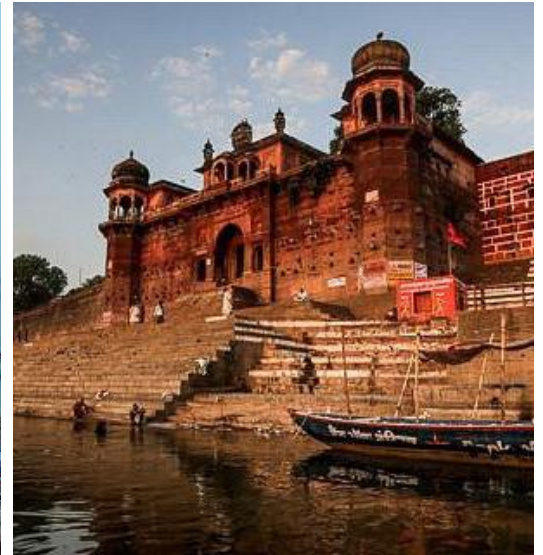
Studio Brief

Architectural Conservation Studio II: Bhonsale Mahal, Varanasi

Learning the fundamental principles of architectural design through a process of exploration, observation, analysis, and creative experimentation. The studio focuses on understanding the relationships between form, space, order, and human experience while developing the ability to translate abstract ideas into meaningful architectural expressions.

Through a series of structured design exercises, students investigate spatial narratives, experiential qualities, and the ways in which architecture shapes movement, perception, and interaction. Emphasis is placed on creating human-scale environments that respond to user needs while fostering sensitivity to context, landscape, and site conditions. Architectural interpretation and precedent analysis form an integral part of the learning process, enabling students to critically observe, document, and understand the principles embedded within exemplary works of architecture.

The studio encourages an iterative design methodology where conceptual thinking is progressively transformed into spatial and built form. Students engage with drawing, model-making, visualization, and design development as tools for exploration and communication. By integrating creativity with analytical thinking, the studio aims to build a strong foundation in architectural design and cultivate an understanding of architecture as an experiential, contextual, and socially responsive discipline. The semester culminates in the development of a comprehensive design proposal that synthesizes these explorations into a coherent architectural outcome.





Major Street



Residential setting



Temple associated with Ghat



Palatial Structure



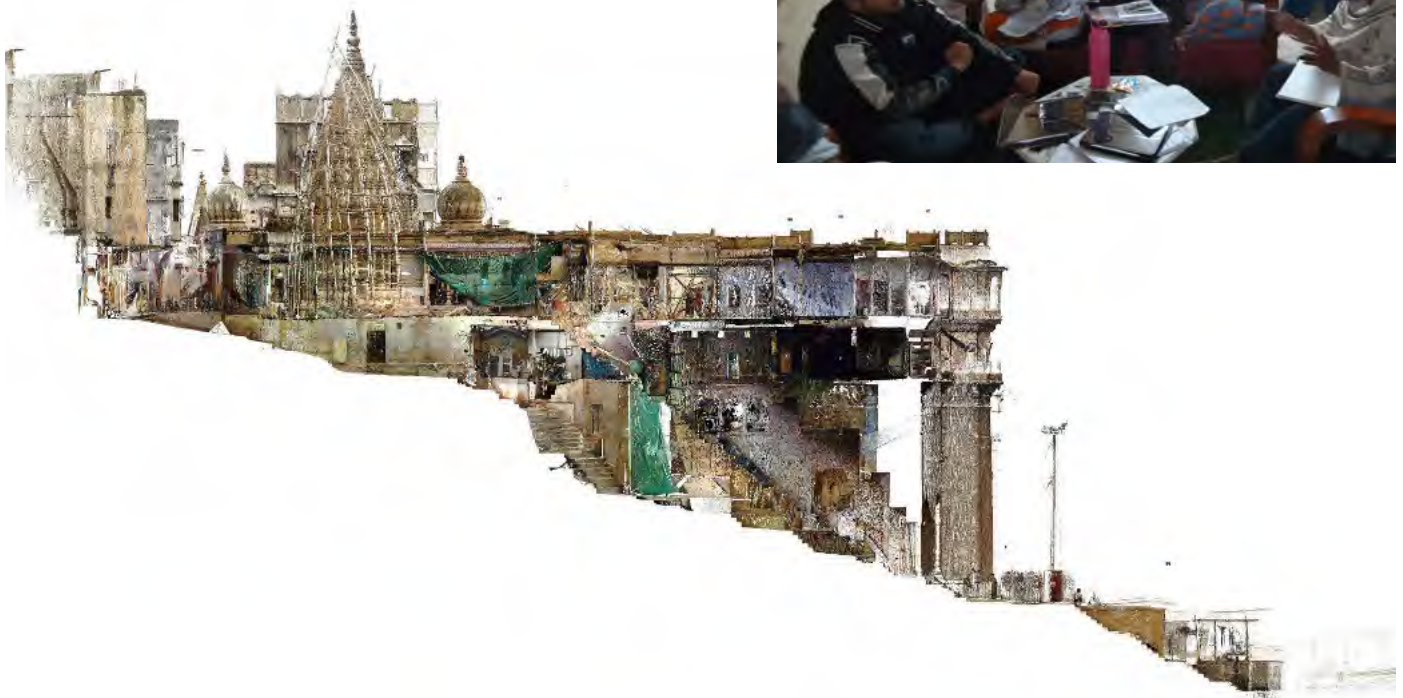
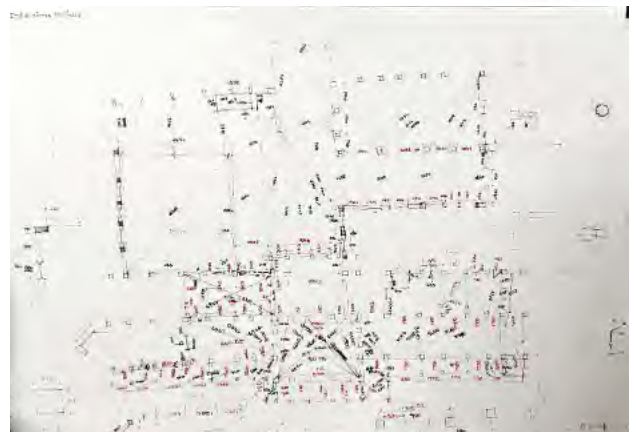
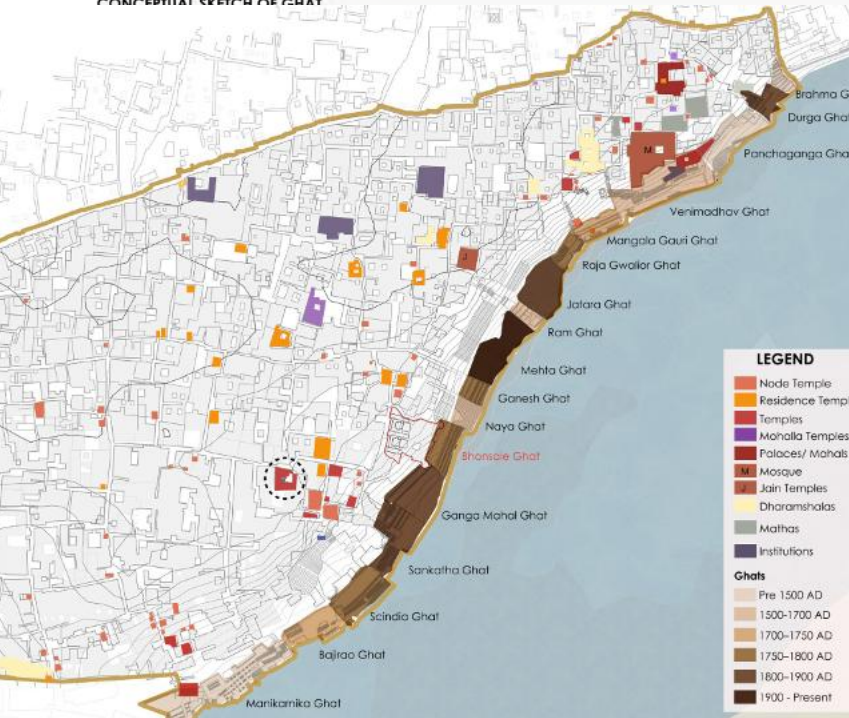
Ganga Aarti and selling of goods

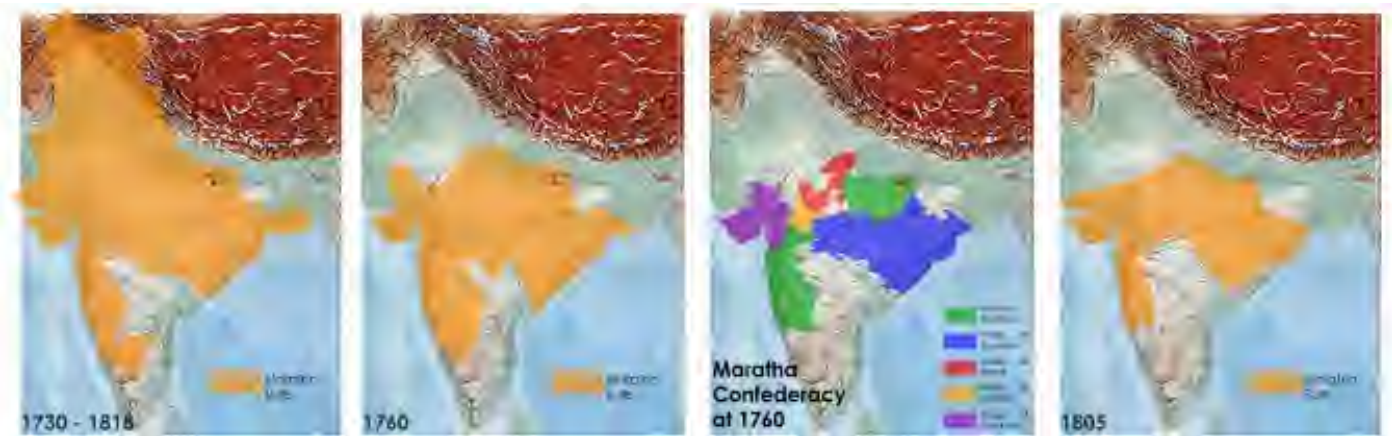


Boating & Holy Dip in Ganga



CONCEPTUAL SKETCH OF GHAT





A historical map of the Indian subcontinent c. 1750–1780, showing the extent of the Maratha Confederacy, the territories of the Nawab of Awadh, the Nizam of Hyderabad, and the Kingdom of Nagpur in relation to Varanasi. The map should highlight the Maratha zones of influence spreading from the Deccan into central and northern India.

Source: Author



Ecology

The ganga and the topographic drop to the ghats form the nat-ural base of the precinct. This layer maps the river edge, drain-age, and green cover and the pressures that a dense urban fabric places on them.

Circulation

The ghat promenade and the gali network form the movement spine of the precinct, connecting the river to the bazaar inland. This layer maps the hierarchy, the pinch points, and the relation-ship between movement and the built fabric.

Open spaces

Ghats, temple forecourts, and haveli courtyards form the open space typology of the precinct each with a distinct use, owner-ship, and social character.

Administration and infrastructure

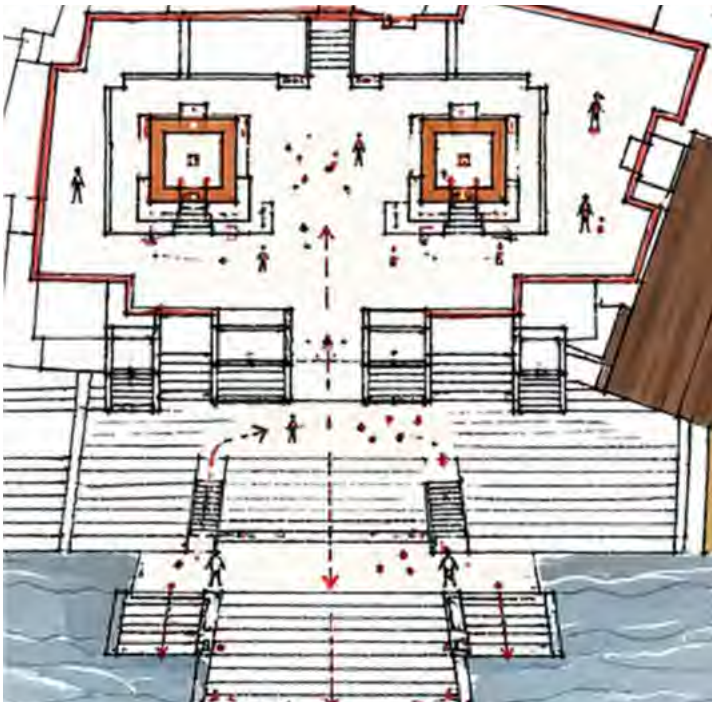
The precinct falls under multiple overlapping jurisdictions, with ageing utilities and unresolved land ownership. This layer maps the governance framework and the infrastructural condition that directly shapes how the built fabric survives or decays.

Built heritage

The precinct holds a dense concentration of ghats, temples, havelis, and mercantile fabric spanning several centuries. This layer maps the temporal growth of the precinct, identifies listed and unlisted heritage, and locates bhonsale mahal within its ar-chitectural context.

Community

Priests, traders, weavers, boatmen, and long-term residents each hold a distinct spatial and social role within the precinct. This layer maps who lives and works here, how they use the space, and what that means for conservation.

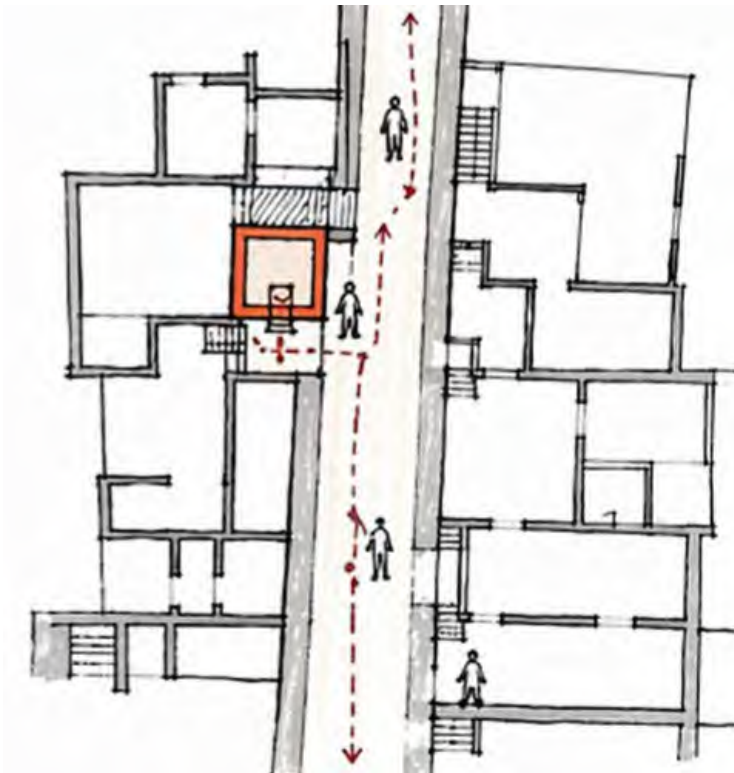


The Node Temple - Sacred Micro-Centre of Daily Life

Fig 1. The node temple is the smallest and most ubiquitous element of Varanasi's sacred landscape. These are the shrines that appear at street junctions, at the bend of a lane, at the foot of a stair-case - wherever two paths cross or a moment of orientation is needed. They are often small: a niche in a wall housing a lingam, a small platform with a bell and a lamp, a modest shikhara rising above a busy intersection.

Fig 2. Plan of node temple indicating temple as daily mi-cro-centre

Fig 3. Plan of node temple indicating temple as daily mi-cro-centre



Studio

Highlights



Sustainable Architectural Studio II: Sustainable IT Office Building, Bengaluru

IT Office Building in Bengaluru is envisioned as a climate-responsive and energy-efficient workplace that integrates advanced passive design strategies to enhance occupant comfort while reducing environmental impact. Located within a transit-oriented urban zone near Bellandur, the project benefits from excellent metro and road connectivity, encouraging sustainable mobility and reduced transportation emissions.

The design responds to Bengaluru's moderate climate, characterized by significant diurnal temperature variations, high solar exposure, and seasonal humidity influences from nearby water bodies. Building orientation, massing, and façade design are developed to minimize heat gain and maximize daylight utilization. Self-shading building forms, horizontal overhangs, vertical fins, and high-performance glazing are incorporated to improve thermal performance and visual comfort.

Natural ventilation is promoted through strategically placed courtyards, sky courts, and porous building volumes that harness prevailing wind patterns. Green-blue infrastructure, including rainwater harvesting, stormwater management systems, and landscape buffers, enhances site ecology and mitigates urban heat island effects. An Earth-Air Heat Exchanger (EAHE) system is integrated to reduce cooling loads and improve energy efficiency.

The project aims to create a healthy, productive, and resilient workplace for approximately 700 users while demonstrating sustainable architectural solutions suitable for rapidly urbanizing Indian cities.

UTCI - FIALA MODEL (No seasonal Changes)

$$M + W + C + E + Q + R + S = 0$$

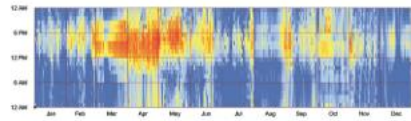
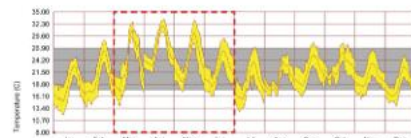
M: Metabolic rate (set to 2.3 MET / 135 W/m² for sedentary 40-year-old)
W: Work done
C: Convection
E: Evaporation (sweat)
Q: Radiation (long and short-wave)
R: Respiration (latent and sensible)
S: Heat storage (0 for steady state)

Comfort Range: 18 to 26 deg.C

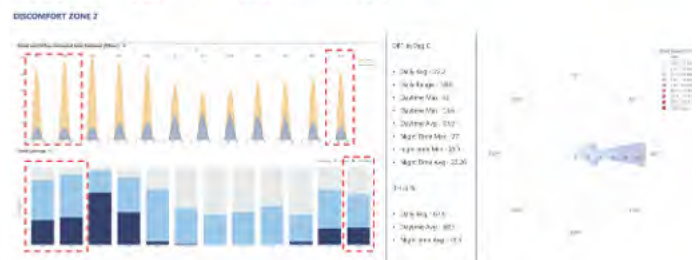
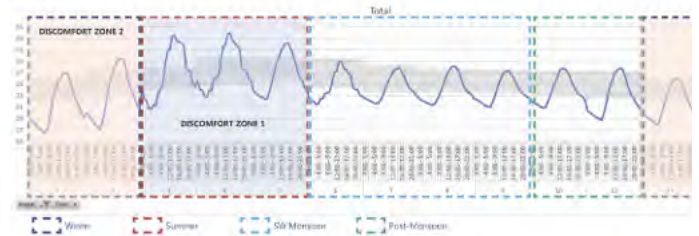
These charts show that for much of the year (June-December), the yellow band representing the thermal region is comfortably within or slightly below the 18°C threshold at night.

Critical Months for Cooling: March, April, May, June

Critical Months for Heating: December, January, February



CRITICAL PERIODS



Day while a lower solar angle reduces the overall solar gains available to temper that warmth during the day. This thermal deficit is further highlighted by comfort metrics like the Standard Effective Temperature (SET), where SET remains consistently in the light orange-yellow range, indicating high thermal stress or discomfort. The combination of high temperatures and intense radiant heat from the indoor environment will lower the SET, leading to a sustained period of discomfort.

PET - MEMI ENERGY BALANCE EQUATION

The energy balance of the human body is generally represented by the following formula, with components measured in W/m².

$$W + R + C + ED + ES + E_{sk} = 0$$

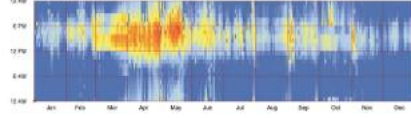
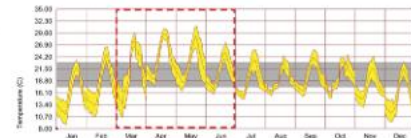
M: Metabolic rate (internal energy production)
W: Physical work output (mechanical power)
R: Net radiation of the body
C: Convective heat loss
ED: Latent heat loss from skin (sweat evaporation)
ES: Respiratory heat loss (convection and evaporation)
E_{sk}: Heat loss through clothing

Comfort Range: 18 to 23 deg.C

PET highlights that Bangalore has a high frequency of "warm" mid-days. It suggests that while the air might be cool, the radiant environment (sun hitting the body) quickly makes a person feel too warm.

Critical Months for Cooling: March, April, May, June

Critical Months for Heating: December, January, February



SET - FANGERS STEADY STATE MODEL

$$M + W + R + C + ED + ES + E_{sk} = 0$$

M: Metabolic rate (internal energy production)
W: Physical work output (mechanical power)
R: Net radiation of the body
C: Convective heat loss
ED: Latent heat loss from skin (sweat evaporation)
ES: Respiratory heat loss (convection and evaporation)
E_{sk}: Heat loss through clothing

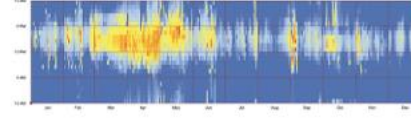
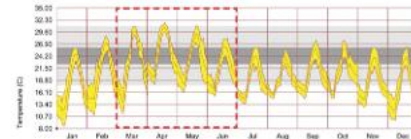
Absolute Comfort Range: 22 to 26 deg.C

Acceptable Comfort Range: 18 to 30 deg.C

SET graph calculated with 1 matting and 0.7 clothing (above and full matting) indicates that Morning indices is cool for indicated clothing. This indicates that for a person in standard indoor clothing, the climate will often feel chilly during the nights and early mornings. Indoor spaces will require heat retention or metabolic activity to stay comfortable.

Critical Months for Cooling: March, April, May, June

Critical Months for Heating: December, January, February



COMFORT ANALYSIS

COMBINATION OF COMFORT CHOICES (EVALUATING COMFORT HOURS BASED ON MULTIPLE INDEPENDENT CRITERIA (UTCI, PET, AND SET))

Short-Term or Discomfort and Thresholding

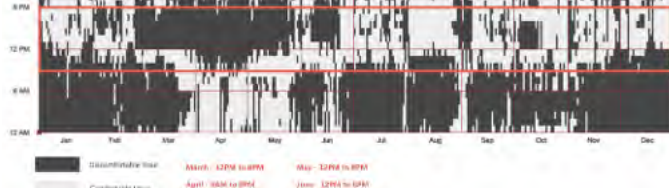
For each comfort index, based on different comfort levels (thresholds), each hour is designated into 3 categories: Comfortable and 0 (discomfortable).

Boolean Algebra

After all the hours designated as 0 and 1, each hour is compared against each other and produce an specific hour combination or not based on two methods.

Short-Term or Discomfort (0/1) is not a true for that hour or not comfortable.

Majority rule (0/1) is not a true for that hour or not comfortable.



DESIGN CONCEPT

Form Follows Performance

Form follows performance is a design philosophy where the form of a building is determined by its intended function. In this context, the building's form is designed to optimize its performance in terms of energy efficiency, thermal comfort, and structural integrity.

Performance Geometry

The color is determined by the geometry. The color is determined by the geometry. The color is determined by the geometry.

Dramatic Volumes

The color is determined by the geometry. The color is determined by the geometry. The color is determined by the geometry.

IDEA BEHIND THE SHOWBOX MODEL

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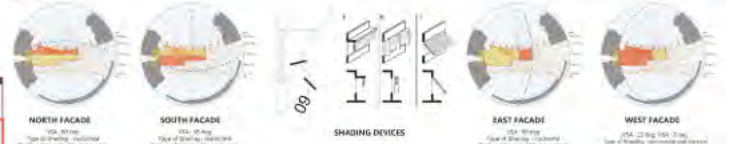
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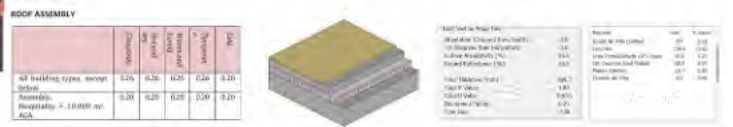
The color is determined by the geometry. The color is determined by the geometry. The color is determined by the geometry.

BASELINE ENERGY ANALYSIS

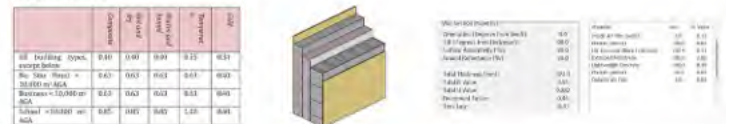
SHADING



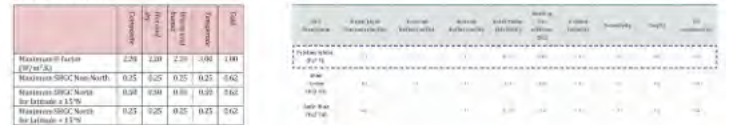
ASSEMBLIES



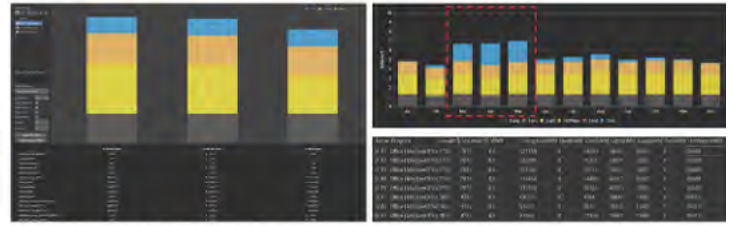
OPAQUE WALL ASSEMBLY



VERTICAL FENESTRATION

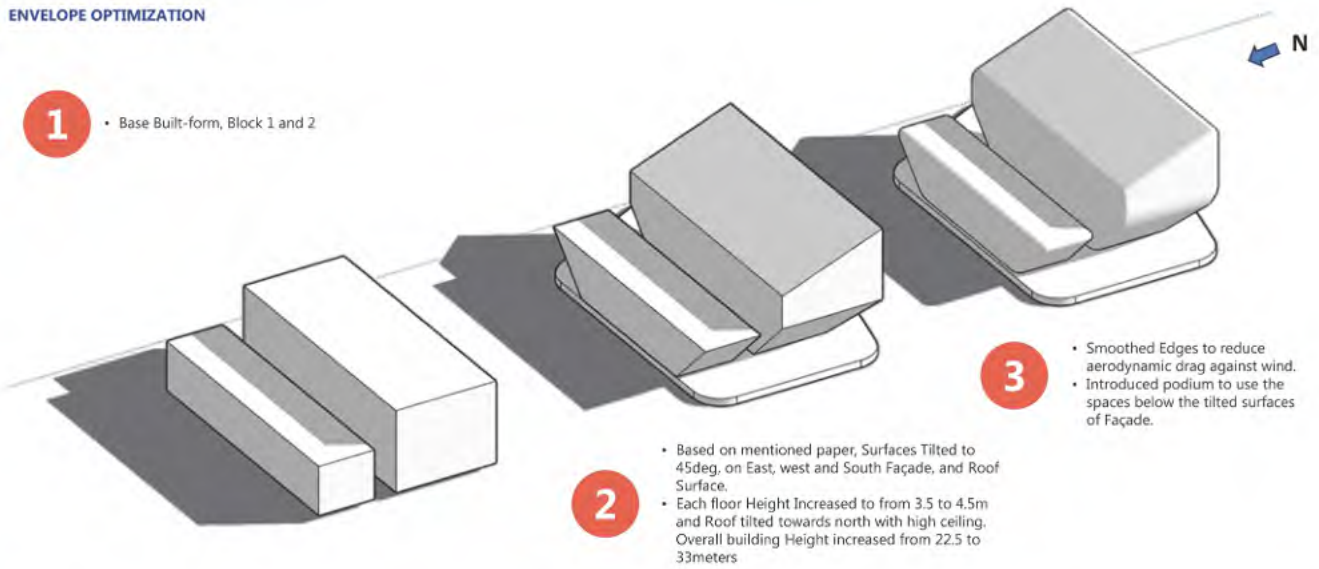


ENERGY SIMULATION



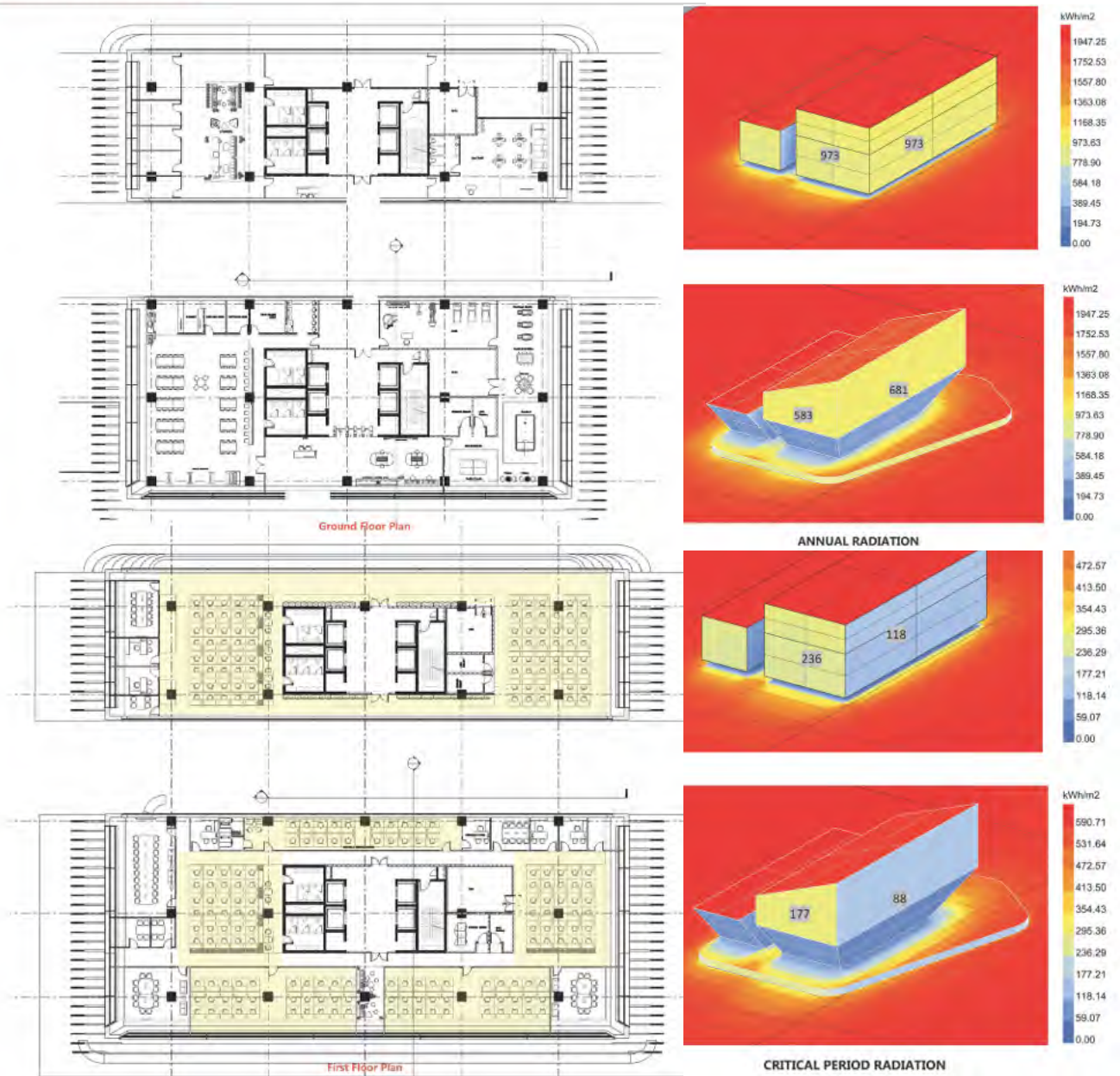
Even though the simulation with WWH 60% on all hours without shade consumed 10% less energy compared with WWH 60% with shade, only lighting loads changed and the effect on the cooling energy demand. This indicates shade has no effect on reducing the cooling energy demand, which is true in thermal comfort zone simulation is based on load on load system with PV.

The peak cooling occurred in March, April, May, where the 60% of the years demand for the cooling is occurred not the year due to the HVAC system. The analysis with current indoor climate heating requirement is within a well-defined steady-state temperature. Thus the active heating, during operational hours of office is not required.

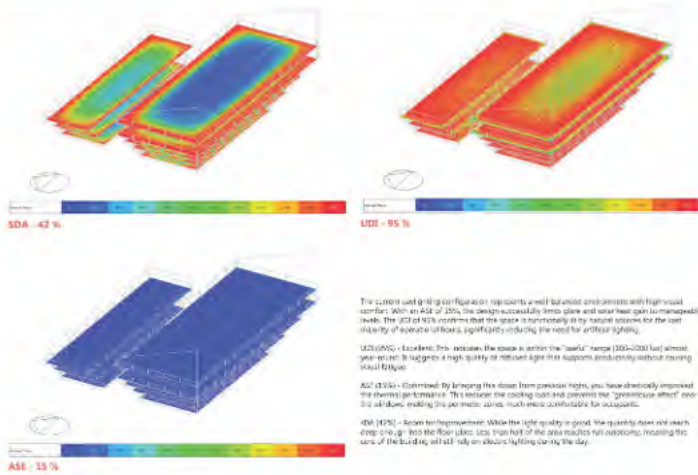


Fang, A.; Yang, Y.; Dong, W. Optimal Design of Tilted Building Envelope Considering Air Conditioning Energy Demand, Daylight Utilization and Glare Protection—Case Study. *Buildings* 2024, 14 (2). <https://doi.org/10.3390/buildings14020473>.
 Qahtan, A. M. Thermal Conditions in Workspace Centre and Adjacent to Inclined Glazed Façade of a Green-Certified Office Building in the Tropics. *Case Studies in Thermal Engineering* 2024, 53, 103798. <https://doi.org/10.1016/j.csste.2023.103798>.

PLAN, ELEVATION AND SECTION



DAYLIGHT ANALYSIS



The current lighting configuration represents a well-balanced design with high-level comfort. With an ASE of 13%, the design successfully limits direct solar heat gain to manageable levels. The UDI of 95% confirms that the space is predominantly lit by natural light, for the vast majority of hours, significantly reducing the need for artificial lighting.

UDI (95%) - Excellent: This indicates the space achieves the "excellent" range (1000-2000 lux) almost year-round, suggesting a high quality of natural light that supports productivity without causing visual fatigue.

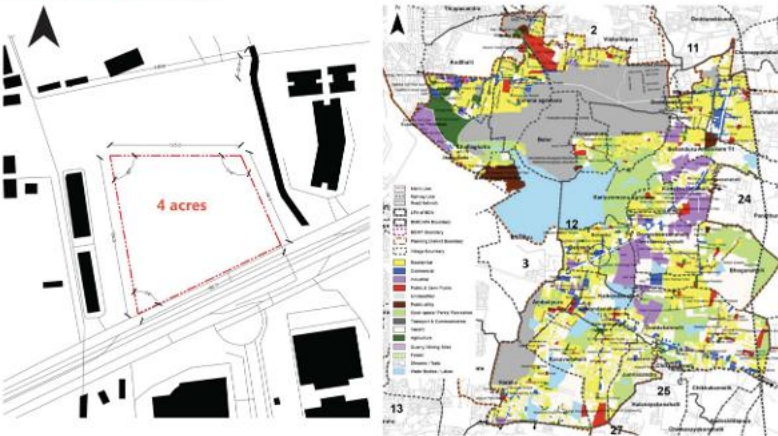
ASE (13%) - Comfortable: By keeping this figure low, the design has effectively improved the thermal performance. This reduces the cooling load and prevents the "greenhouse effect" from airflows, making this perimeter space much more comfortable for occupants.

ASE (13%) - Solar heat management: While the light quality is good, the quantity does not reach deep enough into the floor slabs. This high level of solar radiation has the potential to cause the building to rely on active lighting during the day.

COMFORT ANALYSIS



SITE AREA AND DIMENSIONS



BUILDING REGULATIONS

SETBACK REGULATION

Sl. No.	Height of Building in meters	Setback from Road in meters
1	Below 3.0	0.0
2	3.0 to 4.5	0.5
3	4.5 to 6.0	1.0
4	6.0 to 7.5	1.5
5	7.5 to 9.0	2.0
6	9.0 to 10.5	2.5
7	10.5 to 12.0	3.0
8	12.0 to 13.5	3.5
9	13.5 to 15.0	4.0
10	15.0 to 16.5	4.5
11	16.5 to 18.0	5.0
12	Above 18.0	5.5

F.A.R. REGULATION

Sl. No.	Area in sq. m.	F.A.R. (Floor Area Ratio)	Permitted F.A.R. (Floor Area Ratio)
1	Below 1000	0.5	0.5
2	1000 to 2000	0.75	0.75
3	2000 to 3000	1.0	1.0
4	3000 to 4000	1.25	1.25
5	4000 to 5000	1.5	1.5
6	5000 to 6000	1.75	1.75
7	6000 to 7000	2.0	2.0
8	7000 to 8000	2.25	2.25
9	8000 to 9000	2.5	2.5
10	9000 to 10000	2.75	2.75
11	Above 10000	3.0	3.0

PARKING

Sl. No.	Type of use	Minimum parking spaces
1	Residential	1 space per 100 sq. m.
2	Commercial	1 space per 50 sq. m.
3	Industrial	1 space per 100 sq. m.
4	Public	1 space per 100 sq. m.
5	Healthcare	1 space per 100 sq. m.
6	Education	1 space per 100 sq. m.
7	Government	1 space per 100 sq. m.
8	Religious	1 space per 100 sq. m.
9	Recreational	1 space per 100 sq. m.
10	Other	1 space per 100 sq. m.

Sl. No.	Area in sq. m.	Permitted F.A.R. (Floor Area Ratio)
1	Below 1000	0.5
2	1000 to 2000	0.75
3	2000 to 3000	1.0
4	3000 to 4000	1.25
5	4000 to 5000	1.5
6	5000 to 6000	1.75
7	6000 to 7000	2.0
8	7000 to 8000	2.25
9	8000 to 9000	2.5
10	9000 to 10000	2.75
11	Above 10000	3.0

16.0 Parking space - Adequate space for the parking of vehicles shall be provided in the site as per standards given in Table 13 subject to the following stipulations:

(a) Each of the car parking spaces provided for motor vehicles shall not be less than 18 sq.m (6m x 3m). For motor cycles and mopeds, each parking space shall not be less than 2.2 sq.m (2.2m x 1.2m) and for cycles it shall not be less than 1.2 sq.m (1.2m x 0.7m).

(b) Off street car parking space shall be provided with adequate vehicular access to a street and shall be of not less than 2.2m wide. Access shall be provided to the parking space from the street.

(c) No parking space shall be created upon the existing developed area of the site, except the area of 100 sq.m.

(d) In case of high rise buildings, parking space may be provided in the sub-basement or in the basement. In such cases, the minimum height of 3 meters shall be maintained for the parking space.

(e) Alternative means of parking such as bicycle parking, multi-storey parking, parking deck, etc. shall be provided, subject to the approval of the authority. In such cases, a clear height of 3.6 meters in the basement floor shall be maintained, and the space to be constructed per unit of car parking shall be determined by the authority.

(f) Parking in the upper floors shall be allowed only if ramps are provided after leaving the minimum setback line from the building.

(g) Parking to be allowed on site shall not be considered as a separate floor and the same shall be exempted from computing the height of the building provided the total height of the building does not exceed 100.00m.

FIRE SAFETY

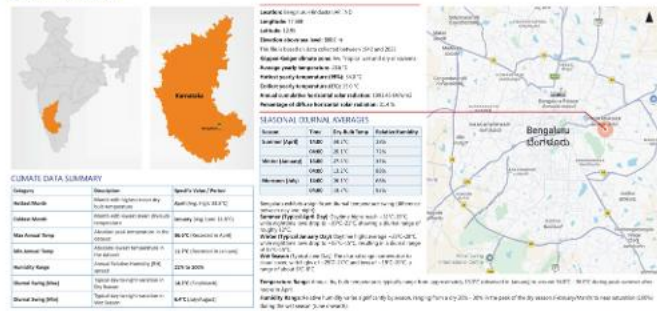
20.1 FIRE SAFETY REQUIREMENTS

(a) Buildings shall be designed, designed and constructed to ensure adequate fire safety to the occupants and shall be in accordance with the Fire Protection of the National Building Code of India. The fire fighting equipment, arrangements and installations required in buildings shall also conform to the provisions of the National Building Code of India.

(b) The buildings with ground floor or more shall be provided with fire alarm and fire extinguishers, subject to the approval of the Fire Services.

SITE LOCATION AND CLIMATE

SELECTED CITY - BANGALORE



SITE OPTIONS



Sl. No.	Criteria	Option 1	Option 2	Option 3	Option 4
1	Area (sq. m.)	1000	1000	1000	1000
2	Area (sq. ft.)	10764	10764	10764	10764
3	Area (acres)	0.23	0.23	0.23	0.23
4	Area (hectares)	0.023	0.023	0.023	0.023
5	Area (morgas)	0.023	0.023	0.023	0.023
6	Area (bighas)	0.023	0.023	0.023	0.023
7	Area (katha)	0.023	0.023	0.023	0.023
8	Area (anna)	0.023	0.023	0.023	0.023
9	Area (chitta)	0.023	0.023	0.023	0.023
10	Area (dheeran)	0.023	0.023	0.023	0.023
11	Area (satakaj)	0.023	0.023	0.023	0.023
12	Area (bigha)	0.023	0.023	0.023	0.023
13	Area (katha)	0.023	0.023	0.023	0.023
14	Area (anna)	0.023	0.023	0.023	0.023
15	Area (chitta)	0.023	0.023	0.023	0.023
16	Area (dheeran)	0.023	0.023	0.023	0.023
17	Area (satakaj)	0.023	0.023	0.023	0.023
18	Area (bigha)	0.023	0.023	0.023	0.023
19	Area (katha)	0.023	0.023	0.023	0.023
20	Area (anna)	0.023	0.023	0.023	0.023
21	Area (chitta)	0.023	0.023	0.023	0.023
22	Area (dheeran)	0.023	0.023	0.023	0.023
23	Area (satakaj)	0.023	0.023	0.023	0.023
24	Area (bigha)	0.023	0.023	0.023	0.023
25	Area (katha)	0.023	0.023	0.023	0.023
26	Area (anna)	0.023	0.023	0.023	0.023
27	Area (chitta)	0.023	0.023	0.023	0.023
28	Area (dheeran)	0.023	0.023	0.023	0.023
29	Area (satakaj)	0.023	0.023	0.023	0.023
30	Area (bigha)	0.023	0.023	0.023	0.023
31	Area (katha)	0.023	0.023	0.023	0.023
32	Area (anna)	0.023	0.023	0.023	0.023
33	Area (chitta)	0.023	0.023	0.023	0.023
34	Area (dheeran)	0.023	0.023	0.023	0.023
35	Area (satakaj)	0.023	0.023	0.023	0.023
36	Area (bigha)	0.023	0.023	0.023	0.023
37	Area (katha)	0.023	0.023	0.023	0.023
38	Area (anna)	0.023	0.023	0.023	0.023
39	Area (chitta)	0.023	0.023	0.023	0.023
40	Area (dheeran)	0.023	0.023	0.023	0.023
41	Area (satakaj)	0.023	0.023	0.023	0.023
42	Area (bigha)	0.023	0.023	0.023	0.023
43	Area (katha)	0.023	0.023	0.023	0.023
44	Area (anna)	0.023	0.023	0.023	0.023
45	Area (chitta)	0.023	0.023	0.023	0.023
46	Area (dheeran)	0.023	0.023	0.023	0.023
47	Area (satakaj)	0.023	0.023	0.023	0.023
48	Area (bigha)	0.023	0.023	0.023	0.023
49	Area (katha)	0.023	0.023	0.023	0.023
50	Area (anna)	0.023	0.023	0.023	0.023

CONTEXT ANALYSIS

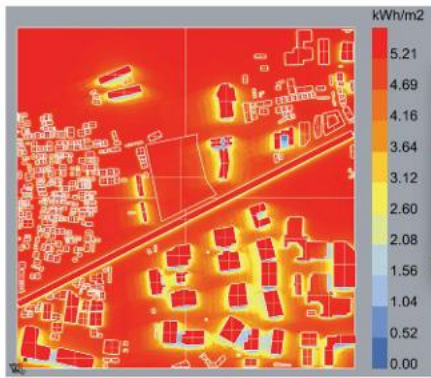


LANDMARKS AROUND THE SITE

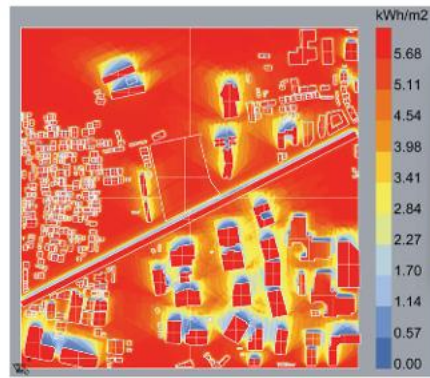
1. HSRC Fast campus
2. Indian Private Limited
3. Candore India
4. ZEE tech and Innovation centre
5. Micro Land
6. 800 Rise Private Limited
7. Synopsys India
8. Centricus
9. Alterra Semiconductor India
10. Syntron technology
11. Deloitte

FIGURE GROUND / DENSITY MAPPING OF LOCALITY

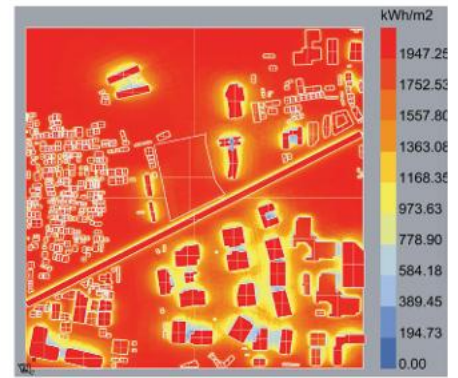




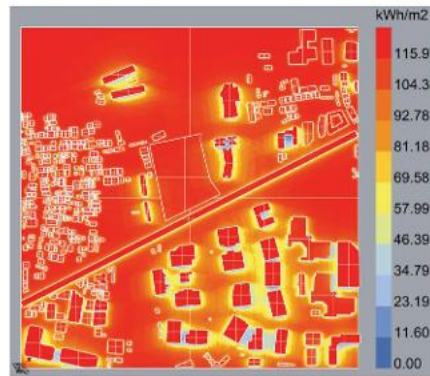
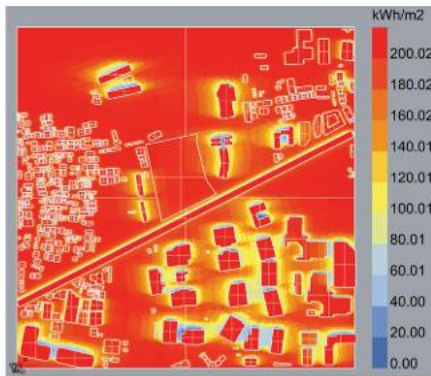
Summer Solstice



Winter Solstice



Annual

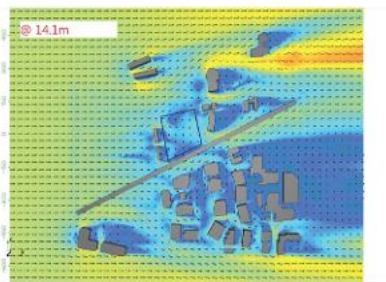
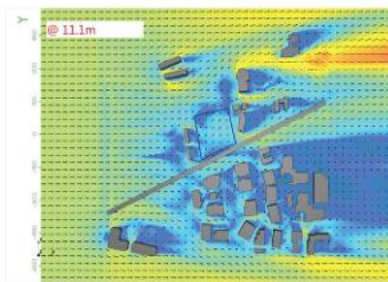


INFERENCES:

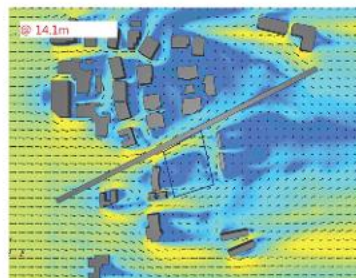
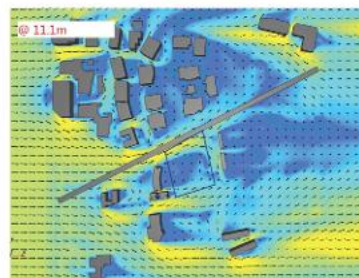
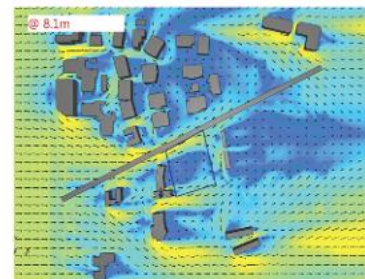
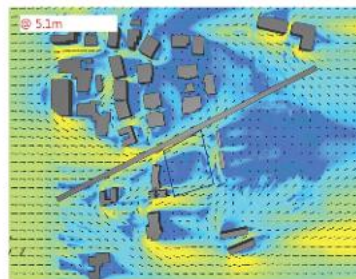
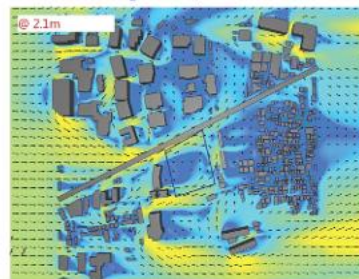
1. Using low-absorptivity (high-albedo, reflective) materials should be used to reduce solar heat absorption.
2. Glazing with low SHGC is essential on west and east façades to limit direct solar heat gain. High Window-to-Wall Ratio (WWR) increases solar penetration, especially on west-facing façades, thereby raising cooling loads.
3. West façades require maximum control due to extreme afternoon peaks, while east façades need moderated glazing and combined vertical-horizontal shading.
4. South façades can be effectively managed with horizontal overhangs, as solar exposure is predictable and seasonally variable.
5. North façades receive minimal direct radiation and require limited intervention, making them suitable for daylight-oriented design.

INFERENCES:

When the wind hits the site from the west at a brisk speed (5.5 m/s), it exerts a strong force against the buildings. At the street level, the southern cluster of buildings acts as a shield, creating calm pockets, but the wind speeds up significantly as it squeezes around the western corners and rushes down the diagonal road toward the east.



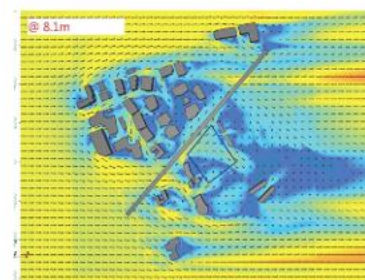
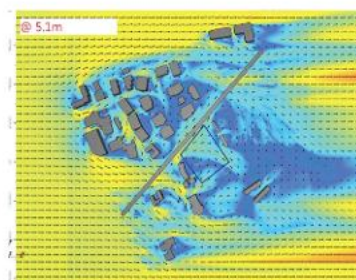
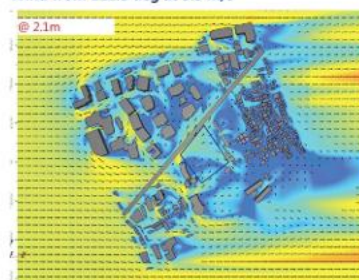
Wind from 90 deg at 5.5 m/s



INFERENCES:

When the wind blows from the east at 5.5 m/s, it hits the site with a forceful energy that mirrors the western scenario but in reverse. At the ground level, the eastern building edges cause the air to speed up sharply, while the central and western parts of the site are left in a deep, calm "wind shadow." The diagonal road acts like a funnel, causing the wind to whip through it toward the west with significant force.

Wind from 112.5 deg at 3.3 m/s



Thesis

Highlights

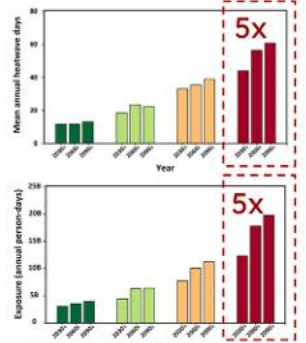


Sustainable Architectural: Thesis

INTRODUCTION AND BACKGROUND

Rising temperatures and intensifying urban heat have made indoor thermal comfort a critical challenge, particularly in affordable housing where occupants depend largely on passive cooling.

In many Indian cities, buildings are already experiencing frequent indoor overheating, placing vulnerable populations at continuous thermal risk.

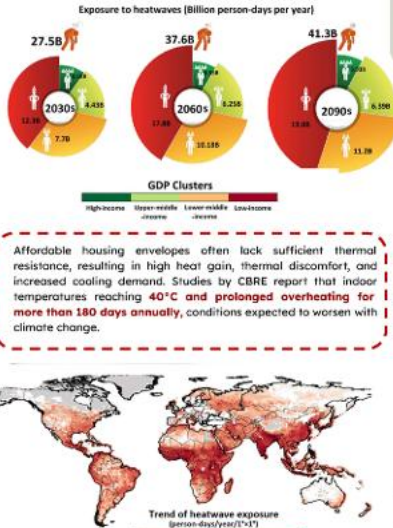


Existing standards like the Eco-Niwas Samhita (ENS 2018) prove insufficient, for low-cost constraints (Bhanware et al., 2020). This inadequacy, rooted in poor insulation, severely compromises thermal transmittance, immediately exacerbating discomfort (Mathur & Damle, 2021).

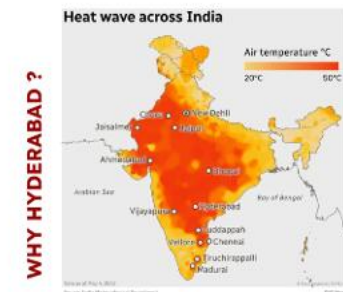
PROBLEM STATEMENT

Existing research focuses largely on current climate performance and isolated material improvements, while limited studies integrate future climate projections with combined optimization of envelope geometry and material properties for low-income housing in Indian cities.

This results in uncertainty regarding the long-term thermal resilience and comfort of current affordable housing typologies.



Hence, developing optimized, cost-effective, and climate-resilient envelope solutions is both an environmental and social necessity. Integrating Local Climate Zone (LCZ) analysis along with simulation-based optimization can create future-ready affordable housing, aligned with India's net-zero and climate-resilient goals.



"We just want homes that can keep us safe and comfortable as the heat keeps getting worse every year."



"Mitigating Overheating Risk In Future Through Optimization Of Building Envelope Geometry And Materials : A Study Of Affordable Housing In Composite Climate"

NEED AND SIGNIFICANCE OF STUDY

Urban heat in cities is causing overheating in affordable housing.



Urban heat in cities is causing overheating in affordable housing.

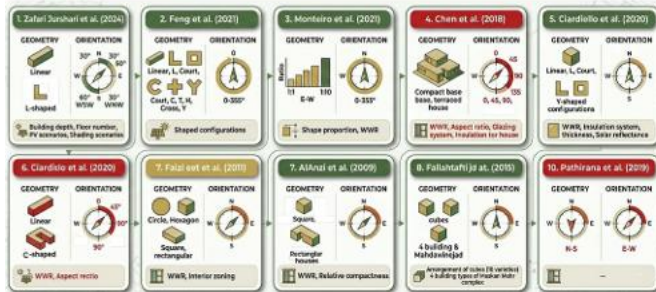


Current designs fail to address future climate resilience.



133 million sqm (at 8 sqm per capita), 167 million sqm (at 10 sqm per capita) and 200 million sqm (at 12 sqm per capita) of residential area that will need to be constructed by 2034.

METHODOLOGY EVOLUTION - OVERVIEW OF GEOMETRICAL OPTIMIZATION RESEARCH

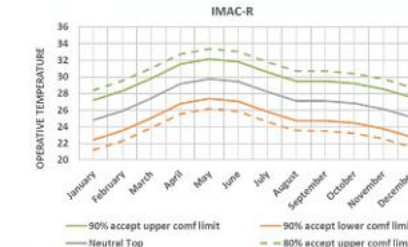


SL NO	Constants & Variables	Studied Typologies	Reference	Tool Used
1	Same floor area, thermal & construction properties, but vary in height and volume		Zhang, Pan & Wang, 2017c	Design Builder
2	Same floor area, WWR and thermal properties		Zhang et al., 2017b	Design Builder
3	Same floor area and volume for all shapes		Raj, Templek & van den Dobbelsteen, 2017	Design Builder
4	Same volume, varying surface area in increasing order		Albarici & Passerini, 2011	EN ISO 15790:2008
5	Same volume and floor area for heating		Geletka & Sedláková, 2012	EnergyPlus
6	Same volume for all shapes, 16 blocks in each shape		Depecker et al., 2001	EnergyPlus
7	Same floor area, volume, and height for all shapes		Rashdi & Embi, 2016	Autodesk Ecotect
8	Floor area and height kept constant		AlAnzi, Seo & Krarti, 2009	DOE-2
9	Same floor plan area and volume		Saha, 2019	Design Builder / EnergyPlus
10	Same gross floor area and volume for all blocks		Fendous & Gorgolewski, 2014	IES-VE

DEPENDENT VARIABLE

COMFORT LIMIT- IMAC-R (ADOPTED FROM LITERATURE REVIEW)

CARBSE Monthly 50% acceptability range for Hyderabad



INDOOR OVERHEATING HOURS (IOH)
IOH are calculated as the annual number of hours when the indoor operative temperature (T_{int}) exceeds the maximum thermal comfort temperature limit ($T_{lim,max}$) for the occupied zone, beyond which the overheating is unacceptable (Hamdy et al 2017).

INDOOR OVERHEATING DEGREE
It is advised to use IOH to take into consideration the frequency and severity of overheating (Thapa, 2021). The ratio of the annual number of overheating hours to the positive difference between the Top and Tcomf is known as the IOD.

OPERATIVE TEMPERATURE
The operative temperature (T_{op}) is used to evaluate the thermal condition of the environment, which is given by ASHRAE Standard-55 as Equation

$$T_{op} = T_{a,i} + (1-A) T_{r,i}$$

where, $A = h_c / (h_c + h_r)$

Where,
 $T_{a,i}$ & $T_{r,i}$ are the mean room temperature and mean radiant temperature,
 h_c & h_r stands for convective and radiation heat transfer coefficient of the clothed body, respectively.
 However, the value of A is taken as 0.5, 0.6 and 0.7 for air movement below 0.2 m/s, between 0.2 and 0.6 m/s and between 0.6 and 1.0 m/s for most practical purpose (ASHRAE 2010).

$$T_{rand} = 0.42(T_{out} - 30DRM) + 17.60$$

• T_{rand} - Neutral (comfortable) temperature
 • T_{out} - Outdoor temperature
 • 30DRM - "30-day Running Mean" outdoor temperature.

$$30DRM = \frac{\sum_{i=1}^{30} T_{mean,day i}}{30}$$

DISCOMFORT DEGREE HOURS
Discomfort Degree Hours takes into account the length of time and degree of discomfort felt or anticipated over the course of a year. Based on the India Model for Adaptive (thermal) Comfort (IMAC) calculation

$$DDH = \sum_{i=1}^N (T_i - T_{acceptable})$$

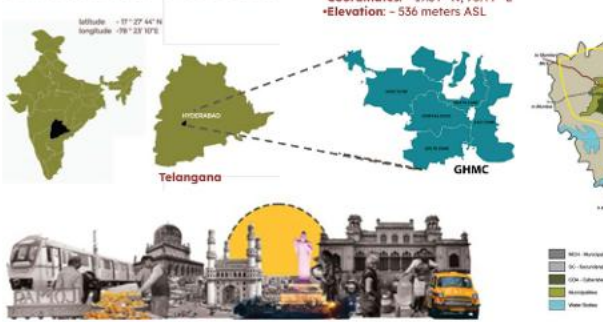
where, $T_{acceptable} = \begin{cases} T_{lower} & \text{when } T_i < T_{lower} \\ T_{upper} & \text{when } T_i > T_{upper} \end{cases}$

• N - Zone
 • i - Occupied hour
 • N_i - Occupied hours in zone 'i'
 • t - Time step of 1 hour
 • $T_{a,i}$ - Operative temperature of the zone 'i' in the time step 't'
 • $T_{lim,max}$ - Upper limit of comfort temperature provided by the ATC for the i-th time step in the zone 'i'.

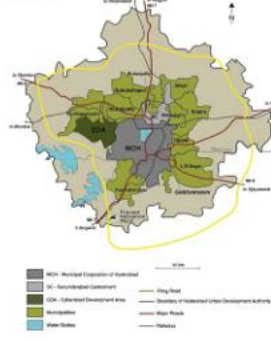
• T_i indicates the measured or achieved operative temperature at i-th hour.
 • Acceptable indicates either the lower (T_{lower}) or the upper limit (T_{upper}) of the targeted operative temperature based on IMAC comfort model

STUDY AREA

CLIMATIC ANALYSIS OF STUDY AREA



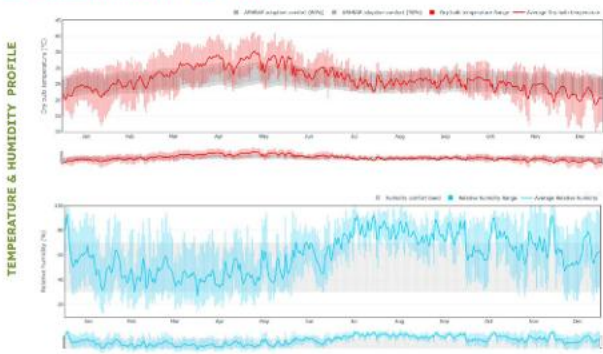
MACRO



CLIMATIC OVERVIEW

WEATHER DATA SUMMARY														LOCATION: Hyderabad Begumpet, AP, TS, IND													
Data Source														Latitude/Longitude: 17.432° N/78.451° E, Time Zone from Greenwich: 5:30C+5:30M, Station Number: 431030, Elevation: 537 m													
MONTHLY MEANS														JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC		
Global Solar Radiation (Avg Hourly)														475	509	539	574	621	669	702	682	629	569	502	439		
Direct Normal Radiation (Avg Hourly)														439	469	499	534	581	629	662	642	589	529	462	399		
Diffuse Radiation (Avg Hourly)														33	39	40	40	40	40	40	40	40	40	40	40		
Global Solar Radiation (Max Hourly)														591	629	659	694	741	789	822	802	749	689	622	559		
Direct Normal Radiation (Max Hourly)														555	585	615	650	697	745	778	758	705	645	578	515		
Diffuse Radiation (Max Hourly)														40	49	50	49	49	49	49	49	49	49	49	49		
Global Solar Radiation (Avg Daily Total)														1294	1364	1405	1457	1524	1594	1652	1629	1529	1409	1269	1109		
Direct Normal Radiation (Avg Daily Total)														1169	1239	1279	1330	1400	1470	1528	1500	1399	1279	1159	1009		
Diffuse Radiation (Avg Daily Total)														124	124	126	127	124	124	124	129	130	130	130	130		
Global Solar Irradiation (Avg Hourly)														1049	1087	1127	1169	1224	1282	1330	1300	1200	1080	960	840		
Direct Normal Irradiation (Avg Hourly)														1009	1047	1087	1129	1184	1242	1290	1260	1160	1040	920	800		
Diffuse Irradiation (Avg Hourly)														40	49	50	49	49	49	49	49	49	49	49	49		
Dry Bulb Temperature (Avg Monthly)														23	25	28	32	35	38	39	36	32	28	25	23		
Dew Point Temperature (Avg Monthly)														21	22	24	27	29	30	30	28	25	22	20	19		
Relative Humidity (Avg Monthly)														77	75	72	68	65	63	62	65	70	75	78	80		
Wind Speed (Monthly Mean)														30	34	36	38	40	42	43	42	40	38	36	34		
Wind Speed (Avg Monthly)														3	3	3	3	3	3	3	3	3	3	3	3		
Ground Temperature (Avg Monthly of 2 Depth)														23	23	23	23	23	23	23	23	23	23	23	23		

CLIMATIC ANALYSIS OF STUDY AREA



Climate Parameter	Range/Value
Climate Type (Köppen)	Tropical wet and dry (Aw) bordering hot semi-arid (Bsh)
Average Annual Temperature	26.7 °C
Urban Heat Island (UHI) / Thermal Comfort Issues	UHI exists: elevated night-time temperatures in dense built areas, impacts on outdoor comfort especially in summer and monsoon months

Summer (March to June):

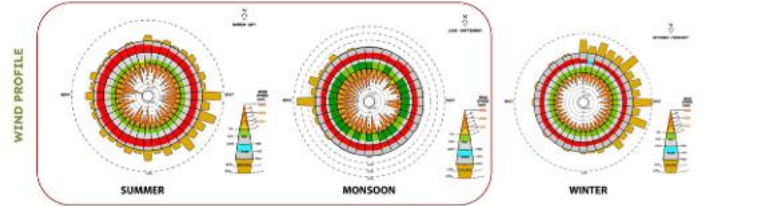
The summer season is hot, with temperatures often exceeding 40°C during peak heat in May and June. The nights are somewhat cooler but still warm. **Average Temperature: 28°C to 42°C**

Monsoon (June to September):

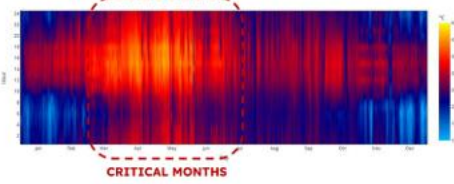
The monsoon brings moderate rainfall and cooler conditions, though it can still be quite humid. **Average Temperature: 24°C to 33°C**

Winter (November to February):

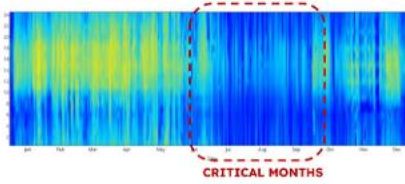
Winters are mild and pleasant, with daytime temperatures ranging from 25°C to 30°C and nights being cooler, often dipping to 15°C. **Average Temperature: 15°C to 30°C**



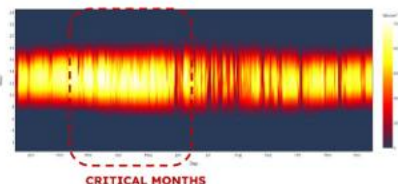
DRY BULB TEMPERATURE HEATMAP



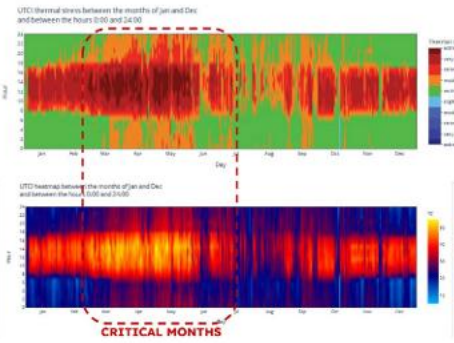
HUMIDITY HEATMAP



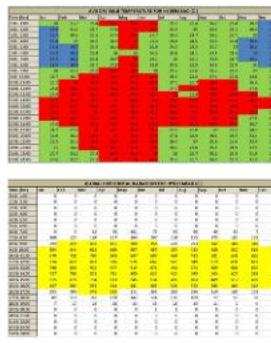
RADIATION HEATMAP



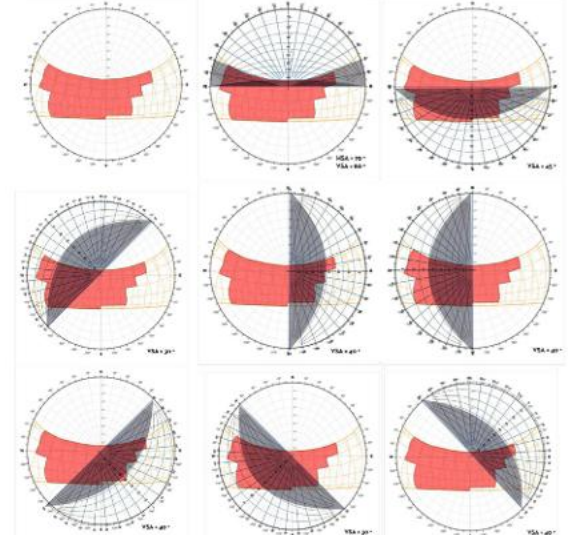
UTCI HEATMAP



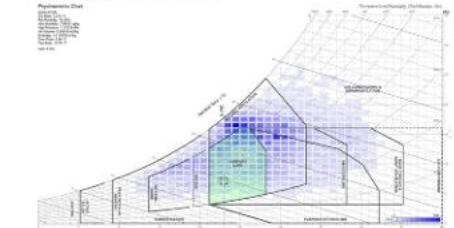
OVERHEATED PERIODS



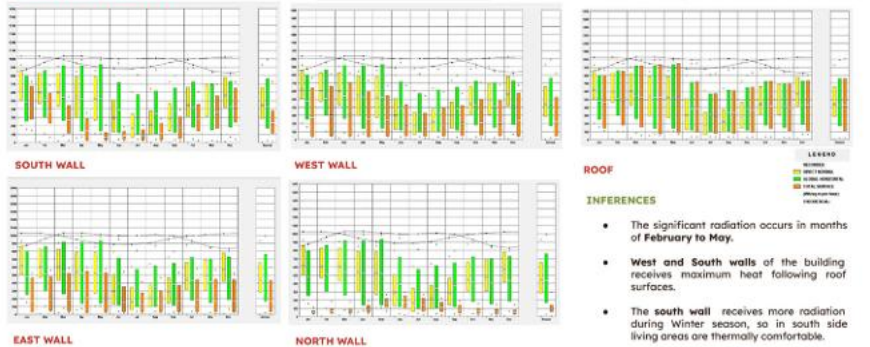
SHADE REQUIREMENTS CALCULATION - STRATEGY DESIGN CASE



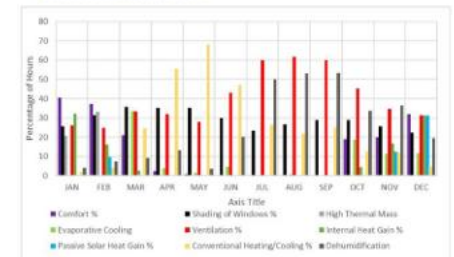
PSYCHROMETRIC CHART



RADIATION ANALYSIS



STRATEGIES IDENTIFIED



INFERENCES

- The significant radiation occurs in months of February to May.
- West and South walls of the building receives maximum heat following roof surfaces.
- The south wall receives more radiation during Winter season, so in south side living areas are thermally comfortable.

Study On local climate zones and characteristics



LCZ 1: Compact high-rise
SV: 0.3 IF: 50
AR: 2.5 SA: 1650
H: 37.5 A: 0.15
TR: 8 AH: 175
BF: 5



LCZ 2: Compact mid-rise
SV: 0.45 IF: 40
AR: 1.375 SA: 1850
H: 17.5 A: 0.15
TR: 6.5 AH: 37.5
BF: 55



LCZ 3: Compact low-rise
SV: 0.4 IF: 5
AR: 1.13 SA: 1500
H: 6.5 A: 0.15
TR: 6 AH: 37.5
BF: 55



LCZ 4: Open high-rise
SV: 0.6 IF: 35
AR: 1.5 SA: 1600
H: 37.5 A: 0.185
TR: 7.5 AH: 25
BF: 30



LCZ 5: Open mid-rise
SV: 0.65 IF: 40
AR: 0.525 SA: 1700
H: 17.5 A: 0.15
TR: 5.5 AH: 175
BF: 30



LCZ 6: Open low-rise
SV: 0.75 IF: 35
AR: 0.525 SA: 1500
H: 6.5 A: 0.185
TR: 5.5 AH: 12.5
BF: 30

Layers of Limestone Wall



Kakatiya architecture employs indigenous sustainable construction techniques based on local stone, dry masonry, and modular layered assembly. The use of interlocking stone components eliminates the need for binding materials, enabling repair, reuse, and long-term durability. This system provides thermal stability, resource efficiency, and climate responsiveness, making it a strong model for sustainable conservation practices.

Criterion	Indicative Value	Sustainability Reading	Suitability
Visual Compatibility	Pale ochre / terracotta yellow	Minimizes historic character and typology contrast	***
Thermal Performance	1.1-1.25-1.35 W/mK	Contributes to passive thermal stability through thermal mass	**
Embedded Carbon	Indigenous locally sourced stone	Reduces reliance on non-renewable modern materials	***
Structural Reliability	30-60 MPa compressive strength	Appropriate for repair, replacement, and long-term storage	***
Moisture Behaviour	1-dry water absorption	Needs careful detailing in water-exposed areas	**
Repairability	Good workability / carvability	Supports minimum intervention and future repair on site	***
Economic Feasibility	1100-1300 / sq.ft	Cost-effective for extensive restoration and reuse	**
Conservation Suitability	High visual + material match	Strong candidate for context sensitive restoration	***

This material assessment supports the objective of reinterpreting stone performance as measurable evidence of sustainability, where the value of yellow limestone is understood not only through engineering data but also through its repair potential, cultural continuity, environmental responsiveness, and long-term conservation suitability.

Photogrammetric view



Sketch View: Photogrammetric view of the existing structure



Elevation B: Limestone surface weathering with localized structural cracks identified through photogrammetric mapping.



Elevation B: The weathered limestone base shows signs of erosion and structural weakening.



Elevation B: The photograph shows existing thermal and moisture-related issues.

Layers of Limestone Plinth in two different Locking's



Elevations



Elevations-East Facing



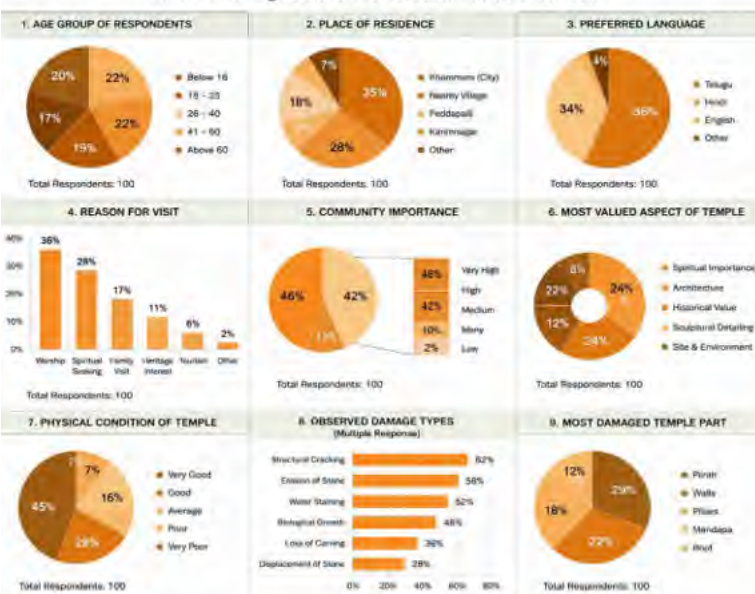
Elevations-South Facing



Note: All Dimensions are in Meters

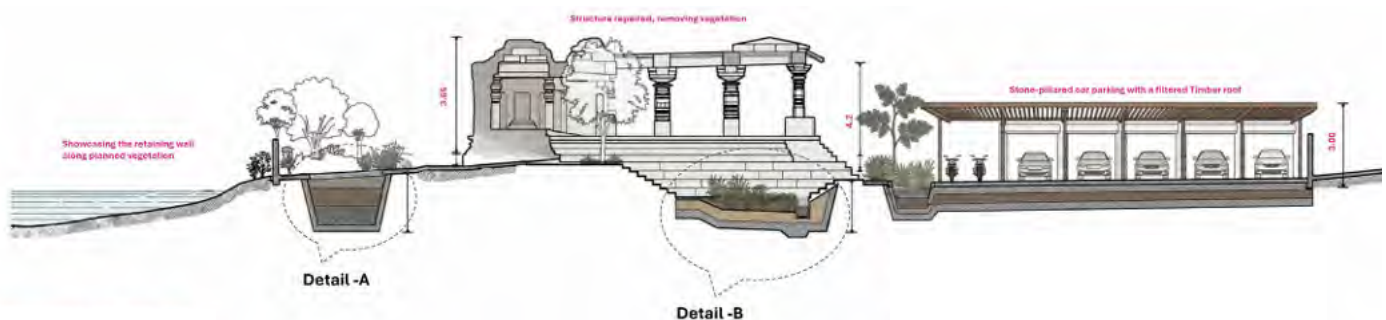
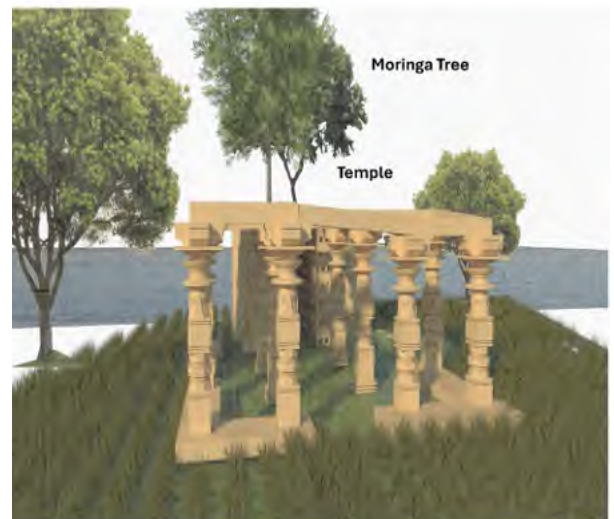
SUMMARY OF SURVEY RESULTS

Riverine Heritage Deterioration & Sustainable Conservation



Thermal Mass-Plinth-Walls, Roof

Existing Structure

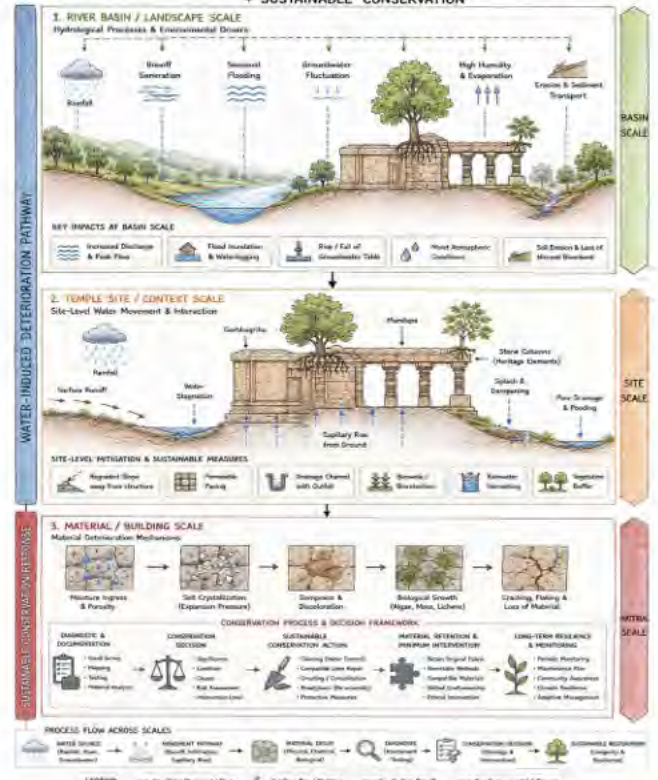


Footfall-driven analysis enables a sustainable restoration strategy that manages peak loads, minimizes material intervention, and responds to climatic and ritual-based site usage

3. DESIGN INTERVENTIONS (SITE PROGRAMMING) - FLOW CHART



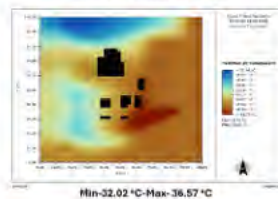
MULTI-SCALE FRAMEWORK FOR RIVERINE HERITAGE DETERIORATION + SUSTAINABLE CONSERVATION



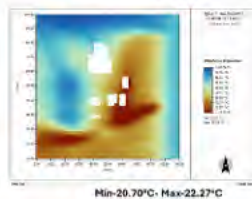
Potential Air Temperature

Evaluate the ambient thermal conditions that affect outdoor comfort.

Summer Solstice-21-06-2025



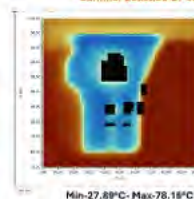
Winter Solstice-22-12-2025



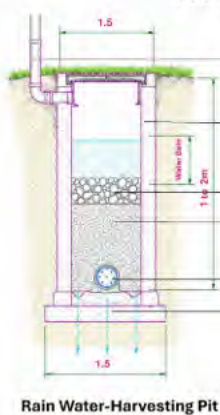
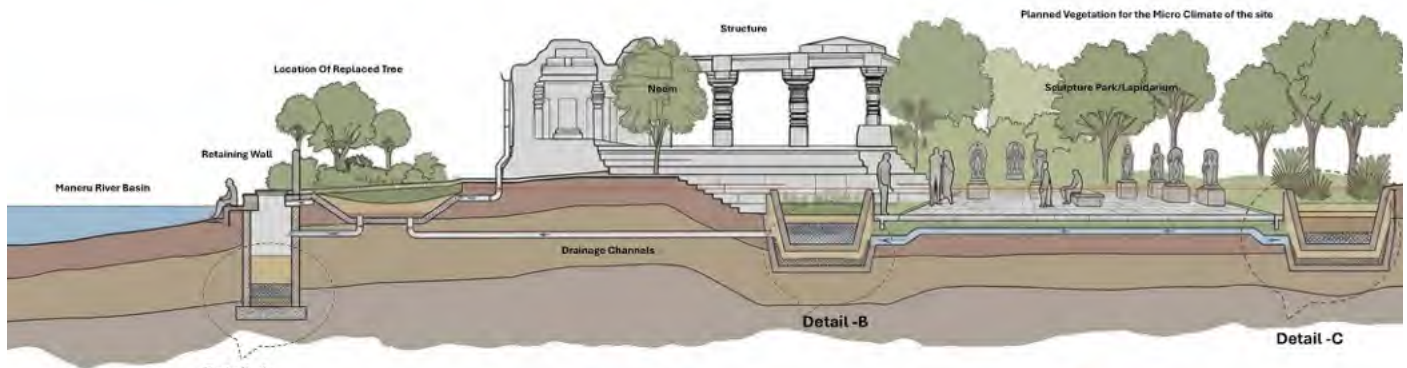
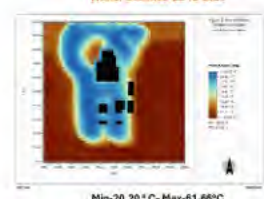
Mean Radiant Temperature (MRT)

Assess the combined radiative heat exposure from surfaces and sky.

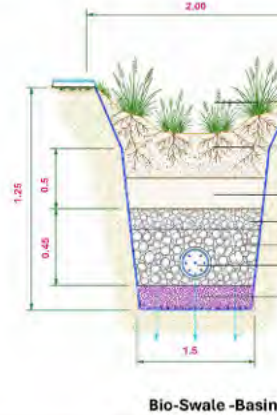
Summer Solstice-21-06-2025



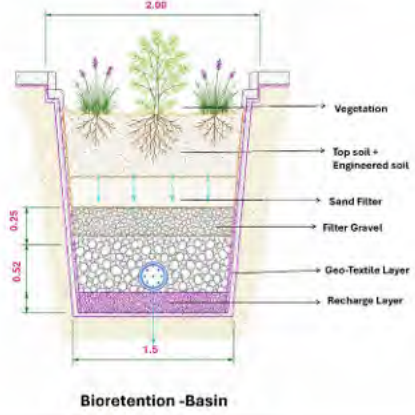
Winter Solstice-22-12-2025



Rain Water-Harvesting Pit



Bio-Swale-Basin



Bioretention-Basin

Studio

Highlights



Studio Brief

Urban Design Studio II: Inclusive Urban Extension for Madurai

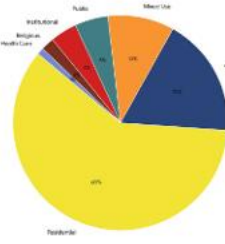
This Urban Design Studio focuses on understanding and reinterpreting the spatial, cultural, ecological, and economic character of Indian temple towns through the case of Madurai. One of South India's oldest continuously inhabited cities, Madurai has evolved around the iconic Meenakshi Temple and represents a unique synthesis of history, culture, religion, and urban form. Today, however, rapid urbanization, population growth, migration, environmental pressures, and unplanned peripheral development threaten the city's identity, liveability, and resilience.

The studio aims to investigate the morphology, movement networks, ecological systems, public spaces, heritage precincts, and socio-economic activities that shape the city. Through documentation, field surveys, stakeholder interactions, and urban analysis, students will examine the relationship between the temple, the city, and its evolving peri-urban landscape. Particular emphasis will be placed on understanding how traditional urban principles can inform contemporary development.

The final outcome is the preparation of an Inclusive Urban Extension Framework for Madurai on a greenfield site. The proposal should address walkability, mixed-use development, ecological resilience, cultural continuity, employment generation, and sustainable infrastructure while respecting the historic character of the temple town. The design intervention should demonstrate how future growth can strengthen Madurai's identity, enhance quality of life, and create a resilient, people-centered urban environment.

BUILT USE ANALYSIS

The Built use map reveals a highly diverse and functionally complex urban fabric. Residential use in yellow remains dominant across the entire area, forming the basic fabric of the settlement. However, what distinctly sets this area apart from Palanganatham and Perungudi is the significant presence of industrial use in violet, forming a prominent cluster in the central zone, indicating an active industrial or manufacturing precinct embedded within the urban fabric, a characteristic absent in the other two study areas. Institutional use in red forms a dense and concentrated cluster in the upper-left zone, suggesting a major campus-scale development such as a government complex, hospital, or educational institution. Public use in teal is notably more prominent here compared to the other areas, distributed across the upper-left and central zones, reflecting better civic infrastructure provision. Commercial use in blue is well distributed along major road corridors particularly in the eastern portion, indicating denser and more organised commercial activity. Mixed use in orange is widely and frequently scattered, reflecting genuine mixed-use development across multiple streets rather than being confined to isolated pockets. Healthcare in light blue appears to be more consistently distributed, suggesting comparatively better medical accessibility. Religious structures remain organically dispersed throughout the residential fabric. Overall, this area represents the most functionally diverse and urban-mature settlement among the three study areas, with a distinctive industrial presence, strong institutional zones, and richer commercial and public infrastructure.



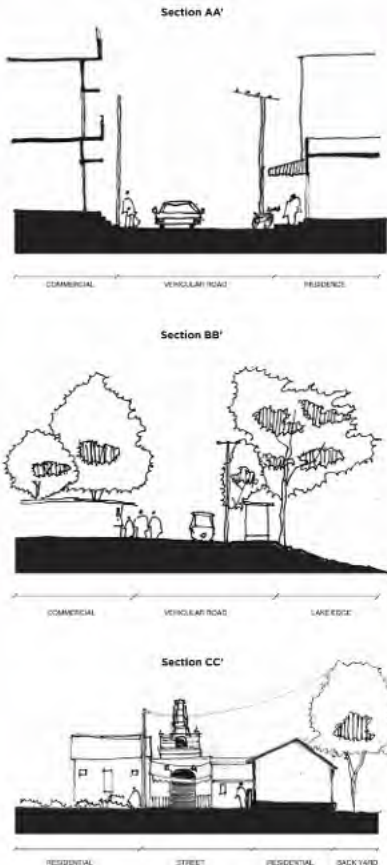
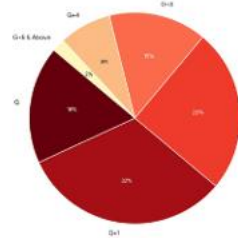
BUILDING HEIGHT ANALYSIS

The building height map of KK Nagar reveals a significantly more diverse vertical profile compared to Perungudi and Palanganatham, indicating a more mature and densified urban settlement. Unlike the other study areas, the fabric here displays a visible mix of forms ranging from deep dark red through medium red to lighter salmon and peach shades, reflecting a genuine spread of building heights from ground floor up to G+3 and G+4 across much of the area.

G and G+1 structures remain present throughout but are not as overwhelmingly dominant as in the other areas, indicating that vertical growth has already progressed significantly beyond the early low-rise stage. G+2 and G+3 buildings are widely and evenly distributed across the fabric, particularly in the central and eastern zones, suggesting that mid-rise development is the prevailing character of the settlement rather than an exception confined to major corridors.

The lighter salmon and peach tones of G+3 to G+4 structures appear in notable clusters, particularly in the upper-left institutional zone and central areas, likely corresponding to the taller institutional, commercial, and apartment buildings identified in the land use map. A few isolated very dark and large footprint structures represent the tallest buildings in the area.

The river edge visible in the lower portion naturally constrains southward growth. Overall, KK Nagar presents as a well-densified, mid-rise dominant urban area with considerable vertical diversity, reflecting a more advanced stage of urban consolidation than the other study areas.



	SCHOOL	TRADITIONAL	SINGLE COMMERCIAL UNIT	COLLEGE
MASSING MODEL				
BUILDING FOOT PRINT				
PLAN				
SECTION				



The Perungudi area displays three primary building typologies reflecting its early-stage urban character. The traditional form features a narrow street plan with almost total enclosure. The commercial form is a compact, vertical but otherwise structure serving basic local needs. The single commercial unit is a compact, vertical but otherwise structure serving basic local needs. The college form is a compact, vertical but otherwise structure serving basic local needs.

	LOW	LOW	Very low	High
Public Use	Low	Low	Very low	High
Dominant Height	G+1 to G+2	G to G+1	G to G+1	G+2 to G+3
Mid-rise (G+3 to G+4)	Present along corridors	Emerging along roads	Rare	Widely distributed
High-rise (G+5+)	Isolated instances	Isolated instances	Almost absent	Isolated instances
Urban Grain	Fine-grained, compact	Moderate, semi-regular	Coarse, fragmented	Moderate, planned regular
Street Pattern	Concentric, organic	Irregular, road-guided	Sparse, incomplete	Grid-based, semi-planned
Open Space Type	Streets & temple courts	Tank & road setbacks	Large undeveloped voids	Institutional courts & river edge
Natural Boundary	None significant	Vandiyur Tank	Vandiyur Tank	Vaigai River
Stage of Urbanisation	Mature historic core	Actively densifying	Early stage	Consolidated planned zone

Parameters	Modern Temple Core	Palanganatham	Perungudi	KK Nagar
Urban Character	Historic organic core	Transitional urban core	Peripheral emerging settlement	Planned semi-urban settlement
Built-up Area	75%	80%	80%	85%
Open Space	25%	20%	20%	15%
Dominant Land Use	Commercial & Religious	Residential	Residential	Residential & Institutional
Commercial Presence	High - all major streets	Moderate - major roads	Low - very sparse	Moderate - road corridors
Religious Presence	High - dispersed	Scattered	Sparse	Scattered
Institutional Presence	Low	Moderate	Low	High - campus clusters
Industrial Presence	Absent	Absent	Absent	Present - central zone
Healthcare	Sparse	Sparse	Very sparse	Moderate
Mixed Use	Moderate	Scattered	Minimal	Moderate - widely scattered

Thesis

Highlights

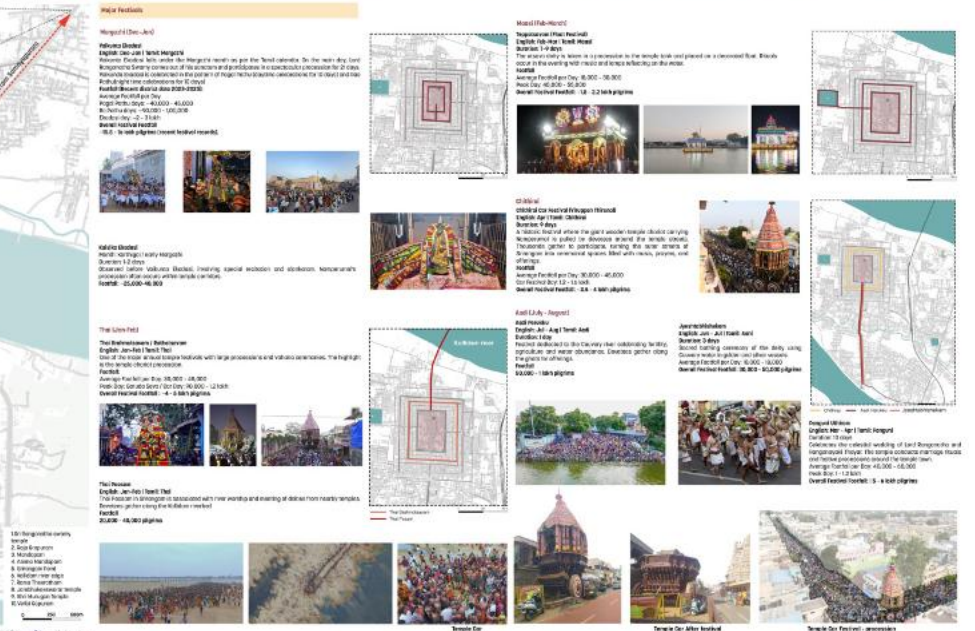


Urban Design: Thsesis

As Bengali religious temple at Shreegan functions as a living ritual site, where more than 300 days of the year are marked by festivals. Among them, *Vaisakha Saptami* (the 7th day of the Bengali month of Vaisakha) is the most important 24-day celebration, celebrating the birthday (birth) and entry into the Shreegan temple.

Importance begins in coincidence with the selection of a temporary residence of all *Shreegan* temples in the north-east corner of the main enclosure, neighbouring *Shreegan* space are closed off from the rest of the temple. The *Shreegan* temple is a square in plan, measuring the north-east corner of the second enclosure, opened only for this occasion, allowing significant *Shreegan* rituals within the temple complex.

Thus, the festive religious movement, hierarchy, and public space, rendering *Shreegan* identity as a well-structured urban landscape.



The diagram illustrates the evolution of urban form and social organization through six stages, connected by arrows indicating a progression from left to right.

- FROM CHAOS:** Represented by a tangled web of lines and nodes, symbolizing random, unorganized growth.
- TO ORDER:** Represented by a grid pattern with a red 'X' over it, symbolizing the imposition of order and the resulting loss of organic structure.
- FROM CONFLICT:** Represented by a scene of a car and a person in a conflict, symbolizing the clash between different social groups or interests.
- TO HARMONY:** Represented by a scene of people walking together in a park, symbolizing social cohesion and shared public space.
- FROM INFORMAL:** Represented by a scene of informal housing (shacks), symbolizing the lack of formal planning and regulation.
- TO STRUCTURED INFORMALITY:** Represented by a scene of organized informal housing (shacks in a grid), symbolizing the emergence of order and structure within informal settlements.

PUBLIC REALM

- Tree line Corridor
- Shaded walkways
- Seating & Pause Points
- Activity / Spill-Out
- Encourages longer stay & social interaction.
- Reduces urban heat and improves temperature.

3D View

PROWIDING Provide a variety of walking options for safe and enjoyable movement.	MIDDLE GROUND Encourage food vendors for organized and efficient informal economy.	EDGE ACTIVATION Active edges with seating, landscaping and engaging public activities.	WAYFINDING SECTION Clear, visible signage for wayfinding and better spatial orientation.	CLIMATE RESPONSE Shade, greenery and sustainable materials for thermal comfort and resiliency.	CULTURAL INTEGRATION Respecting heritage and culture through identity through place-based design.
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Figure 1 consists of four small, square diagrams, each labeled with a number and a title. Each diagram shows a different urban form with various elements like buildings, streets, and green spaces. Below each diagram is a short description of the form.

- 1. ALLEY**: alleyway with grocery and chair
- 2. VENDOR CLUSTER**: market stalls, grocery, equipment, children and dog
- 3. JUNCTION NODE**: alleyway made with market, grocery, lighting, and dog
- 4. EDGE PICKET**: small green space with seating, grocery and dog

Livelihood

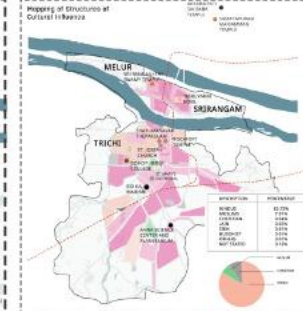
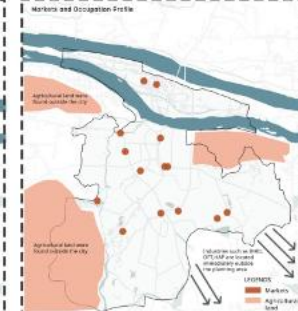
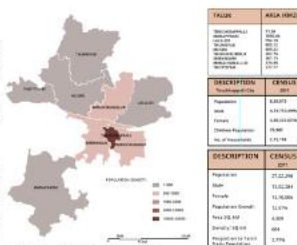
Brackish water provides sheltered conditions for fishing activities such as anchorage, docking, repair, and storage, while also supporting fish productivity and marine livelihoods.

Basile Cultural Evolution
 Truchirappalli evolved from a Sangam-era river settlement at Uthirai into a temple-centered sacred landscape under the Cholas, anchored by Sri Ranganatha Swamy Temple. It was further strengthened during the Vijayanagara-Nayaka period through monumental temple and fort developments like the Veerabhadra Temple.

Demography

In 2001, Tiruchirappalli had population of 27,22,290 of which male and female were 13,52,584 and 13,70,009 respectively. There was change of 12.07 percent in the population compared to population in year 1991. In the previous census of India in 2001, Tiruchirappalli District recorded increase of 12.10 percent to its population compared to 1991.

The population of Tiruchirappalli is projected to be 31,60,000 in the year 2026 with growth rate of 0.9 percent. In the year 2031, the population of Tiruchirappalli is projected to be 31,60,000.



Handlooms:
Weavers in Manendri village have mastery over handloom weaving of their shirats in the past. 2000 men and 7000 women were engaged in handloom weaving in the village. The industry has declined from about 400 handlooms even a decade ago to about 125 handlooms now.
Many handloom weavers closed down their looms and moved to alternate employment opportunities in construction and MAFPIB programme.

Kernal Mats
Kernal (read) grass mats are manufactured in Madurai and Kolar areas. These mats are supplied to maratha houses in India. Most of the enterprises have one machine. A few of the producers have two or three machines. The industry is currently facing problems in shortage of labor and poor quality raw material. Many small time manufacturers have shut down their units and migrated to new places like Madurai and Tirunelveli for alternative employment.

Synthetic fibres
Synthetics grew apace and pelleting was once a thriving industry. Puchinappalli is said to have been the industry provided employment to about three lakh people in manufacturing and trading. The industry now employs about 10,000 people.
The industry faces stiff competition from cheap Chinese imports.

Gold Jewellery
The number of active goldsmiths with workshops has considerably declined in 20000 two decades back to 1800 now in Thiruvaprappalli, Goldsmiths use traditional craft have lost to the popularity of machine-cut gold jewellery leading brand-end jewellery manufacturers.

The efforts of the DIC, Chennai, under the Ministry of MSME, Government of India, it supported the Gold Jewellers Cluster in Thiruvaprappalli and Madurai with a grant of Rs 3 crore each for establishing common facility centre (CFC) through Rajya programme via MSME and Small Enterprises Cluster Development Scheme (MSE-CDPS).

Beaded ornaments. The Harikurnner community is concentrated in Daveroyenari and N.K. Golei Golei near Thiruvallur in Thiruvallur district. They buy beads from Marathi merchants, make beaded ornaments and sell in the local markets. The community is numerically very small in number. There are about one lakh people in the entire state. They do separate from one place to another to sell their craftwork.



Studio

Highlights

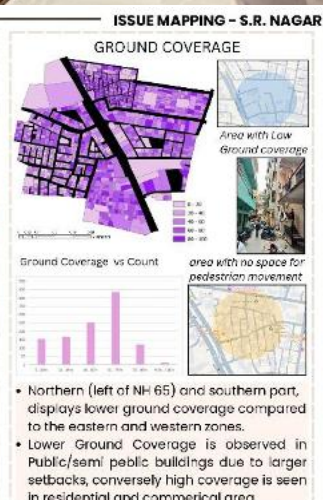


BACHELOR OF PLANNING

Studio Brief

B.Plan 1st Year Sem II: Planning and Mapping Studio

The Planning and Mapping Studio equips firstyear B.Plan students with foundational skills in map preparation and spatial representation, crucial for understanding and communicating spatial data in planning. The studio focuses on practical exercises, starting with interpreting topographic sheets and tracing maps, and progressing to creating base and thematic maps at different scales—district, city, and neighborhood. Students learn various mapping techniques, including scaling, legends, notations, and effective use of colorcoding. Each module emphasizes stepbystep learning, from understanding basics to preparing thematic maps and a physical model of a neighborhood. By the end of the semester, students develop proficiency in visually representing spatial information, forming a strong foundation for future planning exercises.



Setback in residential buildings

Varies from place to place

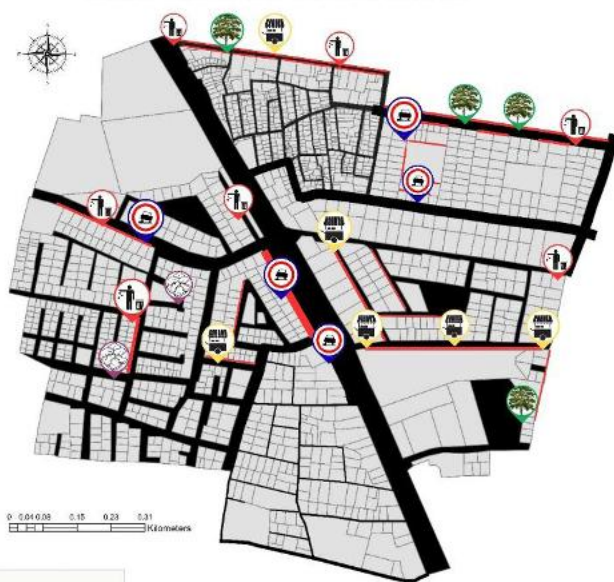
Required of state level and local level codes

Lesser minimum height and ventilation

Essential for safety mechanism

- To ensure enough natural light
- To ensure good ventilation and prevent one building from blocking another building's sunlight and air
- To ensure easy access to buildings.
- Proper setback compliance also ensures construction worker safety during building operations and maintenance.

CONDITION & USE OF FOOTPATHS

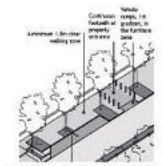


LEGEND



SIGNIFICANCE OF FOOTPATH

- Footpaths segregate and protect pedestrians from motorized vehicles on urban streets to provide safe walking, and help to improve vehicle flow.
- They are vital components of residential areas and have a big impact on the overall quality of life for local people.
- Serves as public spaces for community interaction, social gathering, and supporting local street vending.



FOOTPATH AT PROPERTY ENTRANCES

	Presence	Absence
Footpaths	14	57
Length	3405 m	7245 m



Brick Footpaths



Concrete Footpaths



Footpaths being used for parking



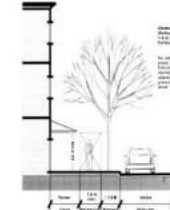
Street Vendors encroaching on footpaths



Electric Poles & Trees obstructing footpath

	Width		Height	Accessibility	Safety
	Residential	Commercial			
Ideal	1.8	2.5	0.15	Inclusion of Tactile Paving Ramps with a slope of 1:15	Bollards to be installed
Current	1.3	1.5	0.2	No Tactile Paving, Ramps are usually broken	Bollards only seen near NH

IRC VIOLATIONS



REQUIREMENTS OF FOOTPATHS

- Footpaths are not provided on all street types where vehicular speeds exceed 15 kmph².
- A minimum width of 1.8 m for residential and 2.5 m for commercial are not followed for any streets
- A dead zone is required for footpaths along commercial stretches, however that is not noted among any roads
- The width of pedestrian walkway should vary based on the design flow of the street, but those standards aren't considered for the footpaths here
- Bollards are not present at locations on footpath where illegal vehicle encroachment is possible such as around property entrance access ramps.



Gates obstructing pathway



Littering & Street Vendors on Footpaths



Broken Footpaths



Encroachment of Hawkers



Trees Obstructing Path



Parking on Footpaths

FOOTPATH & ROAD DESIGN ANALYSIS

CONDITION OF ROADS



LEGEND



OTHER ISSUES

- There are other issues consistently seen on the stretches of SR Nagar such as:
- Poor Signages and Marking – Lane markings and Speed Limits are not visible on roads
 - Blind Spots – Poor street-light infrastructure
 - Unsafe Road Crossings – Crossings leading to inaccessible areas (middle of the divider)

	Width	Prominent Issue
Arterial Road	Regulation	50-80 meters
	Present	35-40 meters
Sub-Arterial Road	Regulation	30-50 meters
	Present	15-20 meters
Collector Road	Regulation	12-30 meters
	Present	Littering

IRC VIOLATIONS

PARKING

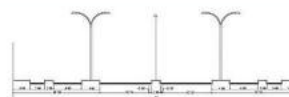
- On-street parking occurs on all types of street while IRC only approves it for collector and local streets
- Parking is observed within 50m from the intersection on collector streets and 10m from the intersection on local streets
- Designated car and tri-cycle parking spaces for persons with impaired mobility is not provided.

STREET VENDING

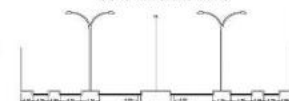
- On-street vending is not managed to ensure vendors and buyers do not hinder the pedestrian movement, as they usually take up one-third of the carriageway

CARRIAGEWAY

- For a select few streets, carriageway width is not consistent throughout the length of the street leading to bottlenecks and increase in traffic flow



IDEAL ARTERIAL ROAD



IDEAL SUB-ARTERIAL ROAD



IDEAL COLLECTOR ROAD

Two-wheeler parking



Two-wheeler parking

Four-wheeler Parking



Four-wheeler Parking



Potholes



Street Vendors



Littering



Under Construction

IDEAL ON-STREET PARKING



PROMINENT ISSUES



PARKS

Adequacy

- ✓ Adequate park area for total population of 14,000

Accessibility

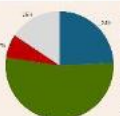
- ✗ Pedestrian pathways for park access
- ✗ Designated parking spaces
- ✓ Independent access
- ✓ Connected to street network
- ✓ Within 300 - 800m (recommended) walking distance

Quality & Facilities

- ✗ Multi-functional use
- ✗ Drinking water dispensers
- ✗ Public toilets within/nearby park

There's only one slide in the park, so children don't have much to use, and the benches have worn out over time with no basic facilities like toilets nearby.

PRATYAKSHI (Sri Nagar Park)



Responses by residents for "What is the most significant social infrastructure project needed in your neighbourhood?"



EDUCATIONAL INSTITUTIONS

Vengal Rao Nagar Govt School

Overcrowding

Dilapidated building condition, lack of cleanliness

Brahman High School

Located at a junction, creates conflict points at school peak hours

Kivis Pre-primary play school

Too many schools in one zone which creates unequal distribution

Cluster of schools and Jr. college

Shared pressure on roads and footpath

where emergency, fire, landslide and terrorism accident risk

LEGEND

- Pre-Primary school
- Schools
- Jr. College
- Degree college

Gautami Vidya Dhamam School

Located at a junction, creates conflict points at school peak hours

Sri Chaitanya Junior College

The NH acts as a physical barrier reducing safe access across zones due to lack of platform for crossing roads.

Education Infrastructure Guideline Compliance

1. ADEQUACY

- Uneven spatial distribution – clustering in central/western areas.
- Clustered schools leads to severe congestion, Road blockage, Increased accident risk
- There are insufficient no. of pre-primary schools for a population of 14,000 people.
- Lack of hierarchical distribution (pre-primary not evenly spread).

2. ACCESSIBILITY

- Major central roads act as a physical barrier, reducing safe access across zones.
- Lack of pedestrian infrastructure (footpaths, crossings, traffic calming).
- Schools located on narrow streets/junctions.

3. FACILITIES

- No playground facilities are being provided any of the schools or colleges.
- Lack of designated drop-off / pick-up zones causing traffic congestion.
- No scope for expansion due to tight plot conditions.



The NH acts as a physical barrier reducing safe access across zones due to lack of platform for crossing roads.

Education Infrastructure Guideline Compliance

Primary and Pre-primary

Plot area (sq.m)

Building area (sq.m)

Play Area guidelines

Recommended Area Distribution

Schools

Plot area (sq.m)

Building area (sq.m)

Play Area guidelines

Recommended Area Distribution

Schools

Plot area (sq.m)

Building area (sq.m)

Play Area guidelines

Recommended Area Distribution

Schools

Plot area (sq.m)

Building area (sq.m)

Play Area guidelines

Recommended Area Distribution

OPEN SPACE & INFRASTRUCTURE ANALYSIS

SOLID WASTE MANAGEMENT

Waste Composition in S.R. Nagar (Ward 102)

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NEIGHBOURHOOD MAPPING - S.R. NAGAR

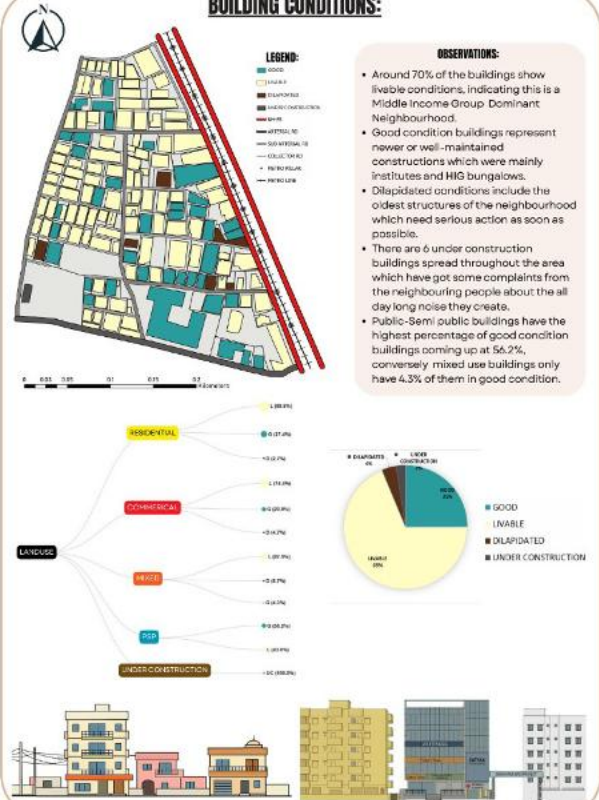
ISSUE BASED MAP:



OBSERVATIONS:

- The issue we mainly saw was the lack of footpaths in many internal collector and sub arterial roads
- Waste dumping was also a major issue we came across. It is mainly visible near spot 5) the Large under construction plot where domestic waste was being disposed by residents
- Street vendors were also seen disposing trash on the streets along with encroaching the roads causing disruption in traffic flow (spot 1).
- Noise pollution was a major complaint during Ramzan from the residents near (spot 6) the mosque.
- Accidents near 8 and 9 spots were relatively frequent due to blind turns and lack of convex mirrors
- Public places such as parks (spot 4) are not taken care of by the local authorities leading to broken benches and play area
- Roads near spot 2 face water logging in the monsoon season as the drains on the road are blocked
- Parking on the roads in designated area is evident through out the NH -65 and feeder road
- Electric wires near spot 3 are seen intertwined with buildings and trees posing a fire hazard

BUILDING CONDITIONS:



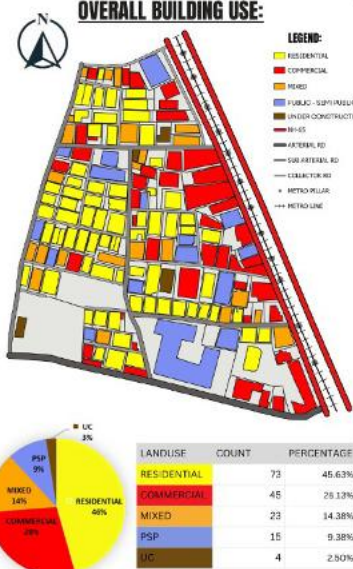
OBSERVATIONS:

- Around 70% of the buildings show livable conditions, indicating this is a Middle Income Group Dominant Neighbourhood.
- Good condition buildings represent newer or well-maintained constructions which were mainly institutes and HIG bungalows.
- Dilapidated conditions include the oldest structures of the neighbourhood which need serious action as soon as possible.
- There are 6 under construction buildings spread throughout the area which have got some complaints from the neighbouring people about the all day long noise they create.
- Public-Semi public buildings have the highest percentage of good condition buildings coming up at 66.2%, conversely mixed use buildings only have 4.3% of them in good condition.

BUILDING ANALYSIS



OVERALL BUILDING USE:



- This area is defined by core residential zones with commercial/mixed use zones serving as perimeter.
- Huge retail complexes and offices use strip development along the two main roads - NH65 and Yousufguda Main Rd.
- Also the presence of large scale Institutional buildings and public use buildings make this area socially active.
- The number of PG homes and hostels in this area is more than what can be seen in any other neighbourhoods.
- One can see some buildings under construction throughout the area. All of them being built in proper manner with little to no complaints from neighbouring people.

FLOORWISE BUILDING USE:

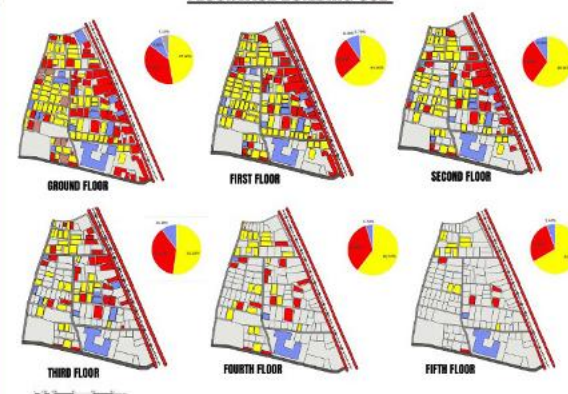
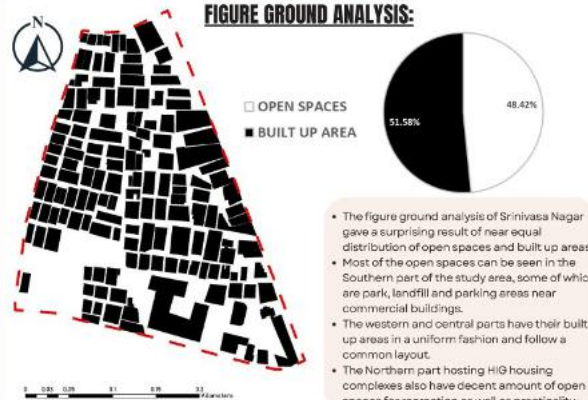


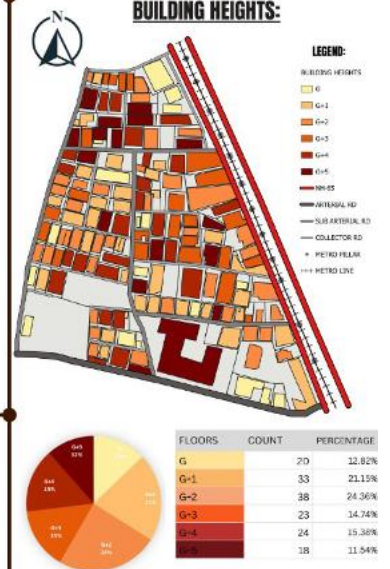
FIGURE GROUND ANALYSIS:



- The figure ground analysis of Srinivasa Nagar gave a surprising result of near equal distribution of open spaces and built up areas.
- Most of the open spaces can be seen in the Southern part of the study area, some of which are park, landfill and parking areas near commercial buildings.
- The western and central parts have their built up areas in a uniform fashion and follow a common layout.
- The Northern part hosting HIG housing complexes also have decent amount of open spaces for recreation as well as practicality.

NEIGHBOURHOOD MAPPING - S.R. NAGAR

BUILDING HEIGHTS:



- Building heights in SR Nagar range from Ground (G) to G+5, with G+2 (three-storey) structures being the most predominant.
- In mixed-use buildings, the ground floor is primarily dedicated to commercial activities while the later floors serve as residential units.
- While the taller G+4 and G+5 buildings consist of recently constructed educational institutions and modern apartment complexes.
- Commercial structures adjacent to the National Highway typically range from two to four storeys (G+1 to G+3).
- Conversely, the lower-profile G and G+1 buildings predominantly comprise independent residential dwelling units.

Studio

Highlights



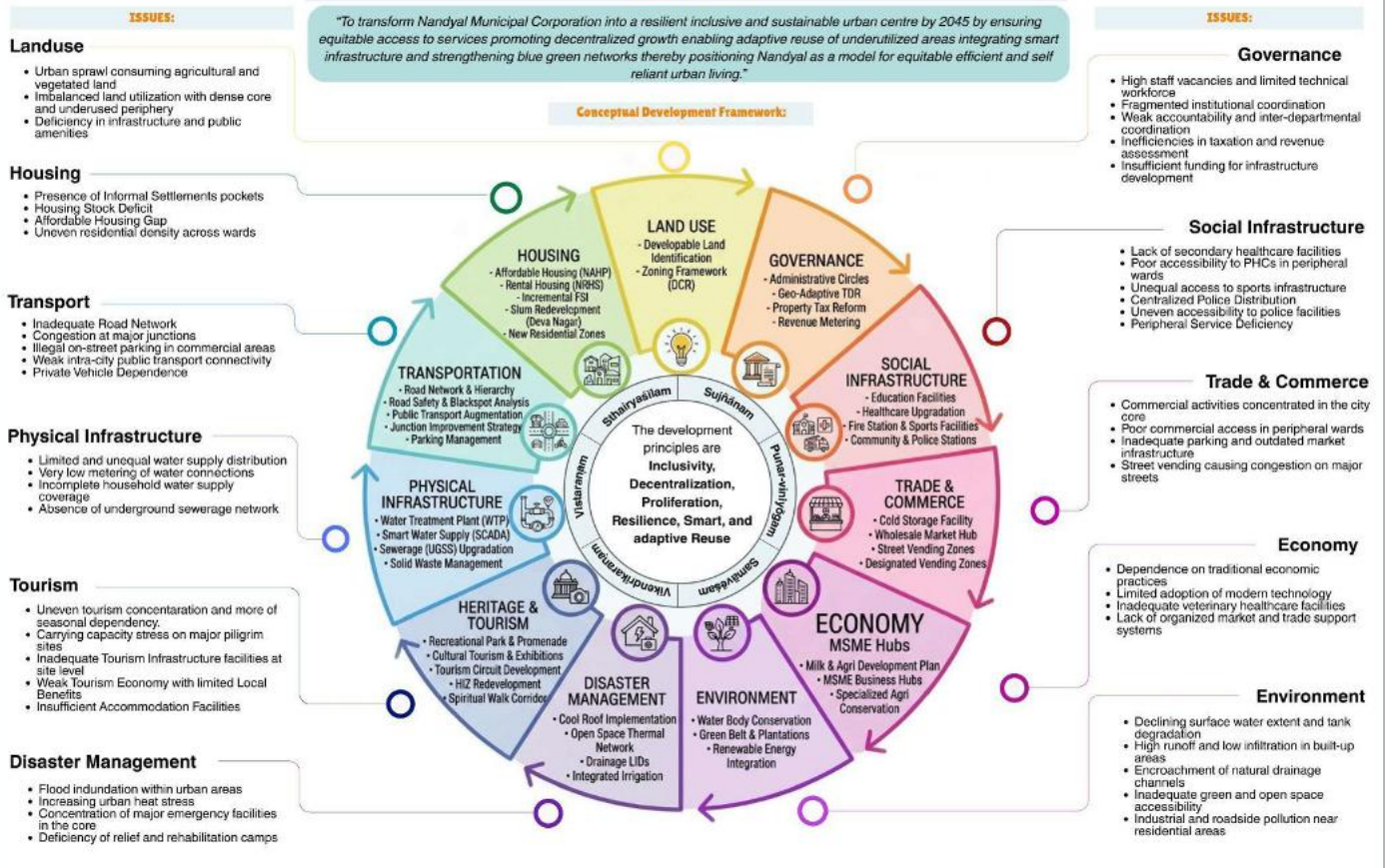
Studio Brief

B.Plan 3rd Year Sem VI: Master Plan Studio - Nandyal Master Plan–2047

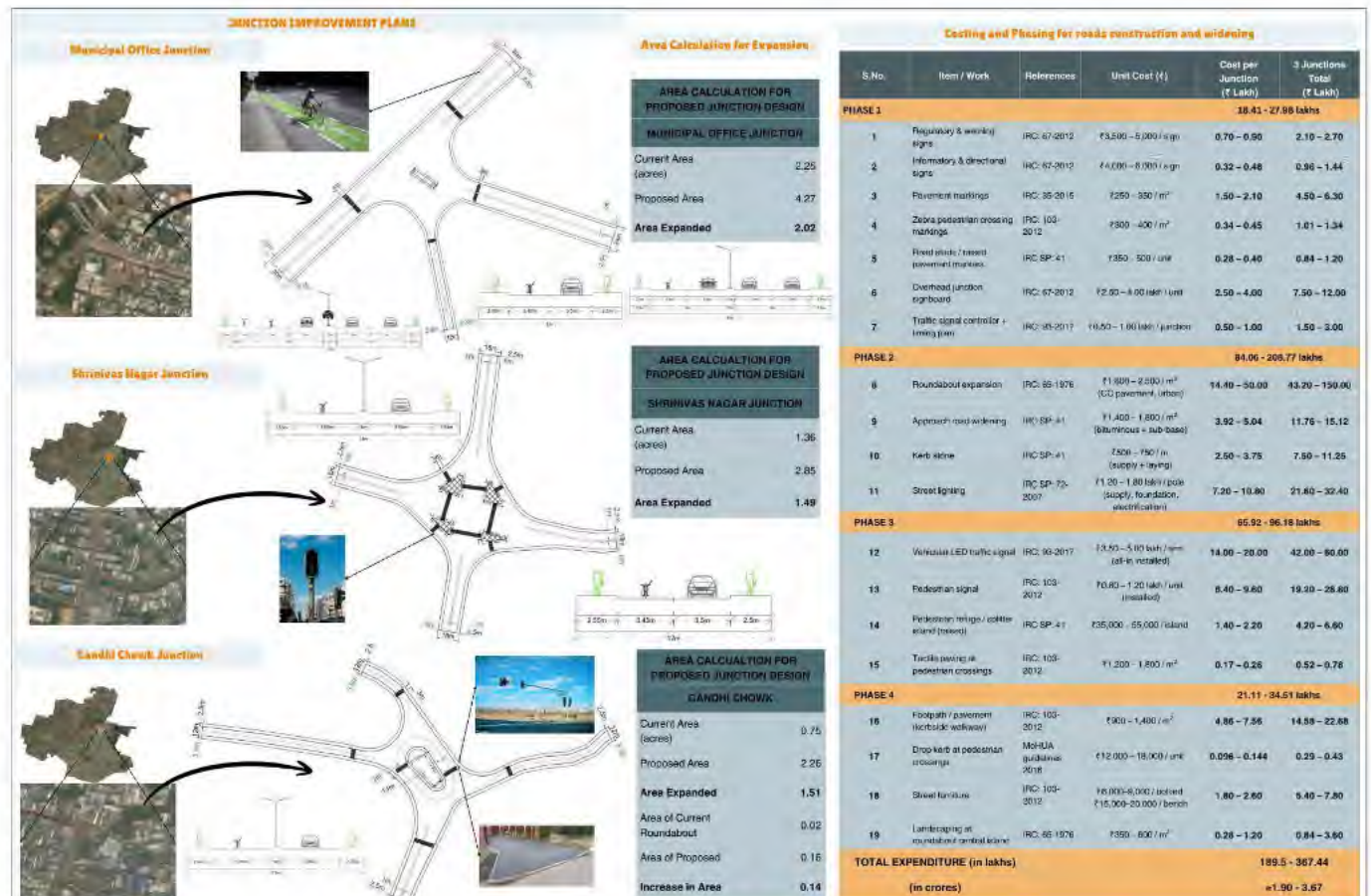
The Master Plan Studio introduces sixthsemester B.Plan students to the preparation of comprehensive development plans for urban settlements through fieldbased learning and spatial analysis. During the semester, students worked on the Nandyal Master Plan–2047, focusing on understanding the town's existing conditions, growth trends, and development challenges.

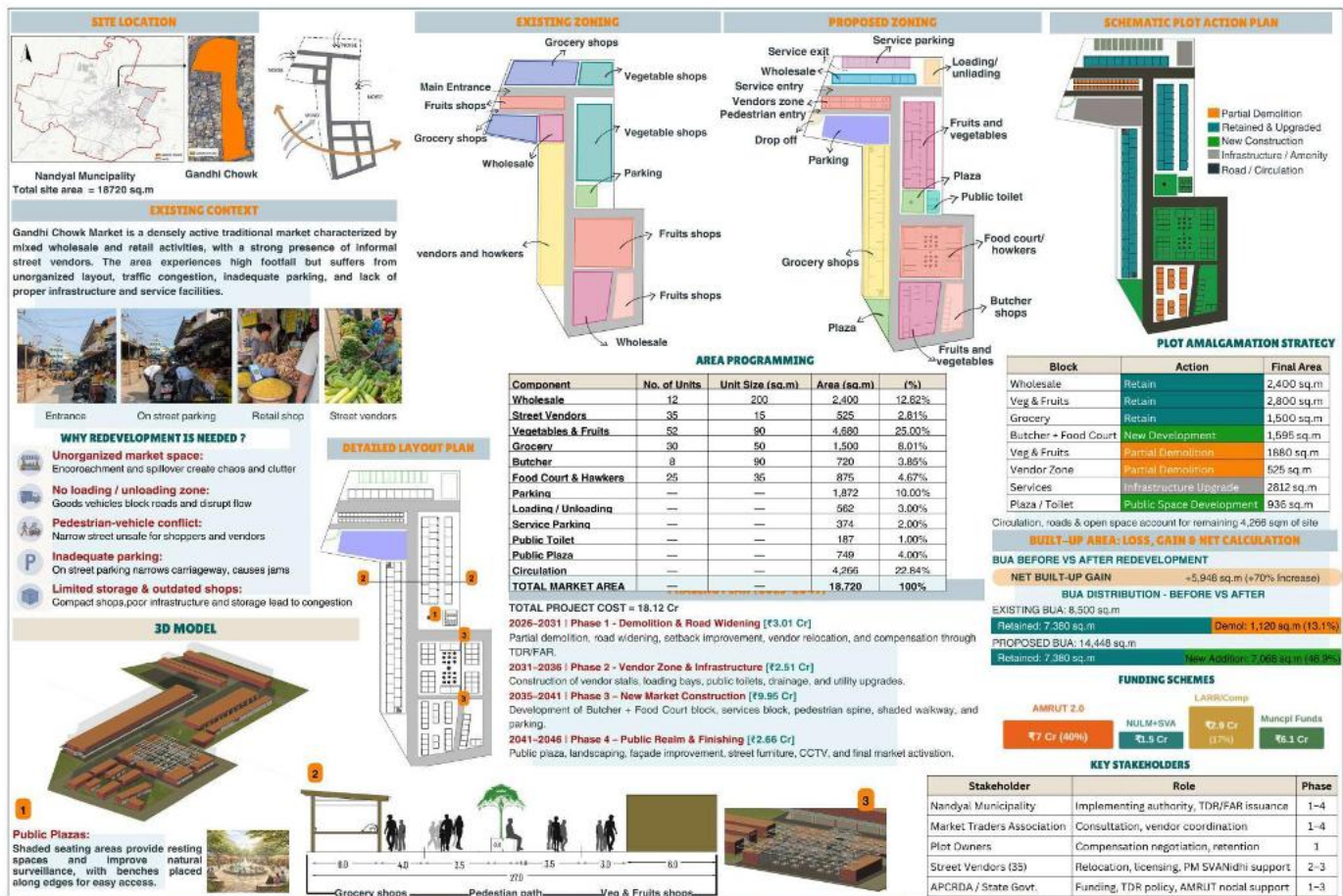
The studio involved reconnaissance surveys, detailed land use mapping, household and establishment surveys, transportation studies, tourism assessments, and evaluation of parks and open spaces. Students also interacted with key stakeholders and government departments, including the Municipal Office, District Collectorate, APSRTC, RTO, Traffic Police, Tourism Department, KUDA, and DTCP, to understand governance structures, infrastructure provisions, and ongoing development initiatives.

Through data collection, analysis, and stakeholder consultations, students examined various sectors such as land use, housing, transportation, infrastructure, environment, and economic development. The studio emphasized integrated and sustainable planning approaches, enabling students to formulate a longterm vision and sectoral proposals for Nandyal. The exercise provided practical exposure to urban planning processes and laid the foundation for preparing a comprehensive Master Plan for the town.

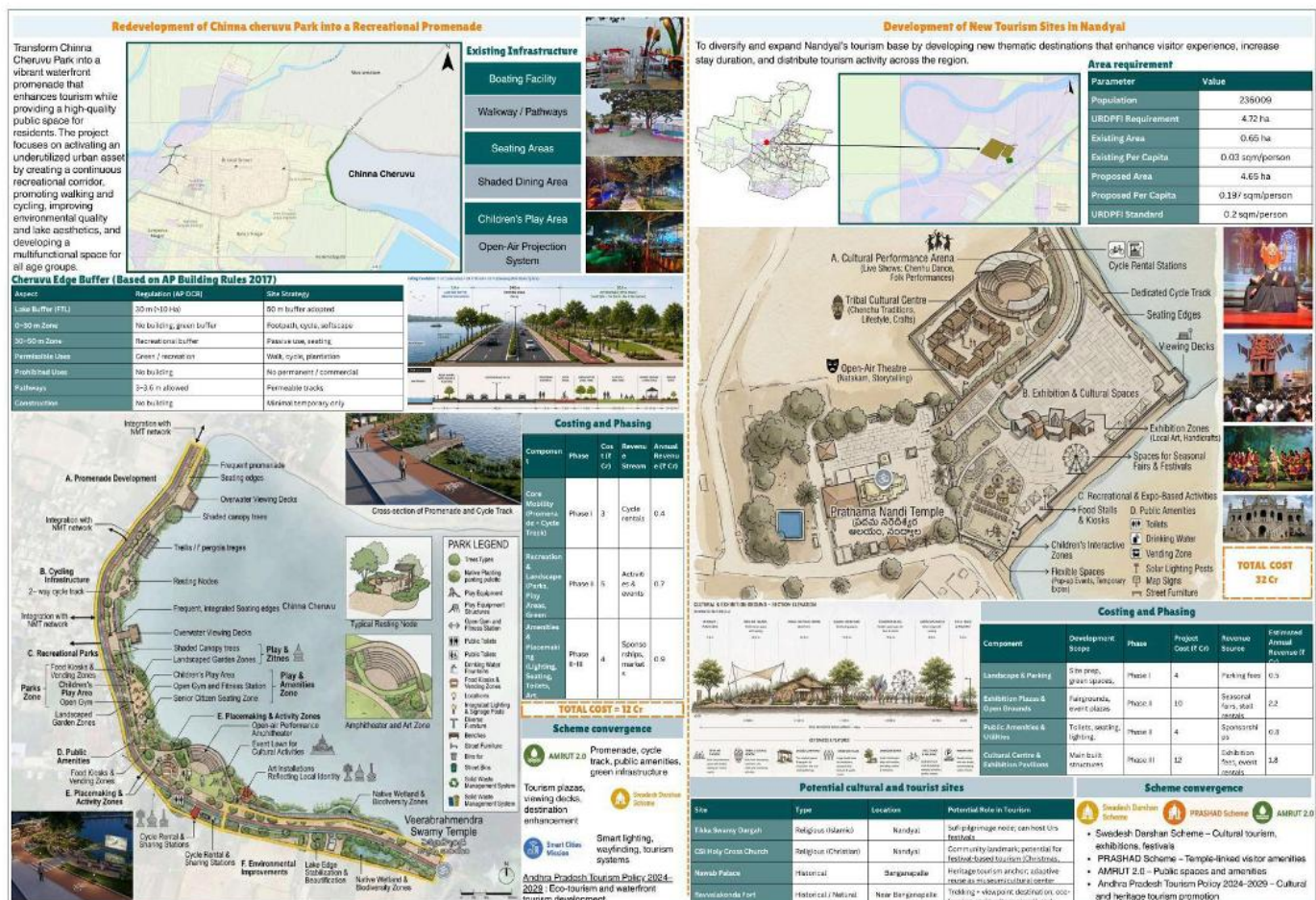


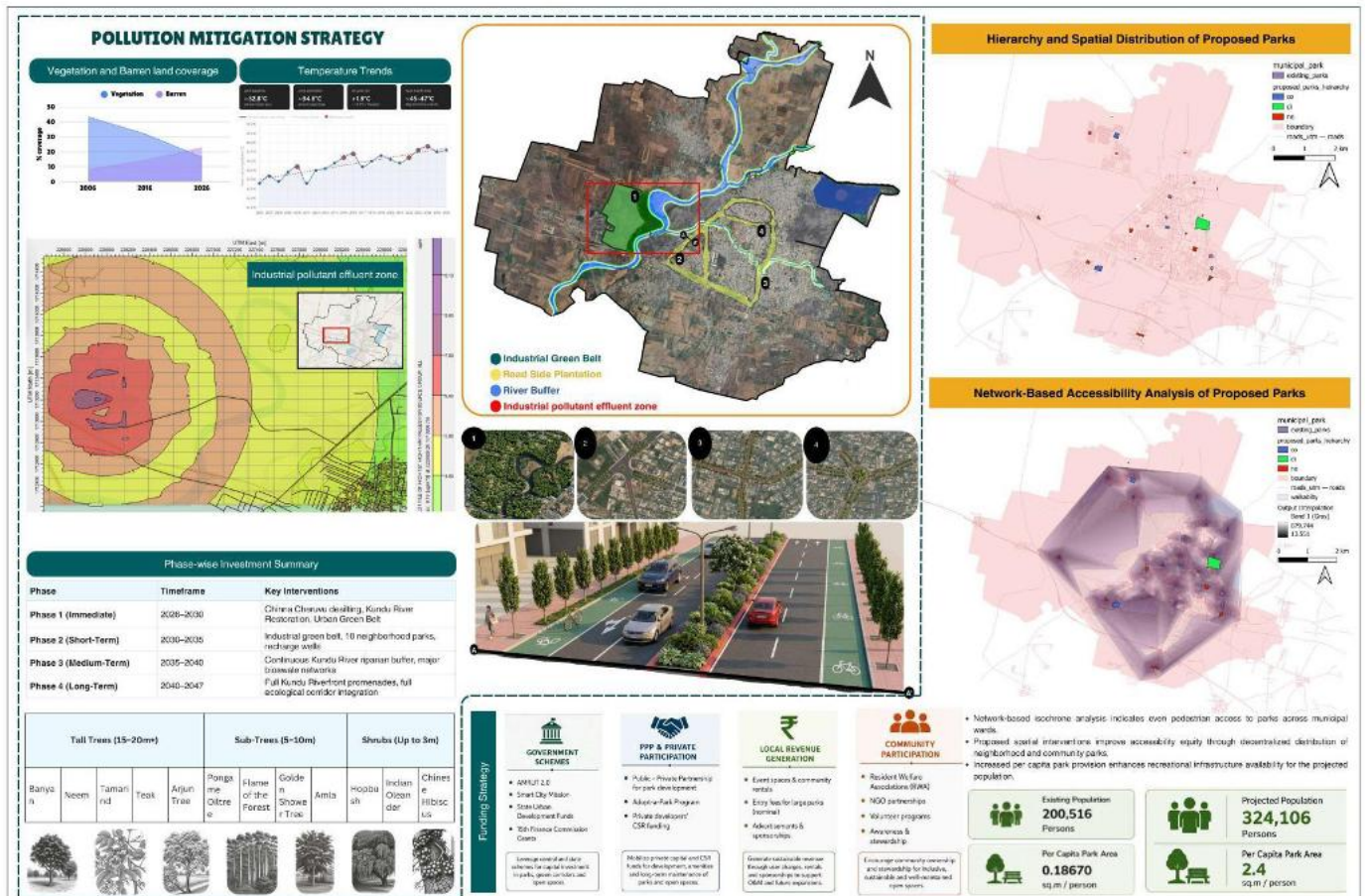
CONCEPTUAL FRAMEWORK & JUNCTION REDEVELOPMENT STRATEGY



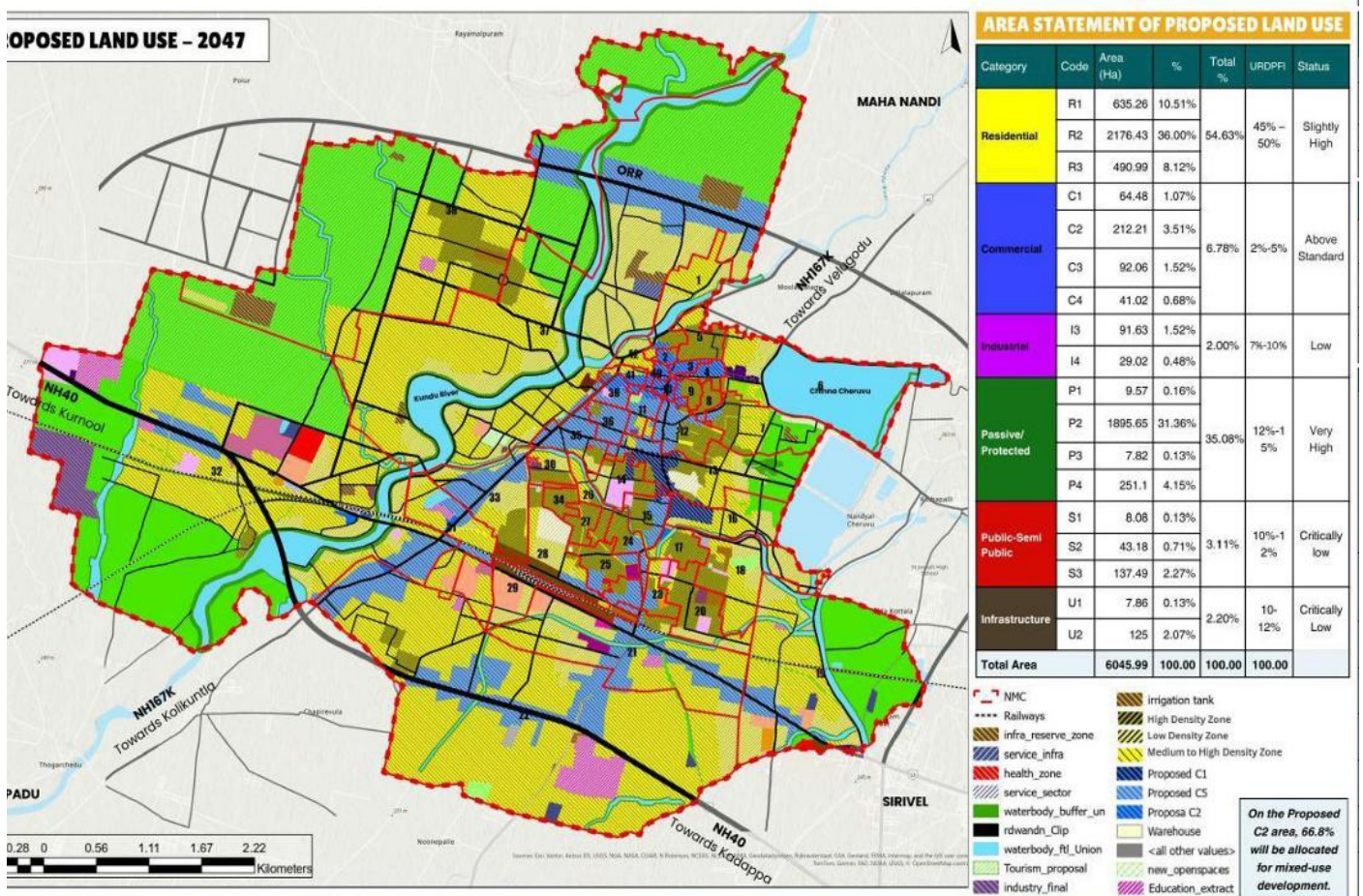


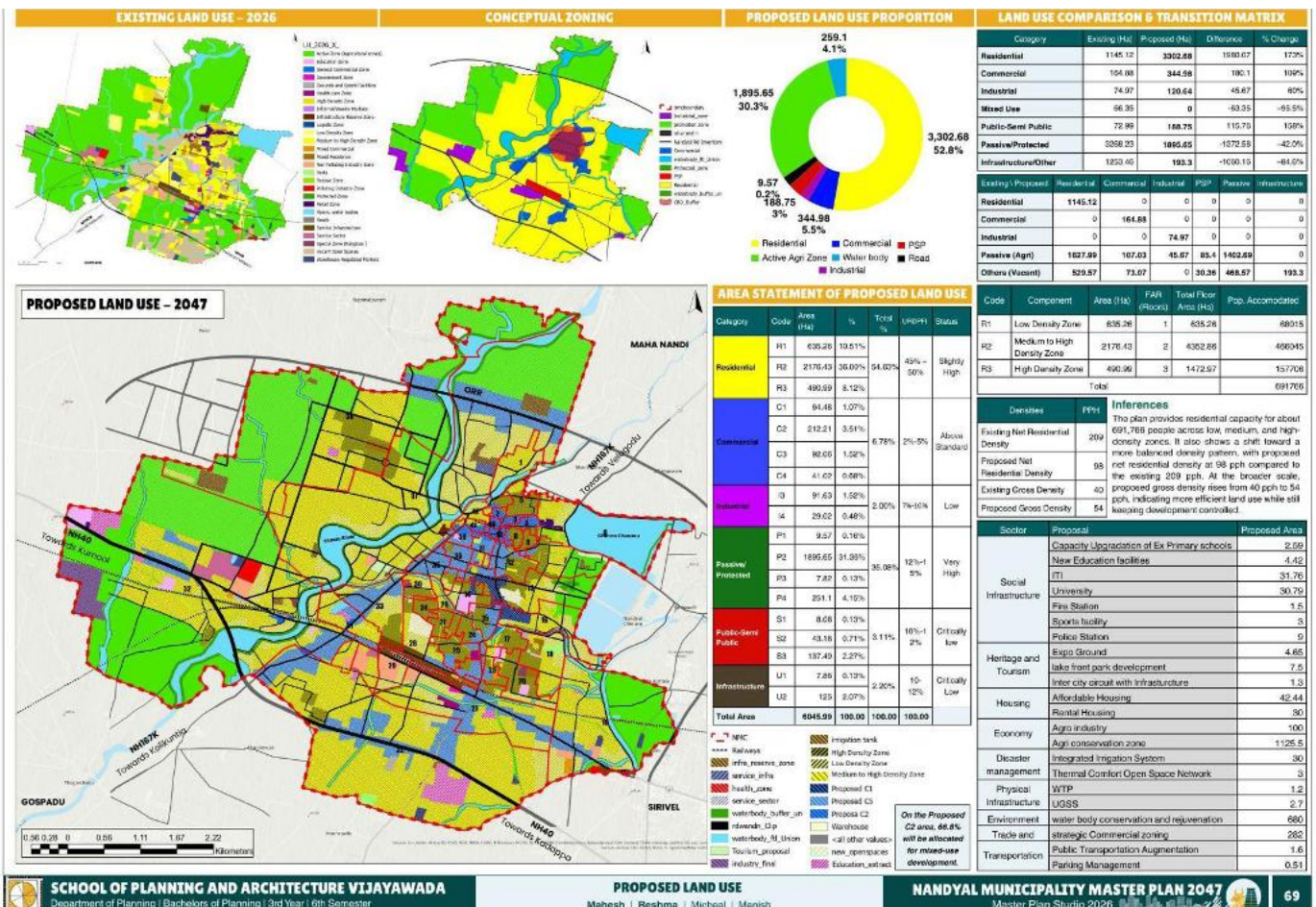
WATER TOURISM & MARKET REDEVELOPMENT





POLLUTION MITIGATION & LANDUSE STRATEGY





ROW 1 : L TO R: Shaunak , Danvanth , Kshitij , Harish , Adithya , Advaid , Ganesh , Micheal , Rahul , Prakash , Nithya
 ROW 2 : L TO R: Charan , Fathima , Saravanan , Raiza , Rufaid
 ROW 3 : L TO R: Abhinav , Tejaswini , Prerana , Faiza , Hamsa , Sudharshini , Reshma , Shanvitha , Sagarika , Manish
 ROW 4 : L TO R: Mahesh , Jeevitha , Vishnupriya , Siddhartha

Thesis

Highlights



B.Plan Thesis

AUTOMATED TURNING MOVEMENT COUNT RESULTS

RAGHAVAIAH PARK JUNCTION



Vehicle Class	Southbound to North	Southbound to Left	East Right to West	East Through to Left	West to East
Bicycle	1	0	0	0	1
Auto	11	0	0	0	0
Two-wheeler	40	0	0	0	0
Car	0	0	0	0	0
Bus	0	0	0	0	0
Medium	0	0	0	0	0
Heavy	0	0	0	0	0
Truck	0	0	0	0	0
Tractor	0	0	0	0	0
Trailer	0	0	0	0	0
Truck	0	0	0	0	0
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Trailer	0	0	0	0	0
Truck	0	0	0	0	0
Tractor	0	0	0	0	0
Trailer	0	0	0	0	0

VINAYAK TEMPLE JUNCTION



Vehicle Class	Southbound to North	West to East
Bicycle	0	0
Auto	0	0
Two-wheeler	0	0
Car	0	0
Bus	0	0
Medium	0	0
Heavy	0	0
Truck	0	0
Tractor	0	0
Trailer	0	0
Truck	0	0
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Trailer	0	0

SUMO BASED REAL TIME TRAFFIC EMISSION INVENTORY

METHODOLOGY

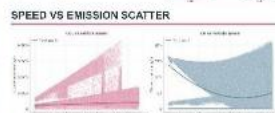
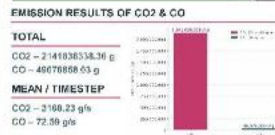


CALIBRATION FOR INDIAN TRAFFIC SCENARIO

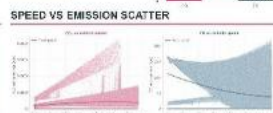
FACTOR	ADJUSTED SETTING	PURPOSE IN INDIAN SCENARIO	INPUT	ROLE
Sublane Movement	lateral-resolution = 0.8 m	Allows side-by-side movement within lanes	Vehicle speed	Determines engine operating condition
Minimum Gap Tolerance	collision-rung-factor = 0.9	Permits extremely short vehicle gaps	Vehicle acceleration	Represents engine load changes
Collision Handling	collision-action = warn	Prevents vehicle removal during close interactions	Deceleration	Handles braking/coasting states
Junction Blocking	ignore-junction-blocking = 10	Mimics aggressive intersection behavior	Idle condition	Produces idling emissions
Driver Imprecision	sigma = 0.5	Reflects inconsistent driving patterns	Traffic congestion	Creates stop-go movement patterns
			Vehicle class	Emission class

Source: Sasibani, Y., Nayak, R.A., Prakash, A.G., Kulkarni, D.A. and Vengalil, L., 2020. Calibration of SUMO for Indian heterogeneous traffic conditions. In: Recent Advances in Traffic Engineering. Springer.

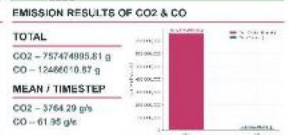
AUTONAGAR JUNCTION



RAGHAVAIAH PARK JUNCTION



VINAYAK TEMPLE JUNCTION



CO₂ emissions generally increase with vehicle speed and acceleration, showing higher variability under congested stop-and-go traffic conditions. CO emissions are highest at lower speeds due to inefficient combustion during idling and frequent acceleration-deceleration behavior.

DISPERSION MODELLING

COMPUTATIONAL FLUID DYNAMICS

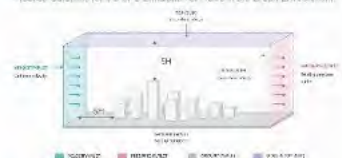
METHODOLOGY



INPUT PARAMETERS FOR CFD

ANALYSIS TYPE	Steady-state	Two-Dimensional, incompressible
PASSIVE SPECIES	1	Carbon dioxide
TURB. SCHEM	CF	Standard k-epsilon
DIFFUSION COEFF.	1e-06 m²/s	Molecular diffusivity
MATERIAL	Stainless Steel 304 (wall, default)	304
VELOCITY INLET	1 m/s	Free flow velocity
INLET BOUNDARY	1 m/s	Free flow velocity
TOP AND SIDES	Boundary	Minimally reflective
GROUND	10 m/s	Other conditions
SOURCE TYPE	File	Two-dimensional road loads
FLUX VALUE	g/s	Two-dimensional road loads

Source: Pothuri, V., Reddy, A., Sathish, M. and Chaitanya, S., (2017). Road Traffic Simulation for the CFD Simulation of Flow in the Urban Environment.



CFD BASED POLLUTION DISPERSION

AUTONAGAR JUNCTION



CO₂ concentrations of around 57 g/s occur along the main flow corridors due to higher traffic and inflow movement, while inner residential zones remain below 2.6 g/s because of reduced ventilation and lower activity.



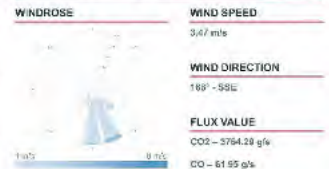
RAGHAVAIAH PARK JUNCTION



High CO₂ concentrations (100 g/s) persist along the primary flow channel, while surrounding urban blocks induce localized mixing and gradual downstream dilution.



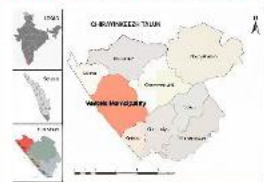
VINAYAK TEMPLE JUNCTION



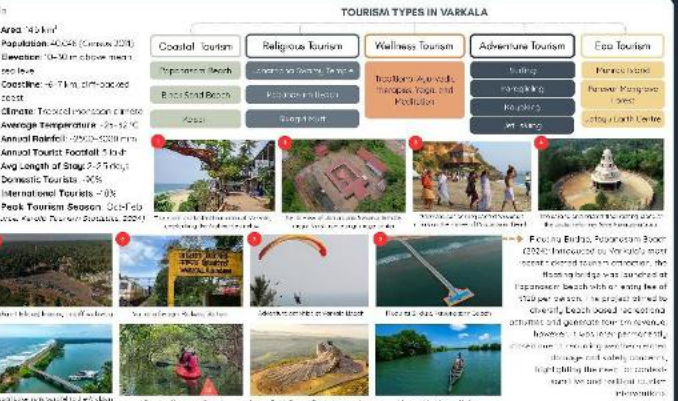
Peak CO₂ concentrations (20 g/s) occur near the lower inlet jet, with rapid downstream dilution caused by urban-induced mixing and dispersion.



INTRODUCTION TO STUDY AREA



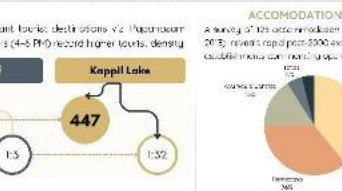
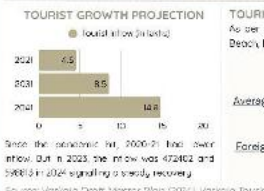
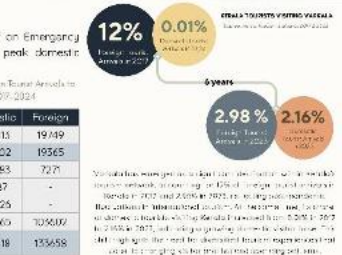
- Varkala, a coastal municipality located in the state of Kerala, within the Thiruvananthapuram district.
- It lies along the Arabian Sea coast and is geographically characterized by its unique cliff formations, which give the area a scenic coastal terrain unlike typical beach locations.
- Recognized as a National Geological Monument by the Geological Survey of India, highlighting its geo-heritage significance (UNESCO World Heritage Centre, 2025).
- A theme park, the town functions as a diversified tourism destination (UNWTO) attracting visitors for beach recreation, spiritual tourism, and wellness activities.



EXISTING SCENARIO

Based on a study conducted for preparation of an Emergency Action Plan for Varkala, it was observed that peak domestic season coincides with local cultural festivals.

Event & Location	Month
New Year Celebrations (Varkala Beach)	Jan - Feb
Onam Celebrations (Varkala Beach)	Aug - Sep
Vishu Festival (Varkala Beach)	Apr - May
Varkala Beach Festival (Varkala Beach)	Nov - Dec



B. Plan IV Year VIII Semester
Department of Planning
School of Planning and Architecture, Vijayawada

ASSESSING TOURISM POTENTIAL THROUGH TOURIST BEHAVIOR AND SPENDING PATTERNS: A CASE STUDY OF VARKALA, KERALA

NIKITHA S
2220200369

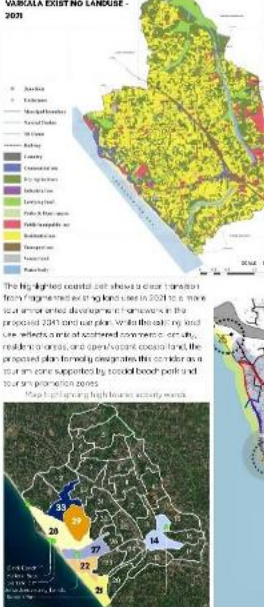
Seal and Signature

03

Spatial Movement and Tourism Zone Analysis

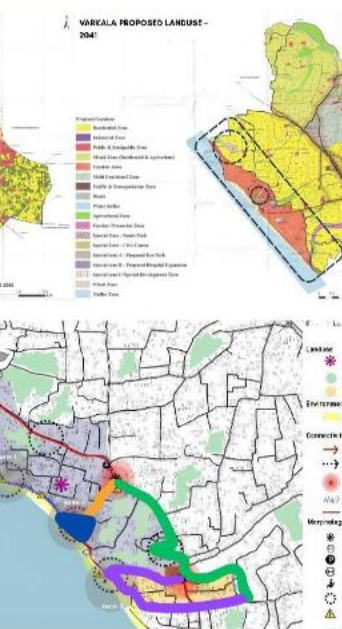
To examine tourist movement patterns and the spatial concentration of tourism activities in order to identify major tourism zones, hotspots, and underserved areas within the destination.

TOURIST ZONES



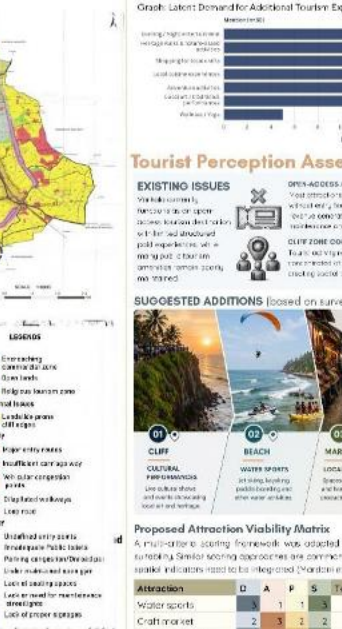
Obj 3

Varkala Municipality comprises 25 wards, of which wards 14, 21, 22, 23, 24, 25, and 26 have been identified as high tourism potential wards. Among these, the tourist concentration of tourism activities is compared within wards 21 and 26, experience the highest visitor movement.



Obj 4

To assess the tourism development potential of different areas in Varkala by integrating results from tourism profiling, tourist segmentation, and spatial movement analysis.



Potential	Low Tourism Potential	High Tourism Potential
High Tourism Potential	Environmentally Sensitive / Management Areas: Cliff edge areas experiencing environmental stress and infrastructure limitations.	Core Tourism Zone: Varkala Cliff and Papanasam Beach with high visitor concentration and strong attraction value, requiring improved visitor management and infrastructure.
Low Tourism Potential	Peripheral Areas: Areas with limited tourism activity and low relevance to tourism development.	Potential Tourism Expansion Areas: Secondary destinations such as Kappal, Munroe Island, and Ayyappan, offering natural and cultural value but lower visitor concentration.

Core Tourism Zone	Supporting Tourism Zone	Potential Tourism Expansion Zone
Varkala Cliff, Papanasam Beach	Temple corridor, Hillside entry	Kappal, Munroe Island

Attraction	D	A	P	S	Total	Priority
Water sports	3	1	1	1	6	Moderate
Craft market	2	3	2	2	9	High
Beach amenities	3	3	3	1	10	Very High
Parking	2	3	2	1	8	High
Culture	2	2	2	2	8	High
Beach sports	2	2	2	2	8	Moderate
Heritage tours	1	2	2	2	7	Moderate

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NIKITHA S
2220200369

Seal and Signature

06

PROPOSALS

Spatial Concentration of Tourism Activities

- Tourism activities are highly concentrated along the Varkala Cliff, overlooking Beach corridor, leading to infrastructural pressure and uneven distribution of tourist movement.
- The compact spatial arrangement of major attractions (cliff, beach, temple) creates a natural tourism circuit within walking distance which can be structured into a pedestrian tourism zone.

Infrastructure and Visitor Management Constraints

- Vehicle congestion near major tourism entry points.
- Inadequate parking infrastructure.
- Poor pedestrian infrastructure and walkways.
- Lack of signage and navigation systems.
- Limited public amenities such as toilets and seating.

Limited Tourism Experiences and Paid Attractions

- Many attractions in the study area operate as open-access public spaces with limited organized tourism experiences.
- Tourist behaviour analysis indicates moderate to high spending capacity among visitors and a willingness to pay for well-maintained tourism experiences. This suggests potential demand for organized tourism activities and curated experiences, including local products and crafts, cultural and traditional performances, adventure-based activities etc.

CORE TOURISM ZONE MANAGEMENT PLAN

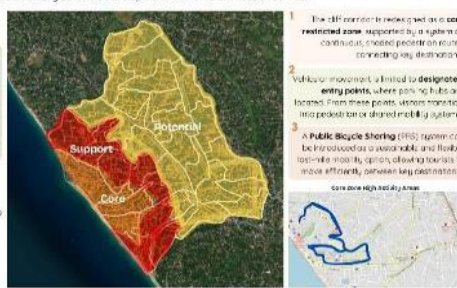


The core zone accommodates the highest tourist concentration in Varkala and experiences significant pressure on mobility, amenities, safety, and visitor management infrastructure. This proposal focuses on improving accessibility, public amenities, safety, and overall visitor experience while ensuring environmentally sensitive development within the cliff-beach corridor.

Development Guidelines & Site Constraints

- CRZ Regulations
- Cliff Stability
- Lightweight Development Only
- Drainage & Erosion Control
- Carrying Capacity Management
- Waste & Sewage Management
- Disaster/Safety Preparedness

These guidelines are critical due to the environmentally sensitive and geologically fragile nature of the Varkala Cliff-coastal ecosystem. Strict adherence is necessary to minimize environmental degradation, manage tourism pressure, and maintain long-term sustainability of tourism development within the study area.



Cliff Viewpoint Seating
Inspired by Tel Aviv's waterfront seating design, this upgradation introduces iconic semi-shaded seating that enhances comfort, creates a unique visual identity for the cliff edge, and transforms passive viewpoints into memorable tourism experiences without heavy permanent construction.



Beachfront Amenities

- CHANGING PODS**
 - Lightweight bamboo/teak structures for tourists to change while maintaining privacy and ventilation.
 - Capacity: 3-4 users at a time.
 - Space: 10-12 sqm.
- OPEN SHOWERS**
 - For quick rinsing after beach activities, reducing sand and oil-sweat transfer to swimwear.
 - Capacity: 2-3 users at a time.
 - Space: 8-10 sqm.
- FOOT WASH STATION**
 - Low-height wash taps placed near stair exits to clean sand before re-entering pedestrian areas.
 - Capacity: 4-6 users simultaneously.
 - Space: 3-4 sqm.
- LOCKER UNITS**
 - Secure storage units for personal belongings for users.
 - Capacity: 20-30 lockers.
 - Space: 10-15 sqm.

Cliff Walkway
Existing cliff pathways can be upgraded into safer pedestrian corridors through continuous shaded walkways, improved railings, seating nodes, lighting, and lightweight structural interventions that enhance walkability while preserving character.

Public Toilets
Public sanitation facilities near major entry points can accommodate 10-15 users at a time within a 40-50 sqm area, including male and female stalls, a universal accessible toilet, baby changing room, wash basins, enclosure space, and parking/storage areas. The facility can operate through a 10-15 pay-and-use model for maintenance, using QR-code-enabled kiosks, ventilated lightweight roofing, washable surfaces, and greywater treatment systems.

Cliff to Beach Access
Existing cliff-to-beach access points are currently unsafe due to steep gradients, slippery steps, and lack of supporting infrastructure. These can be redesigned into safer and more accessible connections through improved stairways, graded ramps, handrails, shaded rest areas, and organized circulation systems, ensuring comfortable movement between the cliff and beach for a wider range of users.

Example: Eram E-Toilets, Thiruvananthapuram
Eram Scientific Solutions introduced automated pay-and-use public toilets across high-footfall public spaces in Thiruvananthapuram through partnerships with urban local bodies and private organizations. Key features:

- Com-operated entry system (QR/RFID/coin)
- Automated cleaning after every 10 uses
- Low flooring requirements
- Water-efficient system
- AMC-based maintenance model
- Capital Cost: 12-17 lakhs per unit



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ASSESSING TOURISM POTENTIAL THROUGH TOURIST BEHAVIOR AND SPENDING PATTERNS: A CASE STUDY OF VARKALA, KERALA

NIKITHA S
2220200369

Seal and Signature

07

CLIFF RETAIL DIVERSIFICATION STRATEGY

The existing cliff promenade functions as Varkala's primary tourism spine, lined with cafes, retail outlets, resorts, and beach access points. The proposed reimagines existing commercial activity through strategic zoning, strengthens local economic linkages, and introduces flexible activity nodes without disrupting the cliff's natural character.



TOURISM CIRCUIT

Creating a well-connected tourism circuit that links nearby secondary destinations through improved accessibility, curated experiences, and integrated visitor management.



Table: Travel Time & Distance from Primary to Secondary Destinations

Origin/Destination	Mode	Distance (km)	Travel Time (min)
Cliff Beach	Walking	1.5 km	15 min
Cliff Beach	Walking	2.5 km	25 min
Cliff Beach	Walking	3.5 km	35 min
Cliff Beach	Walking	4.5 km	45 min
Cliff Beach	Walking	5.5 km	55 min
Cliff Beach	Walking	6.5 km	65 min
Cliff Beach	Walking	7.5 km	75 min
Cliff Beach	Walking	8.5 km	85 min
Cliff Beach	Walking	9.5 km	95 min
Cliff Beach	Walking	10.5 km	105 min

Table: Travel Patterns (Primary to Secondary)

Origin/Destination	Mode	Distance (km)	Travel Time (min)
Cliff Beach	Walking	1.5 km	15 min
Cliff Beach	Walking	2.5 km	25 min
Cliff Beach	Walking	3.5 km	35 min
Cliff Beach	Walking	4.5 km	45 min
Cliff Beach	Walking	5.5 km	55 min
Cliff Beach	Walking	6.5 km	65 min
Cliff Beach	Walking	7.5 km	75 min
Cliff Beach	Walking	8.5 km	85 min
Cliff Beach	Walking	9.5 km	95 min
Cliff Beach	Walking	10.5 km	105 min

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Cliff Beach	Walking	6.5 km	65 min
Cliff Beach	Walking	7.5 km	75 min
Cliff Beach	Walking	8.5 km	85 min
Cliff Beach	Walking	9.5 km	95 min
Cliff Beach	Walking	10.5 km	105 min

CURATED TOURISM EXPERIENCES

To diversify tourism offerings and increase visitor spending, curated evening attractions can be introduced within the core zone to extend tourist activity beyond daytime beach visitation.



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08

Studio

Highlights



MASTER OF PLANNING

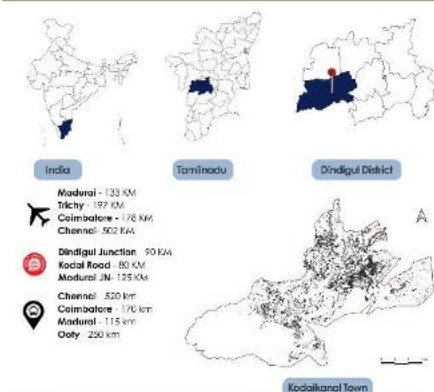
Studio Brief

MEPM 1st Year Sem II: Urban Environmental Planning Studio

The Urban Environmental Planning Studio introduces secondsemester M.Plan (Environmental Planning and Management) students to environmental assessment, conservation, and climate resilient planning through fieldbased learning. Using Kodaikanal Local Planning Area (LPA) as the study area, students explored the environmental challenges of a sensitive hilltown ecosystem and prepared a ClimateCentric Development Plan - 2047.

The studio involved environmental profiling, GISbased spatial analysis, field surveys, stakeholder consultations, and interactions with local government departments. Students examined key themes such as demography, land use, climate, biodiversity, infrastructure, tourism pressure, environmental risks, and governance systems. Through sectoral and intersectoral analysis, they identified issues related to ecological degradation, climate vulnerability, infrastructure gaps, and landuse conflicts.

Based on their findings, students formulated strategies for ecosystem conservation, climate neutral development, lowcarbon mobility, green economy, and risk - sensitive planning. The studio provided practical exposure to environmental planning processes and strengthened students' ability to prepare sustainable and resilient development proposals for environmentally sensitive regions.



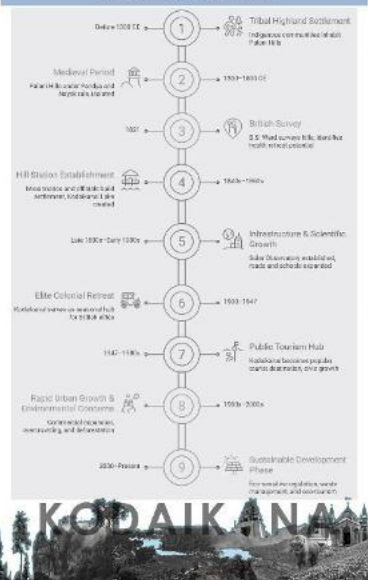
INTRODUCTION



GEOGRAPHIC OVERVIEW

- Longitude:** 77°29'29.6" E
- Latitude:** 10°13'54.7" N
- Geographical Area:** 22.5 Sq. km (2,250 hectares)
- Agro Climatic Zone:** Zone 10 - Southern Plateau and Hills Region
- Elevation:** 7,000 ft (2,133 m) above mean sea level
- Contour Ranges:** Varies between from 1,730 meters at the lower levels to 2,370 meters at the highest peaks

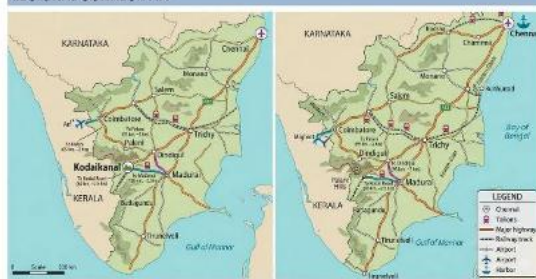
EVOLUTION OF KODAIKANAL



PAST PLANNING & DEVELOPMENT



REGIONAL CONNECTIVITY



GEOGRAPHIC CONTEXT



ECONOMIC INFLUENCE OF KODAIKANAL

Sector	Revenue / Scale	Impact Level	Factors
Tourism	₹1,500 Cr+ / yr	State	BM - 80 annual visitors, "Princess of Hill Stations".
Agriculture	₹250 Cr+ / yr	National	High-altitude Arabics, Coffee, Avocado, and Peas.
Employment	30,000+ jobs	Regional	Direct hospitality & satellite logistics in Dindigul/Madurai.
Infrastructure	₹100 Cr+	State	Recent Govt investment in sustainable "Smart Hill" tech.
National Role	Top 10	National	A pillar of India's South Hill Circuit domestic tourism.

CLIMATE CENTRIC DEVELOPMENT PLAN

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INTRODUCTION OF THE TOWN

GROUP MEMBERS

ARJAN BHOWMIK
(2250300194)

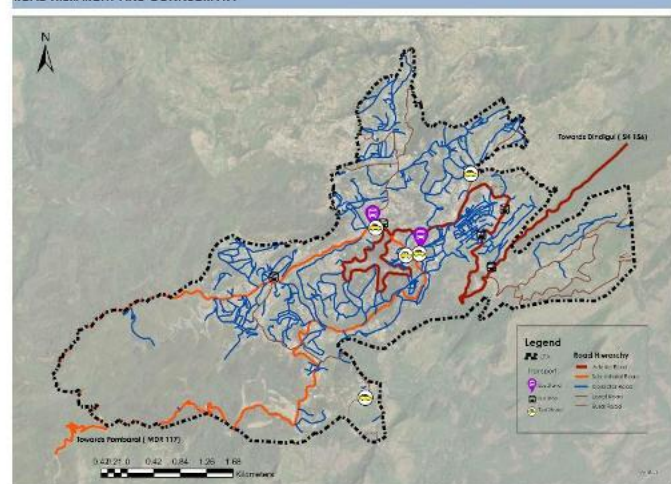
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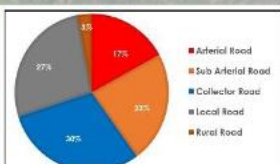
5



ROAD HIERARCHY AND CONNECTIVITY



Sl. No.	Road Hierarchy	Length (km)	Percentage (%)
1	Arterial Road	22 km	17%
2	Sub-Arterial Road	29 km	23%
3	Collector Road	37 km	30%
4	Local Road	54 km	43%
5	Rural Road	4 km	3%
Total Length		126 km	

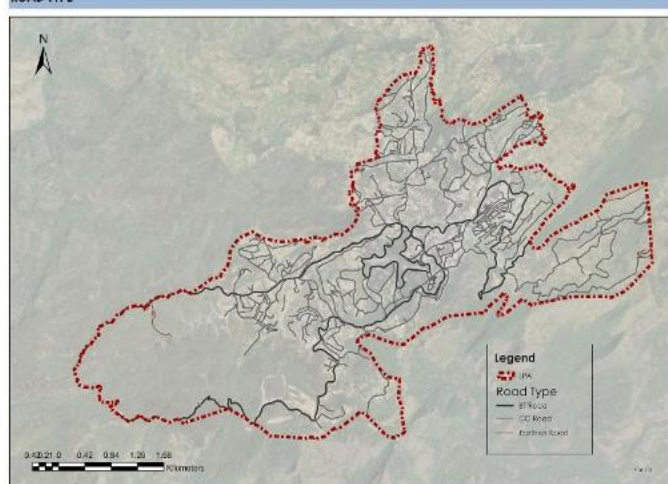


- Kodaikanal is only connected via road transportation. The nearest railway station is Kodal Road station and nearest airport facility is Madurai International Airport.
- National Highway 44 passes through Dindigul and Rattigundur and Major District Roads connection are through Palani-Kodaikanal, Periyakulam-Kodaikanal.
- Kodaikanal is mainly connected through a Tamil Nadu SH 156, which is the Kodaikanal Ghat Road.
- The Main Access Route: Madurai → NH 44 → Dindigul → Rattigundur → SH 156 Ghat Road → Kodaikanal.
- The road system here does not follow any specific pattern but roughly it is a Circular and Radial Pattern, circular around the lake and oil roads radiating from it's road.

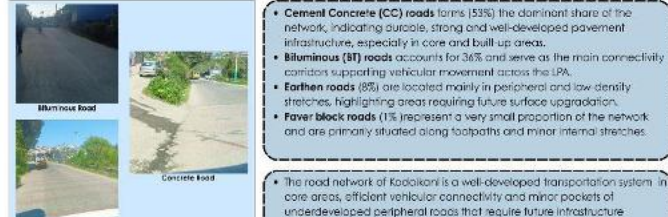
Road Type	Road Name	Function
National Highway	NH-44	Inter-regional route
State Highway	SH-156	Major road to Kodaikanal
Major District Road	Palani-Kodaikanal, Periyakulam-Kodaikanal	Regional connectivity
Local Road	Various local roads	Local movement within the town

- Inside the town, the main mode of transport is taxis and buses mostly serve inter-city travel, not local movement within the town.

ROAD TYPE



Sl. No.	Type	Length	Percentage %
1	BT Road	47 Km	36.50%
2	CC Road	66 Km	53.00%
3	Earthen Road	10 Km	8.00%
4	Paver Block	1 Km	1.00%
Total		127 Km	



- Cement Concrete (CC) roads** forms (53%) the dominant share of the network, indicating durable, strong and well-developed pavement infrastructure, especially in core and built-up areas.
- Bituminous (BT) roads** accounts for 36% and serve as the main connectivity corridors supporting vehicular movement across the LPA.
- Earthen roads** (8%) are located mainly in peripheral and low-density stretches, highlighting areas requiring future surface upgradation.
- Paver block roads** (1%) represent a very small proportion of the network and are primarily situated along footpaths and minor internal stretches.

- The road network of Kodaikanal is a well-developed transportation system in core areas, efficient vehicular connectivity and minor pockets of underdeveloped peripheral roads that require future infrastructure upgradation.

CLIMATE CENTRIC DEVELOPMENT PLAN
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TRANSPORT INFRASTRUCTURE

GROUP MEMBERS

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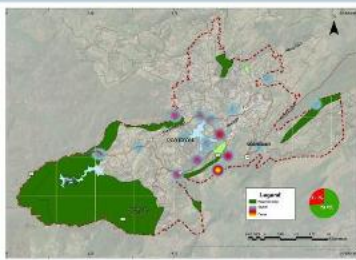


Near Threatened Species

A taxon is Near Threatened when it has been evaluated and does not qualify for CR, EN, or VU now, but is close to qualifying or likely to qualify in the near future.



Species Density Map



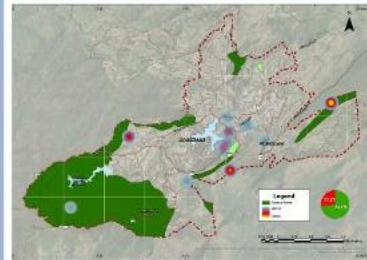
Endangered Species

A species facing a very high risk of extinction in the wild.



Platypleuron madurensis Beddome, 1877

Species Density Map



Man Animal Conflict - Bison

The Gaur (commonly called Indian bison) has increasingly been observed entering urban areas of Kodakal, leading to rising human-wildlife conflict. Although gaur are native to the forests of the Western Ghats, habitat disturbance and changing land-use patterns have pushed them closer to settlements.



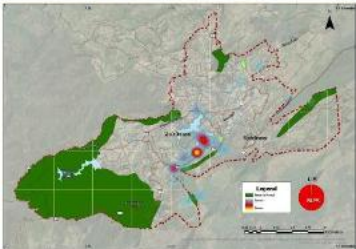
Least Concern Species

A taxon is Least Concern when it has been evaluated and does not qualify for any of the threatened categories (CR, EN, VU) or Near Threatened; it is typically widespread and abundant.



Anas crecca limensis, 1758

Species Density Map



Critically Endangered Species

A taxon is Critically Endangered when it meets the criteria indicating that it is facing an extremely high risk of extinction in the wild.



Brayleya refusa (Dawson) J. Aitken

Species Density Map



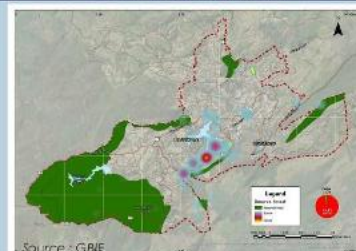
Vulnerable Species

A taxon is Vulnerable when it meets the criteria indicating that it is facing a high risk of extinction in the wild.



Anaphalis beddomei Hook. f.

Species Density Map



Vulnerable Species

A taxon is Vulnerable when it meets the criteria indicating that it is facing a high risk of extinction in the wild.



Anaphalis beddomei Hook. f.

Man Animal Conflict - Bison mapping



- 5 people died 28 injured due to Indian bison (gaur) attacks in Kodakal between 2020-2024. (The new Indian Express)
 - Conflict is concentrated along the forest-urban fringe, especially along the boundary, indicating strong edge interaction.
 - Southern and south-western belts show higher clustering, suggesting these areas function as core habitat zones from which bison move into town.
 - Habitat loss and fragmentation: Expansion of tourism infrastructure, roads, and plantations has reduced natural grazing areas.
 - Availability of food in urban areas: Open garbage dumps, gardens, and ornamental plants provide easy food sources.
 - Decline in natural forage: Degradation of grasslands and forests (17% 2001-2025 - NDVI Analysis) limits natural fodder availability.
 - Reduced fear of humans: Frequent encounters have made some gaur habituated to human presence.
 - Urban edge expansion: Settlements are increasingly encroaching into wildlife habitats.
- Implication:**
- The movement of gaur into urban areas increases the risk of property damage, road accidents, and safety concerns, highlighting the need for habitat management, and wildlife-sensitive urban planning.

CLIMATE CENTRIC DEVELOPMENT PLAN

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ENVIRONMENT

GROUP MEMBERS

DEEKSHITH REDDY
(2250300201)

RAGHU RAMA RAJU
(2250300195)

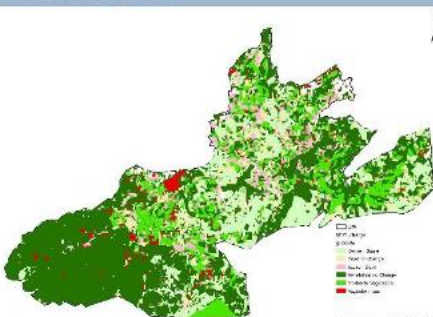
NIHARIKA N.N
(2250300199)

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41



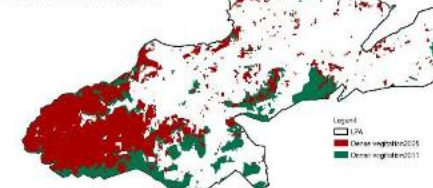
GREEN COVER CHANGE



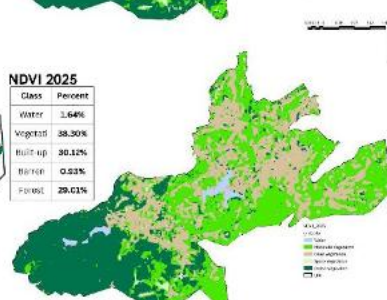
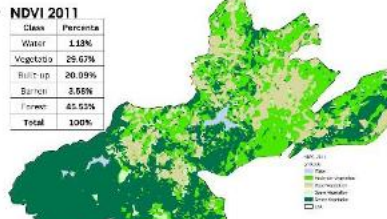
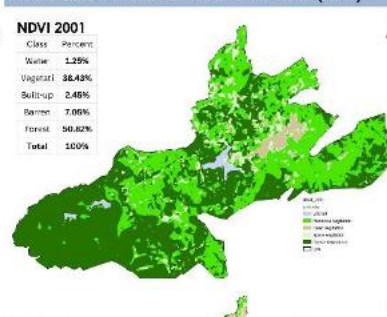
Vegetation Transformation
Dense vegetation shows a steady decline (4.9 sq km)
Percentage of Green Loss-17.78%

- The green cover change map indicates that although large areas of vegetation remain stable, less vegetation loss is several parts of the study area.
- Overall, the analysis shows a net green cover reduction of approximately 17.78% between 2001 and 2025.
- This loss is spatially concentrated in fragmented and accessible regions, while peripheral areas retain relatively stable vegetation.

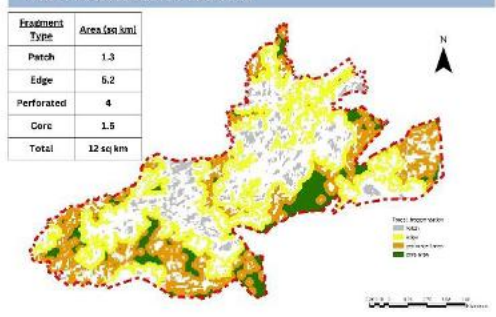
FOREST COVER CHANGE



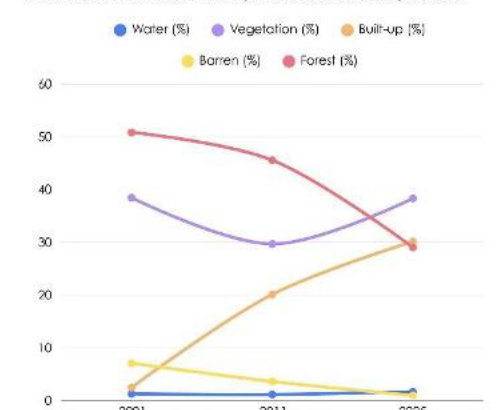
NORMALIZED DIFFERENCE VEGETATION INDEX (NDVI)



FOREST FRAGMENTATION ANALYSIS



- The analysis shows that the forest landscape is dominated by edge (5.2 sq km) and perforated areas (4.0 sq km).
- Indicating significant fragmentation due to human activities and tourism-related development.
- Core forest area is limited (1.5 sq km).
- This suggests that interior forest habitat is relatively small. This highlights the need to protect core forest patches and reduce further fragmentation to maintain ecological stability.



CLIMATE CENTRIC DEVELOPMENT PLAN

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ENVIRONMENT

GROUP MEMBERS

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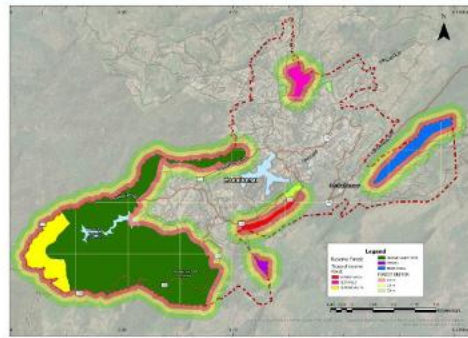




Types of Forest Under Reserved Forest Area

Map showing Types of Forest and forest Buffer

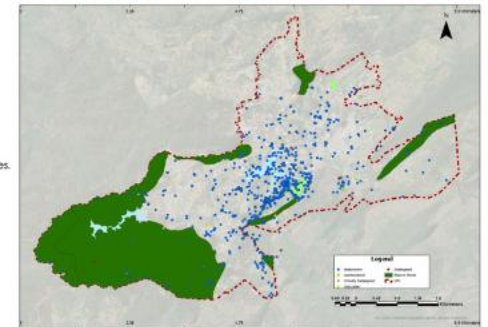
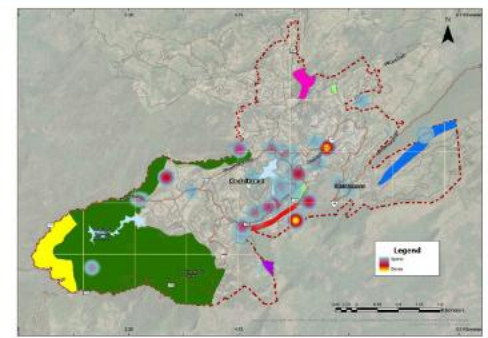
Reserved Forest Area	Location (approx. km)	Forest Type	Soil Type	Key Features	Management Note
Central Forest	100-120	Mountain Forest	Mountain Forest	Highly fertile, deep, well-drained soils	Highly sensitive, biodiversity rich, highly sensitive
Shola Forest	100-120	Shola Forest	Shola Forest	Highly fertile, deep, well-drained soils	Highly sensitive, biodiversity rich, highly sensitive
Forest Buffer	100-120	Forest Buffer	Forest Buffer	Highly fertile, deep, well-drained soils	Highly sensitive, biodiversity rich, highly sensitive
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Forest Buffer	100-120	Forest Buffer	Forest Buffer	Highly fertile, deep, well-drained soils	Highly sensitive, biodiversity rich, highly sensitive



Source : Management Plan for kodaikanal wildlife sanctuary, TNGS

Total forest area : 7 km

- The distribution shows that topography strongly influences forest types, with natural forests occupying steeper and less accessible terrain.
- Shola forests occur in valley depressions where moisture accumulation is highest, which supports their characteristic vegetation.



Inference

- Concentration of High-Risk Species in Central and Southern Zones
- The densest hotspots (red-yellow zones), are predominantly concentrated in the central Kodaikanal region and the southern periphery of the LPA boundary. This indicates a higher clustering of threatened and near-threatened species in these areas.
- Ecologically Sensitive Pockets Along Forest Edges and the lake area.
- Several moderate-density clusters (blue-purple zones) appear along the western and southeastern fringes, suggesting forest-edge habitats that support vulnerable biodiversity.
- Sparse or minimal hotspot intensity is observed in highly built-up and road-dense regions, indicating possible habitat fragmentation and anthropogenic disturbance reducing species occurrence.

Classification of species according to IUCN

Extinct	Threatened	Least Concern
EW	CR, EN, VU	LC
Extinct in the wild	Near Threatened	

IUCN Global Red List Category	Abbreviation	Number of Species	Category	Official Weight (IUCN)
Critically Endangered	CR	2	CR	1
Endangered	EN	29	EN	2
Vulnerable	VU	513	VU	3
Near Threatened	NT	56	NT	4
Least Concern	LC	25141	LC	
Data Deficient	DD	19		
TOTAL		25740		

Source:(MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE)

Biodiversity Sensitivity Index

The index measures how sensitive an area is based on the presence of threatened or rare species. Areas with more endemic, rare, or threatened species receive higher sensitivity values.

$$\frac{\sum(W_i \times S_i)}{\sum W_i}$$

Category	Count (W _i)	Severity Weight (S _i)	W _i × S _i
CR	2	4	8
EN	29	3	87
VU	513	2	1026
NT	56	1	56

B _{SI} Range	Ecological Condition
0-1.0	Low Sensitivity
1.0-1.3	Moderate Sensitivity
1.5-2.5	High Sensitivity
2.5-3.0	Very High Sensitivity

$$\sum(W_i \times S_i) = 8 + 87 + 1026 + 56$$

$$\sum(W_i \times S_i) = 1177$$

$$\sum W_i = 2 + 29 + 513 + 56$$

$$\sum W_i = 600$$

$$B_{SI} = \frac{\sum(W_i \times S_i)}{\sum W_i}$$

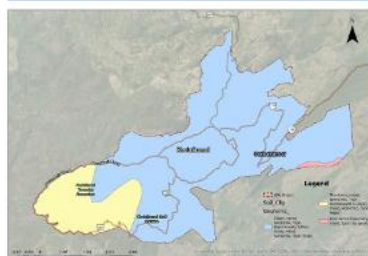
$$\frac{1177}{600} \quad B_{SI} = 1.96$$

High Sensitivity

High Precautionary measures must be taken in order to conserve the local biodiversity.

ENVIRONMENT ANALYSIS

GEOLOGY MAP



- It demarcates forest reserves, protected shola ecosystems, revenue villages, and conservation-regulated hill slopes under the HACA framework.

Soil Type	Location	Key Characteristics	Planning Significance
Clayey & Fine-loamy, Typic Haplohumus	Central Kodaikanal, Sembahanoor	Deep, weathered, well-drained soils	Limited construction possible with slope stabilization
Humitropes & Clayey-mixed soils	South-west near reservoirs & golf course	Moderately developed, moisture-retentive soils	Suitable for vegetation; drainage needed for buildings
Rock land & Typic Ustorthents	Eastern & peripheral areas	Shallow soils, exposed bedrock	Unsuitable for construction; conservation zone

SOIL QUALITY AND NUTRIENT STATUS

Place	pH	N (mg/kg)	P (mg/kg)	K (mg/kg)	Zn (ppm)	Cu (ppm)	Fe (ppm)	Mn (ppm)
Mannanur	5.64	90	4	61	0.68	0.98	5.3	3.1
Pine Forest	4.45	85	11	65	0.54	0.92	5.6	3.6
Tiger Shola	4.08	92	24	61	0.62	0.86	4.8	3.8
Bombay Shola	4.45	87	13	100	0.51	0.36	0.41	0.61
Bear Shola	5.01	94	14	123	0.71	0.93	5.4	3.6
Gane Cave	4.57	88	11	85	0.69	0.95	4.5	2.9

The soils were classified as sandy clay loam in texture and exhibited a reddish-brown color. The analysis reveals that both macro- and micronutrient concentrations were higher in agricultural soils compared to forest soils, indicating that the soils of Kodaikanal are generally nutrient-rich.

Assessment of soil erosion potential in Kodaikanal, Kodaikanal and surrounding areas.

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Studio

Highlights



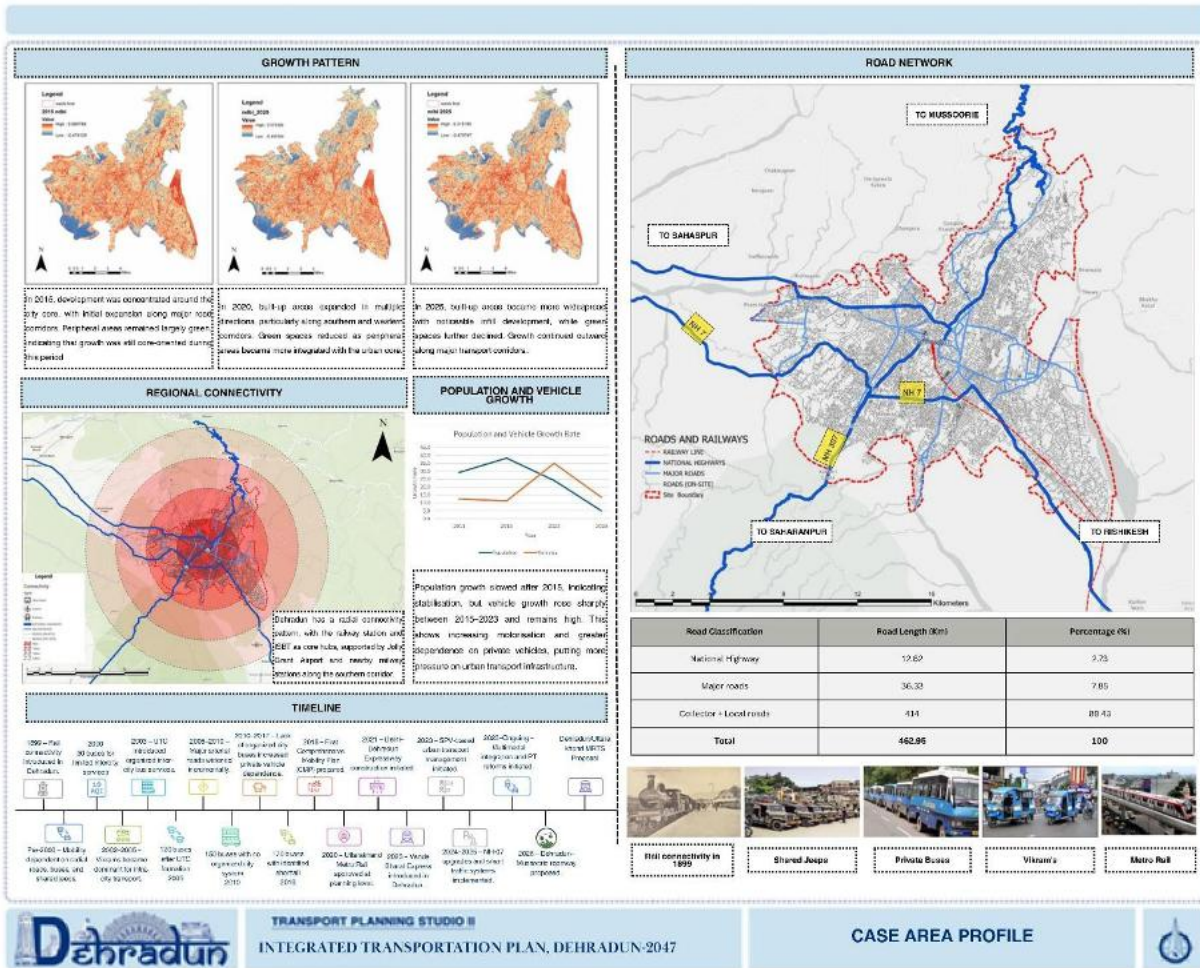
Studio Brief

MTP 1st Year Sem II: Transport Planning Studio

The Transport Planning Studio introduces secondsemester M.Plans (Transport Planning) students to comprehensive transportation planning through field surveys, transport modelling, and scenario-based analysis. Using Dehradun City as the study area, students prepared an Integrated Transportation Plan-2047 that addressed mobility, freight, environmental, and accessibility challenges.

The studio involved extensive data collection and analysis, including traffic volume counts, turning movement counts, speed and delay studies, parking surveys, public transport assessments, Origin-Destination studies, freight movement analysis, and travel demand forecasting. Using GIS and transport planning software, students evaluated existing transport systems, mobility patterns, environmental impacts, and freight logistics.

Based on sectoral and integrated assessments, students developed strategies for sustainable mobility, low-carbon transportation, public transport enhancement, non-motorized transport networks, freight rationalization, and multimodal integration. The studio emphasized data-driven planning, scenario development, and implementation frameworks, providing practical exposure to the preparation of integrated transportation plans for sustainable and resilient urban mobility.



DEHRADUN

KEY MAP

REFERENCE

GROUP MEMBERS

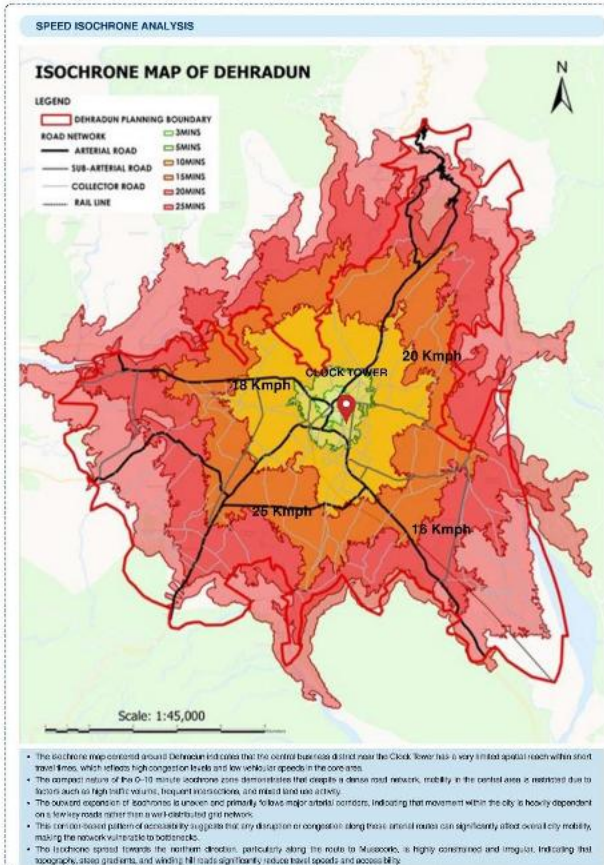
NAME: PRAKASH P
Reg. No: 2203001038

NAME: P. BHASKAR
Reg. No: 2203001039

SHEET NUMBER

05

ISOCHRONE ANALYSIS AND SUMMARY OF ISSUES



SITE INTRODUCTION AND SHIMLA BYPASS ROAD 1 KM STRETCH CHAINAGE-WISE ISSUES IDENTIFICATION

SHIMLA BYPASS JUNCTIONS - Micro-Location Analysis - Identify specific "conflict nodes."



Crossing Conflicts - Most Severe
 Shimla Bypass x Noida Road: The most critical conflict where all traffic streams intersect. The NE arm meets the bypass at an acute angle, with a very high speed differential and a right-angle crash risk.
 SE arm meets crossing the Noida through-stream.
 Right turn from the Noida crossing oncoming bypass traffic.
Merging Conflicts
 NE approach merging onto the bypass main carriageway at speed.
 High traffic merging with the bypass at the junction core.
 SE arm merging into the bypass downstream.
Diverging Conflicts
 Bypass traffic, depending on turn onto the Noida and SE arm, respectively, is a near approach hazard.
 Noida traffic splitting toward the NE arm.
Merging Zones
 SE bypass approach vehicles entering from the left must cross to reach the right lane.
 NE approach vehicles entering traffic flows across bypass lanes.
Procedural/MTT Conflicts
 Bypass crossing at a junction with zero-grade crossings.
 Near-end conflicts.
 Queue spillback on SE bypass approach.
 Stop-start conflict on Noida, opening of signal.

- It is an at-grade controlled cross intersection with 3 legs.
- Shimla Bypass Chowk is the next junction after the ISBT.
- Sum of fatal and grievous injury crashes is 20 nos.
- Priority is categorized as High Risk.

Peak Hour Traffic Values	Sr No.	Issue / Deficiency	Location	Severity
• Towards Shimla - 1814 • Towards Noida - 2255	1	Stalled and Auto-Rickshaws Stopping Mid-Carriageway	Flyover underpass area (Photo 1, 2)	High
	2	Pedestrians Walking on Live Carriageway Due to Absent Footpaths	All approaches (Photo 3, 4, 5)	High
	3	High-Tension Transmission Tower Located Directly Over / Adjacent to Carriageway	Under Flyover (Photo 6)	High
	4	No Footpath or Usable Pedestrian Walkway on Either Side of Road	Full corridor (Photo 7, 8, 9)	High
	5	Completely Absent / Faded Lane Markings and Road Delineation	Entire corridor (Photo 2-10)	High
	6	Low-Hanging Overhead Utility Wires (Electrical, Telecom) Violating Clearance Norms	Full corridor (Photos 2, 3, 4, 5, 8, 10)	High
	7	Absence of Footpath, Shops and Buildings Directly Abutting Road Edge	Left side, commercial stretch (Photo 2, 3, 8, 9)	High
	8	Flyover/Elevated Structure Wall Creates Blind Side Redundant Sight Distance	Flyover service road (Photo 2, 3)	High
	9	No Advance Warning / Junction Approach Signs on Service Road	Service road approaches (Photo 3)	Medium
	10	Political / Commercial Banners Affixed to Sign Posts and Utility Poles	(Photos 4, 7)	Medium
	11	No Pedestrian Crossing (Zebra) or Safe Crossing Facility at Any Point	All approaches and underpass (4, 5, 8)	High
	12	Median Delimiter Bollards Inadequate Low Visibility at Night, No Retro-Reflection	Approach median (Photo 5)	Medium
	13	Ornamental / Decorative Metal Fence Used as Median Barrier Not Crash-Tested	Clock Tower stretch (Photo 5-10)	High
	14	Irregular On-Street Parking Reducing Effective Carriageway Width	Commercial stretch (Photos 8-10)	High
	15	Road Edge and Construction Material Dumped on Carriageway Margin	Left side approach (Photo 8)	High

CHAINAGE-WISE ISSUE IDENTIFICATION OF SHIMLA BYPASS ROAD (1KM STRETCH)



TRANSPORT PLANNING STUDIO II
 INTEGRATED TRANSPORTATION PLAN, DEHRADUN-2047

ROAD SAFETY



SUMMARY OF ISSUES

NETWORK CHARACTERISTICS

- Rural road network causing high congestion towards core.
- Inadequate ring roads and bypasses for through traffic.
- Discontinuous links and missing connectivity in peripheral areas.
- Narrow ROWs and encroachments reducing effective capacity.
- Poor integration between urban and rural connectivity.

TRAFFIC CHARACTERISTICS

- High congestion on major corridors (Noida Road, Regpur Road, IT Park corridor, ISBT area).
- Peak hour traffic continues daily traffic conditions.
- Mixed traffic and slow moving vehicles reduce speeds.
- High parking demand on street contributing to congestion.
- Frequent bottlenecks at intersections and chokepoints.

TRAVEL CHARACTERISTICS

- High dependence on private vehicles for most trips.
- Short trip lengths dominate, with low share of public transport.
- Work and education trips form major share of daily travel.
- Limited multi-modal integration leading to multi-mode shifts.
- High intensity trips causing pressure on core network.

PUBLIC TRANSPORT & IPT

- Limited coverage and infrequent schedules reduce overall public transport accessibility.
- Severe overcrowding during peak hour decreases passenger comfort and travel efficiency.
- Poor last-mile connectivity restricts optimum access to bus stops and terminals.
- Irregular IPT operation increases competition, conflicts and inefficient transport coordination.
- Lack of dedicated infrastructure, parking, and integration weakens overall transport performance.

NON MOTORIZED TRANSPORT

- Inadequate and discontinuous footpaths.
- Encroachments and obstructions on walking infrastructure.
- Lack of safe cycle tracks and signage.
- Poor crossing facilities and pedestrian safety.
- Limited MMT / Plan/Balanced Transport / Infrastructure integration with public transport.

PARKING

- Rural road network causing high congestion towards core.
- Inadequate ring roads and bypasses for through traffic.
- Discontinuous links and missing connectivity in peripheral areas.
- Narrow ROWs and encroachments reducing effective capacity.
- Poor integration between urban and rural connectivity.

FREIGHT

- Through freight movement within city causing congestion.
- Lack of covering vehicle height bypass.
- Inadequate loading/unloading zones and facilities.
- Time restrictions not effectively enforced.
- No dedicated freight corridor in core proximity.

ENVIRONMENT

- Air pollution due to vehicle emissions and congestion.
- High noise levels in busy corridors and intersections.
- Degradation of natural resources and green cover.
- Poor waste management in transport modes.
- Climate vulnerability - flooding, landslides and extreme weather.

TOURISM

- Seasonal surge leading to traffic congestion, minor lanes and key destinations.
- Inadequate parking and last mile connectivity at tourist spots.
- Poor public transport services to tourist destinations.
- Environmental stress on fragile tourist areas.
- Lack of visitor management and information systems.

ROAD SAFETY

- High number of accidents on busy corridors and intersections.
- Speeding and rash driving major contributors.
- Inadequate pedestrian crossings and road safety infrastructure.
- Lack of enforcement and public awareness.
- Vulnerable road users (pedestrians, cyclists, 2-wheelers) at high risk.

EXISTING MAP OF DEHRADUN PLANNING BOUNDARY FOR INTEGRATED TRANSPORTATION PLAN 2047

Scale: 1:45,000



TRANSPORT PLANNING STUDIO II
 INTEGRATED TRANSPORTATION PLAN, DEHRADUN-2047

SUMMARY OF ISSUES



[illegible]

CHAKRATA ROAD

RAILWAY STATION ROAD

RAILWAY STATION ROAD

A key map of the British Isles. The island of Great Britain is highlighted in red, and the island of Ireland is highlighted in blue. A small inset map shows the location of the study area within Great Britain.

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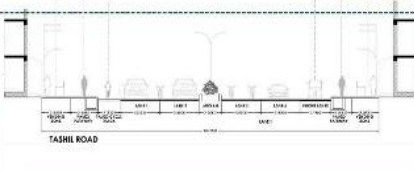
NAME- SAMYABRATO DEY
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NAME- SWEETY MOHANTY
Reg. No- 221001042

NAME- VENKATESH A BHOWI
Reg. No- 221000145

SHEET NUMBER

111



TEHSIL ROAD		
Elements	Standard Size	
Pedestrian Pathway	1.8 m	✓
Cycle Track	1.5 m	✓
Service Lane	3.0 m	✗
Median	3 m	✗
Special Considerations	Street Vending	

[illegible]

RAIPUR ROAD		
Elements	Standard E/W	
Pedestrian Pathway	1.8 m	✓
Cycle Track	1.5 m	✓
Service lane	3.5 m	✓
Median	2 m	✓
Spacial considerations	On Street parking NMT, etc.	

Elements	Standard Size
Pedestrian Pathway	1.8 m ✓
Cycle Track	3.0 m ✓
Service Lane	6.0 m ✗
Median	3.0 m ✓
Special Considerations	Alternate Side Parking & Cycling Lane

MUSSOORIE ROAD	
Elements	Standard (4)
Pedestrian Pathway	1.5 m
Cycle Trail	1.5 m
Service Lane	2.5 m
Median	2 m
Special Considerations	Alternate Slope & Landscaping



Dehradun

INTEGRATED TRANSPORTATION PLAN, DEHRADUN-2041



The diagram illustrates the cross-section of Shahranpur Road, which is 27 meters wide. It features a central 8-meter-wide cycle lane flanked by 1.5-meter-wide paved shoulders. On either side of the cycle lane are 3-meter-wide pedestrian paths. The road includes two bus stops, each with a shelter, and several vehicle lanes (motorcycles, cars, and trucks). A drainage system is shown at the bottom, with a 1% slope towards the center. Various street furniture like trees, benches, and lighting poles are also depicted.

Elements	Specification
Pedestrian Pathway	3.5 m ✓
Cycle Track	3.0 m ✓
Motorcycle Lane	0.5 m ✓
Motorist	3 m ✓
Special Considerations	Sports Activities & On Street parking

The projected traffic capacity for Shahranpur Road is estimated as 8,000 PCUs. Accordingly, the proposed location is an improving pedestrian pathways, integrating cycle lanes, and providing dedicated service lanes to accommodate future traffic demand efficiently.

An aerial photograph shows the construction site for the Shahranpur Road improvement project. The road is partially completed, with new lanes and infrastructure visible. Several vehicles are parked along the roadside, and some people can be seen walking on the sidewalks.

Elements	Separated (3 m)
Pedestrian Pathway	2.5 m ☒
Cycle track	3.5 m ☒
Service lane	6.0 m ☒
Motor lane	3.5 m ☒
Special Consideration	Contribution cycle mode & landscape street furniture

Chakrata Road currently lacks dedicated infrastructure for cyclists. Therefore, a proposal has been made for a two-segmented 2 m wide cycle track along with a 3.5 m wide service lane to improve cyclist safety and traffic management. There is also provision for on-street parking on the service lane to match the requirement.

KARGI ROAD

Elements	STANDARD (m)
Pedestrian Pathway	2.2 m
Cycle Track	1.5 m
Service Lane	4.0 m
Median	1.0 m

Special Considerations

Kargi Road is proposed with a 3 m wide Service Lane. However, no on-street parked cycle track has been provided. This proposal also includes alternate parking arrangements to improve road during management i.e., where in even days one side of service lane will be kept active for cyclist and other side service lane will be utilized as 4 W parking.

[illegible]

Disports	Standard Elem	
Pedestrian Pathway	2.5 ft	✓
Cycle Track	1.5 m	✓
Service Lane	0.5 m	✗
Median	3 ft	✗
Special Considerations	Support Pedestrians & On Street parking	

A cross-sectional diagram of Rajpur Road illustrating its multi-modal design. The road features a central lane for cars, flanked by dedicated lanes for bicycles and pedestrians. It includes infrastructure such as streetlights, trees, and signage to support safe movement for all users.

RAJPUR ROAD				
Diameter	Standard E/Ws			
Pedestrian Pathway	2.5 m	✓		
Cycle Track	3.0 m	✓		
Service Lane	5.0 m	✗		
Median	9 m	✗		
Special Considerations	Street Artwork & On Street Parking			



Dehradun

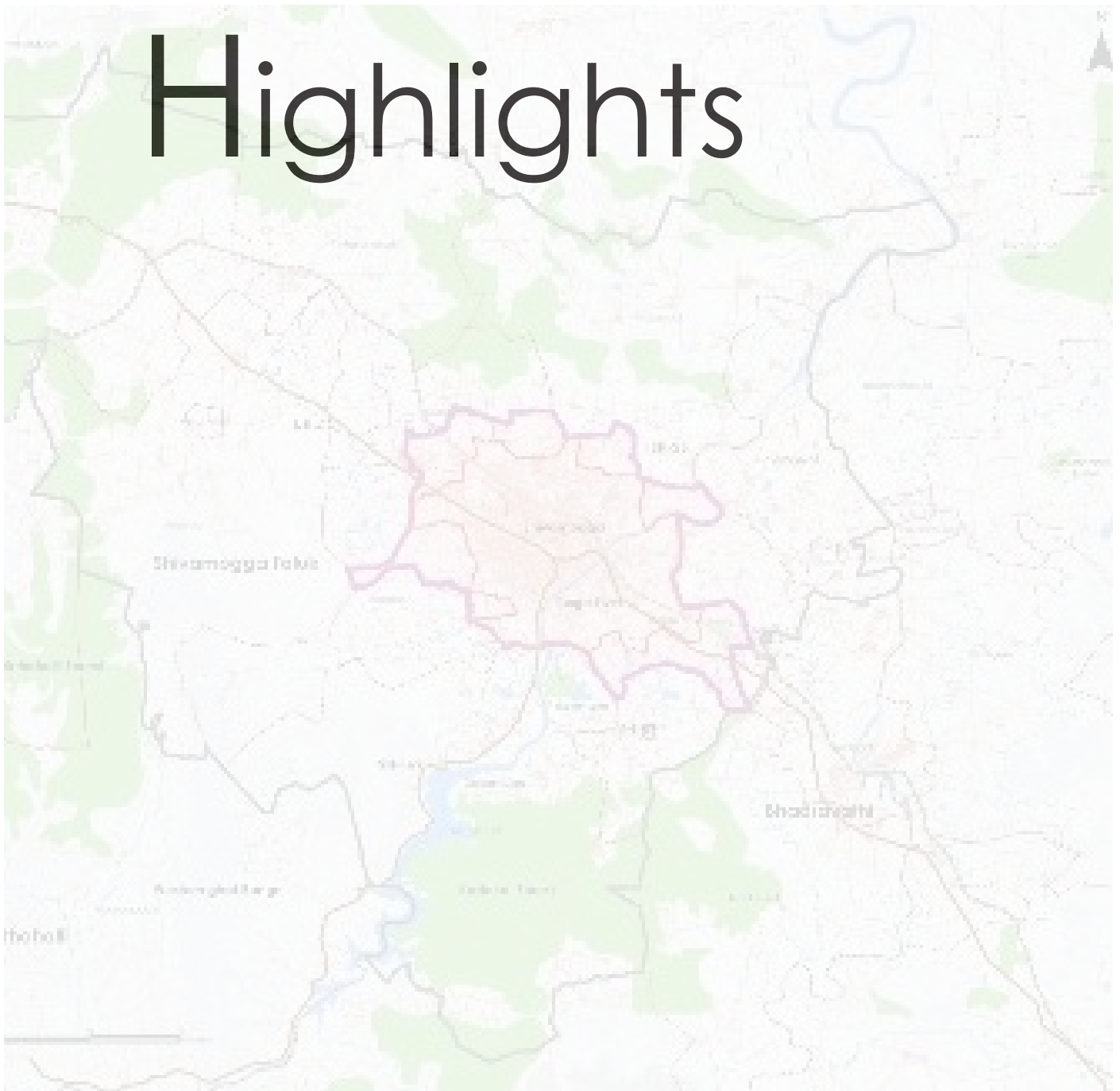
INTEGRATED TRANSPORTATION PLAN, DEHRADUN-2041

Network Characteristics



Studio

Highlights



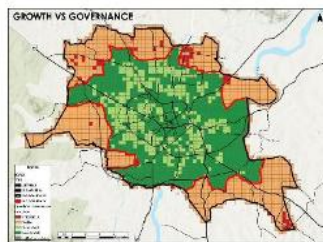
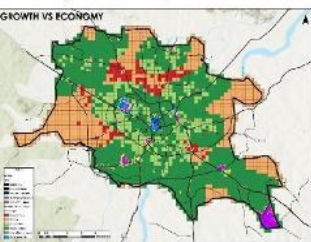
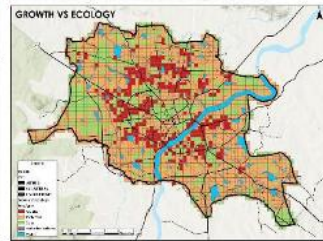
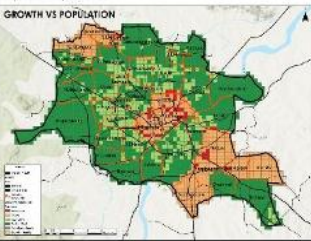
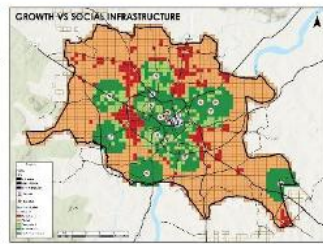
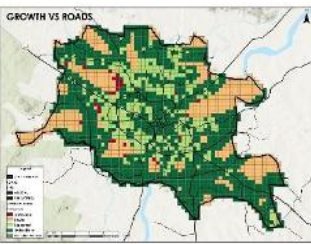
Studio Brief

MURP 1st Year Sem II: Urban Planning Studio

The Urban Planning Studio introduces secondsemester M.Plan (Urban and Regional Planning) students to the principles and practice of urban planning through a fieldbased and analytical learning approach. The studio focuses on preparing a Comprehensive Development Plan (CDP) for a selected urban area, enabling students to understand urban growth patterns, development challenges, and planning interventions. For the 2025–2027 batch, the studio focuses on Shivamogga, with the vision of transforming the city into a resilient, inclusive, and sustainably connected regional hub by 2041, aligned with the Viksit Bharat 2047 vision. Students undertake field surveys, stakeholder consultations, spatial mapping, and data analysis to assess the city's physical, social, infrastructural, environmental, ecological, economic, and institutional characteristics.

The studio adopts an integrated planning approach involving landuse analysis, population studies, housing, transportation, infrastructure, environmental quality, economic development, and governance assessment. Analytical tools such as land suitability analysis, settlement growth assessment, qualityoflife evaluation, ecological mapping, and infrastructure gap analysis are used to identify key issues and development opportunities. Based on analyses, students formulate planning strategies, development proposals, and implementation frameworks that promote sustainable growth, environmental conservation, infrastructure enhancement, and improved quality of life. The studio develops professional competencies in urban analysis, spatial planning, policy formulation, and strategic decisionmaking.

Growth Drivers



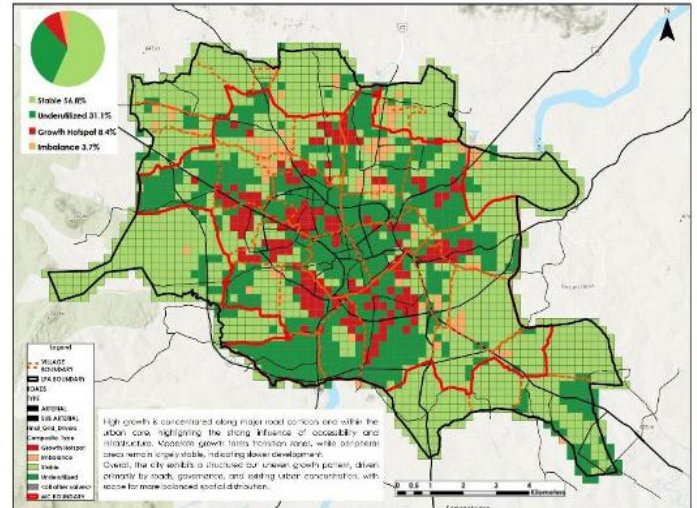
Growth Drivers Composite

The analysis used a binary cell-by-cell composite framework, where both observed growth and driver influence are coded as 1 (present) and 0 (absent) for each grid cell. The relationship is derived through simple logical combinations.

Growth	Driver	Category	Explanation
1	1	Supported	Growth is occurring in areas with driver influence, indicating aligned and justified development.
0	1	Undervalued	Driver is present but growth has not occurred, showing potential areas for future development.
1	0	Imbalance	Growth is occurring without driver support, indicating unplanned or inefficient development.
0	0	Stable	Neither growth nor driver influence is present, representing low-activity or stable zones.

Growth	Roads	Population	Economy	Social	Governance	Ecology	
1	0.2	0.18	0.1	0.2	0.3	0.2	-0.01
0	0.2	0.1	0.22	0.25	0.28	0.28	-0.05
0.18	0.15	1	0.12	0.18	0.2	-0.02	
0.1	0.22	0.12	1	0.16	0.18	-0.03	
0.2	0.25	0.18	0.14	1	0.22	-0.04	
0.3	0.28	0.2	0.18	0.22	1	-0.04	
-0.01	-0.05	-0.02	-0.03	-0.04	-0.06	1	

The correlation matrix shows that Governance has the strongest positive correlation with Growth (0.3), followed by Roads (0.2) and Social factors (0.2), indicating that institutions, effectiveness, and social services are key drivers of urban growth. Economy (0.1) and Population (0.18) show moderate influence. Ecology has a negative correlation with all variables (ranging from -0.03 to -0.06), implying that increased development and urban activity tend to occur at the expense of ecological factors. Overall, the pattern reflects a governance- and infrastructure-led growth system, with ecological aspects being increasingly impacted by development pressures.



Physical Subsystem Growth Drivers Analysis

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AIM

To guide the spatial growth of Shivamogga through scientifically informed land use planning by assessing physical characteristics, growth patterns, land capacity, and environmental assets, ensuring sustainable and balanced urban development.

OBJECTIVES

- EXISTING AND PROPOSED LAND USE PLANNING**
To analyze the current land use planning and use map reflecting residential, commercial, industrial, public, open spaces, and open spaces and to assess land use compatibility.
- GEOGRAPHY AND PHYSICAL FEATURES ASSESSMENT**
To analyze geographical and physical features influencing development patterns and study their implications for construction suitability and optimization.
- SPATIAL STRUCTURE AND URBAN GROWTH ASSESSMENT**
To analyze historical and current urban expansion patterns using LUCI and to evaluate urban spatial characteristics through historical land use and growth direction analysis.
- LAND SUITABILITY ASSESSMENT**
To evaluate land suitability based on slope, soil type, geomorphology, drainage pattern, and natural resources and identify development, restricted, and conservation priority zones.
- GROWTH MANAGEMENT AND URBAN EXPANSION STRATEGY**
To develop logical urban expansion zones based on infrastructure accessibility, physical suitability, environmental sensitivity.

REGIONAL CONNECTIVITY



The regional connectivity of Shivamogga is defined by its central position and multi-directional linkages to key urban centers within Karnataka, including Bengaluru, Mysuru, and Mangaluru. The city is well-connected to neighboring districts like Chikmagalur and Chikballapur. The map highlights the city's strategic location at the intersection of major roads and railways, facilitating regional connectivity and trade.

LOCATION



Area	Extent (sq km)
Shivamogga LPA (Study Area)	121.5 sq km
MC Boundary	76.87 sq km
Conurbation area	50.83 sq km

PHYSICAL SETTING



HERITAGE

The city's development reflects a transition from an agrarian and trade-based settlement to an important administrative and educational center. Shivamogga, as per historical records, is known to have evolved its name from Lord Shiva, "Shiva-Mogga" (place of Shiva).
18th-20th century: Under the reign of the Marathas, Shivamogga was a significant administrative and military center. During British Administration, Shivamogga was a major administrative and military center. The city's development was influenced by the British, who introduced modern infrastructure and administrative systems. The city's development was also influenced by the Marathas, who introduced the city's name and its administrative structure. The city's development was also influenced by the British, who introduced modern infrastructure and administrative systems. The city's development was also influenced by the Marathas, who introduced the city's name and its administrative structure.

Comprehensive Development Plan for Shivamogga Region 2041 A.D.

PLANNING BOUNDARY JUSTIFICATION

Stage 1: Identification of Continuous Urban Influence

Method: 1 km buffer from MC built-up area.

Logic: Mean growth typically expands incrementally from the existing built-up edge, rather than appearing in isolated pockets.

• A 1 km buffer captures the immediate urban fringe, where urban land use begins encroaching on rural land.

• Per suburban and urban development patterns, infrastructure influences begin extending outward.

Why 1 km?

• Represents the first wave of urban expansion pressure beyond the municipal boundary.

• Large enough to capture urban sprawl, but small enough to exclude purely rural areas.

• Commonly used range in peri-urban delineation: 500 m to 1.5 km, 1 km provides a balanced midpoint.

Interpretation: Villages with higher built-up density near the municipal edge indicate active peri-urban transformation.

Stage 2: Built-Up Intensity within Candidate Villages

Method: Built-up percentage calculated for each village.

Logic: Urban influence alone does not imply urbanization. Therefore, villages were further evaluated based on built-up intensity.

• Higher built-up percentage indicates conversion of agricultural land to commercial, residential, and industrial development.

• Permanent transition from rural to urban land use.

Interpretation: Villages with higher built-up density near the municipal edge indicate active peri-urban transformation.

Stage 3: Dominance of Conurbation Influence

Method: Intersection with Conurbation Boundary.

Logic: The conurbation boundary represents the functional urban region where settlements are spatially and morphologically connected to the city.

• Villages with very small overlap may only have edge influence.

Why 30%?

• Ensures urban processes affect a substantial portion of the village area.

• Prevents inclusion of villages where urbanization is limited to small fringe segments.

Interpretation: Villages with higher built-up density near the municipal edge indicate active peri-urban transformation.

Stage 4: Spatial Continuity and Boundary Regularization

Method: Removal of fragmented or isolated patches.

Logic: Planning regions must form continuous spatial units. Therefore, villages were removed where inclusion would create detached or fragmented planning areas.

• Villages with very small overlap may only have edge influence.

Why 30%?

• Ensures urban processes affect a substantial portion of the village area.

• Prevents inclusion of villages where urbanization is limited to small fringe segments.

Interpretation: Villages with higher built-up density near the municipal edge indicate active peri-urban transformation.

Physical Subsystem - Introduction to Shivamogga

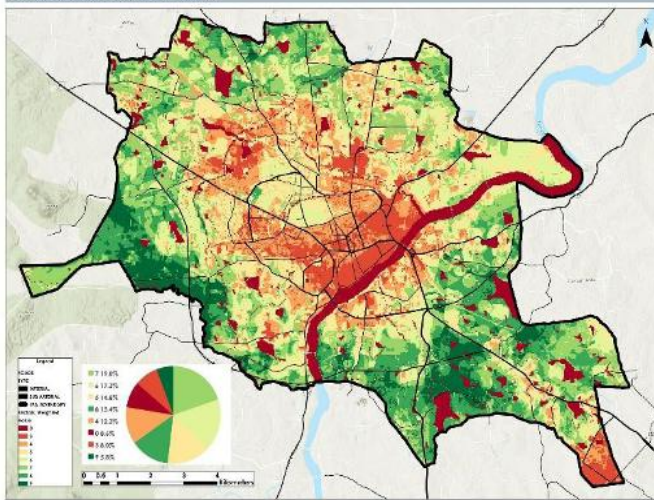
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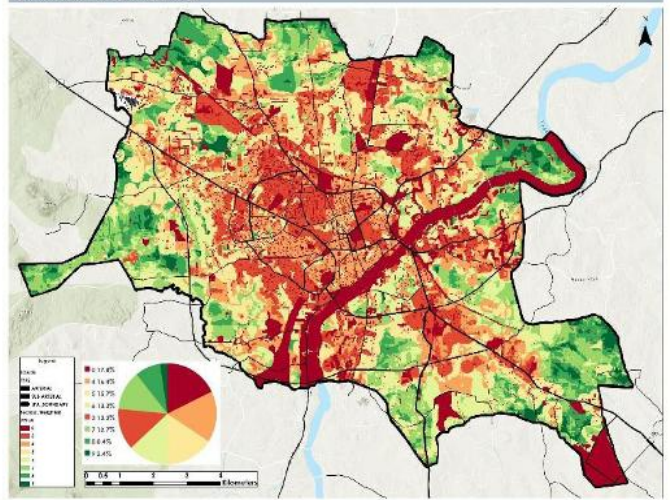
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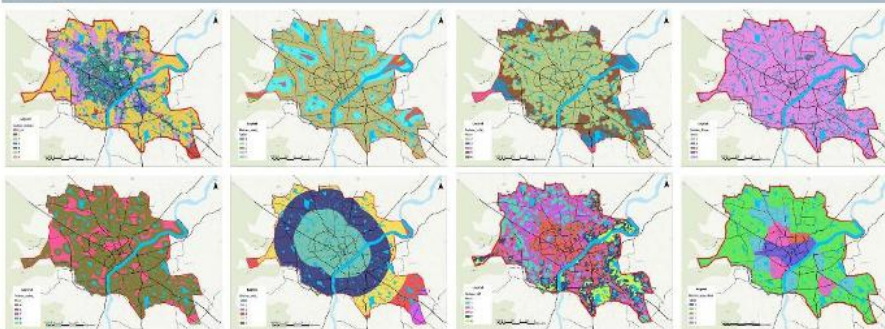
Land Suitability - Weighted Overlay



Land Suitability - Fuzzy Overlay



Suitability Variables



Weights are assigned using MCDA based on relative importance of each factor, and fuzzy membership functions are used to standardize variables into a 0-1 scale, reflecting how each parameter influences suitability. This methodology aligns with established GIS-MCDA and fuzzy logic-based suitability modeling practices (Jacek Malczewski 2004; Lohi A. Zareh 1996; Ekl 2023).

Layer	Weight (%)	Fuzzy Membership Function	Justification
Land Use	18%	Large	Conversion potential
Distance to Roads	12%	Small	Convenient growth
Flood Vulnerability	12%	Small	Avoid hazard-prone areas
Soil Suitability for Buildings	10%	Large / Linear (between soil & building)	Construction feasibility
Distance from Built-up	10%	Large	Edge expansion
Population Density	10%	Linear	Demand indicator
Distance to CBD	8%	Small	Accessibility
Slope	7%	Small	Terrain suitability
LST	8%	Small	Thermal comfort
Distance to Waterbody	5%	Large	Environmental safety

Physical Subsystem

Land suitability

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Proposals for the Green Infrastructure Improvement in the city of Shivamogga
Existing Ragiguda Case in the City of Shivamogga

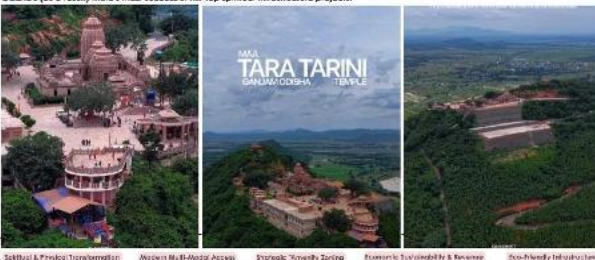
NEED OF THE PROJECT:

Reimagining Ragiguda as an eco-spiritual landscape

The 18 of Ragiguda in Shivamogga currently faces issues of unregulated development, ecological degradation, and loss of organized infrastructure, which diminish both its environmental value and spiritual experience. The project is needed to transform the site into a well-planned eco-spiritual landscape that integrates conservation, sustainable tourism, and meaningful visitor engagement.

Case Study of the TARA-TARINI Temple, Odisha, India

The Tara Tarini Temple Project (often referred to as the "Tara Tarini Shrine Redevelopment") is widely regarded as one of Odisha's (or a nation's) most successful hill-top spiritual infrastructure projects.



Proposed Spaces for the case of Ragiguda Eco-Spiritual Trail:



2. The "Dual Access" System (A Key Revenue Strategy) The Spiritual Climb | The Modern Access (A Roadway Cable Car)

3. Architectural Philosophy (The "Karnataka Style") (Landscape Paving) (Clutter-Free Sanctum)

4. Environmental Protection Measures Slope Stabilization Eco-Friendly Toilets Traditional Lighting

Comprehensive Development Plan for Shivamogga Region 2041 A.D.

SINCE SHIVAMOGGA RECEIVES HEAVY RAINFALL AND HAS HIGH GREENERY, THE TRAIL ISN'T JUST FOR CROWDS—IT'S FOR SOIL STABILITY AND WATER MANAGEMENT.

TRAIL EXPERIENCE: A JOURNEY IN 3 LEVELS

Level 1: The "Gateway to Mahad" (Base/Foot of the Hill)

The "Gateway to Mahad" is the starting point of the trail, located at the base of the hill. It is a well-planned area with parking, restrooms, and a small shop. The trail starts from here and goes up the hill.

Level 2: The "Eco-Transition" (Mid-Slope)

The "Eco-Transition" is the middle section of the trail, located on the mid-slope. It is a well-planned area with restrooms, a small shop, and a small temple. The trail continues from here and goes up the hill.

Level 3: The "Pristine Sanctum" (The Summit)

The "Pristine Sanctum" is the top section of the trail, located at the summit. It is a well-planned area with a small temple, a small shop, and a small rest area. The trail ends here.

Ragiguda Eco-Spiritual Trail Shivamogga, Karnataka

Reimagining Ragiguda as an eco-spiritual landscape

The proposal transforms a simple hill ascent into a journey of ecological awareness, cultural connection, and spiritual reflection.

LEGENDS:

1. THE TEMPLE COMPLEX

2. THE ECO-TRAIL

3. ECO-TRAIL

4. PARKING AREAS

5. MARKET PLACES

6. ROPE WAY STARTING POINT

7. ECOLOGICAL TRAIL GUIDANCE

8. VIEWING DECKS

9. REST AREAS

10. PRISTINE RESTING AREAS

11. FIRST AID POINTS

12. REST AREA

13. REST AREA

14. REST AREA

15. REST AREA

16. REST AREA

17. REST AREA

18. REST AREA

19. REST AREA

20. REST AREA

Strategic Relocation & Institutional Decoupling: Transitioning Healthcare Infrastructure to Designated Sites

Strategic Relocation & Institutional Decoupling: Transitioning Healthcare Infrastructure to Designated Sites

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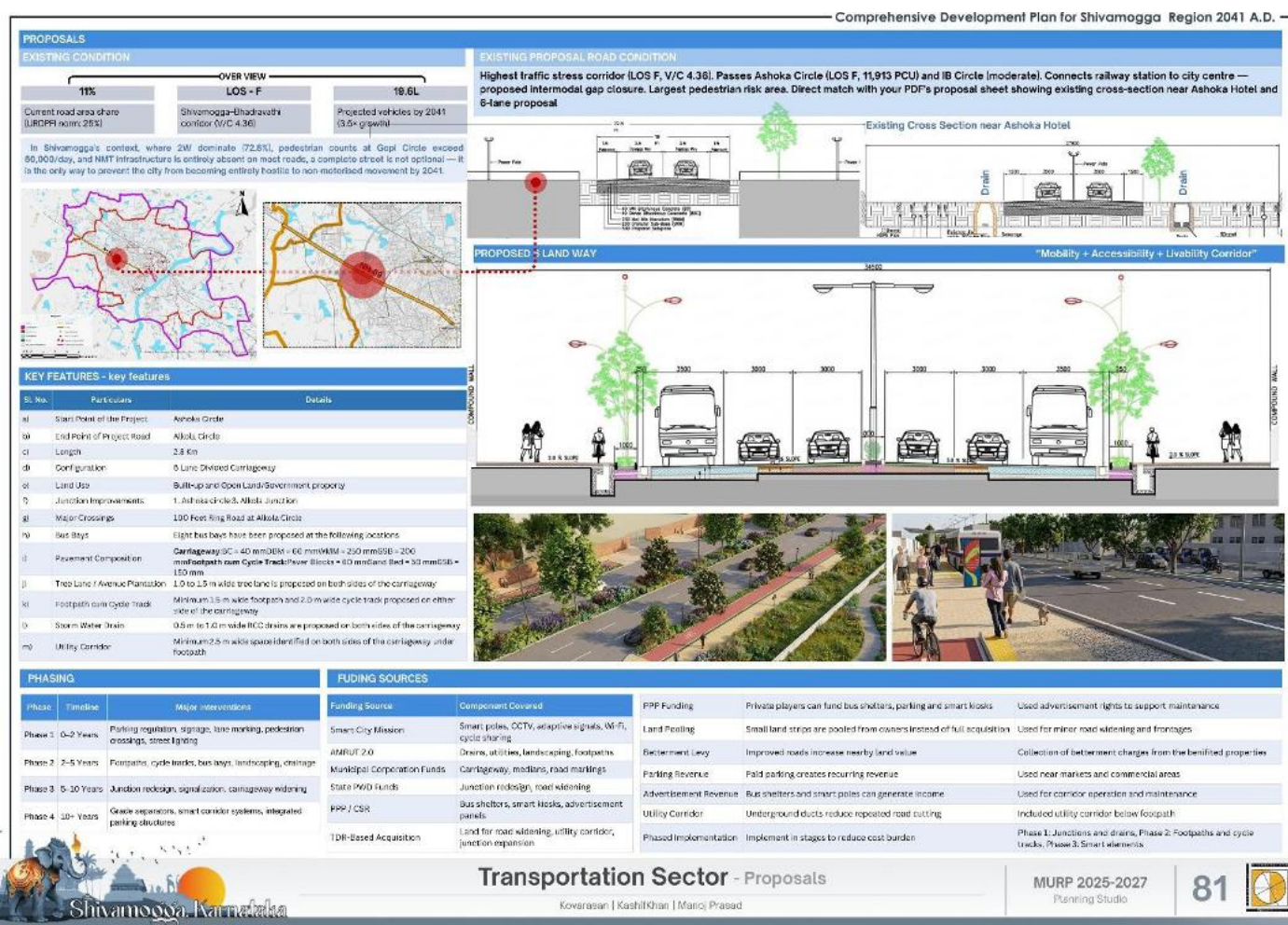
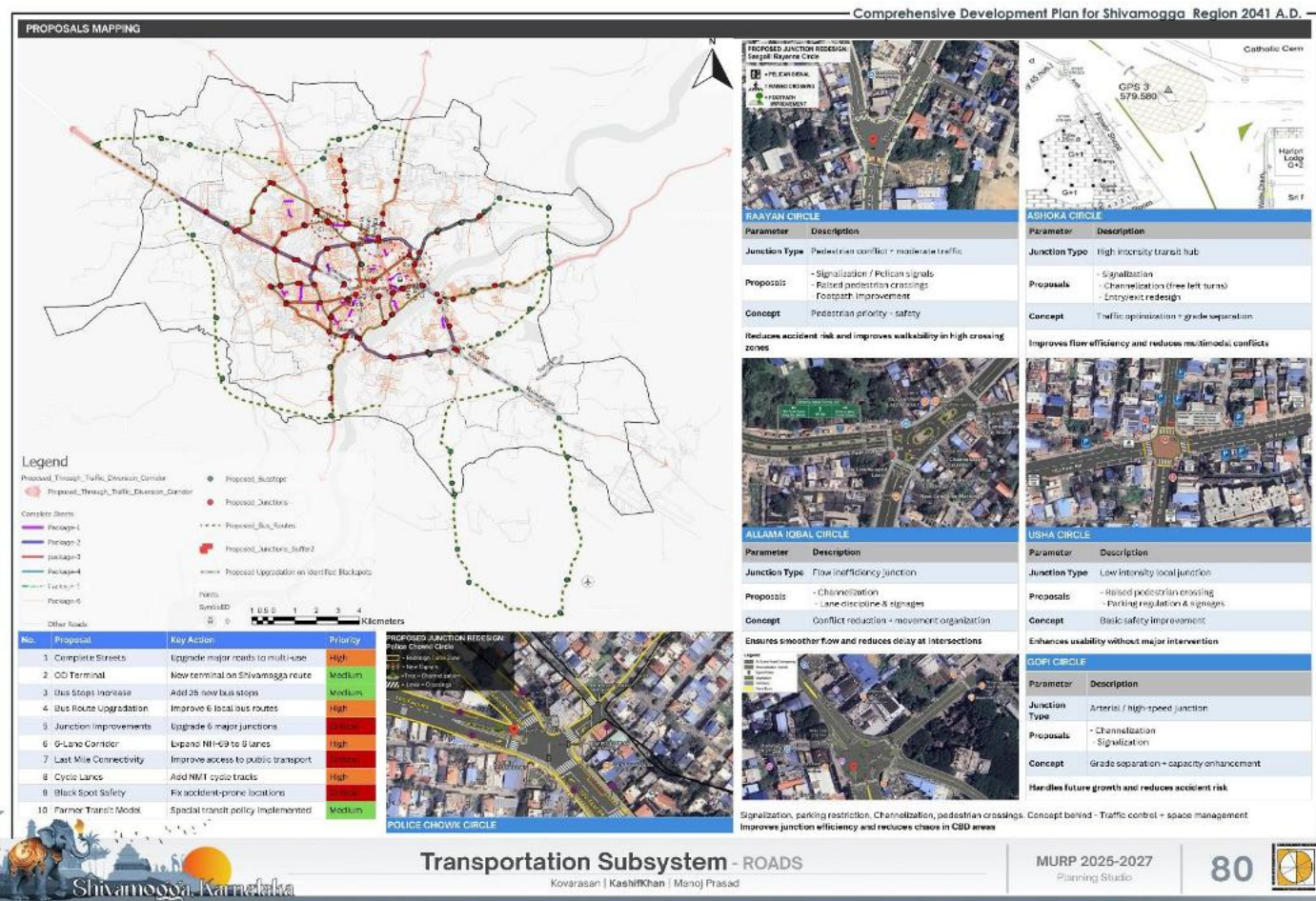
Inter-Sectoral(Social and Environment and Economy) - Proposals for Eco-Trail

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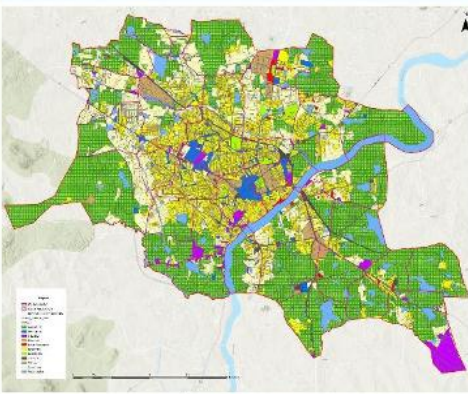
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Ajay Venkat | Jitesh Pangrhi | Tejashree Padwad



EXISTING LAND USE 2025



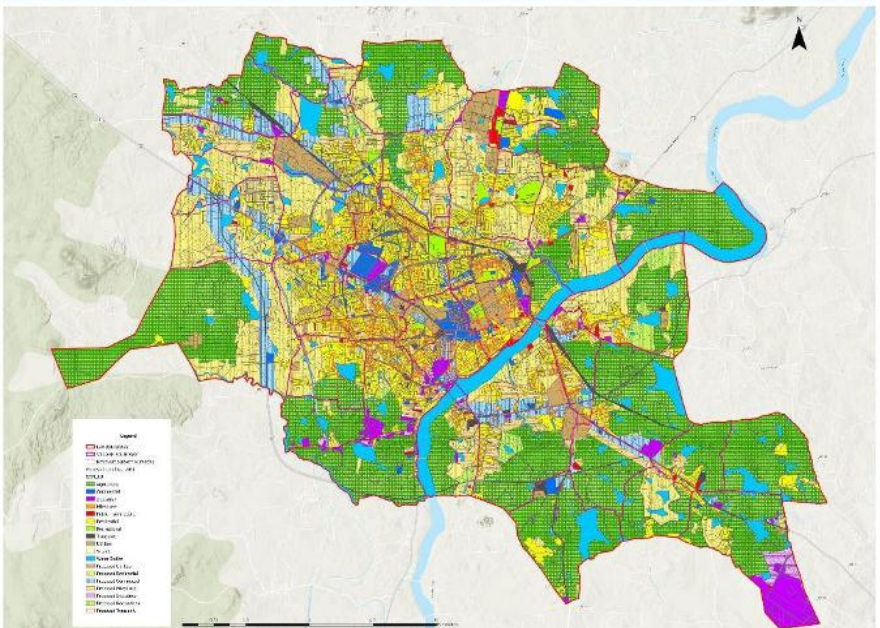
EXISTING LAND USE

Land Use Category	Area Sq.Km	Existing (%)
Residential	20.07	14.76
Commercial	2.32	1.71
Industrial	0.70	0.5
P&U - Utilities	6.61	5.04
Recreational/Open Space	1.14	0.85
Transport	17.49	12.88
Water Bodies	18.72	13.91
Agriculture	52.27	38.19
Vacant Land	22.45	16.84
Mixed Use	0.46	0.35

PROPOSED LAND USE

Land Use Category	Area Sq.Km	Existing (%)
Residential	20.07	14.76
Commercial	2.32	1.71
Industrial	0.70	0.5
P&U - Utilities	6.61	5.04
Recreational/Open Space	1.14	0.85
Transport	17.49	12.88
Water Bodies	18.72	13.91
Agriculture	44.0	32.67
Mixed Use	0.46	0.35
Proposed Residential	19.4	14.27
Proposed Commercial	6.2	4.68
Proposed Mixed Use	5.1	3.81
Proposed Recreational	9.3	6.99
Proposed Industrial	0.9	0.69
Proposed Utilities	2.1	1.58
Proposed Transport	6.3	4.73

PROPOSED LAND USE 2041



LAND USE COMPARISON

Land Use Category	2025 Area Sq.Km	2041 Area Sq.Km	Area Change	Percentage Change
Residential	20.07	19.4	-0.67	-3.33
Commercial	2.32	6.2	3.88	167.24
Industrial	0.70	0.7	0	0
P&U - Utilities	6.61	6.61	0	0
Recreational/Open Space	1.14	9.3	8.16	715.79
Water Bodies	18.72	18.72	0	0
Agriculture	52.27	44	-8.27	-15.82
Mixed Use	0.46	5.1	4.64	1008.48

INFERENCE

The comparison between existing land use (2025) and proposed land use (2041) indicates a shift towards commercial, industrial, and recreational uses. The existing pattern shows a dense concentration of residential and mixed-use development in the core, with scattered, irregular extensions in peripheral areas.

In the proposed plan, growth is strategically controlled through designated nodal locations, reducing pressure on the city center. There is a significant increase in recreational areas, supporting the introduction of proposed mixed-use corridors along major roads to provide a better environment for residents and enhance the quality of life.

Industrial and commercial zones are placed along major roads, ensuring a better environment for residents and enhancing the quality of life. The plan also strengthens green and recreational spaces, ensuring a better environment for residents and enhancing the quality of life.

Overall, the proposed land use demonstrates a transition from a dense, urbanized pattern to a more sustainable, well-distributed, and balanced urban structure for Shivamogga by 2041.

Physical Subsystem PROPOSED LAND USE 2041

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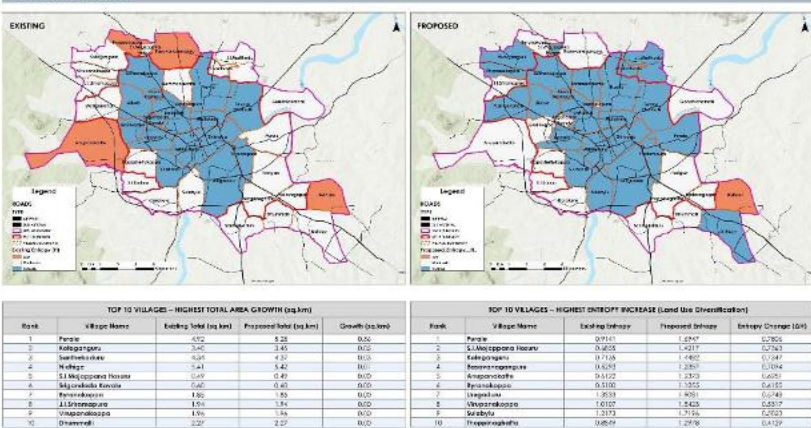
VILLAGE-WISE LAND USE COMPARISON

SHIVAMOGGA MASTER PLAN - VILLAGE WISE LAND USE COMPARISON (Area in Hectares)																																							
Village Name	EXISTING LAND USE (2025)										PROPOSED LAND USE (2041)										ABSOLUTE CHANGE (2025-2041)										% CHANGE								
	Agri	Forest	Barren	Water	Residential	Commercial	Industrial	Transport	Other	Agri	Forest	Barren	Water	Residential	Commercial	Industrial	Transport	Other	Agri	Forest	Barren	Water	Residential	Commercial	Industrial	Transport	Other	Agri	Forest	Barren	Water	Residential	Commercial	Industrial	Transport	Other			
Agri	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05			
Forest	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05		
Barren	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
Water	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
Residential	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
Commercial	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
Industrial	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
Transport	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Other	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
Agri	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05			
Forest	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05			
Barren	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05			
Water	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05			
Residential	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05			
Commercial	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05			
Industrial	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05			
Transport	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05			
Other	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05			
Agri	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05			
Forest	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05			
Barren	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05			
Water	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05			
Residential	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05			
Commercial	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05			
Industrial	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05			
Transport	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05			
Other	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05			
Agri	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05			
Forest	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05			
Barren	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05			
Water	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05			
Residential	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05			
Commercial	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05			
Industrial	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05			
Transport	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05			
Other	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.26	0.05	0.0																			

SHANON ENTROPY (LAND USE MIX) ANALYSIS

Village Name	Existing Entropy	Proposed Entropy	Change (%)	Notes
Shivamogga	0.912	0.912	0.00	
...	...	...	...	...

VILLAGE ASSESSMENT



The comparative land use and village assessment indicates a clear transition from a more functional, agriculture-dominated landscape to a diversified and functionally integrated urban system.

The proposed plan shows a significant increase in mixed-use, recreational, and commercial areas, reflecting an enhanced urban environment and a more integrated urban system.

The shift towards a more functional, agriculture-dominated landscape to a diversified and functionally integrated urban system.

The shift towards a more functional, agriculture-dominated landscape to a diversified and functionally integrated urban system.

Physical Subsystem PROPOSED LAND USE 2041

Aneeshu | 2250400241 | Kurlinjathana 2250400250 | Dharun 2250400247

MURP 2025-2027
Planning Studio

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A group of people are gathered around a bonfire at night. The fire is burning brightly in the foreground, casting a warm glow. Several people are standing around the fire, some looking towards the camera and others looking at the fire. The background is dark, suggesting it is nighttime. The overall atmosphere is warm and social.

CELEBRATIONS



PC: Emmanuel A



PC: Emmanuel A

SANIKRANTI & HOLI
PUNARNAVAM



RAYLES TROPHY



INYAN'2026





FACULTY PUBLICATIONS

Department of Architecture

Prof.Dr. Amitava Sarkar

Professor

Role of Vertical Fenestration Design for Enhancing Daylighting in Office Buildings - In Composite Climate, AkiNik Publications, Delhi, India, ISBN: 978-93-6135-705-3(2025)

Prof. Dr. Vijayalaxmi Iyer K

Professor

Book:Sustainable Architecture: Towards a Greener India, SPRINGER,ISBN: 978-981-96-2427-0(2025)

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Prof. Dr. Srinivas Daketi **Professor**

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SACRED STEPS: Reimagining Age-Friendly Parameters for Indian River Ghats; International Conference by COA and Chitkara University, SHAPE: 2026, Sustainable Habitats and Architecture for People and the Earth Feb 26-28, 2026 (2026)

Prof.Dr. S Venkata Krishna Kumar **Professor**

3D Printing in Architecture: Mechanisms, Materials, and its Emerging Impact on Construction Practices Dheeraj Kishan Tanuku., Venkata Krishna Kumar

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Dr. Janmejyoy Gupta

Professor

Book:Planning for Resilient and Sustainable Built Environment; COPAL;ISBN: 978-81-993532-2-0(2026)

Dr. Shanmuga Priya G

Professor

International Journals :Role of sacred groves in climate change mitigation: A carbon storage assessment in Puducherry.; International Research Journal of Innovations in Engineering and Technology

International Journals :Active Design Strategies in Urban Landscapes for Fostering Public Health and Physical Activity; International Journal for Multidisciplinary Research,

International Journals :Exploring innovation and development of new recycled building materials in contemporary public architecture; Proceedings of the International Conference on Materials Optimization and Design Innovation for Sustainable Future (MODI 2025),

National Journals :Daylighting optimization strategies for office buildings in tropical climates: A simulation-based study.; Journal of Engineering, Computing and Architecture,

Workshops Conferences attended :Integrating Traditional Water Systems for Sustainable Stormwater Management in Indian Cities; 7th Bharatiya Vigyan Sammelan (BVS) organized by National Sanskrit University, Tirupati, Andhra Pradesh between 26 – 29 December 2025.

Workshops Conferences attended :Re-examining Urban Growth through the 3Qs: Quantity, Quality, and Quotient of Green Open Spaces in Puducherry; · International Federation of Landscape Architects (IFLA) –APR Regional Congress : Growth Paradox: Reimagining Landscapes, 14th -15th November, 2025

Workshops Conferences attended :CPTED Crime Prevention Through Design Interventions in Urban Open Spaces: Insights from Global Case Studies; · National Conference On Crime Prevention Through Environmental Design (CPTED) & AI in Urban Areas organised by SPA Vijayawada on 12th September 2025

Workshops Conferences attended :Moderator for the session on “Transdisciplinary Curriculum and Development and Pedagogy”;; Envisioning Tomorrow’s University: A Transdisciplinary Dialogue on the Future of Education” organised by MIT-WPU Goa, on 17 September 2025

Workshops Conferences attended :Greening the City: Landscaping Urban Open Spaces for Well-being and Sustainability”; · Workshop on Greenery development and Biodiversity Improvement in Amaravati Capital City” organised by Andhra Pradesh Capital Region Development Authority - APCRDA, 12th &13th June 2025

FDP Conducted :Capacity Building Programme titled “Climate Resilience through Simulation of Urban Environment – Hands on Training of Tools and Techniques funded by The AMRUT Center of Urban Planning for Capacity Building (ACUPCB-SPAV), Ministry of Housing and Urban Affairs, Government of India. 17 -21 Feb 2025

Dr. Lilly Rose A

Professor & Dean Academic

International Journals: Correlation between land surface temperature and spectral indices through assessment of UHI magnitude in Coimbatore, India; Environmental Research Communications(2025)

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Dr. Uma Shankar Basina **Associate Professor**

International Journals: Examining the child-friendliness of a gated community, centring on children's independent and unhindered mobility; Journal of Applied Bioanalysis, Volume 11(9), Year 2025, Pages 215-224. <https://doi.org/10.53555/jab.v11i9.1227> (2025)

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Workshops Conferences attended: Identifying ways of Reconnecting Children with Nature through WSUD in Vertical Environments. Case of Vijayawada and Guntur, Andhra Pradesh; WET-WAR 2025 International Conference, Year 2025 (2025)

Dr. M. Banu Chitra **Associate Professor**

Books: Book on "Environmental Planning and Landscape Management" Volume 1; Cipher; ISBN: 978-93-49204-40-9 (2025)

International Journals: Sustainable Living through Traditional Settlements: Exploring Indigenous Knowledge and Practices in Tamil Nadu's Agraharam Houses "Library Progress International (2025)

Machine Learning Based AI System for Soil Analysis and Crop Suggestion; International Conference on Emerging Trends in Artificial Intelligence (ICETAI 25) (2025)

National Journals: Environmental Planning and Landscape Management; Environmental Planning and Landscape Management
Landfill Site Selection Directives: A Landscape-Centric Perspective in the Context of Kerala; Urban Sustainability

Workshops Conferences attended: Machine Learning Based AI System for Soil Analysis and Crop Suggestion; International Conference on Emerging Trends in Artificial Intelligence (ICETAI 25) (2025)

Dr. Khuplianlam Tungnung **Associate Professor**

International Journals : "Sustainable Passive Design for Climate Resilience - Parametric Simulation of Circular Materials in Warm-Humid Climate Zones of East India"; PLEA 2026, Passive and Low Energy Architecture

Parametric passive design strategy towards sustainable net-zero energy buildings in hot-dry climate zones of India; Solar Energy, Elsevier
FDP Participated: Nurturing Future Leadership Program (NFLP) on Building Impactful Leadership by IRMA, Gujarat

Dr. R N S Murthy **Assistant Professor**

International Journals : Hydrology, Ecology, And Geopolitics Of Kashmir's Rivers, Bharath; article International Journal of Environmental Sciences, Volume Vol. 11 No. 8 (2025) , Year 2025, Pages 2278 - 2287, doi.org/10.64252/20tf9354

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Workshops Conferences attended: Blue Tactics for

Brown Cities: Integrating smart waste management in Indian urban slums; conference paper Institute of Town Planners India - Delhi Regional Chapter, Year 2025

Integrated Urban water management - A Framework for stormwater, waste water and ground water integration; conference paper Institute of Town Planners India - Delhi Regional Chapter, Year 2025

Dr. Nagaraju Kaja
Assistant Professor

International Journals: Analysis of cultural impact categories and subcategories for cultural life cycle assessment of traditional houses in India.

: Journal of Design and Built Environment, 25(3), 107–137. <https://ejournal.um.edu.my/index.php/jdbe>

Dr. Kranti Kumar Myneni
Assistant Professor

International Journals: Optimizing passive design strategies in warm-humid climates: A holistic framework for green building rating systems.; Optimizing passive design strategies in warm-humid climates: A holistic framework for green building rating systems.

Dr. Jagath Kumari D
Assistant Professor

Book: Environmental Design and Disaster management; Shivika Publication; ISBN-978-81-987027-1-5(2025)

Dr. Prashanti Rao
Assistant Professor

International Journals: Analysis of cultural impact categories and subcategories for cultural life cycle assessment of traditional houses in India.; Journal of Design and Built Environment, 25(3), 107–137. <https://ejournal.um.edu.my/index.php/jdbe> (2025)

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Dr. Faiz Ahmed C
Assistant Professor

The Spatio-Temporal Dynamics of Green Spaces and their impact on the Urban Environment of Bhopal Region, Madhya Pradesh, India; OIDA International Journal of Sustainable Development

Evaluating the Quality of Life for Sustainable Peri-Urban Development Planning: A Case of Imphal City, Manipur, Northeastern State, India; OIDA International Journal of Sustainable Development

Assessing the environmental vulnerability of coastal city—Kochi, Kerala State, India. In L. K. Dashora, M. Firoz C., & R. Shaw (Eds.), Urban sustainability: Navigating environmental transition challenges in Global South ; Springer - Book Chapter

Influence of urban form on urban heat island and its planning implications in Chennai Metropolitan Area, Tamil Nadu, India. In L. K. Dashora, M. Firoz C., & R. Shaw (Eds.), Urban sustainability: Navigating environmental transition challenges in Global South ; Springer - Book Chapter

Assessing human biometeorological conditions in hot summer days in a world heritage site in Hampi in India; International Journal of Biometeorology

FDP Conducted :5 Days National Workshop on Micro-Climate Simulation using ENVI-met at National Institute of Technology, Patna, in collaboration with Bihar Council on Science & Technology

Ar. Karthik Chadalavada
Assistant Professor

International Journals: Optimizing passive design strategies in warm-humid climates: A holistic framework for green building rating systems; Revista Hábitat Sustentable, 15(2), 90–101. <https://doi.org/10.22320/07190700.2025.15.02.07> (2025)

FDP Participated: 5-day Programme on Nurturing Future Leadership Program (NFLP) on Building Impactful Leadership [Sponsor: MoE, Ministry of Education - India; Organizer: IRMA, Gujarat]

Ar. Kapil Natawadkar
Assistant Professor

International Journals :Residential street and edges: Negotiating community space, a case example of film colony Vijayawada, A.P., IN.; Advanced International Journal for Research

Rainfall Interception by Six Urban Tree Combination in Vijayawada, Andhra Pradesh; Advanced International Journal for Research

Ar. Vijesh Kumar V

Assistant Professor

International Journals : "Assessing indoor environmental quality of naturally ventilated classrooms in tropical climates"; Journal of Building Engineering, Volume 111, Year 2025, DOI: <https://doi.org/10.1016/j.jobe.2025.113048>

Workshops Conferences attended: "Sustainable Building Materials and Alternative Technologies for Built-environments" ; 1-Day National workshop on "Sustainable Building Materials and Alternative Technologies for Built-environments" on 04 March 2025 at SPAV Sabhagaar conducted by the School of Planning and Architecture, Vijayawada.

Coordinator, 5-Day DIC Workshop on "iDeate 2025", 27-31 October 2025, conducted by DIC, School of Planning and Architecture, Vijayawada.

'Intelligent Signage and Community Engagement in Digital Communication' ; Keynote Speaker and Chair for 1-Day National Conference on 'CPTED & AI in Urban Areas', 12th July 2025 conducted by the School of Planning and Architecture, Vijayawada.;

Layout Automation in Architecture: Invited Speaker for 4-Day hands-On-Workshop & 01 Day International Symposium on 'Computational Design & Digital Fabrication in Architecture' 14th to 18th July 2025 conducted by the School of Planning and Architecture, Vijayawada.

FDP Participated : 4-Day National Level FDP on 'Integrating Artificial Intelligence in Architecture: Research Trends & Innovations' 05th to 26th April 2025 (Saturdays) conducted jointly by Faculty of Architecture, Planning and Design, Integral University Lucknow, and, Department of Architecture, School of Planning and Architecture, Vijayawada.

5-day Programme on Nurturing Future Leadership Program (NFLP) on Building Impactful Leadership [Sponsor: MoE, Ministry of Education - India; Organizer: IRMA, Gujarat]

Ar. Deepak Kumar

Assistant Professor

Books: Exploring Heterotopia: Navigating Parallel Realities; Amazon, ISBN 9798325896200

International Journals: Examining the child-friendliness of a gated community, centring on children's independent and unhindered mobility; Journal of Applied Bioanalysis, Volume 11(9), Year 2025, Pages 215-224. <https://doi.org/10.53555/jab.v11i9.1227> (2025)

Investigating the Activity and Behavioral Patterns of Children in both Designated and Undesignated Open Spaces within Gated Residential Communities: A Case Study of Guntur, Andhra Pradesh; International Journal of Environmental Science ISSN: 229-7359, <https://doi.org/10.64252/h7ng1e30> (2025)

Investigating the Activity and Behavioural Patterns of Children in both Designated and Undesignated Open Spaces within Gated Residential Communities: A Case Study of Guntur, Andhra Pradesh; International Journal of Environmental Sciences, Volume 11 (22), Year 2025, Pages 5647-5652 International Journal of Environmental Sciences, Volume 11 (22), Year 2025, Pages 5647-5652(2025)

Examining the Child-Friendliness of a Gated Community, Centring on Children's Independent and Unhindered Mobility; International Journal of Research -GRANTHAALAYAH, 13(11), 77-99. ISSN(O): 2350-0530/ISSN(P): 2394-3629. <https://doi.org/10.29121/granthaalayah.v13.i11.2025.6501> (2025)

Workshops Conferences attended: International Conference of Research Into Design by IIT Hyderabad , ICorDE 2025

Identifying ways of Reconnecting Children with Nature through WSUD in Vertical Environments. Case of Vijayawada and Guntur, Andhra Pradesh; WET-WAR 2025 International Conference, Year 2025 (2025)

Ar. Somania Islary

Assistant Professor

International Journals : Comparative Analysis of the Baseline and Remodelled Scenario to Study the Presence of Green Infrastructure to Mitigate Heat Intensity: A Case of Vijayawada City; Sustainable Building Performance. Springer, Singapore. https://doi.org/10.1007/978-981-96-2428-7_10 (2025)

FDP Participated: Building Coastal Disaster Resilience: R3 Strategies for Flood and Heat Stress

Ar. Narasimhan R

Assistant Professor

Book: "Built Heritage Documentation Handbook: A Systematic Methodological Guide for Architectural Conservation April 2026 Publisher: Agni Leaf press ISBN: 978-93-471428-8-8"

The Palatial Edge: Cultural Heritage of Bhonsale Mahal. Publisher: World Academic Press. May 2026 DOI: <https://www.doi.org/10.66727/wap.9788168686199> ISBN: 978-81-686861-9-9"

Built Heritage geometry and proportion, World Academic Press. June 2026 ISBN: 978-81-687397-96"

National Journals: Value assessment of lighting interventions in adaptive reuse of heritage structures january 2026 international journal of creative research thoughts 14(4)

Role of water shaping in the cultural landscape of the cauvery delta region, tamil nadu april 2026 international journal of novel research and development 11(4)

Cultural mapping of tangible and intangible heritage for historic buildings: the case of ananthapuram koil thampuram kottaram april 2026 international journal of creative and open research in engineering and management volume 14(issue 4):2320-2882

Application of artificial intelligence in hbim of nampally serai april 2026 international journal of creative research thoughts volume 14(issue 4):2320-2882

An approach to understand the ancient tamil measuring system april 2026 international journal of scientific research in engineering and management 10(4)

Conservation and reuse of historic electrical and plumbing systems in kollapur palace january 2026 international journal of creative research thoughts 14(4)

Ar.Tanaya paul **Assistant Professor**

Workshops Conferences attended: Exploring Human Bio Meteorological Conditions in a Heritage Site: A case of a UNESCO World Heritage Site in Hampi, India.; International Conference on Urban Climate

Ar.Thushara **Assistant Professor**

Book:The Soul of India A Journey through social history and culture;Metro books;ISBN:978-81-987681-9-3

Department of Planning

Prof. Dr. Ayon Kumar Tarafdar **Professor**

International Journals: Assessment of the Future Environmental Carrying Capacity for Sustainable Development in Kochi City, Kerala State, India; OIDA International Journal of Sustainable Development, 18 (12), 779-794, 2025

Novel Framework Towards Integration of Environmental Carrying Capacity for Sustainable Spatial Planning: A Systematic Approach in Indian Context ;OIDA International Journal of Sustainable Development, Volume 19, Issue 03, Pg. 93-122, 2026.

Dr. Adinarayanane R **Professor**

International Journals: Assessment of the Future Environmental Carrying Capacity for Sustainable Development in Kochi City, Kerala State, India; OIDA International Journal of Sustainable Development, 18 (12), 779-794, 2025

Assessment of Urban Green Space Dynamics towards Mitigating the Environmental Stress in Vijayawada

City, Andhra Pradesh, India; OIDA International Journal of Sustainable Development, Volume 19, Issue 03, Pg. 71-92, 2026

Novel Framework Towards Integration of Environmental Carrying Capacity for Sustainable Spatial Planning: A Systematic Approach in Indian Context ; OIDA International Journal of Sustainable Development, Volume 19, Issue 03, Pg. 93-122, 2026.

Workshops Conferences attended :Resilience of Coastal Communities to Climate Change, in Thiruvananthapuram Region, Kerala State, India; 21st International Conference on Sustainable Development 2025, held between 15/07/2025 and 16/07/2025, at University of Ottawa, Ottawa, Canada organized by Ontario International Development Agency Inc. 2581 River Mist Road Ottawa, Ontario, K2J 6G1 Canada

Impact of Land Use types on the Spatial Heterogeneity of Extreme Heat Environments in Jaipur City, Rajasthan, India; 21st International Conference on Sustainable Development 2025, held between 15/07/2025 and 16/07/2025at University of Ottawa, Ottawa, Canada, organized by Ontario International Development Agency Inc. 2581 River Mist Road Ottawa, Ontario, K2J 6G1 Canada

Assessment of the future Environmental Carrying Capacity for Sustainable Development in Kochi City, Kerala State, India;21st International Conference on Sustainable Development 2025, held between 15/07/2025 and 16/07/2025, at University of Ottawa, Ottawa, Canada, organized by Ontario International Development Agency Inc. 2581 River Mist Road Ottawa, Ontario, K2J 6G1 Canada

Novel framework towards integration of Environmental Carrying Capacity for Sustainable Spatial Planning: A Systematic Approach in Indian context; 22nd International Conference on Sustainable Development 2025, held between 03/09/2025 and 04/09/2025, Bandaranayake Memorial International Conference Hall Bauddhaloka Mawatha, Colombo, Sri Lanka, organized by Ontario International Development Agency Inc. 2581 River Mist Road Ottawa, Ontario, K2J 6G1 Canada.

Assessment of Urban Green Space Dynamics towards Mitigating the Environmental Stress in Vijayawada City, Andhra Pradesh, India; 22nd International Conference on Sustainable Development 2025, held between 03/09/2025 and 04/09/2025, Bandaranayake Memorial International Conference Hall Bauddhaloka Mawatha, Colombo, Sri Lanka, organized by Ontario International Development Agency Inc. 2581 River Mist Road Ottawa, Ontario, K2J 6G1 Canada.

Dr. Prasanth Vardhan **Associate Professor**

Workshops Conferences attended: Participatory Approaches in Village Improvement and Development Planning, SPA Vijayawada, 4th December 2025; Workshop at SPA Vijayawada

Dr. Rajakumari M
Associate Professor

Cultural Heritage as a Driver of Sustainable Development in Deep Rooted Traditional Cities -The City-Festivity Nexus", *SSRG International Journal of Civil Engineering*

Urban Design Studio –A Proposed Methodology to Study Indian Towns

FDP Participated: 5-Days residential training on "Nurturing Future Leadership Programme" under aegis of Malaviya Mission Teacher Training Programme (MMTP), MOE at Indian Institute of Management Bodhgaya(2026)

International Journals: Sustainable Living through Traditional Settlements: Exploring Indigenous Knowledge and Practices in Tamil Nadu's Agraharam Houses ",*Library Progress International*

Mr. Rajeev R
Assistant Professor

International Journals: Assessment of the Future Environmental Carrying Capacity for Sustainable Development in Kochi City, Kerala State, India; *OIDA International Journal of Sustainable Development*, 18 (12), 779-794, 2025

Assessing Flood Susceptibility Using GIS and AHP Method: Case of Mandovi River Basin, Goa: Pal, S.C., Chatterjee, U. (eds) *Surface, Sub-Surface Hydrology and Management: Application of Geospatial and Geostatistical Techniques*. Springer Geography. Springer, Cham. https://doi.org/10.1007/978-3-031-62376-9_4 ISBN: 978-3-031-62376-9 (Online), 978-3-031-62375-2 (Print)

Novel Framework Towards Integration of Environmental Carrying Capacity for Sustainable Spatial Planning: A Systematic Approach in Indian Context ; *OIDA International Journal of Sustainable Development*, Volume 19, Issue 03, Pg. 93-122, 2026

Next-generation self-healing concrete for crack-proof infrastructure. *International*. : *Research Journal of Modernization in Engineering Technology and Science*, 8(1).

Workshops Conferences attended: "Assessment of the Future Environmental Carrying Capacity for Sustainable Development in Kochi City, Kerala State, India; *OIDA 21st International Conference on Sustainable Development 2025*, Ontario, Canada

Novel Framework Towards Integration of Environmental Carrying Capacity for Sustainable Spatial Planning: A Systematic Approach in Indian Context: *OIDA 22nd International Conference on Sustainable Development 2025*, Colombo, Sri Lanka

Participatory Approaches in Village Improvement and Development Planning, SPA Vijayawada, 4th December 2025; Workshop at SPA Vijayawada

FDP Participated: Participated in Online Guru Dakshita (Faculty Induction Programme) Under Malaviya Mission

Teacher Training Programme (MM TTP) of University Grants Commission, Organized by IIT Kharagpur from 22.12.2025 to 17.01.2026.

FDP Conducted: 'Climate Actions for Local Area Planning: Combating Heat Extremes',AMRUT Centre of Urban Planning for Capacity Building, School of Planning and Architecture, Vijayawada., Duration: 06.02.2025 to 10.02.2025 (5 Day)

Dr. Anurag Bagade
Assistant Professor

International Journals: Sustainable Living through Traditional Settlements: Exploring Indigenous Knowledge and Practices in Tamil Nadu's Agraharam Houses ",*Library Progress International*

Workshops Conferences attended: Participatory Approaches in Village Improvement and Development Planning, SPA Vijayawada, 4th December 2025; Workshop at SPA Vijayawada FDP Conducted: 'Climate Actions for Local Area Planning: Combating Heat Extremes',AMRUT Centre of Urban Planning for Capacity Building, School of Planning and Architecture, Vijayawada., Duration: 06.02.2025 to 10.02.2025 (5 Day)

Mr. Bhargava Teja S
Assistant Professor

Workshops Conferences attended :Participatory Approaches in Village Improvement and Development Planning, SPA Vijayawada, 4th December 2025; Workshop at SPA Vijayawada

Dr. MNV Pavan Kumar
Assistant Professor

International Journals: Examining the Child-Friendliness of a Gated Community, Centring on Children's Independent and Unhindered Mobility; *Journal of Applied Bioanalysis*, Volume 11(9), Year 2025, Pages 215-224

FACULTY MEMBERS

ARCHITECTURE

Prof. Dr. Ramesh Srikonda
Director, Professor

Prof.Dr. Amitava Sarkar
Head of Department
Architecture, Professor

Prof. Dr. M Kailasa Rao
Professor

Prof. Dr. Vijayalaxmi Iyer K
Professor

Prof. Dr. Srinivas Daketi
Professor

Prof. Dr. Anil Kumar Chilakapati
Professor

Prof.Dr. S Venkata Krishna Kumar
Professor

Dr. Janmejy Gupta
Professor

Dr. Shanmuga Priya G
Professor

Dr. Lilly Rose A
Professor & Dean Academic

Dr. Uma Shankar Basina
Associate Professor &
Dean Student Affairs

Dr. M. Banu Chitra
Associate Professor &
Dean Resarch

Dr. Khuplianlam Tungnung
Associate Professor

Dr. Karteek Guturu
Assistant Professor

Dr. R N S Murthy
Assistant Professor

Dr. Nagaraju Kaja
Assistant Professor

Dr. Kranti Kumar Myneni
Assistant Professor

Dr. Jagath Kumari D
Assistant Professor

Dr. Prashanti Rao
Assistant Professor

Dr. Faiz Ahmed C
Assistant Professor

Dr. P. Shiva Prasad
Assistant Professor

Ar. Pushpendra Kumar
Assistant Professor

Ar. Karthik Chadalavada
Assistant Professor

Ar. Madhava Rao T
Assistant Professor

Ar. Kapil Natawadkar
Assistant Professor

Ar. Vijesh Kumar V
Assistant Professor

Ar. Deepak Kumar
Assistant Professor

Mr. Santhosh Kumar Pedagadi
Assistant Professor

Ar. Somania Islary
Assistant Professor

Ar. Siddesh Mundle
Assistant Professor

Ar. Dheeraj Ch.
Assistant Professor

Ar. Komal G
Assistant Professor

Ar. Apurvasri
Assistant Professor

Ar. Charitha Y
Assistant Professor

Ar. Narasimhan R
Assistant Professor
Ar. Abhinav Bole
Assistant Professor

Ar. Divya Yadav
Assistant Professor

Ar. Kaushal Kumar
Assistant Professor
Ar. Monoisha Kunjumon
Assistant Professor

Ar. Tanaya Paul
Assistant Professor

Ar. Thushara
Assistant Professor

FACULTY MEMBERS

PLANNING

Prof. Dr. Ayon Kumar Tarafdar
Professor, Dean Academics

Dr. Adinarayanane R
Head of Department
Planning, Professor

Dr. Prasanth Vardhan
Associate Professor

Dr. Rajakumari M
Associate Professor

Dr. Valliappan AL
Assistant Professor

Ms. Ekta
Assistant Professor

Dr. Naina Gupta
Assistant Professor

Mr. Rajeev R
Assistant Professor

Mr. Jayakaran V
Assistant Professor

Mr. J M Bhagwat
Assistant Professor

Dr. Anurag Bagade
Assistant Professor

Mr. Bhargava Teja S
Assistant Professor

Dr. Arpan Paul Singh
Assistant Professor

Dr. MNV Pavan Kumar
Assistant Professor

Mr. Sandeep P
Assistant Professor

Ms. Pushyami N
Assistant Professor

Ms. Monica Sekar
Assistant Professor

Mr. Jayakaran
Assistant Professor

Ms. Zorba
Assistant Professor

SPAV

**SCHOOL OF PLANNING AND ARCHITECTURE
VIJAYAWADA**

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