

# nirvahana

An Off-grid Integrated Communal Living

/ neer-VAH-ane /  
Sustainability

The ability to exist constantly.

## Intent

The earth is at a crisis more than ever before because of its inhabitants and their way of living. The greed of Sapiens and depleting natural resources are all adding up to this. The need to change our lifestyle and to be more accomodative of nature is going to be a step towards change.

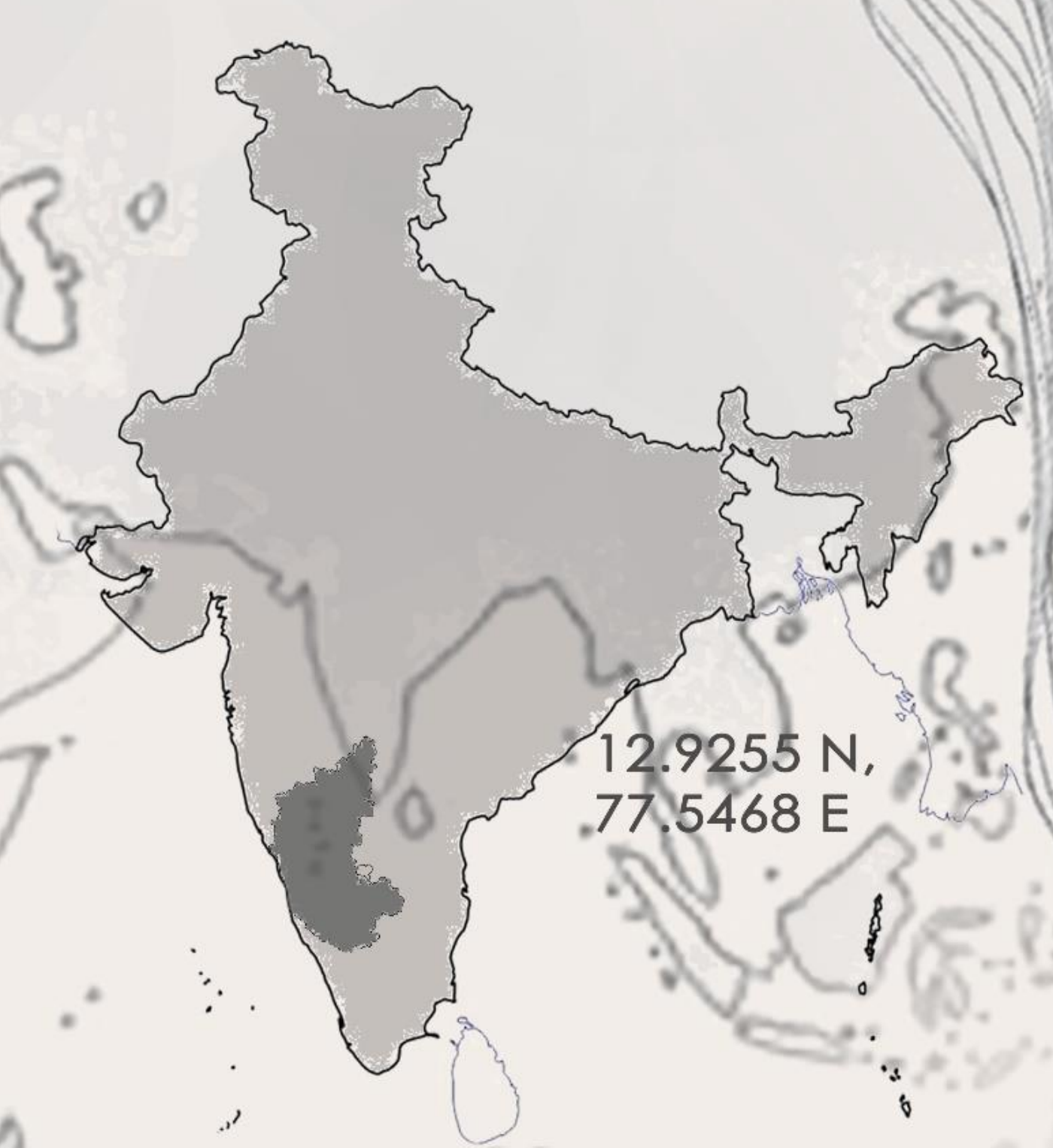
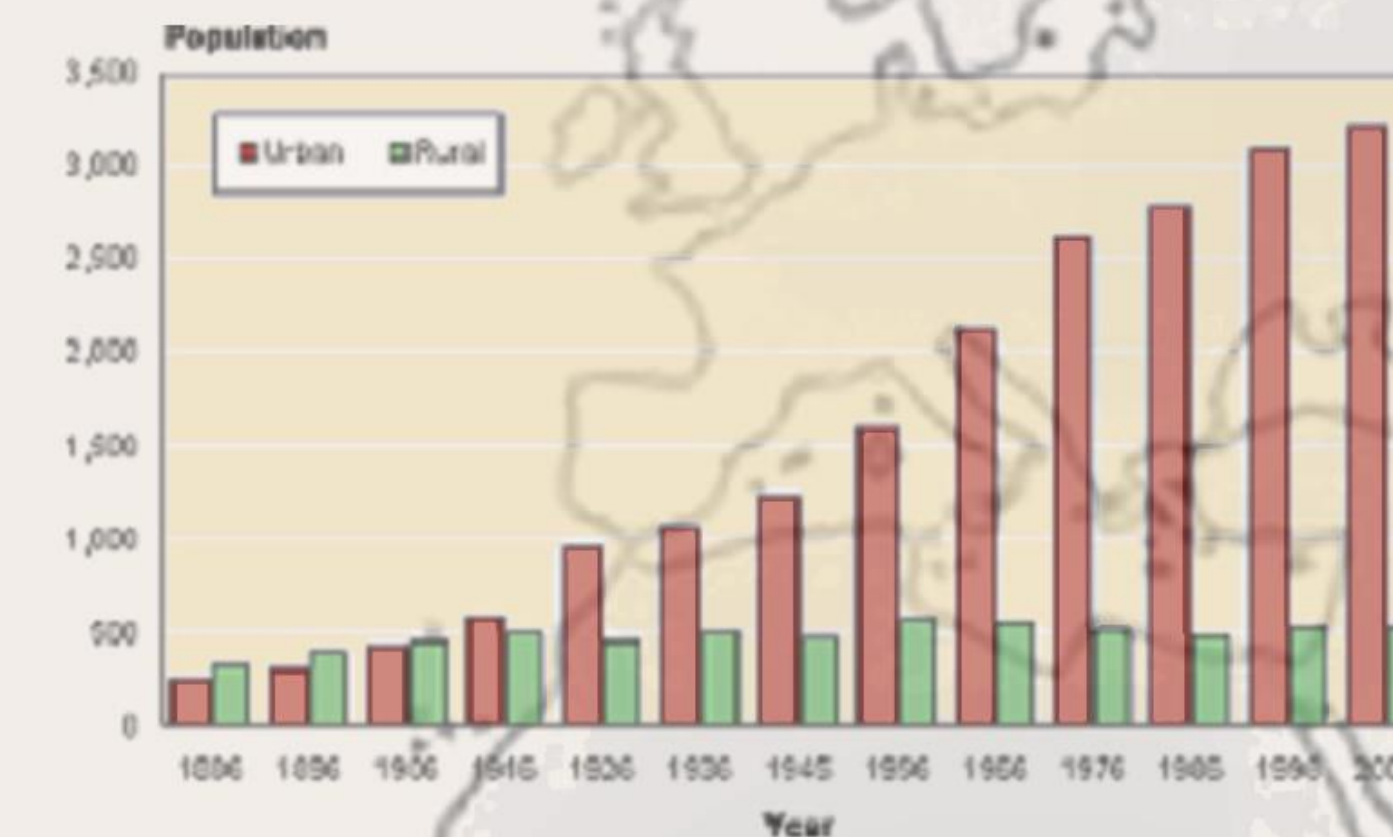
The project is a small step towards that change. The project premise is set in Bangalore, India. India is a diverse country with the world's second most populated country, with 22 major languages being spoken across various parts of the country, even architecture changes across the country. India has various climatic zones and architecture is seen to be relative.

The urbanisation has had an impact on the housing, with the large population being lower middle class get affected a lot. The living conditions have been deteriorating and the project deals along those lines. The 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 housing which could improve the dwellings and the built environment.

## Site Location

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 accomodating the influx of migrants who come in search of better income and higher wages and the ever growing IT hub in the country.

The site is located in the south of Bangalore with close proximity to the Metro and Bus station making it a busy neighbourhood. The surrounding areas are highly dense with a community of low-income colonies. The area has a high scope and in need for reformation of housing community. The locality stitches together to form a dynamic neighbourhood, with its narrow lanes, small houses and densely populated



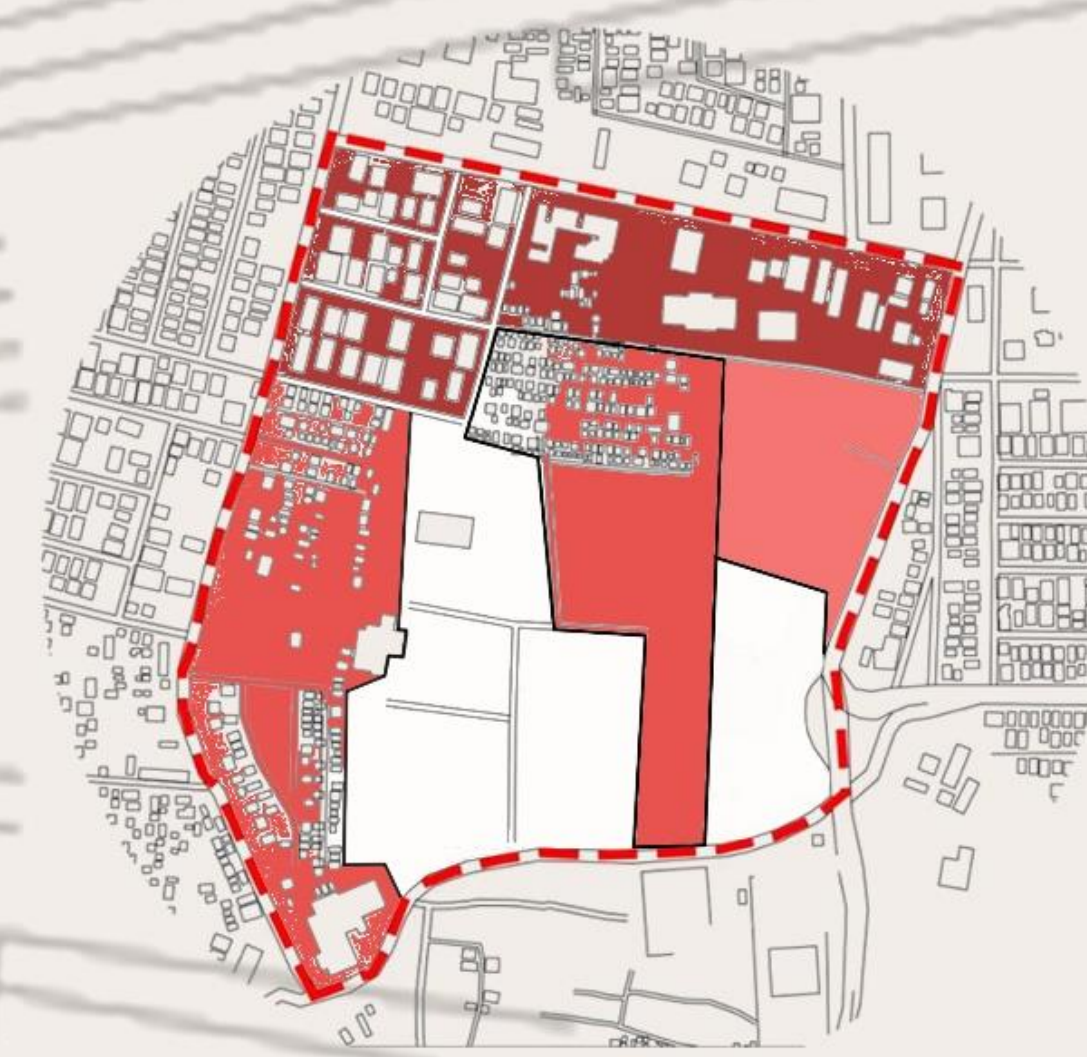
# Site Analysis :



Vegetation and Green Spaces



Road Networks



Population Density



Proximity

The inference from the above study gives us the information for the site and its surroundings. The proximity to major public transportation hub, and the dense housing community provides a much larger scope for development. The Primary road network adjacent to the site boundary will act as a main access road to the site. The site is surrounded by green areas which will be retained and also considering the increase in area for vegetation for further development. The housing community is fairly dense, with the poor living conditions of its residents. The decentralization of the community will serve to be helpful, the community is tight knit fabric with the residents used to living in similar circumstances.

# Intervention :

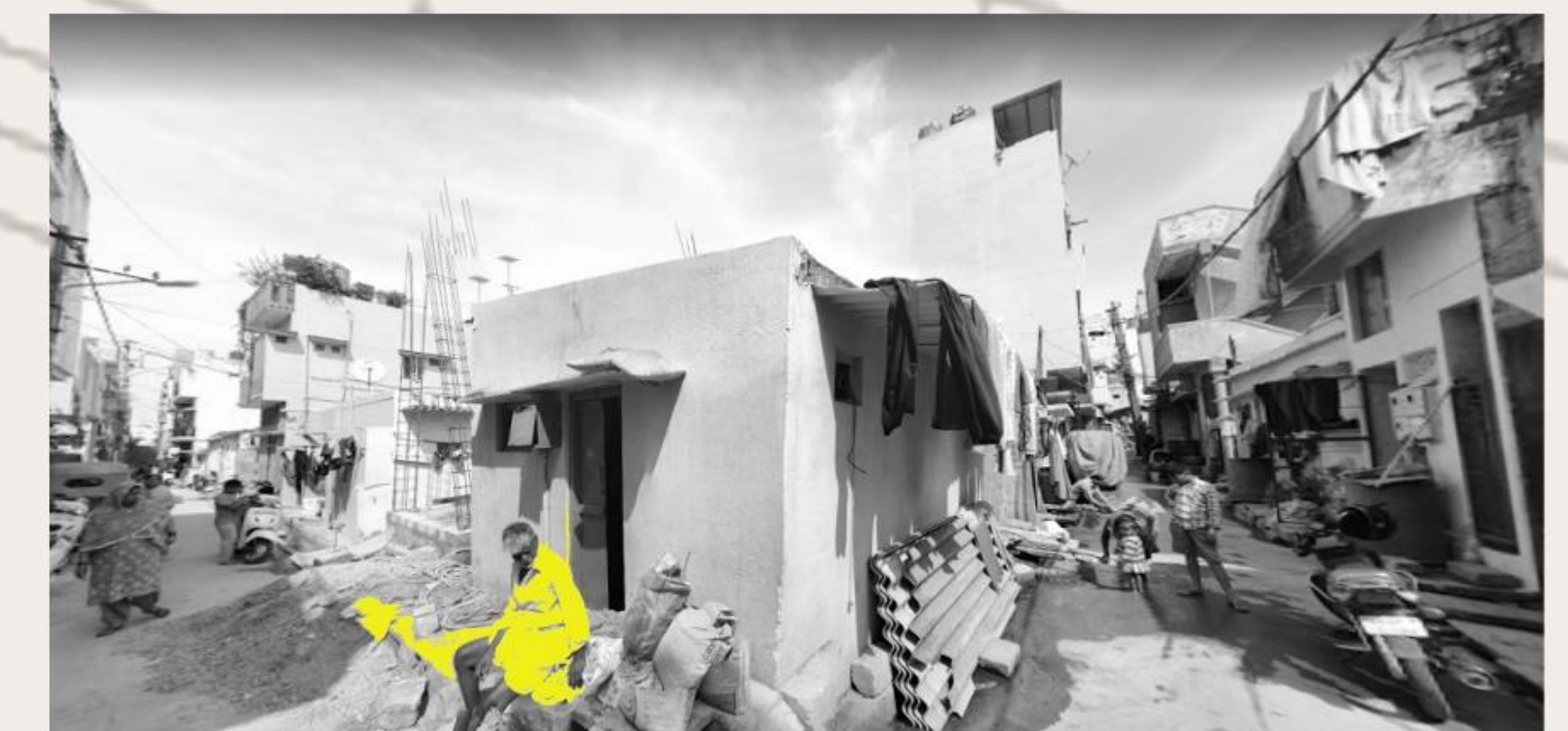


TYPE	kuccha	semi-pucca	semi-pucca	pucca (1)	pucca (1.5)	pucca (2)	pucca (2.5)	pucca (3)	pucca (3.5)
AREA	12.5 sq m	12.5 sq m	12.5 sq m	12.5 sq m	19 sq m	25 sq m	30 sq m	75 sq m	87 sq m
COST (INR) (GRB)	5000-8000 60-95	25000 - 35000 300 - 400	10000 - 130000 1000 - 1400	150000 - 160000 1600 - 1800	160000 - 180000 1800 - 2000	90000 - 250000 2000 - 3000	≈ 350000 ≈ 4000	≈ 40000 ≈ 4500	≈ 45000 ≈ 5000
PHYSICAL	- basic shelter - no structure - basic - 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 - leaks from roof - plastered which increases thermal capacity - little light - little ventilation - no sanitation	- basic shelter - not 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	- 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 - water drains - air conditioning

Varied scales of housing in India

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 (Lower Income Group). 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, 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 basic amenities often absent. Thus 'Affordable Housing' is an idea whose time has come, planned sustainable urbanisation will have to be by default and not by choice.



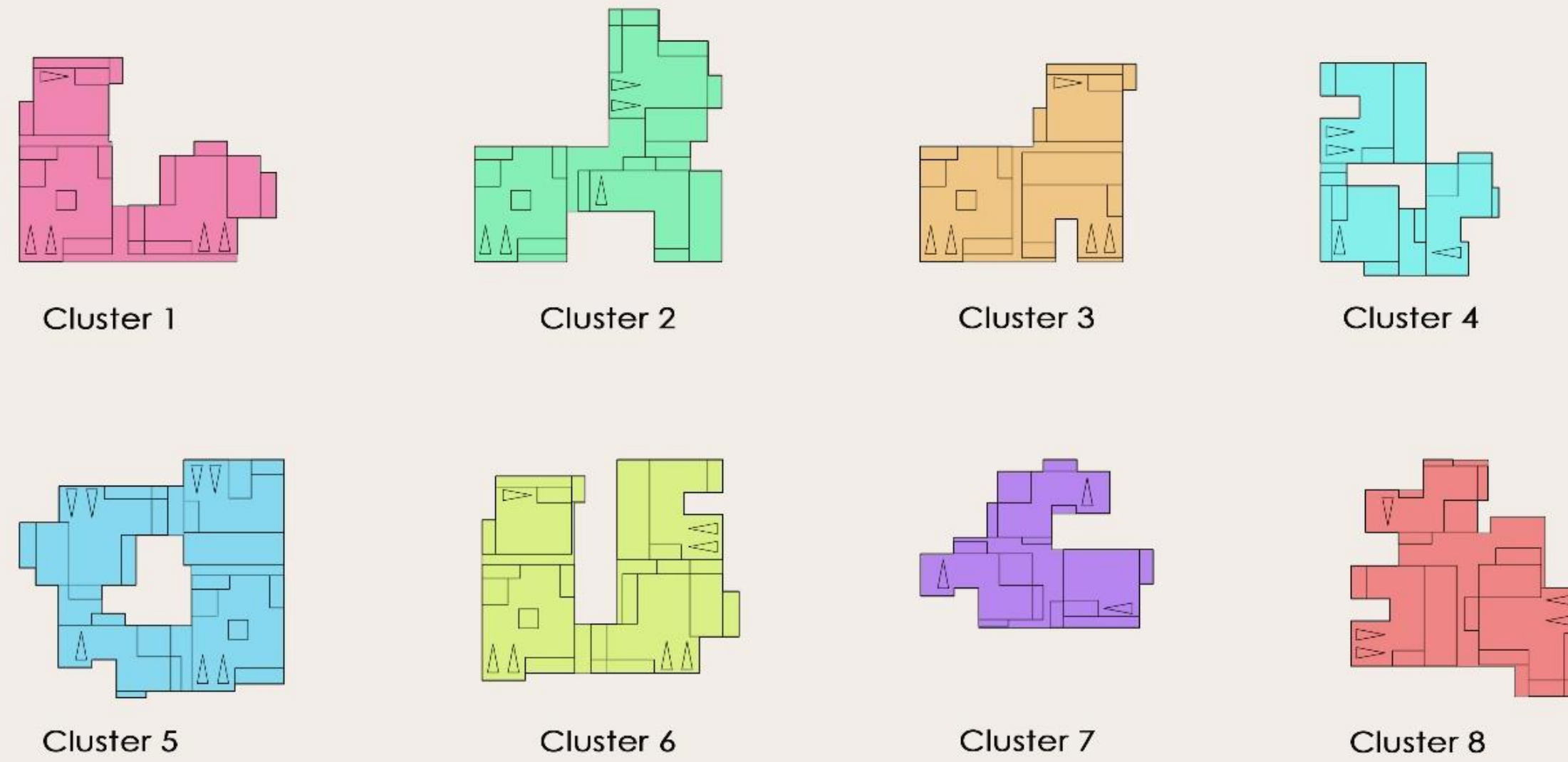
Existing Site Context

## Cluster :

The clusters were made from the typologies to regulate the infinite possibilities of combinations that will be available for the residents living in there. These clusters hold the houses together, making it fragments of a community inside a larger community. The clusters can go upto four floors each, so that it does not turn out to be huge bulky structures that hinder the connectivity in-between them.

The space and void makes the structure look much lighter and will open upto many more interaction spaces in the cluster.

The circulation spaces will also serve as interaction spaces in the community. The open gardens, terrace gardens and courtyards change during the various times of the day. These voids also give space for future expansion.



## Commercial Typologies :

The clusters were further developed to accommodate commercial spaces attached with the residences which could help to sustain a family, and make the community economically stable. The ground floor of all the clusters will have provision to convert them according to their convenience, dictated by design. This will help with a boost in commercial sector, household businesses and small scale factories. This will give the residents the responsibility and thus contributing to the community.

These interventions will help in building a stronger and a close knit community. The outcomes being vast, below are the few outcomes of a space being a Cafe, Bakery, Restaurant or a Boutique.

These will lead to further interactions between the community and also drawing in crowd from the exterior.

Residential : Comercial Ratio -



## Typologies :

The housing community was designed keeping the communal and cultural interactions among people. The typologies were made upon the inferences from the study and are able to scale up at their own convenience. Each typology can have a further addition to accommodate their needs. This decision was taken upon going through their needs and expansion of family. The man dreams of owning up a house in India, and this fulfills it. The typologies have climatological influences in its design with terrace garden provided so that the residents can grow and sustain themselves. The varied shapes open upto many more possibilities which make the entire community dynamic, where the residents are given the choice to develop their houses with a certain degree of freedom.

	1 BHK	2 BHK	3 BHK	4 BHK	
<b>A</b>					<b>Patio Typology</b>
<b>B</b>					<b>C-Shaped Typology</b>
<b>C</b>					<b>Free Standing Typology</b>
<b>D</b>					<b>L Typology</b>
<b>E</b>					<b>Courtyard Typology</b>
<b>F</b>					<b>Shifted Slab Typology</b>

## Cluster Plans :

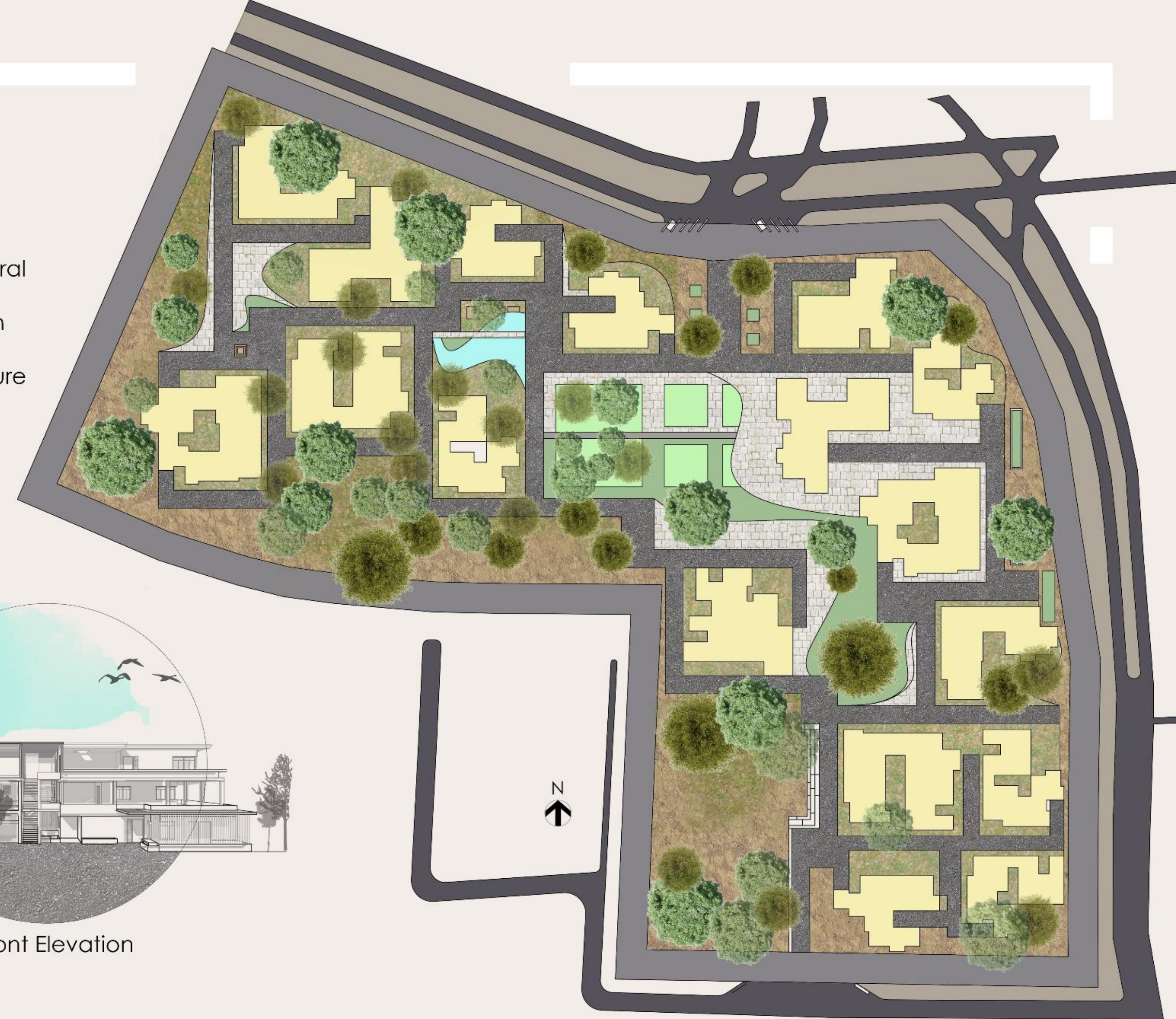


Ground Floor Plan



First Floor Plan

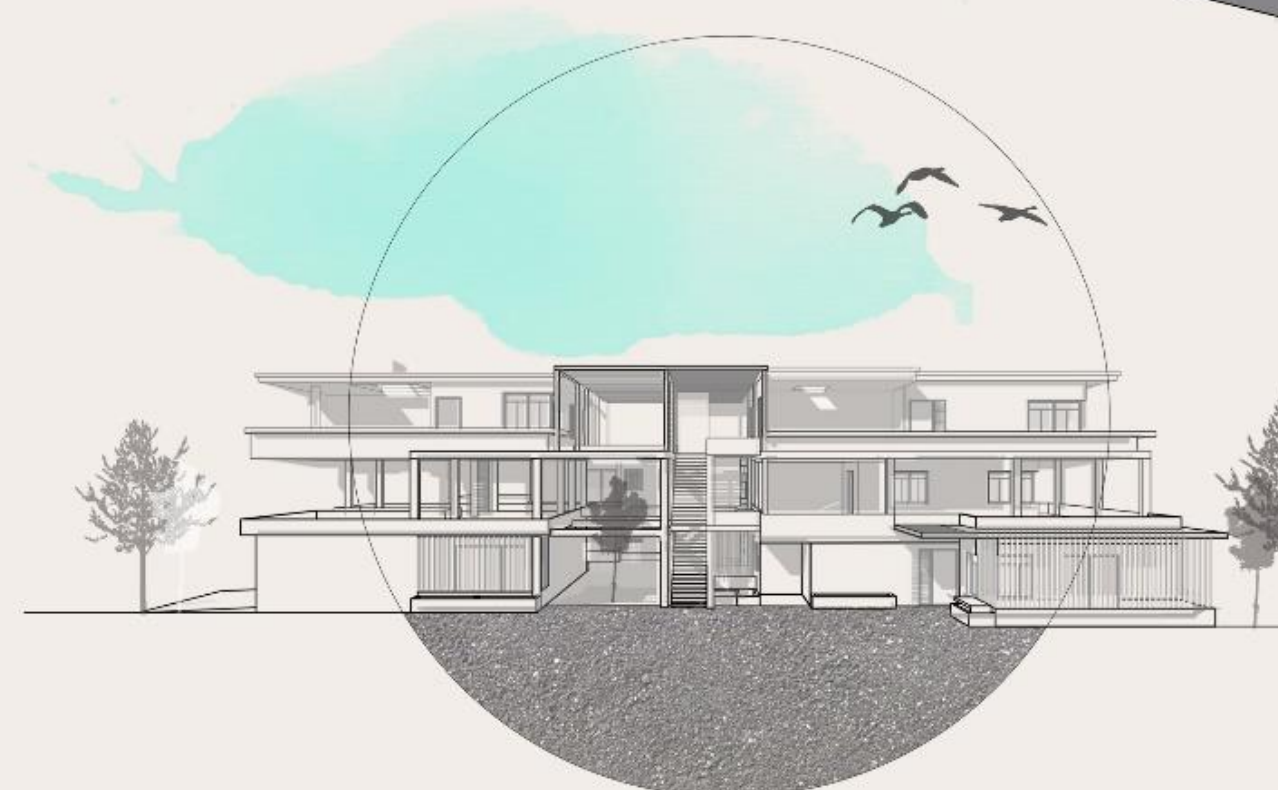
The clusters are designed around a structural grid that holds it together. These structural elements are exposed in these voids which give it open feel for the entire place. The services are worked around the structure to make it as seamless as possible.



Side Elevation



Section XY



Front Elevation

## 3-D Visualisations :



## Master Plan

The clusters are surrounded by lush greenery, with varying volumes of cluster, spaces and void, the community is ever evolving. The pavillion which evolves into a community gathering space and also as a play area for kids. The lush foliage also acts as a buffer from exterior pollution and the residents enjoy a nice stroll during their walks. The localized trees enrich the environment thus creating the complete loop.

The community is made sure to work along with the lines of nature, accomodating the flora and fauna of the surroundings. The design is a well designed machinery with each component coming together to form an off-grid integrated communal living.