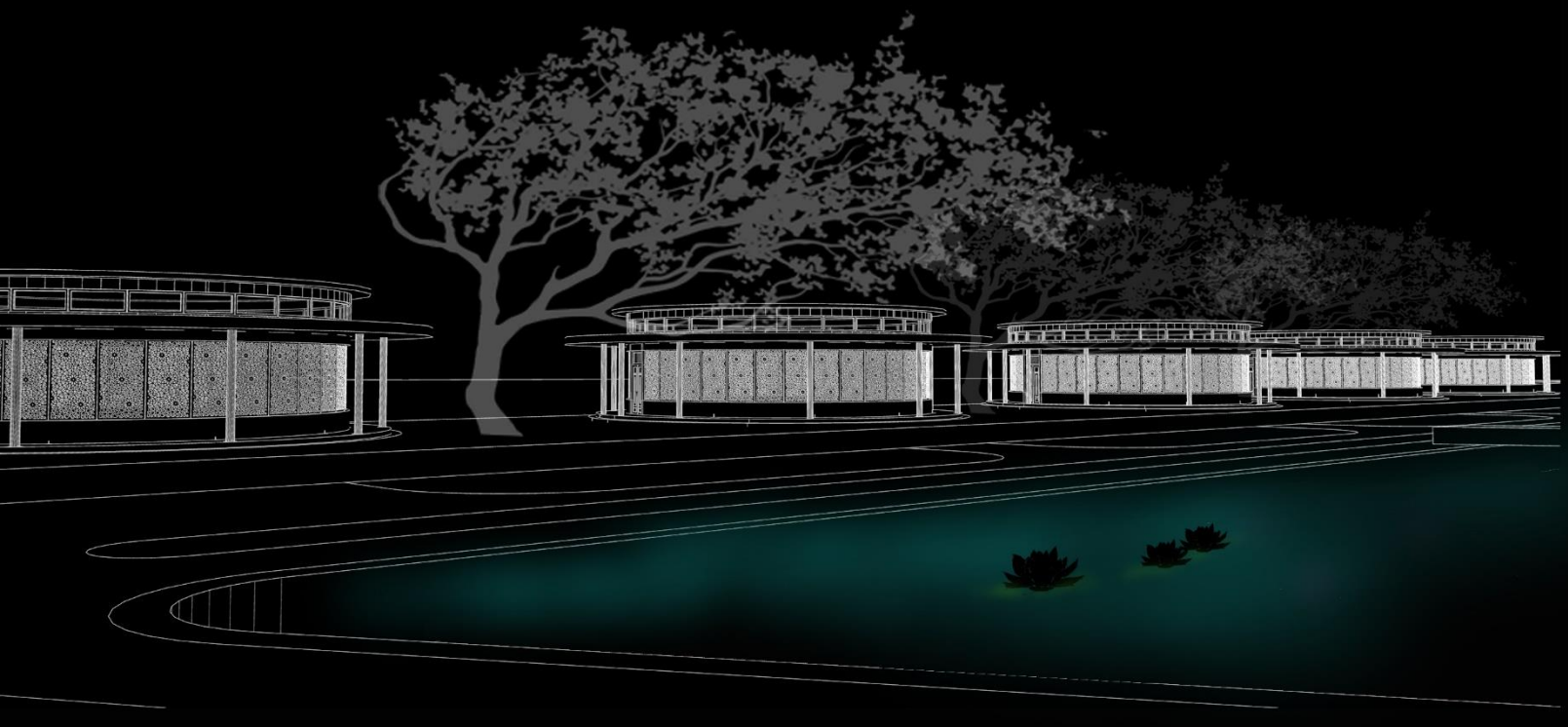
WATERFRONT CULTURAL PARK

VELI - KERALA - INDIA



CRITERIA AND PROJECT FOR THE URBAN OPEN PUBLIC SPACE

"WATERFRONT CULTURAL PARK"

IN

VELI, KERALA, INDIA

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POLITECNICO DI TORINO

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Table of Contents

1 CHAPTER 1: INTRODUCTION 1

1.1 Abstract: 1

1.2 Aim 2

1.3 Objectives 2

1.4 Scope and Limitations 2

1.5 Methodology 3

2 CHAPTER 2 – PUBLIC SPACE 3

2.1 INTRODUCTION 3

2.2 A BRIEF STUDY ON THE IMPORTANCE AND BENEFITS OF PUBLIC SPACES 4

2.2.1 WHY PUBLIC SPACES ARE IMPORTANT? 6

2.2.2 BENEFITS OF PUBLIC SPACES 7

2.3 THE SUBDIVISION OF THE URBAN OPEN SPACE 12

2.3.1 PRIVATE 12

2.3.2 PUBLIC 12

2.3.3 COLLECTIVE 12

2.4 COMPONENTS OF URBAN PUBLIC OPEN SPACE 14

2.4.1 Streets 14

2.4.2 Paths 16

2.4.3 Squares 17

2.4.4 Pocket parks 18

2.4.5 Recreation Grounds 19

2.4.6 Open loose space 20

2.4.7 Parks 21

2.4.8 Waterfront 22

2.5 FUNCTIONAL PARAMETERS OF THE OPEN PUBLIC SPACE 23
2.6 ENVIRONMENTAL PARAMETERS OF THE OPEN PUBLIC SPACE ...23
2.7 ATTRIBUTES OF A GOOD PLACE.....25
2.7.1 Primary qualities of a great place.....26
2.7.2 PLACE DIAGRAM 28
2.8 WHAT MAKES A GOOD PUBLIC SPACE?.....29
2.8.1 Feels welcoming and comfortable.....29
2.8.2 Capitalizes on sensorial surroundings.....30
2.8.3 Values authenticity and originality 30
2.8.4 Has a positive and memorable identity 30
2.8.5 Strengthens community bonds 31
2.8.6 Respects narratives and memories 31
2.8.7 Encourages user ownership.....31
2.8.8 Adds value for everyone 32
2.9 CHARACTERISTICS OF GREAT PUBLIC SPACES.....32
2.10 GUIDELINES OF SUCCESSFUL PUBLIC SPACE.....33
2.11 ELEMENTS.....34
2.11.1 Open Cultural Space 34
2.11.2 Urban Recreational spaces.....35
2.11.3 Urban Trees and Planting.....36
2.11.4 Urban Landscape 37
2.11.5 Waterbody Roles.....38
3 CHAPTER 3: PUBLIC SPACE AND THE SUSTAINABLE CITY 39
3.1 INTRODUCTION.....39
3.2 SUSTAINABLE APPROACH.....39
3.2.1 Social Sustainability 39

Social Instructions 40
3.2.2 Economical Sustainability 40
Economic Instructions 41
3.2.3 Environmental sustainability 41
3.2.4 Functional Sustainability 41
Functional instructions 42
3.2.5 Aesthetical Sustainability 42
Aesthetical Instructions 43
3.2.6 Physical sustainability 43
Physical instructions 43
3.3 SUSTAINABLE LANDSCAPE DESIGN ELEMENTS 44
3.3.1 Rainwater/greywater harvesting 45
3.3.2 Native plants 45
3.3.3 Urban Farming 46
3.3.4 Rain Gardens 46
3.3.5 Drip irrigation 47
3.3.6 Materials: 48
3.3.7 Retaining Site Elements 48
3.3.8 Planting 49
3.3.9 Water 49
3.3.10 Energy 49
3.3.11 Color 50
3.3.12 Form 50
3.4 PRINCIPLES FOR SUSTAINABLE URBAN DEVELOPMENT 51
4 CHAPTER 4 - PUBLIC SPACE PLAY'S VITAL ROLE IN PANDEMIC 54

4.1 INTRODUCTION 54
4.2 DESIGN CRITERIA BASED ON A PANDEMIC SITUATION 59
4.3 RETHINKING STREETS IN A TIME OF PHYSICAL DISTANCE 60
EMERGING PROTOCOLS, MATERIALS AND DESIGN 61
4.4 HEALTHY CITY 68
4.4.1 GREEN SPACE 71
4.5 MENTAL HEALTH 74
5 CHAPTER 5 - PUBLIC SPACE OF INDIA 75
5.1 PUBLIC SPACE AND LIFE IN AN INDIAN CITY 75
5.2 PANDEMIC SITUATION IN INDIA 80
5.3 WHY DO SPACES FAIL? 85
5.4 HOW DO PUBLIC SPACES SUCCEED? 88
5.4.1 Enhance Streets as Public Spam 88
5.4.2 Create Parks and Squares as Multi-Use Destinations 89
5.4.3 Build Local Economies through Markets 90
5.4.4 Design Buildings to Support Places 91
5.4.5 Multifunctional Spaces 92
5.4.6 Lighter, Quicker, Cheaper: 93
6 CHAPTER 6 – CASE STUDIES 94
6.1 SUPERKILEN URBAN PARK 97
6.2 POP UP INTERVENTIONS 102
6.3 THE GASTRO SAFE ZONE: 104
6.4 OCT OH BAY Retail Park 107
6.5 NRITYAGRAM, DANCE VILLAGE 111
6.6 CASE STUDY INFERENCE 118
7 CHAPTER 7 - SITE ANALYSIS - INDIA 119

7.1 INTRODUCTION TO SITE – TRIVANDRUM, KERALA, INDIA 120
7.2 SITE LOCATION & DETAIL 121
..... 122
7.3 SITE APPROACH AND SURROUNDINGS 124
7.4 PROPOSED SITE – VELI -EXISTING CONDITION 125
7.5 SITE CONNECTIVITY AND MOBILITY 137
7.6 LANDUSE COVER & SITE IMAGEABILITY 138
7.7 SUN PATH AND WIND DIRECTION 139
7.8 NOISE ANALYSIS 140
7.9 SERVICES 141
7.10 PARKING AND PEDESTRIAN TRAFFIC 142
7.11 VELI CLIMATE AND WEATHER CONDITIONS 143
7.12 CONTOUR AND VEGETATION 144
7.13 VIEW OF THE SITE 145
7.14 SITE PHOTOS 146
7.15 SWOT ANALYSIS 147
7.16 SITE FUNCTIONS 152
7.17 SITE ZONING 155
8 CHAPTER 8 – CONCEPT AND DESIGN EVOLUTION 156
9 CHAPTER 9 – SITE DIMENSION 161
10 CHAPTER 10 – WATERFRONT CULTURAL PARK- MASTER PLAN 162
10.1 THE RED SQUARE 165
..... 167
10.2 THE ORANGE SQUARE 168
10.3 THE YELLOW SQUARE 169
10.4 THE GREEN SQUARE 171

10.5 THE PINK SQUARE 174
10.6 SITE ACCESSIBILITY 176
11 SITE SECTION AND DETAIL 177
12 PANDEMIC DESIGN SOLUTIONS 191
13 SITE VIEWS 194
14 CHAPTER 11 – CONCLUSION 195
15 CHAPTER 12 – REFERENCE & BIBLIOGRAPHY 197

List of Figures

Figure 1: Eiffel Tower in Paris 4
Figure 2 Sydney Opera House, Australia 5
Figure 3 Portland food cart pods 7
Figure 4 Hollywood Walk of Fame Master Plan, Hollywood, California Conceptual 7
Figure 5 La Rambla, Street in Barcelona, Spain 8
Figure 6 Holi festival in North India 8
Figure 7 Streets of Seattle with "Pop-Up! Street Furniture" 9
Figure 8 Athens Street night 9
Figure 9 Superkilen urban park, Copenhagen, Denmark 10
Figure 10 Urban Amenities / Sports Lot Caracas, Republic of Venezuela 11
Figure 11 Urban Bloom, Shanghai, China 11
Figure 12 Hussein Bin Talal Park, Grozni, Russia 11
Figure 13 Categorization of public open spaces based on size and coverage area 14
Figure 14 Streets of Mykonos, Greece 15
Figure 15 Maggie Daley Park, Chicago, United States 16
Figure 16 Example of a Square 17
Figure 17 Israels Plads square in Copenhagen 17
Figure 18 Example of Pocket Park 18
Figure 19 Paley Park New York 18
Figure 20 Bredäng Park, Stockholm, Sweden 19
Figure 21 V-Plaza Urban Development, Kaunas, Lithuania 20
Figure 22 Pengbu Central Commons, China 21
Figure 23 Adapted from Önen (2007), the effects of water as a planning element in urban area 22
Figure 24 Zhangjiagang Town River Reconstruction, China 22
Figure 25 LAVA and Aspect Studios' Central Park masterplan in Ho Chi Minh City, Vietnam 26
Figure 26 Hyperlane Linear Sky Park, China 26
Figure 27 Playground in The Bronx 26
Figure 28 The Social Unit, West Bund | Shanghai, China 27
Figure 29 Place Diagram PPS 28
Figure 30 Sundance Square, US 32
Figure 31 Concept of a great public place 33
Figure 32 Tianjin Cultural Park, China 34
Figure 33 Pingjiaqiao lu, Shanghai, China 35
Figure 34 Pixeland activity zone, China 35
Figure 35 21st century approach to urban trees 36
Figure 36 Azatlyk Square, Russia 37
Figure 37 Garden Hotpot Restaurant, USA 38
Figure 38 Common three-ring sector view of sustainable development 39
Figure 39 Baptisia 'Purple Smoke' is a native, drought-tolerant perennial 44
Figure 40 French garden, Sydney 44
Figure 41 Arizona National Scenic Trail (AZT) Remote Rainwater Collector 45
Figure 42 Expo Milão 2015 46
Figure 43 Urban landscape: Rain Garden 46

Figure 44 Drip irrigation in raised bed garden 47
Figure 45 Public Toilets in Zuzhai Village 48
Figure 46 Reused runway used for main pedestrian path at Xuhui Runway Park 48
Figure 47 Buscot Park, England 49
Figure 48 Cassiobury Park, London 49
Figure 49 Proposed Solar Panels at Freshkills Park 49
Figure 50 Camden school 50
Figure 51 Levinson Plaza, USA 50
Figure 52 Urban sustainability_©https://www2.helsinki.fi 51
Figure 53 Public space during pandemic 54
Figure 54 Healthy urban design: the intersection of urban design, health, and nature 59
Figure 55 Masked citizen: new relations between people in public space 60
Figure 56 Milan, Italy 62
Figure 57 Berlin, Germany 64
Figure 58 Dallas, TX, USA 66
Figure 59 New York City, USA 67
Figure 60 Four guiding concepts for developing and evaluating public places are presented in the Framework 70
Figure 61 Quality green public space chart- Adapted from NSW Greener Places: Establishing an urban Green Infrastructure policy for New South Wales. (2017). 71
Figure 62 Taj Mahal, India 75
Figure 63 Major cities of India 77
Figure 64 Major cities and the public spaces 78
Figure 65 A typical street section with shops, informal vendors, customers and vehicular traffic 81
Figure 66 Demarcated seating areas of different sizes and distant walking trails in public parks. Place reference: Central Park, Jaipur 82
Figure 67 A typical Indian sabji mandi post rearrangement and streamlining of materials and movement 83
Figure 68 Parking lots alternatively used as extended dine-outs. Place reference: Church Street, Bengaluru 84
Figure 69 India Gate, India 85
Figure 70 Bengaluru, Commercial Street, India 85
Figure 71 City bird Sanctuary, Chandigarh, India 86
Figure 72 Jetty Garden, India 86
Figure 73 Bengaluru, Cubbon Park, India 86
Figure 74 Traffic in India 87
Figure 75 Gujarat street, India 87
Figure 76 Mumbai, India 87
Figure 77 Tenri Station Plaza CoFuFun,Japan 89
Figure 78 Peoples Gas Holiday Market, Downtown Pittsburgh 90
Figure 79 Building 12 Qplex, China 91
Figure 80 Pegasus Trail, Chongqing, China 92
Figure 81 San Francisco's Secret Mosaic Staircase 93
Figure 82 Superkilen, Copenhagen, Denmark 93

Figure 83 Superkilen, Copenhagen, Denmark. 97
Figure 84 The Red Square Superkilen, Copenhagen, Denmark 98
Figure 85 The Black Square Superkilen, Copenhagen, Denmark 99
Figure 86 The Green Square Superkilen, Copenhagen, Denmark 101
Figure 87 Outdoor yoga domes, Toronto, Canada 102
Figure 88 POP up Intervention, Geodesic dome, Toronto, Canada 103
Figure 89 Dining set, The Gastro Safe Zone: A public space proposal, Czech Republic 106
Figure 90 OCT OH BAY Retail Park, Shenzhen, China 107
Figure 91 streamlined, curved form OCT OH BAY Retail Park, Shenzhen, China 108
Figure 92 Waterfront retail park OCT OH BAY Retail Park, Shenzhen, China 108
Figure 93 Event area, OCT OH BAY Retail Park, Shenzhen, China 109
Figure 94 Organic shapes blend in with nature, OCT OH BAY Retail Park, Shenzhen, China 109
Figure 95 Top View, OCT OH BAY Retail Park, Shenzhen, China 110
Figure 96 Giant Wheel, OCT OH BAY Retail Park, Shenzhen, China 110
Figure 97 NRITYAGRAM, DANCE VILLAGE, Bangalore, India 111
Figure 98 Nrityagram Dance Village site plan, Bangalore, India 112
Figure 99 Gurukul (Studio) Nrityagram, Bangalore, India 113
Figure 100 Outdoor Performing Space, Nrityagram, Bangalore, India 114
Figure 101 Classroom, Nrityagram, Bangalore, India 114
Figure 102 Dining space, Nrityagram, Bangalore, India 115
Figure 103 Cottages and seating space , Nrityagram, Bangalore, India 115
Figure 104 Temple , Nrityagram, Bangalore, India 116
Figure 105 Yoga Studio , Nrityagram, Bangalore, India 116
Figure 106 Amphitheatre, Nrityagram, Bangalore, India 117
Figure 107 Veli Shangu sculpture 123
Figure 108 Veli Walkway 123
Figure 109 Sculpture 123
Figure 110 Floating Bridge 123
Figure 111 Kochuveli beach 123
Figure 112 Veli Lake 123
Figure 114 Site Surroundings 124
Figure 113 Veli Proposed site Current Situation 124

1 CHAPTER 1: INTRODUCTION

1.1 Abstract:

The public space is a very important feature of the city. Public space is responsible for the behavior in the cities and to showcase its strength to the world. It will aid in the composition of a city and country identity to portray them to the public. A healthy environment leads to a healthy existence. It is a vital aspect in the building up of a city that can be traced back to ancient times.

These types of spaces help connect the various neighborhoods residing together and promote social connection and even a common, local personality. For tourists and locals, public spaces indicate and make up the graphic of the location because these are the most widely accessed places with which they can engage. Along with the basic benefit of the area, open public spaces provide an opportunity to connect, greet, and enjoy it. i.e., space-sharing. The metropolitan areas are known for their public places which were with a lack of Indian cases.

This thesis paper covers the "CRITERIA AND PROJECT FOR THE URBAN OPEN PUBLIC SPACE". In addition, the paper includes the role of public space inside India. The study part includes typically the characteristics of your excellent public space and even how the 'external room' may be more effective and successful with the aid of physical and social factors. Typically, the focus is usually to design an external room according to sustainability, existing pandemic situation, healthy city, social inclusion, urban green, and even communication.

Analysis of certain case studies helps to understand how these spaces have been utilized and what they lack for the betterment of society. The thesis aims to bring people together to interact and explore their mutual interests. The urban landscape also creates a platform to encourage psychological well-being, social activities, physical exercise and play, communication, and social integration for the improvement of society.

1.2 **Aim**

The goal is to investigate the notions of open public space and how it contributes to the enablement of public life, social integration, and people's capacity to identify with their surroundings. The major goal is to establish a long-term design solution for the present pandemic crisis that will help people's mental and physical health.

1.3 Objectives

- To create a space that is useful and visually pleasant. The provision of shade, shelter, resting points, and seating, make such places more attractive to use, particularly for the ageing population.

- To establish a sense of self and location while also contributing to the broader image of the city.

- To achieve environmental sustainability and low-cost maintenance through environmentally friendly design strategies.

- Creating a small-scale public space network that connects to a larger-scale public space network, from the porch to the countryside, can be quite beneficial.

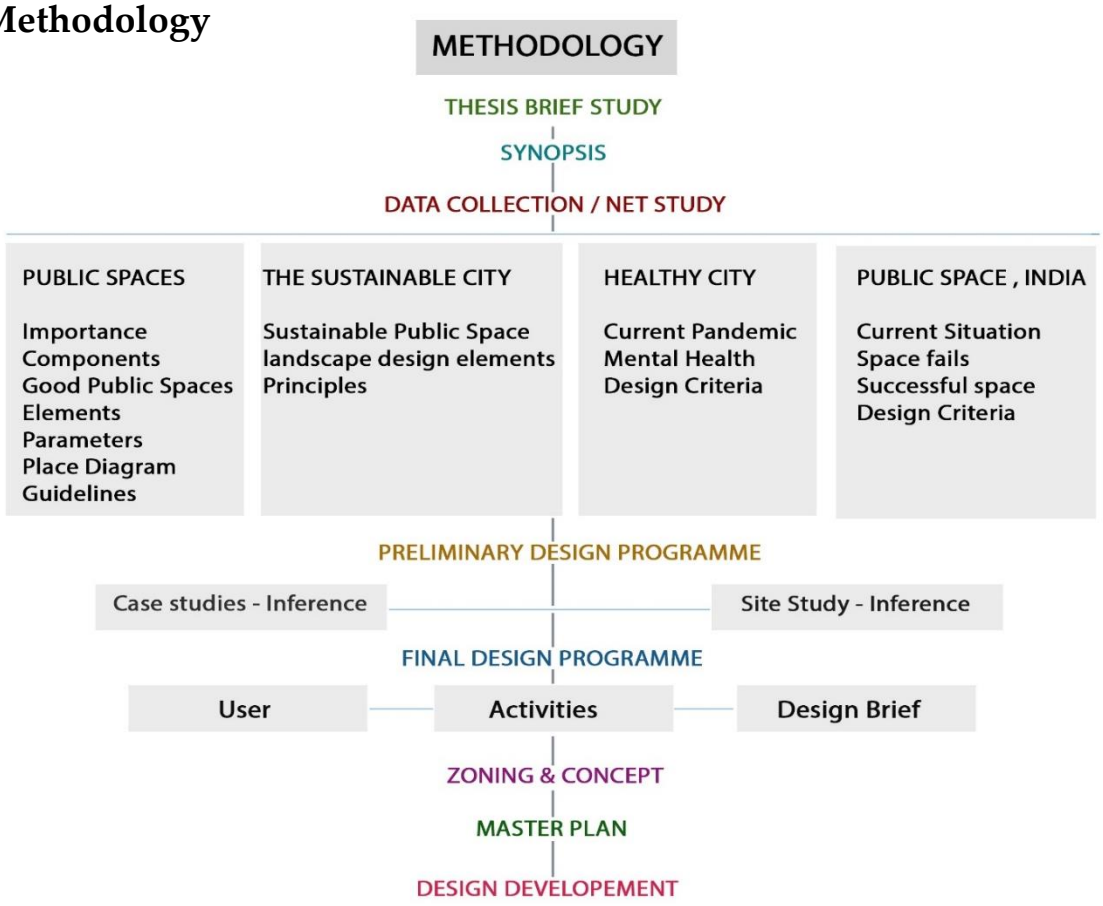
- To design a space that encourages psychological well-being, social activities, physical exercise and play, communication, and social integration for the betterment of society.

1.4 Scope and Limitations

- The research aims to study the concepts of open public space and how it is important and benefits people and the city. The paper also discusses the guidelines to build successful public space helps to implement in the design.
- The research aims to unravel various layers like a current pandemic, sustainability, and a healthy city.

- The area of the study is limited.
- The main focus is on to Southern part of India which lacks a cultural landmark.

1.5 Methodology



2 CHAPTER 2 – PUBLIC SPACE

2.1 INTRODUCTION

Public space is a hub for contacts and meetings, as well as public and private interactions in cities. Social gatherings, exercise, play, amusement, and creativity are all possible in public spaces. Public space is used for a plethora of events, social activities, and public expression. It must be a meeting place, a space where people can share their freedom and equality.

All open public space, namely traffic areas and other common places, is included in urban public space: squares, parks, green areas, city woods, cemeteries, waterfronts, and similar. Open public spaces also play a critical role in integrating public structures' image and function, including courts, museums, theatres, libraries, markets, public schools, and public hospitals.[1]

2.2 A BRIEF STUDY ON THE IMPORTANCE AND BENEFITS OF PUBLIC SPACES.

When we think about it, we discover that while the basic concept of what a city is, such as its scale and population density, is shared around the world, the image of a town or city is inextricably linked to what it delivers to its citizens as part of its unique experience. This one-of-a-kind experience is embedded in the gaps in between where people interact with their city. City streets, parks, playgrounds, waterfronts, promenades, transportation terminals, common service areas, worshipping areas, and cultural city centres are

Figure 1: Eiffel Tower in Paris

[1] Liljana Jankovič Grobelšek. (2015, December 31). *Public spaces and private spaces open to the public: Spatial Planning and Development Using Urban Design Guidelines*. Open Urban Studies and Demography Journal. https://benthamopen.com/FULLTEXT/OUSDJ-1-23

examples of public spaces wherein people from diverse walks of life and backgrounds come together and participate with the city. A city's identity is rooted in the areas that give it its distinct personality.

The Times Square of New York, the Eiffel Tower of Paris, the Marine drive in Mumbai, or the Sydney Harbor in Sydney are the iconic images that instantly come to mind when one thinks of any of these cities. Over the years, these places have remained constant in the ever-changing and growing components of the cities. These bustling areas with a varied range of activities form the city's common ground, accommodating a varied range of people and providing them with their own private space inside the huge urban expanse in which to interact, indulge, or simply be. People connect these unique areas in their image of the city; therefore, these landmark spaces have become attractions in and of themselves.

Figure 2 Sydney Opera House, Australia

As a result, they see a lot of foot traffic from both locals and tourists. Tourists come to observe and gain a sense of the city, while locals come for their everyday routine and recreational activities. The places become spaces of performance that unravel the activity

in the city. The public spaces are intrinsically related to the social, cultural, and economic factors shaping the life of people in the city.

Active public spaces, such as playgrounds, parks, and waterfront promenades, have consistently been shown to increase the value of an area in real estate studies. Residents esteem these public amenities because they provide much-needed break spaces between their homes, offices, crowded commuting districts, or commercial zones. These are the areas where individuals can relax, reconnect with nature, and find some sort of mental quiet amid the city's rush and bustle.[2]

2.2.1 WHY PUBLIC SPACES ARE IMPORTANT?

- Provision of appealing living, working and playing environment
- Encourage people to have a healthy lifestyle and well-being through active and passive pastime
- (leisure), is a type of organized activity, walking, and social interaction.
- Destination for visitors and tourists
- High-quality public space attracts trade and investment
- Commitment to the scene and visual convenience
- Opportunity for informal learning
- central location for events and activities
- Opportunity for community preservation and participation increased public awareness and upgrading.[3]

[2] Importance of public spaces in any urban fabric. (n.d.). https://www.re-thinkingthefuture.com/rtf-fresh-perspectives/a1546-importance-of-public-spaces-in-any-urban-fabric/

3 Sambhav Jain, S. J. (2019, April 6). Public spaces. Issuu. https://issuu.com/sambhavjain4/docs/paper1

2.2.2 BENEFITS OF PUBLIC SPACES

2.2.2.1 Support local economies

Jobs are created where there is a thriving business community, which allow people to save and invest in real estate. Property taxes from these communities, are used to bring about the funding of parks, trees, and improve infrastructure in commercial zones. All of this results in improved quality of living for urban residents, and that means residents are happy to stay in their communities and support a strong local business economy.[4]

Figure 3 Portland food cart pods

2.2.2.2 Attract business investments

By drawing more visitors to a location, a high-quality public environment can enhance trading. New civic squares, improved pedestrianization, clearer signage, and better arrangement of street furniture in Coventry have made the city centre a much more appealing place to visit, resulting in a 25% increase in footfall, which has benefited local trade significantly.[5]

Figure 4 Hollywood Walk of Fame Master Plan, Hollywood, California Conceptual

[4] Jacobs, J. (2017, December 20). *Business case: How the public realm and the urban economy go hand in hand.* https://thediscourse.ca/scarborough/business-case

[5] February 02, 2021 | B. J. T. T. (2021, February 2). Why investing in public space matters for cities and real estate developers. Gensler. https://www.gensler.com/blog/why-investing-in-public-space-matters-for-cities-and-real

2.2.2.3 Attract tourism

- Strong public spaces and strong neighbourhoods are better able to absorb tourists and help visitors relate to the culture and identity of a place.

- A Placemaking strategy for tourist development may not only assist assure economic success and minimizing the effect, but it can also build local capacity for managing, maintaining, and evolving these destinations throughout time.

- In these wonderful locations, people contribute to the elevation of the level of experiences shared among them. They feel compelled to connect more deeply with their surroundings, to other fellow people in their lives, and even to express themselves.[6]

Figure 5 La Rambla ,Street in Barcelona, Spain

2.2.2.4 Provide cultural opportunities

One of the benefits of good public space is that it may be used for social gatherings. Festivals and other activities that are well-managed can have a good impact on the urban city by bringing communities together and providing social, financial, and environmental advantages. They can revive the type of civic environment that has been forgotten in far too many of our cities.[7]

Figure 6 Holi festival in North India

[6] Cynthia Nikitin. (2016, April 13). *Obiaa.com*. https://obiaa.com/wp-content/uploads/2020/09/TA3-Placemaking-to-Attract-Tourists.pdf

[7] Woolley, H., & Rose, S. (n.d.). The value of Public Space - Design Council. https://www.designcouncil.org.uk/sites/default/files/asset/document/the-value-of-public-space1.pdf

2.2.2.5 Encourage volunteerism

Volunteers have been a huge help to urban parks, according to most people. They supervise playgrounds, guide nature walks, adopt flower plots, participate in clean-ups, and assist park offices around the country with a variety of tasks.

Successful Park volunteer programs have a plethora of benefits, from fostering community "ownership" and increasing park use to identifying and developing future leaders and park benefactors.[8]

Figure 7 Streets of Seattle with "Pop-Up! Street Furniture"

2.2.2.6 Reduce crime

Figure 8 Athens Street night

[8] *Increasing volunteerism in Parks.* RSS. (2008, December 31). https://www.pps.org/article/increasingvolunteerism

- **Community gardens reduce crime:** A communal garden was established on the site of an old garbage dump in a residential area in southern Ontario, Canada, which had previously been a hotspot for local criminals and had been shunned by the neighborhood's 1200 people. Other advantages of the garden include increased interaction amongst different ethnic groups in the town.
- **The benefits of increased lighting**: By boosting the illumination of its street markets and lengthening walkways from 2m to 3m to offer pedestrians more room, Birmingham City Council was able to mitigate theft in shopping bags by 70%.
- **Reducing crime at bus stops**: A study carried out in Los Angeles in the late 1990s discovered that the location and visibility of bus stops can affect the rate of crime. Criminal conduct was less likely where bus stops were visible. Bus stops also provided shelter to users and were located on streets with much car traffic or activity.[9]

2.2.2.7 Improve pedestrian safety

One common reason for altering the balance of a particular street area is to create additional space for pedestrian mobility, allowing people to easily choose their walking pace or groups without colliding with other pedestrians.

- City sidewalks aren't only for pedestrians; they're also social gathering spots where people congregate to meet up or converse with friends, meander, window shop, or simply watch the world go by.
- The provision of amenities that support pedestrian activities is another cause to alter the balance of the gap between pedestrians and cars.[10]

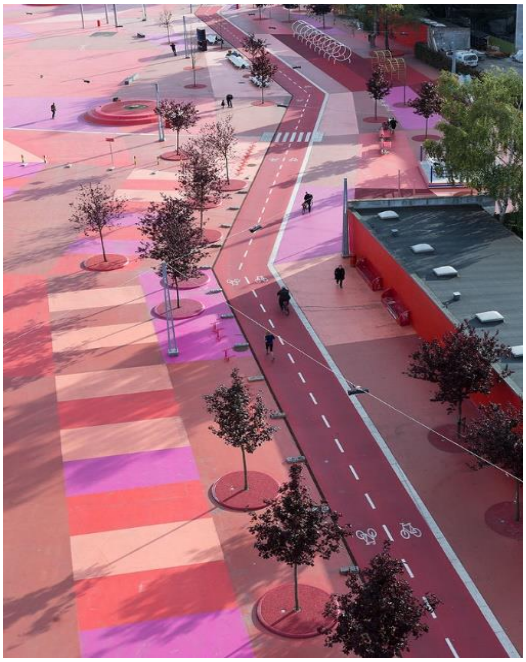


Figure 9 Superkilen urban park, Copenhagen, Denmark

[9] Woolley, H., & Rose, S. (n.d.). The value of Public Space - Design Council. https://www.designcouncil.org.uk/sites/default/files/asset/document/the-value-of-public-space1.pdf Architects, J. (2019, April 19). How landscape architecture and urban design can reduce crime. Land8. https://land8.com/how-landscape-architecture-and-urban-design-can-reduce-crime/

[10] project for public spaces. (n.d.). *Balancing street space for pedestrians and vehicles*. https://www.pps.org/article/balancing-street-space-for-pedestrians-and-vehicles

2.2.2.8 Increase use of public transportation

Transportation is a means to an end, not an end in itself, for achieving vital goals such as economic productivity and social participation.[11]

Figure 10 Urban Amenities / Sports Lot Caracas, Republic of Venezuela

2.2.2.9 Improve public health

Figure 11 Urban Bloom, Shanghai, China

We can enhance our mental and physical health by walking more, playing sports, or simply enjoying a green and natural environment if we have access to well-maintained, good-quality public areas. To put it another way, our public spaces help in the fight to reduce obesity and disease.

2.2.2.10 Improve the environment

- The areas with the most trees had the best carbon-storage capacity and the least amount of surface water draining down into drains (allowing sewers to cope better with water flow and minimizing flood problems).

Figure 12 Hussein Bin Talal Park, Grozni , Russia

[11] project for public spaces .*Streets as places: How transportation can create a sense of community*. RSS. (n.d.). https://www.pps.org/article/streets-as-places-how-transportation-can-create-a-sense-of-community

- **Vegetation,** whether in public spaces or private gardens can help to amend this discrepancy. It provides a variety of vital environmental benefits to metropolitan areas, including air cooling and pollution absorption.

- Vegetation also allows individuals to get closer to 'nature,' which has a positive impact on mental health. There is a simple pleasure in seeing trees, squirrels, birds, ladybirds, and other fauna in an urban setting. This constitutes a habitat corridor or green corridor for the fauna.[12]

2.3 THE SUBDIVISION OF THE URBAN OPEN SPACE

2.3.1 PRIVATE	2.3.2 PUBLIC	2.3.3 COLLECTIVE
•Designed for limited use •Ownership carries charges and responsibilities	•Designed for use by all audiences	•It can be public, private, or mixed (public-private) property •Designed and managed for a use reserved for a restricted and defined public (e.g. condominium space, defined groups of people)
The Concept of Property can be of three types: • PRIVATE PROPERTY, (Accessible only if you own it or licensed by the owner); • PUBLIC PROPERTY, (Control and accessibility need rules and policies) • COLLECTIVE OWNERSHIP (Mixed property, public or private) and can be used by a specific public).		

[12] Woolley, H., & Rose, S. (n.d.). *The value of Public Space - Design Council*. https://www.designcouncil.org.uk/sites/default/files/asset/document/the-value-of-public-space1.pdf

'Public space ' is a space also built by social action, by concrete practices within which to identify and experiment with paths of coexistence and managing conflicts.

The difficulties of urban coexistence, affected by a plurality of practices, cultures and methods of use, increase social and physical fragmentation, affirm the 'society of differences'.

Open Space Categorization Using the Classification Method

Typology and Classification are the two most common strategies to describe open space classification. The term "typology" refers to the various types of open spaces, regardless of their interior characteristics. It primarily focuses on types of open spaces like Plazas, Squares, Streets, Atrium, Residential parks, and Marketplaces using the typological technique. The nature of open space is impacted by several elements, including its location, development level, principal function, and relationship with adjacent land use and urban form.

The classification method for open spaces generally includes three approaches: i) The Hierarchy of Catchments (who will utilize the open space), ii) function (the open space's role), and iii) landscape/environmental character (how the open space looks).

Hierarchy of Open space Catchments: The following factors establish the hierarchy: size, level of use, significance, the average size of the site and how far a user might travel to access it. The distance individuals are willing to go to use open spaces, the area of influence and the origins of users, are reflected in the catchment hierarchy.

Function: To represent its principal usage, every open space is given a functional classification. It is used to specify the intended use of space. A functional classification that takes into account the open space's principal purpose or use inside the network. Three basic classifications of open spaces are identified based on their principal usage and predicted activity are Sporting spaces, Recreational spaces & Natural spaces

Environmental Setting/Landscape: A landscape/environmental classification is assigned to each open space that portrays its primary physical setting. Landscape character is a term used to describe a space's desired landscape and/or vegetation type. [13]

[13] Ashkan Nochian. (2015, December). *A comprehensive public open space ... - researchgate.net*. https://www.researchgate.net/publication/291833200

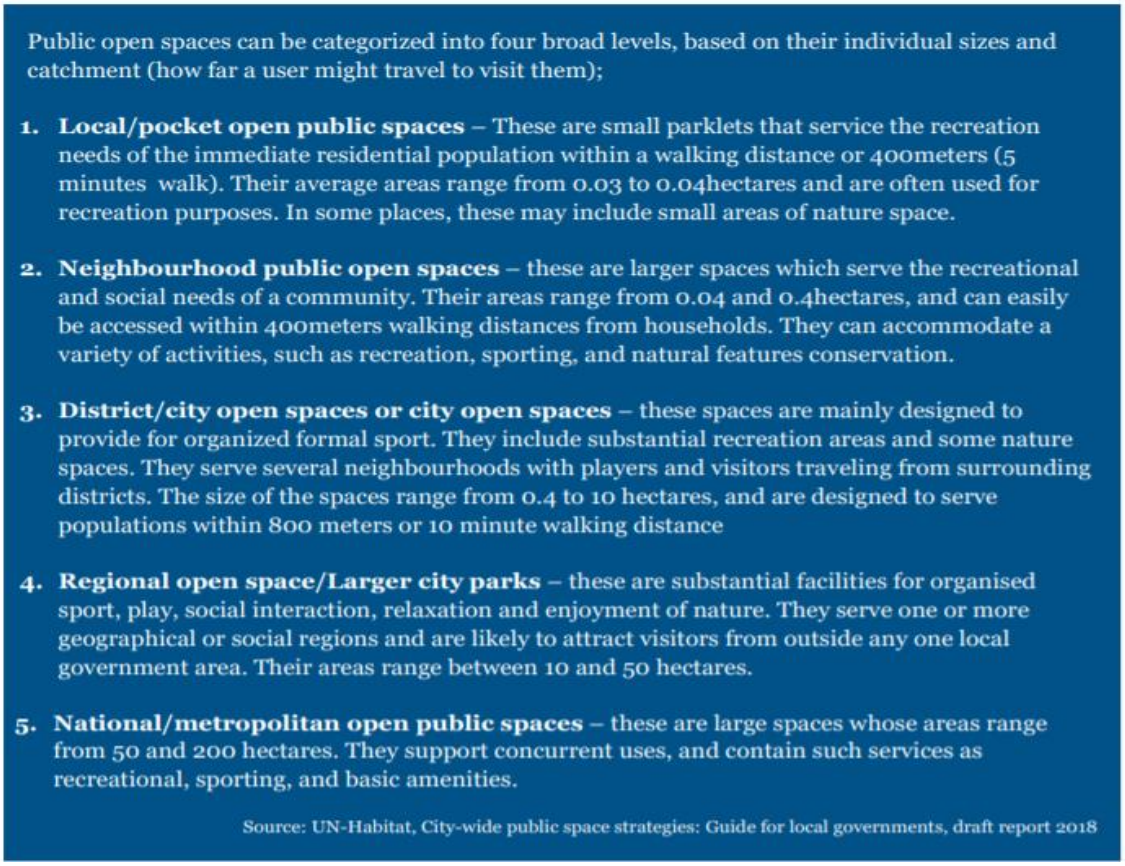


Figure 13 Categorization of public open spaces based on size and coverage area

(Source: UN-Habitat, City-wide public space strategies: Guide for local governments, draft report 2018)

2.4 COMPONENTS OF URBAN PUBLIC OPEN SPACE

2.4.1 **Streets**

- Meeting space, highway space, business space, play area, utility, recycling infrastructure, and green paths are all surrounded by the fronts of buildings.
- In any city, streets are the most common and heavily used public spaces. People can utilize streets and courts as routes and as places to loiter and mingle because they are connected to the movement network.
- They frequently have areas where people may sit and eat their lunch, receive some sun or shade, take shelter during harsh weather, watch their children play, or visit with friends. They also give people the opportunity to observe the world around them.[14]

[14] Department of Environment, Land, Water and Planning. (n.d.). Public spaces. Urban Design Guidelines - Public spaces. https://www.urban-design-guidelines.planning.vic.gov.au/guidelines/public-spaces#street_spaces_and_plazas

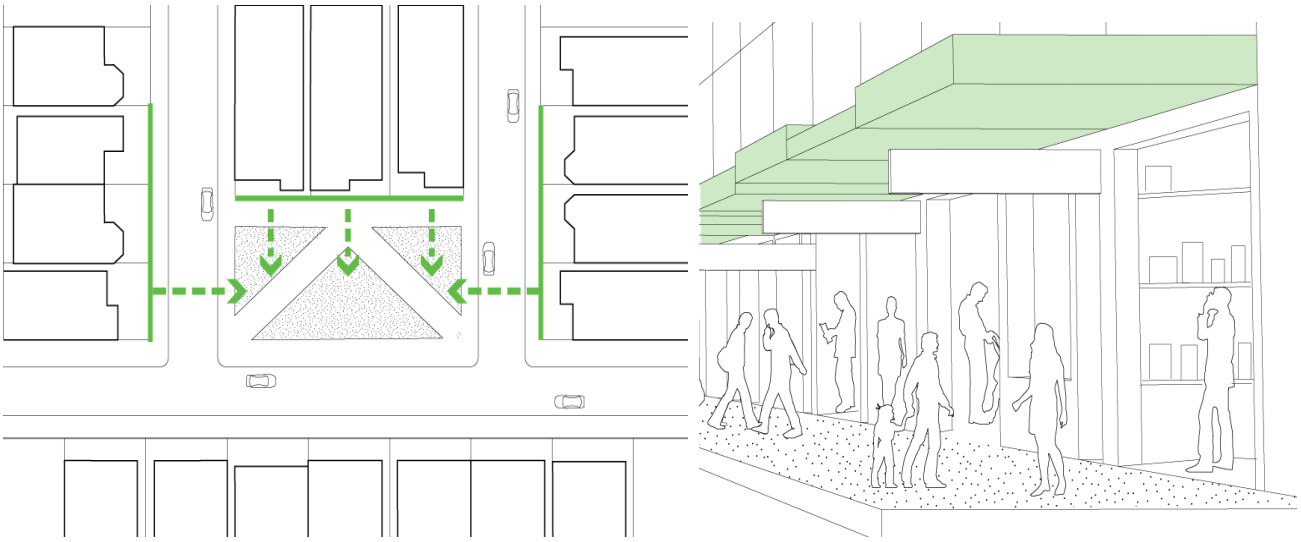


Figure 14 Objectives to establish and support activity around the edges of street spaces and plazas

(Frontmedia Studio. (n.d.). The Essex Design Guide. Urban Public Space | Essex Design Guide. Retrieved from https://www.essexdesignguide.co.uk/design-details/landscape-and-greenspaces/urban-public-space/)

Figure 14 Streets of Mykonos, Greece

2.4.2 Paths

- Neither roadways nor footways; rarely used in new designs, but crucial in connecting streets, squares, and other locations.
- Alleys, streets, railroads, highways, and canals are examples of paths that can be found within a city. The significance of pathways can be determined by their appearance.
- The shared routes must also be regulated for the safety of pedestrians and cyclists about motor vehicles.
- This could be accomplished by defining characteristics such as pavement textures and vegetation, as well as the significance of building facades along the walkways.[15]

Figure 15 Maggie Daley Park, Chicago, United States

[15] Fazlina Khashim, N., Ismail , M., Sanusi Hassan, A., & Al-Ashwal, N. T. (2017, December 1). *A Study on Kevin Lynch's Urban Design Elements: Precinct 9 East Putrajaya*. Retrieved from https://www.tuengr.com/V08/153M.pdf

2.4.3 Squares

- Squares are free spaces within a city that are bordered by buildings and other structures like parks and roads. As a result, they play a vital part in the composition of a city's mass and void. Citizens can use public squares for a diverse variety of outdoor leisure activities and events.
- Public squares that are well-designed add to the aesthetic value of the landscape and contribute also to environmental aesthetics.

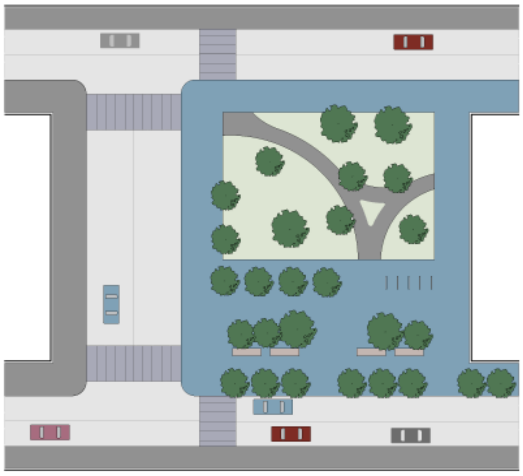


Figure 16 Example of a Square

- Individually valued visual landscapes have favourable psychological effects built upon the users of the location, in addition to establishing the overall city image and a role of social inclusion.[16]

Figure 17 Israels Plads square in Copenhagen

[16] Memluk, M. Z. (2013, July 1). *Designing urban squares*. Intech Open. https://www.intechopen.com/chapters/45404

2.4.4 Pocket parks

- Pocket parks, sometimes known as vest-pocket parks or mini-parks, are relatively small urban open areas. Such mini-parks can be placed within and dispersed across the urban fabric to benefit the immediate community.
- Small event spaces, children's play areas, spaces for relaxing and meeting friends, lunch breaks, and so on are examples of functions.

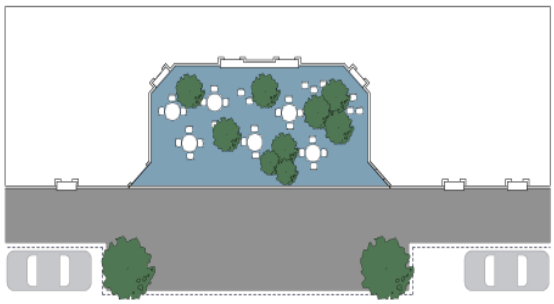


Figure 18 Example of Pocket Park

- Pocket parks are unique and have the fascinating feature of being able to be built out of abandoned lots or otherwise overlooked locations.
- There are already potential to increase the number of penetrable surfaces in the city, which could also serve as patches for various animals, particularly birds.[17][18]

Figure 19 Paley Park New York

17 Jolma Architects. (2018, November 21). Pocket Parks as Urban acupuncture. Land8. https://land8.com/pocket-parks-as-urban-acupuncture/

18 Alison Blake. (n.d.). Pocket Parks - University of Washington. https://depts.washington.edu/open2100/Resources/2_OpenSpaceTypes/Open_Space_Types/pocket_parks.pdf

2.4.5 Recreation Grounds

- It is a provision made for sport, fitness, play.
- A well-designed recreational area may be used as a backdrop for community events and social gatherings. It may be a gathering place that draws people together, boosts community participation, and fosters a sense of belonging.
- They promote the acquisition of critical life skills, habits, and attitudes. City playgrounds make it easier for parents, grandparents, and other caregivers to spend quality time with their children and engage in multi-generational play.
- They improve people's lives by giving them a sense of belonging by bringing them together.[19][20]

Figure 20 Bredäng Park, Stockholm, Sweden

[19] Community playgrounds: Parks & recreation: Landscape structures, Inc.. Community Playgrounds | Parks & Recreation | Landscape Structures, Inc. (n.d.). https://www.playlsi.com/en/playground-planning-tools/resources/park-playgrounds/

[20] Temporary use of the palace precincts by relais+. Landezine. (n.d.). https://landezine.com/landscapes/landscape-architecture/realized-projects/

2.4.6 Open loose space

- Socializing, nature, informal play, informal recreation, landscaping, water management, cultural events, and entertainment are all available here.
- Loose Space looks at the various ways that city dwellers use public space to satisfy their wants and aspirations, using ingenuity and drive.
- The activities that create urban space loss continue to offer cities life and vibrancy, whether they are familiar or surprising, spontaneous or planned, fleeting or long-lasting.[21]

Figure 21 V-Plaza Urban Development, Kaunas, Lithuania

[21] *Quentin Stevens Karen Franck. (2006, November 1). Loose space: Possibility and diversity in urban life: Karen Franck*. Taylor & Francis. https://www.taylorfrancis.com/books/mono/10.4324/9780203799574/loose-space-karen-franck-quentin-stevens

2.4.7 Parks

- It's a formal landscape with provision for a variety of functions depending on size, possibly with open spaces and sports facilities.
- Public parks may be of nearly any size and layout, but they always serve the same purpose: to provide particular and civic benefits to broad public users.
- Parks are important places for contemplation and appreciation of nature and beauty, organized sports and unstructured play, civic and cultural events, as well as education and research.
- Parks develop in response to popular perceptions of nature's significance in human life.[222324]

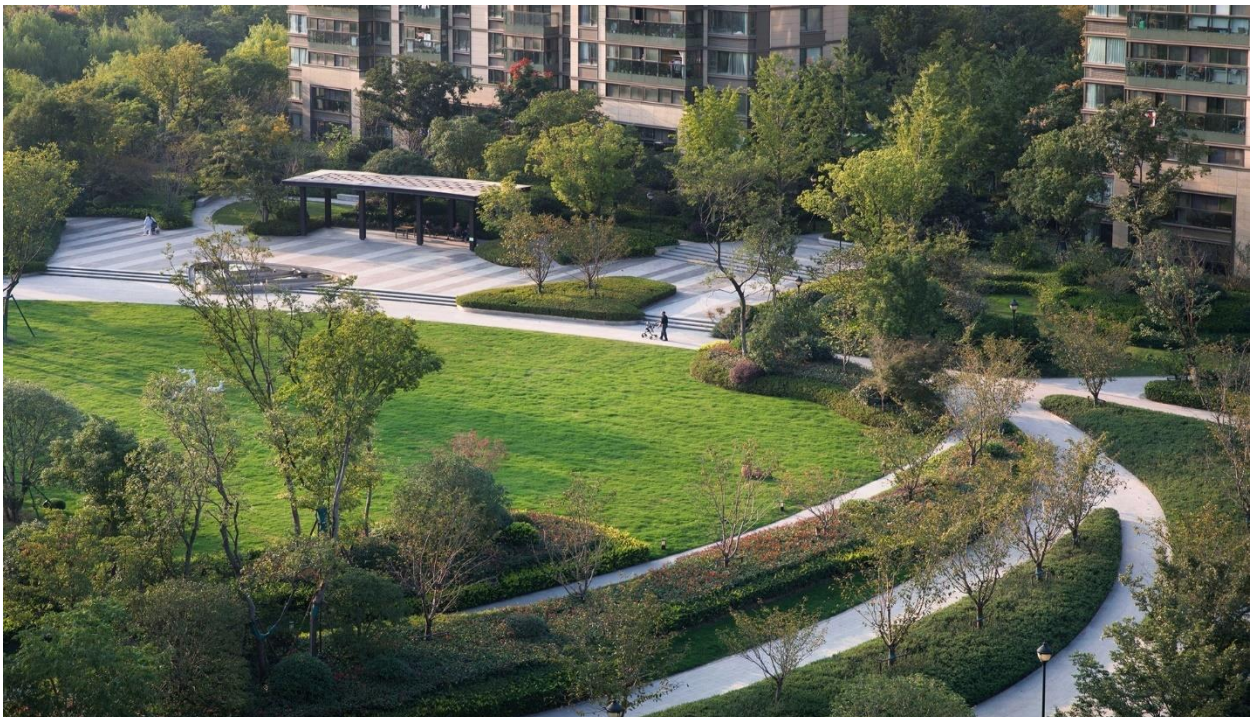


Figure 22 Pengbu Central Commons, China

22Park architecture and Design. ArchDaily. (n.d.). https://www.archdaily.com/search/projects/categories/park
23Paula Pintos. (2021, October 12). Pengbu Central Commons / Plat Studio. ArchDaily. https://www.archdaily.com/970031/pengbu-central-commons-plat-studio?ad_source=search&ad_medium=projects_tab
24 Frontmedia Studio Limited. (n.d.). The Essex Design Guide. Successful Criteria for Public Open Spaces | Essex Design Guide. https://www.essexdesignguide.co.uk/design-details/landscape-and-greenspaces/successful-criteria-for-public-open-spaces/

2.4.8 Waterfront

- The word meaning of waterfront gets through as "the part of a town or city adjoining a river, lake, harbour, etc."
- Water is a crucial planning element since it provides the physical and psychological comfort of humans. Furthermore, it incorporates various aesthetic and utilitarian qualities into the current surroundings.
- Water in urban places has both aesthetic and utilitarian impacts. Climate comfort, circulation impacts, noise control, and recreational effects are the four categories.[25]

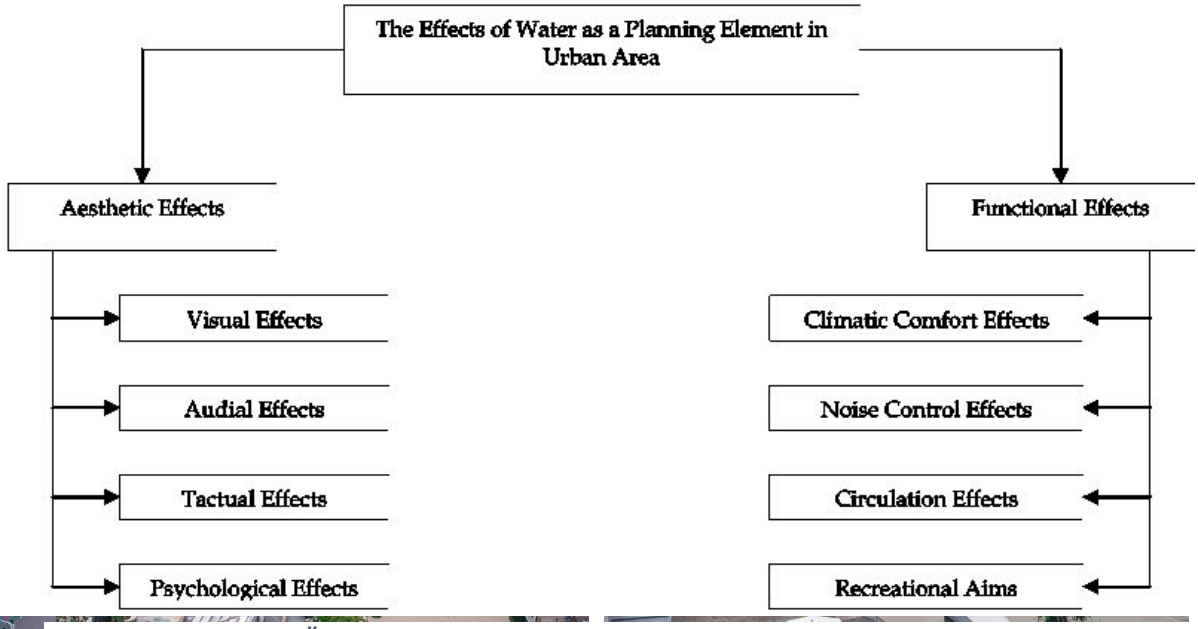


Figure 23 Adapted from Önen (2007), the effects of water as a planning element in urban area

Figure 24 Zhangjiagang Town River Reconstruction, China

[25] Umut Pekin Timur. (2013, July 1). *Urban Waterfront Regenerations*. IntechOpen. https://www.intechopen.com/chapters/45422

2.5 FUNCTIONAL PARAMETERS OF THE OPEN PUBLIC SPACE

- **Green areas established for aesthetic and/or functional purposes to components of representation**: this word refers to green spaces that serve as a predominant ornamental function and frame to spaces, squares, and/or public structures.
- **Publicly owned or managed forested areas**: free or uncultivated plant areas that can be used to create new wooded areas in urban areas based on extension and location.
- **Outdoor areas for recreational play** are used as sports fields, swimming pools, multi-purpose fields, green classrooms, etc.
- **Neighborhood green areas** utilized as small parks and neighbourhood gardens with games for children, dog areas, etc. (equipped with benches, fruition paths, etc.), intended for public use: this includes gardens which, due to their location, dimensional characteristics, and type of equipment perform service functions mainly in favour of residents in the neighbourhood.
- **Cemetery green**, commemorative, monumental green areas that are connected by their specific use, but which can also be an opportunity for the improvement of the city's landscape and its local biodiversity.

2.6 ENVIRONMENTAL PARAMETERS OF THE OPEN PUBLIC SPACE

- **Ecological corridor**: it is a space of natural territory (linear, landscape, and for nuclei connected) that exists in itself or that is created by man through punctual vegetation of plants similar to native vegetation.

- **Green of ecological connection**: green areas that mainly perform a liaison function with natural areas and between natural and rural areas, to ensure the conservation of habitats; can contribute to the creation of cycle paths and "soft" mobility.

- **Green mitigation**: its main function is to filter and mitigate in structural, functional, and landscape terms the impacts deriving from production sites or road infrastructures. it also contributes to the reduction of urban heating and air and noise pollution.

- **Uncultivated green**: green areas in urbanized areas of any size within the municipal boundaries not subject to cultivation or other recurrent agricultural activity or to agrarian arrangements, for which the spontaneous vegetation is not subject to scheduled maintenance and control

- **Historic green villas**, gardens, and parks that have artistic interest, landscape history, and/or that are distinguished by their uncommon beauty; managed directly or indirectly by the Municipality.

- **Technological green**: green areas that perform the main function of improving the climatic, hydraulic, and energy performance of "grey" buildings and infrastructure, vertical green, green roofs, green facades, etc.

- **Dry garden**: garden, designed with species with limited or no irrigation needs and rainwater to survive and the plants are chosen for their drought tolerance.

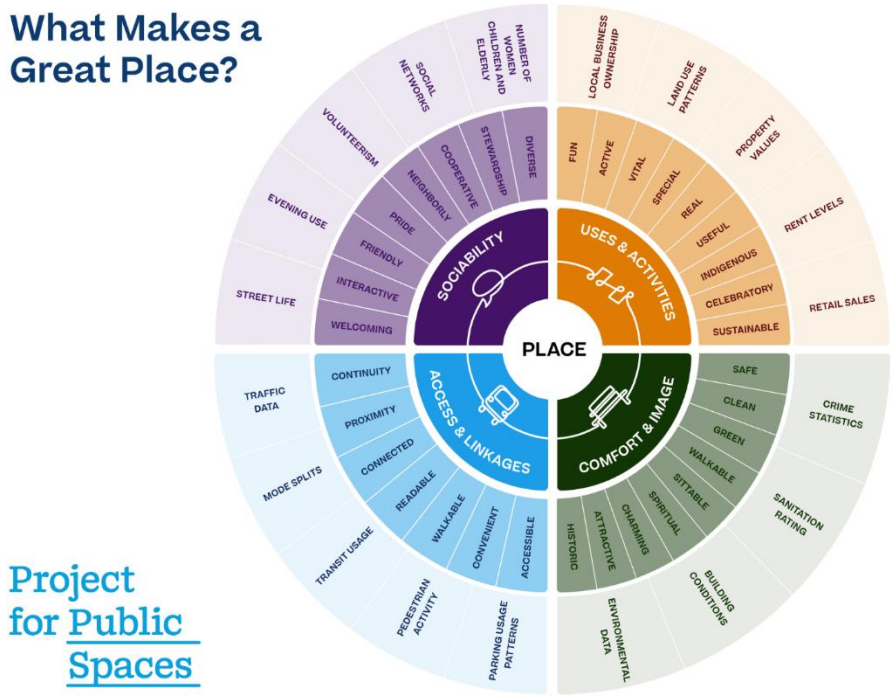
- **Rain gardens**: they are rain gardens, properly designed and built, the excavation hole houses various substrates and inert materials to promote the infiltration and collection of water. Inside are planted various plant species that not only take advantage of the water to grow but also carry out an important process of Phyto depuration of the soil and pollutants present in the water. The plants used, must withstand periods of drought and others of abundant humidity, are mainly herbaceous perennials with ornamental blooms. [26]

[26] Italia Nostra Sardegna. (1970, January 1). *A Ghilarza Si Tagliano gli alberi perché sporcano il Campo Sportivo*. A Ghilarza si tagliano gli alberi perché sporcano il campo sportivo. https://italianostrasardegna.blogspot.com/2020/09/a-ghilarza-si-tagliano-gli-alberi.html

2.7 ATTRIBUTES OF A GOOD PLACE

Projects for Public Spaces

- Public Space Projects (a non-profit organization) bring public spaces alive by planning and developing them in collaboration with the people who utilize them daily. They collaborate to construct community-driven public places all around the world. It's a multidisciplinary group with a zeal for public places.
- They ensure that public spaces flourish long after our work is done by designing effective management plans and boosting the ability of local partners to carry them out as they go about the process of design, community visioning, and implementation.
- The best kind of **public spaces** are ones where everyone gathers to celebrate, social and economic interactions take place, friends' cross paths, and cultures collide. They are the "front porches" of our public institutions, such as libraries, field houses, and schools, where we connect with the government. When these venues are well-designed, they act as a platform for our public life.[27]



[27] *Home - project for Public Spaces*. Home - Project for Public Spaces. (n.d.). https://www.pps.org/

2.7.1 Primary qualities of a great place

Access & Linkages

Accessibility of a place by its connections to its surroundings, both visual and physical. A successful public space is easy to get to and get through; it is visible both from a distance and up close. Physical elements can affect access (a continuous row of shops along a street is more interesting and generally safer to walk by than a blank wall or empty lot), visibility (the ability to see a public space from a distance).

Figure 25 LAVA and Aspect Studios' Central Park masterplan in Ho Chi Minh City, Vietnam

Comfort & Image

When the space is comfortable and presents itself well, it has a good image and will make a key to its success. Comfort includes perceptions about safety, cleanliness, and the availability of places to sit.

Figure 26 Hyperlane Linear Sky Park,China

Uses & Activities

Activities such as free public concerts, friendly social interactions, community art shows are the basic building blocks of great places. Having something to do gives people a reason to come to a place and return. It makes a place special and unique. Activities may also serve to make a location unique or special, which can lead to a sense of community pride.

Figure 27 Playground in The Bronx

Sociability

This is a challenging characteristic to accomplish in a place. When individuals meet and greet their friends, neighbours, and relatives, and feel at ease engaging with strangers, they develop a greater sense of feeling or attachment to their locality and the environment that encourages these sorts of social interactions.[28][29]

Figure 28 The Social Unit, West Bund | Shanghai, China

The design of spaces and equipment must take into account the different habits and needs of individuals and communities that are present together, based on factors such as culture, education, ethnicity, wealth, gender and age.

28What makes a successful place? PROJECT FOR PUBLIC SPACES. (n.d.). https://www.pps.org/article/grplacefeat#:~:text=In%20evaluating%20thousands%20of%20public,one%20where%20people%20meet%20each

29Project for Public Spaces. (2020, February 26). What makes a great public place? ArchDaily. Retrieved from https://www.archdaily.com/914616/what-makes-a-great-public-place?ad_medium=gallery

2.7.2 PLACE DIAGRAM

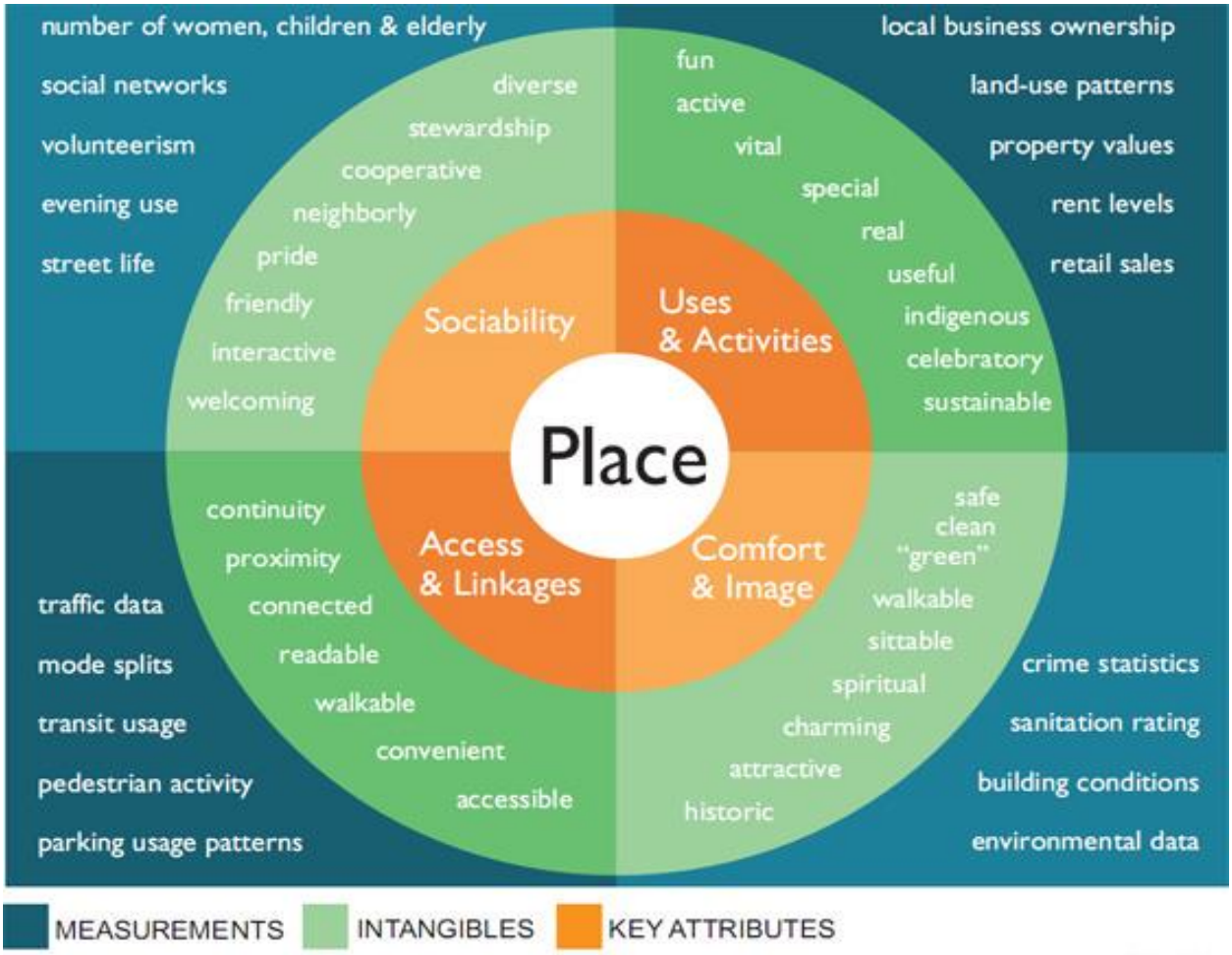


Figure 29 Place Diagram PPS

Consider the diagram's central circle to be a familiar location: a street corner, a playground, or a plaza outside a building. In the orange ring, you can rate that location based on four factors. The green ring depicts numerous intuitive or qualitative factors that may be used to evaluate a location; the blue region depicts quantitative factors that can be quantified using statistics or research.[30]

[30] *Four key qualities of a successful place*. Placemaking Chicago - A neighborhood guide to placemaking in Chicago. (2008). http://www.placemakingchicago.com/about/qualities.asp

2.8 WHAT MAKES A GOOD PUBLIC SPACE?

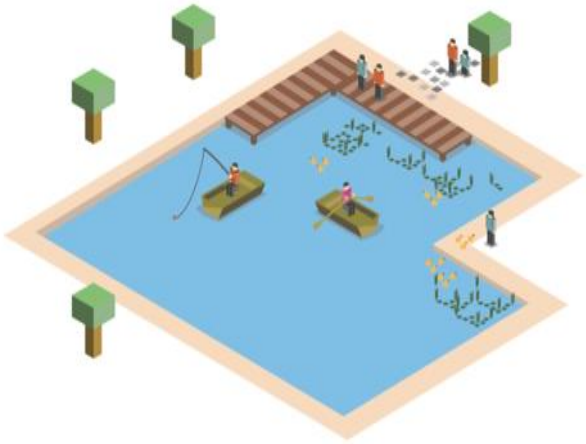
The best places are those that possess many different qualities and offer varied experiences. It is the unique blend of social, cultural, and economic elements that makes a place memorable.

2.8.1 Feels welcoming and comfortable

Both new and existing users will find a welcoming physical presence in an excellent location. It makes individuals feel mentally at ease by considering how one could access and experience the location, the ease and comfort with which one can move about the location, and the physical comfort with which one can move around the location.

2.8.2 Capitalizes on sensorial surroundings

An excellent location is rooted in its surroundings. It embraces and utilizes the natural and urban aspects of its surroundings to provide a rich, multi-sensory experience that is unique to its place.



2.8.3 Values authenticity and originality

An excellent place seems authentic and local, as though you've just had a fresh idea and couldn't find it anyplace else. This attribute assesses a location's individuality, determining if it is overly staged or over-branded and whether it has a distinct personality or a "cookie-cutter" sense, same configuration as other typical spaces.

2.8.4 Has a positive and memorable identity

People should find going to a nice place to be a pleasurable and gratifying experience. This includes on-site activities, the possibility of being able to create or revisit memories, and also possibilities for a multi-layered appreciation/experience of the location.

2.8.5 Strengthens community bonds

A good environment for people should provide possibilities for individuals to form relationships and generate a sense of 'warmth.' It should either stimulate, support, or strengthen the social networks' diversity, growth, and strength. This helps to create a resilient environment that can survive shocks to its social fabric, as well as a local resource pool that can contribute meaningfully to the community.

2.8.6 Respects narratives and memories

A good location demonstrates an understanding of the varied levels of meaning that different stakeholders and users have for it. It's also aware of its past and how its current and future actions fit within that narrative. This is portrayed in the way it is activated, managed, and communicated.

2.8.7 Encourages user ownership

The physical environment and the people who utilize it have a deep relationship in a good place. Users and stakeholders are invested in it, and they have a say in how it is designed, used, and maintained. This makes the location more relevant to users' interests and more adaptable to changing demands and circumstances.

2.8.8 Adds value for everyone

A good place should serve as a platform and catalyst for many stakeholders to profit from their investments in the area - either directly or indirectly through the ripple effect of various place initiatives and stimuli. This should be tangible, and it can take various forms, including economic, environmental, social, and other aspects, depending on the stakeholder's perception of value. This level of excellence should be maintained throughout time.[31]

2.9 CHARACTERISTICS OF GREAT PUBLIC SPACES

The different social, cultural, economic, physical and landscape objectives are summarized as follows by Wulfhorst:

- Encouraging human interaction and participation in social events.
- Is a safe, friendly, and accommodating environment for all users.
- Contains aesthetically appealing design and architectural characteristics.
- Encouraging residents to participate in community activities.
- Is culturally or historically relevant to the area.
- Has a lot of crossover potential.
- It is in good condition.
- Is endowed with a distinct personality.[32]

Figure 30 Sundance Square, US

(American planning association)

[31] *Qualities of a good place*. Shophouse & Co. (2013). https://www.shophouseandco.com/qualities-of-a-good-place

[32] Peter Wulfhorst. (2016, May 19). *What makes a great public space? Spaces to Places Transforming Public Spaces into Vibrant Places for the Community.* www.nar.realtor. https://www.nar.realtor/blogs/spaces-to-places/what-makes-a-great-public-space

2.10 GUIDELINES OF SUCCESSFUL PUBLIC SPACE

"Successful Criteria for Public Open Spaces" are presented by Essex Design Guide.

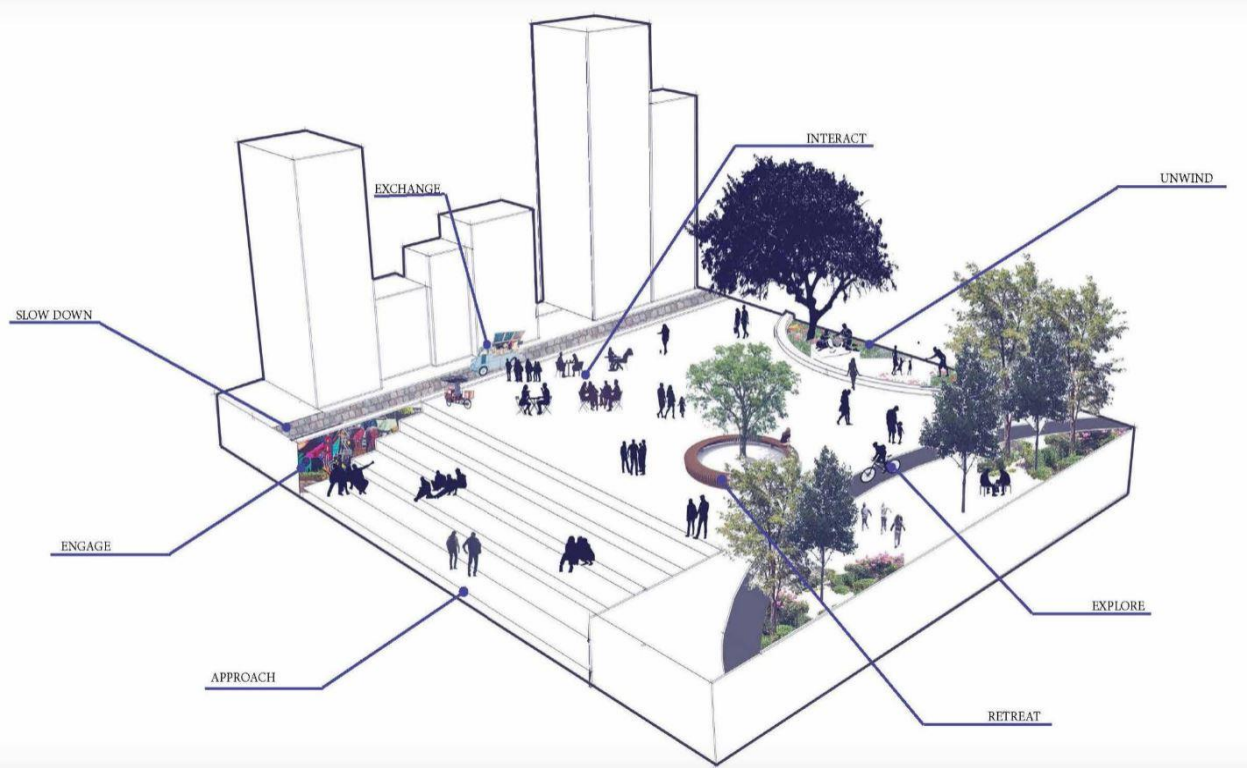


Figure 31 Concept of a great public place

Source: https://issuu.com/taylornproctor/docs/thesis_final_presentation_book_11x11_final_submiss

- part of a large network connected internally and to its surroundings.
- overlooked by building frontages; (or limited by barriers, natural or constructed);
- well-maintained and appropriately managed, designed to support management over a long period of use.
- accessible to all.
- of high biodiversity value.
- of varied character and functionality to meet identified needs.
- able to offer opportunities for a multifunctional activity for all.
- secure and safe; provisioned with shelter and shade.
- sufficiently well-designed and well-equipped as to become a destination – larger public spaces may be appropriate to support with facilities such as toilets a café to encourage people to spend more time in the open spaces.
- well-served by walking and cycling paths.

- linked to smart infrastructure to allow flexible use of the area for people of various ages and activities.
- equipped with sitting and resting areas.
- legible to all users, with clear wayfinding.
- provisioned with shelter and shade.[33]

2.11 ELEMENTS

2.11.1 Open Cultural Space

Cultural spaces differ greatly from city to city, depending on how the cultural identity and history of the city are valued. These areas might include everything from individual structures, such as museums or historic preservation sites, to monuments and landmarks. These places frequently contain nostalgic connotations to enhance the importance of the site's or city's heritage. This creates a sense of oneness among the observers and helps establish the cultural implications of the space in modern-day history.

Figure 32 Tianjin Cultural Park, China

[33] Frontmedia Studio Limited. (n.d.). The Essex Design Guide. Successful Criteria for Public Open Spaces | Essex Design Guide. https://www.essexdesignguide.co.uk/design-details/landscape-and-greenspaces/successful-criteria-for-public-open-spaces/

2.11.2 Urban Recreational spaces

It is also critical to provide sufficient infrastructure to such locations, which will contribute to their increased attraction. Urban recreational areas are becoming more and more defined in terms of utility, aesthetics, and identity, taking on increasingly experimental and distinctive forms.

Figure 33 Pingjiaqiao lu, Shanghai, China

Parks and sports fields, bathing places, sports and recreation facilities, playgrounds, and facilities or locations where cultural, social activities and entertainment take place (such as restaurants, cinemas, clubs, theatres, art galleries, and museums) are all examples of open urban cultural & recreational spaces.[34]

These spaces must consider the different demand of communities and people who access them.

Figure 34 Pixeland activity zone, China

[34] Justyna Mokras. (2018, June 3). New urban recreational spaces. Attractiveness, infrastructure arrangements, identity. - sciendo.com. https://www.sciendo.com/pdf/10.2478/mgrsd-2018-0017

2.11.3 Urban Trees and Planting

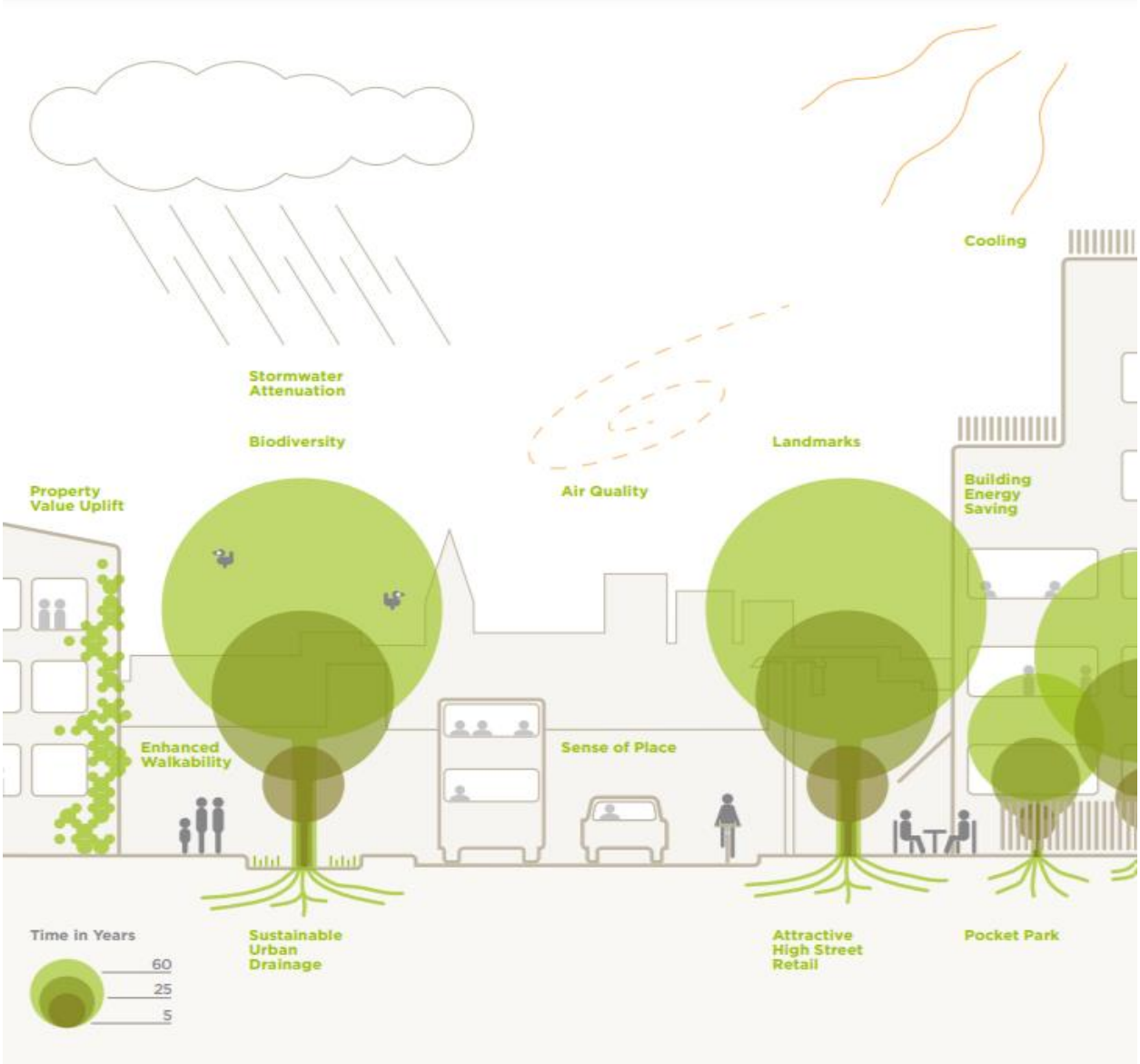


Figure 35 21st century approach to urban trees

- Trees not only make places work, look, and feel better, but they also help to climate-proof our communities and promote human health and environmental well-being. Trees may also help to establish economic success circumstances.
- Trees have a role in addressing some of our generation's most pressing issues, such as climate change and diminishing health and well-being. [35]

[35] Anne Jaluzot, & Strategic Greening Consultant. (2012, June). *Trees in the Townscape*. Www.tdag.org.uk. https://www.tdag.org.uk/uploads/4/2/8/0/4280686/tdag_treestownscape2021.pdf

2.11.4 Urban Landscape

Figure 36 Azatlyk Square,Russia

- To build interconnected landscape networks that may be utilized to encourage people to be more active, for as by routing pathways and cycleways via green networks.
- In addition, the landscape structure should develop a network of wildlife corridors that connect public open areas to the surrounding countryside.
- Multifunctional open spaces should be possible thanks to the landscape structure. These should provide room for active work and a diversity of activities for people of all ages and physical and mental capacities.[36]

[36] Aditi Doshi. (2019, December 10). *Urban Design of Russia's monotown by Drom architects*. DesignWanted. https://designwanted.com/architecture/urban-design-russia/

2.11.5 Waterbody Roles

- The water element in architecture lends completeness to any room with its physical look, which is both natural and symbolic insignificance. Water is an aspect of washing and purification in all civilizations, and it is connected with holy values.
- It's a fantastic feature to include in public areas since humans are naturally drawn to water, whether it's a whole waterfront or just a little jet in the ground. Children and adults alike like pulling off their shoes and running through a little sliver of water.
- Not all projects have these elements, but a variety of seats, plants, and water are all characteristics that make guests feel welcome and desire to stay longer.[37][38]

Figure 37 Garden Hotpot Restaurant, USA

[37]Shruti Bihani. (2020, April 24). *Effect of water bodies in a space - architecture* blog. Talking Spaces. https://talkingspaces.in/blog/effect-of-water-bodies-in-a-space/
[38] Admin. (2021, October 19). *The role of water landscaping in landscape design*. eden. https://edenapp.com/blog/the-role-of-water-landscaping-in-landscape-design/

3 CHAPTER 3: PUBLIC SPACE AND THE SUSTAINABLE CITY

3.1 INTRODUCTION

The existence of sustainable public spaces in cities is essential to prevent and predict social harms in society, to reduce depression and violence. The essence of urban space is reached from the results of the components, which by identifying the functions and appropriate impacts of each of these elements on the space, some solutions can be presented for improving the quality of the open space.

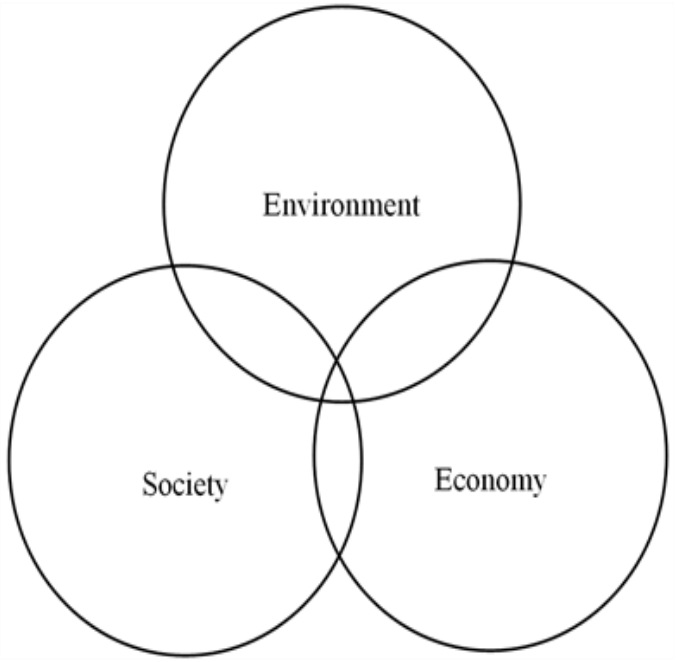


Figure 38 Common three-ring sector view of sustainable development

The requirements for a sustainable urban area may be classified into two groups: those that have a direct impact on environmental, economic, and social concerns, and those that have an indirect impact.

3.2 SUSTAINABLE APPROACH

3.2.1 Social Sustainability

Cities' public space is a location for inhabitants to interact socially, and it serves as a necessity for enhancing integration establishing a spatial environment conducive to social activities and improving human interactions. One of the components of social sustainability is the quality and level of social contact among inhabitants in neighbourhoods

Social sustainability is one of the concerns that has received a lot of attention in recent years in many civilizations, particularly in urban areas, and social capital plays a big part in accomplishing it. Sustainable development has identified its function in the social environment, including social capital, by considering ideas such as social justice, development of all impartiality, and social welfare (Khosfar, 2013: 32). A group of academics recognized four major factors in the notion of social sustainability: social justice, social solidarity, participation, and security. Equal chances and advancement for all people, living with collaboration, equal possibilities for all individuals to perform social roles, as well as security, livelihoods, and the safety of human settlements against natural dangers were all considered in this regard.

Social Instructions

- They value social commitment and a sense of belonging, and they work hard to sustain it.
- People can engage in urban activities and become acquainted with one another, resulting in social relationships.
- Residents believe they are accountable for the city's sanitation and environmental challenges.
- Supporting community groups, assisting in the resolution of social issues, and implementing social networking integration and neighbourhood awareness programs have all been adopted.
- The formation and growth of social acceptance habits, as well as the reduction of social anomalies and the promotion of legalism in the city and neighbourhoods, are all encouraged.

3.2.2 Economical Sustainability

Economic sustainability is achieved by reducing costs by reusing materials or facilities, or by reducing energy consumption by employing environmental considerations. Rather than being dependent on geography, this varies depending on the resources available in each habitat. In a time when formal job prospects are shrinking throughout the world as a result of the global economic downturn, urban planning may play a critical role in promoting livelihoods through local economic growth. Local economic development is a community-empowering, participatory process in which local governments, communities, civil society, and the private and public sectors collaborate to stimulate and strengthen a certain area's local economy. By adopting more flexible land-use

management or zoning systems that enable mixed land uses rather than monofunctional zoning that aims to separate various activities, urban planning might offer the enabling conditions for employees to develop.

Economic Instructions

- People can invest and contribute to the growth of the economy.
- Energy, water, and material conservation are all monitored.
- It is feasible for the local economy to be productive.
- There is the option of repurposing environmental waste.
- There is an allure to the city and region that attracts non-native investment.

3.2.3 Environmental sustainability

It is described as appropriate engagement with the environment to minimize natural resource depletion or deterioration and to ensure long-term environmental quality. Environmental sustainability is a method of ensuring that today's population's demands are satisfied without affecting future generations' capacity to satisfy their own

Environmental instructions

- Design strategies for re-usability and recyclability are used, as well as mitigation and adaptation to climate change, including the shift to a low-carbon environment.
- Measures to reduce waste and pollution (smoke, sound pollution, etc.), use traditional and environment compatible construction materials and brickwork, improve space hygiene, and educate people about environmental issues have all been considered.
- Measures to improve climatic comfort in areas and microclimates, as well as light absorption, natural ventilation, shadow casting, vegetation and green areas, and water management systems, have been proposed.
- The consumption of renewable resources should always be less than regeneration.
- The pace of trash produced from projects would not surpass the environment's assimilation capacity.
- The reduction of nonrenewable resources would necessitate the creation of comparable renewable substitutes.

3.2.4 Functional Sustainability

The functional urban space may be characterized as a space in which a variety of activities can be carried out depending on the space's quality and the space's ability to fulfil human

requirements. All types of human activity interact with and through these spaces, which are defined by energy and movement. It's nonrandom places without an aim, but it's a functional need that merges with the many uses of residential neighbourhoods.

Functional instructions

- People's terms Convenience and comfort should be provided, such as the ability to sit and walk and to meet the demands of inhabitants daily.
- Pedestrian and cycling access, as well as connections to city services, transit system nodes, and the neighbouring neighbourhoods, should all be available.
- Sports, entertainment, amusement, and attractive activities should all be accommodated in multi-purpose areas.
- The placement should be close to major thoroughfares, bustling city routes, and everyday activity hubs.

3.2.5 Aesthetical Sustainability

The aesthetic idea relates to the significance of detecting attractive aspects and pictures at many levels of cognition, including visual, aural, and spiritual cognition, to understand the truth of any experience that impacts emotions. Aesthetics is also the sensory value that an individual feels about the outlines of things, through which he or she is delighted, and with such pleasure and happiness that the individual self has realized the value of his or her life. Architecture, sculptural art, music, and other things that individuals and society as a whole appreciate are products of creative thought, thus the result is a tangible form that must be dealt with to satisfy an intrinsic human need. Many elements are offered to produce a beautiful urban place, such as vitality, richness, multi-use environment, interactive, and bustling at night and on weekends, aesthetically motivating, and appealing to residents and tourists. Lighting, visual, and audiovisual perceptions all have an impact on aesthetics. Sunlight and natural lighting, as well as the distribution of artificial lighting and optical dots at night, play an essential role in the construction of urban open space and the distribution of artificial lighting and optical dots

Aesthetical Instructions

- The appealing place should be built with consideration for variations in the aesthetic quality of spaces, the method in which spaces are lit at night, and the use of colours to beautify spaces.
- Dynamism and vitality should be achieved through the use of memorable and flexible places, as well as by making the space ideal for a variety of activities and fostering diversity and happiness.

3.2.6 Physical sustainability

In a space-limited setting or within particular administrative limits, physical sustainability strives to optimize the distribution and allocation of land and human activities by offering suggestions and/or laws for land use and associated activities.

Physical instructions

- Using guiding features in various areas, generating visual proportion in spaces, and maintaining to human scale, the space must be readable and clear in the minds of the users.
- Different ages and genders should be accommodated by urban furniture.
- The layout of the furniture, as well as the pavements and facades, should be well-designed.
- The area should be porous, allowing people to wander freely between two locations and choose their paths.
- To promote social safety, safety and security criteria should be considered in night functions and disabled people's accessibility.[39][40][41][42][43]

39 Mitra Karimi, & Kianoush Suzanchi. (2021, February). Promoting social sustainability in public spaces through ...ResearchGate.https://www.researchgate.net/publication/349533931_Promoting_Social_Sustainability_in_Public_Spaces_through_Physical_Approaches

40Gökçen Firdevs Yücel. (2019, September). Evaluation of aesthetic, functional, and environmental ... https://pdfs.semanticscholar.org/ecb5/864ad687a8d78fb87074cb1614c1d00e543a.pdf

41Soomi Kim, & Hyun-ah Kwon. (2018, April 19). Urban Sustainability through public architecture. MDPI https://www.mdpi.com/2071-1050/10/4/1249

42earth scan. (2009, April 13). Global report on human settlements 2009, Planning Sustainable Cities. Issuu. https://issuu.com/unhabitat/docs/global_partnership_initiative5

43 Sanei, M., Khodadad, M., & Ghadim, F. P. (2017, May 2). Effective instructions in the design process of urban public spaces to promote sustainable development. World Journal of Engineering and Technology. https://www.scirp.org/journal/paperinformation.aspx?paperid=76114

3.3 SUSTAINABLE LANDSCAPE DESIGN ELEMENTS

Figure 40 French garden, Sydney

The "Green Round Table" consider many elements to make the landscape design more sustainable.

Sustainable landscape design elements:

- Rainwater/greywater harvesting
- Native plants
- Urban farming
- Low maintenance landscapes
- Permeable paving
- Fire pits/fireplaces
- Food/vegetable gardens (including orchards, vineyards, etc.)
- Rain gardens
- Drip irrigation
- Reduced lawn area.

Figure 39 Baptisia 'Purple Smoke' is a native, drought tolerant perennial

The above-mentioned trends highlight a functional landscape – landscapes that reflect their values and lifestyle, gardens that centre on solutions to problems rather than creating additional problems. Plant choices (i.e., native plants), drip irrigation (if necessary), and rain gardens or collecting stations to catch runoff are all important aspects of a sustainable design. [44]

3.3.1 Rainwater/greywater harvesting

Rainwater is beneficial to plant life because it lacks salts and other elements that might inhibit root development. Rainwater percolates into the soil, dragging salts along and away from root zones, allowing roots to develop more quickly and plants to become more drought resistant. Rainwater harvesting may be employed in both large-scale landscapes and small residential landscapes, including parks, schools, business locations, apartment complexes, and parking lots.[45]

Figure 41 Arizona National Scenic Trail (AZT) Remote Rainwater Collector

Rainfall: Rainwater that runs off a surface is referred to as "run-off." Run-off surfaces can be both impermeable and permeable.

Plant Water Requirements: The quantity of water your plants require depends on the types and quantities of plants in your landscape, as well as their development phases and sizes.

Water Collection and Distribution System: Rainwater collecting and distribution systems can be added to nearly any existing structure.

3.3.2 Native plants

When a plant grows in the environment where it evolved, it is said to be "native." Many native plants have brightly coloured, flamboyant blossoms that add to the landscape's beauty. Native plants nourish species of birds and other pollinators that cohabit with these plants, making them crucial to the local environment and thereby enhancing the natural beauty of a roadside median or municipal park in the same way that non-native plants can.[46]

44 Scott Vogt. (2016, March 9). Principles of a sustainable landscape design. Dyck Arboretum. Retrieved from https://dyckarboretum.org/principles-sustainable-landscape-design/
45 *Rainwater harvesting*. Texaswater, Texas A&M University. (n.d.). https://texaswater.tamu.edu/rainwater.html
46 PWS Eric Fuselier. (2019, November 15). *Native plants for public spaces*. LinkedIn. https://www.linkedin.com/pulse/native-plants-public-spaces-eric-fuselier-cnrp

3.3.3 Urban Farming

Figure 42 Expo Milan 2015

Urban gardens can be found in a variety of locations and scales. Urban agriculture has evolved into a means of increasing public access to locally farmed food and reconnecting the public to the many facets of food that we as a culture have missed.[47] Many variables govern the design of an urban farm: **area**(space for planting and materials), **sun**(At least 7 hours of sunlight every day is suggested), **water**(quality Water in good quantity), **drainage**(soaked grounds affect plant growth), **winds**(wind barriers protect plants) and **species**(each variety requires its care).[48]

3.3.4 Rain Gardens

A rain garden is a landscaping feature that gathers rainwater from a roof, driveway, or street and enables it to sink into the ground. Rain gardens, which are often planted with grasses and flowering perennials, may be a cost-effective and attractive solution to minimize runoff from your property.[49]

Figure 43 Urban landscape: Rain Garden

47 What is urban farming? Greensgrow. (n.d.). https://www.greensgrow.org/urban-farm/what-is-urban-farming/
48 Eduardo Souza. (2021, May 17). Urban farming: Food production in Community Parks and Private Gardens. ArchDaily. Retrieved from https://www.archdaily.com/916757/urban-farming-food-production-in-community-parks-and-private-gardens
49 Environmental Protection Agency. (n.d.). EPA. Retrieved January 31, 2022, from https://www.epa.gov/soakuptherain/soak-rain-rain-gardens

Rain gardens should be planted with native plants that don't mind getting wet now and again. Rain garden design involves a set of steps

- Select an appropriate place
- A rain garden's composition
- Determine the size and depth of the hole
- Incorporate infiltration
- Control flow
- Decide on the type of planting

3.3.5 Drip irrigation

The most effective technique of irrigation is drip irrigation. Drip irrigation (also known as trickling irrigation) is a gradual, direct application of water to the soil.[50] It provides water directly to a plant's root zone, resulting in decreased water loss due to evaporation or runoff, as well as less erosion. This is especially beneficial in mulched regions since the water soaks into the mulch rather than washing it away.[51]

Figure 44 Drip irrigation in raised bed garden

50 Aaron Pallares. (2017, April 11). Drip irrigation design guidelines - basics of measurements, parts, and more. Irrigation Tutorials. Retrieved from https://www.irrigationtutorials.com/drip-irrigation-design-guidelines-basics-of-measurements-parts-and-more/

51 Christine Chang Hanway. (2018, February 22). Hardscaping 101: Drip Irrigation. Gardenista. Retrieved from https://www.gardenista.com/posts/hardscaping-101-drip-irrigation/

3.3.6 Materials:

The use of recycled and reclaimed materials, including brick, concrete, steel, can create interest and fun within a design.

Figure 45 Public Toilets in Zuzhai Village

3.3.7 Retaining Site Elements

Retaining site characteristics like asphalt, industrial equipment, and other aspects can pique people's attention and provide them delight, as they are rarely seen by office employees and families.

Figure 46 Reused runway used for main pedestrian path at Xuhui Runway Park

3.3.8 Planting

Trees and planting are underutilized in creating sustainable landscapes. Trees can be used to create shade to cool the landscape. Selecting plants for certain characteristics can create biodiverse, colourful, and interesting seasonal landscapes which provide habitat for pollinators and other fauna.

Figure 47 Buscot Park, England

3.3.9 Water

Water collection, treatment, storage, and reuse are all crucial aspects of landscape design. Water is essential for life and helps to keep plants and animals alive. Large ponds or atmospheric showers can help to chill the metropolitan environment (swamp fans). When utilized in play and recreation activities such as swimming, fishing, kayaking, and other activities, it may be an educational experience for both children and adults.

Figure 48 Cassio bury Park, London

Figure 49 Proposed Solar Panels at Freshkills Park

3.3.10 Energy

Like water, we can harness energy in the landscape, store it, and then utilize it for lighting, signage, and interactive displays.

3.3.11 Color

Using colour in the planting palette or within the landscape is fun to bring a landscape to life. To generate colourful vistas that are frequently lacking in the constructed world, particularly in dense metropolitan landscapes dominated by steel and glass.

Figure 50 Camden school

Figure 51 Levinson Plaza, USA

3.3.12 Form

We may employ physical shape to create intriguing settings by using it in pavement patterns, shade structures, and enclosed tree-lined avenues.[52]

[52] Damian Holmes. (2021, August 30). Sustainability can be fun - worldlandscapearchitect.com. https://worldlandscapearchitect.com/sustainability-can-be-fun/

3.4 PRINCIPLES FOR SUSTAINABLE URBAN DEVELOPMENT

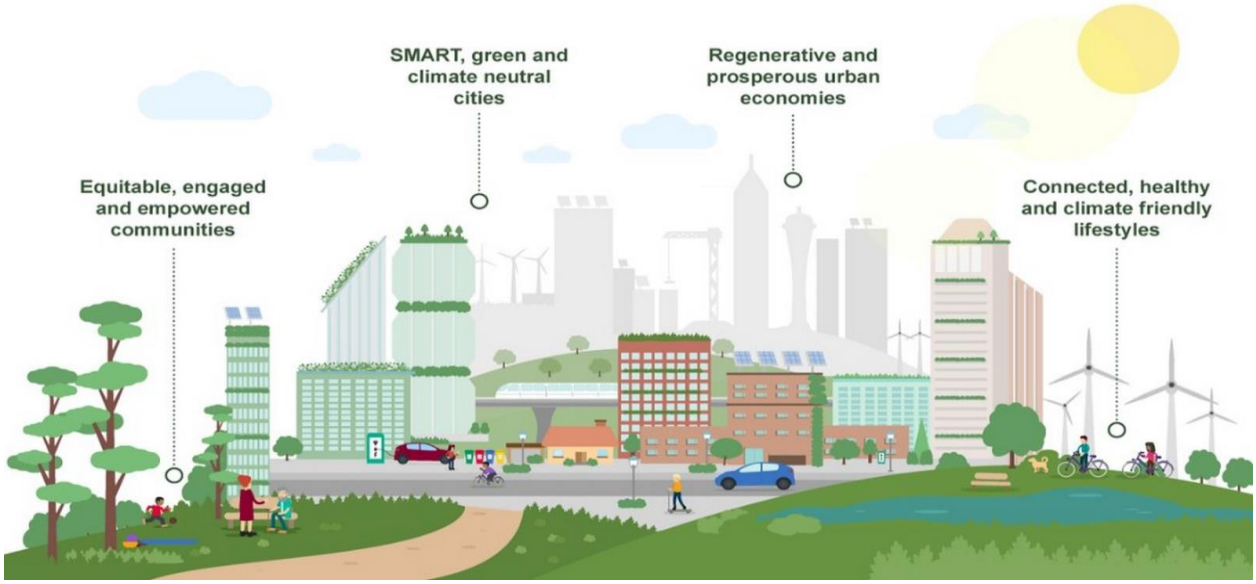


Figure 52 Urban sustainability_©https://www2.helsinki.fi

Sustainability principles may guide civilizations toward futures that are ecologically sound, socially equitable, and economically successful. They demand sustainability enthusiasts know and connect with the stories of their city and local specificities as navigational aids. As a result, sustainability principles assist in guiding the vision that communities wish to achieve as well as how to prepare for their travels. However, as a working list, they need to be updated regularly and linked to best-practice cities to learn about the flaws and benefits of solutions. Cities may be the abyss of today's society, but they also provide powerful transformation levers that may help societies create the desperately required bridges to urban environments' sustainable futures.

Actions that contribute toward the vision of an ecologically integrated and socially viable future are guided by the following sustainability principles, give practitioners a universally functional compass, define essential objectives, and explain critical steps to advance towards sustainability (Gibson, 2006; Luederitz, Lang, & Von Wehrden, 2013).

Human-environment integrity: Develop the city with regards to local settings and conditions, historical background, social significance, economic situation, and political factors

Human well-being: Develop self-sufficient and walkable mix-use neighbourhoods, upgrade public places, and promote sustainable business opportunities.

Intra and intergenerational equity: To ensure social inclusion, consider the design demands of the elderly and disabled. Reduce motorized individual transportation.

Resource maintenance and efficiency: Better understand energy, material, and nutrient flows of cities, reducing the overall consumption and ensuring efficient use.

Democratic governance: Provide opportunities for engagement and education, as well as educational programs focused on sustainability for various age groups.

Precaution and adaptation: Create resilient urban ecosystems and make iterative and adaptable processes a priority. Encourage communities to act as change incubators and to communicate sustainability to the larger city environment, therefore supporting continuous growth.[53]

[53] Christopher Luederitz, & Beatrice John. (2015, August 7). *Principles for Sustainable Urban Places: The why, what and how*. Social science research and transitions to urban contexts. https://isscbookofblogs.pressbooks.com/chapter/principles-for-sustainable-urban-places-the-why-what-and-how/

	Principles for Regional Development	Principles for Parcel Development
1. Environmental Quality and Ecological Restoration	1.1 Promote environmental quality and conform to limits on carrying capacity 1.2 Conform to water resource development and sponge city guidelines 1.3 Assess impact on air quality and plan for climate change adaptation 1.4 Plan for ecological restoration	1.1 Ecological security framework 1.2 Sponge city 1.3 Ecological restoration
2. Land Development and Integration of Urbanization and Industrialization	2.1 Conform density to master plans 2.2 Promote local employment and sustainable economic growth, and quantify impact 2.3 Focus on mixed-use development, integrated with large-scale infrastructure 2.4 Actively promote development of underground spaces 2.5 Build up green finance mechanisms	2.1 Land development must conform to the functions and industrial aspects of master plan 2.2 Planners and developers should follow Transit Oriented Development (TOD) guidelines 2.3 Public service facilities 2.4 Incorporate innovation and entrepreneurial spaces
3. Livable and Healthy Cities	3.1 Create dynamic urban spaces 3.2 Follow city and landscape design guidelines 3.3 Build continuously interconnected slow-traffic systems 3.4 Build smart cities	3.1 Design of public spaces 3.2 Design of slow-traffic spaces 3.3 Development of smart communities 3.4 Planning of green space systems
4. Environmental Protection and Resource Recycling	4.1 Promote green buildings and green communities 4.2 Accelerate construction of water-recycling systems 4.3 Reduce and reuse solid waste 4.4 Promote renewable energy	4.1 Green buildings and communities 4.2 High-efficiency utilization of water resources 4.3 Waste disposal and recycling 4.4 High-efficiency utilization of energy and resources
5. Social Inclusiveness and Cultural Promotion	5.1 Promote social equality and public participation in planning 5.2 Preserve local cultural features	5.1 Barrier-free design 5.2 Public participation in planning 5.3 Preservation and promotion of local cultural elements 5.4 Improve the labels for environmentally friendly ecological systems

The table shows the Sustainable urban planning principles quick reference[54]

[54] U.S.-China CEO Council for Sustainable Urbanization. (2017, December). *Sustainable urban planning - paulson institute*. Retrieved from http://www.paulsoninstitute.org/wp-content/uploads/2017/12/Sustainable-Urban-Planning_EN_vF.pdf

4 CHAPTER 4 - PUBLIC SPACE PLAY'S VITAL ROLE IN PANDEMIC

4.1 INTRODUCTION

Citizens' relationships with their streets, public spaces, and public institutions have changed as a result of the COVID-19 outbreak and movement limitations. Whether it's to contain the virus's spread or to provide places for people to rest or earn a living, public spaces must be part of the response.

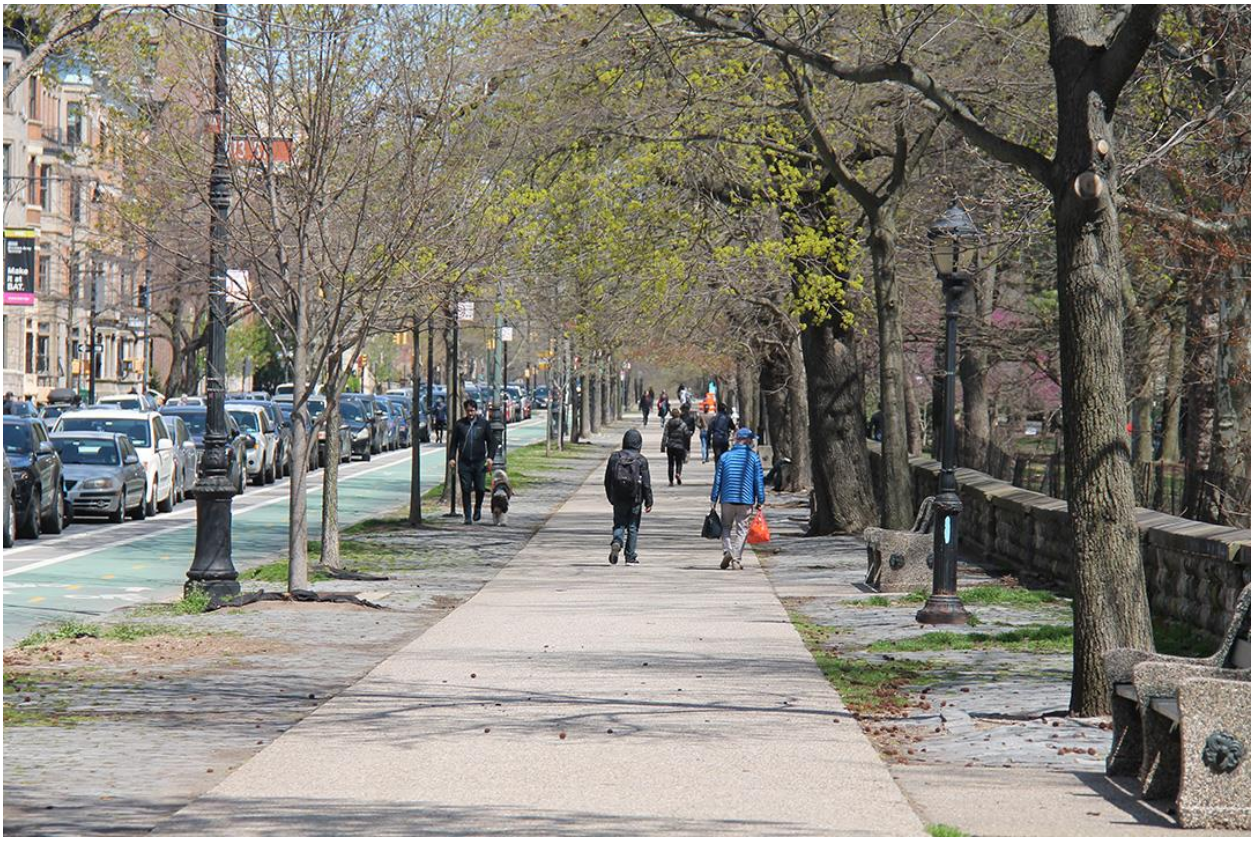


Figure 53 Public space during pandemic

The pandemic of COVID-19 has presented us with new and unanticipated problems. In recent months, our everyday lives and the way we govern the city have undergone a significant transformation toward a forced home involution. Now that the first signals of openness have appeared, we are confronted with a new coexistence: the way we work, meet, rest and consume must be completely rethought to ensure the quality of life in our

territory. This circumstance also presents us with an even more radical opportunity: to design a new development model based on social well-being and environmental quality, building on the momentum of the previous decade in the direction of climate resilience and urban renewal. The open space becomes the public spheres, as well as the private sphere's, theatre; digitization has already resulted in a public sphere expansion through the virtual and networked dimension of public space, as well as an individualization of civic life. The current scenario necessitates a greater presence of urban greenery as a haven to reclaim the sociability of the outside. Squares, streets, and parks will increasingly serve as extensions of restricted private houses and permitted work areas, as well as privileged locations for the pursuit of a public cultural and social life, however tiny.

Green Infrastructures, a concept for creating multifunctional urban and rural green spaces capable of offering specific environmental, social, and economic advantages to man, has been recognized by the European Commission since 2013. Various research initiatives have focused on assessing these advantages through the adoption of natural solutions (nature-based solutions) that are more unique to the environment in which they are inserted in recent years. Bringing nature back to the city, therefore, exposes itself as a resource that is not just scenic but also structural and functional for urban management and people's well-being. Urban green becomes a technology for managing rainfall, controlling the microclimate, lowering pollutants, and creating healthy and biodiversity-rich environments from an ecosystemic perspective. The convergence of contemporary society's high regard for the quality of life, well-being, and climatic resilience, as well as the transformation compelled by the pandemic's present crises, has resulted in a once-in-a-lifetime chance to rethink our way of life and build the city. Many cities are taking initiatives to accelerate the transition to a more stable sharing economy by encouraging sustainable mobility, participatory planning, and the use of digital infrastructure. However, we must not overlook the critical function of urban greenery in preventing unhealthy compartmentation of open space and a loss of urban quality.

LAND's Study Lab (The LAND Group's Research & Innovation unit, LAND Research Lab®, investigates new trends and technologies in landscape development. By linking people with the environment, LRL hopes to develop collaborative methods and data-driven approaches to make cities and rural regions more liveable, climate-proof, and resource-efficient.) is working on an adaptable design strategy for the new issues we're facing, based on some principles for the building of more livable urban landscapes; particularly, the project research is based on an analysis of the adaptive design strategy in five sectors of application.

STREETSCAPE

Streets make up a large part of the city's open spaces; their primary role is movement, but they also provide space for business, pleasure, and socializing. The purpose of strategic adaptive design implementation is to turn the streetscape into a shared ecosystem that collaborates with nature to provide people with environmental, economic, and social advantages.

WATER SENSITIVE ENGINEERING

How do we deal with climate-related meteorological risks? We need to rethink stormwater management and create flood-prone open places like rain gardens, floodable parks, and bioswales that can adapt "naturally" before, during, and after the disaster manifests.

FORESTATION IN THE CITY

Urban nature is a valuable resource for improving the quality of life in urban cities and their environs. Trees are particularly good in reducing pollutants in the air, reducing the impacts of high temperatures and harsh weather, and enhancing biodiversity and psychological health.

EXTREMELY SLOW MOBILITY

The importance of a short-distance and the walkable urban concept has been demonstrated by the COVID emergency. A lifestyle change is required for sustainable urban growth. Slow mobility is essential for residents to have access to open areas, minimize emissions, and be healthy and aware of their surroundings.

PUBLIC SPACE AND DIGITAL LANDSCAPE

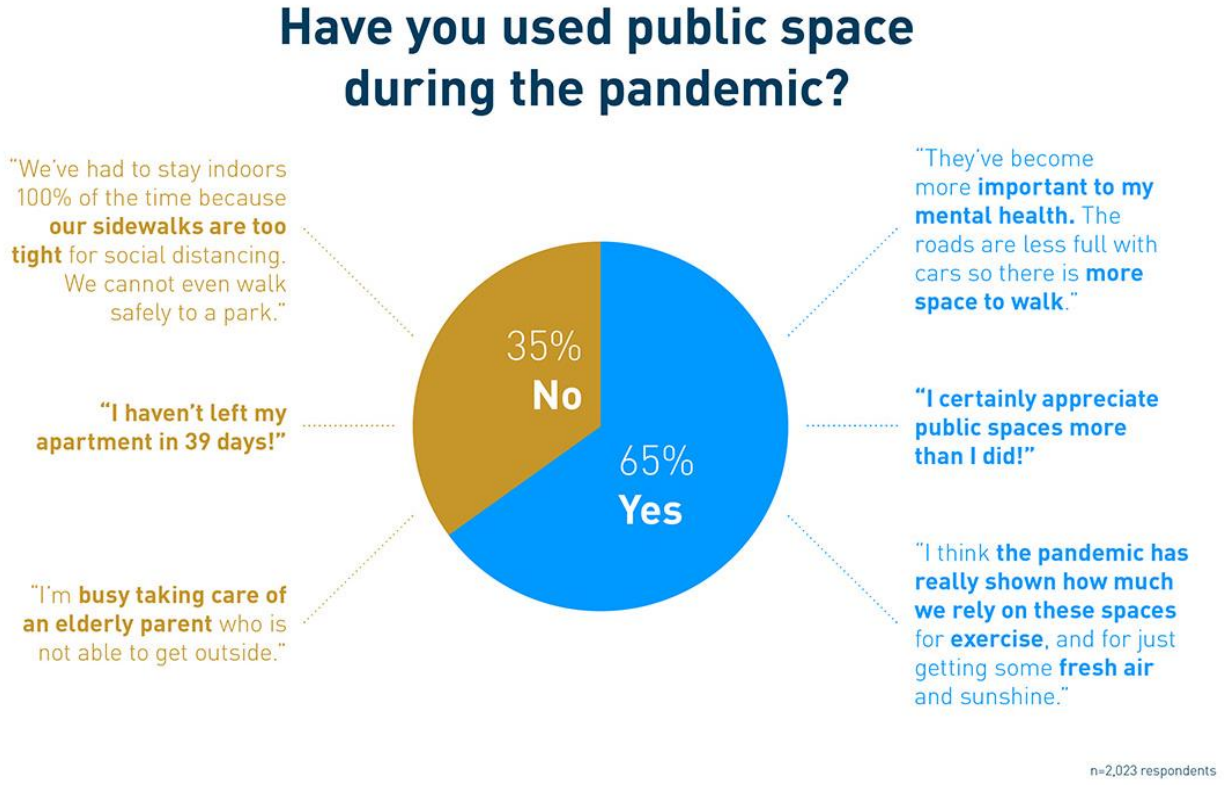
Climate emergency, pandemic, and digitization are three major issues of our time that must be transformed into possibilities for resilient and regenerative landscape design and use. We're experimenting with data-driven design and augmented reality as tools for measuring sustainability and making our project more communicative and successful in making cities and territories more livable.[55]

[55] Land. (2020, July 23). *A strategy for public space at the time of pandemic*. LAND. Retrieved from https://www.landsrl.com/land-news/2020/una-strategia-per-lo-spazio-aperto-ai-tempi-della-pandemia

Opting Inside home

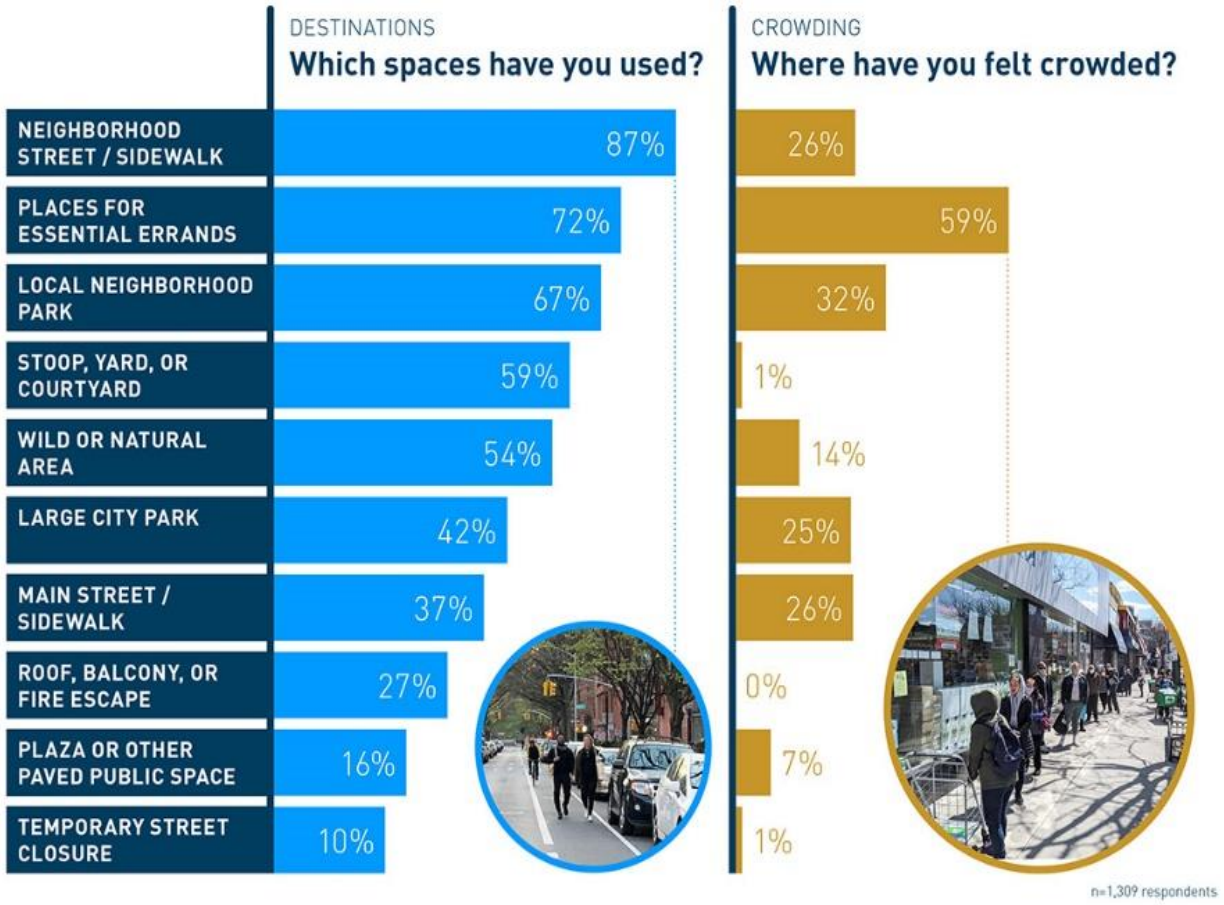
Over a third of respondents are staying out of public spaces except for essential needs — and this is truer for people living outside the United States.35 per cent of all survey respondents say they are opting indoors. People opting out of public space are not disproportionately more senior in age (those potentially most vulnerable to the virus), nor do they tend to live in more suburban or rural settings where they might have more space to roam (based on an analysis of population density in U.S. respondents' reported zip codes).

We did detect a significant variation in the chance of respondents stepping outside based on their geographic origin. People from the United States were 13 per cent less inclined than their worldwide counterparts to avoid the public areas, a difference that might be linked to the intensity of lockdown measures in the States and throughout the world. When asked why they stayed indoors, respondents claimed a variety of reasons, including a government order, the care of an old relative, or the dread of visiting confined public settings. "We've had to stay inside 100 per cent of the time since our walkways are too tight for social distancing," one responder said. Leaders must make it possible for cities throughout the world to plan for up to 18 months or more of physical separation



FEELING THE PINCH IN EVERYDAY SPACES

People are using their neighbourhood streets, sidewalks, and parks most of all — and experience crowding when they do.



While respondents reported crowding up of locations like grocery shops, they also felt it in other places. Neighbourhood parks (mentioned by 32 per cent of respondents), neighbourhood streets and walkways (26 per cent), and main roadways/destination routes were the next most popular sites where individuals felt crowded (26 per cent). "Sidewalks in my city always felt small," one responder said. It's impacting me considerably more now because it's nearly hard to maintain the suggested and needed distance of 1.5 meters in many areas." Many people favoured increasing the use of roadways for walking and jogging to avoid congested sidewalks, while others were concerned about collisions with fast automobiles. "I walk in the roadway to keep a safe distance and keep an eye out for fast motorists." There is no place to go.

4.2 DESIGN CRITERIA BASED ON A PANDEMIC SITUATION

Possibilities

- **Reallocate space** to allow for more physically distant walking, biking, exercising, and staying.
- Increase **easily accessible space for pedestrians and cyclist**s, through **sidewalk extension**s, parking lane closures, or outright street closures at the block or multi-block level (these may be implemented by municipalities or by residents and community organizations).
- Prioritize **space reallocation** measures in neighbourhoods without walkable (<10-15 minutes) access to park space and near essential services.

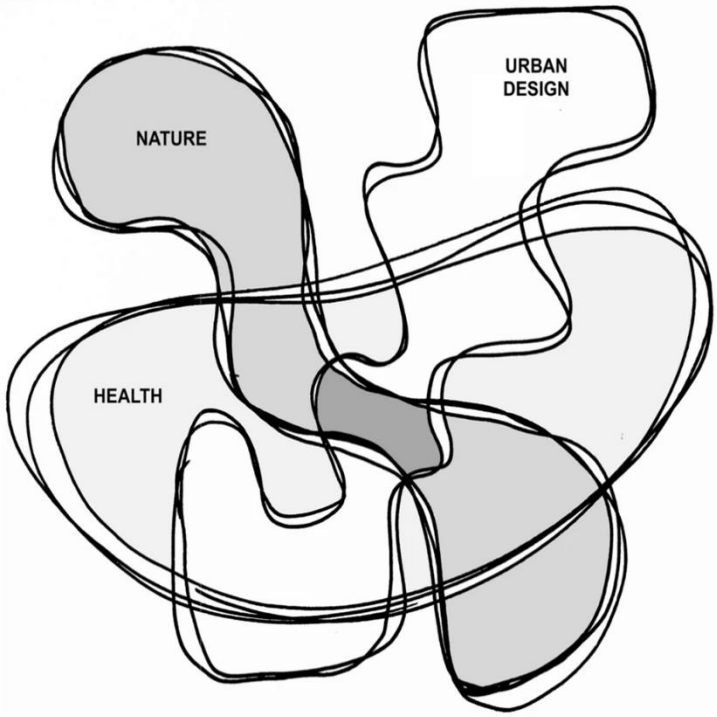


Figure 54 Healthy urban design: the intersection of urban design, health, and nature

- Open up shuttered spaces where safe to do so such as those dedicated to suspended programming (e.g., sports fields) to expand local access to open.
- Manage flow into more congested public spaces by expanding the number of entrances where possible, or by dividing and designating gateways as entry or exit only.
- Adopt criteria for the regeneration of open public space consistent with general healthiness and environmental mitigation.[56][57]

[56] Eamon O'Connor. (2020, May 7). *Public space plays vital role in pandemic*. Gehl. https://gehlpeople.com/blog/public-space-plays-vital-role-in-pandemic/

[57] Louis Rice. (2020, November 11). *After covid-19: Urban Design as spatial medicine*. URBAN DESIGN International. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7656894

4.3 RETHINKING STREETS IN A TIME OF PHYSICAL DISTANCE

((source:

Figure 55 Masked citizen: new relations between people in public space

https://www.transparency.org/news/feature/corruption_could_cost_lives_in_latin_americas_response_to_the_coronavirus))

Streets must be designed in such a way that people may securely travel about the city. Essential employees' mobility is critical; we must guarantee that those who provide medical care, food, and services that allow most of us to stay at home can travel securely and effectively. Our streets must give better, safer alternatives for everyone as we steadily shift from crisis to recovery. It will be critical to our economic recovery to design our streets to facilitate walking, biking, and high-frequency transportation. These regulations are critical in preventing gridlock on our roads and allowing us to continue our efforts to minimize traffic deaths and greenhouse gas emissions.

Our streets, however, sustain more than simply movement, as COVID-19 has demonstrated. Streets provide room for people to securely obtain food and necessary services all around the world. Outside of food shops, marketplaces, and other necessary enterprises, our streets provide areas to queue. As restrictions are lifted, particularly before full disease containment or the development of a vaccine, streets can become more open, allowing restaurants, vendors, and shops to serve customers outside, as well as schools and daycares, to resume care, allowing businesses to resume and society to return to work safely.

EMERGING PROTOCOLS, MATERIALS AND DESIGN

Materials and Design

Cities should match materials to project length, capabilities for maintenance and stewardship, and crucial parameters including measured speeds. For interim implementation, lighter materials might be employed. For a longer deployment, more robust materials should be investigated.

Positioning and Visibility

- Place barriers and signage at intersections where vehicles and passengers must perform a new action.
- Traditional construction zone material or traffic control devices can provide all-weather visibility and reflective surfaces.

Markings and Signs

- Signs can be made of paper, coroplast, or other temporary materials, and if available, plywood or metal regulation signs (such as "Local Traffic Only") can be used in conjunction with them.
- Spray paint, spray chalk, acrylic latex, or traffic tape can be used to construct a temporary lane line or otherwise delineate expanded/altered area for walking, cycling, shopping, or public transportation if one is required.

Separation

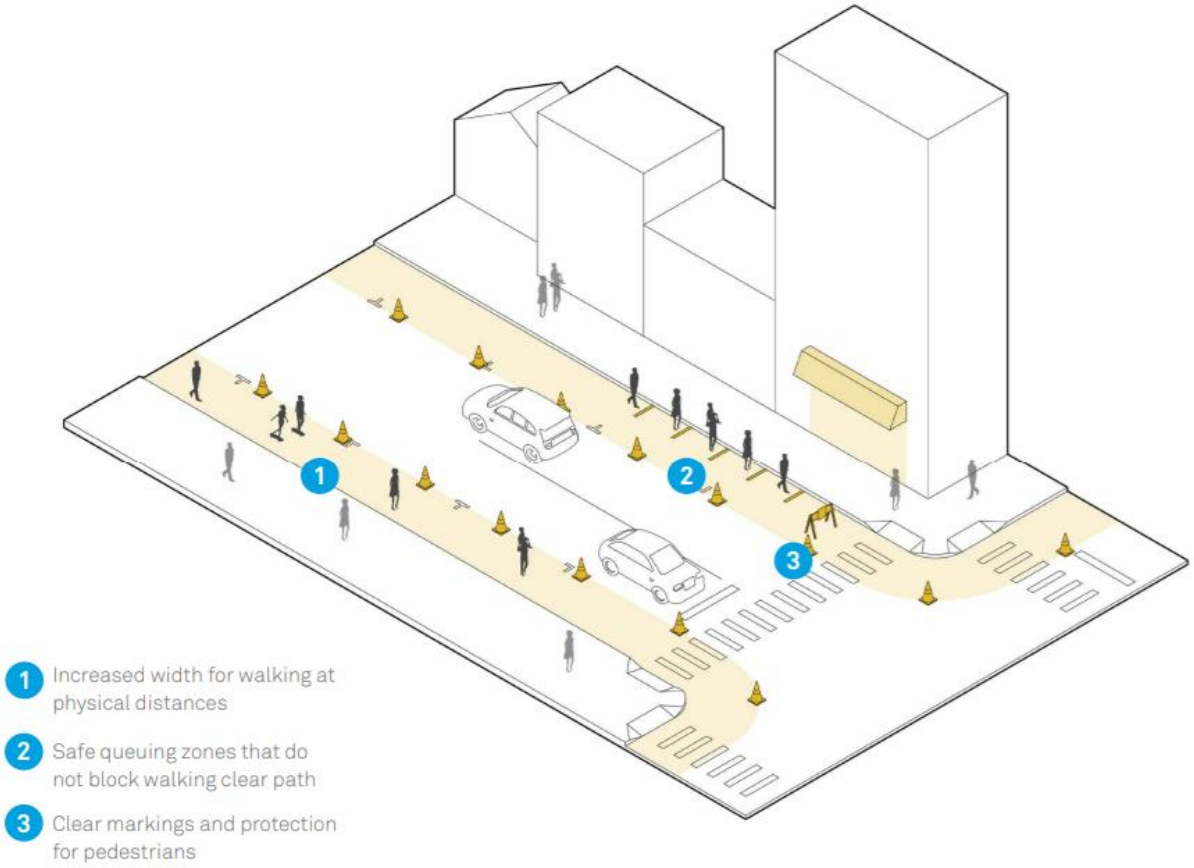
• Light separation: for visibility and to draw attention to the new motor vehicle highway boundary.

Traffic cones, freestanding delineator posts, traffic barrels, sawhorses, moveable parade barriers ("French barricades"), tiny planters, and traffic control barricades like A-frames are all examples of light separation.

• Heavy separation: for the most sensitive areas, such as the start of a lane restriction on a busy street. Waterfilled barriers, concrete barriers, filled barrels, big planters, flexible poles and delineators, and armadillos are examples of heavy separation.

• To make barrier installation easier, spray-chalk or spray-paint the chosen spots.

EXTENSIONS OF THE SIDEWALK



IMPLEMENTATION & DESIGN

- To define walking space, use light separation.
- Maintain large space between endcaps and other vulnerable areas (such as major junctions and T-intersections).
- If a parking lane exists, it should be moved away from the curb or parking should be prohibited. Additional protection for the sidewalk area is ensured by a 'floating' parking lane.
- Apply temporary markers to the highway using tape or spray chalk for pedestrian queuing space; consider including benches and/or entertaining features for children and others.

Credit: AMAT Officina Urbana/Comune di Milano

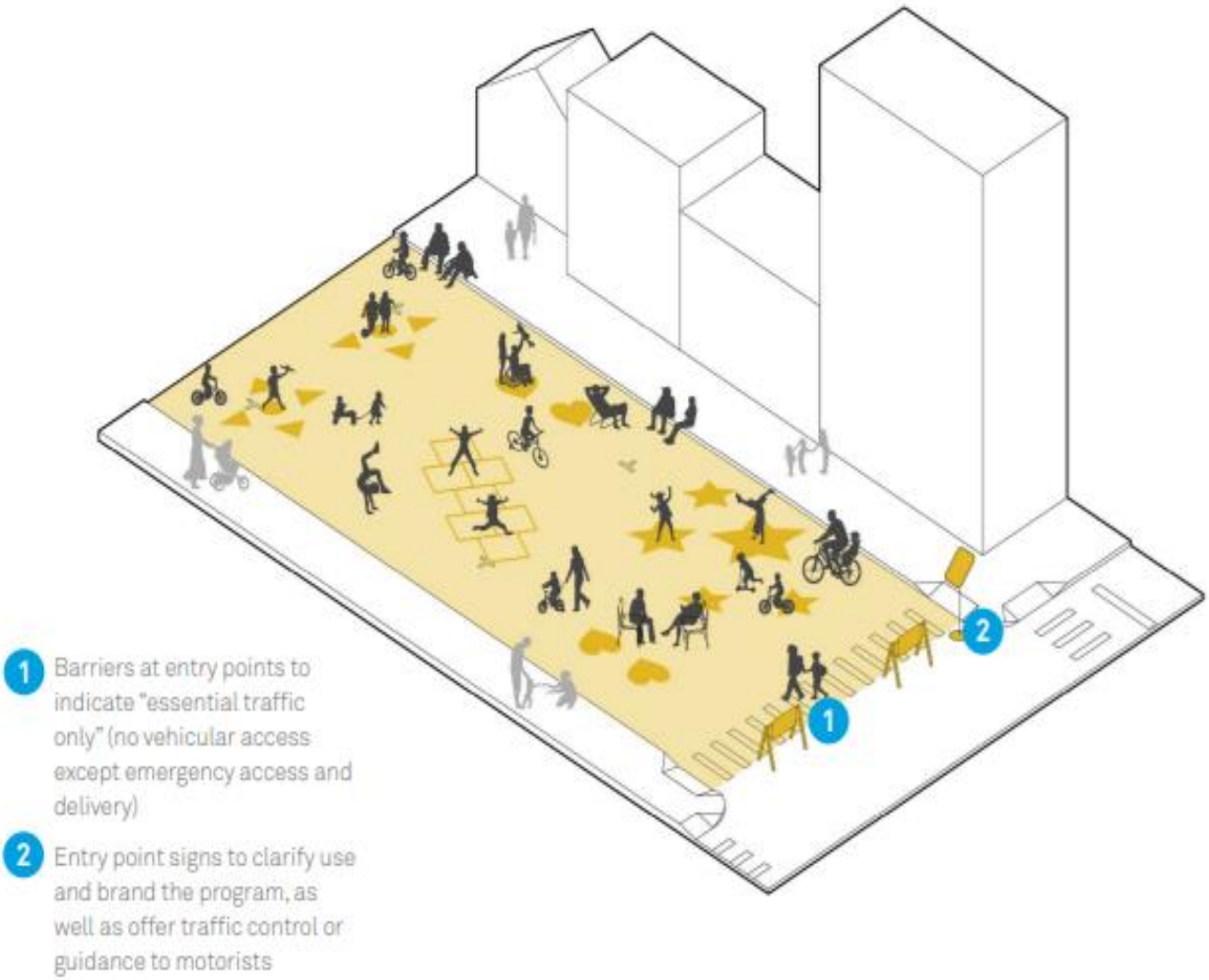
Milan, Italy

Milan created a citywide plan to implement new pedestrian and bike facilities on 35 km of streets. On this 4.5-km corridor over its busiest subway line, the City used paint and markings to widen sidewalks and add a parking-protected bike lane.

Figure 56 Milan,Italy

- Make use of temporary signage like Park Here/Walk Here or Park Here/Queue Here. Before the vehicle closure, use standard temporary lane control signs (Lane Closed Ahead, Right Lane Ends, or local equivalent).
- For local groups with limited staff resources, consider a framework for locations and marks that includes permission.

STREETS THAT ARE OPEN/PLAYABLE



IMPLEMENTATION & DESIGN

• Determine which corridors should be closed completely to through traffic, as well as the best times of day or week to do so. Local access can be preserved with partial closures, but most through-movements are halted.

• Think of open/play streets on a corridor scale to get people to important services securely (medical care, grocery stores, pharmacies, transit).

• Use temporary "Road Closed" signs, which may be mounted to barriers or A-frames; pedestrian and bicycle caution signs can be added if desired.

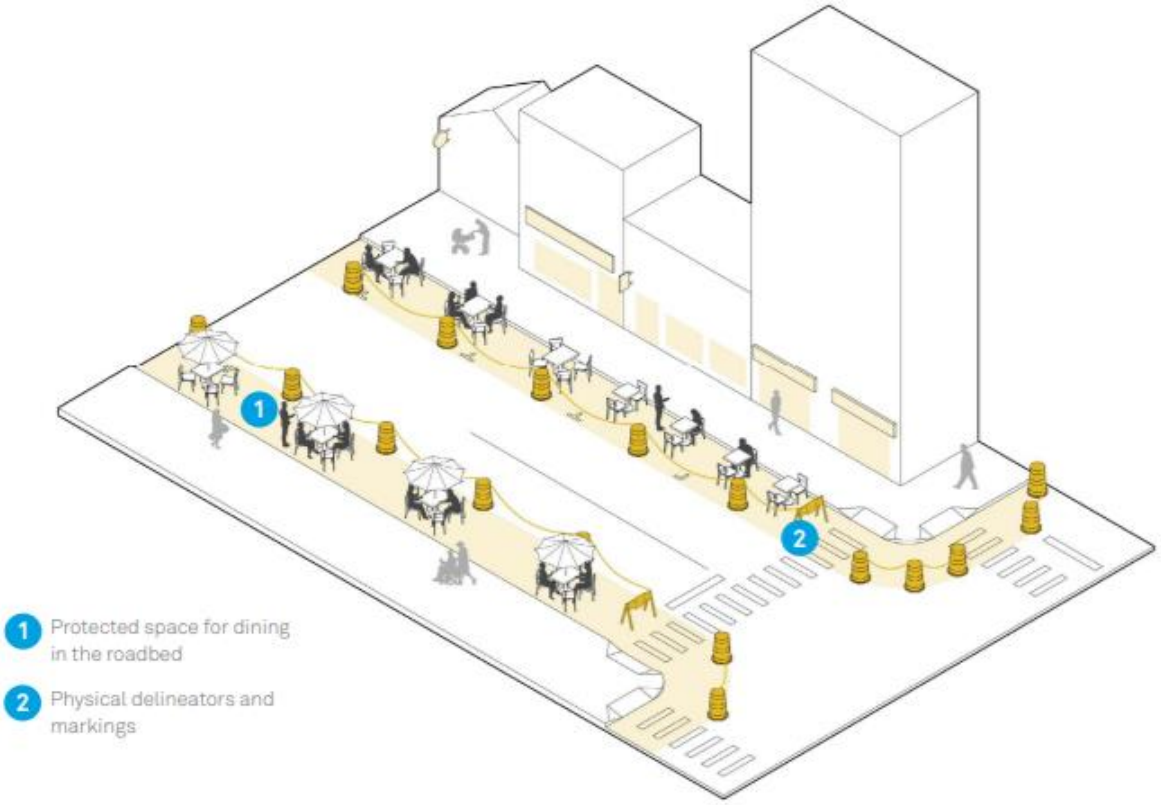
Credit: DPA

Berlin, Germany

Berlin prohibits vehicles on several streets to create space for play and gathering.

Figure 57 Berlin,Germany

OUTDOOR DINING



IMPLEMENTATION & DESIGN

• As needed, use a substantial separation at the endcap to restrict the roadway to vehicular traffic.

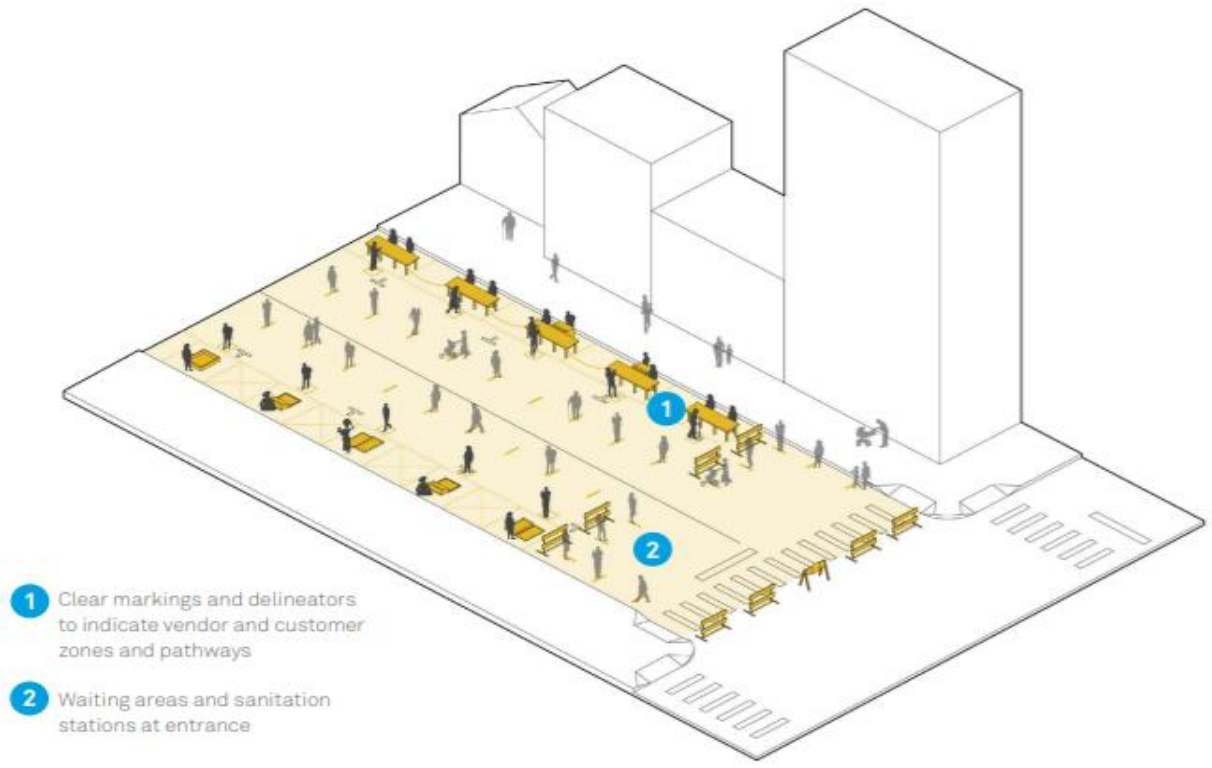
• As needed, use tables, chairs, and umbrellas; develop guidelines for equipment storage and deployment to allow pedestrian, bike, and vehicular access during off-peak hours (to maintain ample pedestrian access).

• Create a delivery policy for eateries depending on their operating hours and general accessibility.

• When using marks to indicate distance standards or public health norms, measure from the back to back of the seat.

• Keep tables and chairs off the pavements to allow for sufficient, physically distanced pedestrian movement.

MARKETS



IMPLEMENTATION & DESIGN

Demarcate where market borders meet vehicle traffic with obstacles and signage.

• Put up a lot of signs at the entrances. When occupancy is at capacity, create queue zones at the entrances for consumers to utilize.

• Mark the locations of vendor stalls and safe circulation routes using paint or other ground marks.

• Use barriers and markers (such as tables, ropes, and paint) to reduce contacts between sellers and consumers and to keep physical distances between them at purchase points. If required, offer hand-washing and sanitation facilities.

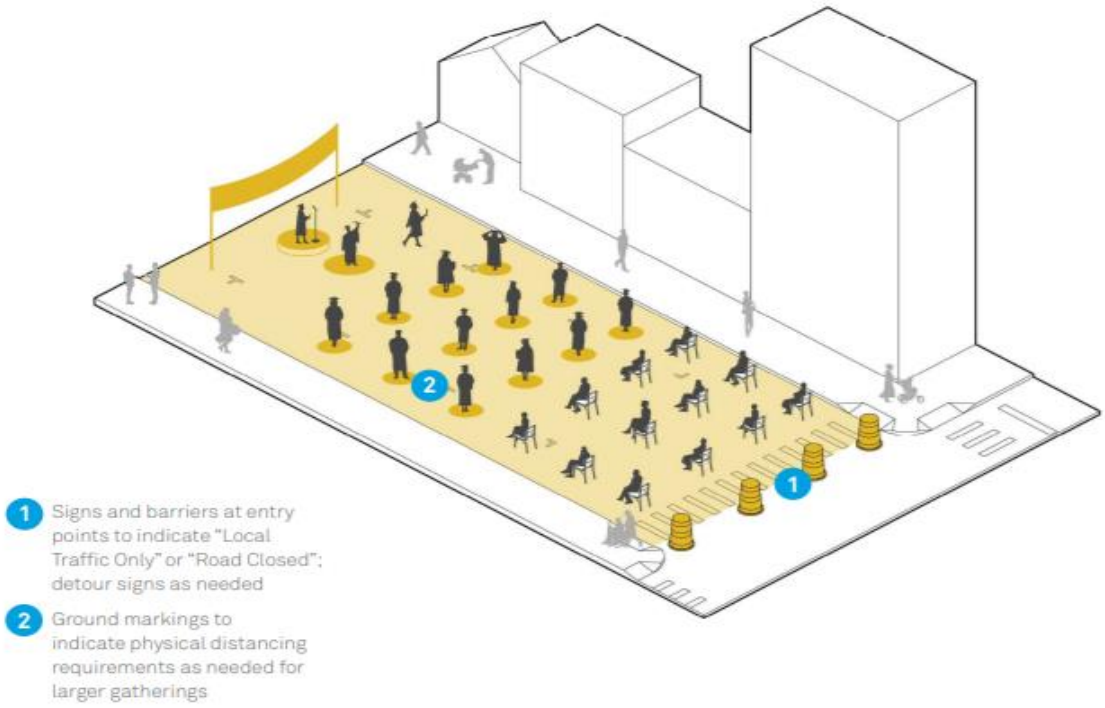
Credit: Jason Roberts/Better Block

Dallas, TX, USA

In Dallas, local nonprofit Better Block is providing wooden fruit and vegetable racks to shuttered restaurants to allow them to sell excess inventory in outdoor grocery markets.

Figure 58 Dallas,TX,USA

EVENTS & GATHERINGS



1 Signs and barriers at entry points to indicate "Local Traffic Only" or "Road Closed"; detour signs as needed

2 Ground markings to indicate physical distancing requirements as needed for larger gatherings

IMPLEMENTATION & DESIGN

- Confirm intersections/streets are fully or partially closed to vehicle traffic using criteria defined during planning.
- Usage light separation to partly close streets and signal limited use and slower speeds (5-10 mph / 10-15 km/h) in areas where partial closures are expected (5-10 mph / 10-15 km/h).
- Use temporary signs such as "Local Traffic Only," "Road Closed," or "New Traffic Pattern Ahead," which may be mounted to barriers or A-frames if needed.
- Demarcate physical separation using surface marks (where applicable).

Credit: NACTO-GDCI

New York City, NY, USA

Wedding guests stand appropriate physical distances apart at an outdoor marriage ceremony while the City Marriage Bureau was closed.

Figure 59 New York city ,USA

- Think of other materials and traffic control components that would be appropriate for the event (pick-up/drop-off zones, event staging locations, etc.).[58]

[58] NACTO + GDCI. (n.d.). *Response & recovery*. nacto.org. https://nacto.org/wp-content/uploads/2020/09/Streets_for_Pandemic_Response_Recovery_Full_20-09-24.pdf

4.4 HEALTHY CITY

The place is integral to health. Our daily settings have a significant impact on how healthy we are as people and as a community. Where we live, work, and play plays a big part in why some people are healthier than others, and it may also play a big role in why other individuals aren't as healthy as they could be. Public spaces that are both healthy and inclusive can help to promote health equality in different ways, including:

- Reflecting accepted societal ideals such as dignity and respect
- Demonstrating the significance of systems that encourage trust and participation, particularly among excluded groups
- Promoting vibrant and diverse social interaction
- Allowing everyone to enjoy and use public space in different ways, such as for physical activity or relaxation
- Assisting communities in overcoming barriers that inhibit mental and physical health
- Protecting and preserving a place's natural assets and strengths
- Allowing everyone to enjoy and use public space in various ways, such as for exercise or leisure.

PROGRAM AND DESIGN

Improve the quality of public space, increase access and safety, and encourage diversity to promote health equity.

Every day, the design and programming of physical space may influence both emotional and physical health. Over the last two decades, research from different fields has highlighted the value of providing opportunities for physical exercise in areas that people travel and visit daily. Even when we're just walking or crossing a street, we interact with public areas daily. To encourage active use and social interactions inside those areas, thoughtful design considerations are required. Weight gain and obesity are caused by a lack of physical exercise, which is a leading cause of chronic illnesses such as heart disease, diabetes, and cancer. Access to secure, high-quality, and green public areas that allow for social contact has significant mental health and well-being advantages. Social isolation, or a deficit of social interaction, is harmful to one's health, increasing the chance of death by around 30%. Loneliness, social isolation, and living alone are all linked to a higher risk of death by 29 per cent, 26 per cent, and 32 per cent, respectively.

The presence of trees consistently indicated increased usage of outdoor spaces by adults, youth, and mixed-age groups of youth and adults. Similarly, increasing physical activity in those locations has been linked to increased vegetation and vegetative cover. Other features and facilities, such as site furnishings Guiding Principles (benches, rubbish bins, shade, and so on), attract a wider range of visitors and boost usage. People from various racial and ethnic groups who wish to utilize the area for socializing, spending time with family or friends, leisure, individual relaxation, or group activities flock to sites with a variety of attractions. It's crucial to remember that inclusionary design interventions might be as little as a bench.

People tend to use public open spaces for physical activity if those spaces are of high quality. Proximity to public open spaces like parks, plazas, and green spaces has numerous health benefits. Creating venues that welcome an assorted range of users contributes to the development of a more inclusive and equitable community for all. When tackling a project, it is beneficial to learn who will be using the space, as well as when and how they will do so, to guide design strategy.

People must feel comfortable in a location before they enter it, yet the presence of people is a vital sign of safety. Women, children, and the elderly, for example, make an area appear safer since these groups are perceived as more vulnerable to crime. However, to be in the place, persons from these groups must also feel comfortable. Other factors that make a location more appealing and inclusive might make it feel safer.

Public Space	Neighborhood	City	Regional/National
– Street and sidewalk/ plaza redesign – Community garden project – New waterfront access area or esplanade – Lighting on a sidewalk – Events held on a square/ in a street – Improvement to a public transit entrance – Community park design-build project	– Renewal program for an urban district – New bike lane connections on a street network – Construction of a regional destination waterfront park – Day worker meeting site – Main street revitalization or redesign – Installation of street lighting fixtures – New friends-of-park group formation – Food distribution area	– Public space network plans – Resiliency strategy for urban waterfront parks – Mobility plan – Bus rapid transit or light rail corridors – Bikeshare network stations or bike racks – Zoning for access to healthy food stores – Active design guidelines – Mental health awareness campaigns – Environmental justice campaign	– Congestion-pricing policy – Walk-to-work policy initiative – Large-scale rails-to-trails project – Regional economic development strategy – Public land conservation plan – Environmental cleanup project – National 10-minute walk-to-a-park goal – Regional health framework plan

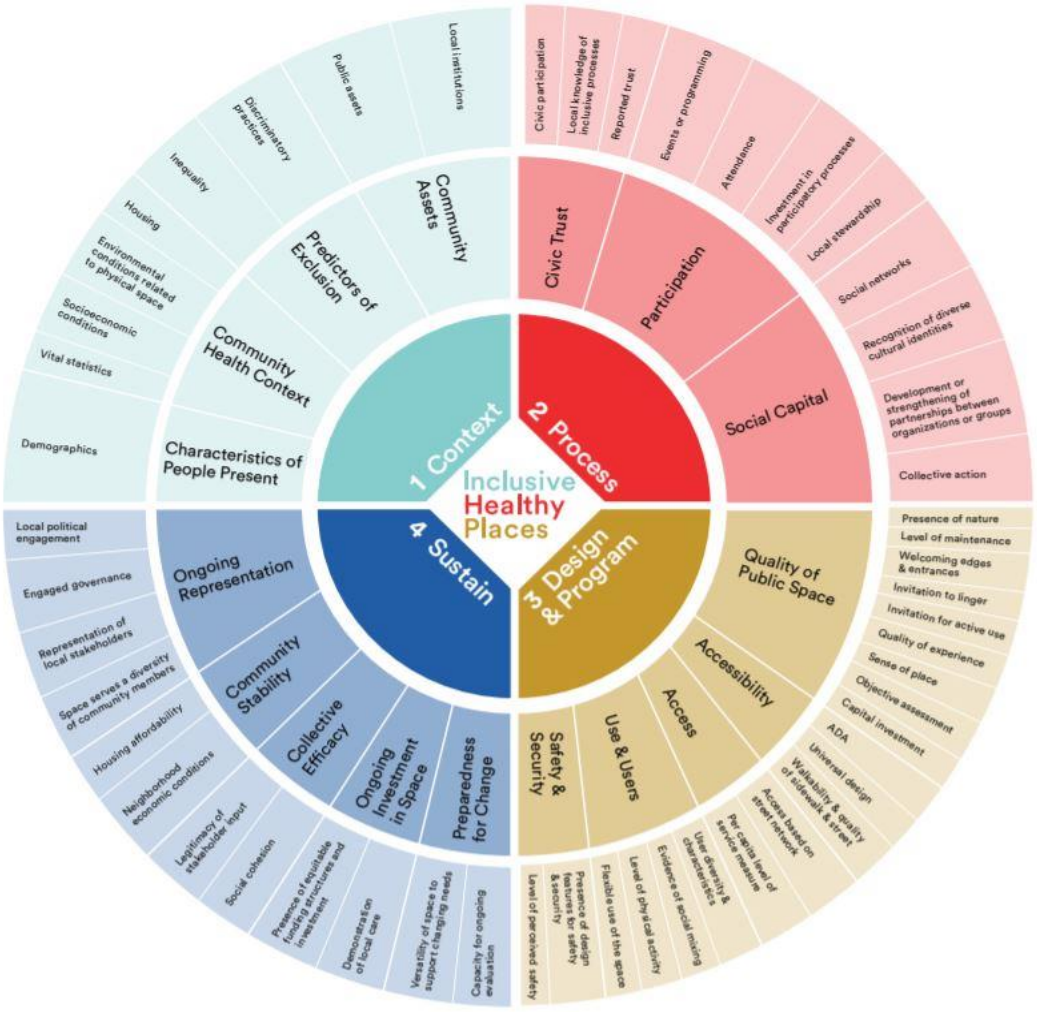


Figure 60 Four guiding concepts for developing and evaluating public places are presented in the Framework

The figure shows the Four guiding concepts for developing and evaluating public places that are presented in the Framework by Gehl Architects. The first principle is the Context to Recognize the context of your community by learning about the current circumstances, assets, and lived experiences that are related to health equity. The second principle is the Process Promote civic trust, engagement, and social capital to support inclusion in the processes that build public space. Design & Program is to improve the quality of public space, increase access and safety, and welcome diversity to promote health equity. Sustainability is the fourth principle that Promotes representation, agency, and stability

in local communities to increase their social resilience and capacity to interact with changes in place over time.[59]

4.4.1 GREEN SPACE

Figure 61 Quality green public space chart- Adapted from NSW Greener Places: Establishing an urban Green Infrastructure policy for New South Wales. (2017).

Green areas are essential for humans, wildlife, trees, and plants to live in a healthy environment. They offer a variety of benefits, including enhanced mental and physical health and wellness, increased community and social connectivity, opportunities for sport and leisure, environmental preservation, climate change adaption, and urban stormwater management. Green spaces are private and public land areas with trees, watercourses, and other landscape components that contribute to the resilience of ecological systems, which are places we often associate with open space, such as parks,

[59]Jennifer Gardner. (2018, June). *Inclusive healthy places framework - gehl institute*. https://gehlinstitute.org/wp-content/uploads/2018/08/IHP_Framework-Summary.pdf

gardens, and sports fields. Streets and roads, other infrastructural corridors, watercourses, nature conservation reserves, National Parks, community gardens, school grounds, and buildings with green walls, facades, veneers, and roofs are all examples of green open spaces. Residential gardens, golf courses, agricultural grounds, and planting treatments (greening) on and around private structures are examples of green open spaces on private property.

GREEN SPACE'S ADVANTAGES

- Physical activity in or near green space is related to a variety of positive health effects, including weight loss, decreased blood pressure, and longer life spans.
- Physical activities in green space ("green exercise") are more beneficial and restorative to health than in enclosed or confined settings, according to emerging data.
- Physical healing can be aided by exposure to natural landscapes, whether through nature experiences or just viewings of nature (e.g., speedier surgical recovery and patient healing).
- The quality of open public space within a neighbourhood appears to be more significant than the amount when concerning mental health.
- Increasing the amount of green space in people's neighbourhoods can help to enhance their mental health.
- Greening, for example, is linked to a decrease in feelings of worthlessness and depression. Walking through green space has also been linked to a drop, in heart rate, which is one indicator of acute stress.
- Green areas provide children unique chances for exploration, creativity, mastery, and control, all of which are considered to affect various elements of brain development.
- Children's attention deficit symptoms are also lessened when they are engaged in green surroundings, according to research.
- Green space may help create social connections and promote a feeling of community, both of which are vital for social cohesion.
- Green places help to keep you cool. Green areas may lower temperatures by 1-4 degrees Celsius, improving human comfort while lowering energy use.
- Noise pollution from continued urbanization, increasing traffic volumes, industrial activities, and decreasing availability of quiet places in cities is a threat to human health and wellbeing.

- Planting trees in parks, public gardens, or streets can slow stormwater runoff and increase water infiltration into soils, which is important for sustainable and resilient landscapes in our cities and towns.
- Noise reduction services are provided by green areas, which act as natural sound buffers, with plant belts 1.5–3m broad estimated to greatly reduce noise.
- Increased rates of cardiovascular and respiratory illness can be linked to poor air quality. Pollution may be filtered by vegetation in urban areas.

The health design, implementation, and management of high-quality green public spaces are guided by the following principles:

- Improve the health and well-being of the community.
- Build stronger communities by connecting with nature
- Provide universal connectivity and access
- Contribute to neighbourhood character
- Provide universal connectivity and access.
- Contribute to the character of the neighbourhood.
- Support resilient communities.[60]

[60] *Creating Greener Places for Healthy and Sustainable Communities*. (n.d.). https://www.odasa.sa.gov.au/wp-content/uploads/Green-Public-Spaces-Principles-FIN-WEB-V3.pdf

4.5 MENTAL HEALTH

- Mental health is most important for leading a happy life. There is a clear link between the nature and quality of the built environment and the mental health of those engaging with it.

- City life can provide a variety of mental health benefits, such as improved opportunities to participate in economic, cultural, and intellectual activities that keep the mind engaged.

- A general sensation of congestion and lack of open space, overcrowding, noise, stench, constantly changing visual stimuli, a sense of disorder, and pollution are all factors that contribute to mental imbalance due to increased stimulation.

- Urban design actions point to green space should be integrated into all designs. While walkable green space seems to have the most impact on mental health, the overall greenness of a person's neighbourhood is linked to better mental health.

- The priority is to ensure that people are exposed to urban nature on a consistent and regular basis as part of their routines, including features such as flowers and street trees in commutes, gardens for lunch, and views of nature from office windows, as well as large walkable spaces for people to socialize and exercise.[61]

[61] Eamon O'Connor. (2020, May 7). *Public space plays vital role in pandemic*. Gehl. https://gehlpeople.com/blog/public-space-plays-vital-role-in-pandemic/

5 CHAPTER 5 - PUBLIC SPACE OF INDIA

5.1 PUBLIC SPACE AND LIFE IN AN INDIAN CITY

Figure 62 Taj Mahal, India

"A city without shared public spaces is a city without culture, without history"—Charles Correa Indian architect and urban planner

India, a growing country with a 33 per cent urbanization rate, is beset by difficult development and expansion challenges. The ever-present discrepancy in people's socioeconomic backgrounds necessitates a continuous effort by the government, architects, and urban planners to come up with solutions that work in this ever-changing context. There arises a necessity for reflection on the quality of public infrastructure and whether it serves the purpose, from fundamental infrastructural necessities such as the supply of decent quality public restrooms to making a purposeful effort to build all-inclusive public places. As we continue to envisage a solution to issues as basic as providing better-functioning, visually appealing, and appropriate public restrooms, it's critical to realize what's at stake.[62]

[62] Chaitali Patil. (2022, January 14). *7 innovative public space designs in India - RTF: Rethinking the future*. RTF | Rethinking The Future. Retrieved from https://www.re-thinkingthefuture.com/architects-lounge/a1530-7-innovative-public-space-designs-in-india/

- India has the world's second-largest urban system. Almost 11% of the urban population in the world resides in Indian cities.
- Lack of serviced land, traffic congestion, the strain on basic infrastructure, high air pollution, urban floods, water shortages, and droughts are not only a reflection of infrastructural deficiencies in cities. These problems point to a serious and widespread absence of appropriate urban planning and governance frameworks.
- Many of the big metropolitan public places inside the sphere of our cities in India are congested, chaotic, unclean, and hazardous, yet they are vibrantly alive and pulsing with vigour and dynamism. These places honour their democratic and varied nature by providing something useful and valuable to everyone.
- The pathways in most traditional Indian cities are often narrow, winding into a maze packed with stores that have served clients for hundreds of years; money is traded, and value is created. Despite this, the 'unorganized' sector is discarded. Every business is well-organized in its own right, even if the bazaar, with its noises and forms, appears to be rather chaotic. Amid macrocosmic chaos, there is microcosmic order.
- Our cities are a mix of organic (slums) and inorganic (city) (planned). The organic is constructed by poor migrants, while the inorganic is built with the help of the state apparatus. It's a pipe dream to think we'll have the resources to build properly planned communities. We must take into account reality while utilizing existing resources to construct a town that is not as chaotic as people envision. In a lively, unpredictable, yet coordinated environment, biological and inorganic forces must communicate and integrate.
- The phrases pandemonium, bazaar, crowded, unclean, and so on are frequently linked with the traditional Indian city, which has numerous levels of activities, rituals, and multivalent functions that coexist in peace despite the seeming confusion. The friction between distinct human and natural hierarchies gives rise to the concept of public spaces.
- India's towns and public spaces are rapidly changing as a result of the global economy, Western influences, and rising urbanization. The amount of complexity grows dramatically as we move from smaller and more controllable scales of towns and settlements to the huge magnitude and dispersion of mega-cities. Without realizing and planning for the differences in our ground (socio-cultural-economic) realities, we aspire for *perfection* (order and planned organization) and the healthy order of Western cities Indian society is polytheistic and heterogeneous in terms of its social, economic, and religious structure.

Figure 63 Major cities of India

Functionally, these spaces may be broadly classified into the following categories:

- Public Buildings and Monument Plaza
- City Squares and Cultural Spaces
- City Level Urban Parks
- Bazaar Streets and Market Places
- Waterfront Spaces

- Religious Spaces
- Ancient Heritage Monument Spaces

Figure 64 Major cities and the public spaces

The four fundamental cornerstones:

The Indian, a city, a public space, a place

Each of the foregoing aspects has its own identity and set of distinguishing traits; nevertheless, it is when all four of them come together in a single time/space matrix that it becomes intriguing. Because different cultures, regions, and religions function at different levels when it comes to what can be considered acceptable public-private boundaries, the nature of this space is constantly changing — and is characterized within an 'Indian' context by a set of parameters that are unique to spaces that exist and co-exist in India.

Indian: To name a few, there is a developing economy, a sturdy education system, rapidly growing hubs for innovative technologies and services, various crafts, the quintessential Bollywood, the family unit's ability to withstand adversity, the allure of the reality shows new-age television industry and new-age television industry reflecting the aspirations of millions of urban poor, a daily negotiation of the modern through traditional values, and, above all, labour.

Urban: It is a concept that is understood the best in the framework of a city, where buildings and people coexist. Cities are formed for different reasons, including economics, employment, and expansion prospects, as well as historical events, natural disasters, and geographic sensibility. Increased population densities, as well as higher energy consumption patterns and economic activity, separate urban regions from their rural equivalents. In India, an urban area is defined as a location having a minimum of 5000 people population and at least 400 people density per square kilometer (according to the 2011 Census of India). It also states that metropolitan regions have more than 75% of their workforce engaged in non-agricultural activities.

The public is a set of social rules as well as physicality. As a result, a public place is created. Is commonly regarded as a public place that is open to all residents of the city. As a result, "who owns what" is often seen as a critical determinant of a city's "public" area. Public space is typically thought to be the responsibility of towns and local governments; however, it is frequently the responsibility of archaeological organizations, private trusts, and even corporate organizations. Equal access to users throughout all parts of society, regardless of income or social standing, is a common characteristic. The majority of large-scale open areas Roads, parks, and water bodies are some of the most common forms of public spaces in a city.

Space: The simplest definition of space is that which we have not made. In most cities, the lack of the constructed component is as important as the presence of the built component. Though it is 'empty,' it is important to realize that in a city, this does not mean 'unused.' It is multifaceted, a place where a wide range of activities and functions take place.

When these four elements are combined in a single area and time to produce the Indian urban public space, we get a complicated organism. It may appear congested, filthy, chaotic, multi-utility, and poorly managed on the surface. However, when examined at a deeper level, the same area scores similarly well, if not better, on counts of its lively, occurring, dynamic, active, and festive quality. The 'gaze' is accountable for this different impression. Another framework (or way of looking at the reality of this complicated occurrence) is the 'gaze' or worldview with which we perceive these areas and interpret the contextual, social, and cultural reality.[63]

5.2 PANDEMIC SITUATION IN INDIA

After its independence and split in 1947, India is undergoing the world's second greatest migration. Construction workers, labourer's, street sellers, and farmers are the worst hit. During the epidemic, nearly 80 million individuals returned home without using public transportation, according to data. Because all of these migratory workers and labourers are dying of starvation, stress, and road accidents during this Reverse-Migration (Urban-Rural), this public health catastrophe has been transformed into a humanitarian disaster for India. The population density of Delhi, the capital city, is 11,297 people per square kilometre, with 1,797 densely inhabited illegal colonies accounting for 30% of the city's total population. Both Dharavi in Mumbai and the Slums of Delhi have demonstrated that cramming the impoverished into a limited metropolitan area has disastrous health repercussions, particularly during a pandemic. In India, several advisories and public health interventions have been implemented in the last three months, including restrictions on the utilization of public spaces, confinement and social distancing, and other policy measures to reduce Covid 19 transmission and protect public health.

Indian towns are recognized for their bustling bazaars with congested people, hawkers, and automobiles, as well as small streets with abrupt twists, sudden dead ends, and buildings overlooking the street. The most critical aspect of the scenario is the ambiguity about what will happen next and the concern that our sense of location and space may

[63] Archana Gupta, & Ansuman Gupta. (2016, June 13). *Celebrating public spaces of India*. Issuu. https://issuu.com/mapin/docs/celebrating_public_spaces_of_india

be permanently altered. While we are starting to notice how urban design affects physical health in India, just a few specialists are aware of the connections between mental health and our badly constructed cities. The Covid epidemic has brought attention to the need of putting people first and create livable communities. The pandemic may compel planners and designers to develop a new lexicon or typology to characterize locations in terms of social density, distances, congestion, or public health hazards. At least in the hotspots, the pandemic will generate a new lens through which to look about public space, maybe a new street design, infrastructure, housing, and mobility alternatives. The pandemic is expected to drive street vendors, other informal labourers, and pedestrians off the streets, and this is likely to continue post-pandemic.[64]

Maintaining safety standards is difficult in a small, densely populated nation like India

With the bare minimum of space to hold gatherings in our commercial spaces such as mandis, haats, and bazaars and insufficient distance between vehicular roads and commercial properties, it has been nearly impossible to keep these markets open while adhering to physical distancing norms during this pandemic. The lack of or poor-quality pathways along such areas has exacerbated the problem.

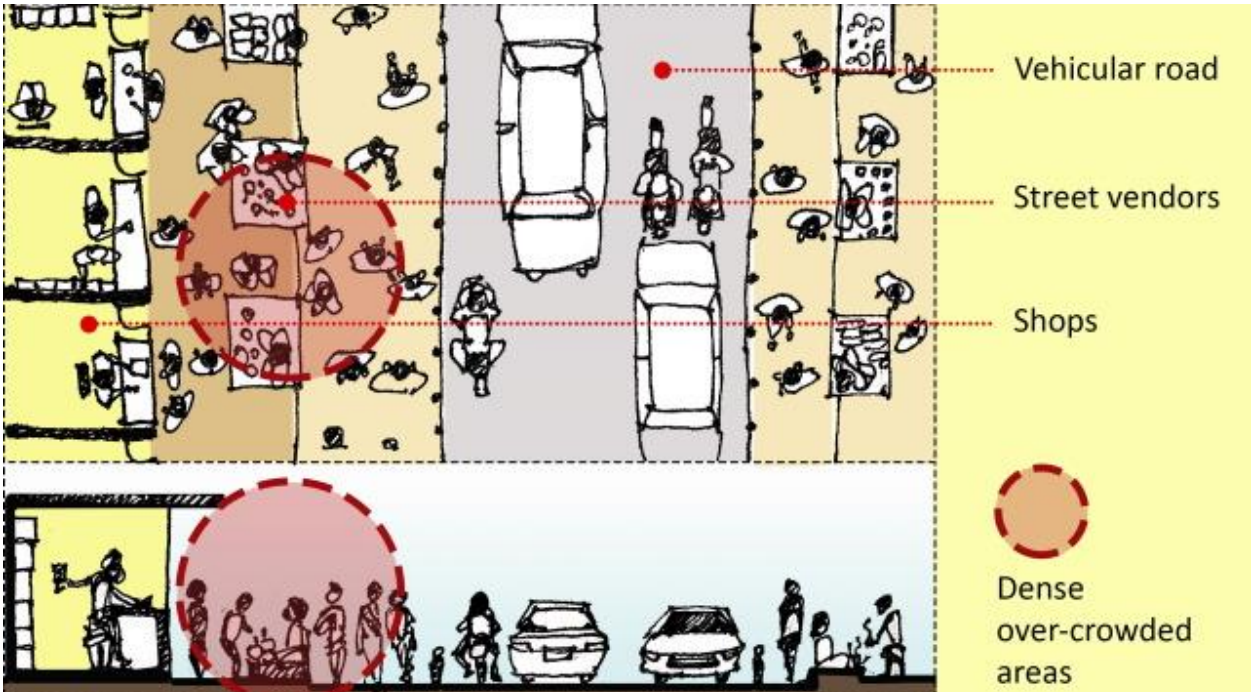


Figure 65 A typical street section with shops, informal vendors, customers and vehicular traffic

[64] Moiz Uddin. (n.d.). Covid19 Impact & Post Pandemic Public Spaces: A case of Indian cities. Follow Your Rhythm.from https://www.placy.city/en/post-quarantine-urbanism/india-public-places/

Safer and more comfortable public places can be created by reorganizing areas, simplifying motions, and limiting public gatherings through spatial and regulatory measures. Streets, pavements, workplaces, institutes, marketplaces, restaurants, food courts, public parks, and similar facilities all require response policies at the city level to build COVID sensitive settings.

Returning the city's breathable pieces to its inhabitants by reopening open areas

Long-term physical isolation, stress, and the dread of a pandemic can all have negative consequences for our mental and physical health. Parks, lawns, and playgrounds provide a peaceful and breathing environment for the general public. Apart from that, large-scale open areas can handle enormous crowds while preserving enough physical separation.

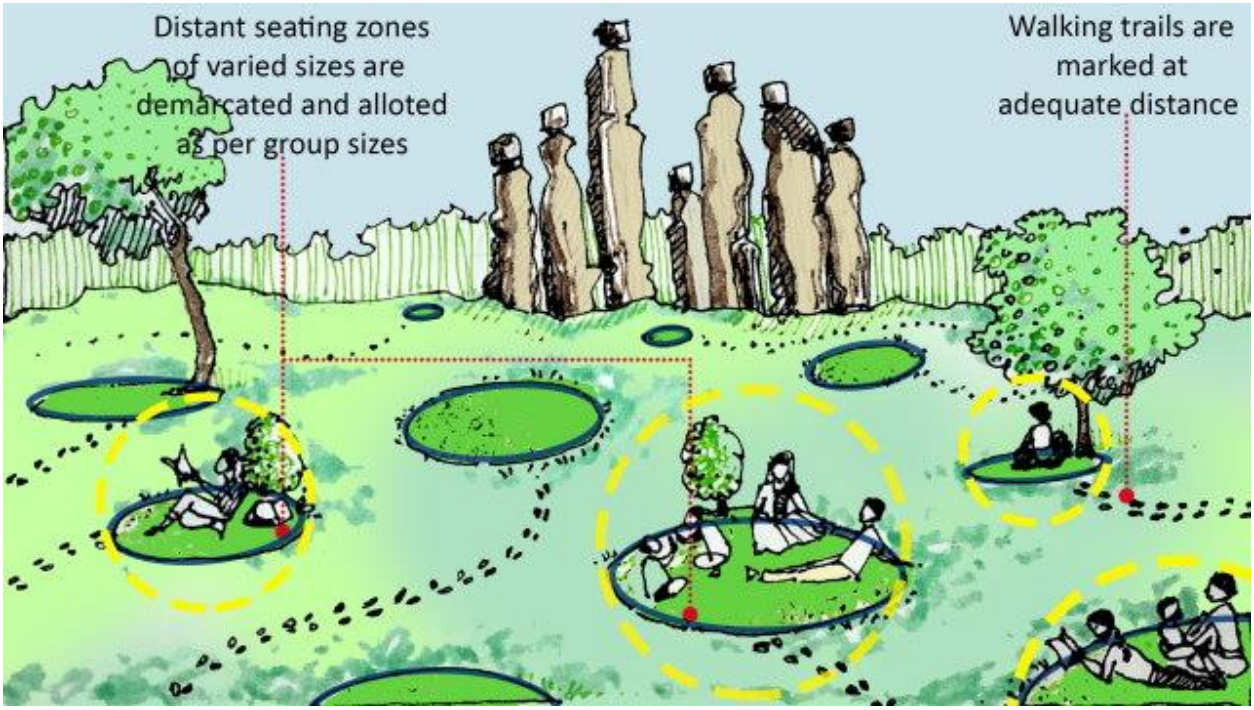


Figure 66 Demarcated seating areas of different sizes and distant walking trails in public parks. Place reference: Central Park, Jaipur

People can use these recreational areas securely by dividing them into zones of various sizes and allocating them to single visitors or families based on group sizes. Strong visual instructions and occasional patrols can be used to limit movement from one zone to another.

Minor interventions help keep mandis, haats, and bazaars running well.

Individual selling areas should be limited wherever feasible, while buyer spaces should be opened up to allow for better physical separation. Parallel tracks for mobility can help to reduce crowding, with one row dedicated to consumers walking to discover suitable businesses or vendors, and the next row adjacent to the sellers allowing people to just buy. Staggering halting areas in both rows allows for distance in both directions. Aside from that, sustaining unidirectional circulation by a strong visual signal on floors is required to keep the throng moving smoothly

As a new option, parking lots are being used.

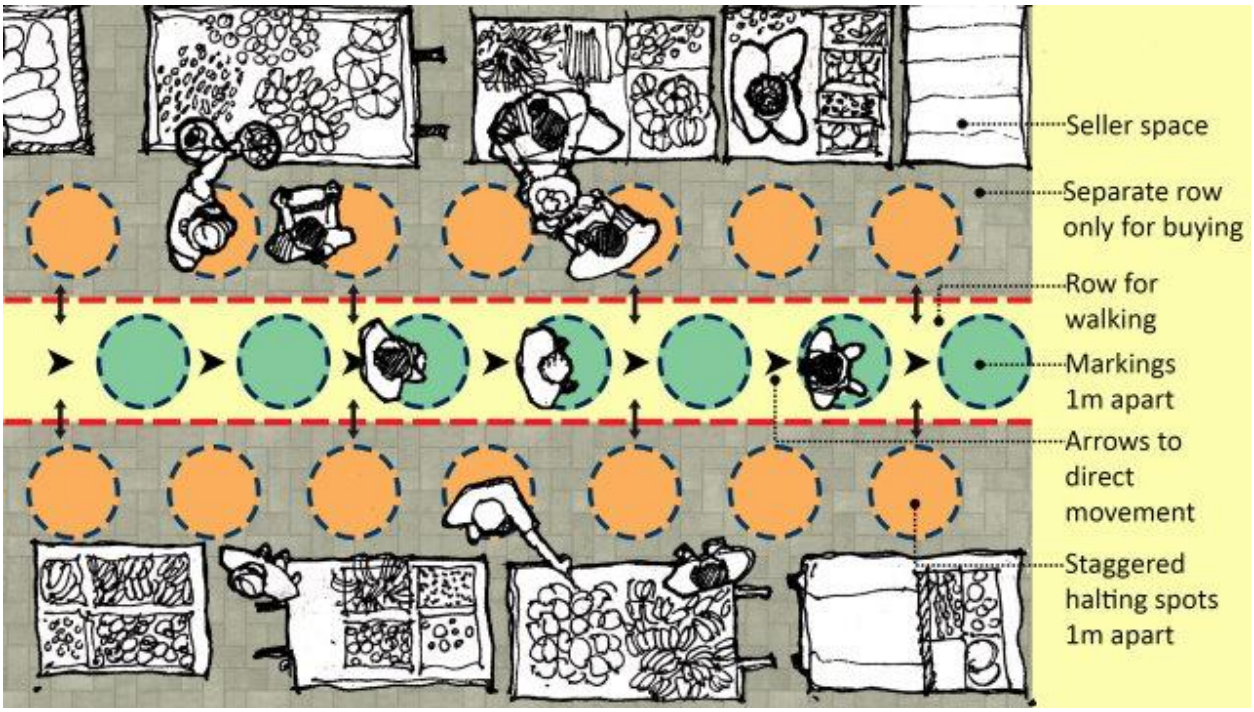


Figure 67 A typical Indian sabji mandi post rearrangement and streamlining of materials and movement

At various points across cities, parking spaces appear as prospective unoccupied places. Cafés, restaurants, and food courts can employ adjacent or overlooking parking lots as extended dine-outs to spread out current client capacities over bigger spaces at properly spaced places. They can also be used as waiting spaces for operating stores and services that are located nearby.

Malls, cinema halls, religious and tourist attractions must adapt their accessible open spaces, such as entry plazas, unbuilt spaces within facilities, or underground parking, to serve as appropriate waiting places. Introducing a reservation system for visitors to reserve desired/available times for such visits as restaurants and hotels will help to alleviate overcrowding and queuing in the majority of our public areas. Phone calls or applications can be used to make such reservations.[65]

Figure 68 Parking lots alternatively used as extended dine-outs. Place reference: Church Street, Bengaluru

[65] Chidananda Arpita. (2020, August 21). *In a post-COVID world, rethinking public spaces in Indian cities, and the need for spatial interventions-india news, Firstpost.* Firstpost. Retrieved from https://www.firstpost.com/india/in-a-post-covid-world-rethinking-public-spaces-in-indian-cities-and-the-need-for-spatial-interventions-8734241.html

5.3 WHY DO SPACES FAIL?

- **Lack of places to sit**

Many public locations don't even have a seating area. As a result, in their never-ending desire for comfort, individuals are frequently obliged to adapt to the circumstance in their manner. A lack of suitable seating is also a significant concern. Depending on the temperature and location, a choice of chairs in the sun or shade might make all the difference in a place's success. It's also critical to allow individuals to sit near a playground or given other activities.

Figure 69 India Gate, India

- **Lack of gathering points**

This includes amenities that people desire or want, like playgrounds or locations where several components, such as bus stops, vending carts, and outdoor seating, come together to form a meeting area. Food is often considered an important aspect of a good meeting spot.

Figure 70 Bengaluru, Commercial Street, India

- **Poor entrances and visually inaccessible spaces**

  If an area is to be utilized, people must be able to see it and access it. One of the prominent causes for the decline of public space in India is that spaces are not visible in the appropriate locations.

Figure 71 City bird Sanctuary, Chandigarh, India

- **Dysfunctional features**

  Frequently, elements are built solely to punctuate the space, offering an aesthetic rather than a practical purpose, rather than encouraging activity to develop around them. Indian public places are devoid of public art, street art, and colourful installations.

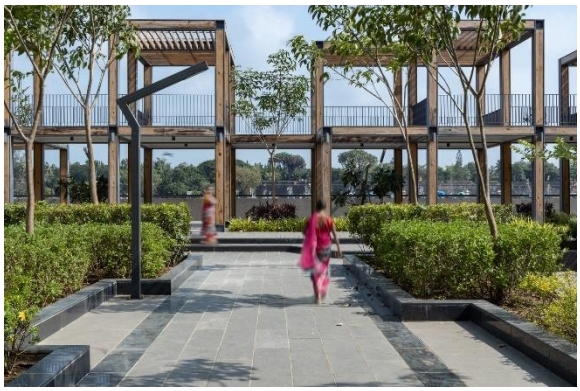


Figure 72 Jetty Garden,India

- **Paths that don't go where people want to go**

  Paths that lead to nowhere are useless, however, circulation at the place will be simple and visible. Paths with more light and more visibility are always preferable, the art of making a path that pulls people along it or allows them to stop and relax.

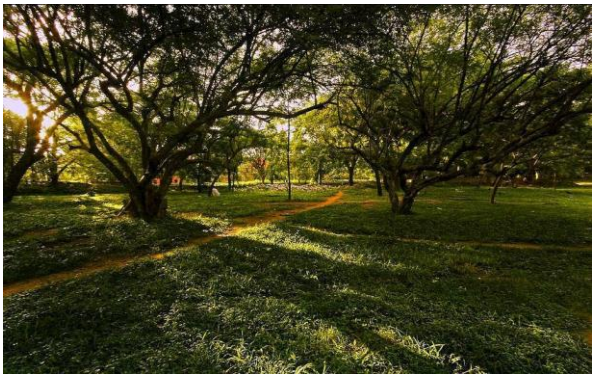


Figure 73 Bengaluru, Cubbon Park, India

- **Domination of space by vehicles**

  It's possible that there aren't enough crosswalks, that the roadways are too broad, or that there aren't enough sidewalks. The primary thoroughfare isn't a highway. Crossing the street should not be feared so much that it must be done in groups.

Figure 74 Traffic in India

- **Blank walls or dead zones around the edges of a place**

  The region surrounding a place is just as vital to its success as the facility's design and administration. The empty wall adds nothing to the bustle of the roadway. It doesn't even appear to be real.

Figure 75 Gujarat street , India

- **Inconveniently located transit stops**

  Bus or rail stops that are situated in areas where no one wants to utilize them are doomed to fail. A transport stops in a bustling, lively area may improve the area while also increasing transit utilization.[66]

Figure 76 Mumbai, India

[66] Amit Bhatia. (2015, March 31). *Architectural Research Paper: Placemaking*. Issuu. https://issuu.com/ar.amitb/docs/publication

5.4 HOW DO PUBLIC SPACES SUCCEED?

Applying these simple solutions, we can also create or enhance our public spaces in India.

5.4.1 Enhance Streets as Public Spam

- Streets are the most basic public area in each city, yet many are congested, therefore Placemaking promotes city design for people and places rather than simply automobiles. The ideal street supports a variety of forms of transportation, including cars, trains, trams, bicycles, and pedestrians, all of which will operate in tandem.
- Planning out a hierarchy of corridors ranging from major boulevards to quiet neighbourhood streets will also affect what develops on that street and create more appropriate street-building interactions.
- In general, making roadways more pedestrian-friendly would give areas for interpersonal connection and develop a feeling of community that is hard to achieve on a largely automotive route.[67][68][69]

[67] *Sidewalks*. National Association of City Transportation Officials. (2015, July 24). https://nacto.org/publication/urban-street-design-guide/street-design-elements/sidewalks/

[68] Balancing street space for pedestrians and vehicles. Project for Public spaces. (2008, December 31). https://www.pps.org/article/balancing-street-space-for-pedestrians-and-vehicles

[69] Streets as places: How transportation can create a sense of community. project for public spaces. (2014, March 18). https://www.pps.org/article/streets-as-places-how-transportation-can-create-a-sense-of-community

5.4.2 Create Parks and Squares as Multi-Use Destinations

- Local economies, civic pride, social connectedness, and human happiness are all boosted when public squares and parks are designed around significant public locations.
- These spaces serve as 'safety valves for a city, where people can find both breathing room and relaxation in a well-planned park space or fear and danger in a badly-planned one.
- Multi-use destinations" with a variety of attractions and activities, where individuals may find common ground and ethnic and economic problems can be overlooked, are the most effective public areas.

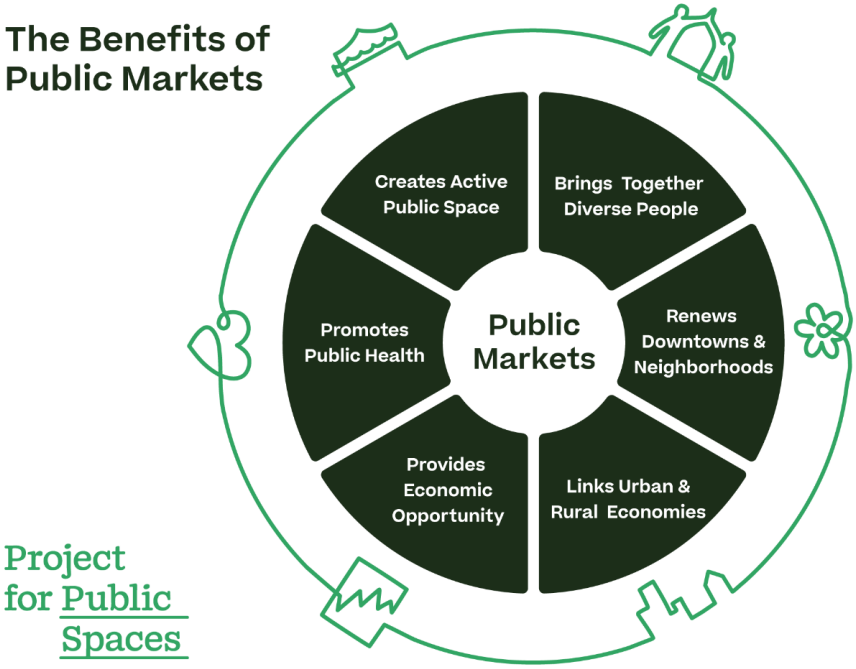
Figure 77 Tenri Station Plaza CoFuFun,Japan

5.4.3 Build Local Economies through Markets

- Markets have long been the most productive and lively venues in our cities and towns, where people trade news, politics, and gossip, as well as reinforce the social ties that are necessary for a healthy society.

Figure 78 Peoples Gas Holiday Market, Downtown Pittsburgh

- Markets benefit cities in different ways, including fostering entrepreneurship, preserving farmland surrounding cities, building relationships between urban and rural regions, and increasing access to fresh food, to name a few. Putting a supermarket in place of a traditional market has shown to have no social benefit and has simply weakened existing community bonds.[70]



[70] *Endless bounty: The transformative benefits of public markets*. Project For Public Spaces. (2010, February 28). https://www.pps.org/article/the-benefits-of-public-markets

5.4.4 Design Buildings to Support Places

- Some may consider buildings with intriguing interiors to be aesthetically successful, but the architecture that extends beyond the façade and interacts with the city fabric at the street level is the most effective since it is designed to human scale.
- It is particularly crucial to invest in public institutions such as libraries, government buildings, and museums for them to integrate with their urban surroundings and promote greater opportunities for interpersonal engagement.
- Furthermore, the presence on the street level of commercial activities, restaurants, associations is important to stimulate the use of smaller open public spaces in the neighbourhoods

Figure 79 Building 12 Qplex, China

5.4.5 Multifunctional Spaces

- This concept emphasizes the necessity of providing an assorted range of activities in one area, making a location greater than the sum of its parts.
- For example, a park should include a fountain, playground, food vendor, and a neighboring library, among other amenities. If a neighbourhood has 10 places that each have 10 different things to do, then that neighbourhood is on the right track; but if that city then has 10 neighbourhoods of this nature, all citizens will be guaranteed excellent public spaces within walking distance of their homes.

Figure 80 Pegasus Trail , Chongqing , China

5.4.6 Lighter, Quicker, Cheaper:

- Start Small, Experiment, big may not always be better, neither is it the best solution. Small actions such as constructing seating areas, a sidewalk, or a café, hosting a community event, planting a container garden, or painting crosswalks may all improve a town's public space.

- Small tweaks here and there can build up in informal settlements, which are already used to lightweight, imaginative techniques that can reimagine their surroundings.[71]

Figure 81 San Francisco's Secret Mosaic Staircase

Figure 82 Superkilen, Copenhagen, Denmark

71

6 CHAPTER 6 – CASE STUDIES

CASE STUDIES JUSTIFICATION

The three major case studies are **Superkilen urban park**, Copenhagen, Denmark, **Nrityagram**, Bangalore, India & **OCT OH BAY Retail Park**, Shenzhen China. The Superkilen Urban Park is located in the post-industrial area in a critical European suburb, the Nrityagram is the Dance village located in the Rural area of Bangalore, Karnataka India and OCT OH BAY park is the regional market town in Shenzhen, China.
The **Superkilen** is a popular tourist destination in **Copenhagen**. It possesses all of the capabilities that a successful public place has, as examined in the study section of this book. It promotes people from 60 different nationalities, resulting in an international platform. Landscape elements from several countries are employed to create a place with a varied culture. This keeps the city alive and busy. The colour theme is the most appealing characteristic to attract people to the location; it gives a sense of harmony. Because the suggested site is in Kerala, India's capital city. The aforementioned variables have the potential to create an active public space while also eliminating the blank sense of the current situation.

India is a country with a rich cultural and traditional heritage. The cultural centre, **Nrityagram,** has chosen the future proposal. It provides a venue for classical dancers to learn about it and experience traditional culture via architecture. The analysis of this location is chosen since it has a high cultural value. All of the elements used here are sustainable, which may lead to a better environment. It is intended to create a quiet and calm ambience, with a rural theme throughout, to preserve dying art forms and culture.

OCT OH BAY park revitalizes **China's** first economic zone. It is a waterfront development. All of the functions that take place make the best use of the water body. The ecological blanket is key in connecting each location. This is a multipurpose location that combines with nature to create an urban retail park that serves to boost the local economy. The selected site incorporates a significant amount of water and natural beauty. This case study could be able to establish an ecological ambience that will benefit the local economy.

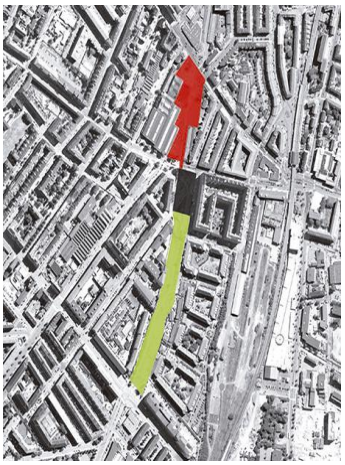
Superkilen urban park, Copenhagen, Denmark	**Nrityagram** Bangalore, India	**OCT OH BAY Retail Park,** Shenzhen, China
Urban Park It is the recovery of a post-industrial area in a critical European suburb The park is intended to bring together refugees and locals, encouraging **tolerance and unity**. **Architecture Features:** It is a **multi-cultural heritage** while also serving as an urban exhibition space, providing a good experience for people who visit, use, or pass through it by forcing locals to join together and form a socially linked community. **Multicultural theme**: 60 different nations coexist, sharing the same place and belonging to the same community. **New ways to transition:** New connections are prompted by varied zones, colours, and lines	**Cultural Village** It is a **dance village**, a place where nothing exists just dance. Students and teachers work in the field and **grow their food** at a residential dance school. **Architecture Features:** vernacular architecture. Large open spaces and gardens, as well as an organic master plan By combining semi-open spaces with the landscape, a free-flowing layout provides an informal environment that mixes with nature. **Natural Materials:** By combining nature with the environment, stone, mud, thatch roof, and brick materials offer a sense of rural touch. Locally available materials are used. **Constructing at a low cost**	**Waterfront Cultural and Retail Park** It has four core zones: East and West Waterfront Retail Parks, Urban Business Center, and Waterfront Cultural Park, all of which are located along with a three-quarter-mile waterfront property. **Architecture features** An ecological blanket a flowing natural landscape that surrounds the site and connects the zones via pedestrian walkways. Water is an important component. Various aquatic activities are available, as well as boat tours of the waterfront for the general public. With plenty of natural light and well-choreographed circulation with the traditional shopping experience

Incorporating **natural elements** into the design **Health:** Trees that were planted to meet the needs of the community are now infected with disease and fungus. **Environmental Value:** Existing materials are reused and recycled The materials chosen have a long-term impact on **sustainability.** **Aesthetic Values:** Geometric forms painted in red, magenta, and tones of orange help to emphasize the design's defining goal. The views on this site are seen from a bird's eye perspective.	**Concept:** The presence of the temple around the practice cottages serves as a focal point, resulting in a sensation of concentration. The open floor plan and the built-in vernacular architectural style There are a lot of trees and open natural places. Due to the abundance of trees, there are naturally shaded walks. **Sustainable Value** Permaculture concepts are used to create a food forest. Vermicomposting, waste management, and alternative energy are all good things to do. Scattered site plan for privacy	Visitors can travel in three dimensions from the public park to every level of the business zone. Various events, exhibitions, and impromptu social gatherings will be accommodated in the celebration plaza. An undulating running track, a cascading sculpture garden, an outdoor performance terrace, and a flower garden From the beach to the city and beyond, there are 360-degree vistas. *Sustainability* The ecological green belt Use of solar systems Wind pressure and heat pressure ventilation are improved by the streamlined shape and vertical patio.

6.1 SUPERKILEN URBAN PARK
Copenhagen, Denmark

Architects: Bjarke Ingels Group, Superflex
Landscape Architects: Topotek 1
Area: 27000 m²
Year: 2012

Superkilen is a heterogeneous public park with an intriguing concept that is contrived as a giant presentation of items and architecture from around the globe. Objects were being chosen by the 60 various ethnicities who make up the area's population.



The park consists of 3 colour-coded zones with their designated theme. The Red Square, The Black Market, and The Green Park.

To produce dynamic visuals, the various surfaces and colours are designed to blend seamlessly with the surrounding items. The newly constructed public area caters to a plethora of hobbies and activities, from chess to vigorous sports, for individuals of all ages.'

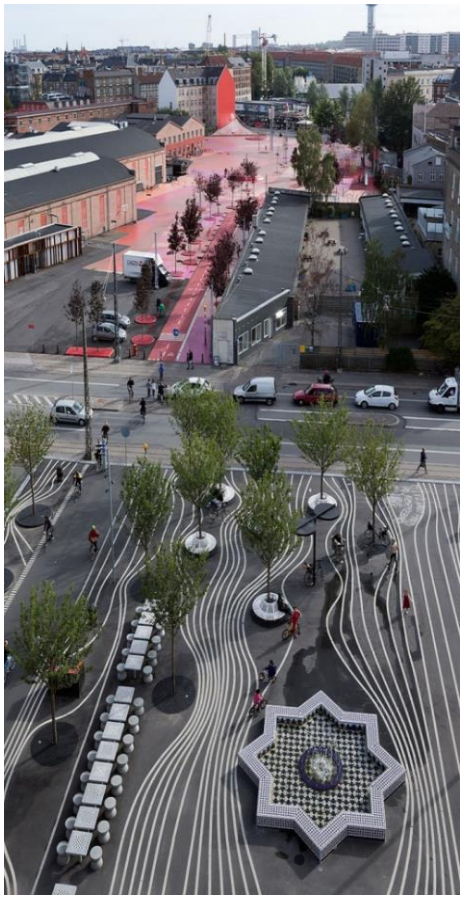


Figure 83 Superkilen, Copenhagen, Denmark.

THREE ZONES - THREE COLORS – ONE NEIGHBORHOOD

THE RED SQUARE

- The Red Square, which covers a wide **public walkway** with angular vibrant red, orange, and pink shapes. All objects even the walls, paths, and plants in this region are painted in a crimson colour scheme. To fit the colour palette, the designer carefully selected maple and cherry blossom trees.
- The Red Square is an extension of the **sports and cultural activities** at the Norrebrohall. When entered through Norrebrograde the square is an open place for residents to gather and play sports.
- The centre area, which was once a **hockey field**, is now a multipurpose place that hosts **ballgames**, **parades**, **markets**, and even **ice skating** in the **winter**. The square is a great **urban marketplace** setting, attracting visitors every weekend from Copenhagen and the suburbs.
- Other purposes include a café and a basketball court, an outdoor fitness area, and a parking space. Thai boxing, playground slide from Chernobyl, swing chairs from Bagh-dad, Indian climbing playground, a stencil of Salvador Allende, Brazilian benches, classic UK litter bins, bike stand, and neon lights from Moscow.

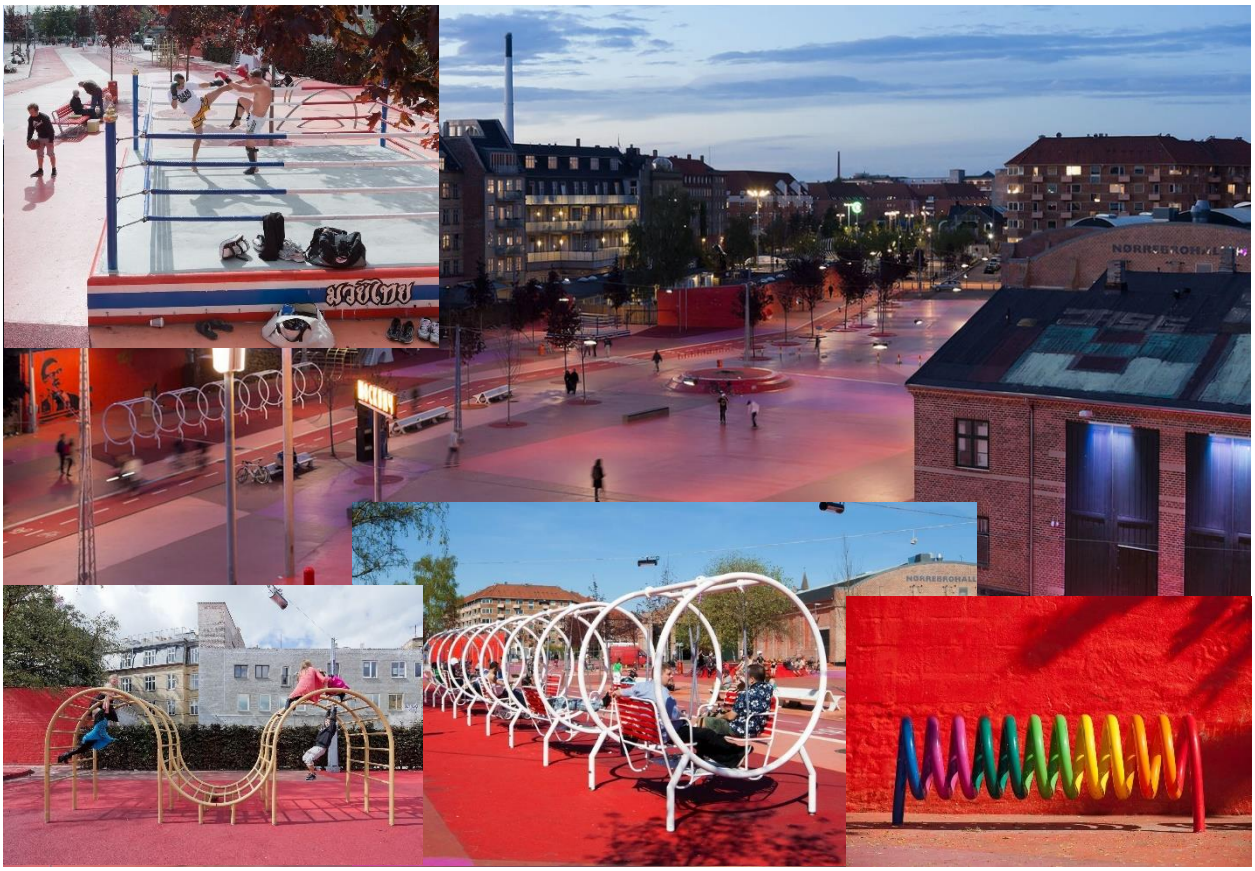


Figure 84 The Red Square Superkilen, Copenhagen, Denmark

THE **BLACK** SQUARE

- Because it is where the residents congregate, the Black Square is also called as "**urban living room**." The surface design is made up of **black asphalt** with white lines curving around the park's furnishings and artefacts. A black octopus, generally considered as a playground for children, sits in the middle.
- The **Moroccan fountain**, the **Turkish seat**, and the **Japanese cherry trees** are popular gathering spots for residents. **Backgammon**, **chess**, and other players can use the permanent tables, benches, and **grill facilities** on weekdays.
- **Brazilian bar chairs** under the **Chinese palm trees**, **Argentinean BBQs**, **Belgian benches** around the cherry trees, **UV (blacklight)** light highlighting all white from the **American shower lamp**, **Norwegian bike rack** with a pump. and **Liberian cedar trees**.

Figure 85 The Black Square Superkilen, Copenhagen, Denmark

BK.03 Neon sign (USA)
LR.03 Playground (India)
LR.02 Octopus playground (Japan)
BE.10-30 Lamp post (Abu Dhabi)
PA.01 Birdnest (Denmark)
BE.18-30 Lamp post (Italy)
PA.03 Dance pavilion (St. Louis, USA)
SR11 Soccer goal (Syria)
KD.01 Manhole cover (Poland)
BK.05 Bench (Iran)
LR. 04 Elephant slide (Ukraine)
BK.16 Bench (Germany)
KD.03 Manhole (Tel Aviv, Israel)
SR07 Basket ball (Mogadishu, Somalia)
MD.01 Osborne Bull (Costa del Sol, Spain)
BE.02 Neon sign (China)
BK.05 Bench (Iran)
Norway Maple (Europe) 'Royal Red'
AF.02 Litter Bin (Scotland)
ST.03 Bar chair (Brazil)
BK.11 bench (Porto, Portugal)
Soil (Palestine)
RI.01 Drain cover (Basel, Schweiz)
BK.01 Bench (Spain)
Lanch (Central Europe)
AF.03 Litter bin (UK)
LR.06 Double swing (Iraq)
SP.03 Thai boxing (Thailand)
ST.01 Double chair (Mexico)
Trochycarpus fortunei/Palm tree (China/Tibet)
Lebanon cedar (Lebanon)
SR05 Frames (Venice Beach)
BK.08 Bench (Miami, USA)
GR.01 BBQ (South Africa)
Sound system (Jamaica)
KD.04 Manhole cover (Ireland)
BK.17 Bench (Cuba)
TB.01 Phone booth (Brazil)
SW.01 Fountain (Morocco)
BK.04 Bench (Ethiopia)
LR.01 Swing (Kabul, Afghanistan)
BB.01 Picnic table (Armenia)
DeAngelis DONUTS
BE.04 Neon sign (Russia)
Mural (Valparaiso, Chile)
FI.01-16 Fitness equipment (Turkey)
Japanese cherry tree (Japan/East Asia)
BK.18 Bench (Belgium)
PU.02 Bollard (Uganda)
SR.02 hand bars (Venice Beach, USA)
LA.02 Cafe (Pakistan)
BE.16 Neon sign (USA)
Plan 1:550
BE.20 Double bench (Brazil)
BK.19 Double bench (Switzerland)
SP.04 Thai boxing (Thailand)
PA.02 Bus stop (Kazakhstan)
BE.07 Lamp (Germany)
SP.06 Ping-pongtable (Spain)
BK.07 Hammock (Sweden)
CS.01 Bike rack (France)
BE.17 Lamp post (Austria)
BE.10-30 Lamp post (Italy)
PU.03 Bollard (Ghana)
SP.10 Basketball (Compton, USA)
CS.04 Bike rack (Netherlands)
PU.01 Bollard (Egypt)
CS.02 Bike stand/pump (Norway)
BK.22 Bench (Kuwait)
SR.04 Climbing rope (Venice Beach, USA)
BE.21 Bench (Prague, Czech Republic)
BK.03 Bench (Portugal)
AF.01 Litter bin (UK)
SK.02 Sign (Red Square, Moscow)
CS.06 Bike rack (Finland)
BE.13 Belisha beacon (UK)
BE.10 UV lamp (USA)
BD.01 Picnic/chess table (Bulgaria)
Ginkgo (China/Asia)
BK.13 Bench (Brazil)
BK.06 Bench (Slovenia)
BE.18-30 Lamp post (Italy)
KD.05 Manhole cover (Zanzibar, Tanzania)
SP.08 Dancing pole (China)
CS.03 Bike rack (Netherlands)
ST.02 Picnic chairs (Romania)
BE.12 Neon sign (Doha, Qatar)
BK.10 Bench (Sweden)
SP.01 Travel rings (Venice Beach, USA)
LA.01 Gate (Mexico)
BK.12 Bench (Tunisia)
BE.01 Neon sign (Taiwan)
KD.03 Manhole cover (Paris, France)
BE.09 Lamp post (Germany)
CS.05 Bike rack (Netherlands)
PU.04 Bollard (Amsterdam, Netherlands)
SK.01 Bus stop sign (Jordan)
GR.02 BBQ (Argentina)
BE.08 Lamp post (Germany)
PA.01 Pavilion
SR03 Push-up bench (Venice Beach, USA)
BE.18-30 Lamp post (Italy)
BK.14 Bench (Vietnam)

THE GREEN SQUARE

- The Green Park is most popular for **picnics, sunbathing, and sports**. It **attracts children, young people, and families**. The park is completely green, even the **bike and pedestrian paths**. In addition, it is the largest out of the 3 sections.
- The long-stretched park houses several different sports fields and courts. We can even find a **basketball court** integrated with a **hockey field**°. The bike lanes which run through Red Square and the Black Market, no doubt continue through Green Park.
- The park is welcomed with a **rotating big neon sign from the USA**, a **Costa del Sol black Osborne Bull,** and a **big Italian chandelier**. There are **Armenian picnic tables** next to Mjolnerparken with **South African BBO's**, a **volcano-shaped sports arena** for basketball and football, a **line dance pavilion** from **Texas**, **muscle beach from LA** with a **high swing from Kabul**, **Spanish ping pong tables,** and a **pavilion** for the kids to hang out in. [72][73]

Figure 86 The Green Square Superkilen, Copenhagen, Denmark

[72] Daniel. (2012, October 25). *Superkilen / Topotek 1 + big architects + Superflex*. ArchDaily. https://www.archdaily.com/286223/superkilen-topotek-1-big-architects-superflex

[73] Arquitectura Viva. (2021, January 20). Superkilen urban park, Copnhague - Bjarke Ingels Big / Bjarke Ingels Group . Arquitectura Viva. https://arquitecturaviva.com/works/parque-urbano-superkilen-3

6.2 **POP UP INTERVENTIONS**

Outdoor yoga domes with a social distance in Toronto's open spaces.

Designed by: Lmnts Outdoor Studio Location: Toronto, Canada

Figure 87 Outdoor yoga domes, Toronto, Canada

- A new pop-up intervention installs 50 private, clear, frameless, **geodesic domes** in the open spaces of Toronto, Canada., the project's goal is to introduce Yoga and fitness activities to an outdoor environment in a safe and socially respectful manner. The event presents a new opportunity to engage in yoga and fitness sessions outdoors, taking place in 50 private, transparent, frameless geodesic domes with temperatures exceeding 100 degrees Fahrenheit (37,8 °C).
- Every dome is over 110 square feet of private, heated area, standing 7 feet tall and 12 feet wide, or more than 2 meters tall and 3 meters broad. A dome will be allotted to each individual, which will also house heaters and fans.

- this intervention has created a **safe and innovative way** to **practice physical activity**, **support local businesses**, **provide jobs** to instructors across the city, as well as **support the mental and physical health** of the community. [74]

Figure 88 POP up Intervention, Geodesic dome, Toronto ,Canada

[74] Christele Harrouk. (2020, April 29). *The Gastro Safe Zone: A public space proposal that considers social distancing measures*. ArchDaily. https://www.archdaily.com/938599/the-gastro-safe-zone-a-public-space-proposal-respecting-social-distancing-measures

6.3 THE GASTRO SAFE ZONE:

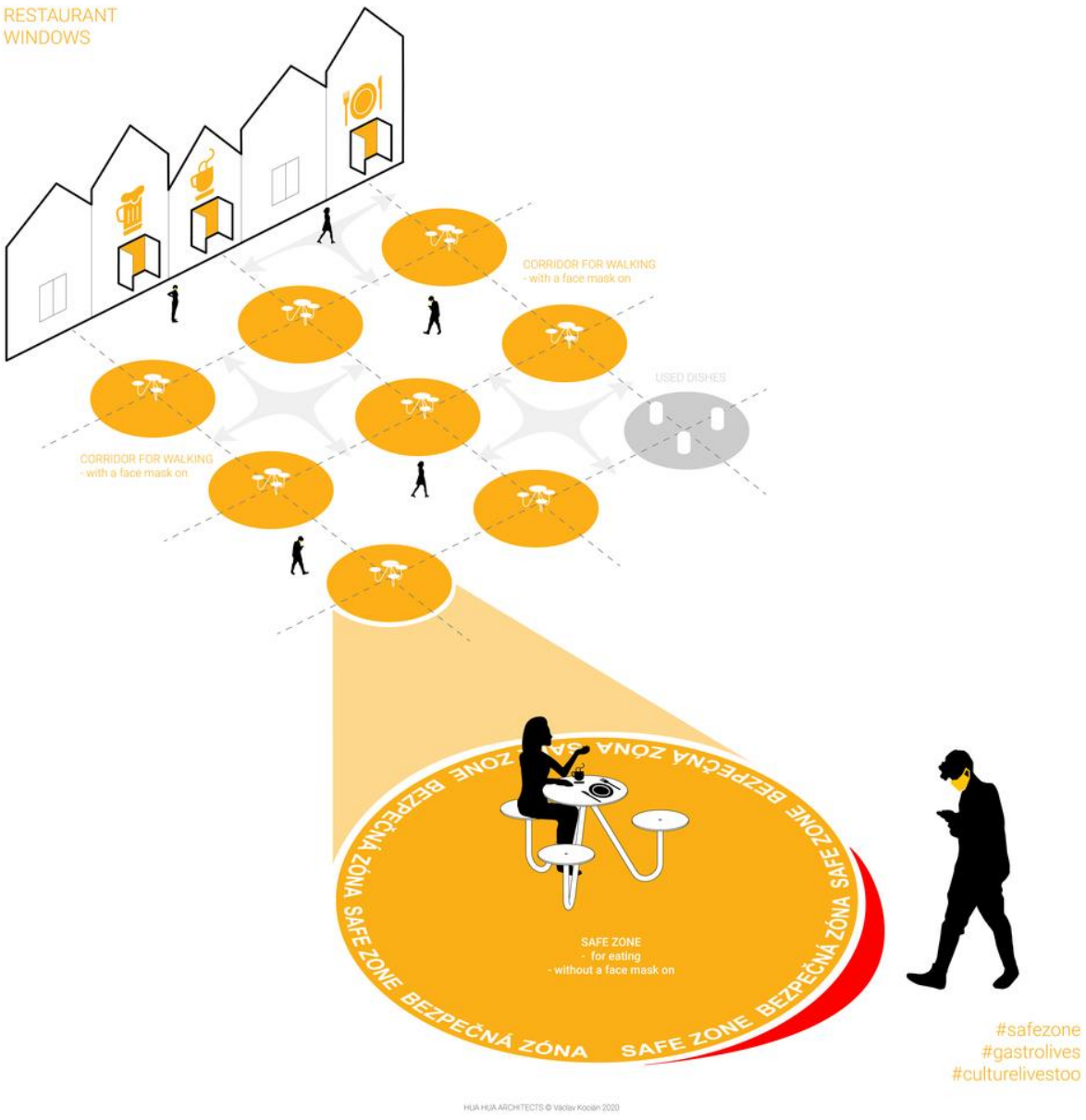
A PUBLIC SPACE PROPOSAL THAT TAKES SOCIAL DISTANCE MEASURES INTO ACCOUNT

Designed by: HUA HUA Architects Location: Czech Republic

- HUA HUA Architects has developed a space grid initiative that transforms public spaces into safe and defined zones, where people can eat outside without spreading
- the virus. To regulate outside eating, the initiative calls for cooperation with authorities for a safe return of the gastro businesses.

- The design, which is inspired by the circle of life, coherence, and infinity, may assume many different shapes and forms. Every safe zone is provided with one eating set and is spaced apart according to the authorities' standards.

- "The dining set includes three seats around a circular table; it is a one-piece construction; it is non-movable, stable, and resistant; and it is constructed of materials that can be sterilized and cleaned often."



- People can consume their meals without wearing a face mask within the clear safe zone. When outside of the grid, you must wear a mask.[75]

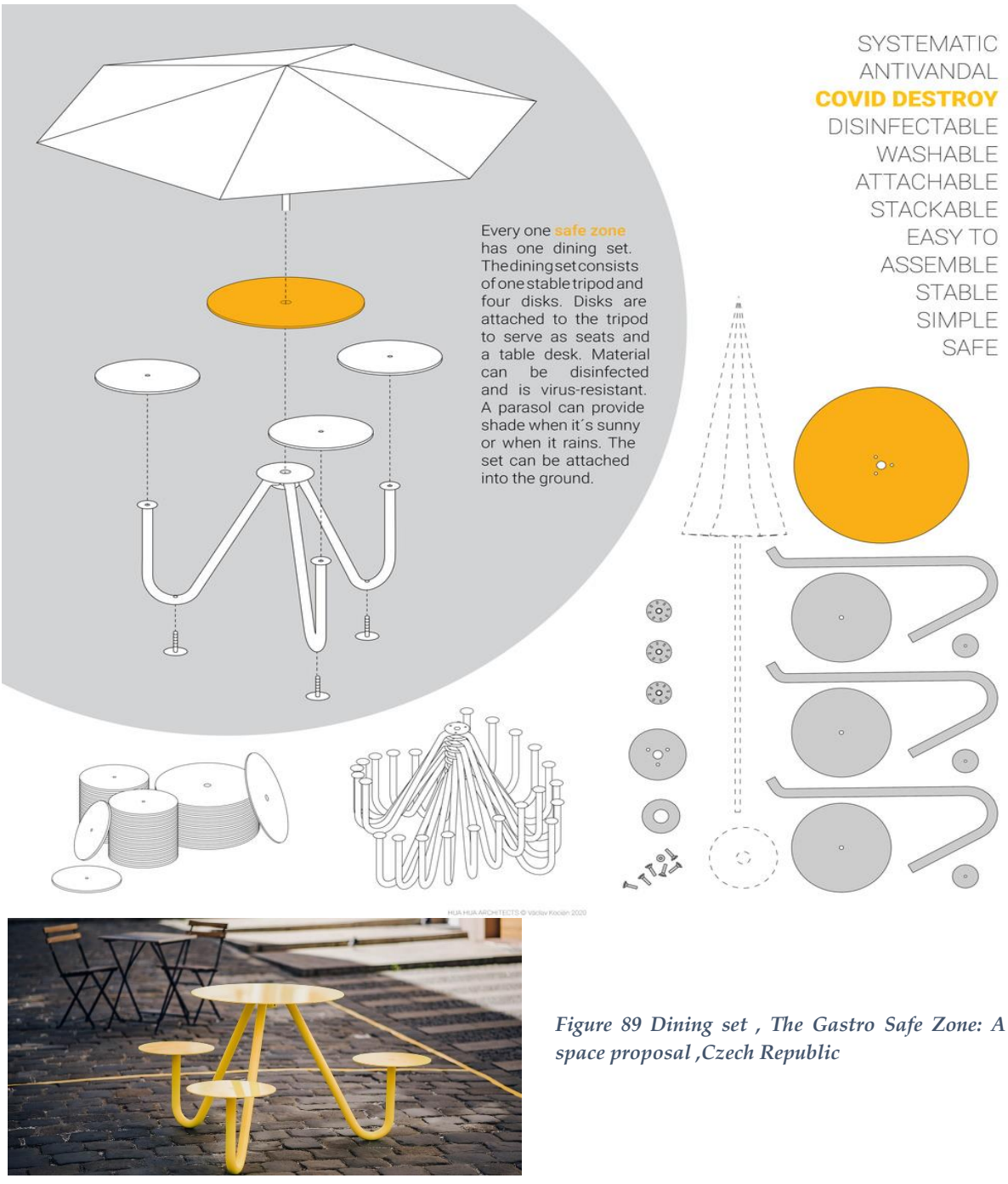


Figure 89 Dining set , The Gastro Safe Zone: A public space proposal ,Czech Republic

[75] Christele Harrouk. (2020, April 29). *The Gastro Safe Zone: A public space proposal that considers social distancing measures*. ArchDaily. https://www.archdaily.com/938599/the-gastro-safe-zone-a-public-space-proposal-respecting-social-distancing-measures

6.4 OCT OH BAY Retail Park

Location: Shenzhen, China

Architects: Laguarda.Low Architects

Area: 430000 m²

Year: 2021

Figure 90 OCT OH BAY Retail Park , Shenzhen, China

- The 128-acre park's design by Low Architects is a symbol of progress, combining business with world-class cultural institutions. The initiative has four core zones: East and West Waterfront Retail Parks, Urban Business Center, and Waterfront Cultural Park, all of which are located along with a three-quarter-mile waterfront property. An ecological blanket a flowing natural landscape that surrounds the site and connects the zones via pedestrian walkways is woven across this collection of mixed-uses.
- **The West Waterfront Retail Park** has a **large open-air plaza with entertainment venues, recreational amenities, and a performing arts centre**. Water is a crucial aspect of the plan since it separates diverse aquatic activities while also allowing the public to explore the shoreline by boat. A four-story experience retail park on the East bank is connected by gently sloping ramps, escalators, and bridges that are placed beneath a large green roof ribbon. With a richness of **natural light and planned circulation**, the usual shopping experience is changed.

- The project's **streamlined, curved form** and **public gathering space** are uniting motifs, fusing the demands of a financially successful program with the needs of a rising **cultural area** on a massive scale.

Figure 91 streamlined, curved form OCT OH BAY Retail Park , Shenzhen, China

WATERFRONT RETAIL PARK ON THE EAST SIDE

- Multiple pebble-shaped three-story structures grouped naturally along an ornate seaside park facing south make up the 35,000 m2 RETAIL PARK. On one, these **organic shapes blend in with nature**, while on the other, many penetrations on the north side address the urban environment. Visitors are drawn from the shoreline into the open-air retail area by the project's porous character, which effortlessly integrates **shopping, food, and beverage locations with nature.**

Figure 92 Waterfront retail park OCT OH BAY Retail Park , Shenzhen, China

- From either end of the project, east and west, two planted gentle pedestrian ramps rise to offer three-dimensional routes for visitors from the public park to every level of the commercial zone, including the green roof garden. This vertical pedestrian access connects trees, flowers, and art pieces with gentle ramps, steps, and rest zones.

Figure 94 Organic shapes blend in with nature ,OCT OH BAY Retail Park , Shenzhen, China

Figure 93 Event area ,OCT OH BAY Retail Park , Shenzhen, China

This event area will host a variety of events, exhibits, and spontaneous social gatherings. It is the meeting place for public transportation from the northeast subway station, and the entryway to the waterfront park via a cascading water garden. As previously indicated, gently undulated green roofs connect all volumes of the construction, providing a unique environment close to and above the waterfront park. Visitors may enjoy amazing views

of the ocean beyond from these roofs. A flower garden, a cascading sculpture garden, an outdoor performance terrace, and an undulating jogging route are among the features of the roof garden terrain. The undulating running route hangs above the retail traffic, providing workout aficionados with breathtaking 360-degree views of the ocean.

Figure 96 Giant Wheel ,OCT OH BAY Retail Park , Shenzhen, China

Sustainability: Water elements and green plants are introduced into the commercial area by the ecological green belt that runs through the retail blocks on the east and west banks, and the landscape and architecture are organically interwoven. Awnings, green balconies, and ecological roofs are used to create air ducts and cool lanes, reducing the urban heat island effect significantly. The retail streets make use of skylights and terraces to optimize natural lighting and solar systems to provide electricity constantly. The buildings' orientation satisfies the need for natural ventilation. Wind pressure and heat pressure ventilation are improved by the streamlined form and vertical terrace. To boost air circulation, high ceilings, openable windows, and high-energy low-speed fans are used.[76]

Figure 95 Top View, OCT OH BAY Retail Park , Shenzhen, China

[76] Li, Y. X. (2021, August 17). *Oct oh Bay Retail Park / Laguarda.low architects*. ArchDaily. Retrieved from https://www.archdaily.com/966837/oct-oh-bay-laguardow-architects

6.5 NRITYAGRAM, DANCE VILLAGE

Location: Karnataka India

Architect: Gerard De Cunha

Site: Almost flat with a gentle slope towards northeast side – 10 acres.

Climate: Moderate

Construction: Completed in 1990

INTRODUCTION

Figure 97 NRITYAGRAM, DANCE VILLAGE, Bangalore, India

Nrityagram was founded in 1990 by Odissi dancer Protima Gauri as India's first modern Gurukul (residential school) for Indian classical dances and an intentional community shaped like a dance village. The residential school provides instruction for Indian classical dance styles such as Odissi, Mohiniattam, Kathak, Bharatnatyam, Kuchipudi, Kathakali, and Manipuri for seven years, eight hours a day, six days a week, following the historic Guru-shishya tradition. The neighbourhood is located near Hesaraghatta Lake, 30 kilometres from Bengaluru, and was designed by renowned Indian architect Gerard da Cunha.

The word Nrityagram translates to "dancing village," and it is a community of dancers in a forsaken spot amidst nature, according to founder Protima Gauri. Nothing exists only dance in this realm. Breathe, eat, sleep, dream, converse, imagine, and dance in this space. A place where all five senses can be fine-tuned to their full potential. A location where dancers can let go of undesirable traits like jealousy, narrow-mindedness, greed, and hatred to embrace their colleagues as sisters and assist one another on their path to become merited dancers.

SITE

The site is linear, with the entrance on the southwest side at the lowest point. The entire place is designed to look like an Indian village. The design process was site-based; no concept was created, and buildings evolved in response to the demands of the

community and available funding. Dramatic aspects like gates, framed views, and street broadening and narrowing heighten the impression of drama and surprise as one passes through the site.

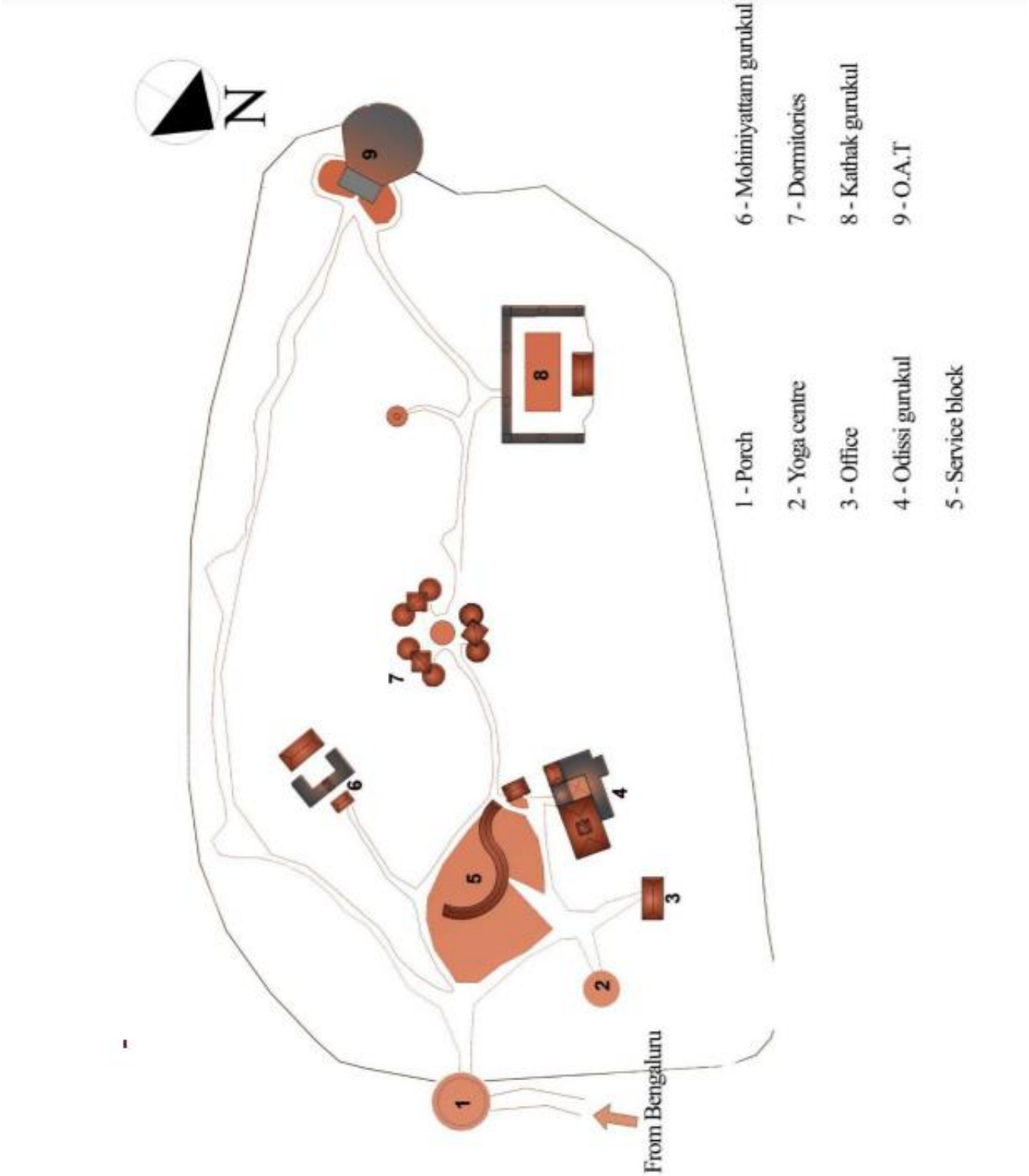


Figure 98 Nrityagram Dance Village site plan,Bangalore,India

Figure 99 Gurukul (Studio) Nrityagram,Bangalore,India

Gerard Da Cunha is the architect. The structures are made of mud and have a village feel to them. The open areas feature a lot of greenery, and there are a lot of trees. Nrityagram is a residential dance school in the form of a dance village that is modelled on gurukuls.

It now offers residential classes in Odissi and Kathak, with aspirations to expand its gurukuls to include all seven of India's classical dances. In the fields, the gurus and students collaborate to cultivate their food.

COMPONENTS: It (gurukul) is a complete living environment. The Odissi gurukul, mohiniattam gurukul, kathak gurukul, a temple, yoga centre, Amphitheatre, admin building, service block, guest cottages, dorms, and numerous gardens are all part of the complex. "A realm where the only thing that exists is dance. A place where you can breathe, eat, sleep, dream, converse, imagine, and dance all at the same time!" - Gouri, Protima

ACCESSIBILITY: The nearest bus station is Nessaraghatta village, from which an auto ride to Nritya gram is available.

TRADITIONAL ARCHITECTURAL FORMS: Organic Masterplan with traditional architectural forms and structure. There are various forms of building for various gurukuls to avoid inconveniences Gurukuls are separated, and 0. A. T. is preserved at the end, with a communal dining and yoga centre in the middle.

CONSTRUCTION:

- Intentional aggregation of stone, brick, mud, tile, and thatch
- all external walls are mud-plastered
- three roof patterns
- flat rough granite slabs
- Thatch pitched Mangalore tile

CLASSROOMS: a hall linked to the teacher's dwelling is used for teaching - Odissi and mohiniattam gurukuls have closed walls with small window holes just for ventilation and light is provided from the courtyard - kathak gurukul has semi-open arched walls In fact, the entire facility is a garden. The majority of food is cultivated, from fruits and vegetables to grain and dal, and even olive trees. Many sculptures have been used as landscaping components.

Figure 101 Classroom , Nrityagram,Bangalore,India

Figure 100 Outdoor Performing Space , Nrityagram, Bangalore, India

Each gurukul had four distinct components in its design:

1. Residence of the Guru

2. Residence for male students

3. Residence for female students

4. a practice area

The stairway to the roof was constructed here as a feature to sit on and observe the activities in the practice hall. These four features were assembled around a courtyard, which became a focal point, with the stair to the roof put here as an element to sit on and observe the bustle of the practice hall. The simple rectilinear geometry of the dwellings was determined by the use of stone slab roofing, and the guru's house was situated so that it had a private spillover to the east. The palm thatch roof of the practice hall, which required a longer span, was used. The service block was designed with a curved shape to ease ingress, and this geometry led to the choice of a thatched roof.

Figure 102 Dining space , Nrityagram, Bangalore, India

COTTAGES FOR VISITORS

The yurts of Tibet and Ladakh inspired these round constructions, which have housed some of the world's best dance and music maestros who have come to perform at Vasantahabba. Temple

Figure 103 Cottages and seating space , Nrityagram, Bangalore, India

The temple, made of Nrityagram's raw mud and burnt after construction, is dedicated to space. Panels illustrating the elements, dancing themes, mudras, and designs from clothing and ghungroos adorn the walls.

Granite rock has been hollowed out to retain water and a flame that never goes out. Ray Meeker designed and built this in 1998.

Figure 104 Temple , Nrityagram, Bangalore, India

YOGA STUDIO

The Yoga centre is an open structure attached to the temple that looks like Stonehenge. Under the open sky, this location is often used for in house performances.

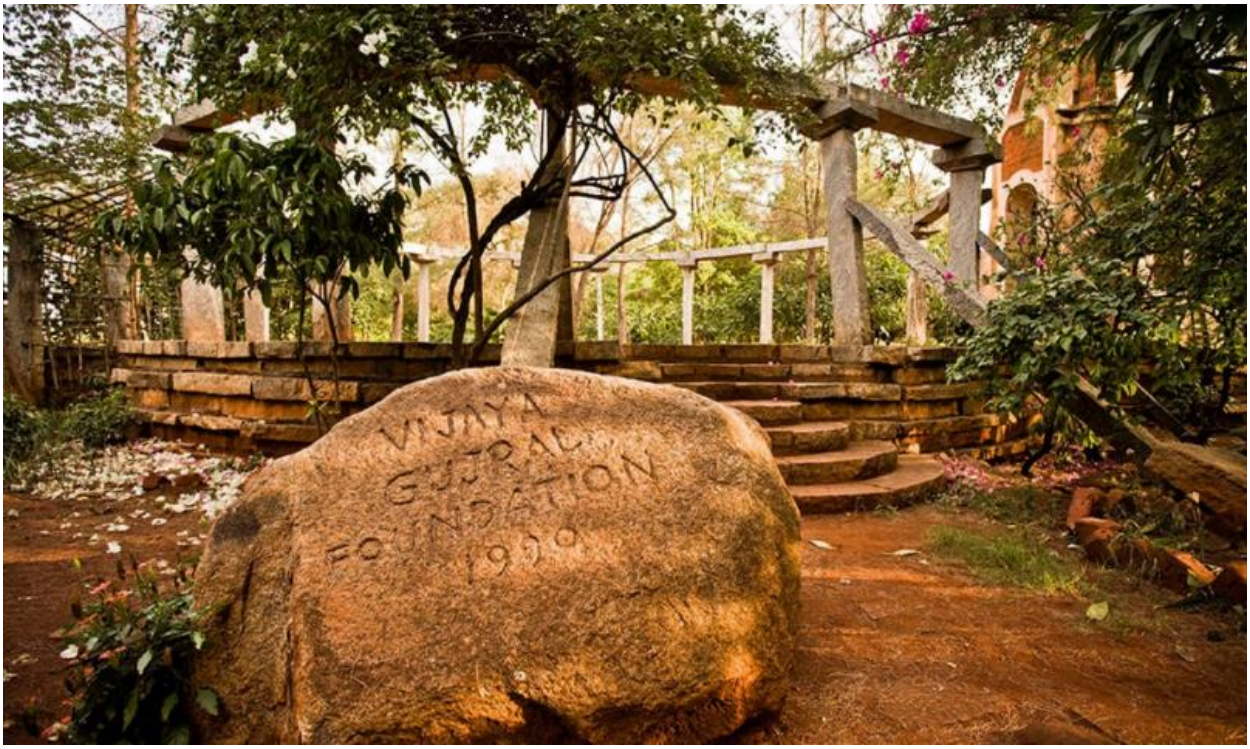


Figure 105 Yoga Studio , Nrityagram, Bangalore, India

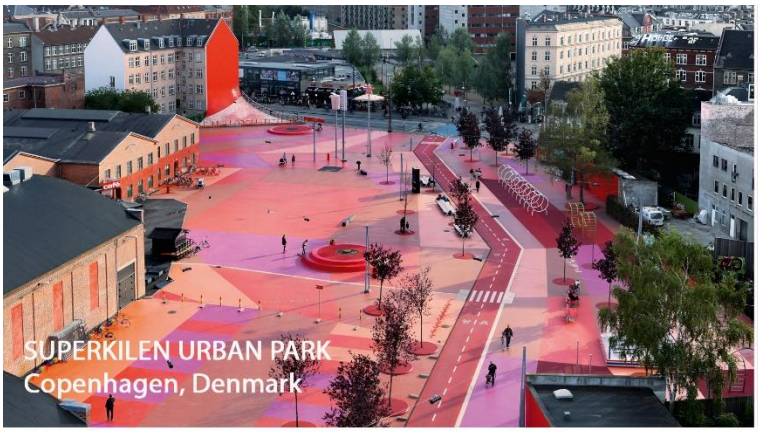
AMPHITHEATRE This is one of Nrityagram's most famous buildings carved out of the red dirt and designed in the style of Roman amphitheatres. This structure, which is designed in the form of a reverse 2, serves as the village's focal point. This is where the entire community eats together.[77][78]

Figure 106 Amphitheatre, Nrityagram, Bangalore, India

[77] *Space: Nrityagram Dance Village, India*. Space | Nrityagram Dance Village, India. (n.d.). https://nrityagram.org/space.html

[78] nikita verma. (2014, October 10). *Undergraduate thesis 2014*. Issuu. https://issuu.com/nikitaverma27/docs/undergraduate_thesis_2014/44

6.6 CASE STUDY INFERENCE



Multicultural theme
Use of colours
Colour-coded zones
Urban marketplace setting
Sports and cultural activities
Outdoor fitness area
Swing chairs
picnics
Sunbathing
Pavilion
urban exhibition space
natural elements
Urban Trees with colour code
Reused and recycled material
Bird's eye perspective.

Waterfront Cultural Park
Ecological blanket
Flowing Natural Landscape
Urban marketplace setting
Celebration Plaza
Performing arts centre
Aquatic activities
Natural light
Giant wheel
Streamlined, curved form
organic shapes blend in
with nature
flower garden
sculpture garden
outdoor performance terrace
ecological green belt

Dance village
Own food Cultivation
Free-flowing layout
Vernacular architecture
Interaction with nature
Rural touch
low cost construction
Naturally shaded walks.
Vermicomposting
Waste management,
Scattered site plan
Natural Material
Yoga centre
Open Air Theatre
Outdoor performing space
Sense of Focus

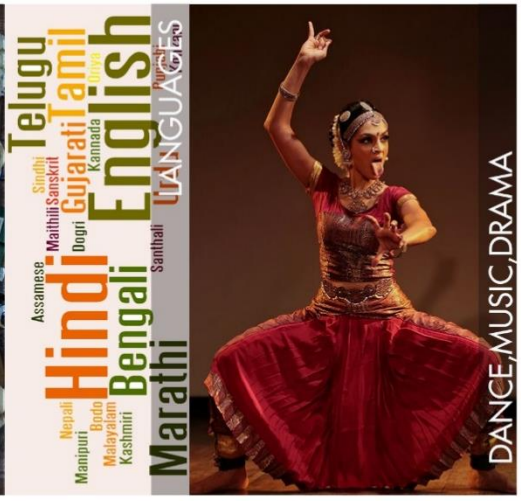
Gastro safe zone

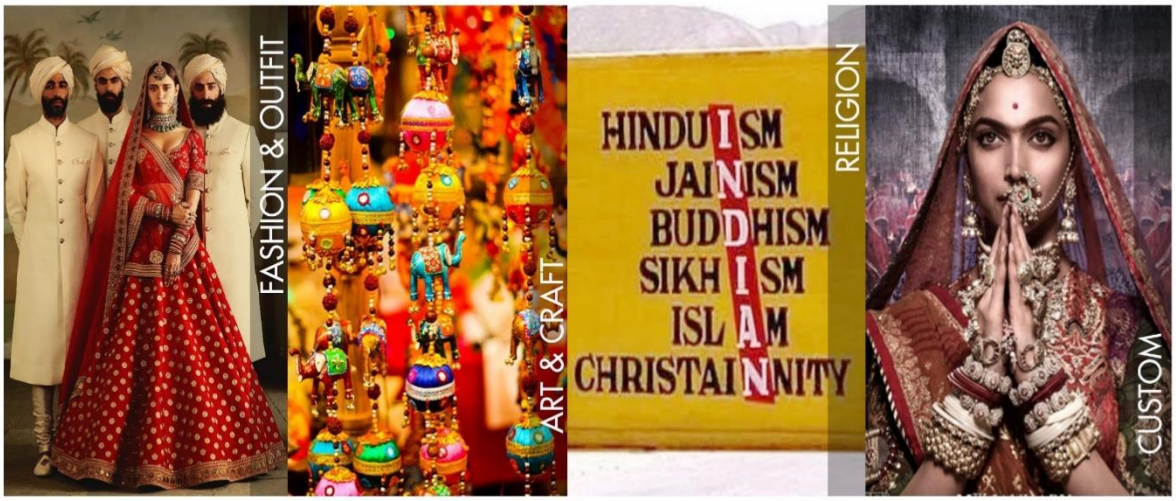
Purpose of
regulating
outside eating
3 seats dining set

Socially distant outdoor
yoga domes

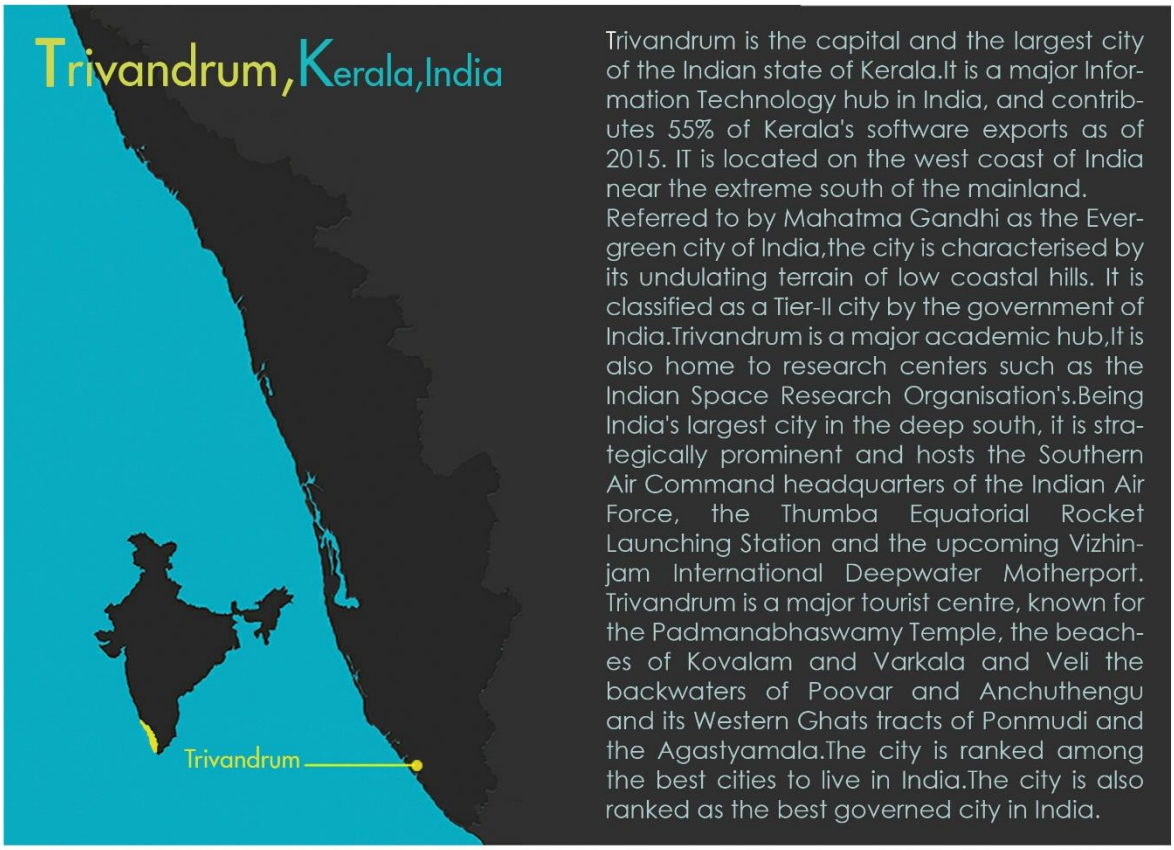
Safe and innovative way
Support local businesses,
Support the mental health
of the community

7 CHAPTER 7 - SITE ANALYSIS - INDIA

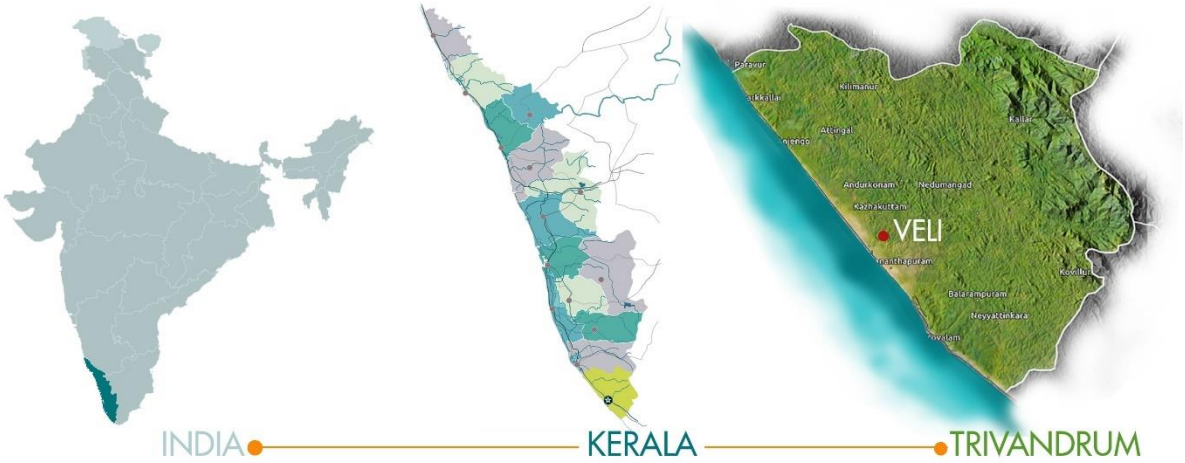




7.1 INTRODUCTION TO SITE – TRIVANDRUM, KERALA, INDIA



7.2 SITE LOCATION & DETAIL



TRIVANDRUM

A gracious and evergreen city spread over seven hills, Thiruvananthapuram, capital of Kerala, is steeped in history and culture. Located in the extreme south of the state, its shores are washed by the warm waters of the Arabian Sea. This is a city where time moves gracefully with the day unfolding according to time honoured rhythms, qualities which make it one of the best cities in the country.The place is well connected to most of the other major cities of India through rail, road, and air network.

CLIMATE

Because of its proximity to the sea, the climate of Trivandrum is tropical. This also gives Trivandrum a very pleasant weather round the year. The average maximum temperature can go up to 35.2 degree celsius in summer months and to a minimum of 18.0 degree celsius in the winters. Monsoon comes to Trivandrum in the month of May and remains until November.

FAMOUS FOR

The city occupies pride of place in India's space research programme and is home to the Indian Space Research Organisation (ISRO) and the Vikram Sarabhai Space Centre as well as several other institutions such as the Rajiv Gandhi Centre for Biotechnology, Technopark and the Indian Institute of Information Technology and Management. Students from all over Kerala make a beeline for its many colleges and professional institutes to advance their prospects.

FESTIVALS

The main festivals celebrated in Thiruvananthapuram are Onam, Vishu and Attukal Pongala. Another festival celebrated in Thiruvananthapuram is the Aarat of Padmanabhaswamy Temple.

(Thiruvananthapuram directory. Thiruvananthapuram online. (n.d.). Retrieved from https://www.thiruvananthapuramonline.in/city-guide/about-thiruvananthapuram)

AREA

Metropolis – 141.2 km2 (54.5 sq. mi)
Elevation - 10 m (30 ft)
Population as per the 2011 Census
Metropolis – 752,490
Density – 4,454/km2 (11,540/sq. mi)
Metro – 752,490

TOURIST ATTARCTIONS

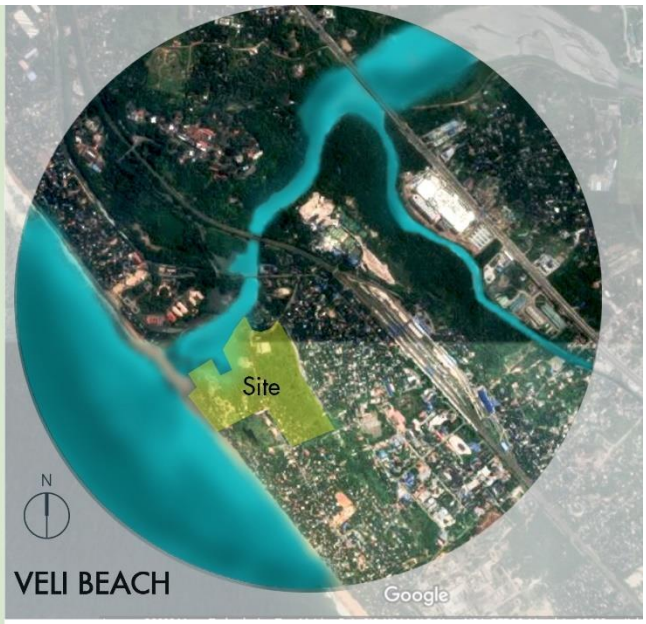
- Sree Padmanabhaswamy Temple
- East Fort
- Napier Museum and Zoo
- Sree Chithra Art Gallery
- Kowdiar Palace
- Kuthira Malika Palace
- Padmanabhapuram Palace
- Kanakakunnu Palace
- Attukal Bhagavathy Temple
- Kerala Science & Technology Museum Planetarium
- Chacha Nehru Children's Museum
- CVN Kalari Sangham
- Kovalam
- Varkala
- Ponmudi
- Poovar
- Veli Tourist Village & Sanghumukham Beach
- Vellayani Lake
- Neyyar Wildlife Sanctuary and Dam

FOOD

In the land of spices, foodies can try out every sort of spicy vegetarian or non-vegetarian dish. They can indulge in a traditional spread with spicy coconut curries eaten on a banana leaf, have a quick meal by a wayside restaurant or munch on savoury snacks on the beach. Sea food lovers can have their fill of fish, crab, mussels or prawns, curried or fried.

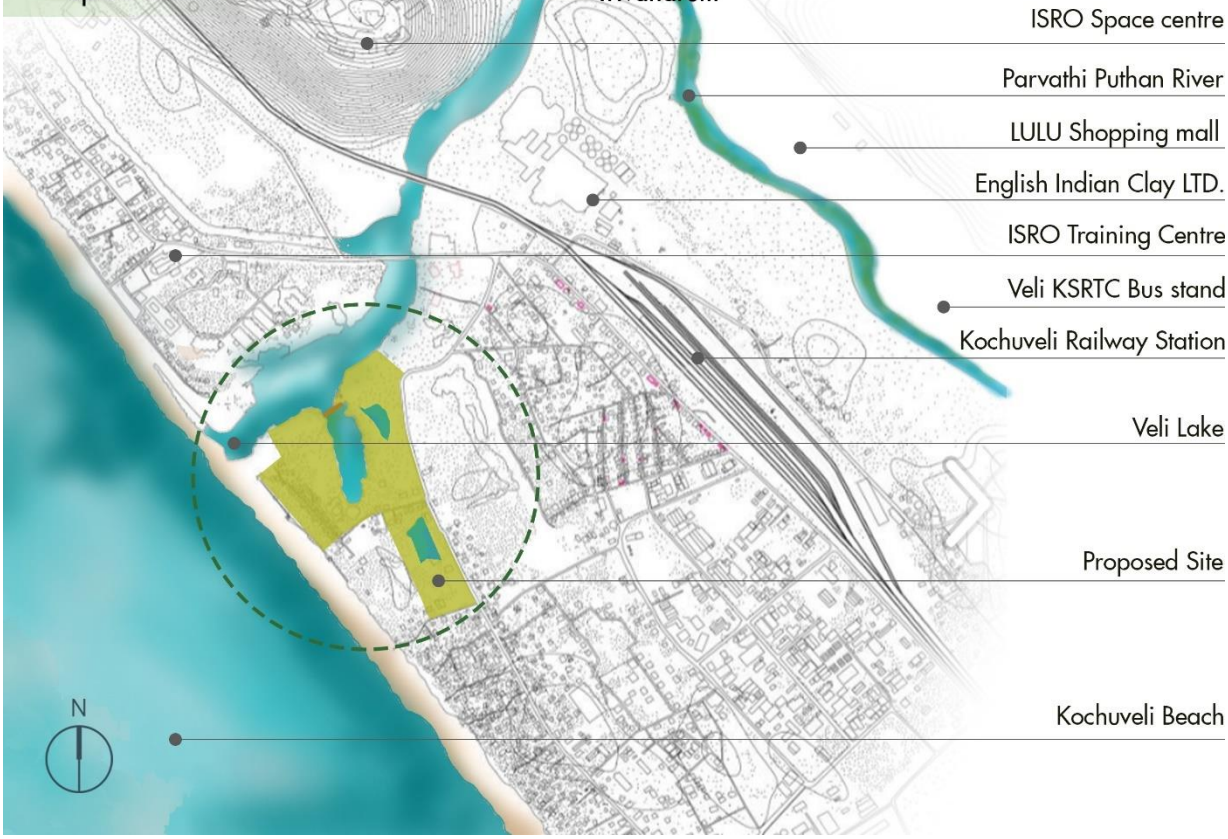
TRIVANDRUM, Kerala

- Capital city of Kerala
- Evergreen city of India
- The place lack a urban public open space
- Undulating terrain of low coastal hills
- Busy commercial alleys
- Natural and Historical significance
- Popular for its ancient temples
- Famous architectural buildings
- Most visited pilgrim centers of India
- Clean and stunning beaches to boast
- Exotic views
- Beach is close to the city
- Most under rated destinations in India
- Combination of being a city and a coastline
- Well connected by roads and access through an efficient railways.
- Most literate and one of the most comprehensively developed states in India.
- Roads and transportation are really efficient
- Travel-friendly City for intra-city travel and commutations
- Has an international airport
- Modern facilities in terms of hotels, schools, sports arenas and infrastructure



Site Location : Veli ,Trivandrum ,Kerala ,India
Site Area : 45 acre

A popular tourist spot in Trivandrum that lies sandwiched between the Arabian Sea and Veli Lake is Veli Beach. Veli tourist village associated with the beach offers boating facilities.It is a nice picnic spot with garden and childrens park. The view and feel of the place is extremely unique, considering it is merely 12 kms from the capital city of Trivandrum



VELI

Veli is a picturesque village, with a delightful waterfront park and a tourist village. Veli village is sandwiched between the Veli lagoon and the Arabian Sea. Veli beach, adorned with its natural beauty, is an added attraction. It lies on the outskirts of Thiruvananthapuram (8 km) in Thiruvananthapuram District, Kerala.

VELI LAKE

Veli Lake is a unique inland lake, separated by a narrow sand bar from the Arabian Sea.The confluence of the lake with the sea is a picturesque picnic spot, named Veli Tourist Village. The charms of the lake can be explored by boat rides. Motor-driven safari launches, powerboats and pedal boats or rowboats can be hired from the Tourist Village. The eastern flank of the lake harbours two beautiful hillocks, good for hiking. Kayaking and hovercraft ride are also possible. The lake features a floating restaurant and a floating bridge that connects the tourist village with the beach.

Figure 112 Veli Lake

VELI BEACH

Figure 111 Kochuveli beach

Veli Beach, golden sand beach with waterfront park, is at a distance of 2 km from Trivandrum International Airport. Visitors can walk through the narrow sandbar at Veli Beach which separates the ocean from the Veli Lake. The park adjacent to the beach comes with different kinds of plant species and art pieces.Veli Beach also offers boat rides, floating bridge, floating restaurant, pony rides and an open-air theater.Veli railway station is 1 km away and Thiruvananthapuram Central Railway Station is at distance about 5 km.

Figure 107 Veli Shangu sculpture

Figure 109 Sculpture

Figure 108 Veli Walkway

(Veli. (n.d.). https://trivandrumdistrict.blogspot.com/2010/10/veli.html)

VELI TOURIST VILLAGE

Figure 110 Floating Bridge

Veli Tourist Village is bordered by Veli lagoon and the Arabian Sea. The main attractions are water sports, waterfront park, floating bridge, children's park, restaurant, and a beautiful garden. This peaceful, charming relaxation center is situated 8 km away from Thiruvananthapuram city. Visiting hours are from 10 00 to 20 00 hrs.Shanghumughom Beach, a favourite spot of sunset watchers is the near by attraction.

7.3 SITE APPROACH AND SURROUNDINGS

Figure 113 Site Surroundings

KTIL is aiming to redevelop and extent veli tourism village Trivandrum and convert it in to a hi-tech tourism destination in the capital city. The project will have all the facility considering international standards to attract domestic as well as international tourist to the city.

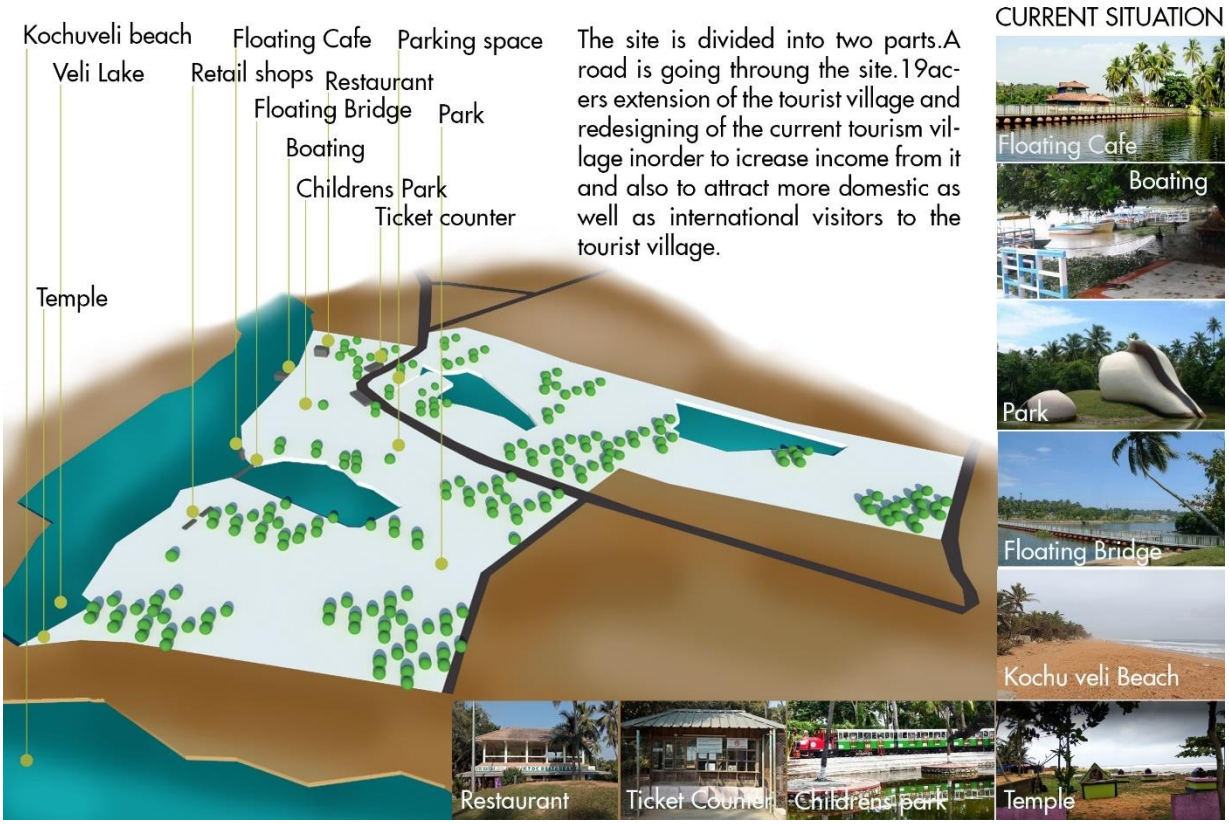


Figure 114 Veli Proposed site Current Situation

7.4 PROPOSED SITE – VELI -EXISTING CONDITION

CURRENT STATE

The proposed location is in Kerala, India's Trivandrum district. The site is divided into two sections: one is the Veli tourist village, and the other is the unused land on the right side of the tourist village. The goal of this project is to link the two sites while also renovating the present tourist village.

VELI TOURIST VILLAGE

In Thiruvananthapuram's district, Veli tourism village is a popular picnic spot. On March 14, 2001, the project was launched.On the southern side of Veli lagoon, it comprises of a big garden. This park and the Veli beach are connected by a floating bridge. Children's play areas, various boat rides in Veli lake, games, horse rides, swimming pool, shopping stalls, cafeterias, a floating restaurant, stone and grass sculptures by Kanayi Kunhiraman dotting the garden landscape, a collection of pet birds such as pigeons and swans, small ponds with fish and tortoises, and more!The park's hours of operation are 8 a.m. to 7 p.m.

Location :
Veli tourism village is around 10 kilometers from Thiruvananthapuram city. A bus, a car, or a taxi can take you there. Both the international airport and the kochuveli train station are easily accessible.It's easy to find the first parking spot on the left side about 200 meters down this road. If this lot is full, walk a few meters to the right to find a spot. A minor parking fee is charged (Rs. 10).t's easy to find the first parking spot on the left side about 200 meters down this road. If this lot is full, walk a few meters to the right to find a spot. A minor parking fee is charged (Rs. 10).Visually able to see the veli entrance on the right side while driving. A handful of tiny shops are also located at the entrance. There is a Rs. 5 admission fee per individual (there is no camera fee here). Children under the age of 14 do not require ticket

1: Parking spots for car.
2: The second parking space, which is significantly larger than the first and can handle buses, is much larger than the first.
3:The entrance to the Veli tourist village. On the right, there is a ticket counter.
4:The boat dock is accessible through a walkway. This route is bordered on both sides by flowery plants.
5:On the left side of the Veli entrance is a toilet complex.
6: Kanayi Kunhiraman produced a stunning grass sculpture of a sleeping woman for a children's park.
7:A pond with a massive Conch shell sculpture (Sanghu). This is Veli's most famous landmark. The pond is home to a variety of fish and tortoises. A herd of swans can be found on the right side (Arayannams).
8:Kanayi Kunhiraman has created some interesting stone sculptures, as well as a lovely garden.
9:Aakulam Lake Walkway

A : Cafeterias can be found here. The massive trees here provide much-needed shade as well as a safe haven for birds to nest.
B : There are two boat docks here. Nearby, there is a ticketing counter.
C : Garden and more stone sculptures.
D : KTDC operates a two-story floating restaurant. Unfortunately, the second floor is currently unavailable. It's a mid-priced eatery with a limited menu.
E : The Veli garden and Veli beach are connected by a 60-meter floating bridge.
F : Here you will find a swimming pool (not operational). There is a lot of open space here, which makes it a great place for kids to play.
G : This is where you'll find shopping stalls. This is run by the residents of the area. A giant wheel is on the right side.
H : There are more shopping and gaming stalls. Here users can also go horseback riding.
I : There is a newly constructed walkway. Normally, this is a deserted area. A fantastic spot for some beach watching.
J : The beach of Veli. The sea is a little rough here, but it provides a more private experience than other beaches. There are lifeguards on duty.
H : The lake and the sea are separated by a sand bar. This sand bar is manually cleared for water drainage during floods.

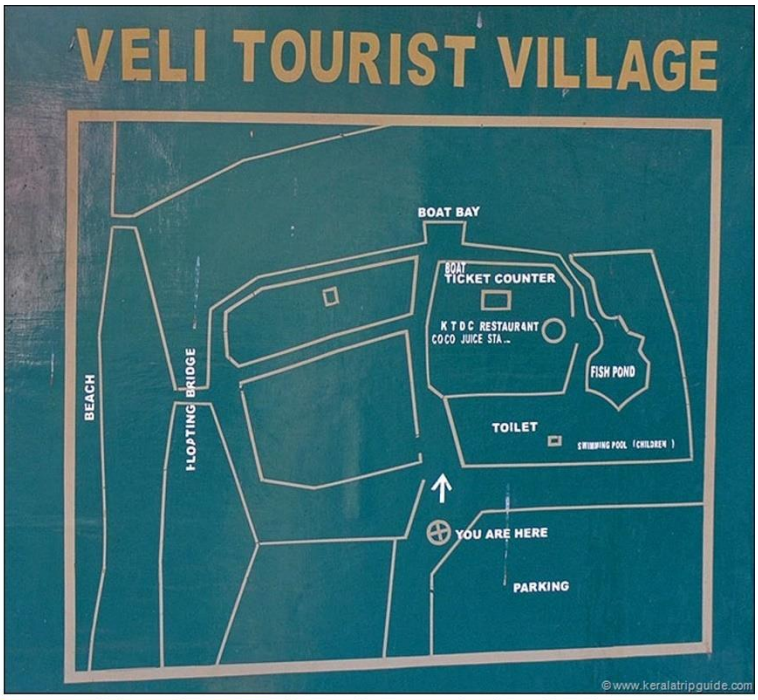
SITE AREA : 45 ACRES
Scale : 1:3000

EXISTING SITE CONDITION

ENTRANCE

Veli Tourist Village, one of Kerala's most well-known attractions, has benefited the state's tourism industry greatly. The village, which is among the top ten places to visit in Trivandrum, is a great place for families, especially kids, who enjoy the variety of water sports as well as the food and drinks available.

The main entrance is found to the left of the ticket counter. Because the counter is near the road and there is no place to queue, the area is crowded and poorly defined. It is also uninteresting and unappealing visually. It's difficult to find the ticket counter and the park entrance. As a result, it demonstrates the poor entrance. The presence of roadside vendors selling goods in front of the park's entrance makes it difficult to navigate the park.



A map of the Veli tourist village's location displayed at the entrance

Ticket Counter

Main Entrance

THE PARK

The entrance leads to the main boat landing area via a narrow pathway. This walkway is lined with lovely flowering plants. It will lead you straight to the boating area, to the beach side, or to the children's play area if you turn right.

The small children's park is located on the right after entering the tourist village. A number of small rides are available for children. Swings for children and adults are also available. Then I discovered a huge sea shell/conch shell (Sanghu) in the middle of a pond. It is the tourist village of Veli's signature landmark. This pond is currently home to a large population of tortoises. This location is also surrounded by a lovely garden. A flock of swans can be seen on the right (Arayannams).

Kanayi Kunhiraman created a beautiful, sexy grass sculpture of a sleeping woman on the left side. A number of interesting stone sculptures can be found to the right of this, towards the lake.

The majority of the spaces are underutilized and have incorrect zoning. The path is difficult to define. They did not provide adequate signage. Plastic and other food wastes have polluted the waterbody where the sculpture is located. It is harmful to the living species. The space around the sculpture appears to be dark and gloomy and unappealing. People aren't drawn to these areas. In general, these areas are not well connected. It creates ambiguity.

Path Not Defined

Sculpture

Lawn

Entrance Leading to Boating area

Polluted Veli's signature landmark

Newely Renovated Park

BOATING

A large percentage of visitors to Veli come to go boating on the lake. KTDC operates the boating facilities, which include two boat docks and a variety of boat rides. The boat ride usually lasts 20 to 30 minutes and takes you from Veli beach to the NH47 bypass bridge (over 1 kilometre). Safari boats, pedal boats, row boats, and speed boats are among the boats available. Boating is available from 10 a.m. to 5 p.m., with a lunch break between 1 and 2 p.m. Purchasing a boat ticket is a two-step process.

Depending on the rush and the availability of the crew, some of the boats may not be available. The high-speed boat ride is a hair-raising experience because the lake is narrow.

On boat trips, life jackets are required. On the down side, life jackets are old and smelly. Boating is advertised as a 5-kilometer trip, but it is actually only 3 kilometers.

The lake, which is infested with water hyacinth, is still in a bad state, affecting tourism. It is necessary to clean it. The water flow will be reduced. As a result, boating is affected.

The lake is also rich in biodiversity, with a variety of native fish species and seasonal migratory birds. The water quality had previously been much better due to the natural cleansing of high tide, which gushes sea water by breaking the sandbar at Veli. ewcomers to the city, on the other hand, only see it as a hyacinth-infested water body.

The boating area is inefficiently designed. The area is misguided, and there are no safety barriers in place. It isn't kept up to date or cleaned properly.

Boat Dock

The lake is infested with water hyacinth

Veli Lake

Boat Ticket Counter

THE LEISURE WALKWAY

Veli is connected to the Parvathi Puthanar canal by a lakeside walkway that begins near the NH47 bypass bridge that connects the Aakulam lake. This walkway is over a km long and provides a great opportunity for a leisure walk.This walkway can be deserted at times, so visiting alone or with a lonely couple is not recommended. Along the way, there is a toddy shop (a store that sells country liquor). There is no proper lighting especially during night time,As a result, this approach is not safe or secure.On the southern side of Veli beach, there is a new elevated walkway that is very nice. Tourists who only visit the Veli lake are unaware of this. This walkway can be reached by crossing the floating bridge to the beach and then crossing the games/shopping area. It's about 300 meters long and offers a fantastic view of the beach. It was originally intended to bring nightlife to Veli, similar to Kovalam (large flood lamps were built here). However, this location closes at 7 p.m., most likely due to a lack of tourists or staff.Apart from the views, there are no interesting activities along the way. The journey becomes boring as a result.

Beach side Walkway

Lake side Walkway

CHILDRENS PARK : Veli has a number of little children's parks . The first is on the Veli main entrance's right side. There are slides, swings, and other playground equipment available. Surprisingly, there are swings designated for "couples" in this part as well. Couples in Kerala are rarely given such consideration.
The majority of the playing stuff is broken or unusable. This is due to a lack of monitoring.. Because there are no multifunctional activities in the children's park. There are fewer sitting options for parents to keep an eye on their children. There's a risk they'll miss the child because the place is so busy. The location lacks a distinguishing element that would draw people in.

Beach side Play area

Children park

DINING : There are a few tiny cafeterias (to the right of the boat port) and a KTDC-operated floating restaurant (located on the left side of the boat dock near the floating bridge).The KTDC restaurant has two levels. The views from the upper floor are spectacular. Unfortunately, it is not in use. Cafeterias serve snacks, ice cream, soft drinks, and other refreshments at reasonable prices for a tourist destination. The floating restaurant is moderately priced and has fantastic views of the lake and beach.
The village covers a large area. It is tough to obtain basic amenities such as a cafe. It's also difficult to locate a path to the destination. It must travel a considerable distance.

KTDC Restaurant

Cafe

Snacks Bar

SHOPPING: Small shops are found on the main road just beyond the Veli tourist village's entrance, as well as on the beach side, where the lake joins the beach.
Getting stuff on the side of the road is not a safe option. It is preferable to be inside the park. When travelling from one shop to another, there is no movement flow. It's congested and unmaintained.This may result in more traffic on the route.Near the beach, there is no such shopping area. Small roadside vendors provide items that are insufficient for the number of people who visit. This also reduces the number of people who visit the beach.

Retail Shops Near Entrance

Beach Side Retail Shops

BIRD WATCHING :Veli is also a great place to go bird watching. Large trees near the boating area, trees on the southern side of the floating bridge, and lake regions near the NH47 bypass bridge are among the hotspots.

GAMES : A giant wheel, shooting games, darts, and other games are among them. Other enjoyable activities include horseback riding, caricature drawing, and so forth. The enjoyable games are inexpensive (Rs.5 each game)! The majority of these are run by beach-side families.

SWIMMING : A swimming pool is located near the Veli beach, although it does not appear to be active. The Veli beach is a little rough, making swimming in the sea challenging. There are also a couple of lifeguards on duty. There was discovered that toxic waste from factories is released directly into the sea only 1km from Veli beach, making swimming on the beach impossible.

FLOATING BRIDGE :Over a branch of the Veli lake, the floating bridge connects the Veli garden and the Veli beach. On the left side, it can see a lot of birds. Following the crossing, it leads directly to the beach. An open space with a lot of stores and little activities can be found along the way.The walk across the bridge is not interesting because the water is contaminated and the view to the park and the beach lacks any appealing features.

FLOATING RESTUARANT: The cafe is empty most of the time because it is not cleaned or maintained. The restaurant has a nice view, but there aren't enough people there to make use of it.

Lake View

Giant wheel near the Beach

Swimming pool

Swimming is restricted in Beach

Floating Bridge

Polluted Water

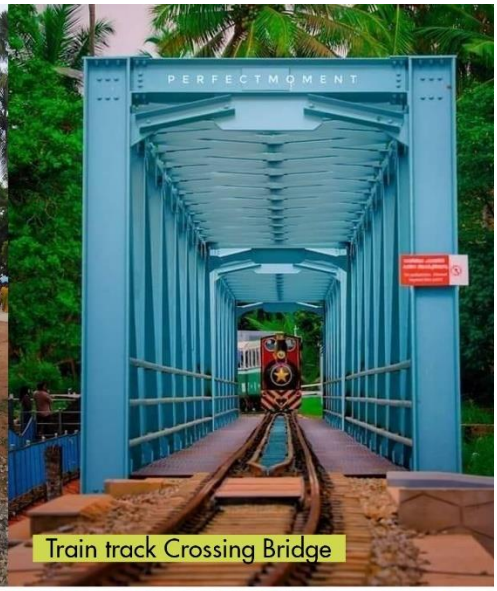
Floating Restaurant

View from the Bridge

Solar-powered miniature railway (2021)

Veli Tourist Village, home to the country's first 2.5-kilometer solar-powered miniature railway, has long been a popular destination for state visitors. The miniature railway is run by Kerala State Tourfed, the federation of tourist cooperative groups' top organization. The train can accommodate up to 48 people at a time. It consists of three coaches, each of which has four compartments that can hold up to four people. The train departs from the station beside the KTDC restaurant in Veli and travels a distance of 2.2 kilometers in 20 minutes. Starting at 9 a.m., it makes roughly ten journeys in a day. One journey is limited to 24 passengers, according to the Covid-19 standard.The miniature rail system included a tunnel, station, and ticket office, just like a real rail system.

Miniature Train



Train track Crossing Bridge

Miniature Train Station

The beach is rough,An elevated walkway has recently been built along the beach, extending to the south side. Unfortunately, there are no shops in the immediate vicinity. Also, despite the fact that it was built with grand ideas in mind (it even has a floodlight suitable for nightlife), there aren't many tourists here. This is because most people come here for a quick picnic in the evening, and it will be dark by the time they arrive. Return to the park exit after the sunset.The beach hasn't been cleaned in a long time. It is contaminated. There are no tourist-drawing activities in this area.The toxic industrial waste pumped out of nearby industrial areas has polluted the sea near Veli beach. Getting into the sea is also not recommended when the polluted Veli lake is connected to the beach.

Beach side Activities

Rough Beach

Sun set View

Empty Beach

PARKING

The parking spaces are not well separated into slots for 4 wheelers and 2 wheelers. Tourists must cross a busy road to enter the village, which is dangerous. The village's parking lots are all located on the outskirts.There is no separate way to direct you to where you should park your vehicle. It's a muddy road with no proper markings. There is plenty of unoccupied space.

Parking Space

Entrance to the park

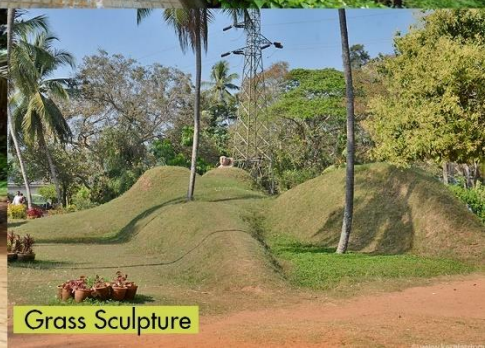
No Parking Slot

VEGETATION

Coconut trees dominate the landscape. Seating is provided under some large trees. There isn't a consistent landscape pattern. Which is completely disconnected from the rest of the story. It is not as functionally designed as it is aesthetically. Here, choose a random location and plant it. The park lacks seating areas as well as an attractive garden in which to enjoy the journey. Here find seasonal plants. This could only be attractive for a short period of time before the space becomes drab. There is no sense of enjoyment.

Garden

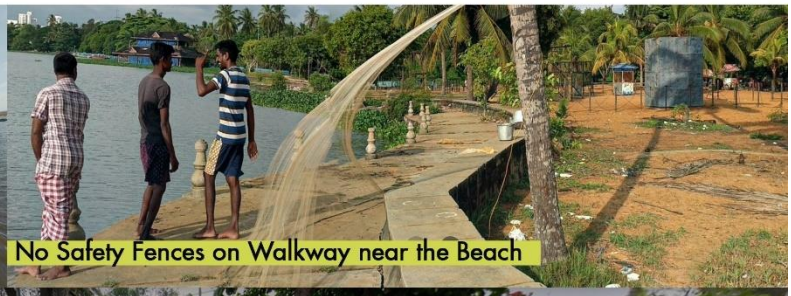
Cocunut trees

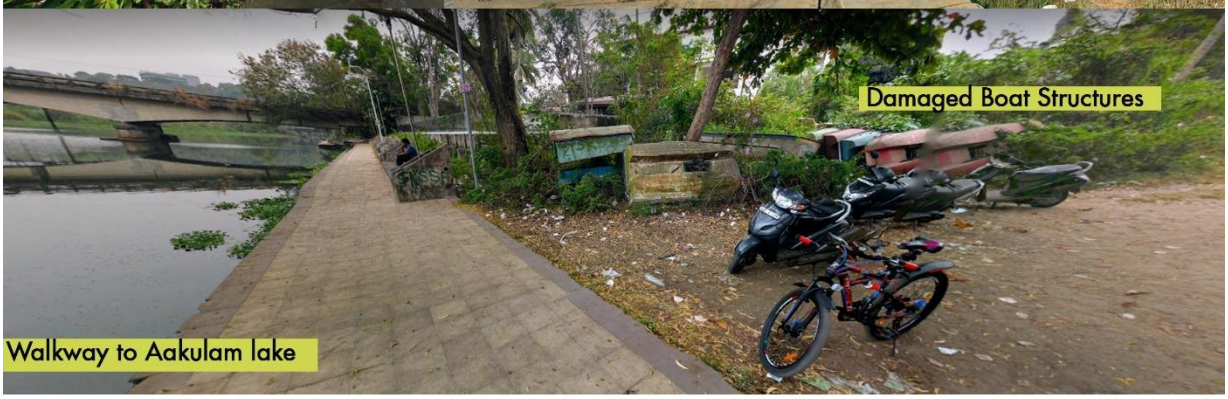


Grass Sculpture

SITE SURROUNDING VIEWS

Edge of the village


No Safety Fences on Walkway near the Beach

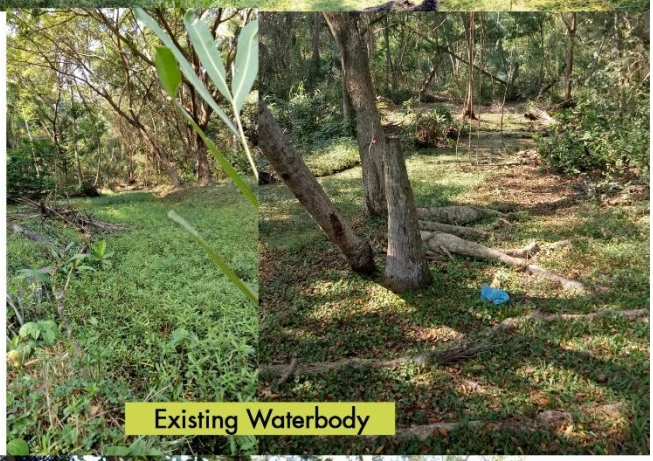

Damaged Boat Structures

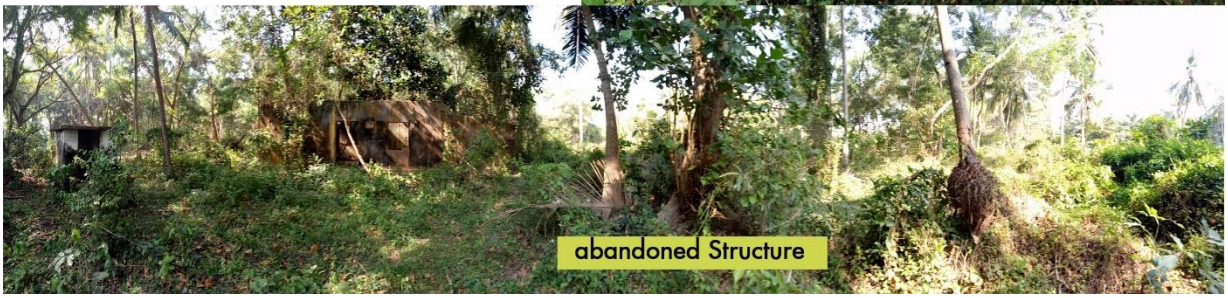
Walkway to Aakulam lake

Part 02 Site View

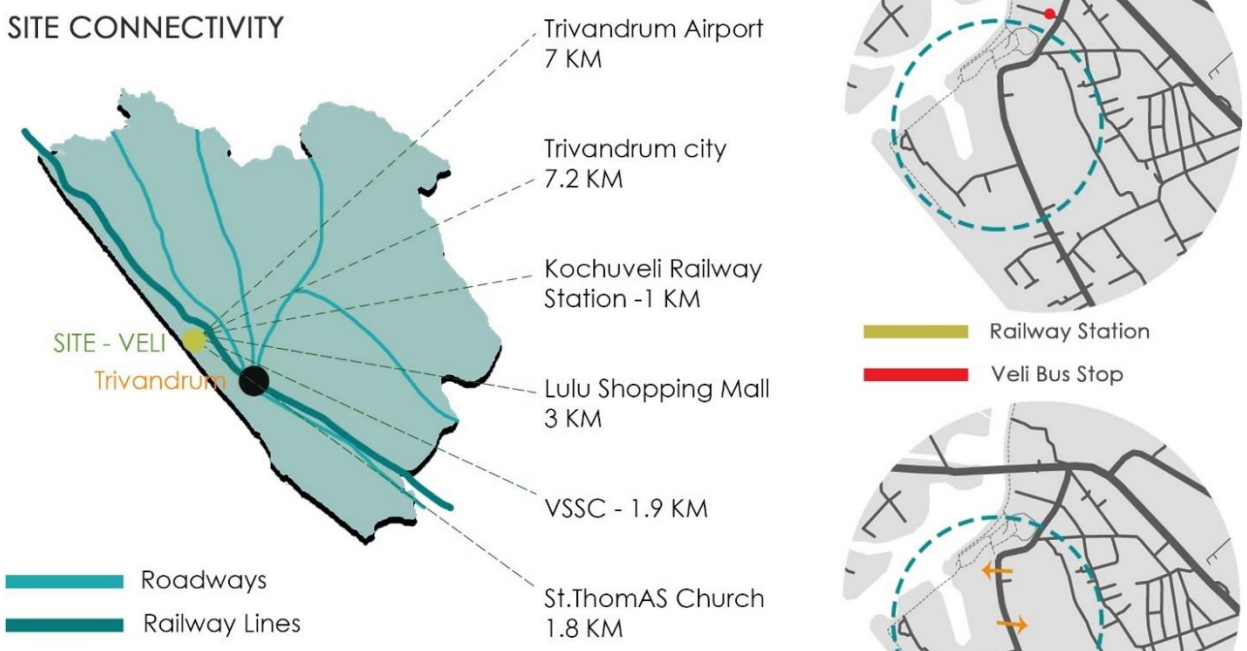
SITE PART 02

This section of the proposed site has been dysfunctional for a long time. This location is directly across the road-from the present facility's entrance. The location contains some abandoned structures. The dominant vegetation is coconut trees. Because of a lack of supervision, the existing two bodies of water are overgrown with aquatic vegetation. This is a non-active space that is covered by dense plants. The goal of the project is to connect the tourist village with this underutilized location. Because it already has a body of water, it offers landscape value that could help the people who live nearby.


Existing Waterbody


abandoned Structure

7.5 SITE CONNECTIVITY AND MOBILITY

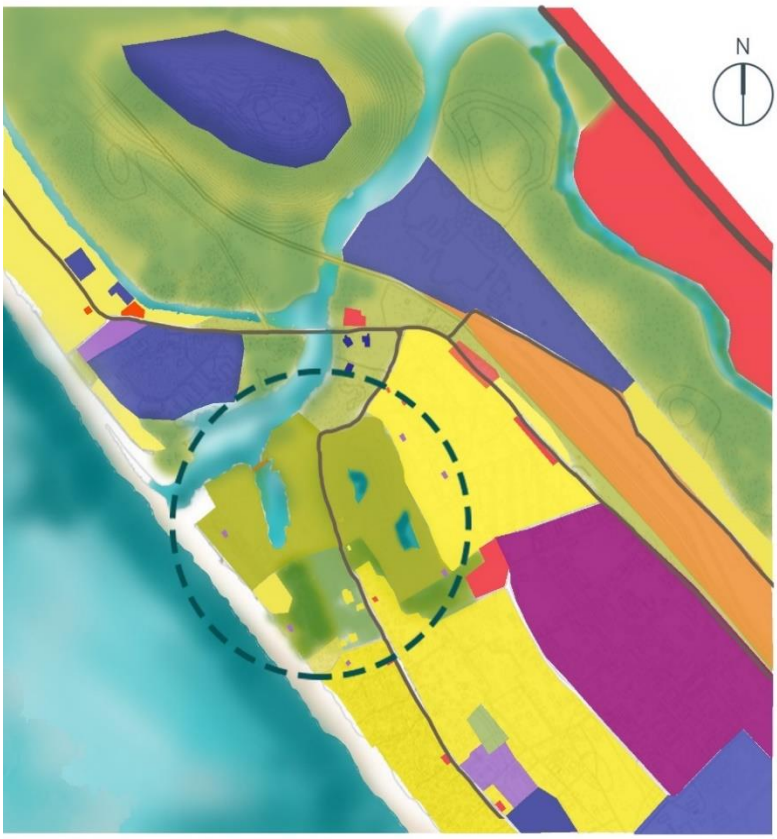


Source: Drawn by Author based on Thiruvananthapuram City Map. (n.d.). Thiruvananthapuram City Map. Maps of India. Retrieved from https://www.mapsofindia.com/maps/kerala/thiruvananthapuram.htm

The proposed site is easily accessible for everyone and the surrounding space. Especially the Kochuveli railway station is just 1KM from the site which connects passengers to major cities of India. There are plenty of landmark situated around the site ,which itself has a major advantages of making the proposed site an active one.The site lacks a proper bicycle path and pedestrain walk way inoder to use the beautiful view of the lake and sea

7.6 LANDUSE COVER & SITE IMAGEABILITY

LANDUSE ZONING MAP



- Proposed site
- Residential
- Commercial
- Industrial
- Institutional
- Religious
- Water Body
- Public Building
- Open space,Park Recreational space,
- Pathway

There are plenty of open space found unused. The majority of the site is surrounded by residential space without a pedestrian and bicycle pathway to enjoy the view of the lake and beaches .Since there are institutional spaces around, it is important to have a recreational and waterfront open cultural space, so that the students can enjoy and relax. In order to attract people and make the space active it could be nice to have a Multifunctional space and Open market

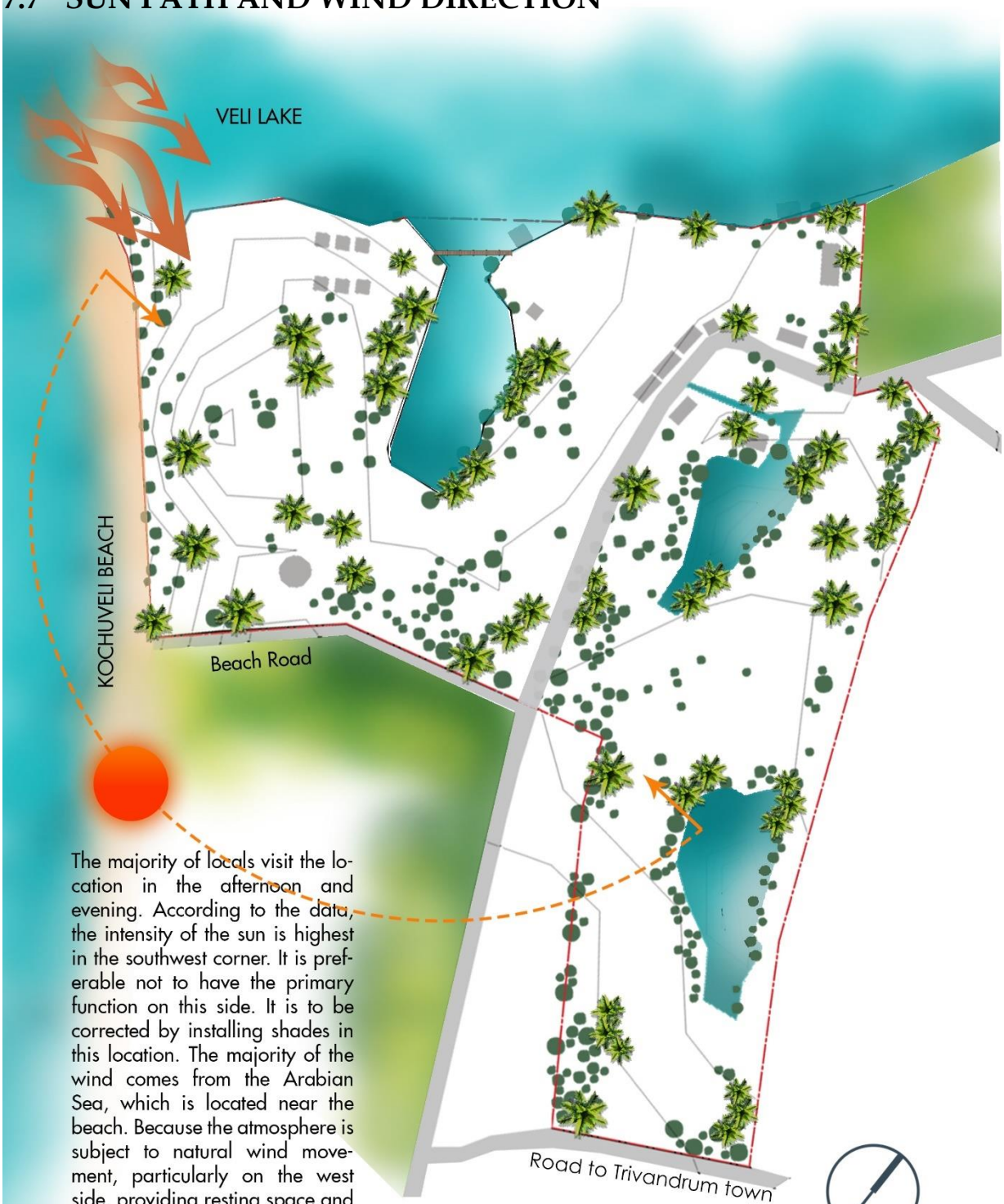
IMAGEABILITY MAP

- Landmarks
- Nodes
- Path
- Edges

The proposed site is surrounded by major landmarks of the city so that it is easy to connect the people to the site by creating a space which is commonly used .The site itself has 2 nodes which are not used effectively and functionally. The path is not well defined to reach the site .It has to be properly designed. These landmarks doesn't connect the people well, so that the proposed site would be the major landmark not only for the city but also for the entire country.

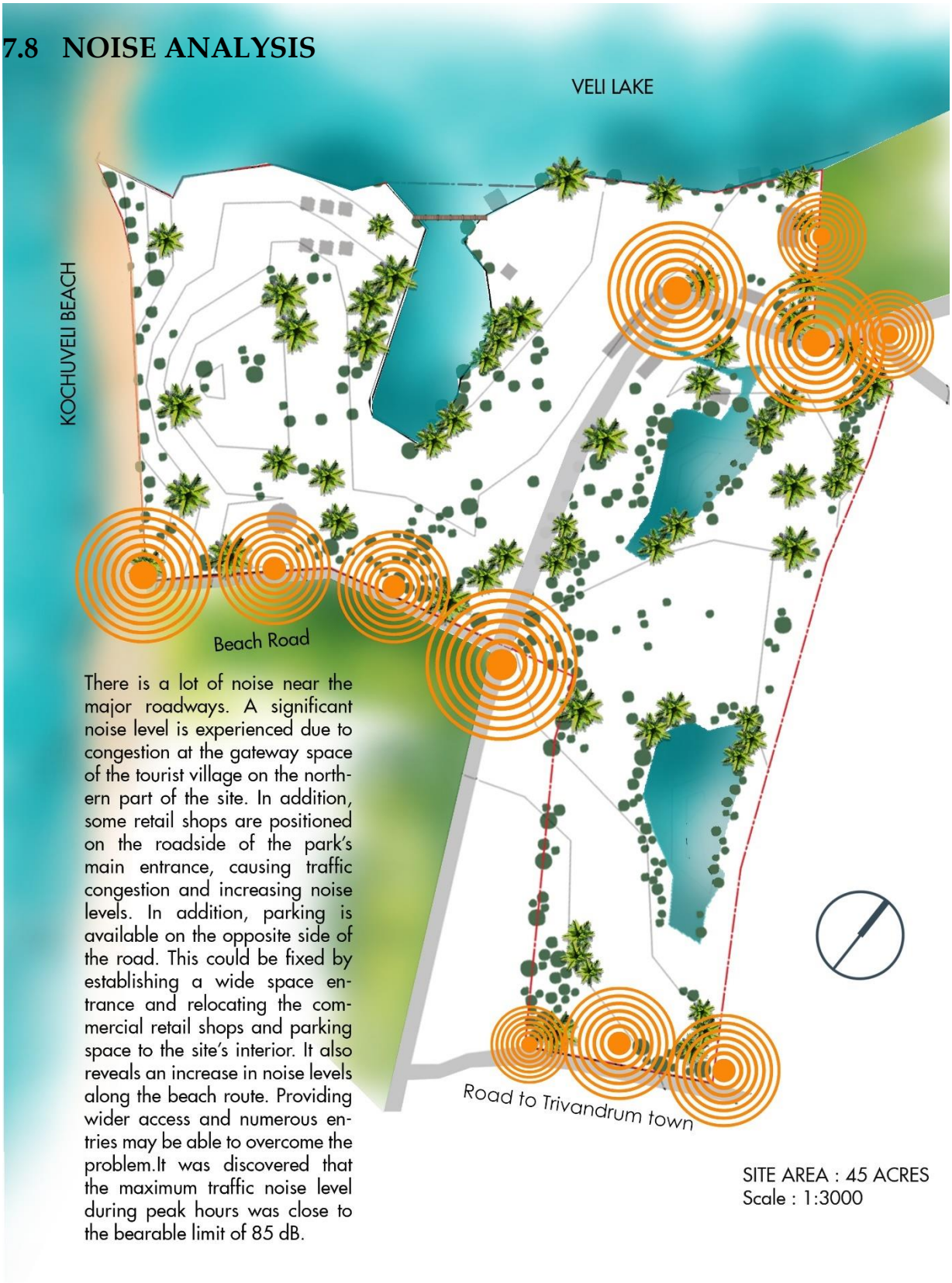
Source : Drawn by Author based on (Existing land use map of Thiruvananthapuram city,Regional town planning office ,Trivandrum,Town and country planning department Kerala 2012)

7.7 SUN PATH AND WIND DIRECTION



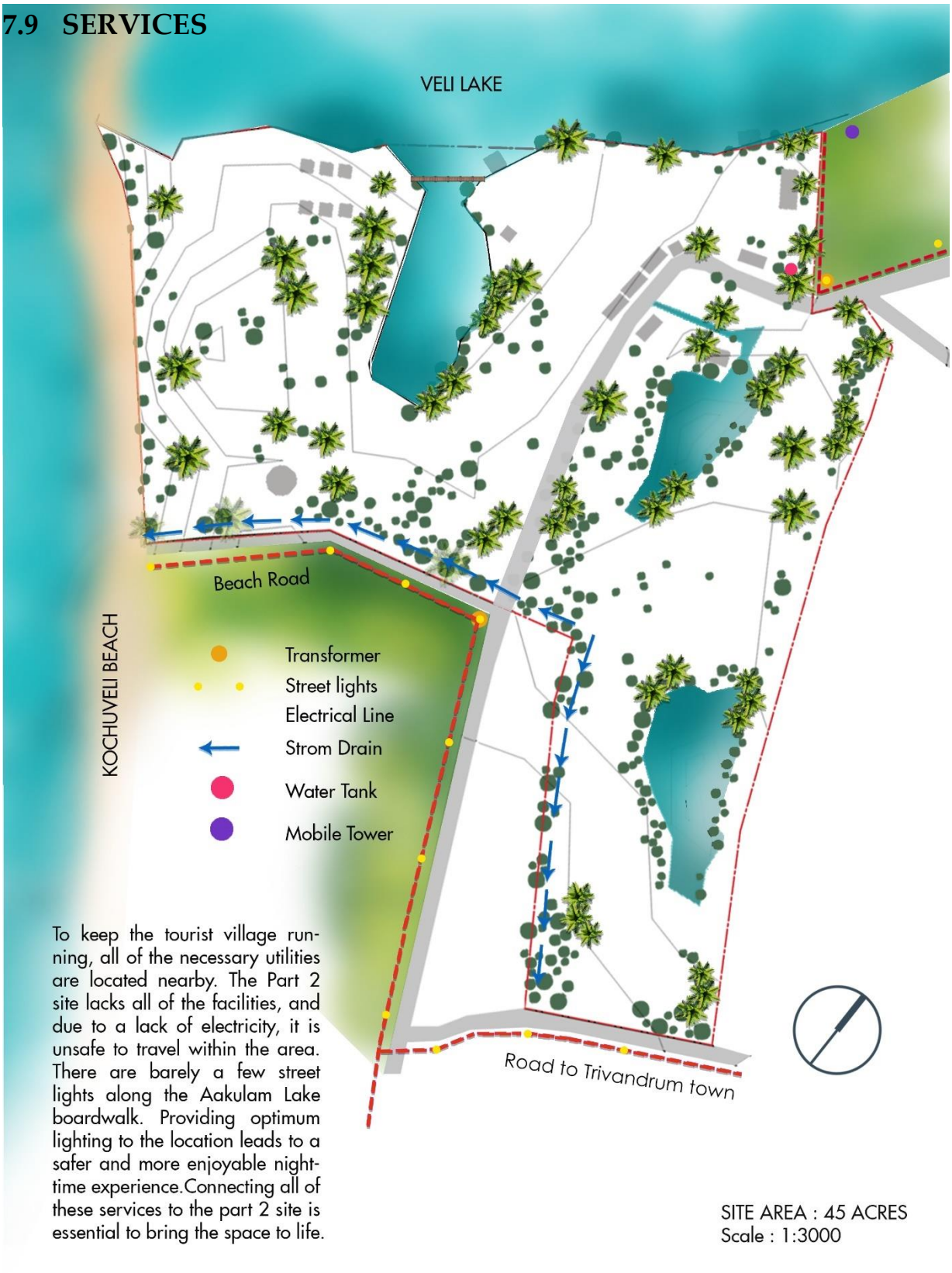
Source: Drawn by Author based on (Thiruvananthapuram, India - sunrise, Sunset, dawn and dusk times for the whole year. Gaisma. (n.d.).

7.8 NOISE ANALYSIS



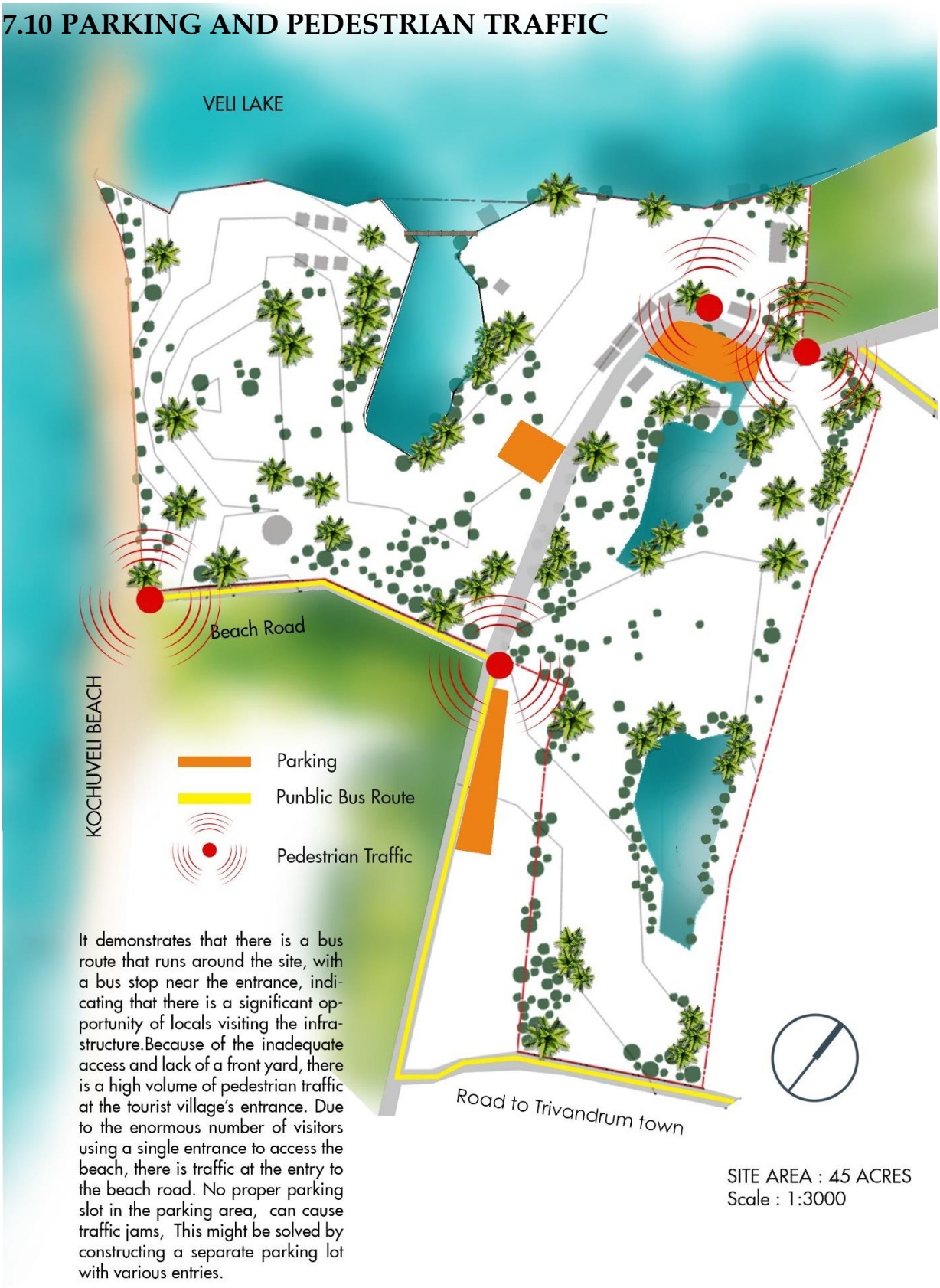
Source: Drawn by Author based on Maya M S. (n.d.). Analysis of traffic noise pollution in Thiruvananthapuram ... https://www.ijert.org/research/analysis-of-traffic-noise-pollution-in-thiruvananthapuram-city-using-mapping-and-modelling-IJERTCONV3IS29036.pdf https://www.gaisma.com/en/location/thiruvananthapuram.html)

7.9 SERVICES



Source: Drawn by Author based on Site Visit @ Veli, Trivandrum India

7.10 PARKING AND PEDESTRIAN TRAFFIC



Source: Drawn by Author based on Site Visit @ Veli, Trivandrum India

7.11 VELI CLIMATE AND WEATHER CONDITIONS

(Veli climate weather averages. WorldWeatherOnline.com. (n.d.). Retrieved February 1, 2022, from https://www.worldweatheronline.com/veli-weather-averages/kerala/in.aspx ; Veli. (n.d.). https://trivandrumdistrict.blogspot.com/2010/10/veli.html)

Veli has the tropical monsoon climate prevailing. The place experience high temperatures and a lot of rainfall throughout the year. The average annual temperature for Veli is 33 degrees and there is about 2276 mm of rain in a year. It is dry for 83 days a year with an average humidity of 76% and an UV-index of 7.The highest average temperature in in Veli is 35C in February and the lowest is 31C in June.

Climate table of Veli

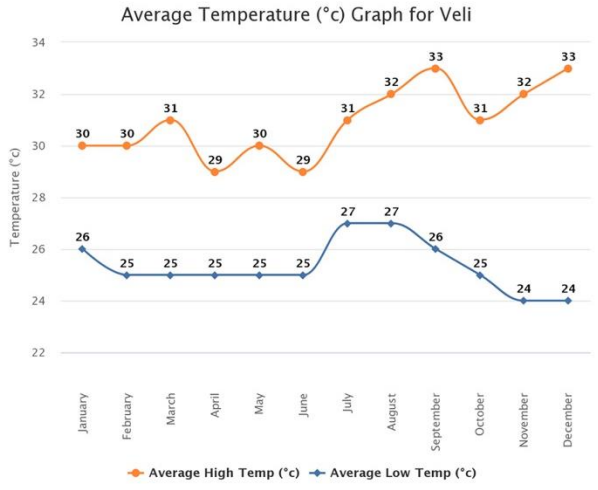
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Day temp. (°C)	34	35	35	34	33	31	31	32	32	33	33	33
Night temp. (°C)	23	24	26	27	27	26	25	25	25	26	26	25

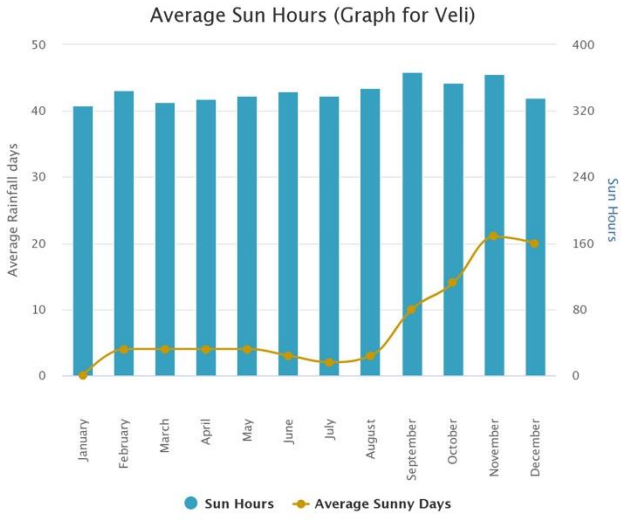
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Precipitation (mm)	29	21	78	165	215	479	286	222	235	233	233	81
Days with rain	8	7	19	27	27	28	29	27	24	23	25	16
Dry days	23	21	12	3	4	2	2	4	6	8	5	15

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Sun hours per day	10	10	10	9	8	7	8	8	8	9	7	9

Dominant wind direction

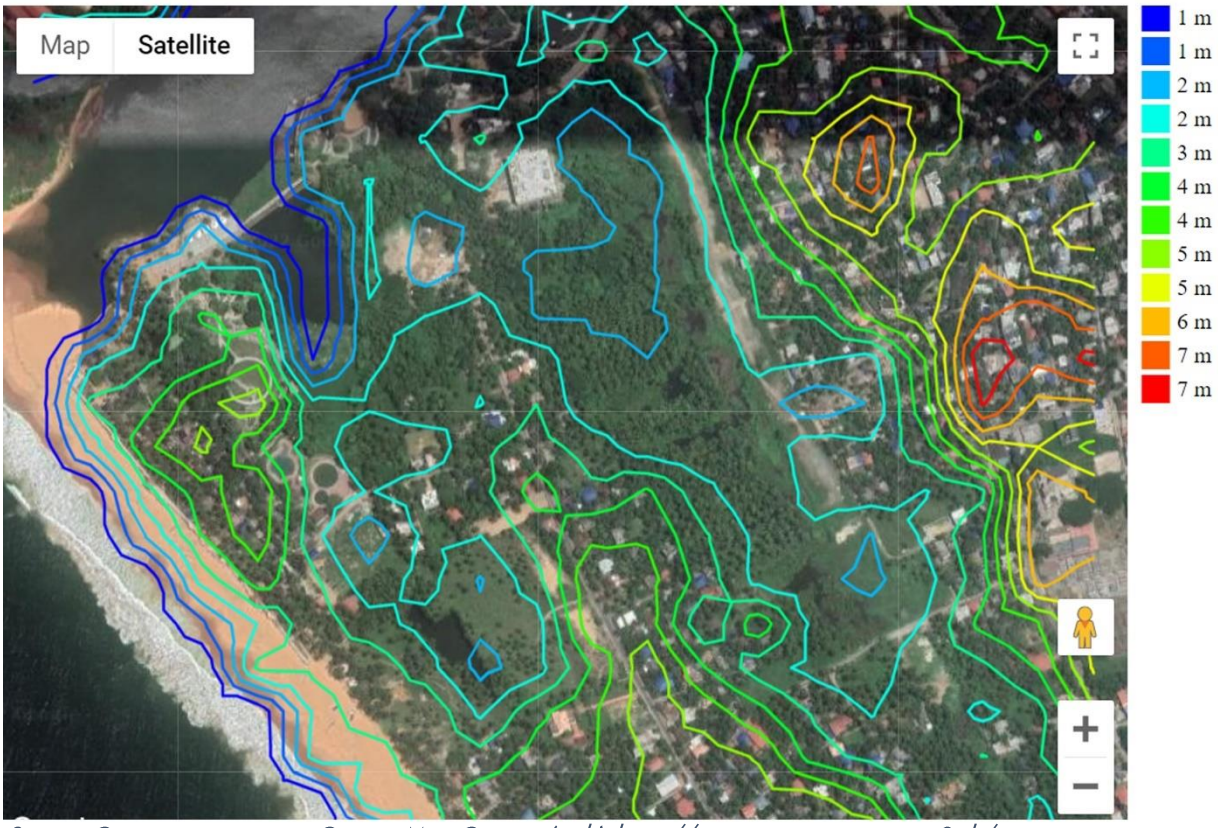
JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
WSW	WSW	W	WNW	WNW	NW	NW	NW	WNW	WNW	W	WSW





7.12 CONTOUR AND VEGETATION

CONTOUR ANALYSIS



Source: Contour map creator. Contour Map Creator. (n.d.). https://contourmapcreator.urgr8.ch/

VEGETATION :

The coastal line is bordered with coconut plantation. The lowest temperatures recorded during post-monsoon could be attributed to the cooling effect created by dense growth of macrophytes vegetation along the banks and heavy precipitation. The majority of the site is covered with coconut trees, Tidal mangroves and aquatic plants. Sand dune flora like Canavalia rosea and Ipomoea biloba are found near the beach areas. Along the margin of the lake is seen abundant growth of Acanthus ilicifoiius and Acrostichum aureum forming extensive belt.

MATERIAL:

The surroundings of the lake are composed of laterite hillocks and tertiary sediments, and the catchment area of the lake is a part of the Kerala Khondalite Belt (KKB) characterized by the presence of khondalites and charnockites. The major rock types around the lake basin are garnetiferous biotite, garnet–biotite gneiss with migmatite, coastal sand and alluvium, sandstone and clay.
Predominance of sand is observed towards the southwestern side reflecting course grain sediment being deposited by frequent back water currents from the sea shore.

Source:https://bsi.gov.in/uploads/documents/Public_Information/publication/books/district_flora/Flora%20of%20Thiruvananthapuram,%20Kerala.pdf

7.13 VIEW OF THE SITE

Key plan

1

2

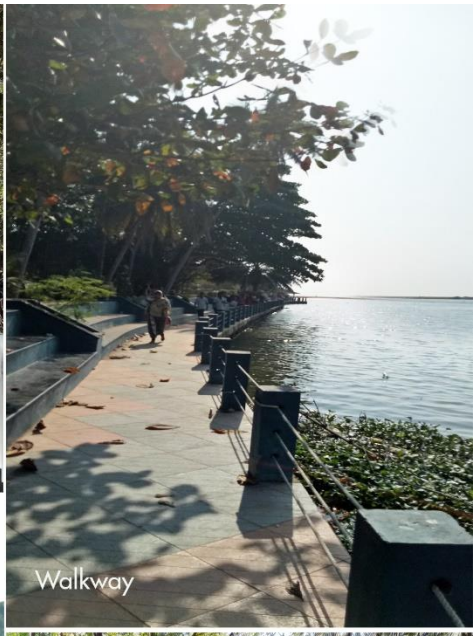
3

4

5

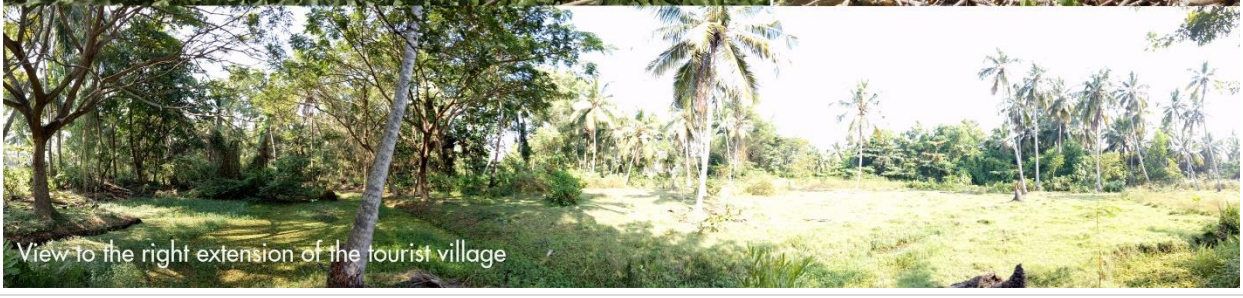
7.14 SITE PHOTOS

Entrance to the tourist village


Walkway

Veli Tourist village

Boating area


View to the right extension of the tourist village

7.15 SWOT ANALYSIS

STRENGTH

EASILY ACCESIBLE:

The site is widely accessible, particularly from the international airport and Kochuveli train station. Because the bus stops and railway stations are so close enough, the locality has a good transit system. Residents living nearby can also take advantage of local transit. This could be the primary enticement for the proposed location.

WATERFRONT PARK:

The site's waterbody plays a significant function. It serves as the site's primary aesthetic appeal. The most interesting parts of the site are the Veli lagoon, lake, and beach. The environment boasts of activities like boating and fishing and the boardwalk that runs alongside the lake. Beautiful views from the site contribute to a nice ambience.

TOURIST VILLAGE:

Picnic areas are available in the tourist village. Boating, walkways, children's park, and sculptures all add to the appeal of the visitors. The most appealing feature is the unusual lake that joins the sea. It is a popular tourist destination in Trivandrum. The new solar-powered miniature train, India's first, is a sustainable approach that helps visitors to cruise around the property and take in the stunning views of the lake and beach. The most notable characteristics are: The floating restaurant and bridge offer which offer a relaxing atmosphere.

BEAUTIFUL VIEWS & PICTUREQUE SPOT:

The Veli lagoon, lake, and Arabian sea can all be seen from the site. For visitors, it presents a photoshoot platform, where people can take and post photos on social platforms, which is increasingly becoming a daily activity for many. There are also native birds that can be spotted surrounding the place, which may be more visually appealing. There is also an excellent opportunity to view the sunset.

TOURIST ATTRACTION:

The district contains the whole tourism package, including hill stations, backwaters, beaches, lagoons, and wildlife sanctuaries. Thiruvananthapuram, a prominent destination for chartered flights to India for medical tourism, attracts international visitors due to the city's many recognized Ayurveda centers. Five-star beach resorts and hill villages nearby offer rehabilitation services. This region is also home to the world-famous Kovalam beach.

CULTURAL AND NATURAL VALUE:

Trivandrum is the cultural hub of South India for arts, architecture, and literature. The culture is deep rooted in history since the rule of the maharajas of Travancore. It embraces all forms of art and keeps an open door for other cultures of the world.Because of its current state, the site has a high landscape value.

ECONOMIC VALUE:

The beachfront provides a huge business opportunity to the residents. The local shops, food stalls and tiny restaurants are mostly owned by the residents of the locality and the veli village nearby. Sporting and leisure activities along the site also add to the economic value of the society and the business alike.

POOR ENTRANCE:

The site has no frontage. The park opens directly to the road and the ticket counter is located just beside the gate to the park. This causes large queues and crowding of the road in front of the park. Illegal handcart shops also add to the crowding of the streets.

POOR SIGNAGE:

One of the park's main drawback is the lack of proper signs. The visitors at most times find it difficult to navigate the park or orient themselves.

IMPROPER ZONING:

The many activities of the park are placed in a random order and disrupt the symphony of the park. The entrance of the park leads directly to the boating area, which causes the visitors to miss other attractions in the park. The pathways to all attractions are not properly connected which leads to improper flow of movement and there is a lack of aesthetic appeal to the overall park design. As the parking facility is placed on the roadside it has becomes a hazard for the pedestrians. The improper placing café, food and refreshment stalls in the park have caused the congestion of road due to many shops coming up on the roadside.

UNUSED SPACES:

There are a lot of pockets of spaces around the activities and attractions (specifically sculptures) which are left unused or bland of any development. The overall percentage of area covered by the activities is quite small compared to the space available. Free spaces become a dumping area for garbage and wastes.

POLLUTED LAKE:

There is no proper maintenance and cleaning of the lake and beach which has resulted in the pollution of the water. Pollutants from industrial wastes and illegal garbage disposal by the people into the lake and the beach cause the immense pollution. Lack of proper governing bodies to check littering leads to increasing measure of pollutants in all waterbodies including the fountains around the sculptures.

EUTROPHICATION:

Pollution of the waterbodies have caused eutrophication in most parts of the lake. Most of the waterbodies in the site are covered with algal bloom and lead to fish death. Water hyacinths are found in most of the waterbodies like boating areas and floating bridges. These lead to the disruption of activities in the lake and also affect the activity of fishes and aquatic life in the lake.

NO COMMERCIAL SPACE:

There is very little space provided for a well-defined commercial activity. Food shops and cafes are very limited.

WEAKNESS

OPPORTUNITY

LANDMARK TO THE CITY:

The site is located in the capital city of the state which lacks a dominant landmark unlike all other capital cities. Trivandrum has good cultural heritage and attracts tourist from all parts of the world. This site can be developed to be a dominant landmark in the state.

PRESERVE THE WATERBODY:

The development of the public space to a landmark or an active zone helps the community to preserve the waterbody around it. Steps can be taken to protect the waterbody and the ecosystem in the site from pollution and increase the aesthetic appeal of the lake.

INTERNATONAL TOURISM:

The city is a throng for tourists from all over the world due to various other appeals like famous beaches and ayurveda centers. By providing facilities to incorporate people from all walks of like the public space can be promoted as a location for international tourism in the country.

WATER SPORTS:

The site is a location where the sea and the lake meet. There are large areas of water bodies which can be used for various kinds of water sports. Apart from the present boating activity the site can be used to introduce different varieties of water sport activities to attract large crowds of people.

HOME FOR SPECIES:

The location of the site promotes the introduction of the different species of birds and animals indigenous to the area. The waterbody can be a home for both freshwater and saltwater aquatic organisms. They help develop the ecosystem.

SUPPORT LOCAL ECONOMIES:

The development of the site to a Landmark helps the building up of the local communities. Residents of the locality will be able to set up small scale businesses and shops to facilitate the public space and this in-turn helps boost the economy of the local people.

IMPROVE PUBLIC HEALTH:

Public spaces help improve the physical and mental health of the people. Parks promote physical activity and provide a space for many outdoor recreational activities.

THREAT

PANDEMIC SITUATION:

The site is a hotbox for the spread of disease as there is much interaction with people due to poor deign of park layout. There is just one entrance and large crowds of people gather and crowd without proper distancing. Lack of flow of movement between different zones result in random movement of people and hence it is difficult to track and manage proper social distancing.

POLLUTE THE ENVIRONMENT:

The site is an area of vegetation and improper management of the resources may lead to further pollution of the environment. Waste and garbage from the parks can leak into the runoff water and end up in the lakes and underground water table. Littering can cause harm to the soil and vegetation.

DESIGN CHALLENGES:

The location of the sight near the ocean pose difficulties in the design of the public space. The coastal area causes much problem from rough seas and erosion of banks.

SAFETY & SECURITY:

The lakeside walkway has poor lighting and is concealed by heavy vegetation. This is a security risk for people walking alone during the evening time. The second part of the site is an undeveloped region with no lighting and infrastructure. The boats for the boating activity are in a shoddy state and with worn out life jackets. This is a major threat in poor weather conditions.

OVERCROWDING:

Due to the location and student hostels and other work centers around the site, there is a plethora of activity in the parks during the evening. Unused spaces are used as gathering points for a variety of people for unsolicited activities. Lack of proper governance of the park leads to large and messy throng of people.

CONFLICTS WITH PEDESTRIANS AND TRAFFIC:

The roadside parking poses a huge threat to pedestrians. It reduces the space for flow of traffic on the road and hinders the movement of pedestrians. The ticket counter also leads to formation of huge lines and crowds.

7.16 SITE FUNCTIONS

FUNCTIONAL

- ADMIN SPACE
- TICKET COUNTERS
- PARKING SPACE
- PARK
- SEATING SPACE
- KIDS PLAY AREA
- JOGGING TRACK
- BYCYCLE PATHWAY
- PEDESTRIAN PATHWAY
- MULTI FUNCTIONAL SQUARES
- RECREATIONAL SPACE
- OUTDOOR SPORTS
- URBAN LANDSCAPE
- FOOD COURT
- OPEN CULTURAL SPACE
- OPEN AIR THREATRE
- TRADITIONAL OPEN MARKET
- WATER FOUNTAIN
- WATERFRONT CULTURAL PARK
- FISHING AREA
- PRIVATE & PUBLIC POOL
- SUN BATHING SPACE
- WATER SPORTS
- BEACH SPORTS
- BOATING
- BAZAAR STREETS
- RELIGIOUS SPACE
- FITNESS AND YOGA
- CELEBRATION PLAZA
- CANOPY PLAZA
- WEDDING AREA
- WEDDING PHOTOSHOOT LAWN
- GREEN CORRIDOR
- ECOLOGICAL WORK SPACE
- PUBLIC ART DISPLAY
- EXHIBITION SPACE
- EDUCATIONAL SPACE
- GIANT WHEEL
- VIEW POINTS
- PUBLIC TOILETS

AESTHETICAL

- DANCING FOUNTAIN
- COLOURED THEME PARK
- PAINTING CROSS WALKS
- FLOWING NATURAL LANDSCAPE
- SEQUENTIAL TREES
- MULTILEVEL LANDSCAPE
- FLOWERING GARDEN
- WATER BODY
- SENSE OF FOCUS
- TRADITIONAL INDIAN ARCHITECTURAL ELEMENTS

SUSTAINABLE

- NATIVE PLANTS
- RAIN GARDEN
- URBAN FARMING
- RAIN WATER HARVESTING
- ECOLOGICAL GREEN BELT
- FIRE PITS
- DRIP IRRIGATION
- OUTDOOR CLASSROOMS
- LOCAL AND RECYCLED MATERIAL
- LOW-VOLTAGE LIGHTING
- AQUAPONICS

HEALTHY CITY

- MULTIPLE ENTRANCES
- OUTDOOR YOGA DOMES
- COMMUNITY GARDEN
- URBAN GREEN
- ACTIVE AND PASSIVE RECREATION
- SIDEWALK EXTENSION
- SAFE QUEING ZONES
- SIGNS & MARKING
- TEMPERATURE CHECK COUNTERS
- BARRIERS
- SANITATION AND HANDWASH SPACE

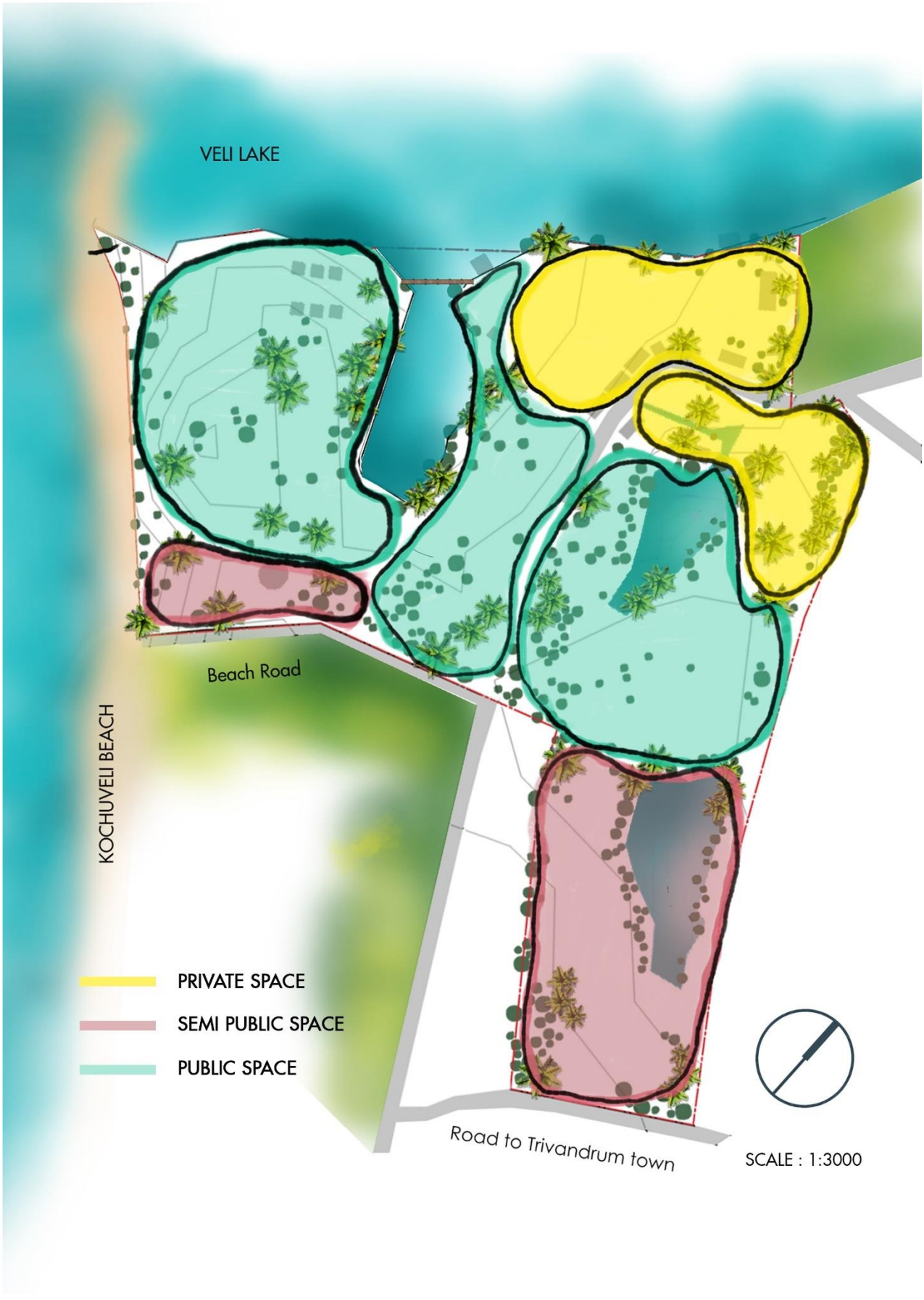
KERALA TOURISM INFRASTRUCTURE LIMITED (KTIL) PROPOSALS

URBAN ENTERTAINMENT HUB

- OCEANARIUM
- WATER THEME PARK
- AMUZEMENTS RIDE
- SNOW WORLD
- KERALA THEME PARK
- 6D THEATRE
- NIGHT CRICKET
- BOWLING ALLEYS
- GO - KARTING

EXISTING ELEMENTS

- FLOATING BRIDGE
- FLOATING RESTAURANT
- SCULPTURES
- TREES
- LEISURE WALKWAY
- TEMPLE
- MINIATURE TRAIN
- BOATING


VELI LAKE
Beach Road
KOCHUVELI BEACH
PRIVATE SPACE
SEMI PUBLIC SPACE
PUBLIC SPACE
Road to Trivandrum town
SCALE : 1:3000

DIFFERENT ZONES

There are three zones on the proposed site: public, semi-public, and private. The zones are further divided into key divisions based on the findings and analysis. They are Recreational, aesthetical, functional, sustainable, healthy space, existing beneficial elements, and KTIL future proposals. Another significant feature is the area's creative and cultural heritage, which helps to the establishment of a new national landmark that brings together all entertainment, educational, and cultural aspects. Based on the findings, it is believed that these services should be implemented in order to improve tourism and protect the current site.

PUBLIC ZONE

This zone contains activities and areas to which the general public has unrestricted access. Parks, recreation centers, open squares, water sports, outdoor sports, children's play areas, public pools, beach activities, snow city, amusement parks, open markets, boating, fishing, Kerala theme park, karting, bowling, and other activities fall under the category of public space. This area is open to the public with no restrictions. Some of these activities can only be done if you pay a ticket. These activities are appropriate for individuals of all ages. All of the spaces are connected by public pathways, allowing visitors to freely roam around the site and take in the existing vistas.

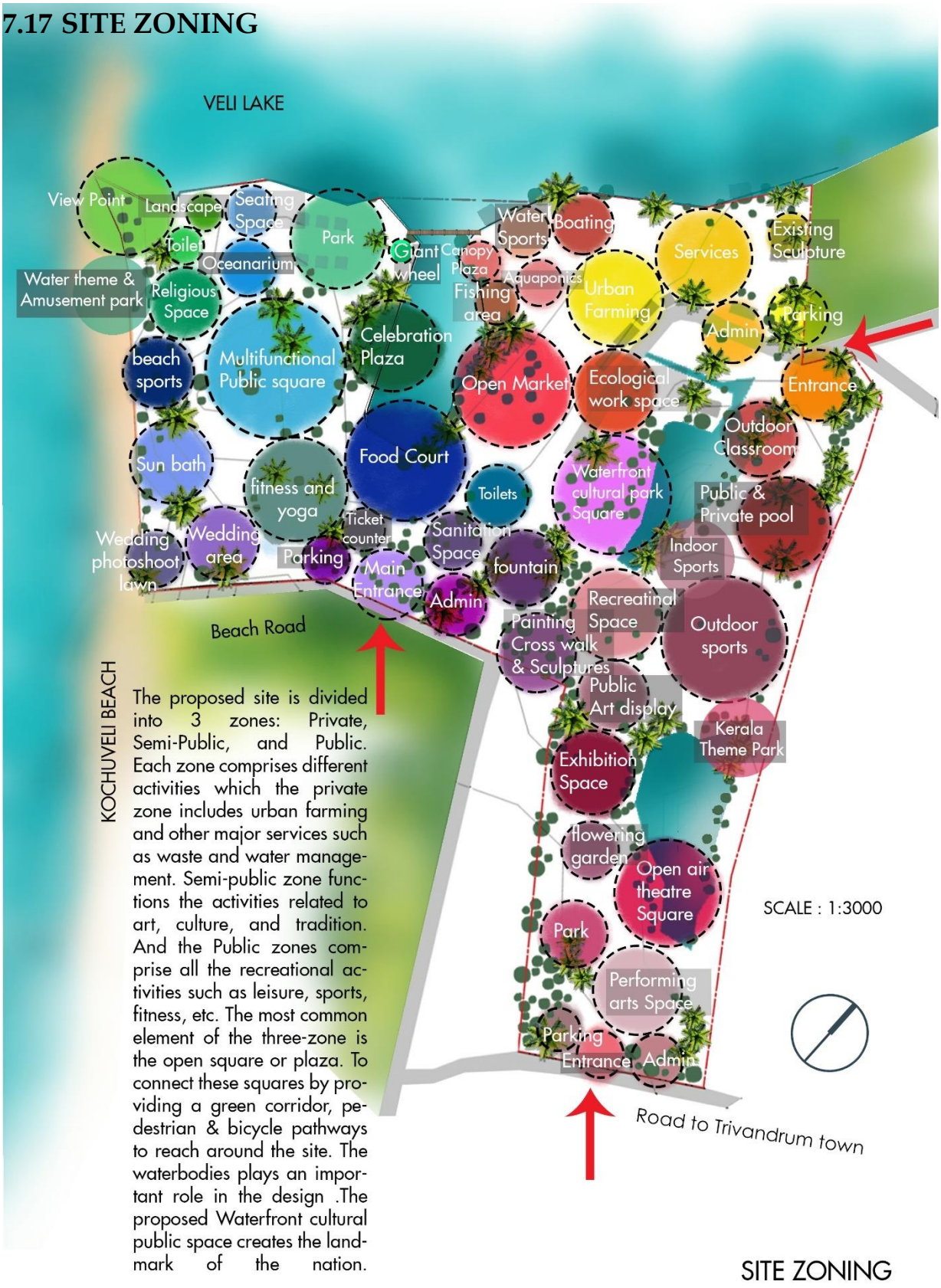
SEMI PUBLIC ZONE

Art and cultural spaces are included in the semi-public zone because they require a tranquil environment and are cherished; they should not be packed or boisterous since this will cause distraction and damage to the tradition. A little barrier is required in the performing arts studio between the audience and the performer, there should be a safe distance. Any interruption could affect their performance. This resembles a museum. People can watch the show from a safe distance without interfering with the rest of it. In Indian mythology and culture, dance has long been associated with nature. The practice of such artforms necessitates some level of secrecy. It is preferable to have a safety barrier in place because the Oceanarium, art show, and exhibition spaces require some supervision. The wedding location must also be kept hidden from the general public. It's a private event that might be better protected from outside noise and passersby.

PRIVATE ZONE

These are regions that are fully isolated from the rest of the public. They primarily consist of park service areas. Waste, energy, and water treatment plants, rainfall collection systems, and the service center for the miniature train station all require a high level of privacy. Regular maintenance and servicing are required for some functions, such as administrative space and urban farming. These areas are accessible only to maintenance and service staff. Furthermore, operations such as loading and unloading areas for the marketplace have their own private space that is not visible to the general public. Aside from that, there is a private pool available which is accessed by specific people only based on booking.

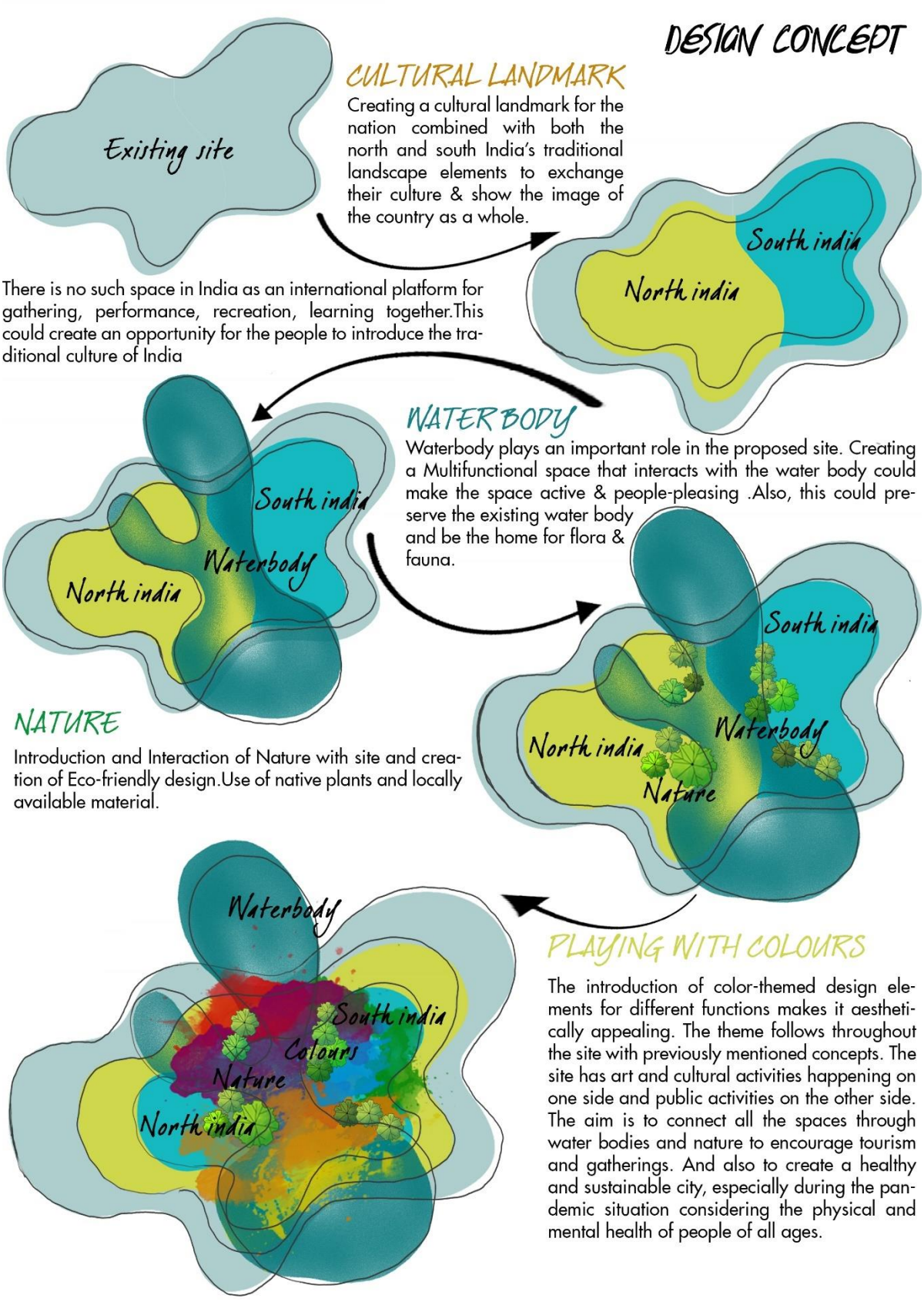
7.17 SITE ZONING



The proposed site is divided into 3 zones: Private, Semi-Public, and Public. Each zone comprises different activities which the private zone includes urban farming and other major services such as waste and water management. Semi-public zone functions the activities related to art, culture, and tradition. And the Public zones comprise all the recreational activities such as leisure, sports, fitness, etc. The most common element of the three-zone is the open square or plaza. To connect these squares by providing a green corridor, pedestrian & bicycle pathways to reach around the site. The waterbodies plays an important role in the design .The proposed Waterfront cultural public space creates the landmark of the nation.

SITE ZONING

8 CHAPTER 8 – CONCEPT AND DESIGN EVOLUTION



PROS

POOR ENTRANCE
IMPROPER ZONING
UNUSED SPACES
POLLUTED LAKE
SAFETY & SECURITY
LOW MAINTENACE
NO CONNECTIVITY
OVER CROWDING
NO MOVEMENT FLOW
NO BEACH SIDE ACTIVITIES
LOWER ATTRACTION
NO RECREATIONAL ACTVITIES
NO COMMERCIAL SPACE

CONS

INTERNATIONAL TOURISM
CULTUAL VALUE
ECONOMICAL VALUE
LANDSCAPE VALUE
PICTUREQUE SPOT
EASILY ACCESIBLE
WATERFRONT(Lake ,Lagoon & Sea)
INSTITUTIONAL NEIGHBOURHOOD
GOOD LOCATION
WATER ACTIVITIES
HOME FOR SPECIES
BEAUTIFUL VIEWS

FOCUSSING ON WATERBODY

5 EXISTING WATER BODIES AROUND THE SITE

1:KOCHUVELI BEACH
2:VELI LAGOON
3:VELI LAKE
4:WATERBODY IN NORTH EAST (Site Part 02)
5:WATERBODY IN SOUTH EAST (Site Part 02)

DIVISION OF 5 MAJOR ZONES AROUND WATERBODIES

1: The Main Square facing Kochuveli **BEACH** activities
2: Urban Market and Food Court facing Veli **LAGOON**
3: Improvisation of Existing Boating area located at Veli **LAKE**
4: A Cultural centre facing the **EXISTING WATERBODY** located at the **SOUTH EAST** side of the Part 02 site .
5:Outdoor and Indoor Recreational Activities facing the **EXISTING WATERBODY** located at the **NORTH EAST** side of the part 02 site

THE MAIN SQUARE
The main square would be the central focus, and the primary justification for locating near the beach area is that there is a significant viewpointpoint where the lake and the beach meet..

THE URBAN MARKET AND FOOD COURT
Markets should be located in areas that have easy access to major roads. These two activities are located in the centre to ensure easy access. These are the primary functions that people lack in the current condition.

BOATING AREA
It is the most active function on the present site. Because of the identification and analysis of the issues, it must be renovated.

A CULTURAL CENTRE
Because the city has a high cultural value. It serves as the primary function. It is preferable to locate at the end of the location, away from any distractions, and also have a separate entrance to the space. It is set in the site's southeast corner.

LEARNING & RECREATIONAL
It is located in a location with both a peaceful and entertaining environment. Because it has to be far from the socially lively area, the north east corner is a good place to learn and play.

MULTIFUNCTIONAL ACTIVITIES AROUND 5 ZONES

SOLUTIONS

To connect the People Inside INDIA

TRADITIONAL ELEMENTS OF INDIA
National entertainment hub for north and south indian people

Promote culture and tourism through architecture

Platform to perform the classical art forms of India

Preserve the Dying art and heritage of the country

To have a traditional feel in this modsern world.

It is the pleasing way to the viewer

COLOURS
Refered from the case study - Superkilen urban park ,Copenhagen, Denmark

Diffrent zone - different colour

It creates a sense of equilibrium within the landscape,balance,sense of balance,sense of order,sense of excitement i.e. is not visually boring to the viewer.
Red : energizing and exciting
Orange : euphoria and enthusiasm
Yellow : optimism and joviality
Violet & Pink : spacious and calmness
Green: tranquility, and well-being
White : simple and pure
Blue : Existing Waterbody

Site Connectivity

NATURE
Refered from the case study -OCT OH BAY Retail Park , Shenzhen, China

To create an Ecological blanket

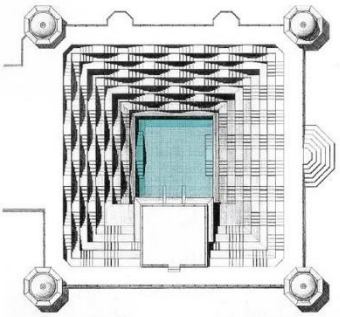
Serve as a connecting factor between each zone.

Use local materials so that the structure blends in with its surroundings.

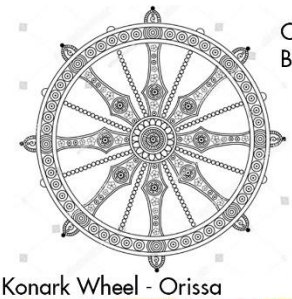
Improve the mental and physical health

Eco-friendly environment that improves air quality and ventilation

Jalli - North India



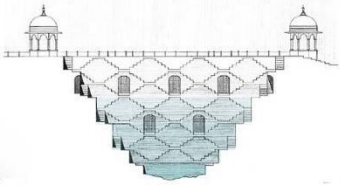
Step Well - Rajastan,Gujarat



Konark Wheel - Orissa

Chabutero - Gujarat
Bird Feeder -

Pillars & Arches
North India

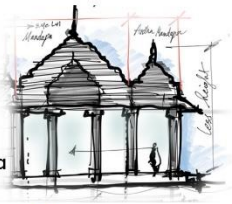


Lanterns-North India

Jaapi - Assam

Bamboo craft
Mizoram
Meghalaya

Stone Waterfountain
Rajastan

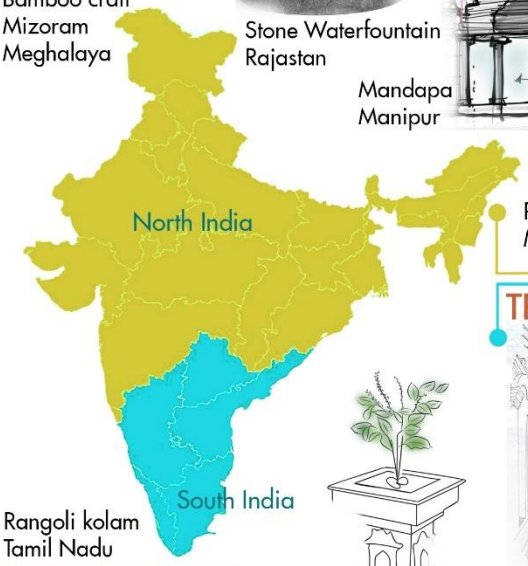


Mandapa
Manipur

Pavillion
Madhya Pradesh

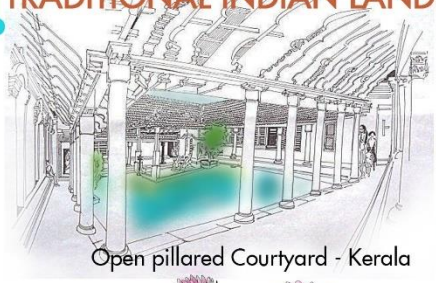
Drinking water pipe - Maharastra

Earth Pot - Jharkhand

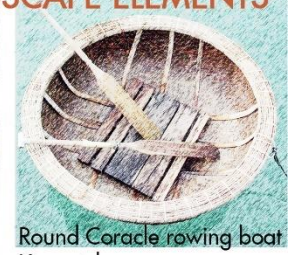


Rangoli kolam
Tamil Nadu

TRADITIONAL INDIAN LANDSCAPE ELEMENTS



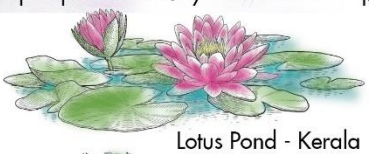
Open pillared Courtyard - Kerala



Round Coracle rowing boat
Karnataka

Thulasi thara
Kerala

Uruli - Kerala

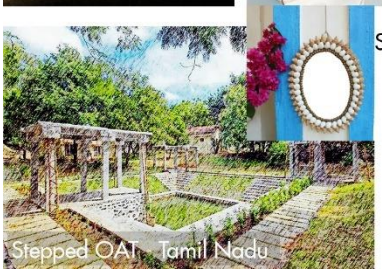


Lotus Pond - Kerala

Wooden Swing
Tamil Nadu

House Boat - Kerala

Hurricane Lamp - Tamil Nadu

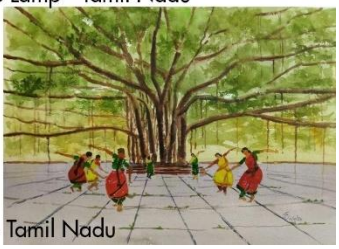


Stepped OAT - Tamil Nadu

Sea Shell craft - Goa

Bullock cart - Tamil Nadu

Diya
Tamil Nadu



Baniyan Tree - Tamil Nadu

The landscape elements are inspired by traditional Indian architecture because this site would be a culturally significant landmark. To give the idea of being in an Indian setting, these components were added. This could make learning about Indian culture more accessible through architecture. Because India lacks a distinct center, north, and south Indian elements are mixed to form a fusion of space in the. North and south India, have vastly diverse architecture, traditions, and cultures. This is a meeting point for two civilizations. The key challenge with the proposed site is the connection and interest of tourists. These features are frequently utilized to connect people within the country as well as visitors from other countries. This could be a better option because it not only looks nice but also provides a purpose for tourists. The entire site is built around the idea of combining these ancient elements, which sets the location apart. Each of India's 28 states has its distinct style of art and craft. Each element represents a different state and is meant to highlight the architecture of that culture. Furthermore, the urban market features multiple stalls from these various states, each with a variety of crafts preserved for sale, giving the impression of an Indian theme.

LIMITATIONS

Locally available materials are used to match the theme of the project. Some elements have ornamentation that can be challenging to work with. To demonstrate the theme, only abstract functions and concepts will be employed. The majority of the elements mentioned here are inexpensive and readily available in your area. It is not created in the traditional sense to modify the entire structure, but rather to make use of modern world technology and concepts, as well as newly available construction methods.

ELEMENTS USED

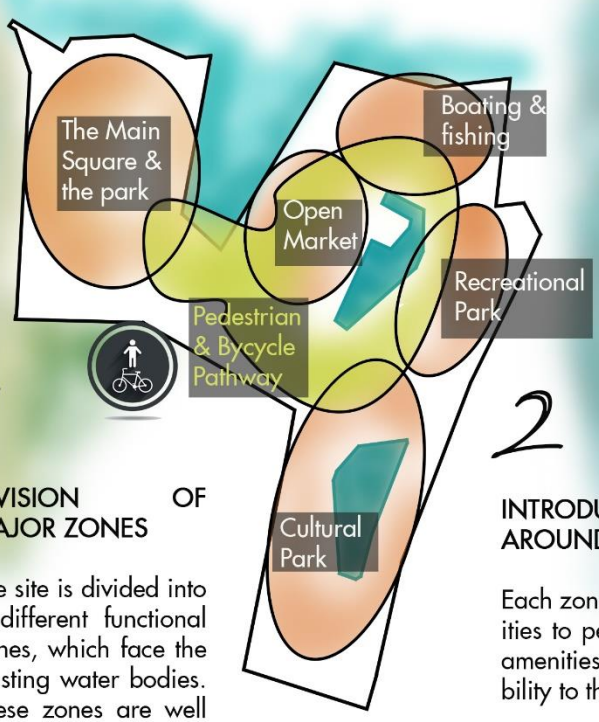
NORTH INDIAN ELEMENTS

PAVILLION: Bamboo Pavilion as a seating space
JALLI: It is the common architectural feature seen in North India It is used as an element in Gazebo, Cultural spaces, marketplace, Barrier screens, etc.
THE STEP WELL: It is the levelled pool that could be used in public and private pools. Different levels create an interesting feature.
THE KONARK WHEEL: It could be the theme of the Giant wheel provided here.
CHABUTARO (Birdfeeder): Since the site has native and migratory birds. It could be useful.
PILLARS & ARCHES: All the gateway entrances and the leisure walk could be the elements with pillars and arches.
STONE FOUNTAIN: Used in the center of the square or plaza which creates a sense of focus. Also in the Garden space.
MANDAPA: It is the 4 pillared roof space that could be used for the performing art space to enjoy nature and art.
LANTERNS: This could be used in the Cultural Plaza, Market streets, and walkways that provide lighting as well as aesthetical appeal.
BAMBOO CRAFT: The waste bin and the seating spaces made up of Bamboo are used.
JAAPI: The umbrella near the beach areas has the theme of Jaapi which is the large hat.
EARTH POT: It could be the landscape elements or sculpture in the garden to provide a rural touch. Also, it could be used for drinking water purposes.

SOUTH INDIAN ELEMENTS

RANGOLI DESIGN: All the pathways could be designed based on the rangoli pattern
THULASI THARA: Mostly it is the traditional elements seen at the entrance of every home with a thulasi plant outdoor to get prosperity. This could be placed at the entrance as a welcoming feature.
OPEN COURTYARD: It could be provided at the center of any closed indoor activity to enjoy nature and the sky.
TRADITIONAL SWING: Swings provided in the kid's play area could adapt the theme of this. This is mostly made up of wood.
URULI: It acts as the traditional element used to float flowers as an aesthetical feature. It could be used in the park as well as cultural space.
LOTUS POND: Commonly seen in Kerala. It is the national flower of India. It could be grown on the existing water body.
STEPPED OAT: Significantly seen as a performing space made with stones.
HURRICANE AND DIYA LAMP: Used for lighting purposes. Streetlights could adapt the theme of that.
ROUND CORACLE & KERALA HOUSEBOAT: These could function as boats in the boating area.
SEASHELL CRAFT: Existing sculpture in the park.

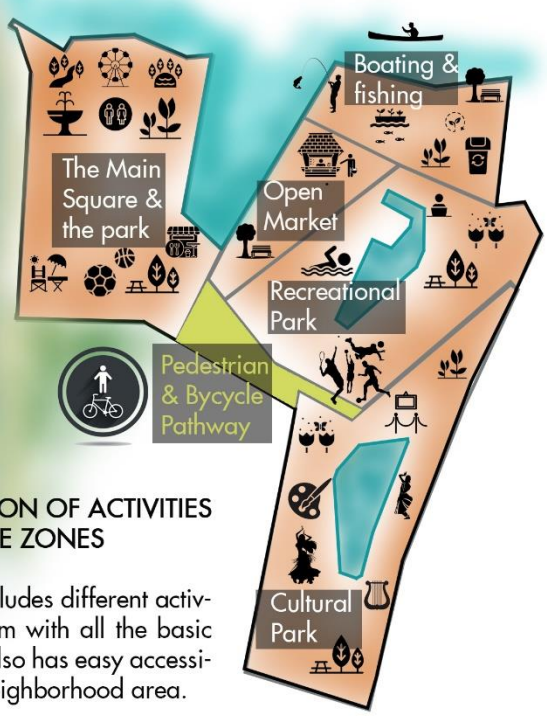
DESIGN DEVELOPMENT



1

DIVISION OF MAJOR ZONES

The site is divided into 5 different functional zones, which face the existing water bodies. These zones are well connected by pedestrian and bicycle pathways.



2

INTRODUCTION OF ACTIVITIES AROUND THE ZONES

Each zone includes different activities to perform with all the basic amenities. It also has easy accessibility to the neighborhood area.

3

COLOURED THEME SQUARE

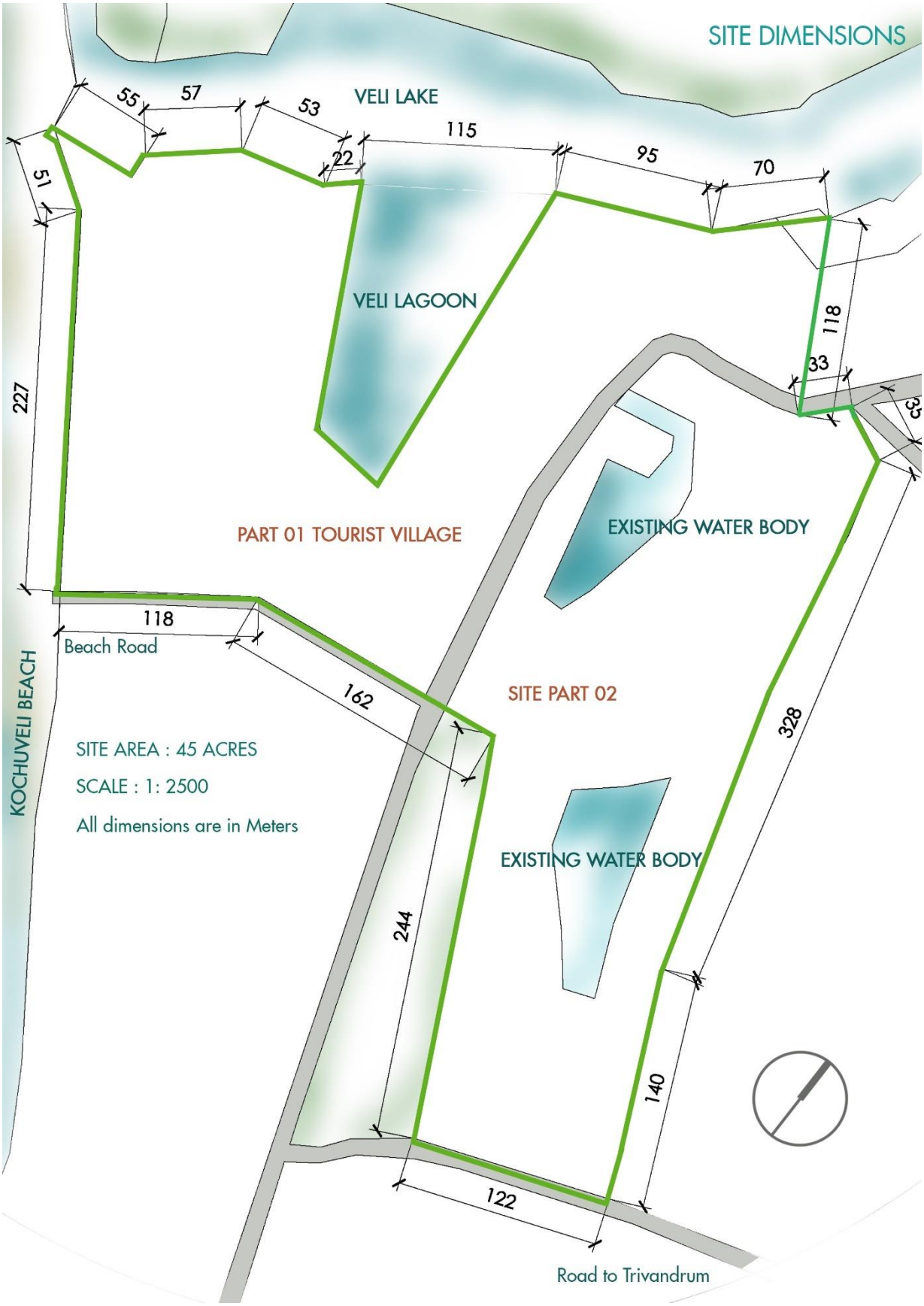
Different zones make a separate square. The introduction of colors to each zona make the area a Vibrant feel when one enters to the other square.

4

BLENDING COLOURS WITH NATURE

Blending nature with the colors to the site feel connected. Each square has its surprising features. The introduction of traditional Indian elements blend with the theme feels unique and to experience the culture of India.

9 CHAPTER 9 – SITE DIMENSION



10 CHAPTER 10 – WATERFRONT CULTURAL PARK- MASTER PLAN

Waterfront CULTURAL Park - Veli,India

The Waterfront Cultural hub is the proposed program at Veli, Trivandrum, Kerala, India. The goal of the program is to redesign the previously existing veli tourist village in Trivandrum, India, as well as expand to a nearby location that is empty and unusable. The proposed site covers 45 acres of land and offers stunning views of the existing beach and lake. It is situated at the confluence of the Arabian Sea and the Veli Lake, which may be a rare scenario for a cultural landmark. The site's waterbody plays a significant function in the plan of the program. It is designed in such a way that it can easily cater to people of all ages. It will be an international hub that can adapt both the local people and foreigners.

ZONING & CONCEPT

The proposed program comprises 5 zones or squares that follow 5 different color themes (red, orange, green, yellow, and pink). The 5 zones are the Main Square (Red Square), the Urban market (Orange Square), the Boating area (Yellow Square), the Cultural Center (Pink Square), and Learning and Recreational Center (Green Square). Each square has its specific amenities. The major activities here are Recreational activities, Cultural activities, urban market and farming, Outdoor and Indoor sports, celebration plaza, Oceanarium, food court and restaurants, yoga and meditation, wedding photoshoot area, educational spaces, public and private pools, fun city, workspace, leisure walkway and seating spaces, flower garden, water theme park, amusement rides, boating, water sports and the like.

An ecological blanket and a flowing natural landscape that covers the site with the zones connected via pedestrian walkways is woven across this collection of activities. It is also a hub for the flora and fauna. The activities are all placed to face the beautiful views of the lake and the beach. All the zones are orientated in such way to get the maximum view of the waterbody. The site itself has a landscape value, but the existing village did not function properly mainly due to improper zoning and connections. There is a visual perception of all the activity zones from any part of the site.

All the elements follow the color code which gives an aesthetical appeal to the site. The vegetation, materials, and the architectural elements all follow the color scheme. Most of the construction techniques are cost-effective since all the materials and vegetation used here are locally available. Finally, all the elements designed here have a rural touch which helps to preserve the culture of India.

SHAPES & MORPHOLOGIES

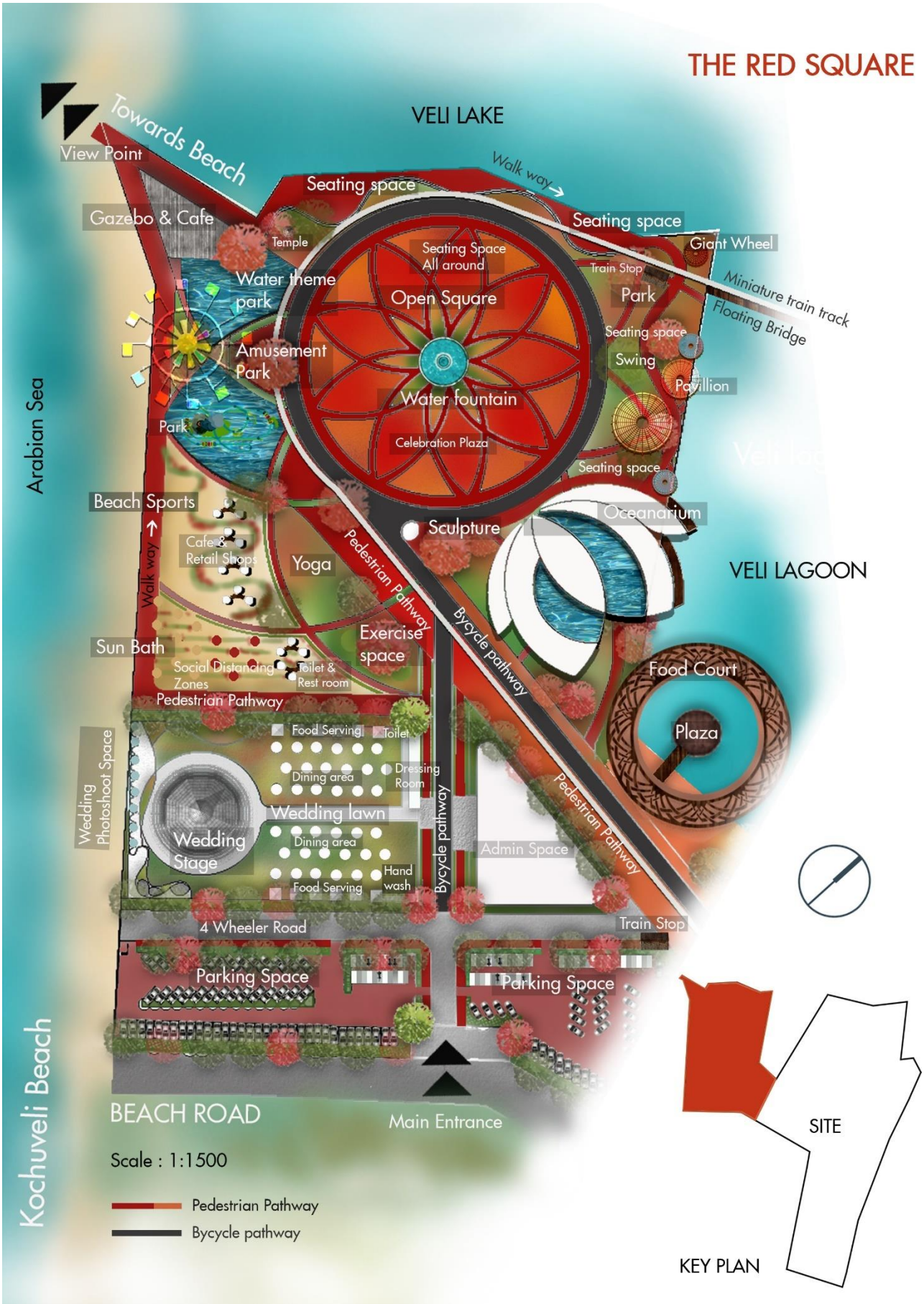
Majority of the site's morphologies are derived from the traditional landscape elements of India. Especially the pattern for the squares is adapted from the 'Rangoli' design which is a traditional element of India. This pattern is used in many areas of the site to get a feel of the culture. Curved forms are used here to get 360 deg. view of the entire site and waterbody. This also helps to get a visual connection throughout the site.

Lotus is India's national flower and traditional vegetation, so several of the primary functions incorporate the Lotus theme to give a sense of national space. Circular structures are used in performing art studio to have flow of movement along the floor. Classical Indian dance performers need flexibility of space to perform their entire art. Also, some places are designed in organic shapes that blend with the nature creates a freedom of movement.

CURRENT PANDEMIC

All the spaces are designed based on the current pandemic situations. All the major functions are zoned in a scattered manner to avoid congestion. Each zone has its own safety precautions like queuing and are well provided with signs and markings. Multiple entrances are provided here to maintain the social distance. Each square has its own sanitation and handwash facilities. The pedestrian pathways are designed with more the 1.5 m width in each lane and both the lanes are separated with a landscape in the middle. The bicycle pathway also follows the same design. There is a resting space provided in between each activity to maintain a safe distance. Each activity has its structure and do not share the same roof. To motivate mental and physical health, plenty of gardens and parks are available to relax and rest. Ticket counters are provided at certain spaces to check and maintain the maximum number of people present at the park at a given time. The proposed program is designed to have a continuous flow of movement from starting to end. The exciting factors in each zone promote the continuous flow of people to successive zones without any lag. Gastro safe zones are used in food courts and Pop up domes are used in yoga and exercise area.

Gazebo Seating Space
Cafe
Giant Wheel
Park
View Point
Water fountain
Square
Floating bridge
Miniature train track
Floating Cafe
Rain Garden
Waste Management
Rain Water Harvesting
Aquaponics
Boating
Miniature Train Station
Urban Farming
Parking
Towards Beach
Giant Wheel
Fishing Area
Water Sports
Admin
Water Theme park
Veli lake
Leisure Walkway towards Aakulam lake
Park
Amuzement Park
Open Square
Pavillion
Veli lagoon
Plaza
Veli Shangu sculpture
Beach Sports
Oceanarium
Service Road
Yoga
Exercise space
Food Court
Plaza
Service Entry
Sun Bath
Open Market
Private Pool
Wedding lawn
Photoshoot Space
Admin
Seating area
Work space
Open Square
Public Pool
Outdoor Class Rooms
Parking
Go-Karting
Kochuveli Beach
BEACH ROAD
Main Entrance
Outdoor Sports
Indoor play area
Kids Play Area
Kerala Themepark
Park
Flower Garden
Plaza
Exhibition Space
Statue
Open Air Theartre
Performing arts studio
Public Art Display
Gazebo
Lotus Pond
Plaza
Open Sqaure/Seating spaces
Parking
Admin Space
SITE AREA - 45 ACRES
SCALE - 1:2500
ROAD TO TRIVANDUM TOWN
Cultural space Entry
MASTER PLAN
WATERFRONT CULTURAL PARK


THE RED SQUARE
VELI LAKE
Towards Beach
View Point
Walk way
Seating space
Gazebo & Cafe
Seating space
Temple
Giant Wheel
Seating Space All around
Train Stop
Water theme park
Open Square
Park
Miniature train track
Floating Bridge
Seating space
Amusement Park
Swing
Pavillion
Water fountain
Park
Celebration Plaza
Seating space
Arabian Sea
Beach Sports
Oceanarium
Sculpture
Cafe & Retail Shops
Yoga
Pedestrian Pathway
VELI LAGOON
Walk way
Bycycle pathway
Exercise space
Sun Bath
Social Distancing Zones
Toilet & Rest room
Food Court
Pedestrian Pathway
Plaza
Food Serving
Toilet
Wedding Photoshoot Space
Dining area
Dressing Room
Wedding lawn
Wedding Stage
Dining area
Admin Space
Pedestrian Pathway
Bycycle pathway
Hand wash
Food Serving
4 Wheeler Road
Train Stop
Parking Space
Parking Space
Kochuveli Beach
BEACH ROAD
Main Entrance
Scale : 1:1500
Pedestrian Pathway
Bycycle pathway
SITE
KEY PLAN

10.1 THE RED SQUARE

The Red Square which the main attraction of the design covers a wide public walkway that connects the recreational activities such as water theme and amusement parks, beach activities, wedding photoshoot area, yoga, exercise, and a food court. All objects placed in this section follow the red color scheme, even the landscape elements, pathways, and vegetation. Gulmohar trees, thechy flower, and laterite stones are used to match the color scheme. Charismatic shade of red is the color used here which portrays strength, radiance, and full of energy to the space.

Indian traditional elements used here are bamboo pavilion with traditional swings attached, Giant wheel in the concept of Konark wheel (Orissa's traditional element), Mud pots, colonnaded food court, etc.

There is a water fountain at the centre of the circular square which creates a sense of focus. Seating spaces are provided all around to have a wide view to the entire site and water body. The square's design is inspired by the Rangoli pattern, which has a central point from which the pattern emerges. Similarly, the square is designed to have a focal point of attraction that radiates outwards through pathways to other activities.

The circular form is utilized to keep movement flowing rather than becoming stuck. Also, to have a broader visual range and aid the structure's integration with the surrounding environment. Curves work particularly well near bodies of water, reflecting that sense of fluidity. This symbolizes the Indian Tradition. Oceanarium and the amusement park are the major appealing factors of the square and one can enjoy them with the view of the beach and lagoon.

The food court has a performing plaza at the center so that the people can have entertainment while eating. There a leisure walkway running around the site which can also be used as a jogging track by the people. Bamboo Pavilion with seating spaces facing water body creates a sense of tranquility.

GULMOHAR TREE

THETTY FLOWERS

Gulmohar trees

They are an important part of Kerala landscape. One of the oldest ornamental trees grown according to the earliest records of cultivation in India. The tree has a delicate aroma and beautiful appearance because of its excellent shade. It's planted on deteriorated land to help with erosion control as well as soil rehabilitation and improvement through nitrogen fixation in the atmosphere.

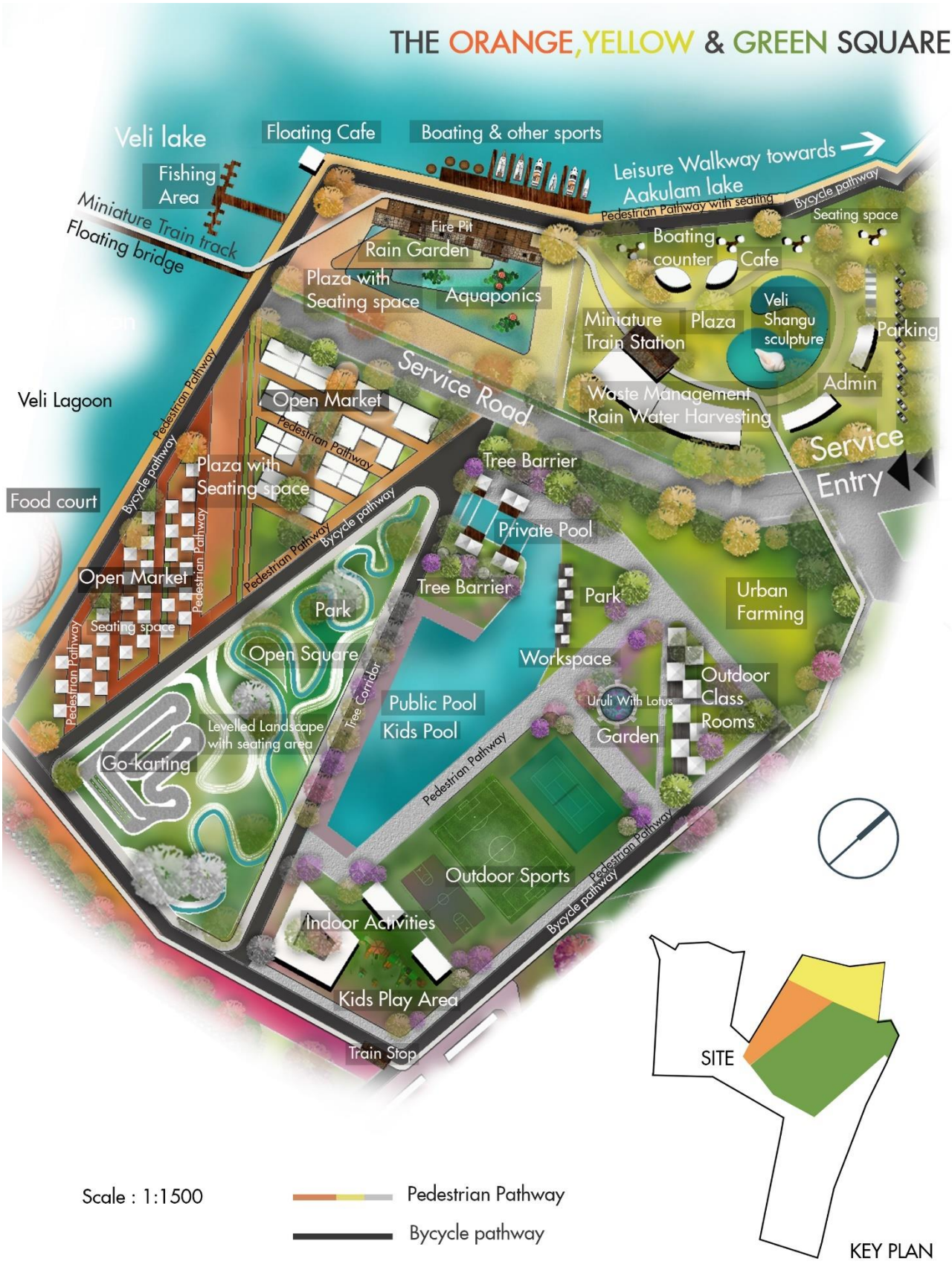
Thechy Flower

It is a common flowering plant found in Kerala. Thechy flowers are used for worships in temples in Kerala. The plant also has good medicinal values. Thechy plant roots, stems etc. are used for treatment of skin diseases. It is also used during the Onam festival (festival of flowers) in Kerala. It blooms all year and gives the garden a more vibrant, bushy appearance.

LATERITE PAVING STONE

Laterite is lovely material for construction. It is strong, rich in color and above all eco-friendly. Laterite stones can be found in abundance in nature, heat resistant and environmentally friendly. It is a very cost-effective material. Laterite is a fascinating material with a beautiful color and texture that may be produced. Laterite is a substance that ages well and grows more visually rich with time.

GAZEBO
LANDSCAPE ELEMENTS
MUD POTS
DRINKING WATER PIPE
BAMBOO PAVILLION
TRADITIONAL
SWING
GIANT WHEEL WITH THE CONCEPT OF KONARK WHEEL


THE ORANGE, YELLOW & GREEN SQUARE
Veli lake
Floating Cafe
Boating & other sports
Fishing Area
Miniature Train track
Floating bridge
Leisure Walkway towards Aakulam lake
Pedestrian Pathway with seating
Bycycle pathway
Seating space
Fire Pit
Rain Garden
Boating counter
Cafe
Plaza with Seating space
Aquaponics
Veli Shangu sculpture
Miniature Train Station
Plaza
Parking
Veli Lagoon
Service Road
Open Market
Waste Management
Rain Water Harvesting
Admin
Service Entry
Pedestrian Pathway
Bycycle pathway
Tree Barrier
Plaza with Seating space
Food court
Private Pool
Open Market
Tree Barrier
Park
Urban Farming
Seating space
Park
Open Square
Workspace
Outdoor Class Rooms
Tree Corridor
Public Pool
Kids Pool
Uruli With Lotus
Garden
Levelled Landscape with seating area
Go-karting
Outdoor Sports
Indoor Activities
Kids Play Area
Train Stop
SITE
KEY PLAN
Scale : 1:1500
Pedestrian Pathway
Bycycle pathway

10.2 THE ORANGE SQUARE

All elements placed in this section follow the orange scheme, even the walls, pathways, and vegetation. The Orange square is a great urban marketplace setting with seating spaces. Each market canopy is spaced at a regular interval, with a front yard to stand in and seating spaces provided in between the shops to relax and enjoy India's traditional art and craft. Each shop has its own circular area where customers can shop without disrupting the other stores.

All the businesses are situated so that you may enjoy shopping while looking out over the lake. Each shopping street line runs from one end to the other, which is leading to a water body. There is a plaza available for leisure activities. This bazaar displays traditional art and craft from many parts of India so that visitors from other countries can learn about the culture. The market contributes significantly to the improvement of the local economy. Residents can also purchase vegetables and fruits grown on the site as part of the urban farming program.

To add a cultural flavor, traditional Indian lanterns are hung on the shopping strip. It also produces a carnival atmosphere, which is one of the most appealing aspects of the area. With vivid lighting and a great view of the waterbody, this will be an unforgettable experience. Hurricane lamps are used in all of the businesses here for lighting purposes, giving them a rural feel and allowing visitors to immerse themselves in the past.

People from outside India can also get a quick understanding of the culture. This might be a venue for cultural exchange through art and architecture. With a slight visibility through the design, Jalli screens operate as a barrier between spaces. This could provide a sense of privacy while not fully blocking the view. This might be employed between shops to create a distinct ambience in each state's arts shop without drawing attention away to the other shops.

GULMOHAR

COCONUT TREES

COCUNUT TREES are the trees used in this square. Kerala is named after the coconut tree. The "Kera" stands for Coconut tree and "Alam" for land, thus meaning "Land of Coconut Trees". Coconut production in Kerala plays an important role in the economy and culture of the region. They dominate the landscape in many parts and most of the parts of the tree have immense use. The land is wet suitable for coconut trees to grow without much effort. They provide a pleasant view and good shade especially to the areas bound by the beach. Coconut cultivation is a quite important and major activity in Kerala and invariably an important part of this square.

COSMOS FLOWERS

It is a traditional plant and reportedly a potent antioxidant. Its constituents may be advantageous to human health. It's a common ornamental plant in cottage gardens and public spaces, where it's often mass-planted along roadsides, beds, and borders. Birds and butterflies are attracted to the flowers of all Cosmos species, including this one. This is a low-maintenance plant flower that will last for a long period in the sprouting stage.

TERRACOTTA

It exudes a rustic, old-world appeal. This material is ideal for rustic or natural environments, as well as earth-tone design. Terracotta tiles are a wonderful mix of red and clay tones that wash in soaring clouds of color, producing a one-of-a-kind, easily accessible, and less expensive appeal. Terracotta Jaalis are typically utilized as load-bearing walls or barriers with semi-transparent and ventilated areas.

10.3 THE YELLOW SQUARE

The yellow zone is a private area of the site with many environmentally friendly measures. Fishing and water activities are two of the key uses. This is where the wastewater treatment and rainwater gathering plants are located. At the center of the yellow square, aquaponics and rain gardens provide a sustainable approach to the property.

Another intriguing characteristic is the utilization of historic Karnataka and Kerala boats to convey a sense of cultural significance. There is a boating counter as well as cafe area. This is also where the solar-powered miniature train's service station is located. Most of the existing elements, such as the veli, significant shangu sculpture, floating restaurant & bridge, and miniature railway, may be seen here.

There is also a service road to load and unload market items, as well as a heavy vehicle service road to assist with the services given in these zones. All the basic services like water, electricity, waste are located here to have a good maintenance provided for the whole site. The visitors have the opportunity for fishing from the lagoon. The fish in the pond located at the Plaza here that makes a rare experience.

The service entry supplied here was the existing site's principal entrance. It has been renamed the service entrance, which is exclusively accessible to those who have a pass. To provide a broader approach to the proposed property, the primary entrance has been relocated to the beach road.

There is a leisure walkway here that leads to the lake, creating a link between the locals and the facility. Within the park, existing structures such as the veli shangu sculpture play an important role. This is the historic veli tourism village's landmark. It also adheres to India's traditional philosophy; thus it is not deleted. For tourists from the surrounding area, there is a park at the site's conclusion. The Miniature railway station, which is placed here, is the most prominent factor, as it allows visitors to take a train excursion throughout the complex while getting a quick glimpse of each space.

THE GOLDEN SHOWER TREE

It is the state flower of Kerala. The flowers are of ritual importance in the Vishu festival of Kerala as of ritual importance. It's a lovely flowering tree with odd, fascinating fruit and cultural significance. The aromatic flowers attract a huge number of pollinators (bees), as well as a wide variety of butterflies. The fruit is frequently utilized in Ayurvedic medicine and is thought to have the greatest therapeutic value. It is one among the most gorgeous trees when it is fully bloomed.

YELLOW BELL FLOWER

The long-stemmed yellow buttercups may be acting as miniature dens for the nearby tiny insects. The plant has a fast growth rate and a good flowering habit that occurs throughout the year. They were created by nature to be utilized as attractive plants. The stem thickens and the plant grows to heights, and they may often be coaxed to grow in desired shapes by garden constructions. It creates a fresh effect in the square.

NATURAL PAVING STONES

Natural stone is cost effective material. It is the most environmentally friendly building resource, and our stone products are recyclable. These stones are unbreakable and will never crack, flake, or chip. They can also tolerate extremes of heat and cold, never expanding or contracting. This choice is fantastic because it is so simple to maintain.

TRADITIONAL INDIAN LANTERNS
HURICANE LAMP
JALLI SCREEN
JALLI SCREEN
BAMBOO CHAIRS
BAMBOO BASKET
WASTE BIN
ROUND CORACLE BOAT
KERALA HOUSE BOAT

10.4 THE GREEN SQUARE

The Green Square is a park containing outdoor and indoor sports, a children's play area, swimming pools, outdoor learning and working space, and an open plaza with leveled seating. This area has a green color scheme. White and purple color accents, such as the Jacaranda tree, Coopany dwarf, water lily, and jasmine blossoms, are employed to make this area more vivid. Natural stone pavement surrounds the green plaza, displaying the country's historic features.

The stepped pool is the most distinctive feature, as it is inspired by the traditional landscape element of north India, the stepwell. A good tree barrier is also provided for the private pool. As you get closer to the cultural plaza, you'll notice a gradual change in color from purple to pink. This generates a calm and relaxing atmosphere throughout the site. Urban farming in the vicinity of the outdoor classrooms provides an opportunity to learn and practice sustainable farming techniques.

The Center Park features a leveled environment with a flowing water stream, making it a more appealing area to relax and visit. This is a public open space where people can play, learn, and relax. Near the outdoor classrooms, activities such as go-karting, indoor cricket, and bowling are available.

Workspace with views of the water Create a stress-free environment for the mind to work. Outdoor classrooms could be a valuable learning and working environment for university students from nearby universities. Natural stones are used extensively to demonstrate the notion. It can be found in dining areas, landscaping components, and walkways. It has a historic as well as a modern feel to it.

Organic shapes are used to create a modern look that mixes in with nature. This area serves as the site's ecological blanket. All the areas are linked to the natural world. In this space, the existing waterbody plays a vital function.

NATURAL STONE

JACARANDA TREE

It is a deciduous or semi-evergreen tree that grows quickly and has a remarkable attractive appearance. The tint of blue – blue-purple, lilac-purple, lavender blue, or mauve – affects their beautiful color. It is a major tourist attraction. It's a beautiful decorative tree. The sight of Jacaranda flowers adds to the beauty of the scene.

WATER LILY

It is a symbol of beauty, purity, and rebirth. These unusual water plants have the ability to bloom in a variety of colors at any time. Water lilies are best noticeable on still freshwater surfaces. Water lilies serve a crucial role in the aquatic ecosystem. They provide shade over the water, keeping it cooler and preventing algae from overgrowing. They also assist in protecting fish swimming beneath them from the sun's heat and predatory birds.

COOPANY DWARF

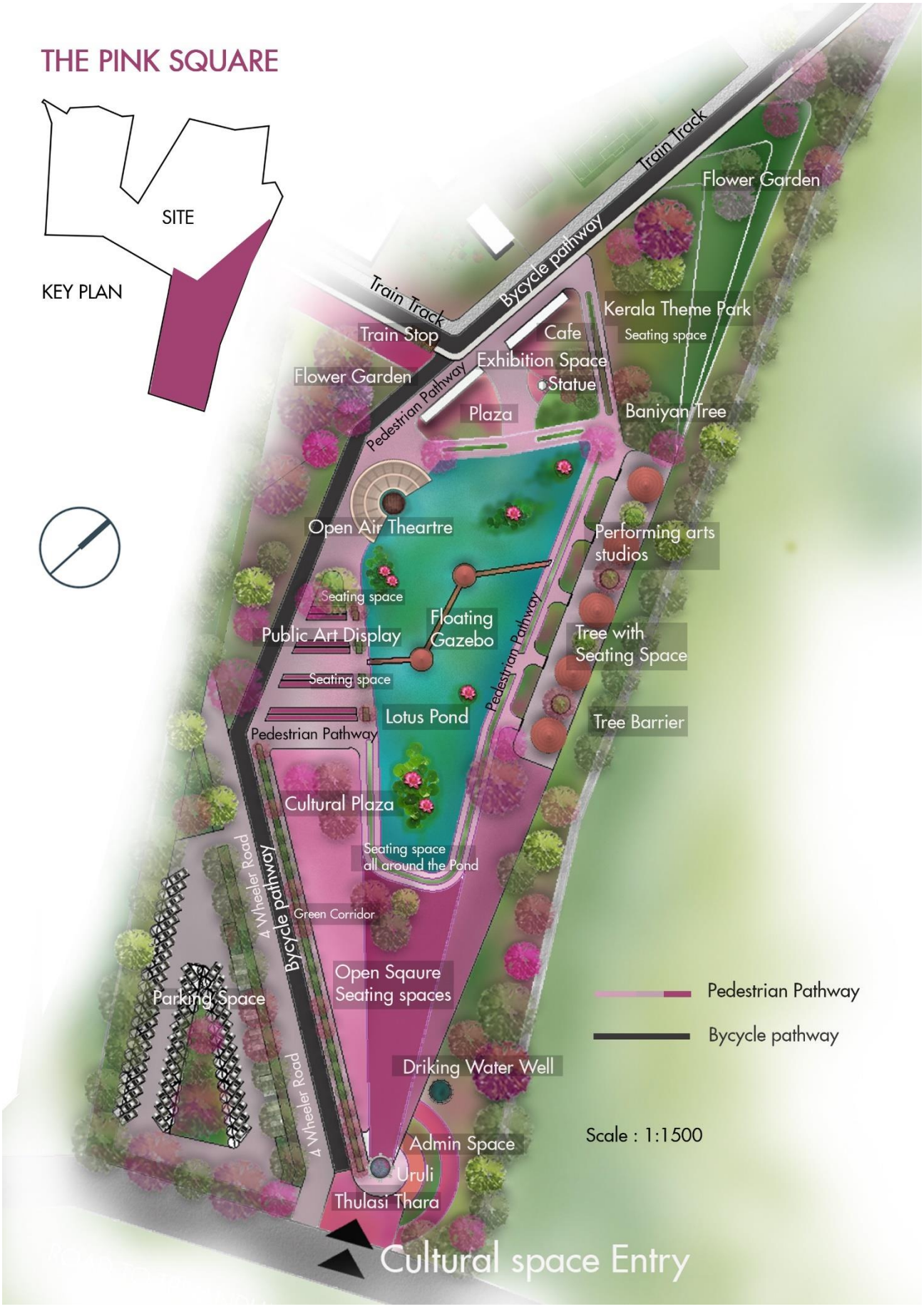
These flowers offer aesthetic landscape elements. They're used as a hedge or accent plant, and they're grown along fence lines, on walls, in containers and/or hanging baskets. The landscapes that give the site its identity is given form and structure by these permanent components. They are landscape elements in the form of canopies. These plants are easy to maintain and can resist all of the city's climatic conditions.

JASMINE FLOWER

It is used as wedding venues in Kerala ,favorite flower is not only fragrant and lovely, but also profitable. Kerala's climate is ideal for jasmine growing. The most appealing feature of jasmine is that it blooms all year. These flowers are known for their captivating fragrance and scent, as well as their ability to induce calm. With its wonderful smell, this plant can help you relax and de-stress. They are one of the most effective natural air filters available.

NATURAL STONE
SEATING SPACE
LEVELLED LANDSCAPE
STONE SEATING
LANDSCAPE ELEMENTS
WATER LILY
WATER STREAM
SWIMMING POOL CONCEPT
TRADITIONAL STEP WELL

THE PINK SQUARE



10.5 THE PINK SQUARE

It is a cultural center that houses studios where various Indian art forms are performed. It's a conventional semipublic venue that's been constructed to provide performers privacy. The lotus flower-shaped performing venue not only has the most gorgeous feature, but it also has mythological importance for Hindu gods. The legends of Hindu deities are represented in all classical dance styles.

The amphitheater's stage floats on the water, allowing visitors to experience nature and aquatic bodies. All the elements placed here follow the pink color theme. The entire zone is built to experience ancient art forms through nature and architecture, as is customary. With a view of the pond, the public art display and exhibition spaces are situated here, creating a lovely environment.

To avoid interaction, the pathway between the display space has a longer distance. Seating is available in the middle of each lane. People can sit and take in the art exhibits. The displays are protected by a larger front yard. There is a link between the performance space and the public art installation. A Pavilion sits in the center, offering views of the lotus pond.

To reflect the motif of the square, oleander, plumeria, and Indian Pink sandstones are employed. A floral garden is also available near the plaza and amphitheater. This place connects the audience, both local and international, to experience the traditional art forms of India.

It has a good connection to the wider paths. It has a tree canopy in between the studios so that people can keep their distance and interact with nature. Around the lotus pond, there are seating areas to enjoy the beauty of the waterbody. The Kerala Theme Park is located near the performing studios and features a variety of outdoor art forms from Kerala, including kalari payittu.

Classical Indian dances such as kathakali, bharathnatyam, mohiniyattam, satthriya, and kathak are taught here. The dancing forms can be experienced by the public in order to learn more about the culture. Outside the studio, there is a banyan tree that serves as an outdoor learning place under the tree. Thulasi thara is used as a welcoming feature, and traditional diya is employed for lighting.

This location features a lovely ambience that attracts birds, as well as capabilities for growing small fish in a lotus pond. This structure also includes a traditional bird feeding aspect

LOTUS

The sacred flower and National flower of India, the lotus, has a special place in ancient Indian art and mythology. It represents divinity, fertility, wealth, and wisdom. It can regerminate for thousands of years since it is entrenched in the mud. It can remove harmful chemicals as well as heavy metals from water. These flowers are effective in the treatment of wastewater.

OLEANDER

OLEANDER: It's often utilized as a decorative plant in gardens, parks, and along roadsides. It's an excellent choice for a screening plant. It may grow in a variety of soil types

PLUMERIA

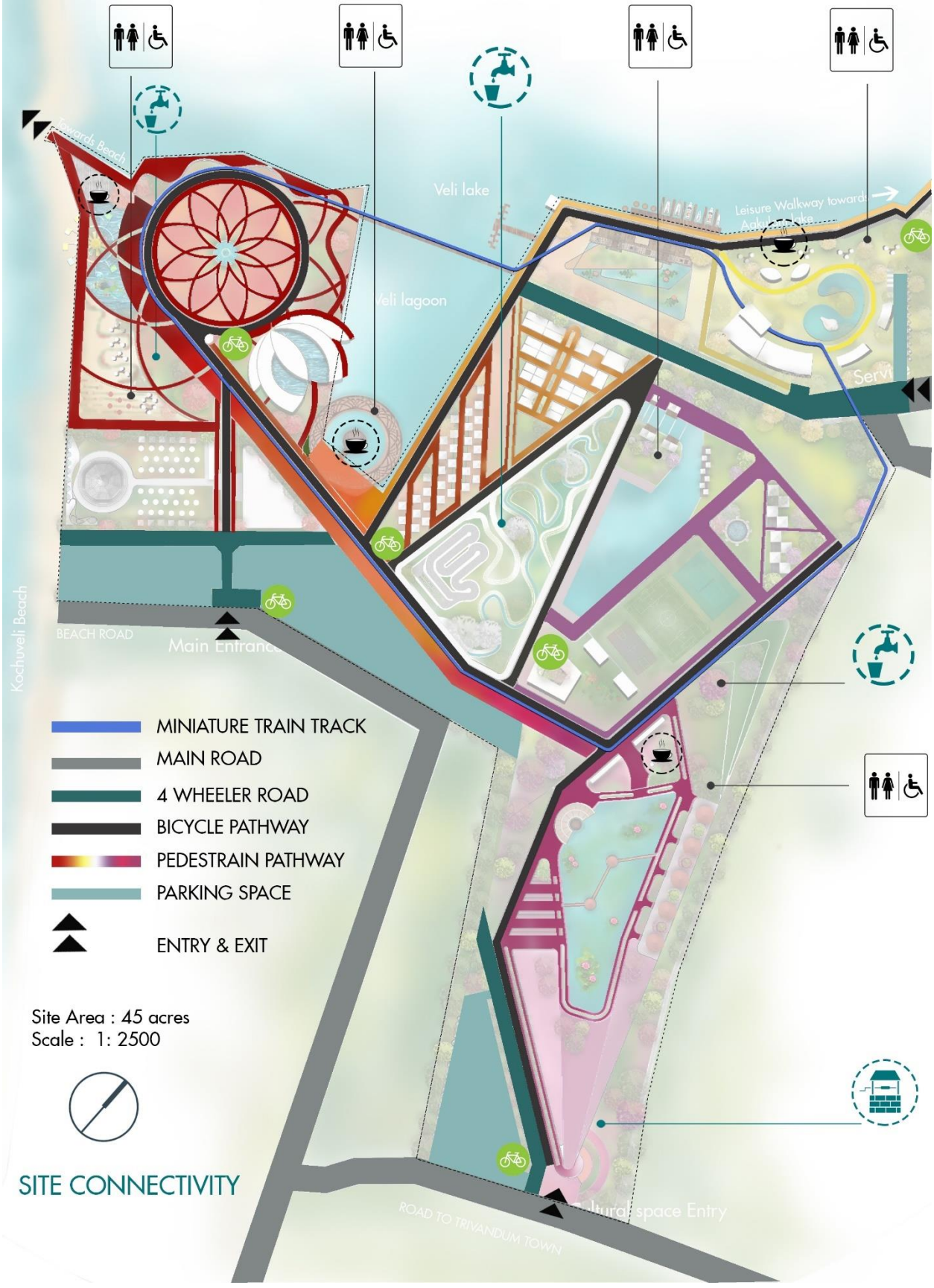
PLUMERIA FLOWERS: These trees, with their lovely colors and scents, are a symbol of natural beauty. Temple tree is another name for it. Plumeria flowers have a wide range of scents. It's strewn about in pools as a decorative element. It is perfect for water gardens and requires little to no care.

SAND STONE

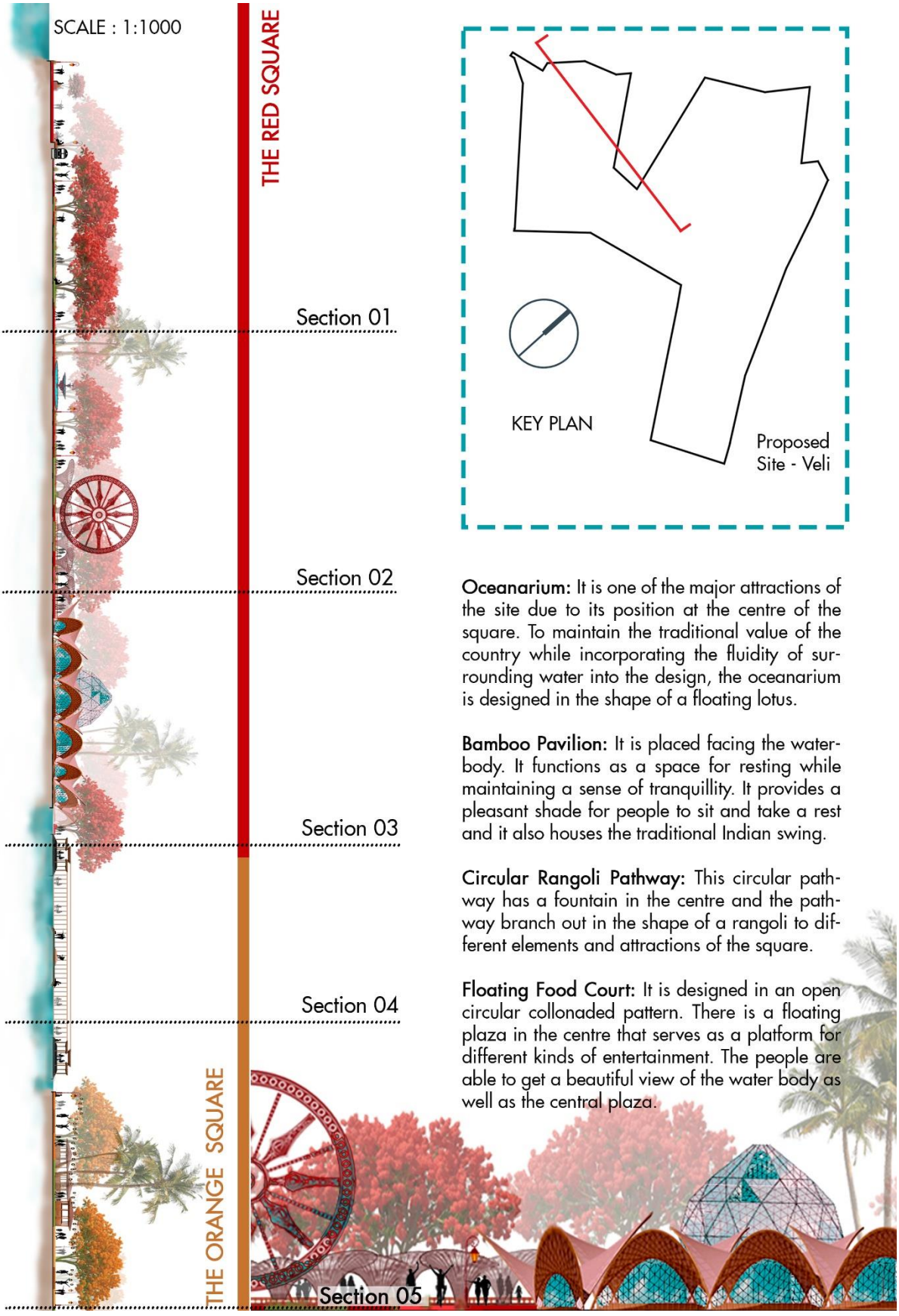
SANDSTONE: It's simple to cut into desired shapes to match the aesthetics of an indoor or outdoor venue. For the construction and manufacture of decorative goods and garden accessories, Indian pink sandstone is a preferred choice. Sandstone is one of the most adaptable natural stones, as it may be utilized for a variety of architectural and design reasons.

CHABUTARO
BIRD FEEDER
RANGOLI
ShanthiSridharan
KOLAM
MANDAPA
LANDSCAPE ELEMENTS
THULASI THARA
DIYA LAMP
PAVILLION
LOTUS POND
STAIRS
URULI-LANDSCAPE ELEMENT
red hibiscus flowers floating in an urli bowl

10.6 SITE ACCESSIBILITY



11 SITE SECTION AND DETAIL



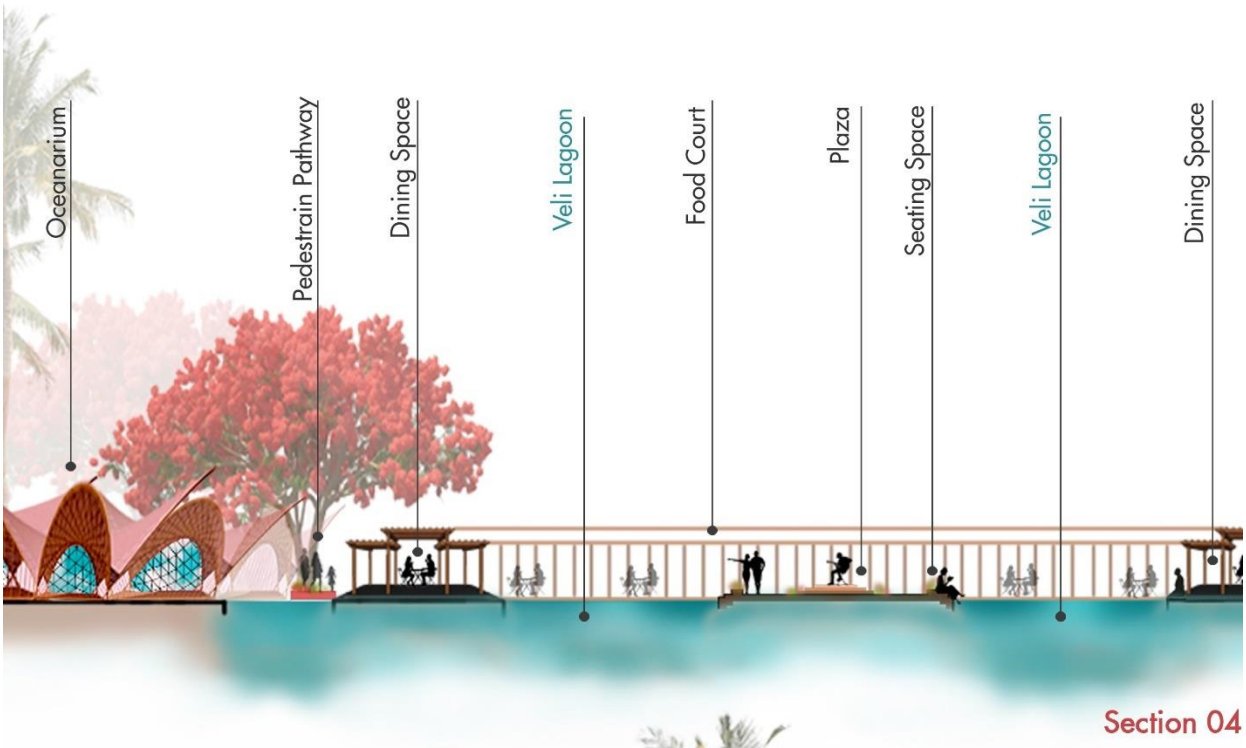
Oceanarium: It is one of the major attractions of the site due to its position at the centre of the square. To maintain the traditional value of the country while incorporating the fluidity of surrounding water into the design, the oceanarium is designed in the shape of a floating lotus.

Bamboo Pavilion: It is placed facing the waterbody. It functions as a space for resting while maintaining a sense of tranquillity. It provides a pleasant shade for people to sit and take a rest and it also houses the traditional Indian swing.

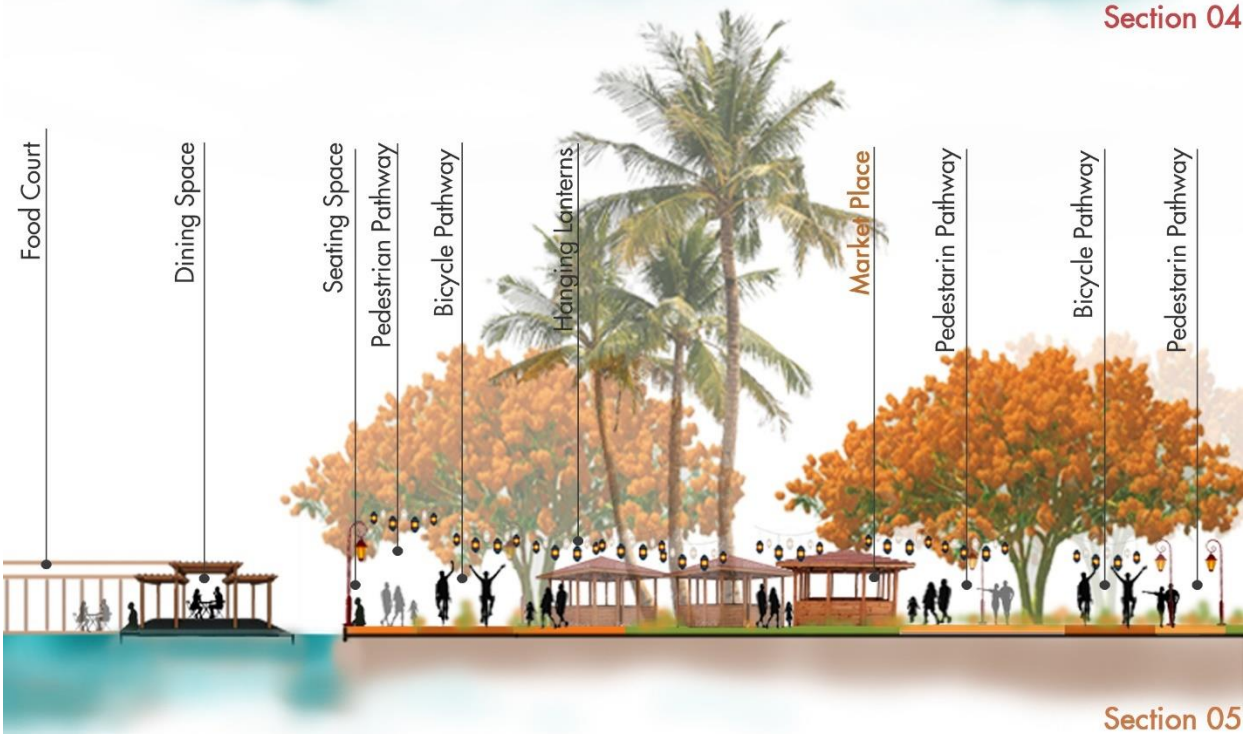
Circular Rangoli Pathway: This circular pathway has a fountain in the centre and the pathway branch out in the shape of a rangoli to different elements and attractions of the square.

Floating Food Court: It is designed in an open circular collonaded pattern. There is a floating plaza in the centre that serves as a platform for different kinds of entertainment. The people are able to get a beautiful view of the water body as well as the central plaza.

Veli Lake
Seating Space
Walkway
Train Track
Bicycle Path
Pedestrain Pathway
Park
The Main Sqaure
Section 01
The Main Sqaure
Water Fountain
Pedestrain Pathway
Bamboo Pavillion
Giant Wheel
Floating Bridge
Bicycle Path
Section 02
Bamboo Pavillion
Bicycle Path
Pedestrain Pathway
Oceanariurm
Veli Lagoon
Food Court
Section 03
SCALE : 1:250

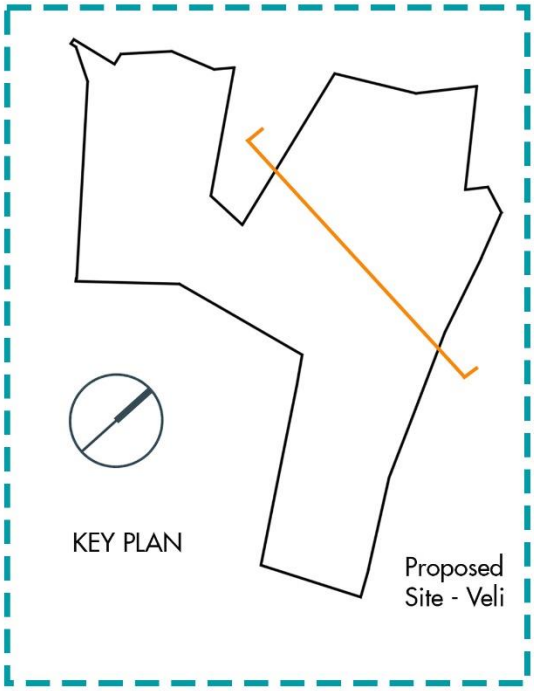


Section 04



Section 05

SCALE : 1:250



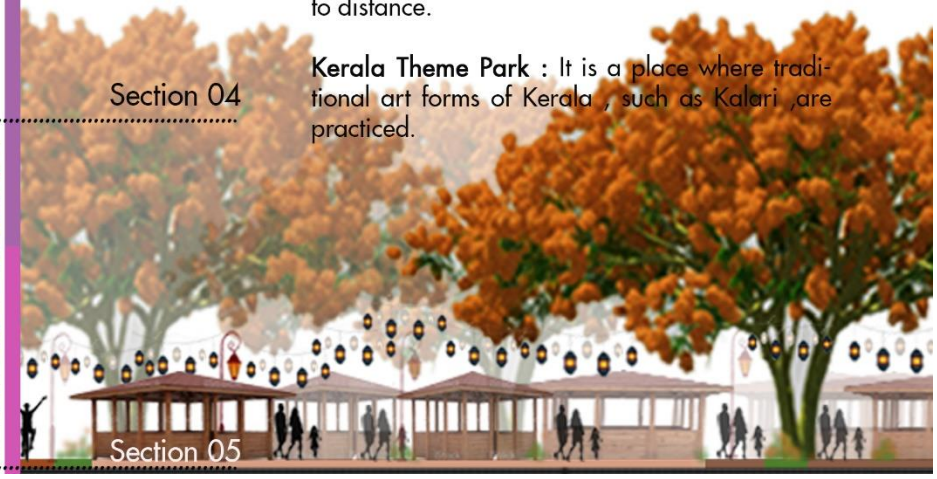
Market Place : It houses various shops placed alternatively .All the shopping streets lead to the waterbody .Traditional lanterns in varying coloured lights are used to light up the streets to form a pleasant view.

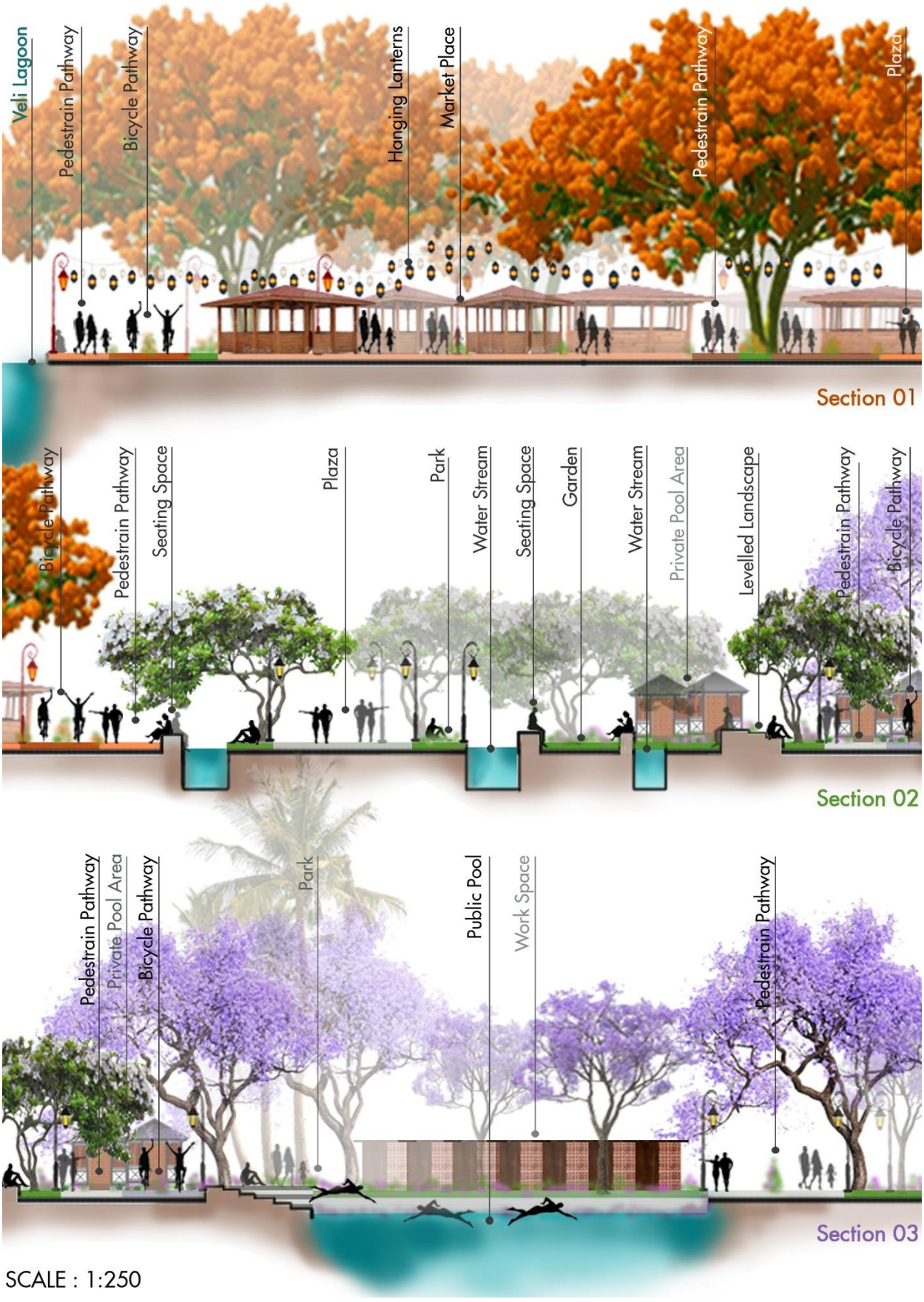
Water stream : There is an artificially created water stream running through the centre of the square with seating spaces provided along the length of it.

Private and Public Pool : The public pool is designed in the pattern of the traditional Indian stepped well .To maintain privacy for the private pool trees are placed as barriers around the pool.

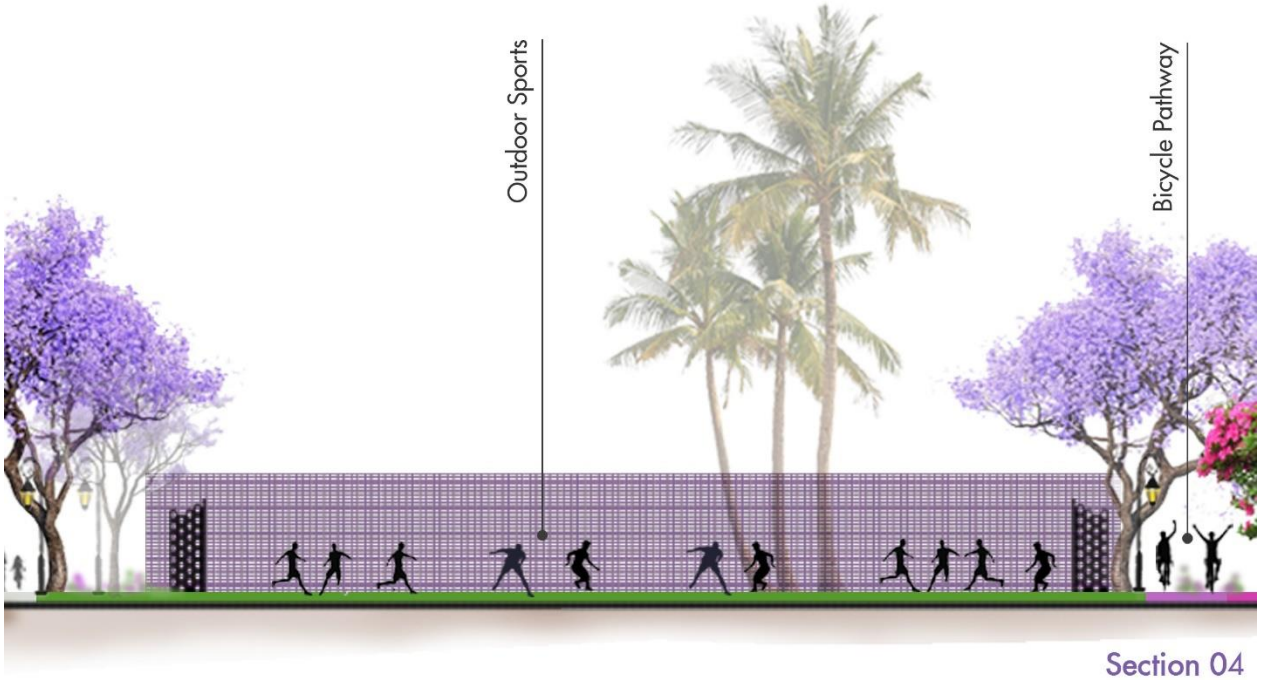
Workspace : It is placed facing the pond.They are seperate cabin placed alternatively maintain to distance.

Kerala Theme Park : It is a place where traditional art forms of Kerala , such as Kalari ,are practiced.

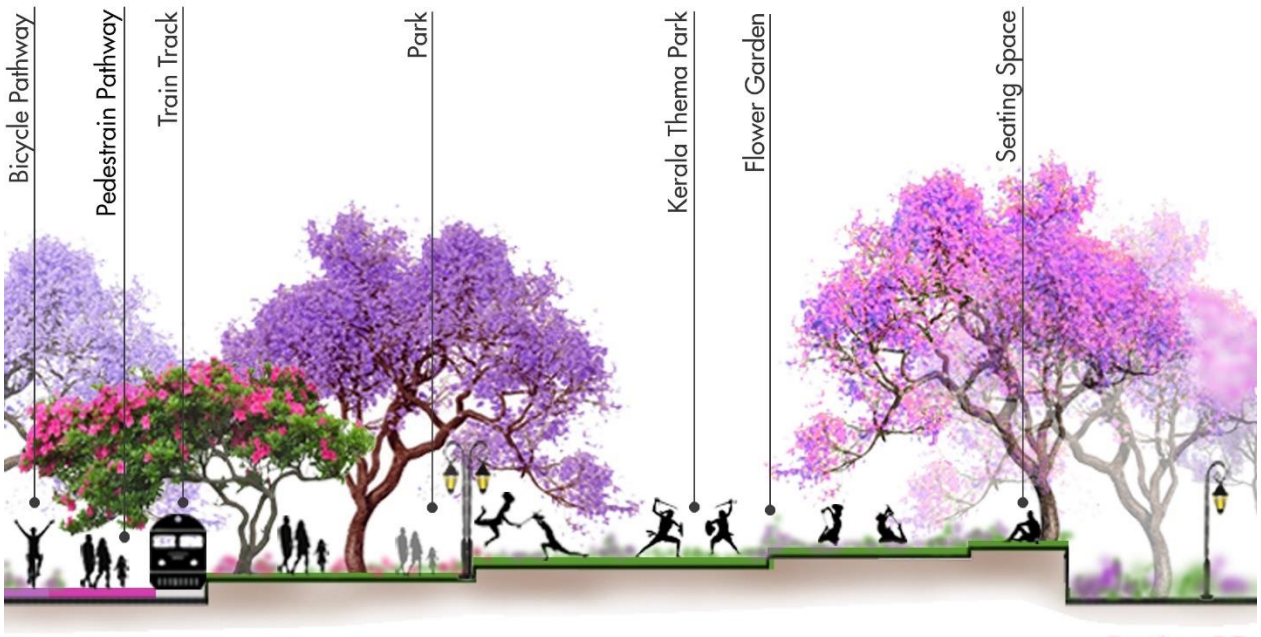



Veli Lagoon
Pedestrain Pathway
Bicycle Pathway
Hanging Lanterns
Market Place
Pedestrain Pathway
Plaza
Section 01
Bicycle Pathway
Pedestrain Pathway
Seating Space
Plaza
Park
Water Stream
Seating Space
Garden
Water Stream
Private Pool Area
Levelled Landscape
Pedestrain Pathway
Bicycle Pathway
Section 02
Pedestrain Pathway
Private Pool Area
Bicycle Pathway
Park
Public Pool
Work Space
Pedestrain Pathway
Section 03

SCALE : 1:250



Section 04



Section 05

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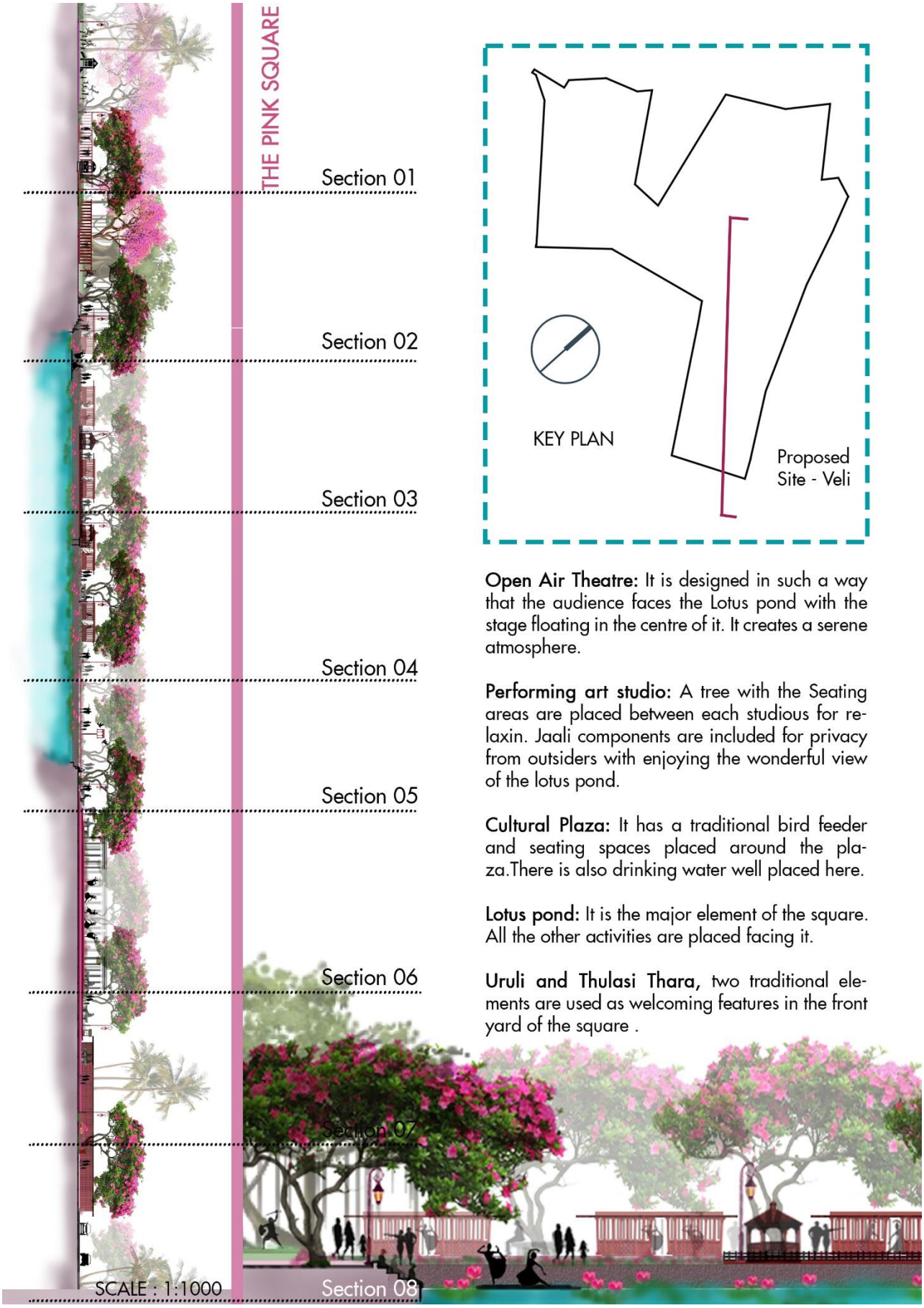


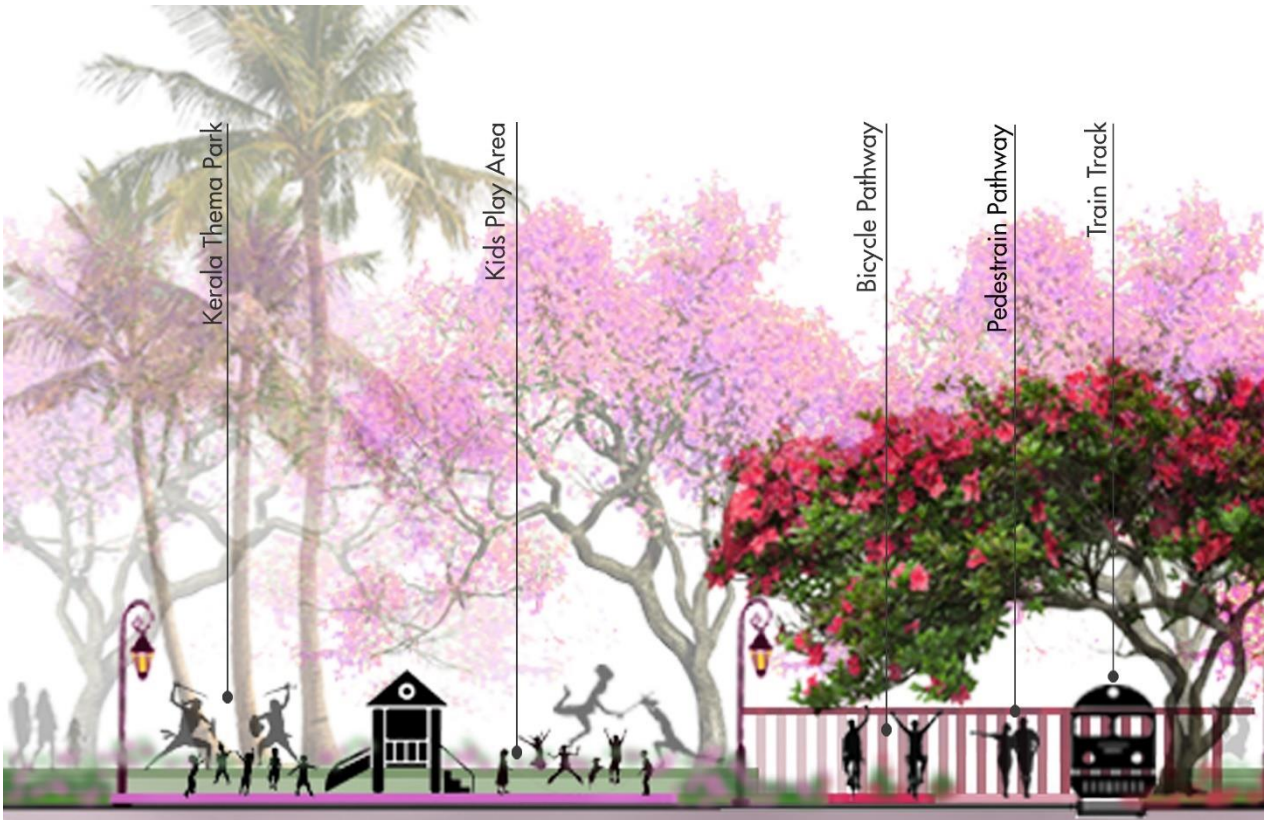
Open Air Theatre: It is designed in such a way that the audience faces the Lotus pond with the stage floating in the centre of it. It creates a serene atmosphere.

Performing art studio: A tree with the Seating areas are placed between each studious for relaxin. Jaali components are included for privacy from outsiders with enjoying the wonderful view of the lotus pond.

Cultural Plaza: It has a traditional bird feeder and seating spaces placed around the plaza.There is also drinking water well placed here.

Lotus pond: It is the major element of the square. All the other activities are placed facing it.

Uruli and Thulasi Thara, two traditional elements are used as welcoming features in the front yard of the square .



Section 01

Section 02

SCALE : 1:250

Section 03

Section 04

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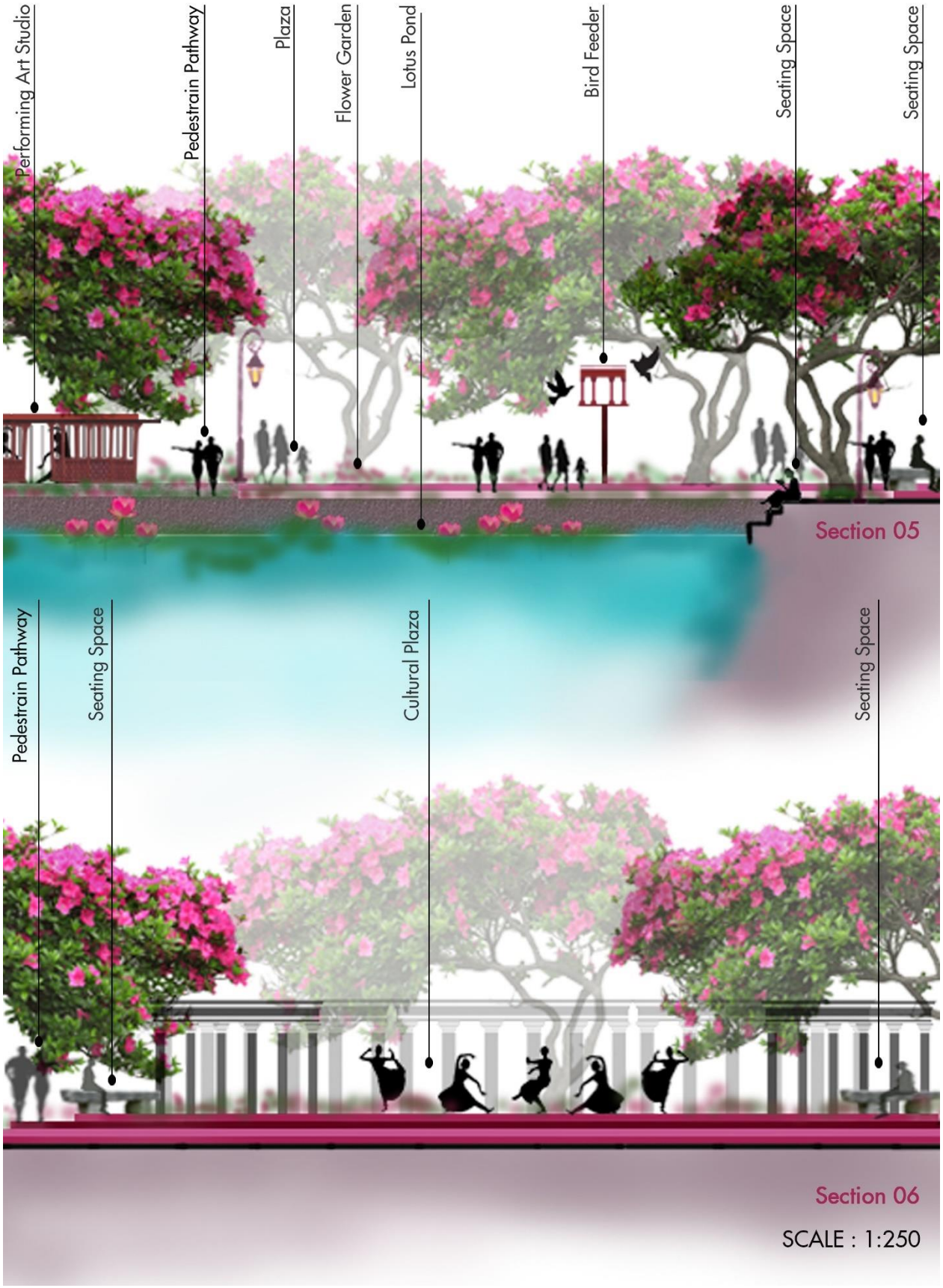
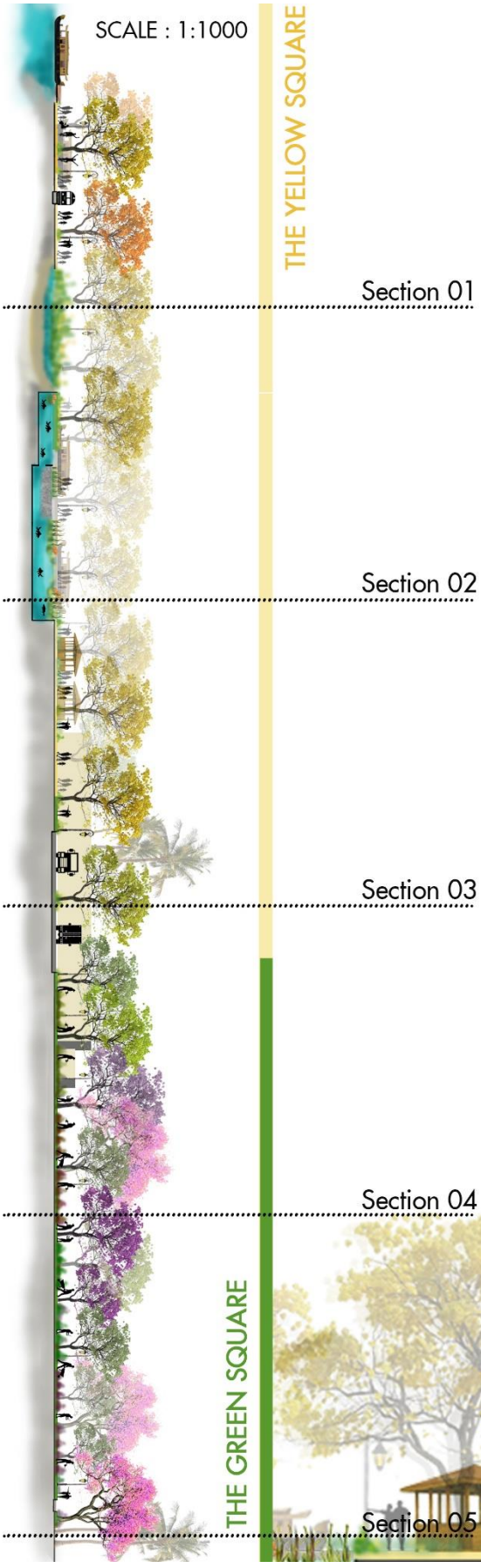
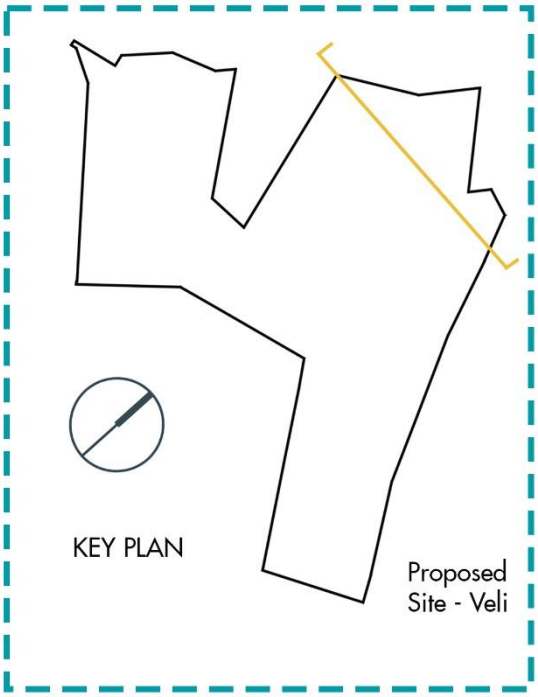

Performing Art Studio
Pedestrain Pathway
Plaza
Flower Garden
Lotus Pond
Bird Feeder
Seating Space
Seating Space
Section 05
Pedestrain Pathway
Seating Space
Cultural Plaza
Seating Space
Section 06
SCALE : 1:250

Section 07

Section 08

SCALE : 1:250



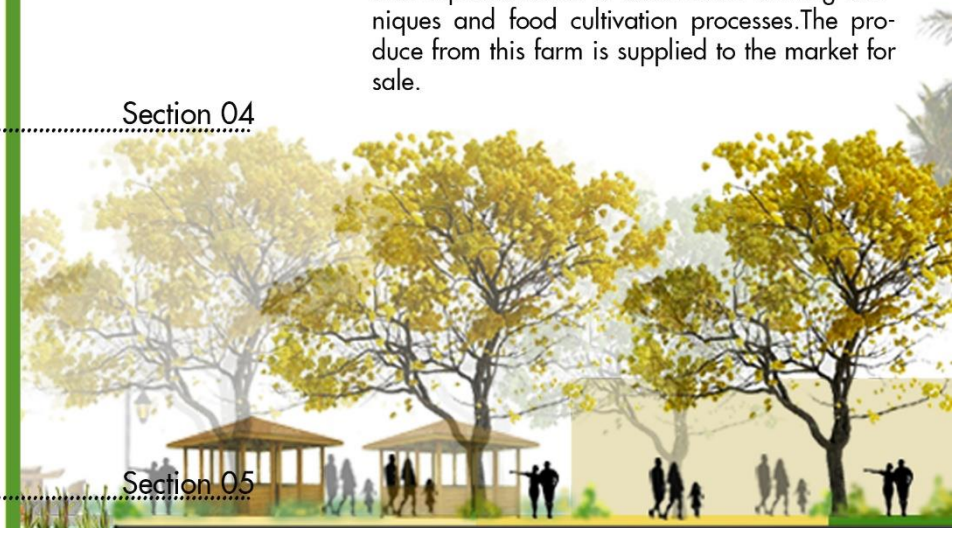


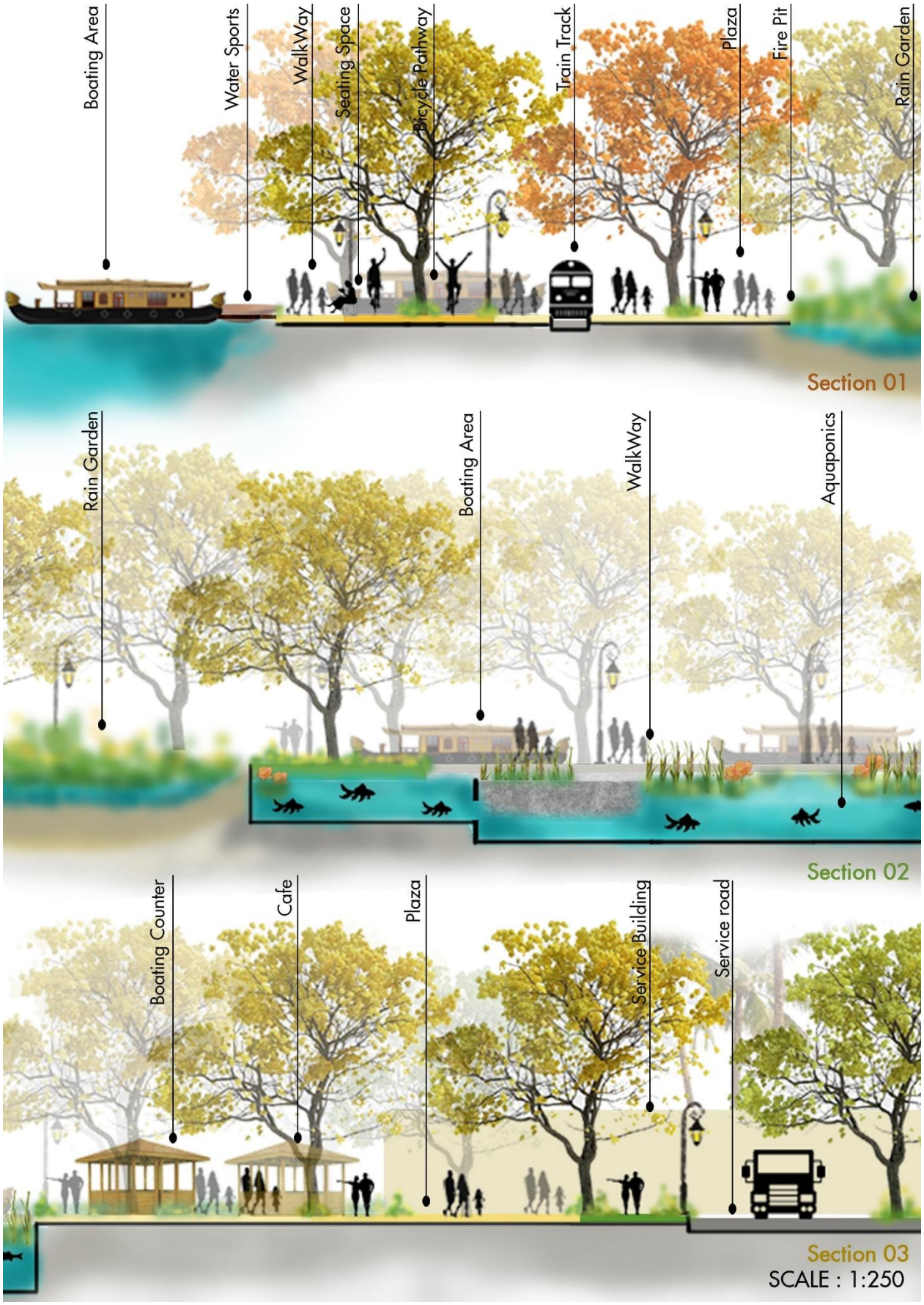
Boating and Water Sports: It is the major activity of the square. Traditional boats are used here to create a sense of culture.

Sustainable Approach: Rain Garden and Aquaponics are used here to bring about sustainable elements to the site.

Service Building: It houses the area for maintenance and servicing of all the essential necessity such as waste, water and electricity.It also houses the area for servicing boats and the miniature train.The service road is provided here.

Urban Farming: It acts as the source for learning and implementation of sustainable farming techniques and food cultivation processes.The produce from this farm is supplied to the market for sale.



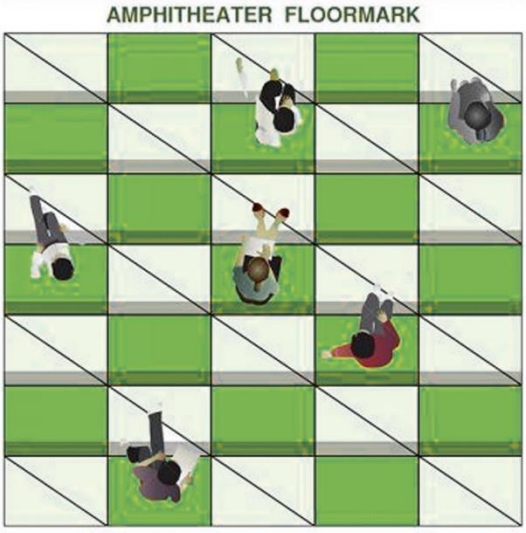

Boating Area
Water Sports
WalkWay
Seating Space
Bicycle Pathway
Train Track
Plaza
Fire Pit
Rain Garden
Section 01
Rain Garden
Boating Area
WalkWay
Aquaponics
Section 02
Boating Counter
Cafe
Plaza
Service Building
Service road
Section 03
SCALE : 1:250

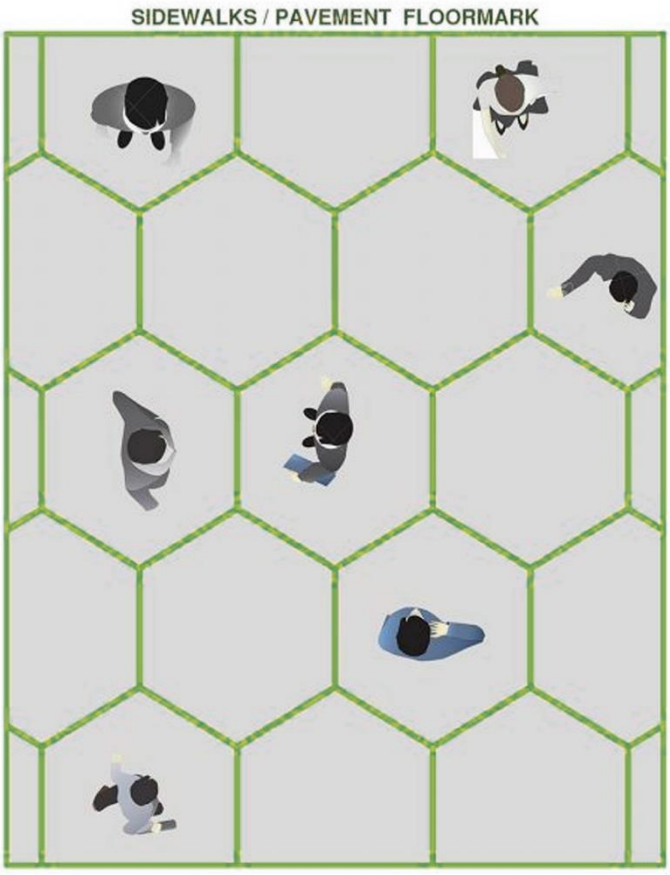
Section 04

Section 05

SCALE : 1:250

12 PANDEMIC DESIGN SOLUTIONS

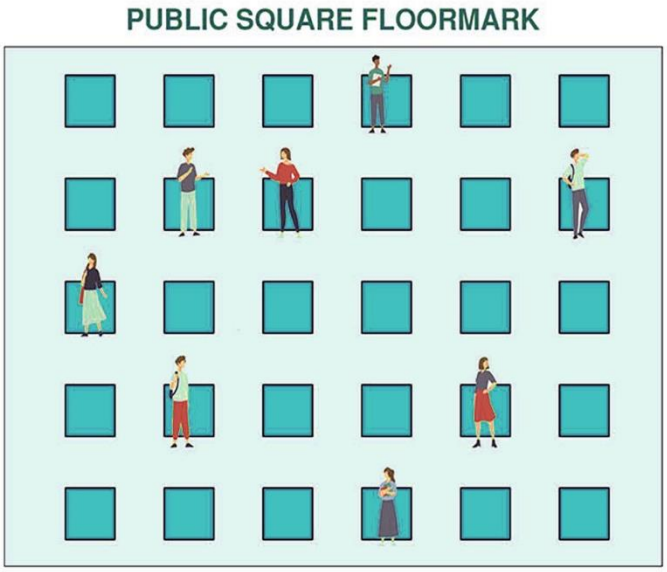




FLOOR MARKS

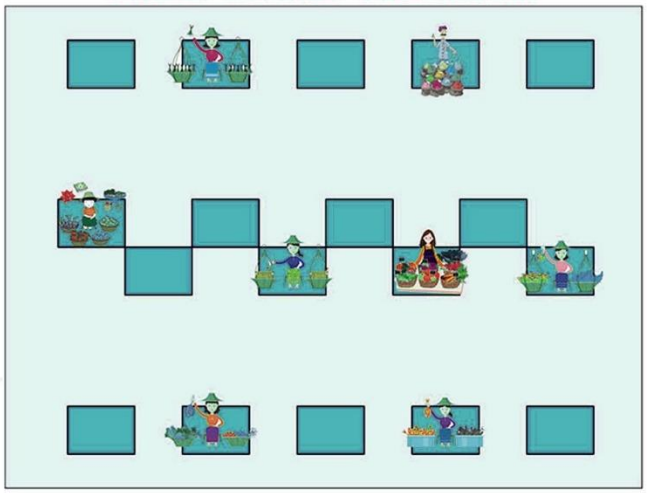
Several variables, including crowded conditions, inadequate ventilation, and close contact activities, may have led to epidemics in public places. A well-planned natural ventilation is beneficial in making the area favourable for preventing the transmission of air-bone diseases. Reduce the chances of transmission by enhancing natural ventilation and controlling maximum occupancy with safe distance floor indicators.

Floor marks such as parkland, walkways, amphitheatre spaces, Squares, Plaza, queuing area, Cafe seating area, outdoor classrooms, Near the ticket and boating counters, Exhibition spaces, Public art display area, Train station area, Wedding lawn, outdoor seating spaces, Market place, and so on are used in the proposed design. This helps to reduce close contact while yet enjoying the public space.

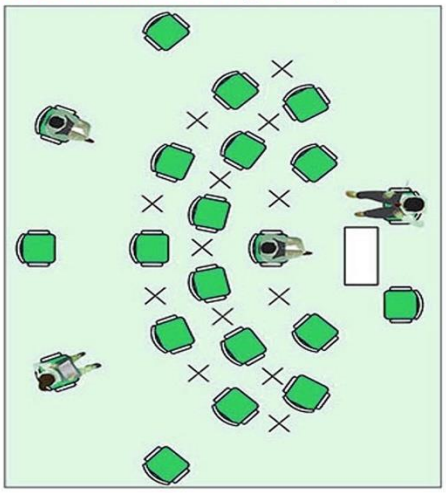


Source: Kabir, S. (2021, March 26). The fog of pandemic and design strategies for public spaces. Context BD. Retrieved from https://contextbd.com/the-fog-of-pandemic-and-design-strategies-for-public-spaces/

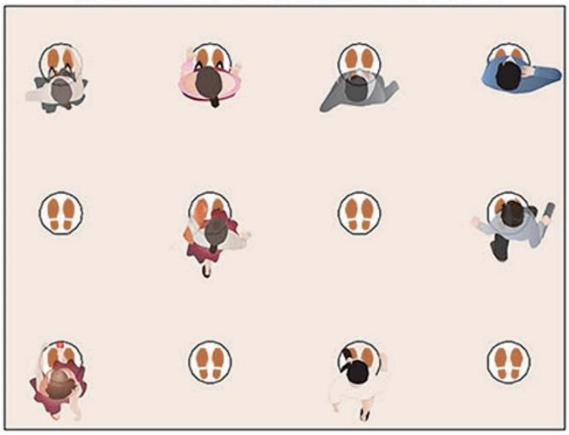
STREET MARKET FLOORMARK



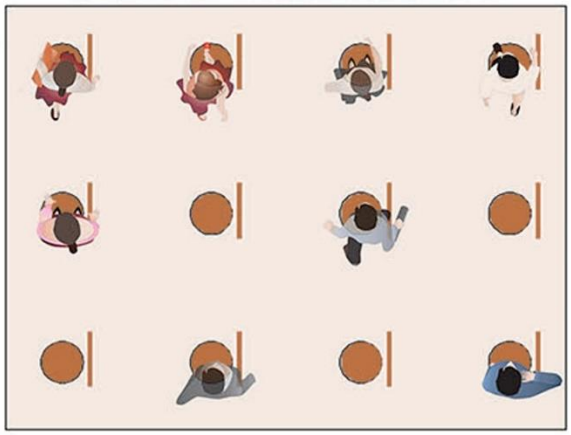
CLASSROOM ARRANGEMENT



STATION FLOORMARK 1



STATION FLOORMARK 2

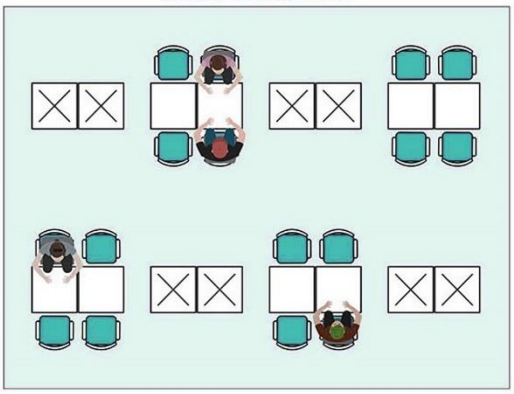


Designed with different places and pleasant settings in both indoor and outdoor settings, while considering health in design, without compromising access and functionalities. With the goal of maximizing the external outdoor events.Multiple entrances and exits, as well as one-way motions, would keep patrons in isolated places apart and allow for smoother movement.The provision of space in front of the amenities gives spectators additional time to enter and depart the venues. Instead of a single open area in the centre, scattered social/gathering spaces of varying proportions are constructed here.Stairs and ramps with a length of 3 meters or more are available in the corridor.The assembly space and audience seating shall adhere to the double bubble of social distancing norms.The audience size may be regulated using the double bubbles, and alternate zones of sittings/visits can be set.The aisle to the middle area of the sitting distances for sitting configurations are 3 meters and 2 meters, respectively.Removable sitting position/layout to keep the double bubble as needed.A significant portion of the patrons wish to have a virtual platform, therefore the design is broadened and places related with virtual functions are explored.Sensor-based/operated fixtures (lighting in the assembly area, exhibition area, and theater area) are given to eliminate touchpoints.

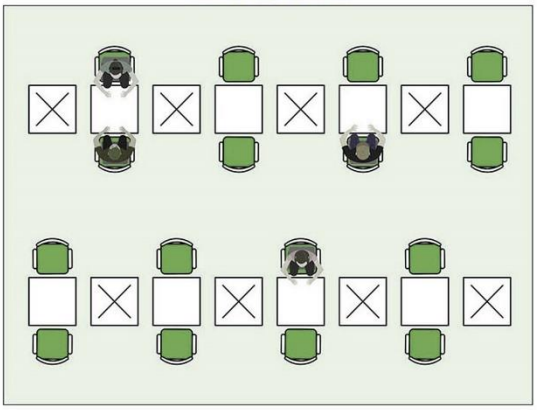
DOUBLE BUBBES

Because large gathering locations pose extra problems in terms of viral transmission, the notion of double bubbling is essentially to relax social distancing measures in order to guarantee patrons maintain physical distance during live performances. The architecture of performance theatre ensures that audience numbers and social distances are maintained. Seating arrangements are determined by the sort of show and the quantity of patrons/audiences. A 2 m social separation regulation separates the circulation aisles. Furthermore, the space between the audience and the performance is doubled to ensure safety.

CAFE SEATING 2



CAFE SEATING 1

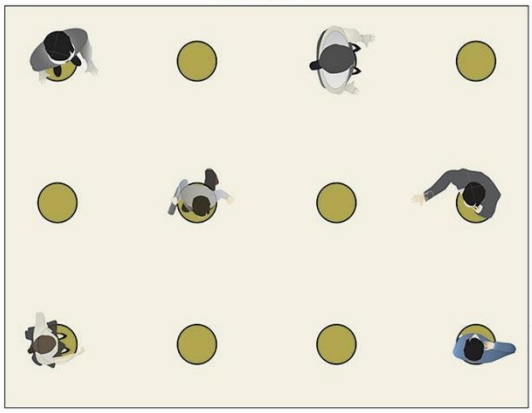


Other Facilities :

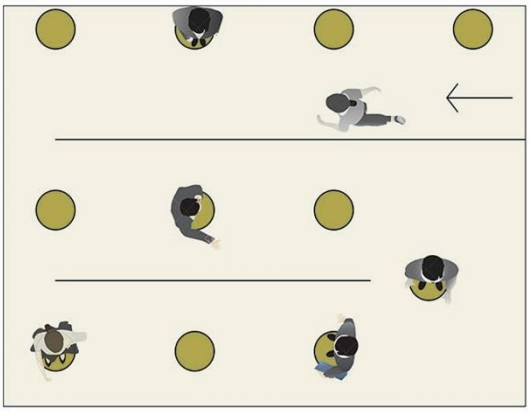
Public space amenities are given here to decrease touch-points and hard-to-clean surfaces.Control methods are implemented by placing touchless washing and/or sanitizing stations in prominent public places (entrance -exit points, ticket kiosks, bathroom, or any high traffic areas). Additional space, such as isolation rooms, health monitoring and check-in areas, and supply storage (hand sanitizers, gloves), are being considered in the design.

SOCIAL DISTANCE QUEING MARKER

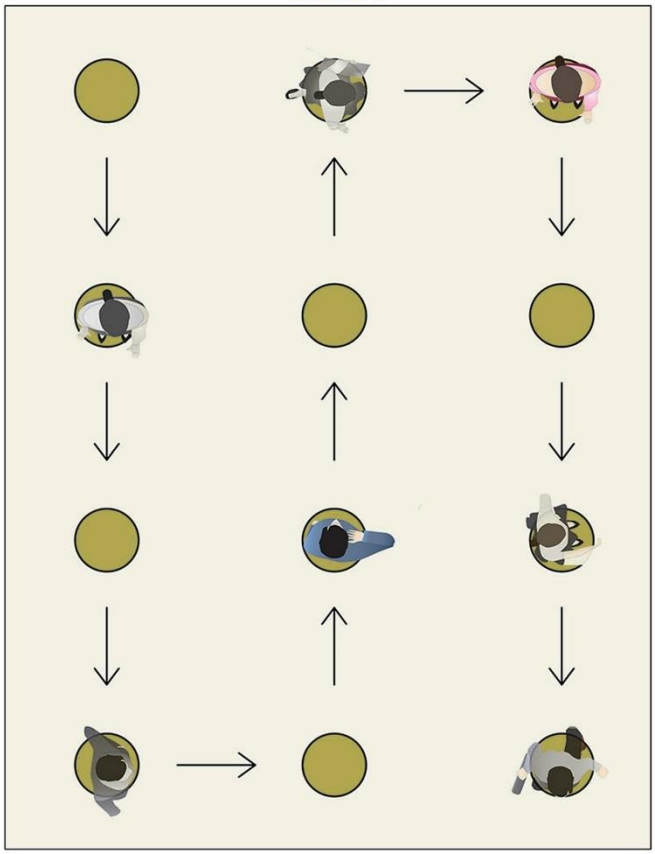
QUEUE 1



QUEUE 2



QUEUE 3



13 SITE VIEWS

MARKET SPACE

CULTURAL SPACE

14 CHAPTER 11 – CONCLUSION

Basically, "**The CRITERIA AND PROJECT FOR THE URBAN OPEN PUBLIC SPACE**" is concise research on the benefits and relevance of public spaces, and how they help the city space be alive during this pandemic. The elements with the guidelines and features of effective public places are addressed here to produce a quality site where people can meet to rejoice, social and economic transactions take place, friends' cross paths, and cultures collide, and it is visually appealing. The key characteristics of great places were to be explored using a graphically displayed Place diagram to gain a clear picture of what a successful public space looks like. It is necessary to create a safe and secure urban open public space where people may engage in multifunctional activities, meet with residents from other neighbourhoods, and form social bonds that would benefit their mental and physical health. To develop a relationship with the environment that benefits future generations, sustainable practices are addressed. The main focus is on creating a healthy and climate-friendly environment that also allows for participation and education, as well as educational activities concentrating on sustainability for people of all ages.

Mental health, more than anything else, I feel, is the most vital aspect of any human's life. We all know how difficult this pandemic situation is for everyone. To overcome feelings of loneliness and boredom, it is necessary to have a well-defined public space, which plays a particularly essential function. The focus of this study, however, was on how well the above-mentioned criteria performed under the current pandemic circumstances, which could be incredibly challenging. The design criteria here must address all the challenges that people confront during a pandemic. As a result, it must create a secure and well-defined public space where people can connect by recognizing all the functional, sustainable, pandemic, and aesthetical components.

To find out the problems with Indian public spaces, case studies of outstanding public places in the west were carried out. The location should not be out of place, and the architecture should be in keeping with the surroundings. The conclusion drawn from major case studies, two of which are based on the current pandemic, is that the functional, sustainable, and physical characteristics of public settings have the prospect to influence the social life and vitality of public space, in addition to aesthetic quality while promoting contact, people's climatic comfort and security,

The proposed site in Kerala India has a huge landscape and cultural value. The inference inspired from the case studies such as multicultural theme, blending with the nature, connections using varied zones, colours, and lines, environment, sustainable & aesthetical value, ecological blanket with the natural landscape, Waterfront park, natural lighting, rising cultural area, organic shape, public art display, flower garden, breathtaking 360-degree views, surprising elements, courtyards etc. are used on the proposed design to make the spice alive and successful public space.

The concept of colours and nature have a crucial role in the design to create a connection throughout the site which could improve the pedestrian activities rather than using vehicular transportation. The proposed design elements encourage the cultural and heritage values of India.

The site is an international platform that could help boost tourism by allowing visitors to experience culture and art through the architecture. There is no other platform in India where people can come together to explore nature, art, and culture, therefore this might be a big landmark for the country.

The environment is being preserved thanks to eco-friendly design and sustainable practices. The Waterfront Park is an aesthetically beautiful location that stimulates activities near water bodies while also providing habitat for plants and fauna. As a result, the water body is kept and maintained.

The multifunctional, environmental and landscaped park system are designed for individuals of all ages to relax, walk, and play. The beach and lagoon add a significant landscape element to the design, which could help local businesses. The property provides 360-degree views and natural daylight, both of which contribute to a reduction in crime. All the spaces that are constructed for the present pandemic condition have the prospect to produce a healthy environment.

As a result, the proposed waterfront cultural park is an international landmark that India currently lacks.

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