

Joint Design Studio – 6<sup>th</sup> Sem

# **REJUVENATION OF RUKMINI TEMPLE AT SAKKARDHARA AND PRECINCT**

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# CONTENTS

- Faculty Profile
- Faculty's Desk
- What Is Urban Design? Student's Understanding
- Nagpur: City Introduction
- Our Site
- Its History
- Climate Statistics
- Kevin Lynch
- **Group A: PATHS**
- **Group B: EDGES**
- **Group C: DISTRICTS**
- **Group D: NODES**
- **Group E: LANDMARKS**
- **Group F: BUILD FORMS & FESTIVITIES**
- Student's View
- Architectural Interventions



# FACULTY PROFILE

## Ar. Sanjay Kopulwar

- Professor and Practicing Architect. He has graduated from VRCE. He has acquired his post graduation in Ur.an Planning from VRCE

## Ar. Vandana Khante

- Associate Professor. She has graduated from VRCE. She has acquired her post graduation in Ur.an Planning from VNIT.

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## Ar. Rukhsana Badar

- Assistant Professor. She has graduated from VRCE. She is pursuing her post graduation from MIET Gondia.

# FACULTY'S DESK

## INTRODUCTION

- Settlements are an embodiment of the socio-cultural , economical and political framework of their times. Although the determinants change only over time and sometimes even resist it and it is here that the planner, designer and architect can play vital role.

## OBJECTIVE

- The driving forces of the city allow it to grow inevitably and change. Here the challenge is to identify those drivers of change(political, economic, environmental, societal pressures) which should be guided to attain a coherent built environment for larger public good.
- The design to outline a Macro approach, long term framework to rejuvenate the precinct and simultaneously an immediately implementable project. Any meaningful intervention will have to have a long-term and an immediate perspective working in synergy with each other.
- Work with the current physical and social characteristics of the area to improve the physical character to bring back the erstwhile glory of the historic precinct. The people inhabiting the precinct, addressing issues such as encroachments by slum dwellers, mismanagement of lake adjoining the historic sites, etc.
- Encourage new interventions into the fabric, while respecting the rich heritage
- Discourage rapid urbanization of temple to retain its charm and character t

## DESIGN BRIEF

# FACULTY'S DESK

Nagpur, the state of Central India and the political capital, ruled by Bhosala was taken up for the Urban Design Studio. The studio focused on studying the untapped potential of historical temple at Sakkardhara in old commercial core of Nagpur and the area in its precinct covering a radius of around 50m. The study was carried out in the following stages

### 1. PHYSICAL MAPPING AND ON SITE SURVEYS

Students went to Sakkardhara for a period of five days where they had a first hand experience of various factors that play a role in shaping of a city structure.

### 2. SITE DOCUMENTATION AND ANALYSIS

The data was collected under six heads as

Historic structure (Grain Density + Mix)

Road Networks (Connectivity, hierarchy and traffic density)

Activity Patterns through different times in a day and through different days in a year,

Open Space Structure at all levels,

Edge Definitions

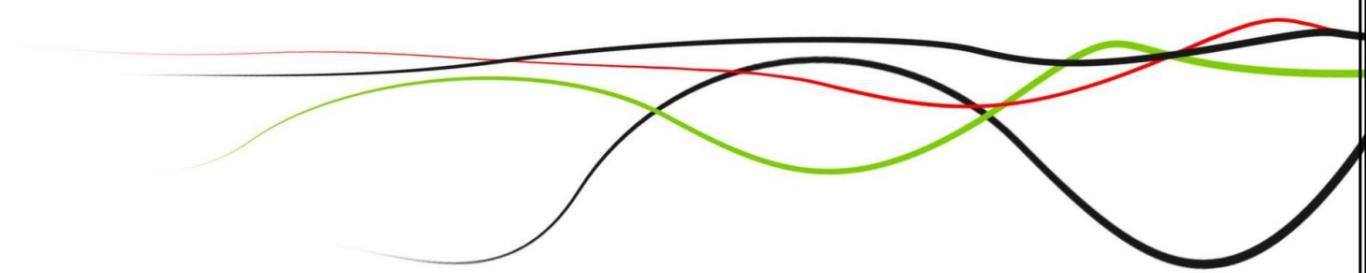
Building Typologies

### 3. EVOLVING A DESIGN PROGRAM FOR ARCHITECTURAL INTERVENTION ON THE BASIS OF INFERENCES GENERATED.

On the basis of the analysis and inferences and the needs of the society students generated their individual design programs on a site in the precinct.

SAKKARDARA





- **CRITERIA FOR EVALUATING:**

- Realistic, implementable designs as opposed to conceptual and academic proposals.
- Proposals to have a physical representation in terms of drawings or models for e.g.: the impact of a new planning or economic policy to be represented in a physical manifestation.
- Viable, Responsive and Sustainable Designs.

# INTRODUCTION

- Sakkardara Lake was built in the 18th century, during the Bhonsale's rule in Eastern Nagpur is about 5kms South-east of Nagpur near Ayodhya Nagar. The beautiful Sakkardara Garden on the shore of Sakkaradara Lake is the favorite weekend spot of the locals.
- The picturesque surrounding of the garden with vast playing area, the breathtaking view of sunrise and sunset all make Sakkardara lake garden an amazing picnic spot. Located close to the Sakkardara lake is a Laxmi Narayan Temple which was built by Raghuji-2.
- The site has a combination of architecture value as well as cultural value. This site has a combination of Sakkardara lake (tropical value), a heritage value in the form of Laxmi Narayan Temple.
- The site also has commercial value in the form of Bollywood Center Point which offer excellent space for various culture events and commercial activity. Thus when we sum up all the things together, the site is a combination of every activity that is needed in a society.

## LOCATION MAP



- Nagpur City has many distinctions.
- Popularly called the Orange City.
- Second largest city in Maharashtra.
- Second Greenest City in India and is located at the very center of the heartland,
- Almost equidistant from Kolkata, Chennai and New Delhi and Mumbai.

## MAJOR TOURIST ATTRACTIONS



NAGPUR RAILWAY STATION



DRAGON PALACE



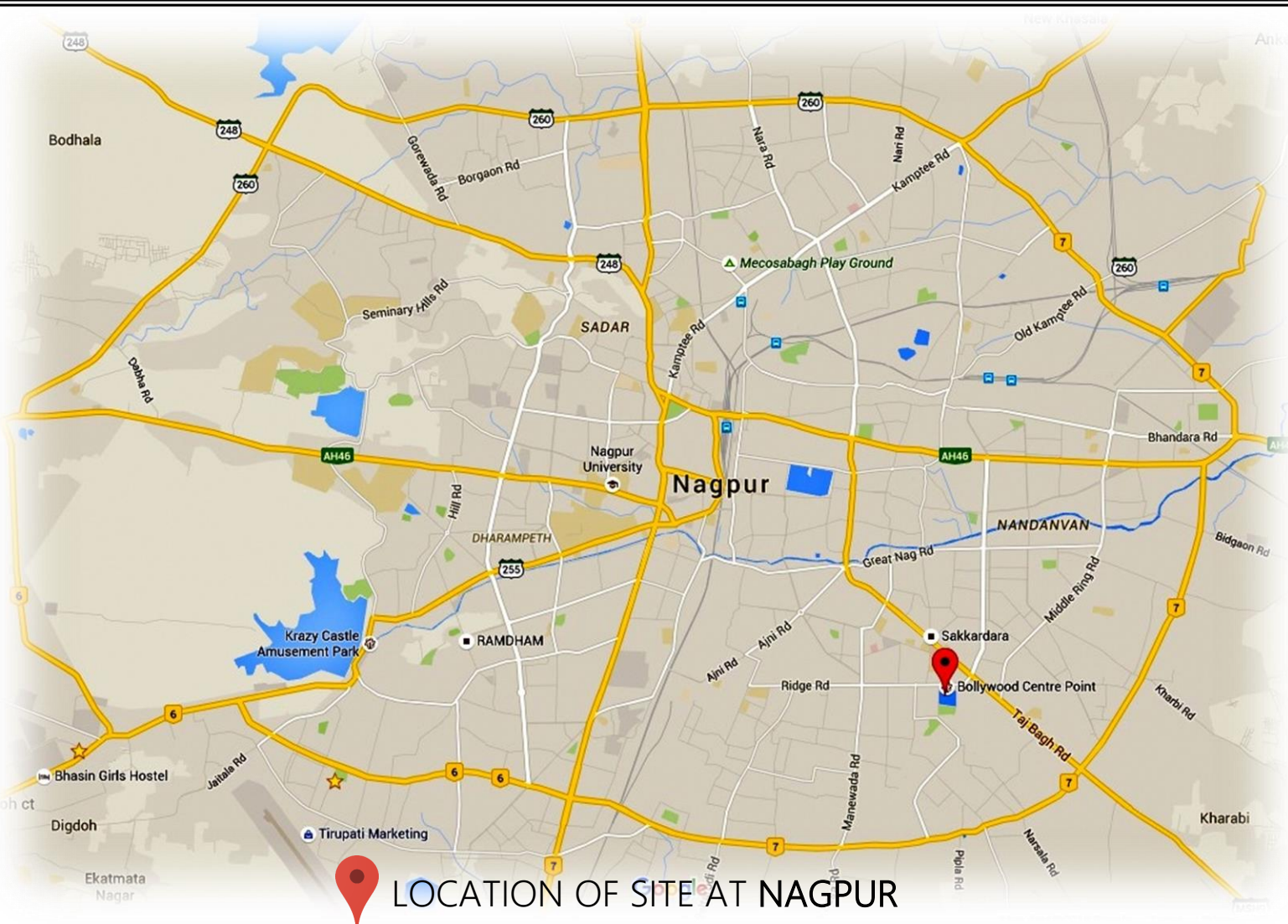
DEEKSHABHOOMI



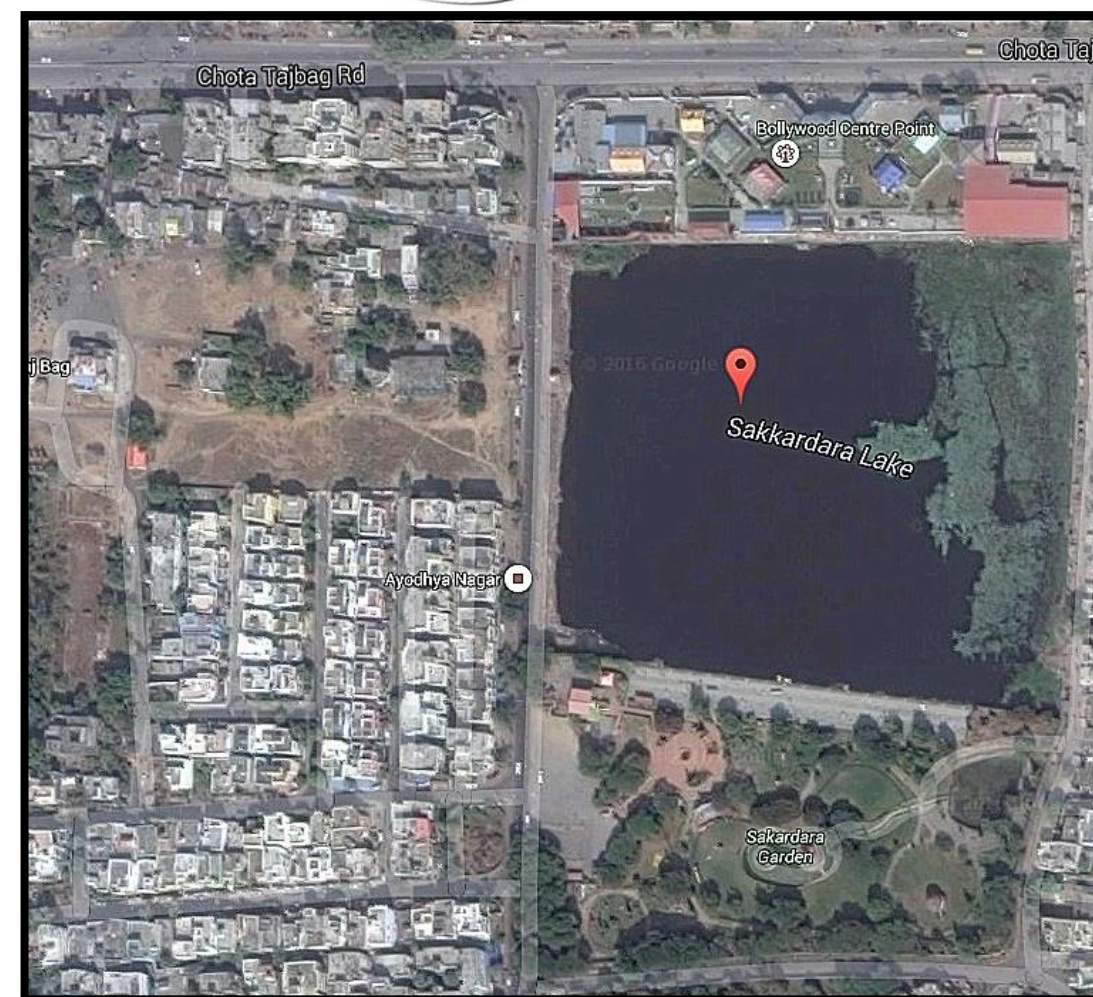
SWAMI NARAYAN TEMPLE

SAKKARDARA

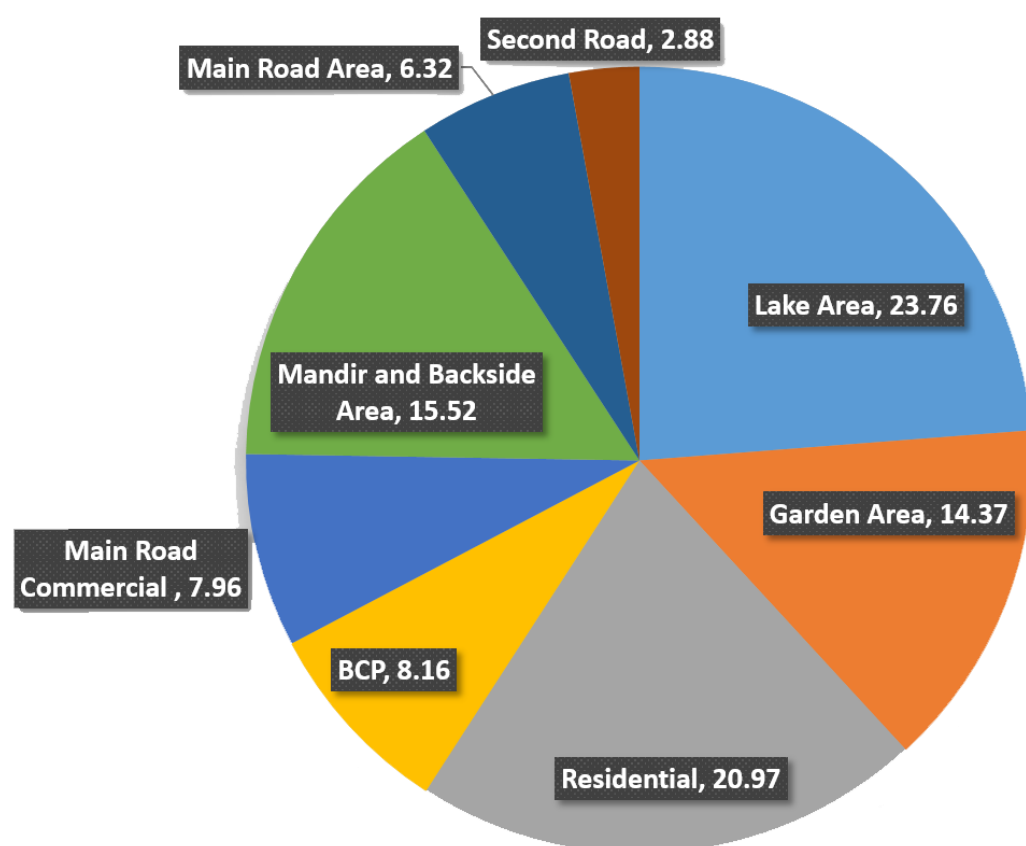
## OUR SITE



- Our Site is located exactly at a distance of 6 Kms from the Zero Mile.
- Temple at the site is 500–700 year old structure.
- Temple is built in the era of Raghuji Bhonsala King.
- Our Site is spread over 42 acres (169030 sq.m.)



- This Site Acts As A Complete Pocket Or Say It Has Everything That We Need To Sustain– Residential Zone, Commercial Zone, Entertainment Zone, A Social Common Place i.e.
- The Garden, A Catchment Area For The Water I.E. The Lake And At Last Some Open Spaces For The Kids To Play.



TOTAL AREA  
1, 69, 030 SQ.M

- Lake Area – 40, 167 sq.m
- Garden Area – 24, 337 sq.m
- Residential – 35, 447 sq.m
- Bollywood Center Point – 13, 800 sq.m

- Main Road Commercial – 13, 461 sq.m
- Mandir and Backside Area – 26, 244 sq.m
- Main Road Area – 10, 690 sq.m
- Second Road – 4, 884 sq.m

## AREA ANALYSIS

## UNDER RULE OF RAGHUJI BHONSALE - 1

### HISTORY

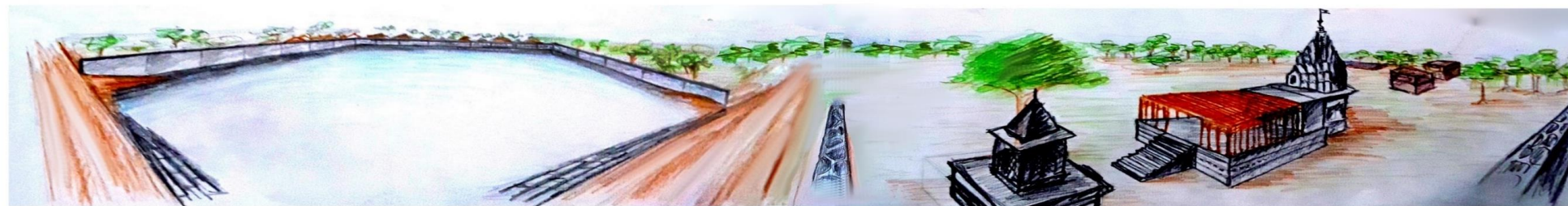
- In 1729 Raghuji Bhosle's rule was established in Mahal (Nagpur).
- Nagpur started progressing (Shukrawari Talao)
- After Raghuji came in Nagpur, Rajwade and Karbharyache wade were constructed.
- In Sitabuldi, toys factory was established.
- In Budhwari, some Marathi soldiers were given shelter.
- Soldiers were sheltered in areas like Indora, Sakkardara and Sitabuldi.
- Raghuji-1 developed a lot of factories & industries in Sitabuldi.
- At initial stage, lake was not present as today it is, slums were there for soldiers.

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1729 → 1<sup>ST</sup> KING RULE ← 1755

## UNDER RULE OF RAGHUJI BHONSALE - 2



- To the increasing population of soldiers, they were provided a place backside the lake which was called as sevadal and now known as sevadal nagar
- Being religious Raghuji Bhosale visited Sakkardara frequently and wished to built a temple there.
- Looking forward to the increasing number of soldier, factory was constructed.
- The place for the temple was predefined and construction was started, during this while the idols were sculpted and finished in Pune, brought to Nagpur and kept in Sitabuldi (19 Sept 1787)
- 29 Sept 1787, Idols were brought to Sakkardara, a stepwell was constructed towards the left of the Temple.
- Firstly only a Laxminarayan Idol and Garudeshwar Idol were placed in the Temple.

- A wada was pre-existing which was built by Raghuji-1 and then a 2nd wada was constructed by Raghuji-2 after the Temple was built up.
- During reign of Raghuji-2, a temple, lake and garden were built.
- There was a war between Britishers and Bhosale's of which the Bhosale lost the war and they had to shift opposite Nag river.

1755 → 2<sup>nd</sup> KING RULE ← 1816

SAKKARDARA

## UNDER RULE OF RAGHUJI BHONSALE - 3

- 1816–1872 , 3rd Raghuji and Britisher's rule,
- Due to small age of the ruler, Britishers ruled over Nagpur.
- Bhosale's lived in Sonagoan, so no development was observed in sakkardhara..

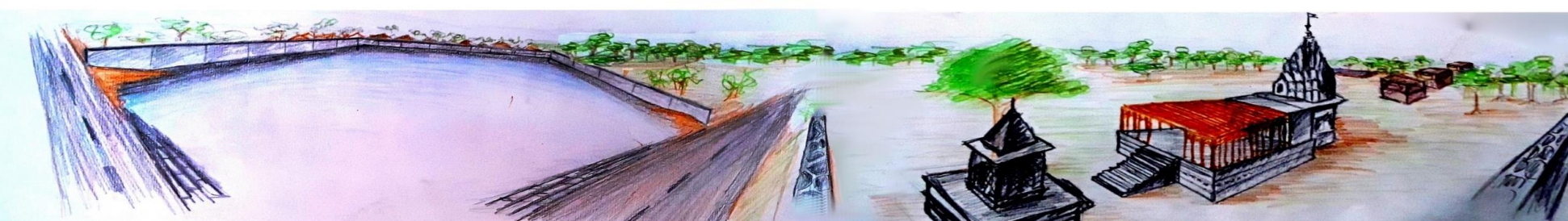
4

## HISTORY



1816 → 3<sup>RD</sup> KING RULE ← 1873

## UNDER RULE OF RAGHUJI BHONSALE - 4



- (1872–1958) Bhosale's rule came back over Sakkardhara and development occurred.
- During 1874–1954, one more wada was built known as Lal Bangla.
- 1908, Tajjuddin baba was released from Pagal Khana by Raghuji-4 by paying Rs.2000, he was in 'waki' for 12 years after he was released.
- 1920, Tajjuddin baba returned to Nagpur and Raghuji made arrangements to stay in Lal Bangla.
- 17 Aug 1925, Tajjuddin baba died and Lal Bangla was named as 'Chota Taj Bagh. '

1873 → 4<sup>TH</sup> KING RULE ← 1958

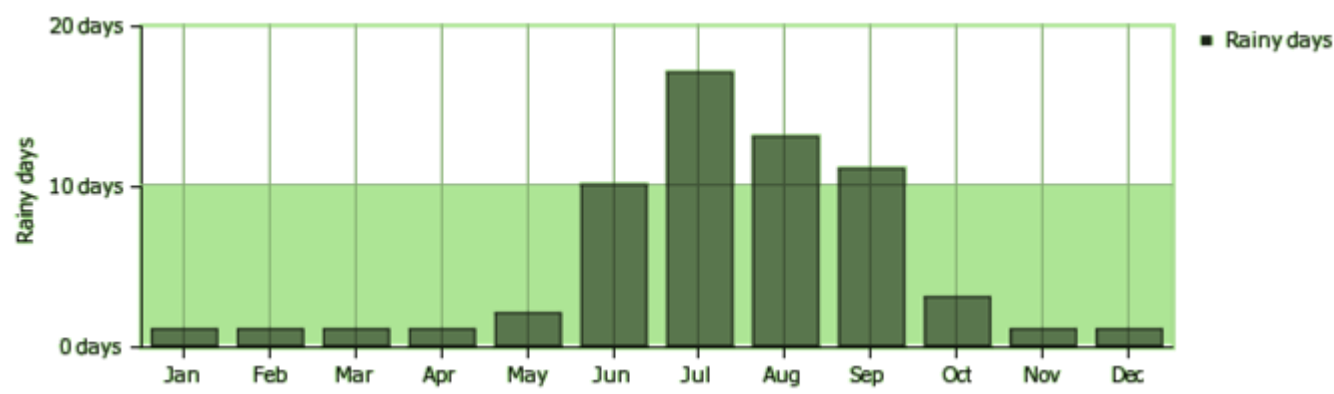
- Residential Complex were built up on south of the Temple.
- Out of the three wadas, only two exist of which one is now known as Chhota Tajbagh
- Garden as an area for relaxation was also built up on south of river.
- A refreshment cum entertaining plaza known as Bollywood Centre Point (BCP) was also built up north of the lake.
- Walls surrounding the lake on three sides were demolished on the garden and the BCP sides and steps were constructed for making it a part of the same.
- Slums were observed behind the lake.
- Settlement of fishermen is also seen in the open ground behind the Temple. The Mandapa was covered with wooden arches and columns which later demolished and now a flat slab
- Circular column is being constructed.



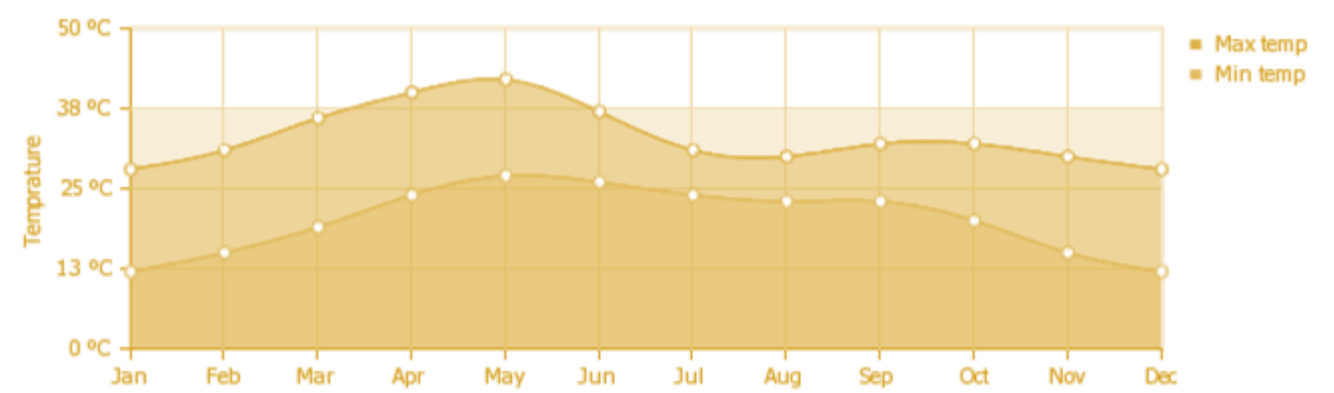
## 1958-PRESENT

SAKKARDARA

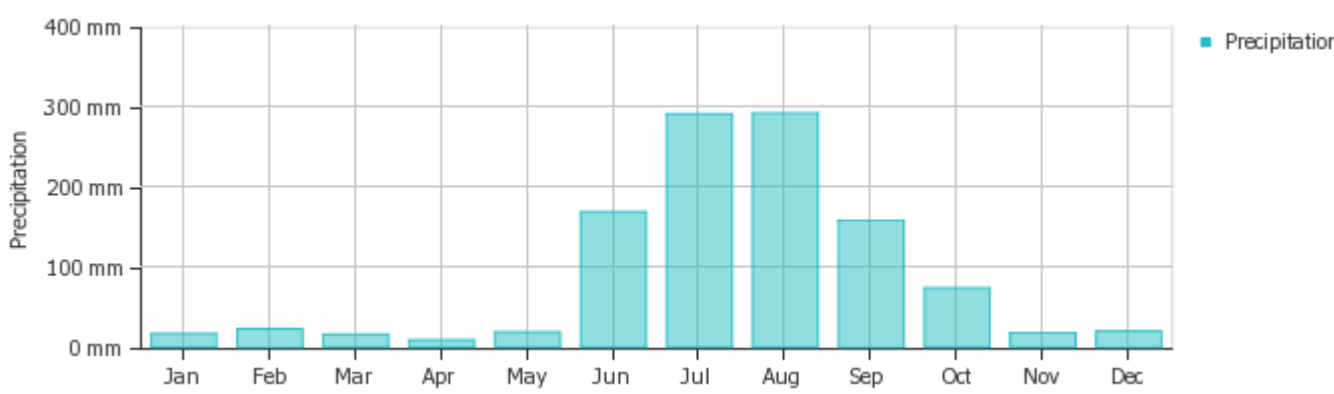
# CLIMATE STATISTICS



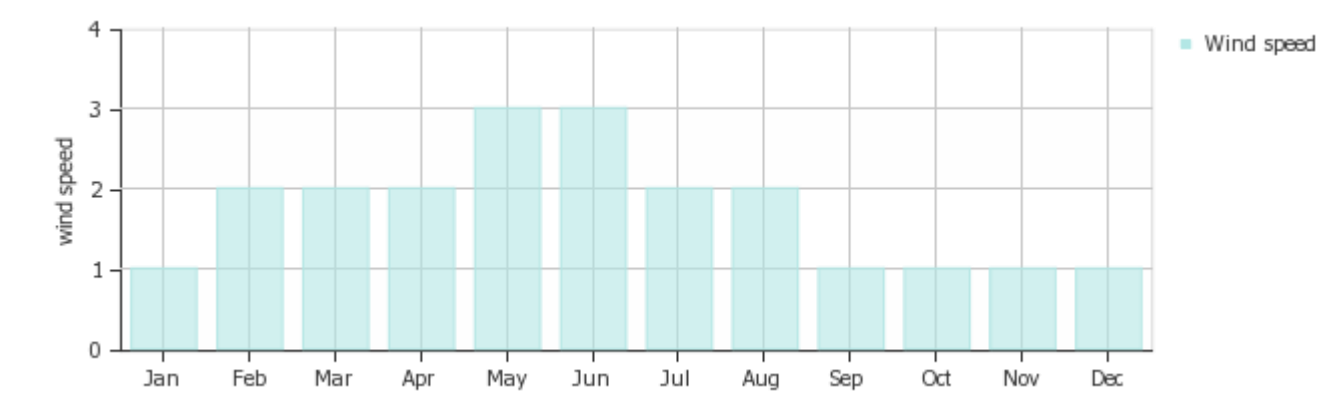
RAINY DAYS



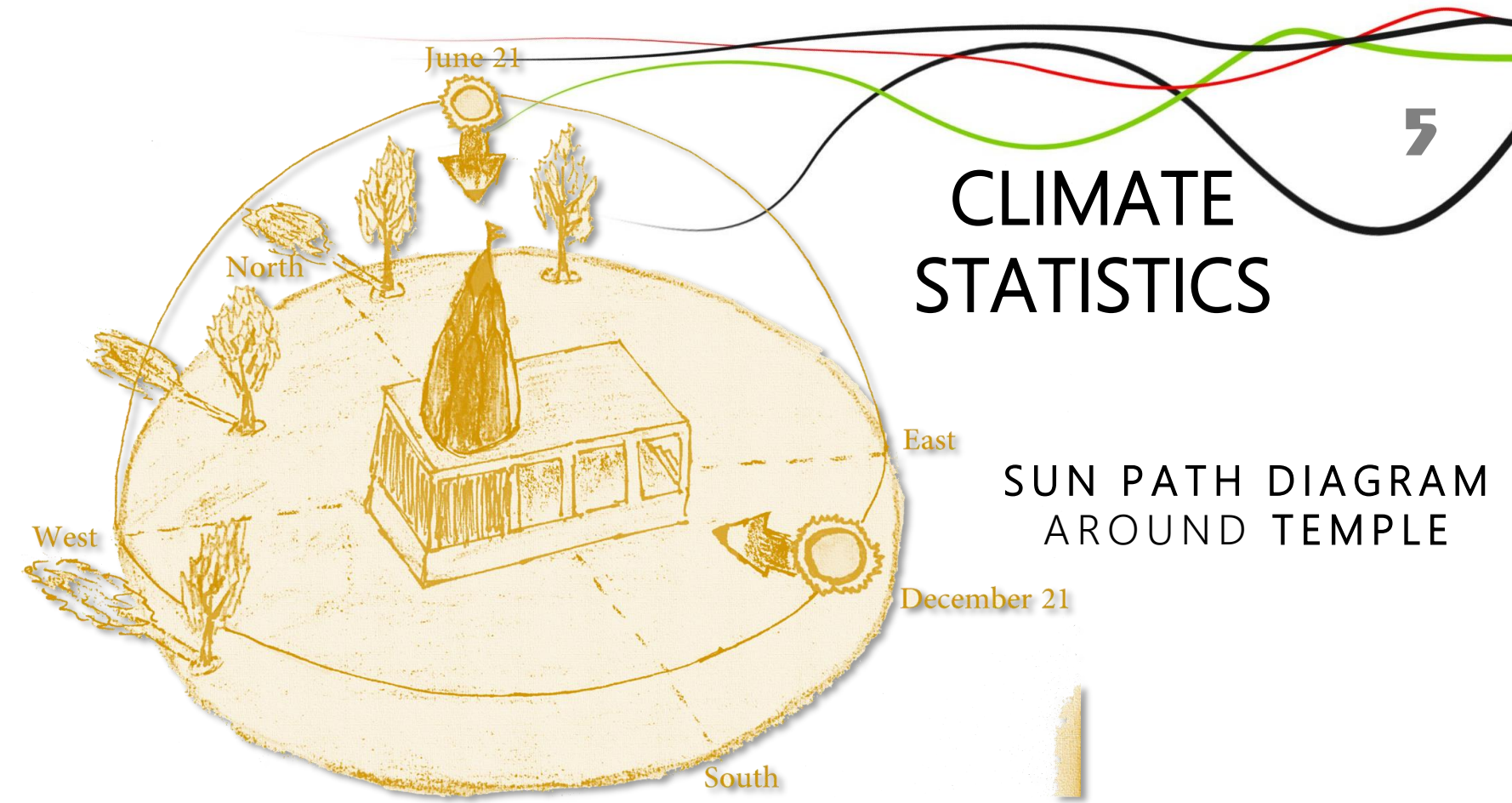
TEMPERATURE



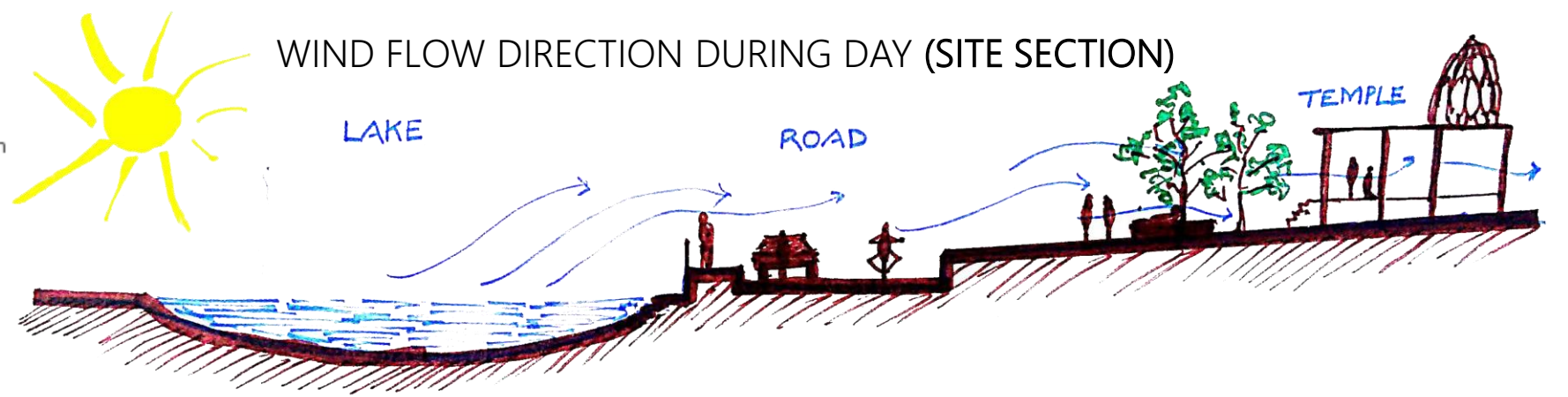
PRECIPITATION



WIND SPEED



SUN PATH DIAGRAM AROUND TEMPLE



WIND FLOW DIRECTION DURING DAY (SITE SECTION)



WIND FLOW DIRECTION DURING NIGHT (SITE SECTION)



- American Urban Planner and Author
- Student of Architect Frank Lloyd Wright before training in city planning
- Image of the city is a book written by him, graduated from MIT
- Lynch describes a five year study in his famous book Image of the City, that reveals about, what elements in a built structure of a city are important in the perception of the city.

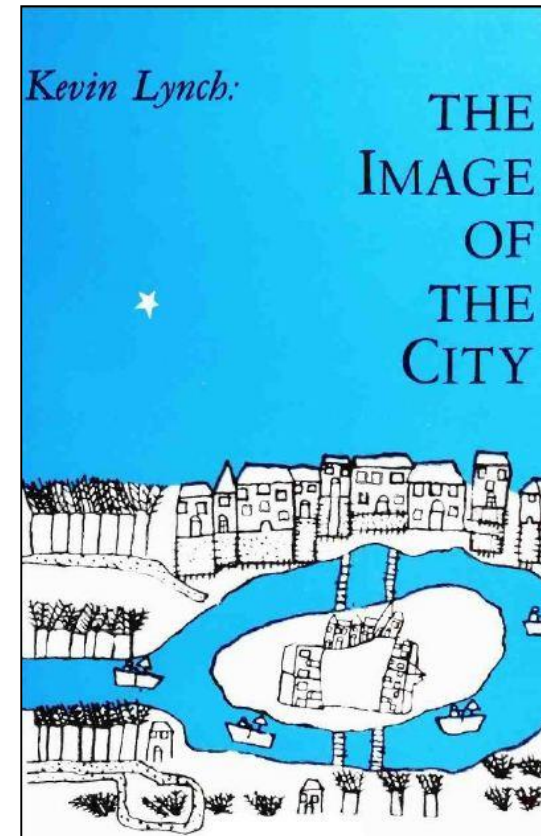
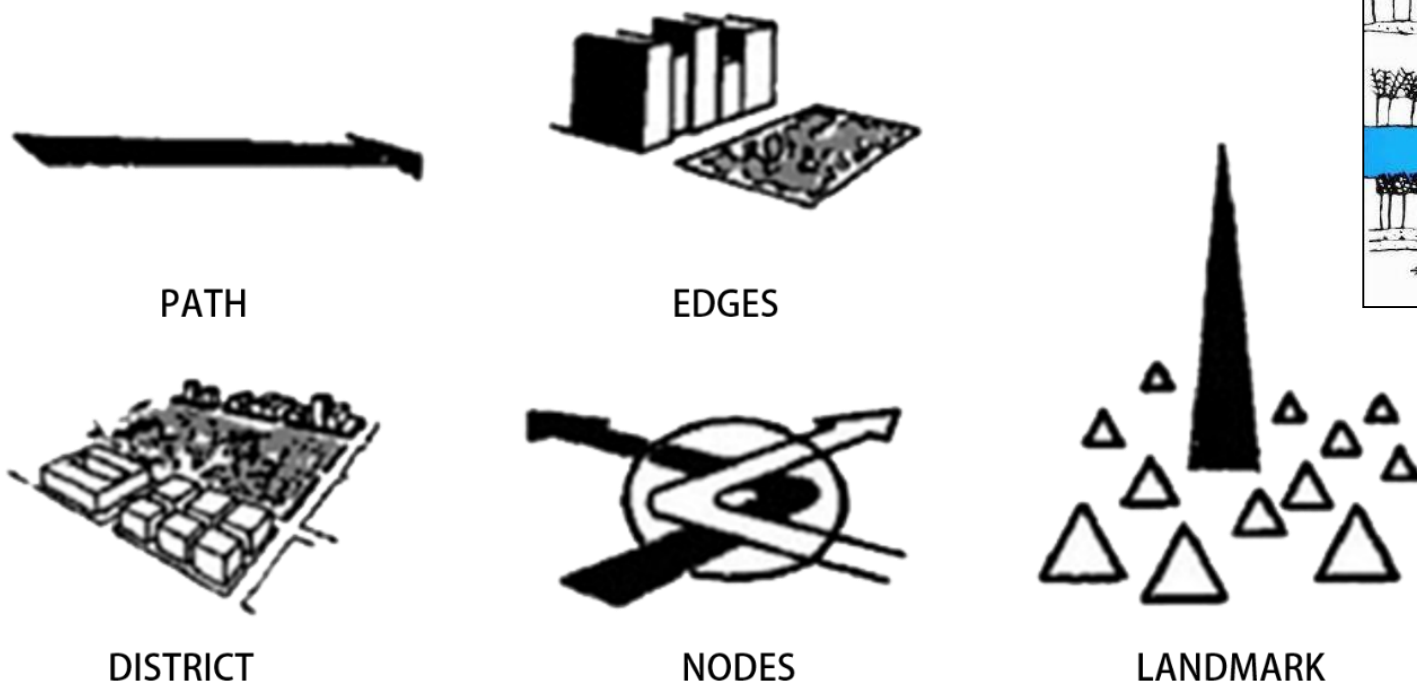
## KEVIN LYNCH

6

## KEVIN ANDREW LYNCH

1918 –1984

- Using three disparate cities as examples (Boston, Jersey City, and Los Angeles), Lynch reported that users understood their surroundings in consistent and predictable ways, forming mental maps with five elements:



## CONCEPT OF IMAGEABILITY

- Another term introduced by Lynch, is the quality of physical object, which gives a observer a strong vivid image.
- Well formed city is highly dependent upon the elements because, that would make the viewers their city image able.
- City should be easily recognizable.
- E.g: Well designed paths include special lighting, clarity of direction, etc. Similarly with nodes, landmarks, districts, edges.
- These elements placed in good form, increase human ability to see and remember patterns and it is these patterns which make easier to learn.

5

## KEY PHYSICAL ELEMENTS OF THE CITY

- In the same book Lynch also coined the words "image ability" and "wayfinding". Image of the City has had important and durable influence in the fields of urban planning and environmental psychology.

PATHS  
EDGES  
DISTRICT  
NODE  
LANDMARK

SAKKARDARA

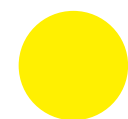
# PATHS

FIRST PHYSICAL ELEMENT

- Paths are the channels along which observers move (streets, transit lines, canals, etc.).
- paths are the most important elements in people's images.
- Other elements are arranged and along them.
- Unclear paths = unclear city image



PRIMARY

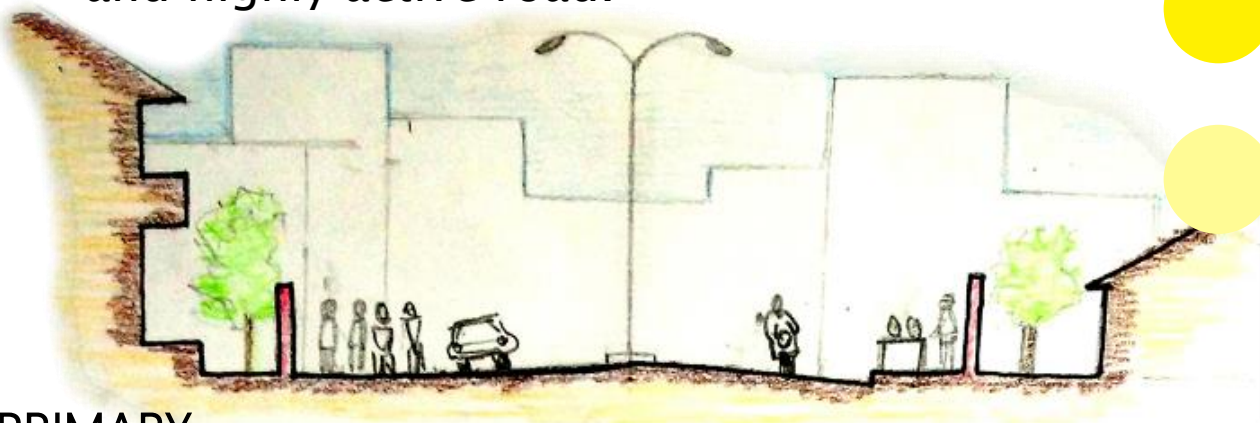


SECONDARY

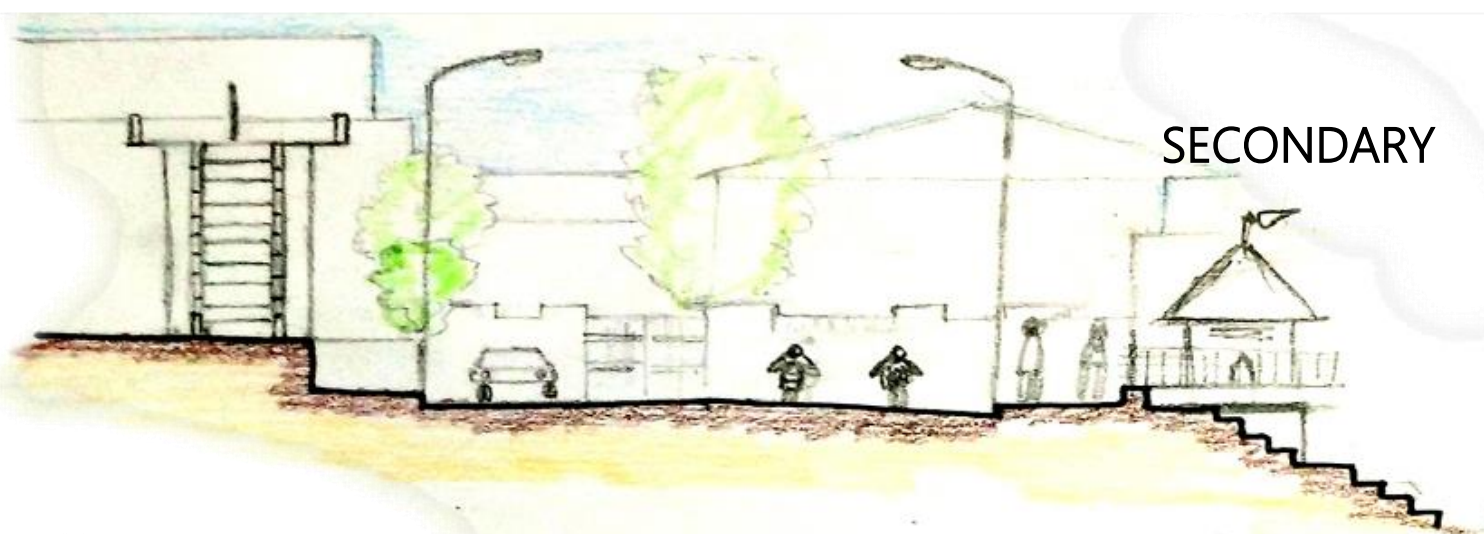


TERTIARY

- **PRIMARY ROAD** – Most dense, busy and highly active road.

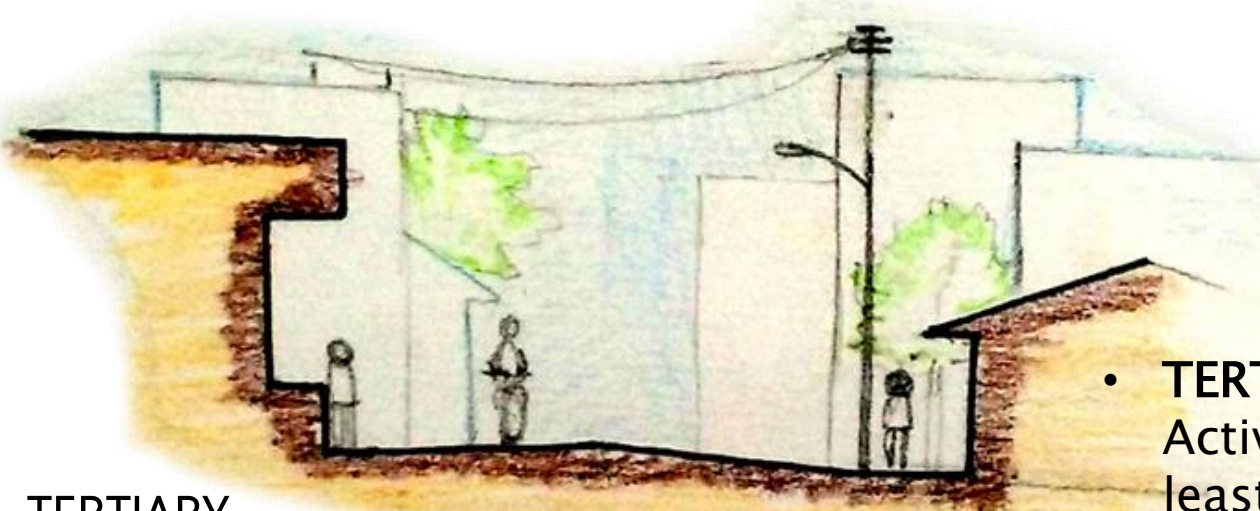


PRIMARY



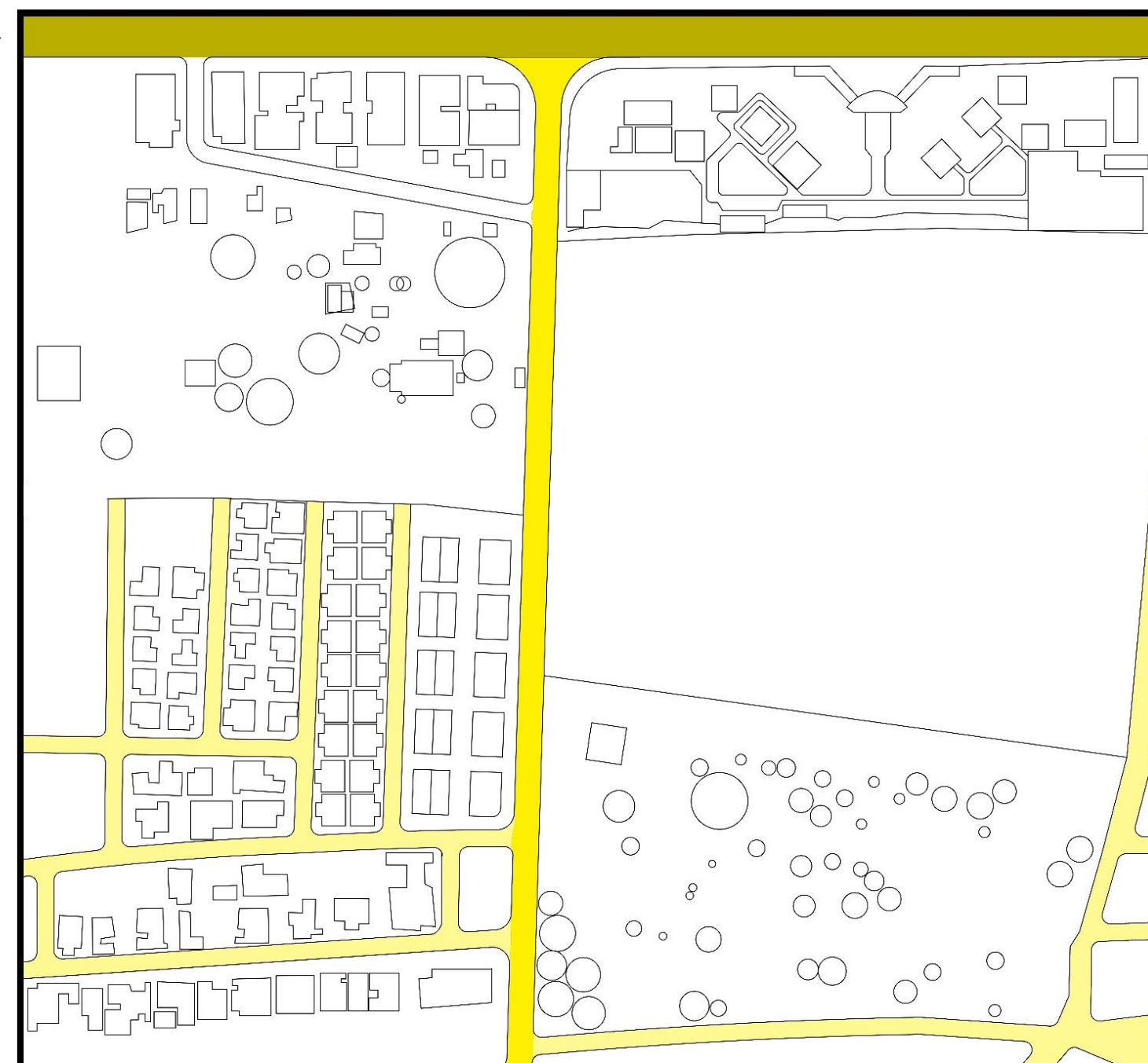
SECONDARY

- **SECONDARY ROAD** – Directly connected to Primary Road, with medium density and medium active road.



TERTIARY

- **TERTIARY ROAD** – Single Activity, Lowest Density, and least active road of the whole site.



PLAN SHOWING LOCATIONS OF ALL KIND OF PATHS IN SITE

# EDGES

SECOND PHYSICAL ELEMENT

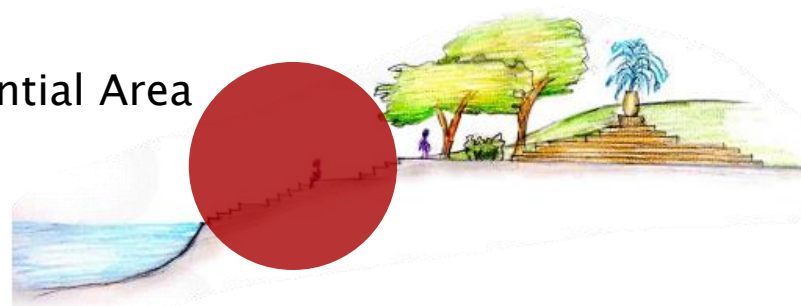
- Edges are linear elements that form boundaries between areas or linear breaks in continuity (e.g. shores, railway cuts, walls).
- The strongest edges are continuous in form, and often impenetrable to cross movement.
- Types of edges – natural and manmade.
- Difference between path and edge Paths Direct the motion to specific direction  
Edges \* Prevent motion in specific direction

Psychological Edges are created between activities by the activities itself i.e. edges are not physically present but psychologically act as an edge.

Ex – Edge between Temple & Residential Area  
Edge between Lake & Garden



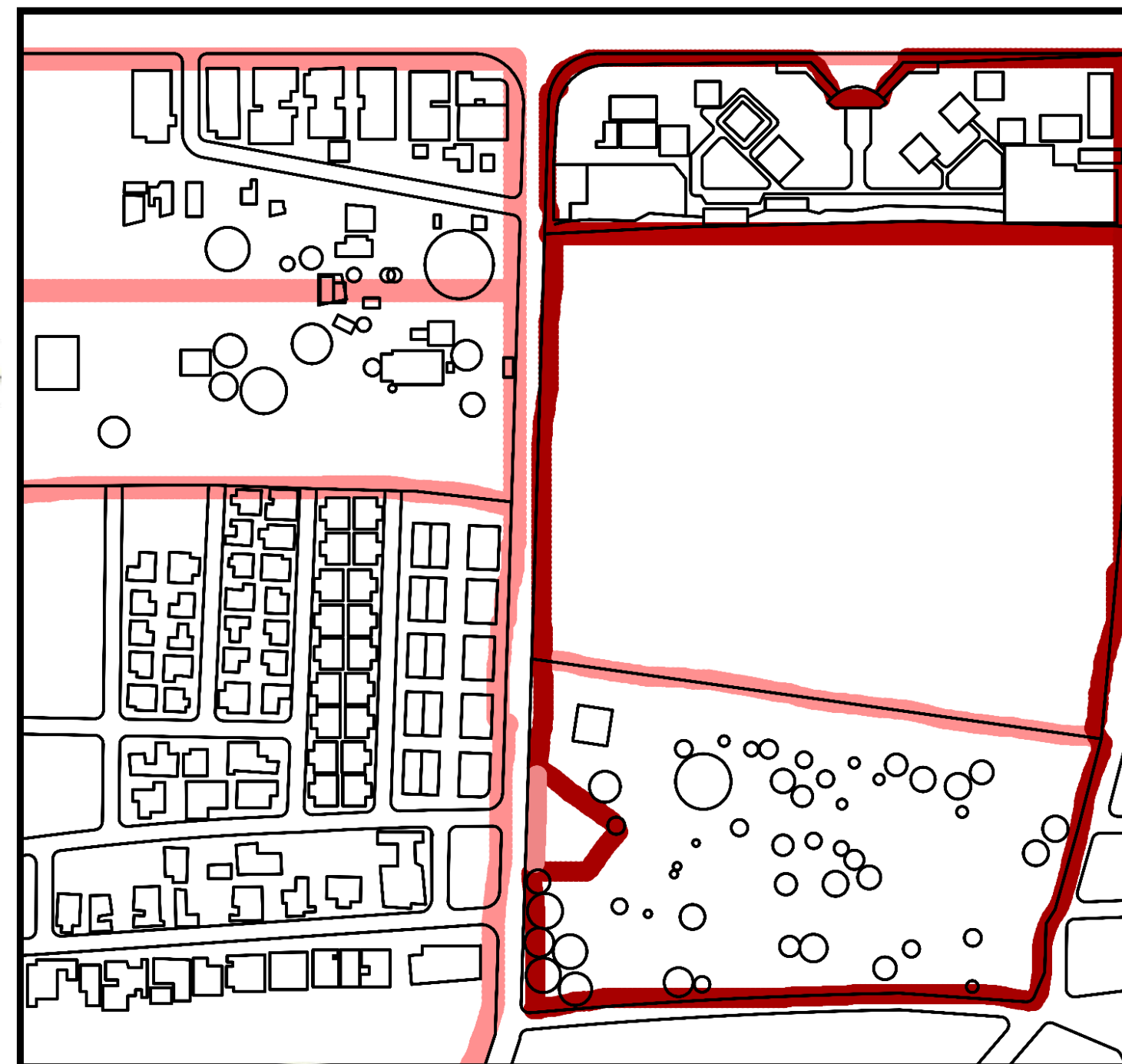
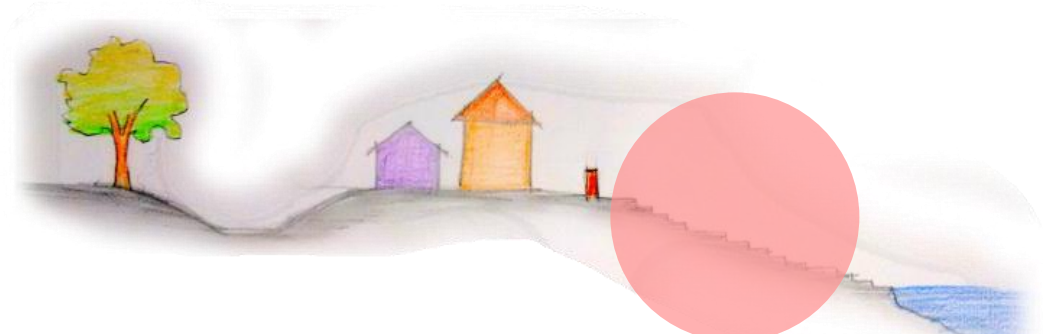
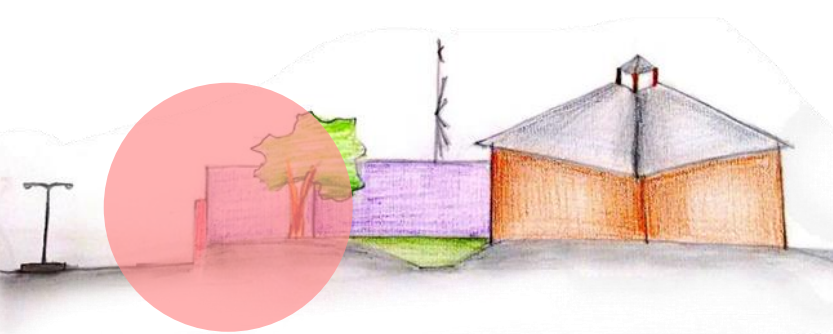
PSYCHOLOGICAL



Mainly Physical Edges are wall or anything which is physically created between two activities.

Ex – Edge between Road & Bollywood Centre Point  
Edge between Lake & Road  
Edge between Bollywood Centre Point & Lake

PHYSICAL



PLAN SHOWING LOCATIONS  
OF ALL KIND OF EDGES IN SITE

# DISTRICTS

THIRD PHYSICAL ELEMENT

- Districts are the medium to large parts of the city which share the same characteristics Style – spatial form, topography– colors– texture, urban fabric.
- Districts may have Clear edges, or soft uncertain ones gradually fading away into surrounding areas.

INSTITUTIONAL

COMMERCIAL

RESIDENTIAL

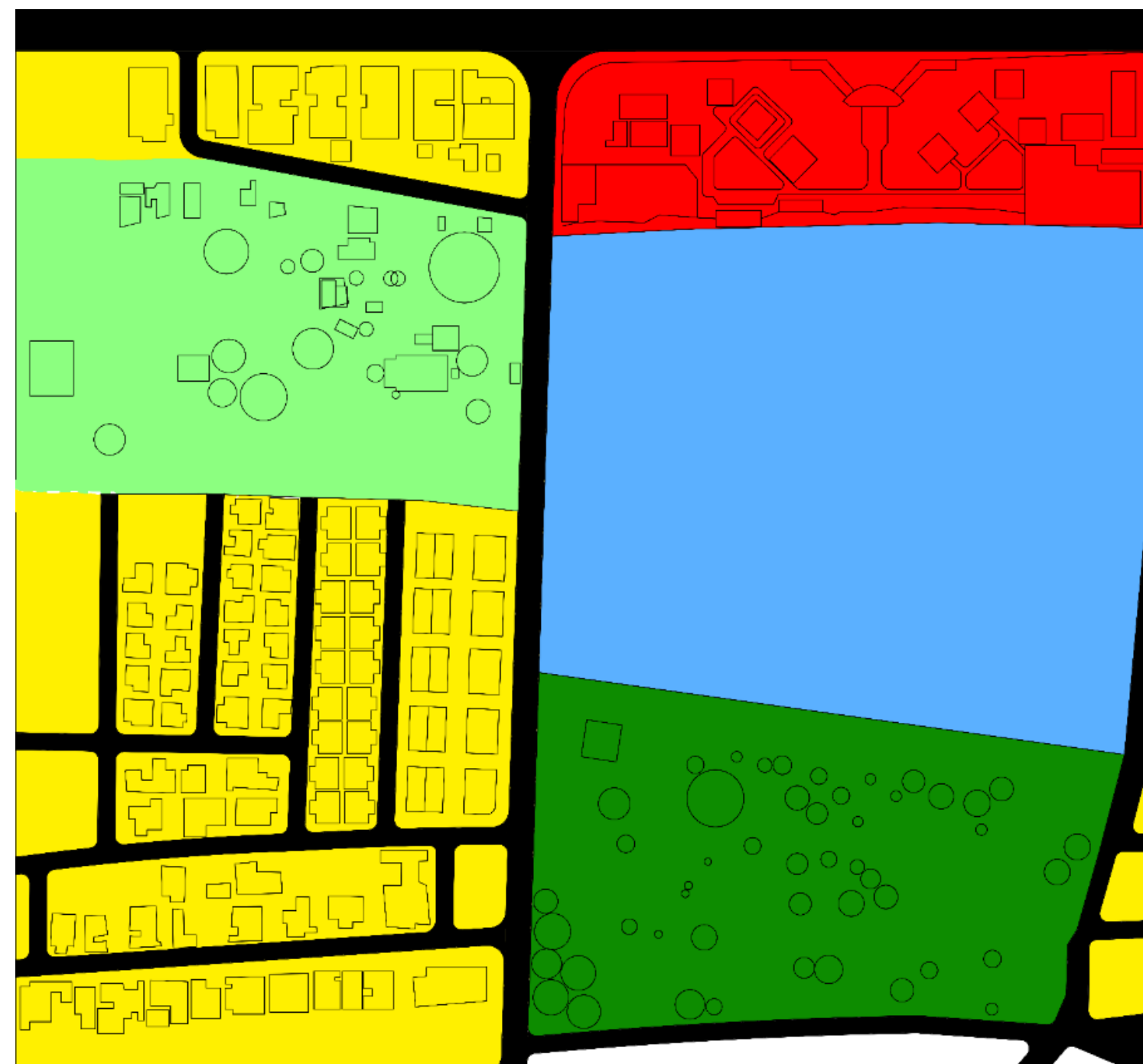
PARK

WATER BODY

Ex – Laxmi Narayan Temple  
Sakkardara Lake  
Sakkardara Garden  
Bollywood Centre Point



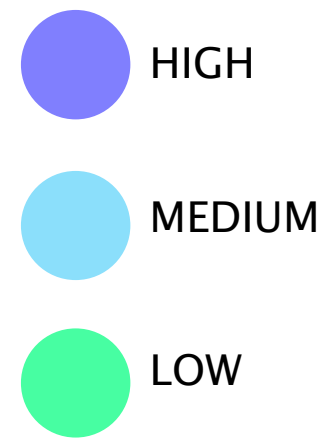
DEVELOPMENT PLAN OF THE SITE  
1986-2011



PLAN SHOWING LOCATIONS OF  
ALL KIND OF DISTRICTS IN SITE

SAKKARDARA

- Strategic points in the city that the user can enter it
- be directed to many destinations
- it can be gathering places or intersection of paths, or places for activities .



## HIGH NODE

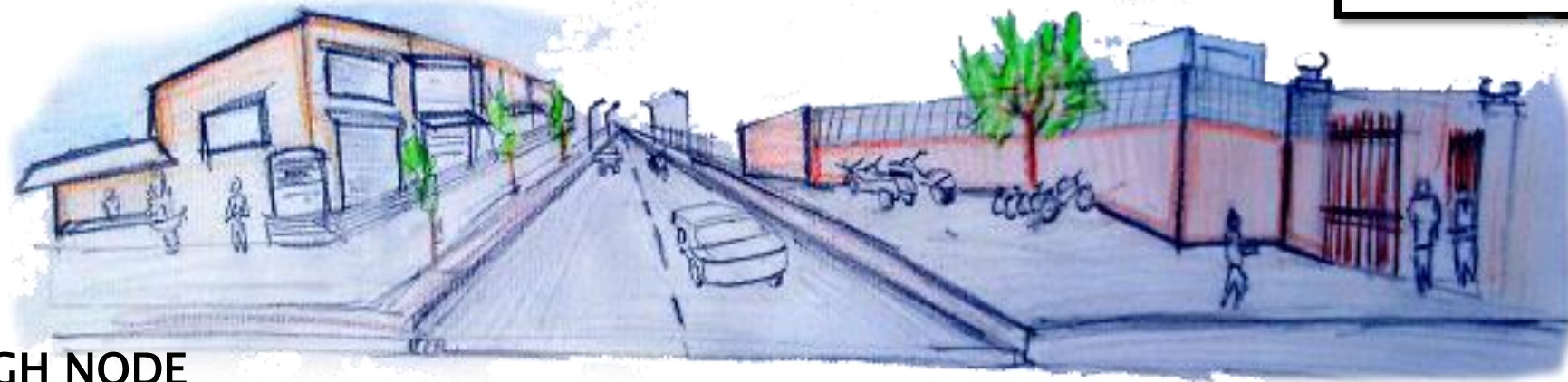
The points where the density of people is at the high point as compared to other areas.

Main(18 m.) road–

1. It is major road for the users which direct to many destinations.
2. It is also the intersection point of road and sewerage chambers.
3. The crowd of hawkers, vegetable sellers etc. regularly, as well as vehicular traffic is also observed.

Garden and Residential–

1. It is a residential and commercial activity zone which also includes a tranquility space & garden which also has a regular crowd of people.
- Permanent spaces with permanent high density crowd.



PLAN SHOWING LOCATIONS OF ALL KIND OF NODES IN SITE

## MEDIUM NODE

The point where the density of people and activity is medium as compared to the other areas.

The secondary road (12 m.)–

Lake activities are observed such as fishing, washing clothes, dumping corners etc. and entrance to the temple which also promotes increase of the hawkers in the same place.

Temple & Dargah–

Temple and Dargah are itself a gathering place for people coming from different destinations on usual timings.

It is a permanent place with permanent medium level crowd at unusual timings in a day.

MEDIUM NODE



## LOW NODE

The points where the density and activity of the people is low as compared to other places.

Near Bollywood Center Point (BCP)–

Gathering place for all working labors during the morning time 9:00AM to 12:00PM is temporary activity is observed on road while the BCP is closed for public during the same time.

During the afternoon as well as evening time 4:00PM to 10:00PM vehicular traffic is observed as well as the crowd for BCP.

Hence, these are permanent spaces but temporary activities are observed.

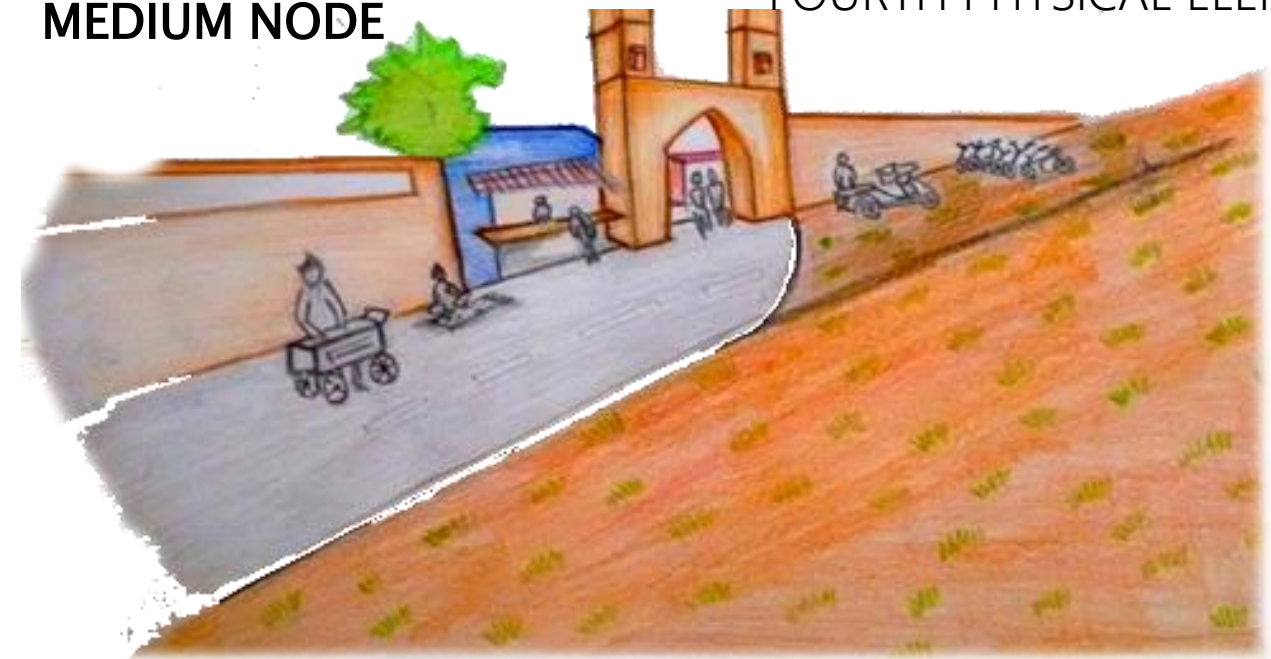
Tree near the Temple–

Due to the high foliage of trees, people during the noon timing 12:00PM to 3:00PM are observed relaxing under the trees and it is a small gathering place



LOW NODE

MEDIUM NODE



LOW NODE

# LANDMARKS

FIFTH PHYSICAL ELEMENT

- A physical element with UNIQUE AND SPECIAL visual features that has a "point-specific" location, and can be identified from the distance.
- Landmarks are another type of point-reference, but in this case the observer does not enter within them, they are external.
- They are usually a rather simply defined physical object: building, sign, store, or mountain.
- It is an object or feature of a Landscape or town that is easily seen & recognized from a distance.



PLAN SHOWING LOCATIONS OF ALL KIND OF LANDMARKS IN SITE

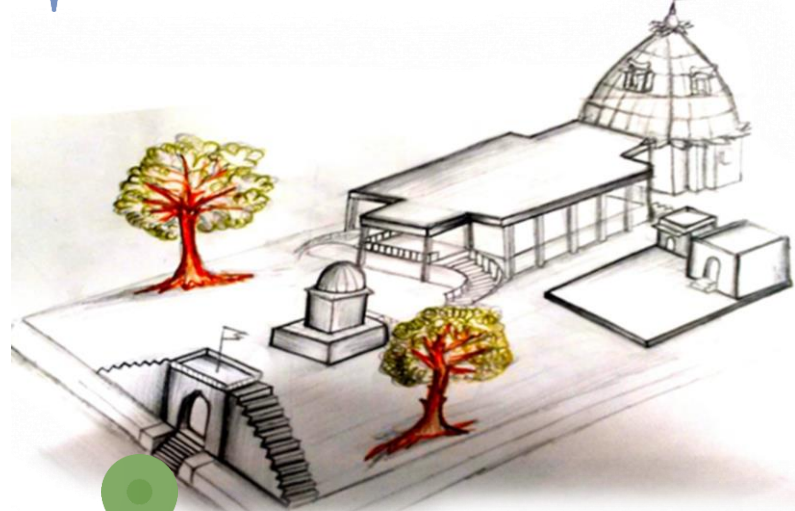
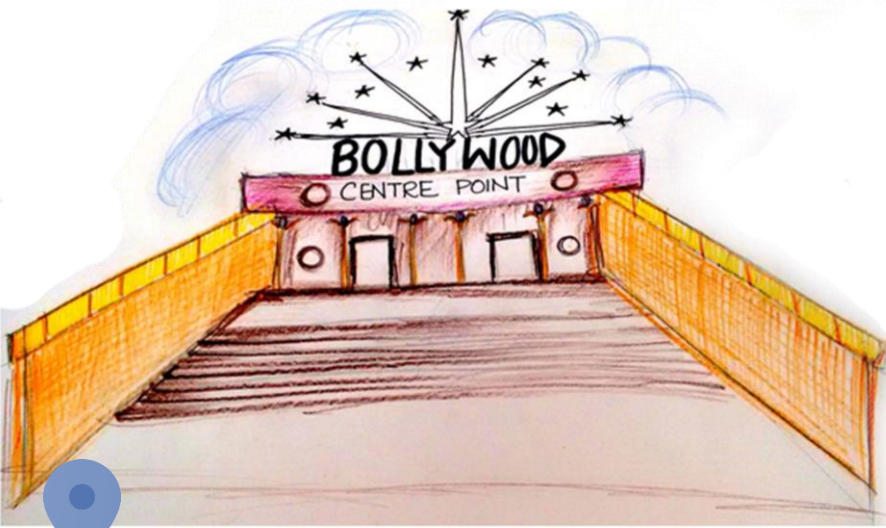
SAKKARDARA

SAKKARDARA LAKE

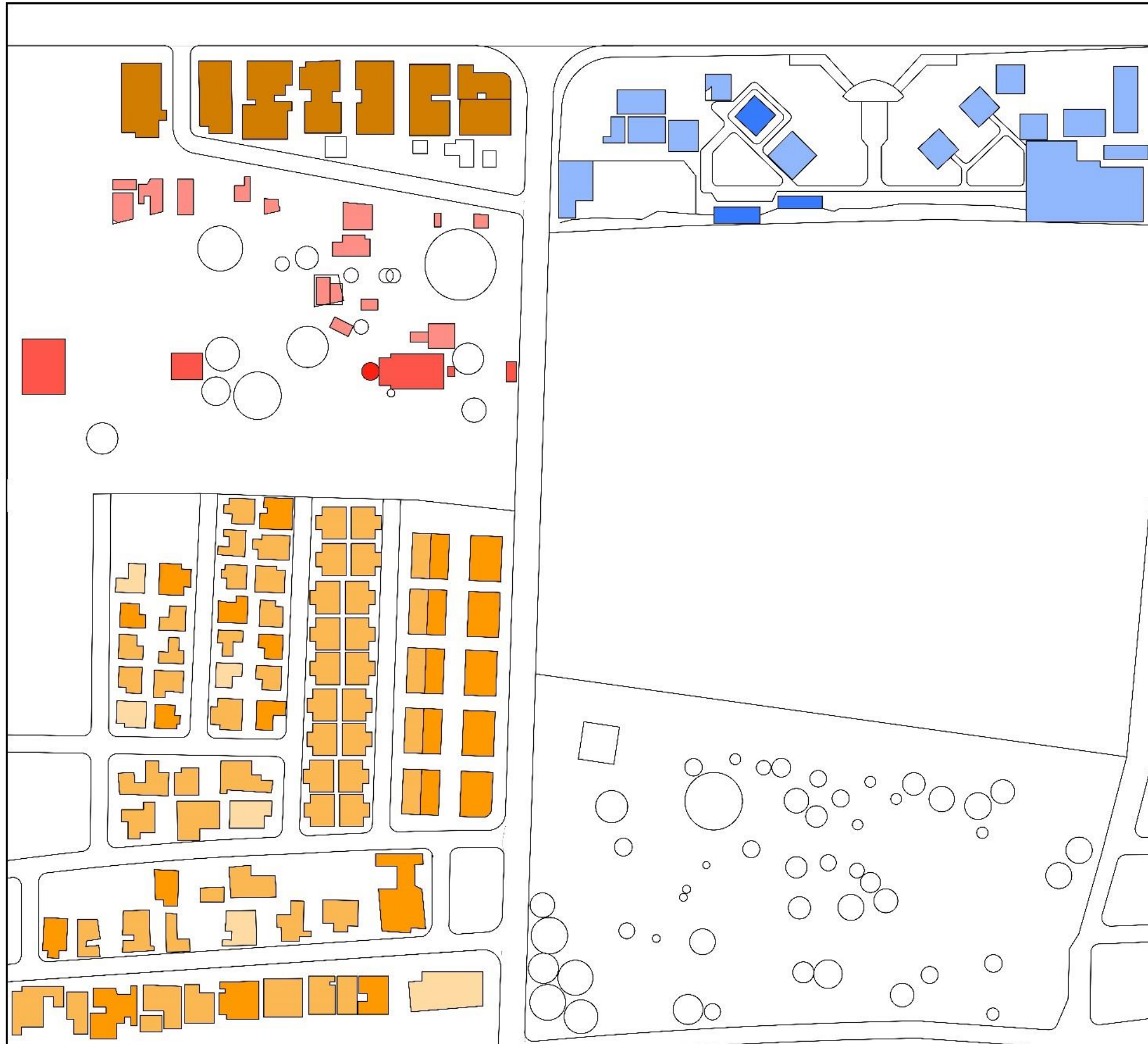
SAKKARDARA GARDEN

SWAMI NARAYAN TEMPLE

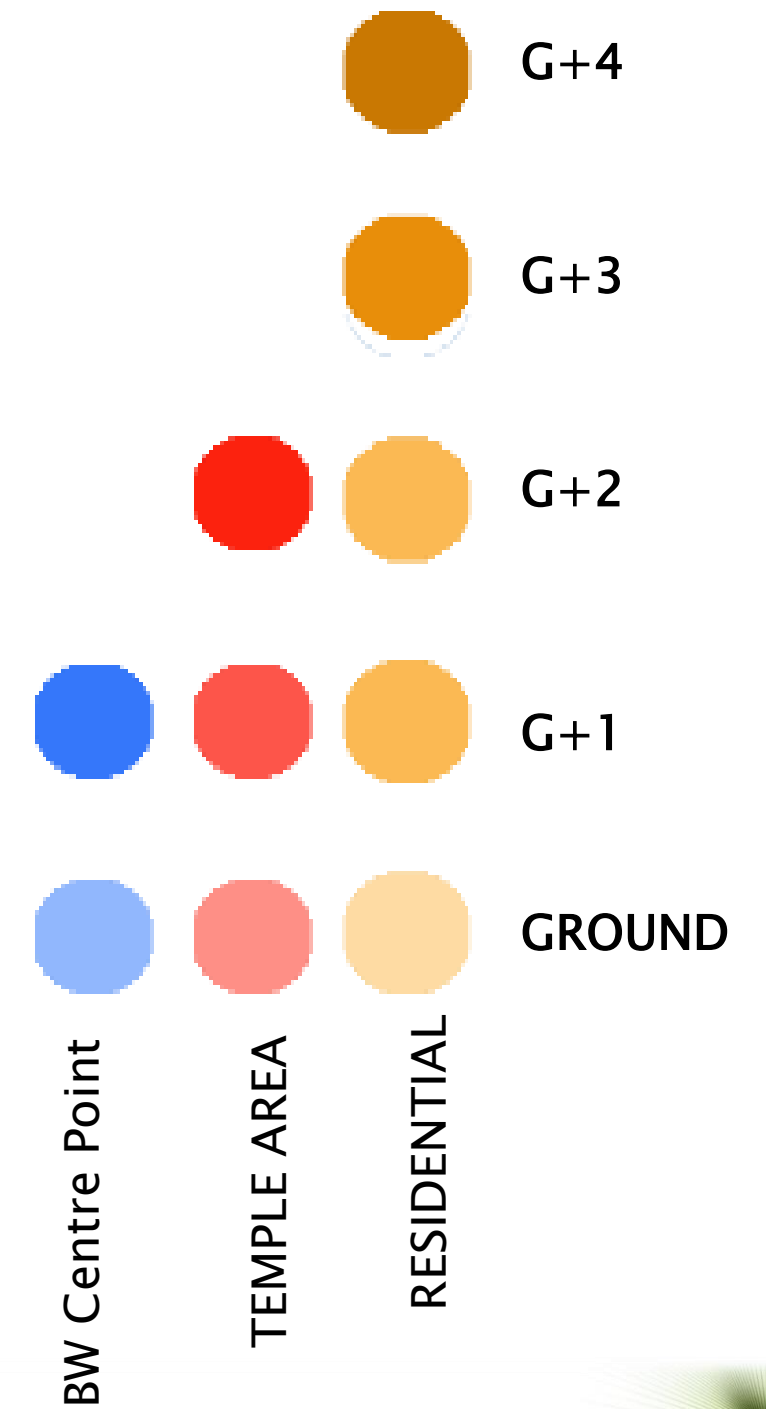
BOLLYWOOD CENTRE POINT



# BUILD FORMS



PLAN SHOWING LOCATIONS OF ALL  
KIND OF BUILD FORMS IN SITE





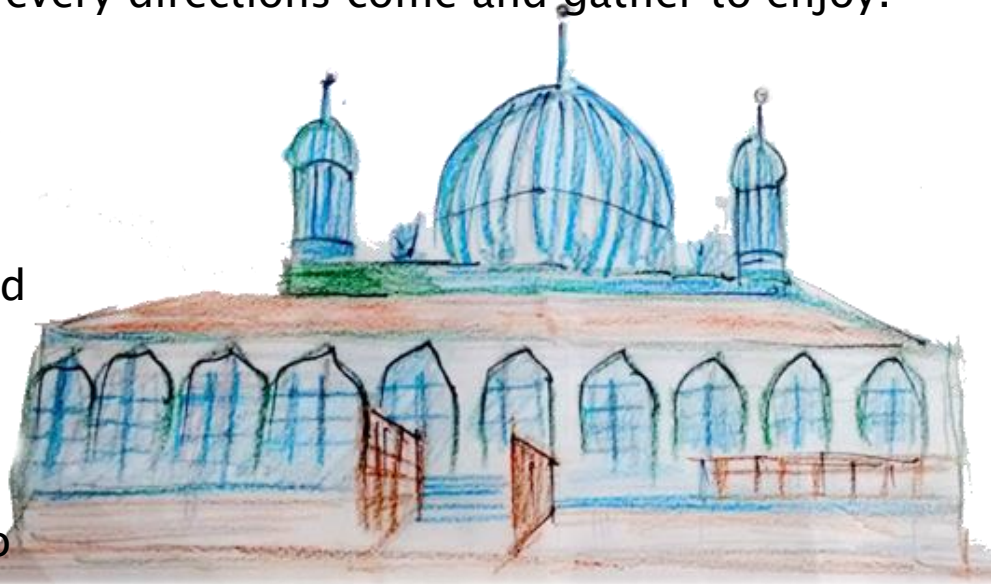
POLITITCAL RALLYS

**BLUE PATCH**

- Entirely covers 12m road between lake and temple which is a major node for all the types seasonal festival and rallies.
- Different types of rally take republic day, independence day, Shivaji Maharaj Jayanti, Ganesh Visarjan, Political Rallies.
- This place activities makes the place crowded as compare to normal days.
- The local people from every directions come and gather to enjoy.

**YELLOW PATCH**

- It covers 'Tajuddin Baba' Dargah under and small primary school.
- In this patch crowd gathers mostly on Thursdays of every week, as it is believe to be holiday of Tajuddin Baba.



DARGAH (URS MUBARAK)

- In this patch, the birthday of 'Tajuddin Baba' makes that place most crowded place of Nagpur on that day, road gets block due to birthday.
- In the time of "Urs" in this patch crowd gathers mostly in surrounded place.



PLAN SHOWING LOCATIONS OF ALL KIND OF LANDMARKS IN SITE



GANESH VISARJAN

### GREEN PATCH

- In this patch, all types of Visarjan happens.
- In this patch, the crowd gathers mostly at the time of Ganesh festival, Navratri with there idols.
- The crowd is very heavy as compare to land area.

### RED PATCH

- Every type of Hindu Festivals are celebrate in same extend on the mandir campus.
- Red Patch cover Mandir and the surrounding area a Lamxi Narayan Temple along with the Shiva and Vitthal Rukmini Mahashivratri, Nag Panchami , Diwali, Shravan Somwar, Dussheer, Tulsi Vivaha and most common festival which happen in daily period is weakly on Monday, monthly Ekadashi, Purnima.
- On these days, spiritual gathering happens which make a prominent place.



MAHASHIVRATRI



PLAN SHOWING LOCATIONS OF  
ALL KIND OF LANDMARKS IN SITE