nirvahana

An Off-the-grid and integrated communal living

Student :
Akshata Bhimsen Vadvadgi

Studio :
Atelier Petr Kordovsky

CONTENTS

CZECH TECHNICAL UNIVERSITY IN PRAGUE
Faculty of Architecture
International Office
Thákurova 9, 166 34 Prague 6, Czech Republic
e-mail: lindokri@fa.cvut.cz tel.: +420 22435 6224

CZECH TECHNICAL UNIVERSITY IN PRAGUE
FACULTY OF ARCHITECTURE

AUTOR, DIPLOMANT:
AUTHOR OF THE DIPLOMA WORK / DIPLOMA PROJECT
Academic Year ……, …….…… Semester

TITLE OF THE DIPLOMA WORK / DIPLOMA PROJECT
(IN CZECH LANGUAGE)

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Diploma Work / Diploma Project Supervisor **Diploma Work / Diploma Project Opponent**	**Ústav: Department**
Key Words (Czech)	
Annotation (Czech)	
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The Author´s Declaration
I declare that I have elaborated the submitted diploma work / diploma project independently and that I have stated all the used information sources in coherence with the "Methodological Instruction for Ethical Preparation of University Final Works".
(The complete text of the methodological instruction is available for download on http://www.fa.cvut.cz/En)

In Prague on ……..Signature of the Diploma Project Author

This document is an essential and obligatory part of the diploma project / portfolio / CD.

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Faculty of Architecture
International Office
Thákurova 9, 166 34 Prague 6, Czech Republic
e-mail: lindokri@fa.cvut.cz tel.: +420 22435 6224

Czech Technical University in Prague, Faculty of Architecture

ASSIGNMENT of the Diploma project

Master degree – ARCHITECTURE & URBANISM.

Date of Birth: 21/07/1995

Academic Year / Semester: 2019/2020 - SUMMER SEMESTER

Department Number / Name: 15128

Diploma Project Tutor: doc. Ing. Arch. Petr Kordovsky.

Diploma Project Theme:

See the Application Form for DP – NIRVAHANA.
"An off-the-grid and integrated communal living".

Assignment of the Diploma Project:

1/description of the project assignment and the expected solution objective

2/description of the final result, outputs and elaboration scales

3/list of further agreed-upon parts of the project (model)

To this list further attachments can be added according if necessary.

(1) An attempt to create a sustainable, reselient, regenerative and close knit community housing in response to issues like economic differences, socio-cultural bridging and the ecological aspects.

Date and Signature of the Student:

Date and Signature of the Diploma Project Tutor:

Date and Signature of the Dean of FA CTU:

(2) final Outputs –

- plans, elevations, sections (scale depends on scheme of project).
- details – drawings
- Physical model
- structural details
- climatic analysis according to site
- Visualisations of proposed design.

(3) Working scheme –

- Site discription
- Site analysis
- Design program (list of spaces & activities)
- Zoning of all activities & spaces.
- form
- Planning & design (process)
- final design
  - ↳ plans
  - → sections
  - → elevations
  - → model.

ABSTRACT

India, like most major emerging economies, has been witnessing accelerating urbanisation.
As per the census of India in 2001, about 72% of the population lived in rural areas, and 28% in urban areas. By 2011, these figures had changed to 69% rural population and 31% urban population. In fact, as per census 2011, for the first time since India's independence, the absolute increase in population was more in urban areas than in rural areas.

According to estimates, around 600 million people are expected to make urban India their home by 2031, a whopping 59% growth over 2011. As an increasing proportion of India's population starts participating in its growth story, it brings with it mounting pressure on the existing infrastructure.

A House is a Machine for Shitting In.

Informality & Incremental Housing

TYPE	kuccha	semi-pucca	semi-pucca	pucca (1)	pucca (1.5)	pucca (2)	pucca (2.5)	pucca (3)	pucca (3.5)
AREA	12.5 sq m	12.5 sq m	12.5 sq m	12.5 sq m	19 sq m	25 sq m	30 sq m	75 sq m	87 sq m
COST (INR) (GRB)	5000-8000 60-95	25000 - 35000 300 - 400	100000 - 130000 1000 - 1400	150000 - 160000 1600 - 1800	160000 - 180000 1800 - 2000	190000 - 250000 2000 - 3000	≈ 350000 ≈ 4000	≈ 40000 ≈ 4500	≈ 45000 ≈ 5000
PHYSICAL	- basic shelter - no structure - leaks - no light - no ventilation - not durable - no sanitation	- simple shelter - not load bearing structure - leaks from roof - little light - little ventilation - no sanitation	- simple shelter - not load bearing structure - plastered which increases thermal capacity - little light - little ventilation - no sanitation	- basic shelter - load bearing structure (roof and walls) - possibility to store water on roof - little light - little ventilation - no sanitation - proper foundations	- load bearing structure (roof and walls) for first floor - second floor structure is semi-pucca - light - some ventilation - no sanitation - proper foundations	- load bearing structure (roof and walls) for first floor - second floor structure is semi-pucca - light - some ventilation - proper foundations - steel door - sanitation and grey water drains	- load bearing structure (roof and walls) - light - some ventilation - proper foundations - steel door - balconies - sanitation and grey water drains	- load bearing structure (roof and walls) - light - some ventilation - proper foundations - steel door - balconies - sanitation and grey water drains	- load bearing structure (roof and walls) - light - some ventilation - proper foundations - steel door - balconies - sanitation and grey water drains - air conditioning

INTRODUCTION

This Thesis objective is to expose the negative impacts of the present social housing mass production model, and then to analyze the possibilities of a coherent alternative to housing based on identity, sense of community and uniqueness which could consistently improve the dwellings and the built environment. The main idea is to find inspiration and to develop a new concept for social housing.

The expandable housing project in Bangalore, in the state of Karnataka, in India is sensitive to the challenge of housing as mentioned above as well as accommodating the influx of migrants who come in search of better income and higher wages and the ever growing IT hub of the country.

Hence, flexibility of dwelling units with crucial income generating spaces which manage its own water, sewage and electricity systems. Thus, making it a new sustainable housing community that responds to the issues of a rapidly growing city.

First, six different housing typologies were designed. Each house type can have up to three different possible additions(2, 3, 4 bedroom from the base 1 bedroom house) that can be built along the years based on the necessity of each family.
The possible income generating spaces include -
1) Convenience store
2) Food stalls
3) Motorbike and car repair
4) Taylor shop
5) Printing and photocopy/ stationary store
6) service apartments/ room for rent
7) Cottage industries/ workshops
8) Beauty salon
9) Household goods
10) Automated teller machine

THE REAL DEAL

In the absence of any meaningful intervention, is slated to double to 38 million units of this deficit for the EWS (Economically Weaker Sections) and LIG (Low Income Group) segments). While this number is huge, there is also a substantial chunk of 'the emerging middle class', who are also deprived of decent living conditions which would further aggravate the proliferation of unplanned and unsustainable urbanisation. Statistics show that more than 80% of this category are staying in congested homes.

The lack of available housing options, combined with limited income and minimal access to home finance for low income borrowers, means that millions of Indian households currently live in cramped, poorly constructed houses/slum areas/shanties. They lack access to a clean and healthy environment, with even basic amenities such as sanitation, clean water, sewage, waste management and electricity often absent. Thus, 'Affordable Housing' is an idea whose time has come, and sooner rather than later, planned sustainable urbanisation will have to be by default and not by choice.

Consequences of Urban sprawl in Bangalore

PROBLEM - SOLUTION

The following are the key issues gathered from the lifestyle and conditions of living of the community I am working for, to provide respective solutions by proposing a planned scenario which further brings organization within the settlement and facilitates the proper function and enhances the living conditions of the dwelling community.

• Incremental housing can be defined as a gradual step-by-step process whereby building components are appended or improved by owner-builders as funding, time, or materials become available. In this way, the costs of housing construction can be reduced, especially compared with the housing delivery by contractors - ECONOMICAL ASPECTS.

• The material selection and vernacular style of architecture reduces cost in both material purchase and efficient labour who are well worse at this style - ECONOMICAL ASPECT.

• Choice of various styles of houses with range of building plot sizes attracts people belonging to different classes in the economic ladder and encourages interaction and thus narrowing down the boarders - SOCIAL AND ECONOMICAL ASPECTS.

• The incorporation of passive cooling building techniques and planning makes it a sustainable solution of living - ENVIRONMENETAL ASPECTS.

Site displacement of residents within the delineation.

• Within the site, hierarchy of open, community spaces are introduced for gatherings and other social activities to happen at various scales, from each individual house level (terraces) to cluster level to biggest site level community spaces from simple space for chatting to arenas for community level festival celebrations - SOCIAL ASPECTS.

• The amalgamation of green terraces and interwoven green community spaces along with the family swellings makes it a green solution - ENVIRONMENTAL ASPECT

• The current unrestricted growth in many urban areas of housing, commercial development, and roads over large expanses of land, with little concern for urban planning is dealt with a properly planned settlement following all the byelaws with further development only with legal permits.

• When family demands an expansion, the family can simply do so at the same plot without the tedious displacement of themselves and their belongings.

• Organized and planned spaces for various commercial occupancy helps in the proper functioning and aesthetic aspects of the settlement.

• Allotted spaces for vehicular parking answers the problem of insufficiency of place to park vehicles which leads to road blockage due to unassigned spaces for parking on the road.

• By dedicating separate spaces for congregation, parking, daily routines and activities like washing, poultry, drying of clothes gives a great level of order to the site, decorum and increased hygienic levels of living.

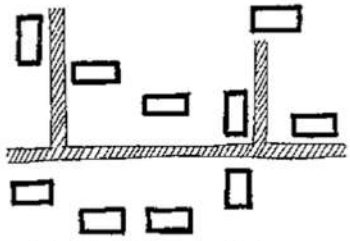
• Effortless expansion at individual dwelling level happens by self built floors as requirements demand for each family, without the use of expensive, space consuming equipments like cranes, RMC, etc., thus not causing inconvenience for current residents within and around the site .

• The intent of keeping the settlement low rise is simple to increase all these interactions between families to create a close knit community.

Current site conditions of congested living, hygiene and sanitation standards

PART SIX

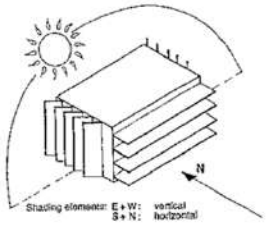
PRINCIPLES



Typical settlement for warm-humid regions.

Indoor/Outdoor connection diagram.

Natural Ventilation and Light Diagram.



Different types of shading devices for each facade (Climate responsive Building).

• Each expandable unit contains technologies, material strategies and planning guidelines that can develop in different ways depending on local social, cultural and environmental conditions.
• The only fixed element is the ground floor units, which are the Base units that include 1 bedroom homes of all the 6 different shape typologies of housing units.
1. The base unit will be built with conventional materials and methods - an RCC foundation that can supports upto 6 floors, RCC beams and column framework onto which modular walls with openings for doors and windows comprising of locally available and affordable building materials. This shall be constructed and financed by the developer or government housing agency.
2. Further, the system allows flexibility where the residents provide infill and expand further in accordance with their circumstantial requirement and budget allowance. These additions are made with Aerated concrete which are characterized by their uniformity, low weight, high thermal insulation, stability and easy machinability (blocks can be cut as desired). allowing construction up to 5-storeys.
• Rainwater harvesting, sewage and septic tank systems, solar electric generation, and passive cooling techniques are integrated in each of these expandable units.
Making it affordable and a self reliant community.

Passive Design techniques and essential tropical criteria:
• Open interior space with minimal partitions, allowing optimum ventilation.
• Roof with sufficient slope for collection of effective rainwater runoff.
• Large roof eaves and balconies for effective sun shading.
• Fully open able windows made with locally produced bamboo with a low thermal capacity for cooler house interiors.
• Terrace gardening surrounding vegetation reduces the heat of buildings and energy costs.
• Linear configuration of unit plans with operable windows on opposite wall enhances cross ventilation effect and cools the interiors.
• Open plazas and gathering spaces through the community. where several types of events, like concerts, fairs, or farmers markets will happen.
• Owner participation on the construction (self-built)
• Sustainable features: cross-ventilation, natural light, rainwater harvesting/recycling, green roofs, small urban agriculture, use of cheap/local materials, pre-fab modules.
In this thesis the idea is to discuss and develop house production in legal situations through the self-building process of individual families and their need for technical support.

PART FIVE

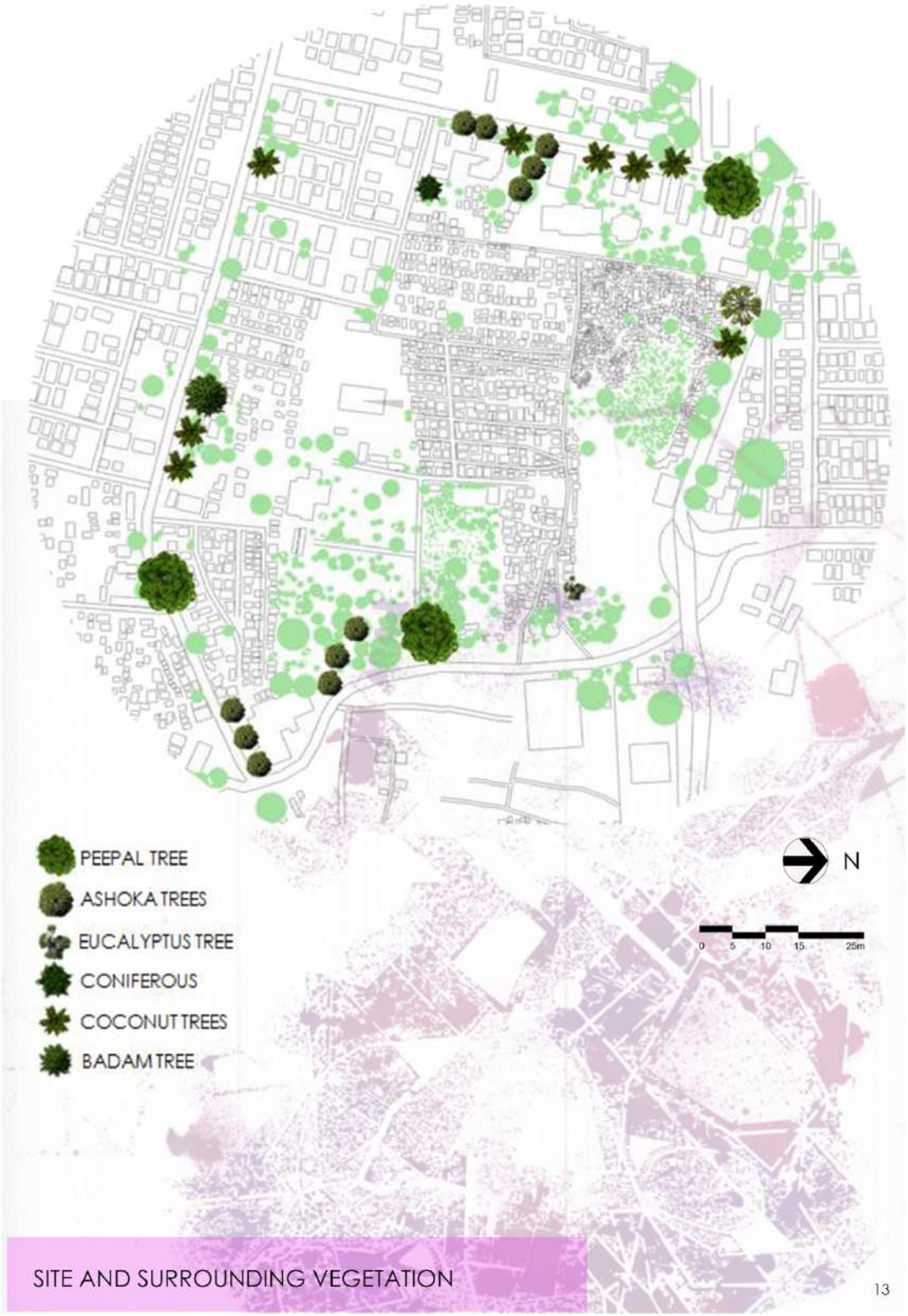
ANALYSIS

India lies on the Indian Plate, the northern part of the Indo-Australian Plate, whose continental crust forms the Indian subcontinent. The country is situated north of the equator between 8°4' north to 37°6' north latitude and 68°7' east to 97°25' east longitude. It is the seventh-largest country in the world, with a total area of 3,287,263 square kilometres. India measures 3,214 km from north to south and 2,933 km from east to west. It has a land frontier of 15,200 km and a coastline of 7,516.6 km.

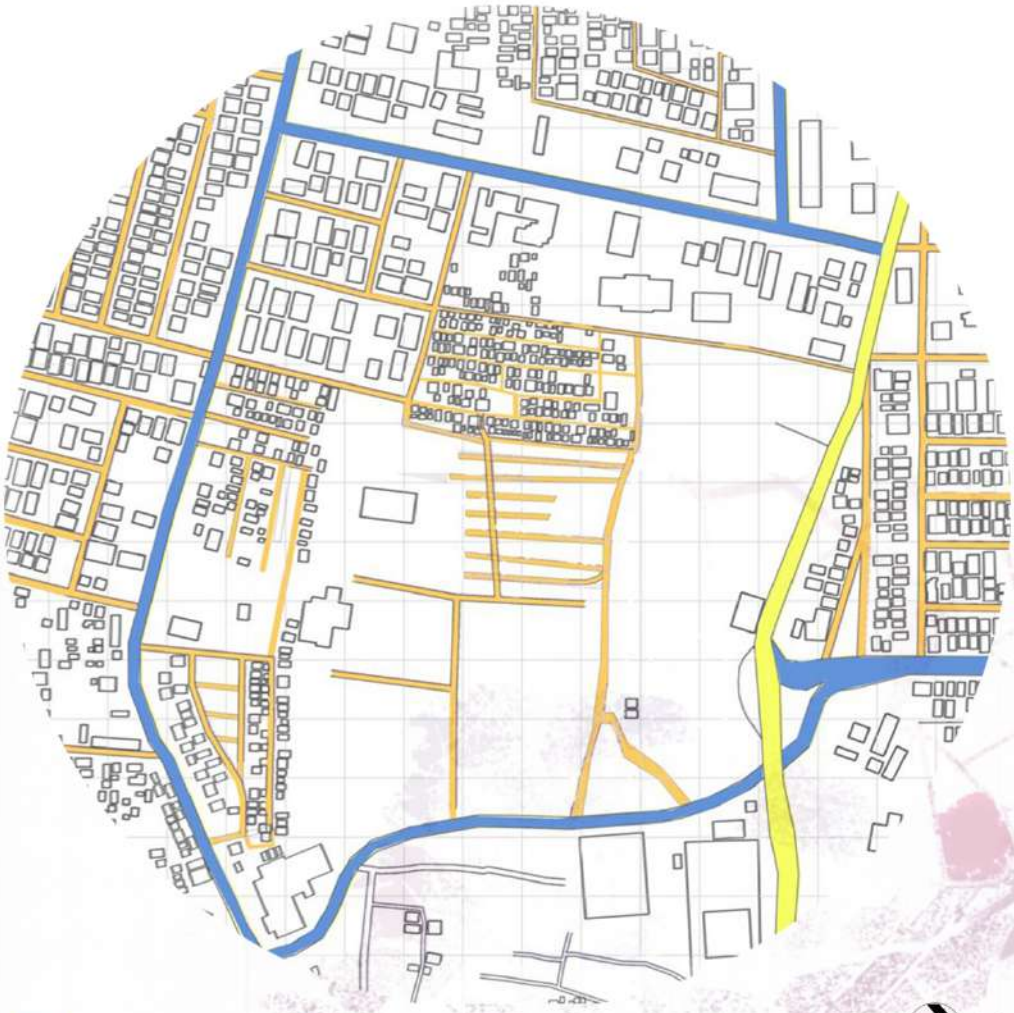
India is divided into 28 States (further subdivided into districts) and 8 union territories including the National capital territory (i.e., Delhi). India's borders run a total length of 15,200 km (9,400 mi).

Bangalore, officially Bengaluru, is the capital of the Indian state of Karnataka. It has a population of over ten million, making it a megacity and the third-most populous city and fifth-most populous urban agglomeration in India. It is located in southern India, on the Deccan Plateau at an elevation of over 900 m (3,000 ft) above sea level. It is multi-ethnic, multi-religious.[promotional language] and cosmopolitan character[promotional language].

LOCATION

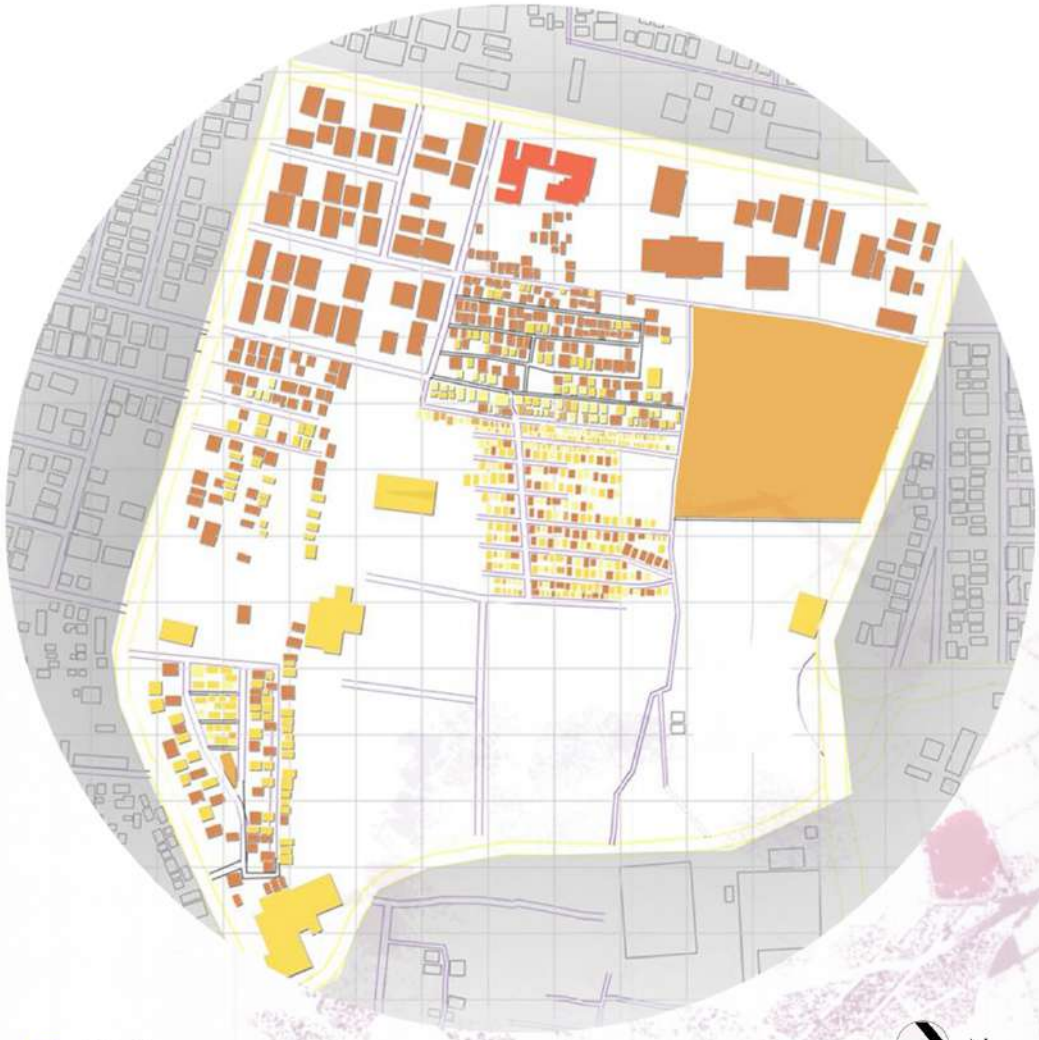


SITE AND SURROUNDING VEGETATION

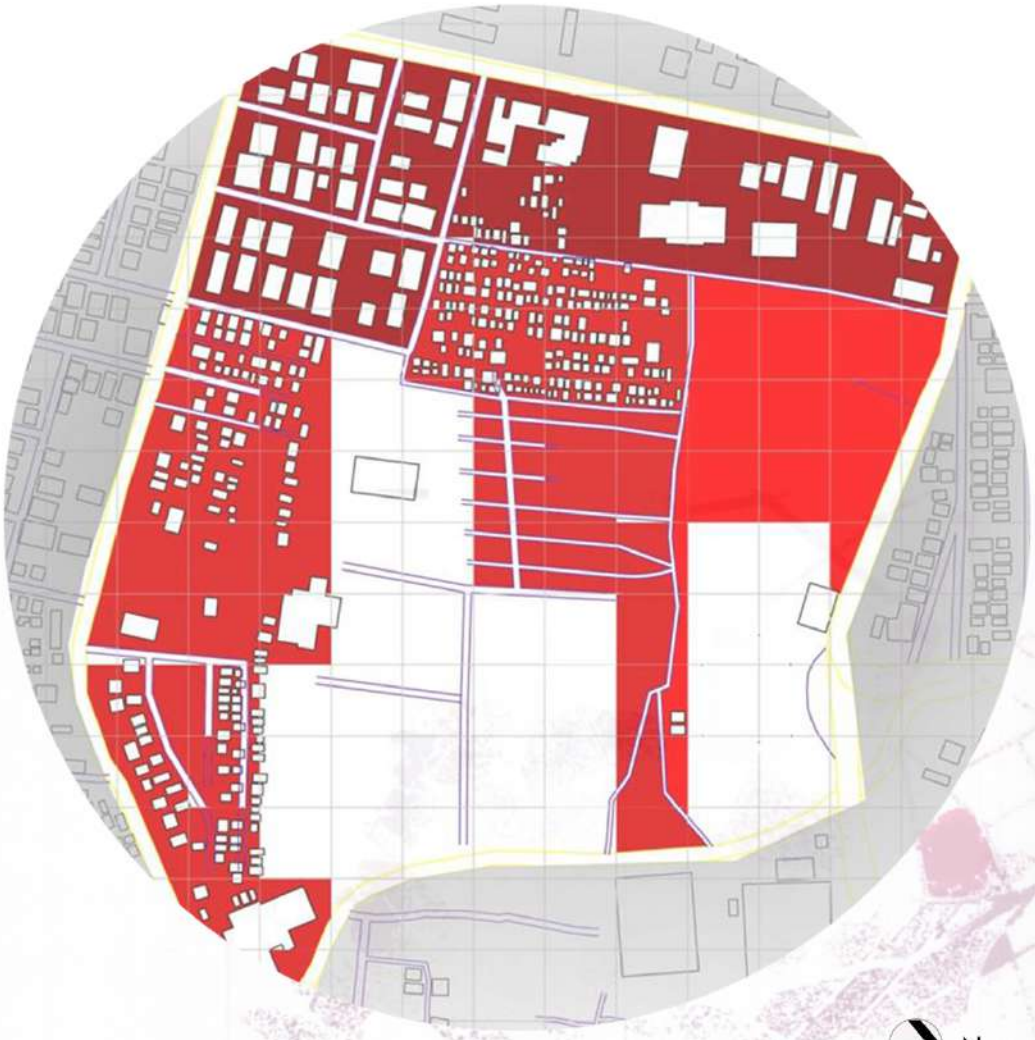


SITE AND SURROUNDING ROAD NETWORK

SITE AND SURROUNDING GREEN SPACE COONECTIVITY



SITE AND SURROUNDING BUILDNG HEIGHTS



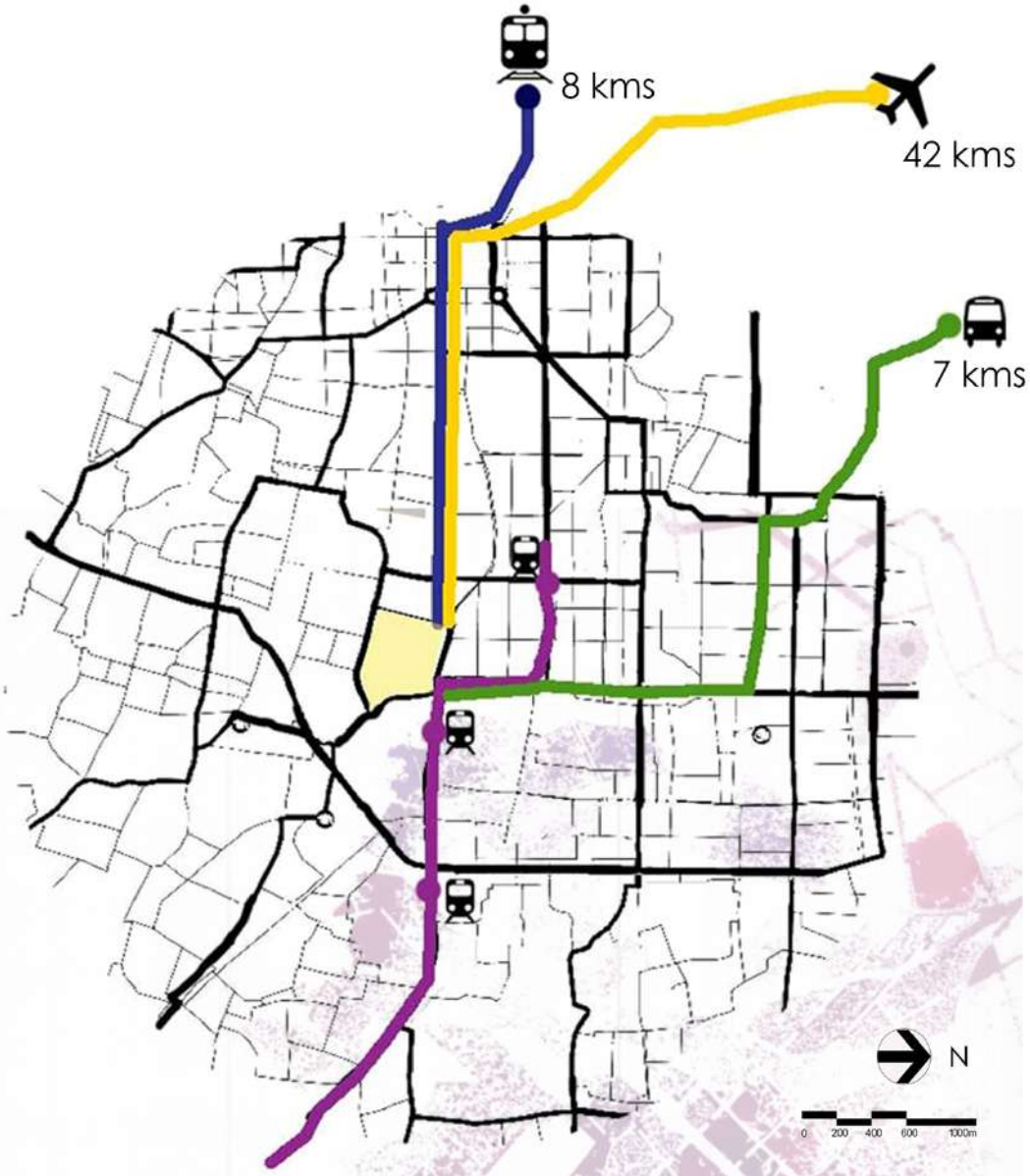
Moderately populated
Highly populated
Densely Populated

N

0 5 10 15 25m

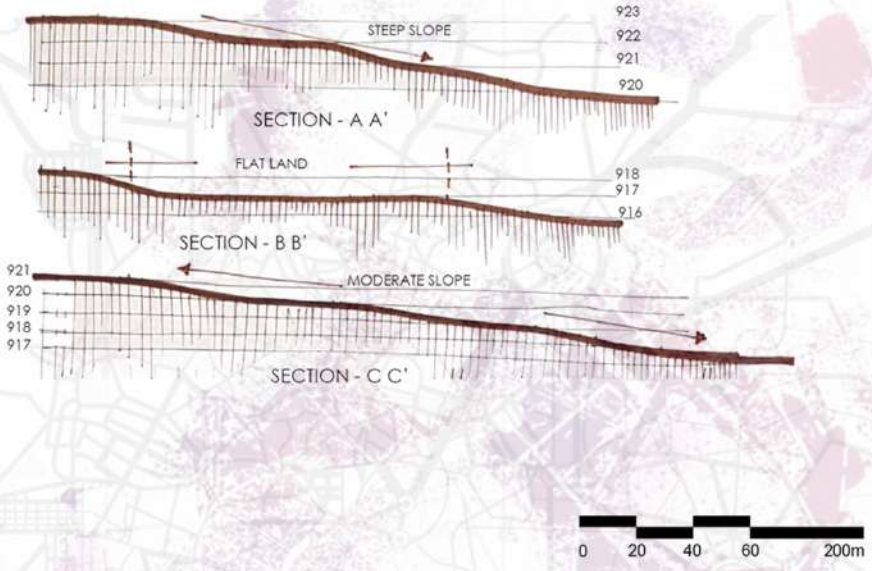
SITE AND SURROUNDING POPULATION DENSITY

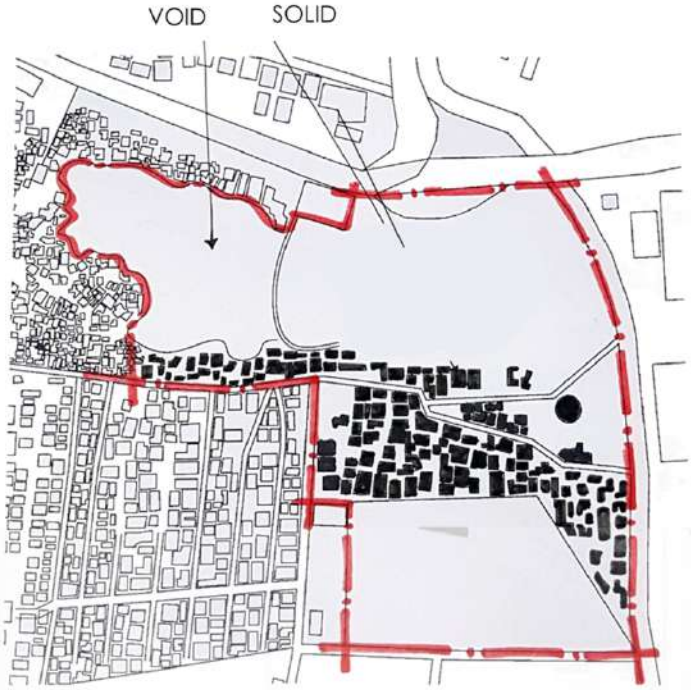
SITE AND SURROUNDING ECONOMIC GROUPS

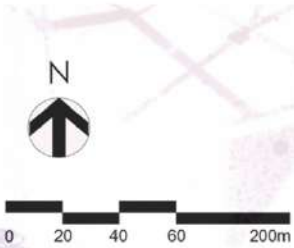


SITE AND SURROUNDING COMMUTING LINKAGE

TOPOGRAPHY - SLOPES

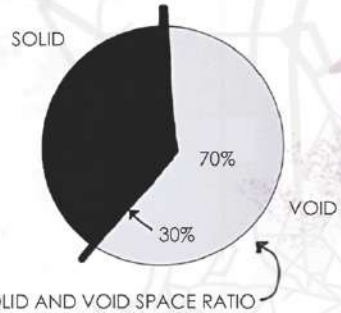






PHYSICAL PARAMETERS

- SPATIAL PATTERN



HAPAZARD (NO SIGNIFICANT ARCHITECTURAL PATTERN)
THUS REDEVELOPMENT WOULD BE APT

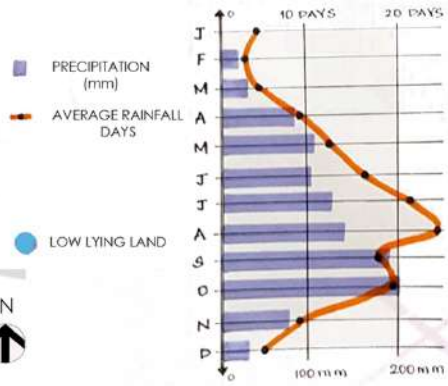
RATIO OF EMPTY SPACES IS MORE THAN THE RATIO OF BUILT-UP SPACE

SITE STUDY - SPATIAL PATTERN (SHWARZ PLAN)

MAXIMUM RAIN WATER IS COLLECTED ON LAND WITH MAXIMUM VEGETATION DUE TO LOWEST LYING CONTOURS

CLIMATIC ANALYSIS

- PRECIPITATION (RAINFALL) AND ORIENTATION



CLIMATIC ANALYSIS

- PREVAILING WIND TYPE AND DIRECTION

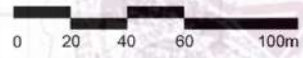
PREVAILING WIND DIRECTION IS FROM "SW" TO "NE" ACROSS THE SITE

THE PRESENCE OF A WATER BODY IN THE VICINITY MAKES THE AIR, MOISTURE LADEN

WIND FUNNELING EFFECT OBSERVED, DUE TO THE PRESENCE OF TREES

PRESENCE OF VEGETATION ALSO HELPS IN DECREASE IN SOIL EROSION LEVELS

OVERALL, A COMFORTABLE MICRO CLIMATE



COOLEST TOWARDS THE PERIPHERY BECAUSE OF VEGETATION AND INTERIOR LOCATION

CLIMATIC ANALYSIS

- TEMPERATURE ANALYSIS

HOTTEST TOWARDS THE MAIN ROAD DUE TO VEHICULAR MOVEMENT AND LACK OF TREES

NO SHADE FROM TREES IN ANY DIRECTION (HOTTEST)

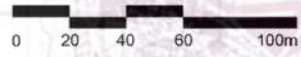
CLIMATIC ANALYSIS

- SUN PATH AND SOLAR INTENSITY AND VEGETATION

- LARGE TREES ACT AS VISUAL MARKER
- SITE CONSISTS OF A VARIETY OF TREES WITH LARGE CANOPIES
- SHADED REGIONS

POTENTIAL REDEVELOPMENT AREA FOR RECREATION AND GREEN SPACES

- SHADED REGIONS AT DIFFERENT TIMES OF THE DAY

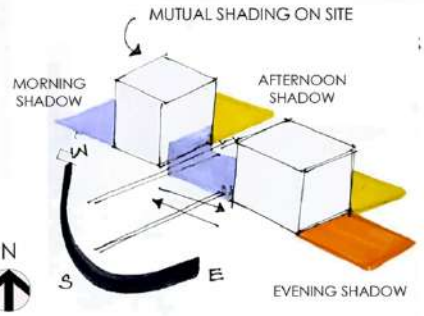


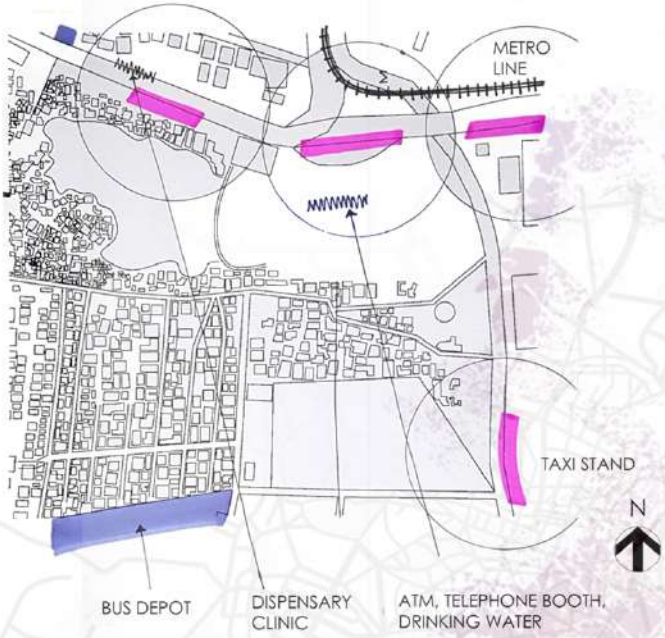
SITE STUDY - NATURAL FEATURES

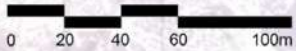
PHYSICAL PARAMETERS

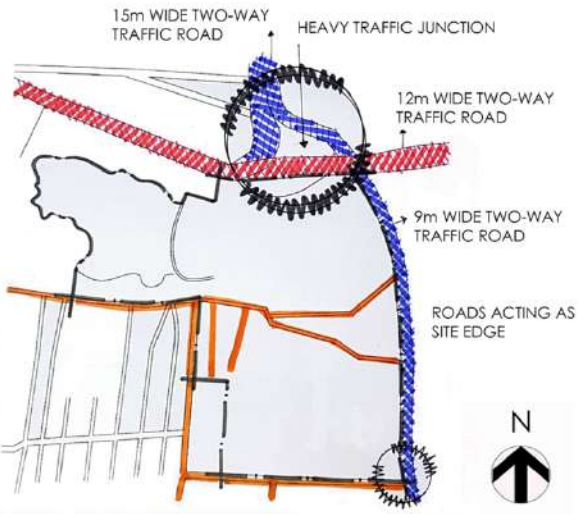
- SHADOW ANALYSIS

THE NON SHADED REGIONS NEED TO BE SHADED BY VEGETATION OR BY OTHER TREATMENT.





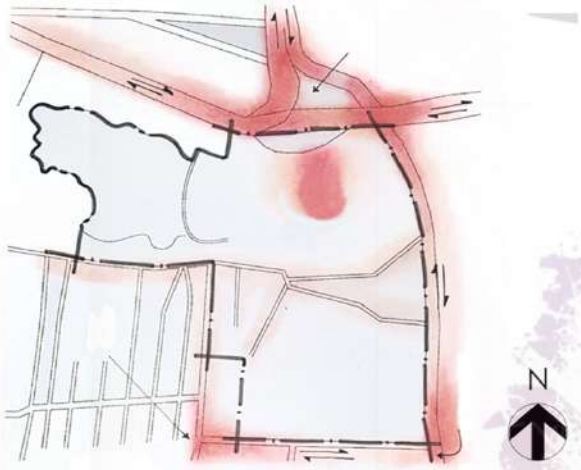




CIRCULATION

- ROAD NETWORKS (CLASSIFICATION, TRAFFIC MOVEMENT, NODES AND JUNCTIONS)

— SECONDARY ROAD
— PRIMARY ROAD
— TERTIARY ROAD



MIN.

VEHICULAR DENSITY

MAX.

CIRCULATION

CIRCULATION VEHICULAR AND PEDESTRIAN DENSITY)

PEAK HOURS OF TRAFFIC

MORNING

9:00

13:00

19:00

EVENING

MAX.

REDESTRIAN DENSITY

MIN.

0 20 40 60 100m

25

SITE STUDY - MANMADE FEATURES

N

(A) , (B) AND (D)

- CORNER PARCEL OF LAND - TWO SIDED EDGES - INTERSECTION
- HIGHEST ALTITUDE IN THE SITE - **CREATING POTENTIAL LANDMARK**
- HAS A COOL ENVIRONMENT - **IN THE DIRECTION OF PREVAILING WIND - AND ALSO ADJACENT TO GREEN SPACE**
- RECEIVES DIFFUSED SOUTH WEST HARSH SUNLIGHT

CHARACTER OF LAND PARCEL

- ALONG THE CONTOUR LINES
- **MINIMAL NATURAL DRAINAGE**
- EASY EXTERIOR ROADS ACCESS
- GETS GOOD VIEW FROM EXTERIORS
- **INCREASES INFLOW OF PEOPLE INTO THE SITE**

POTENTIALS OF LAND PARCEL

- BEST SUITED AS COMMERCIAL LAND
- WORKABLE NOISE BUFFER INTO THE SITE
- POTENTIAL PUBLIC SPACE TOO

(C)

- RELATIVELY MORE SILENT AND COOL FROM ADJACENT **VEGETATION**
- ACCESS FROM **SECONDARY ROADS**

CHARACTER OF LAND PARCEL

- ALONG THE CONTOUR LINES AND NOT AGAINST IT
- HAS GOOD VIEWS WITHIN THE SITE
- LOWEST NOISE AND DUST LEVELS

POTENTIALS OF LAND PARCEL

- POTENTIAL HOUAING AND QUIET RECREATIONAL SPACE
- ENHANCEMENT OF **EXISTING GREEN** BY CONNECTING WITHIN THE SITE

(E)

- CENTRAL LAND PARCEL
- CONNECTS THE TWO SIDES OF SITE
- COOL TEMPERATURE AS ITS SURROUNDED BY VEGETATION
- RELATIVELY LESS NOISY

CHARACTER OF LAND PARCEL

- ORGANIC AND CONNECTING
- RELATIVELY LESS ACCESSED
- **MAKE IT ACCESSABLE FROM WITHIN**
- SCOPE FOR BUILT OR UNBUILT WITH HIGH CONNECTING FEATURE OF DIFERENT SPACES OF SITE - PRIVATE SPACE

POTENTIALS OF LAND PARCEL

- POTENTIAL PRIVATE SPACE FOR HOUSING WITH GREEN CONNECTIONS WITHIN SITE

(F)

- HEART OF THE SITE - **THUS A POTENTIAL HUB**
- CONNECTS THE LAND PARCELS ON DIFFERENT SIDES OF SITE

CHARACTER OF LAND PARCEL

- EVERY LAND PARCEL CONNECTED TO THIS INTERNALLY
- LOW LYING LAND PARCEL IN THE SITE
- SECLUSION ALLOWS LESS DUST AND NOISE HERE
- POTENTIAL ATTRACTION WITHIN THE SITE

POTENTIALS OF LAND PARCEL

- POTENTIAL PRIVATE SPACE FOR HOUSING WITH GREEN CONNECTIONS WITHIN SITE - **COMMUNITY SPACE**
- PEDESTRIAN ACCESS ONLY
- POTENTIALLY PROVIDING AESTHETIC VIEWS FROM WITHIN THE SITE

(G)

- ADJACENT TO THE COMMERCIAL ZONE
- **HIGH LEVELS OF NOISE AND DUST**
- LACKS THE PRIVACY LEVELS
- POTENTIAL BUFFER SPACE LIKE GREEN OR SERVICE CORE
- LACKS DIRECT ACCESS TO EXISTING ROADS
- **THUS CREATE INTERNAL CONNECTIOMS**

(H)

- CORNER PARCEL OF SITE WITH TWO MINOR ROADS AS EDGES - **GOOD FRONTAGE**
- FACING THE INTERIOR, THUS LESS NOISE AND POLLUTION
- COOL WITH VEGETATION COVER AND AGAINST THE PREVAILING WIND DIRECTION

POTENTIALS OF LAND PARCEL

- POTENTIALLY PROVIDING AESTHETIC VIEWS

0 20 40 60 200m

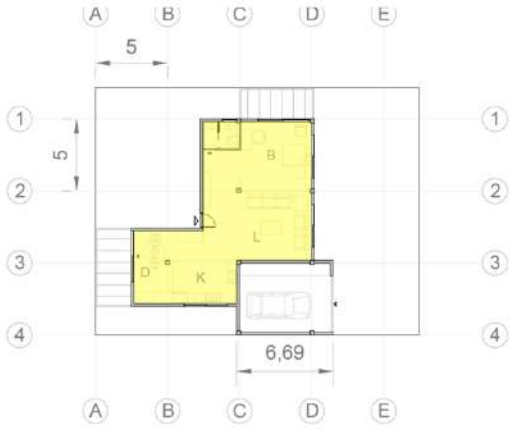
SITE STUDY - CULMINATION ZONING

Sl.No.	Spaces	No of People	Area Sq.m
Residential			
Typology 1	(possible variants)		
1	1 BHK	2	30
2	1 BHK + Dining	2	36.25
3	2 BHK	4	48
4	2 BHK + Dining	4	54.25
5	3 BHK	5	80
6	4 BHK	6	120.25
Typology 2	(Luxury units)	(possible variants)	
1	1 BHK + Dining	2	40
2	2 BHK + Dining	4	60
3	3 BHK + Family room	5	128
4	4 BHK + Family room	6	152
Community spaces + Commercial			
1	Shopping center	200	810
2	Café	50	160
3	Restaurants	80	250
4	Super market	200	420
5	Pharmacy	30	120
6	Galleries	50	120
7	Library	50	150
8	Fitness center	40	150
9	Auditorium	80	160
10	Communal care- (for elderly and children)	30	120
Recreational and other spaces			
1	Office spaces	100	120
2	Open air theatre	100	200
3	Play area	60	120
4	Parks	80	180
5	Cycling lane		
6	Urban farms		800
7	Service core		800

AREA PROGRAMME

PROPOSALS

1 BHK	2 BHK	3 BHK	4 BHK	
 FAR = 0.65	 FAR = 1	 FAR = 1.56	 FAR = 1.875	**PATIO TYPOLOGY**
 FAR = 0.52	 FAR = 1	 FAR = 1.76	 FAR = 1.96	**C - TYPOLOGY**
 FAR = 0.67	 FAR = 1	 FAR = 2.2	 FAR = 2.5	**FREE STANDING TYPOLOGY**
 FAR = 0.59	 FAR = 1	 FAR = 1.52	 FAR = 1.74	**L - TYPOLOGY**
 FAR = 0.84	 FAR = 1	 FAR = 1.5	 FAR = 1.68	**COURTYARD TYPOLOGY**
 FAR = 0.75	 FAR = 1	 FAR = 1.7	 FAR = 2	**SHIFTED SLAB TYPOLOGY**



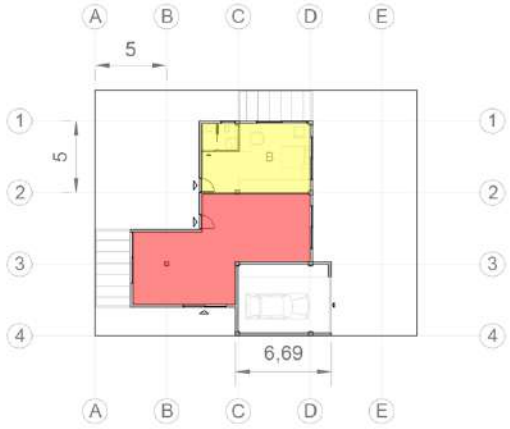
PATIO - 1 BHK

NET SURFACE AREA = 100 sqm

OPTION 1 - FULL DWELLING

COMMERCIAL - DWELLING WORKABILITY

@ SINGLE DWELLING LEVEL

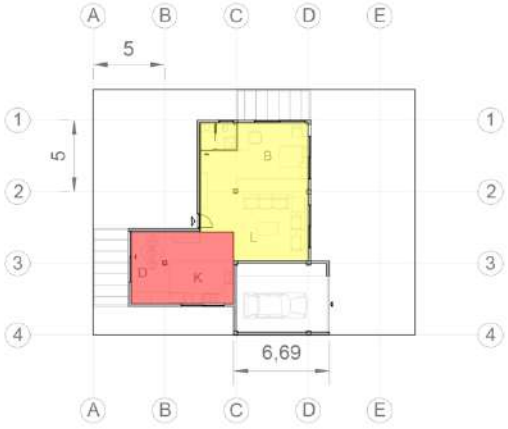


PATIO - 1 BHK

NET SURFACE AREA = 100 sqm

OPTION 2 - 30% DWELLING and 70% COMMERCIAL

COMMERCIAL - DWELLING WORKABILITY

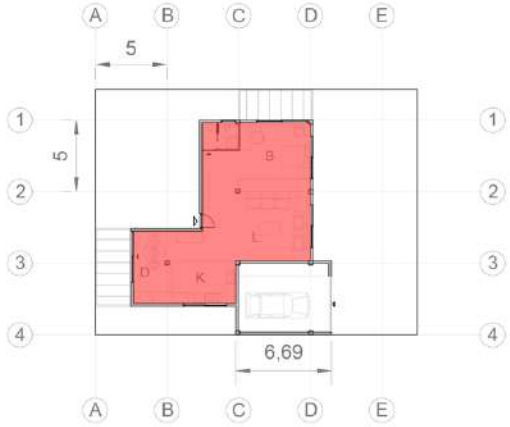


PATIO - 1 BHK

NET SURFACE AREA = 100 sqm

OPTION 3 - 70% DWELLING and 30% COMMERCIAL

COMMERCIAL - DWELLING WORKABILITY

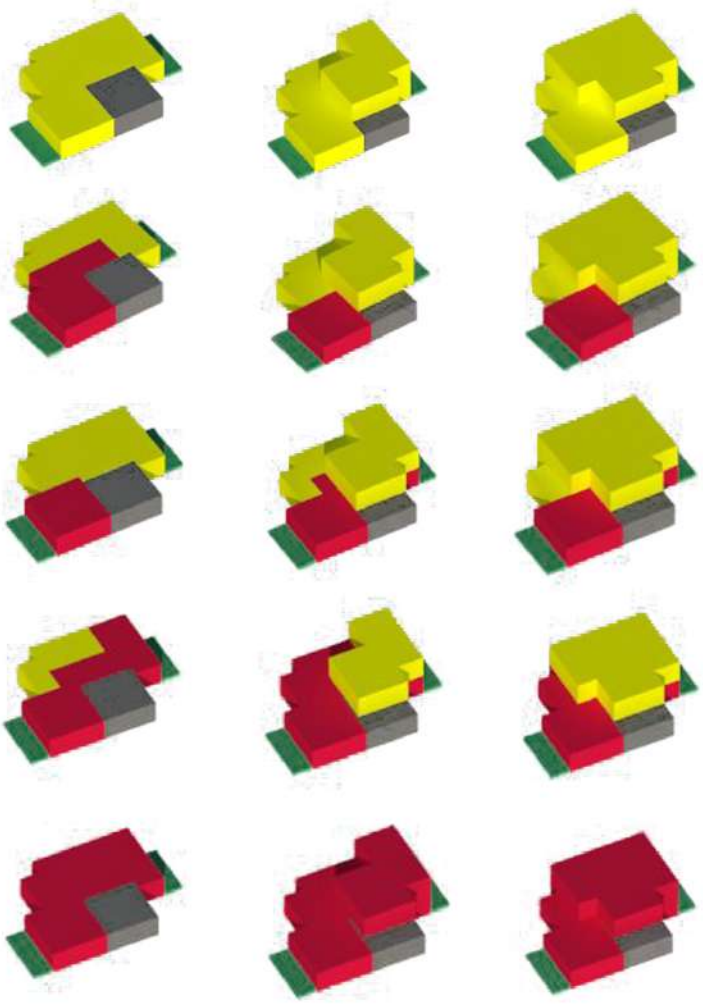


PATIO - 1 BHK

NET SURFACE AREA = 100 sqm

OPTION 4 - FULL COMMERCIAL

COMMERCIAL - DWELLING WORKABILITY



Residential
Income generating space
Car garage
Balcony

The possible income generating spaces include -

Convenience store
Food stalls
Motorbike and car repair
Taylor shop
Printing and photocopy/ stationary store
Service apartments/ room for rent
Cottage industries/ workshops
Beauty salon
Household goods
Automated teller machine

PATIO - 2 BHK

NET SURFACE AREA = 160 sqm

VARIABLE RATIOS OF DWELLING and COMMERCIAL

PATIO - 3 BHK

NET SURFACE AREA = 250 sqm

VARIABLE RATIOS OF DWELLING and COMMERCIAL

PATIO - 4 BHK

NET SURFACE AREA = 300 sqm

VARIABLE RATIOS OF DWELLING and COMMERCIAL

COMMERCIAL - DWELLING WORKABILITY

@ SINGLE DWELLING LEVEL





PATIO - 2 BHK

NET SURFACE AREA
= 160 sqm

VARIABLE RATIOS
OF DWELLING
and COMMERCIAL



PATIO - 3 BHK

NET SURFACE AREA
= 250 sqm

VARIABLE RATIOS
OF DWELLING
and COMMERCIAL

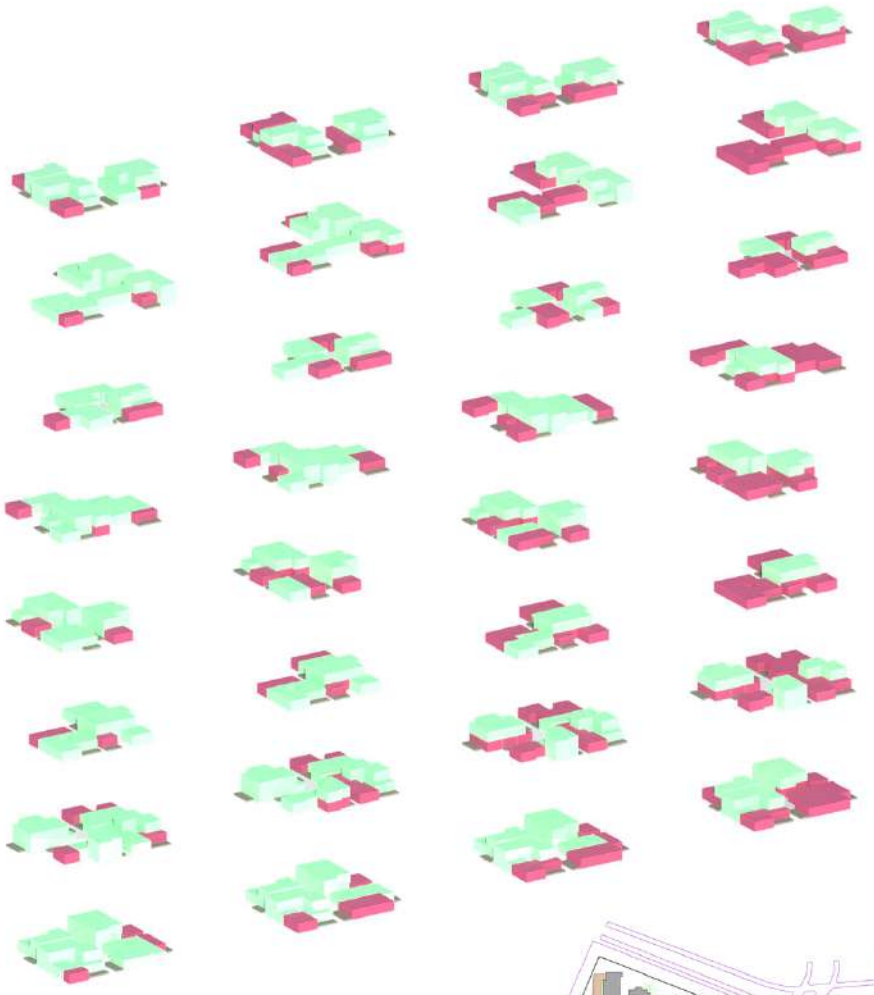


PATIO - 4 BHK

NET SURFACE AREA
= 300 sqm

VARIABLE RATIOS
OF DWELLING
and COMMERCIAL





Various possible options of achieving Commerciall to Dwelling relationships at cluster level -
Note the increase in commercial density from left to right, as indicated in the above graphics of a single cluster

CLUSTER COMPONENTS

PATIO - 3 BHK
C - 2 BHK
COURTYARD - 1 BHK
FREE STANDING - 2 BHK
SHIFTED SLAB - 2 BHK

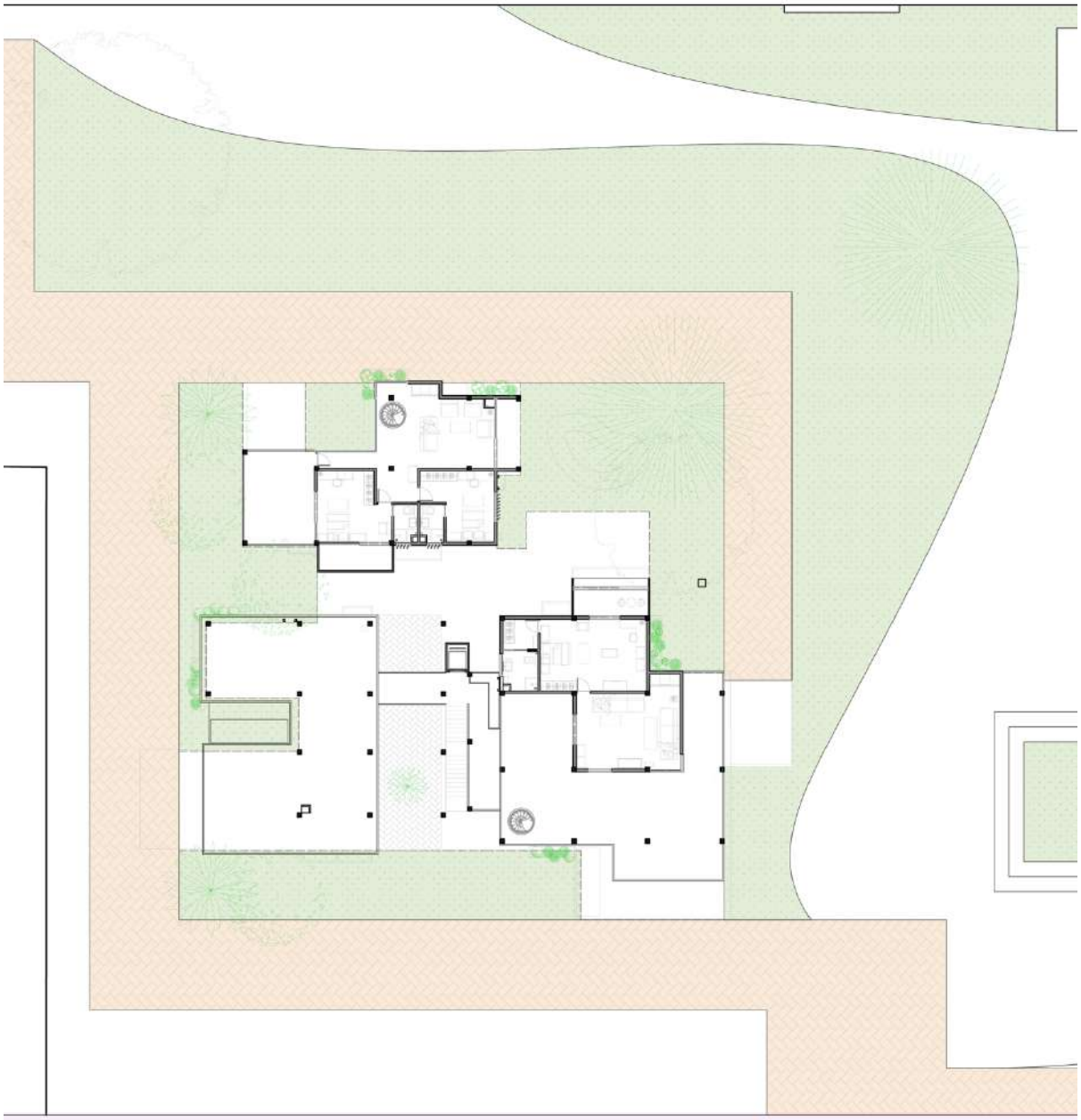
COMMERCIAL - DWELLING WORKABILITY

@ CLUSTER LEVEL

N

GROUND FLOOR CLUSTER PLANS
@ LVL 1.45m FROM GL

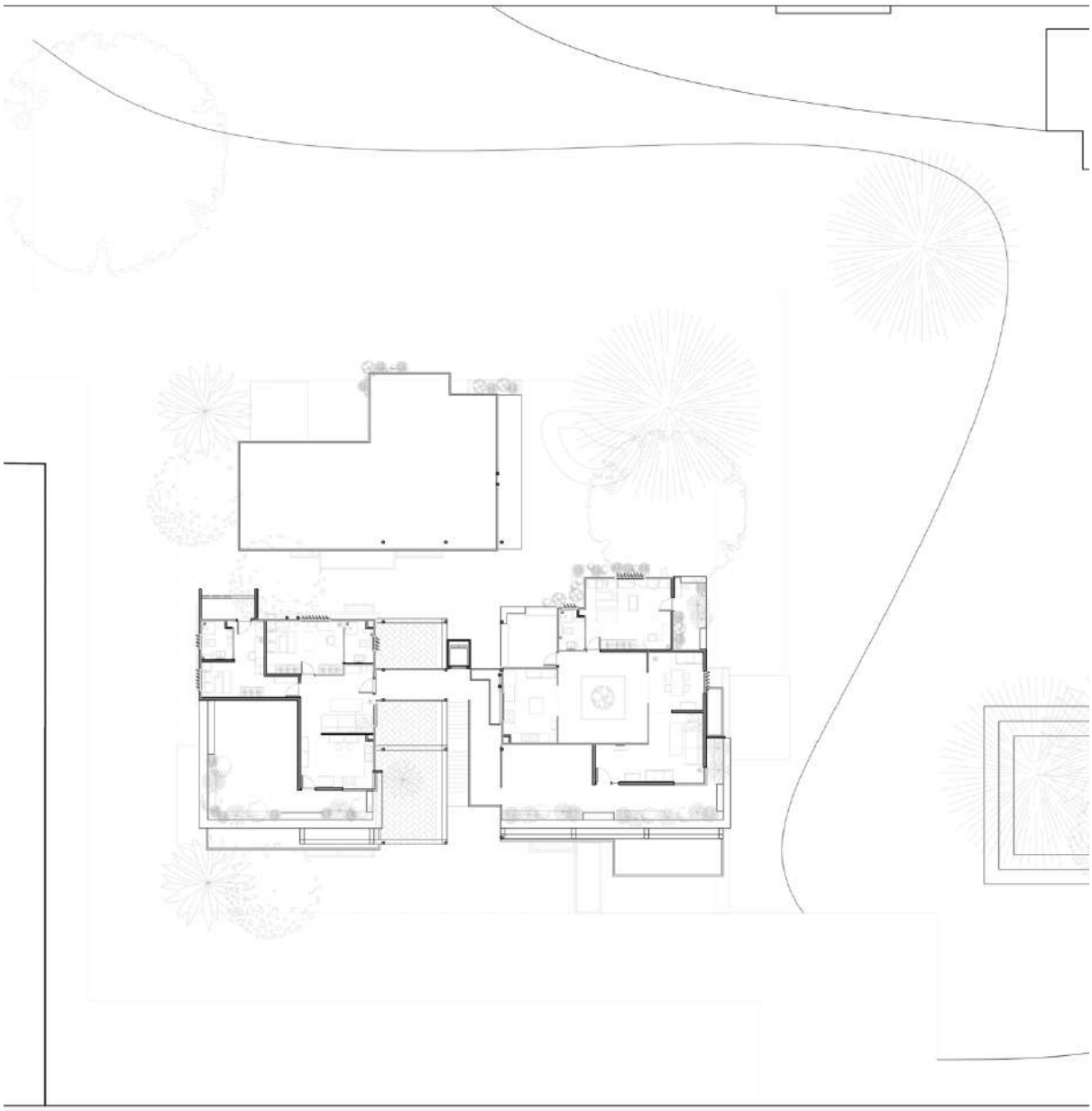
SCALE 1:500



N

FIRST FLOOR CLUSTER PLANS
@ LVL 4.5m FROM GL

SCALE 1:500

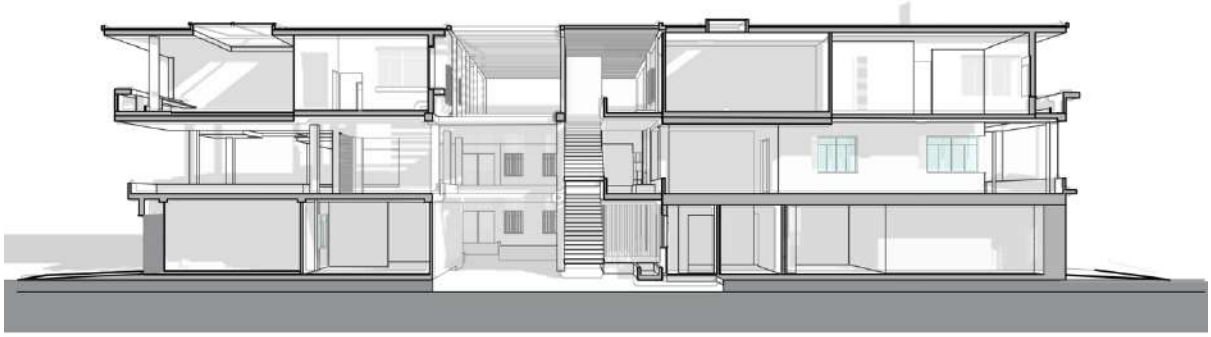


N

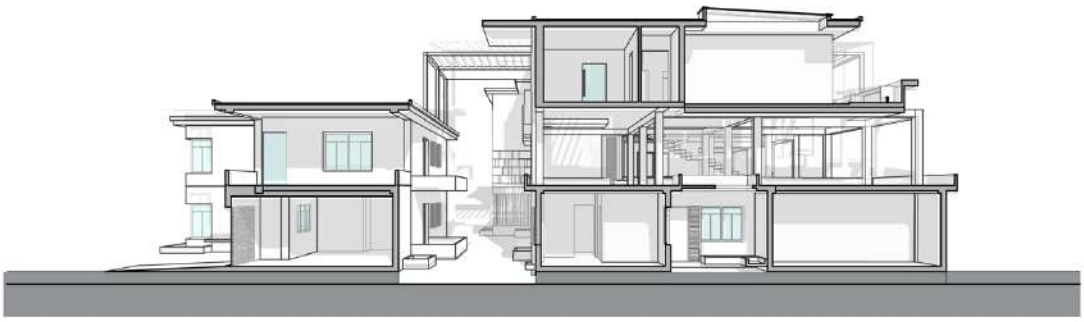
SECOND FLOOR CLUSTER PLANS

@ LVL 7.5m FROM GL

SCALE 1:400



SECTION X-X



SECTION Y-Y

CLUSTER SECTIONS

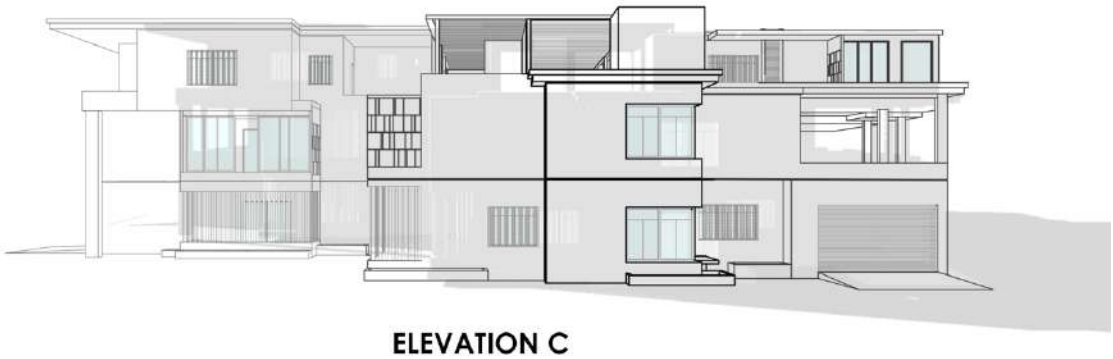
SCALE 1:200

ELEVATION A

ELEVATION B

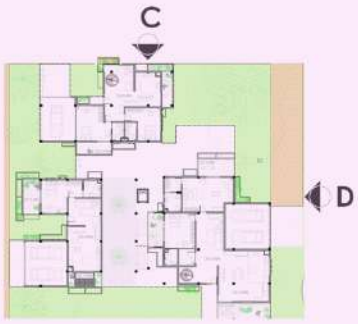
CLUSTER ELEVATIONS

SCALE 1:200



ELEVATION C

ELEVATION D



CLUSTER ELEVATIONS

SCALE 1:200

3 D VISUALISATIONS

DEPICTING ENTRANCE AND CENTRAL GATHERING SPACE

3 D VISUALISATIONS

DEPICTING A CLUSTER AND ITS SURROUNDINGS

3 D VISUALISATIONS

DEPICTING OUTDOOR LIFE

3 D VISUALISATIONS

DEPICTING CLUSTER

3 D VISUALISATIONS

DEPICTING THE BALCONIES

3 D VISUALISATIONS

DEPICTING THE SPACES WITHIN THE CLUSTER

3 D VISUALISATIONS

DEPICTING THE CLUSTER'S OUTLOOK

3 D VISUALISATIONS

DEPICTING THE COMMUNITY KNIT

ACKNOWLEDGMENT

The development of this thesis has been an intensive adventure. Having an architectural base from India, it has been very chalenging to blend the learnings so far to the practicality of the project according to all the necessary conditions of a region completey different. Challenging, though satisfying has been the whole process.

This, it wouldn't have been possible without the help of some amazing people I came across on my way.
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Working on this project was a joy and an extremely enlightening experience. I am glad I was able to put on it as much time and effort and would love to improve this project and see that it would be possible to realize something similar, hopeful of something beneficial to the problems and hardships faced in a city like mine and many others in the mordern world we all reside in.

Thank you for reading it and I would love to hear any thoughts and criticism regarding this project that would allow me to make it better and more though out.

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