

RETHINKING HORIJON-POTTI

A SUSTAINABLE LIVING PATTERN FOR THE URBAN CLEANERS

INTRODUCTION TO SITE

The site is located on Aga Sadek Road, Old Dhaka, on an area of 3.34 acres. There are two segments of the sweeper colony consisting of a muslim population and a hindu population. The current project calls for "Upgrading and Redevelopment of the colony" honoring their socio-cultural pattern of life and incorporating components of contemporary living within their affordable limit.



SITE INFORMATION

Name of the Colony: Nazira Bazar Sweepers Colony/ Miron Jolla Jaat-Sweepers Colony
Location: Aga Sadek Road, Ward 69, Zone 2 (south side of Dhaka)
Site Area: 3.34 acres
Client: Dhaka City Corporation (south)

Community Developed: Horijon (Hindu; Jat cleaner) community developed after 1864
 Muslim colony developed after 1971

Clans: 4 classes of cleaners are known as "horijon": Sweepers, dhoms, methors, rishis.
Language: Bengali, Kanpuri Hindi & Telegu.

No. of Families: 500 (Hindu)
 200 (Muslim)

Family size: 9-13 (Hindu)
 5-7 (Muslim)

Total Population: 6500 approx.
Density: 1946 persons per acre

No. of Residential Buildings: 5 six storied buildings (360 dwelling units)
 2 five storied buildings (100 dwelling units)

No. of Slum Houses: 240

Community facilities On site :
 Primary school
 High school
 Bazaar
 Mosque
 Mondir (Hindu Temple)
 Mazar (Muslim religious place)



The target group of the proposed project is the most deprived and neglected government employees, the sweepers. These people live mostly under miserable subhuman conditions in the the citys' squatters or slums.

The term "Dalit" comes from Sanskrit root "dal", meaning to "break" or "crack". It is used as a synonym for "untouchable" and/or "outcast". Dalits are the people who have been broken and grounded down deliberately by those above them in the social hierarchy. Mahatma Gandhi coined the term 'Horijan' instead of untouchables, which means children of God (Hori is another name for the Hindu god Vishnu).

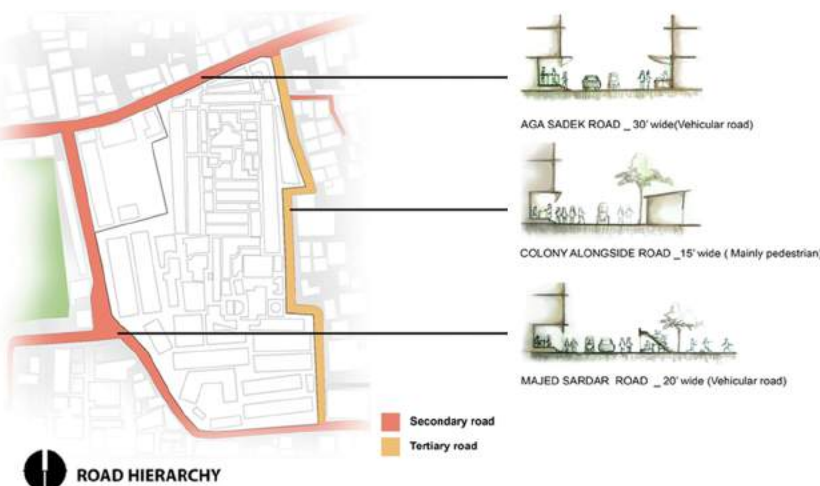
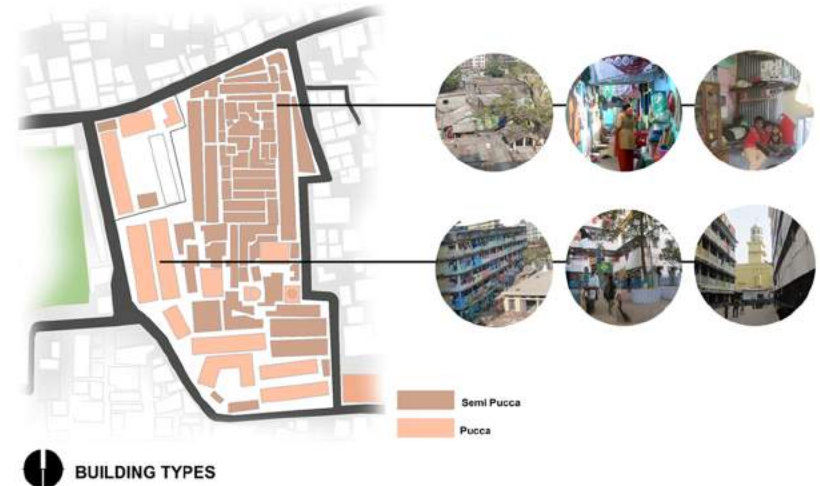
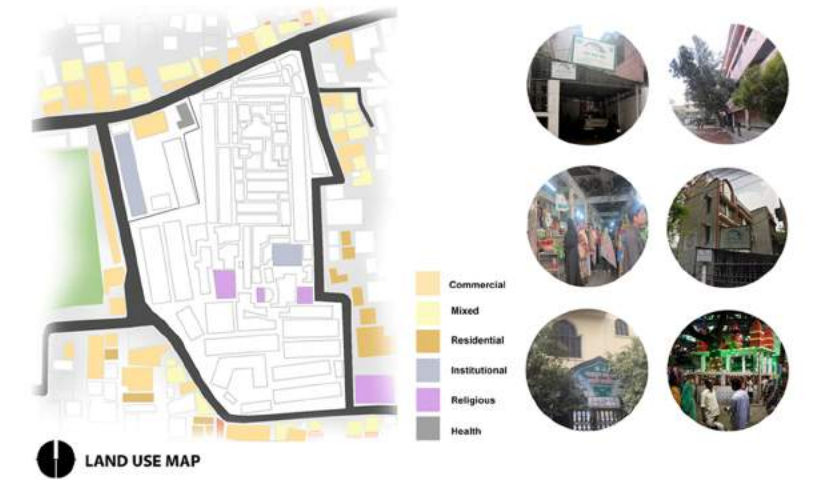
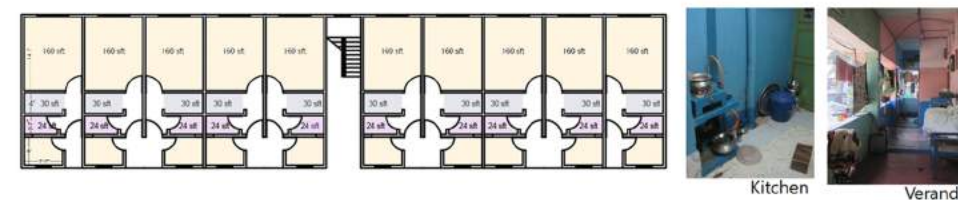
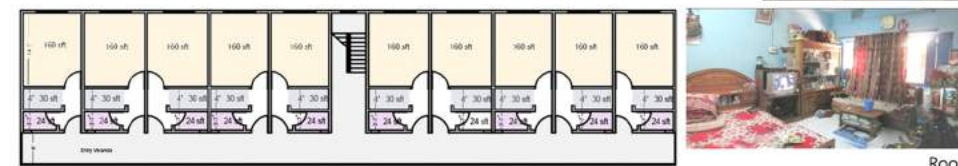
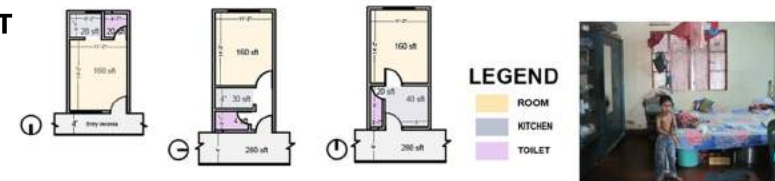
STANDARD ANALYSIS

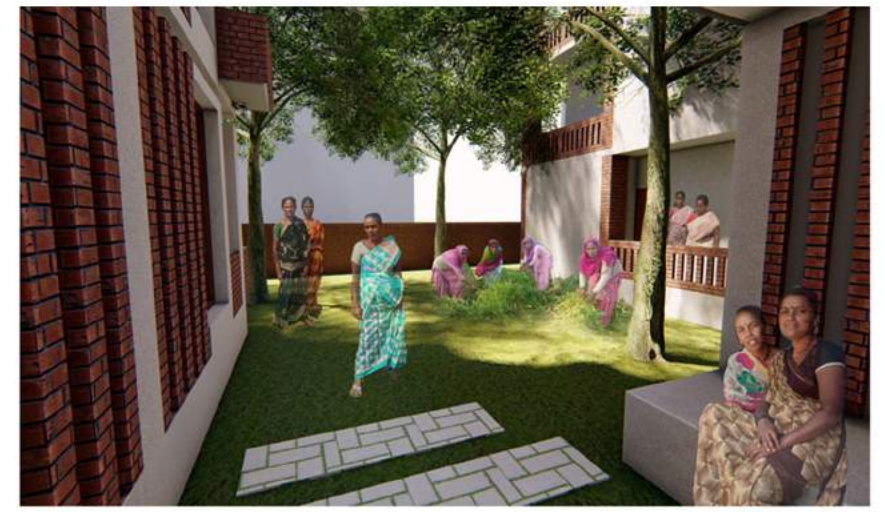
Name	Time Saver Standard	BNBC Standard	Existing
Room	Minimum area: 105 sq. ft.	Minimum area: 75 sq. ft. Height: Min. 8'; Min. 6.8 ft. under beam	Room area: 160 sq. ft.
Kitchen	Minimum area: 52.2 sq. ft.	Minimum area: 45 sq. ft. Height: Min. 8 ft Window area: Min. 10 sq. ft.	Minimum area: 28 sq. ft., 30 sq. ft., 40 sq. ft.
Toilet	Minimum area: 30 sq. ft.	Minimum area: 21 sq. ft. Width: Min. 3.28 ft, Height: Min. 7 ft Window area: Min. 3.7 sq. ft.	Minimum area: 20 sq. ft. Width: Min. 2.7 ft.
Veranda	Minimum area: 35.5 sq. ft.	Minimum area: 35.5 sq. ft.	

FAR ANALYSIS

Type of building: Low Class Residential
 Type: A4
 Site Area: 3.34 acres = 145490 sq. ft.
 Road Width: 30 ft.
 FAR for road width: 5.25
 Extra FAR for surrendered road: 0.2
 Total FAR: 5.27
 Available Buildable Area (area*FAR): 766732.3 sq. ft.
 MGC 50% of land: 72745 sq. ft.
 Min. green space 25% of land: 36372.5 sq. ft.
 Allowable plinth Coverage 75% of land: 109117.5 sq. ft.

EXISTING UNIT







MASTERPLAN



TOP VIEW PLAN



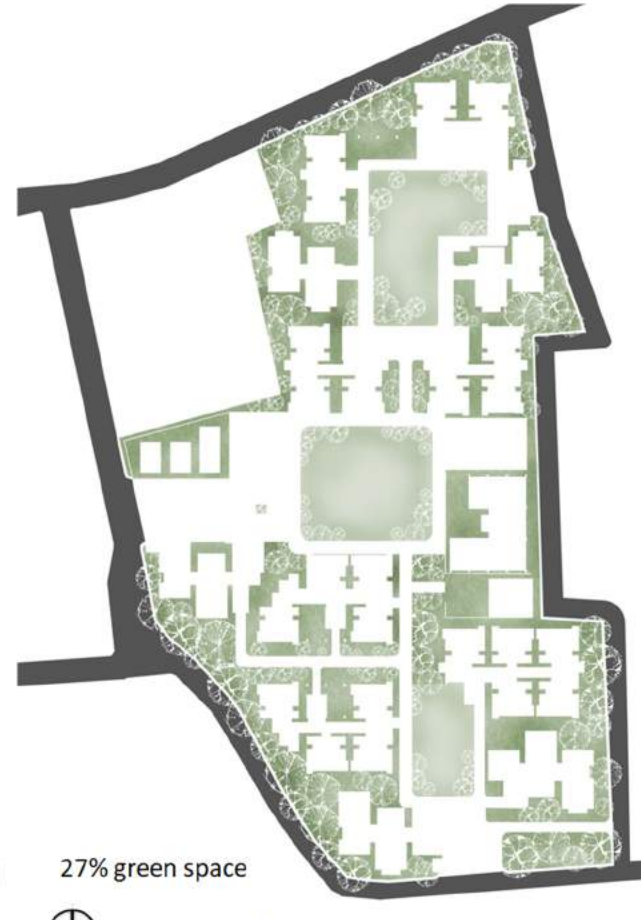
TYPE B
TYPE A
BUILDING TYPE MAP



COMMERCIAL
COMMUNITY
RELIGIOUS
INSTITUTIONAL
RESIDENTIAL
PROPOSED LAND USE MAP



PAVEMENT
SOFT PAVED
PEDESTRIAN PATH
PAVEMENT AND PEDESTRIAN NETWORK



27% green space
GREEN SPACE MAP



UNIT DESIGN

Two types of units have been designed based on local surveys and study of user groups.

For the permanent employees, a two room unit has been designed with one bedroom, one multi-purpose room, one kitchen, one bathroom and a veranda.

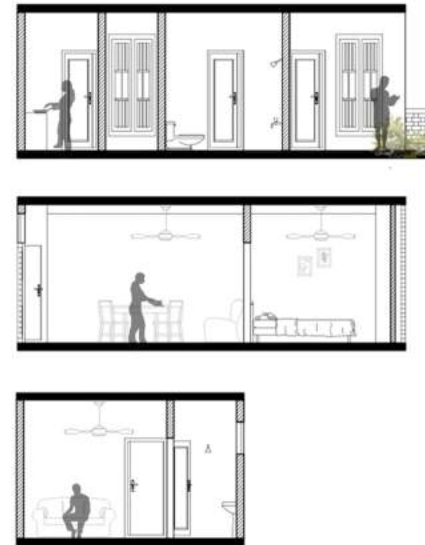
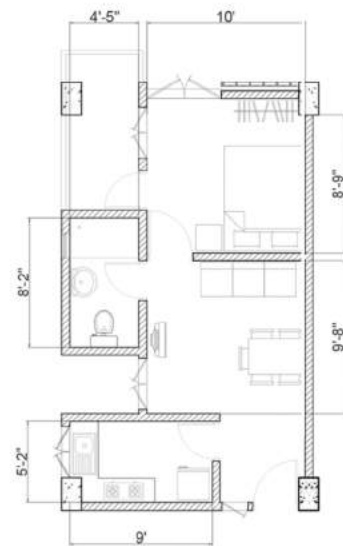
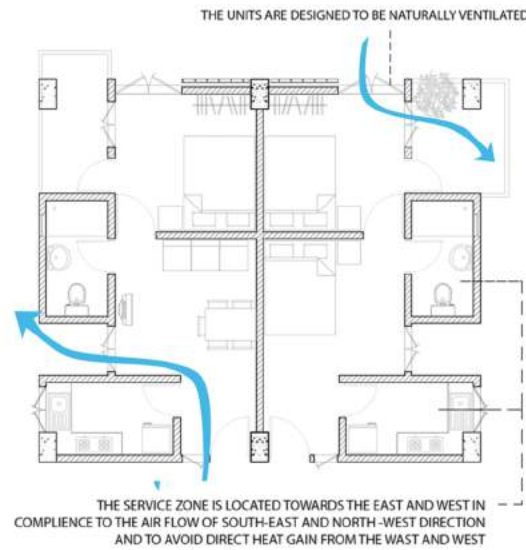
For the temporary employees, a two room unit has been designed with one bedroom and a multi-purpose room. A shared bathroom with a separate chamber for a water closet, a bath and washing area and a shared kitchen has been designed for a three family occupancy.

UNIT TYPE A



BEDROOM: 98 sq ft
 MULTIPURPOSE ROOM: 126 sq ft
 KITCHEN: 46 sq ft
 TOILET: 36 sq ft
 VERANDAH: 50 sq ft
 TOTAL AREA: 400 sq ft

TOTAL NUMBER OF UNITS: 600



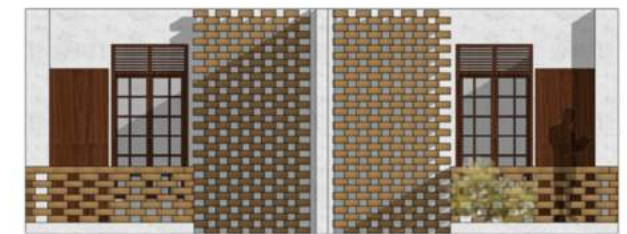
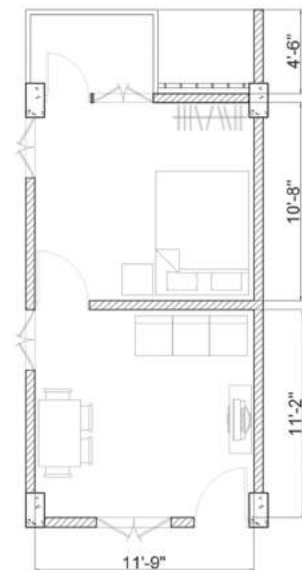
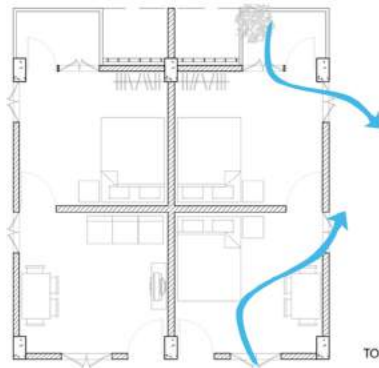
UNIT TYPE B



BEDROOM: 124 sq ft
 MULTIPURPOSE ROOM: 130sq ft
 VERANDAH: 30 sq ft
 TOTAL AREA: 284 sq ft

SHARED KITCHEN: 70 sq ft
 SHARED TOILET: 130 sq ft

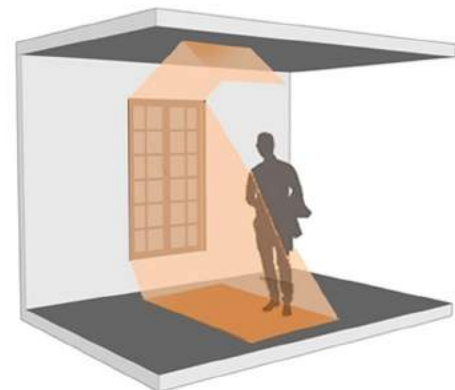
TOTAL NUMBER OF UNITS: 300



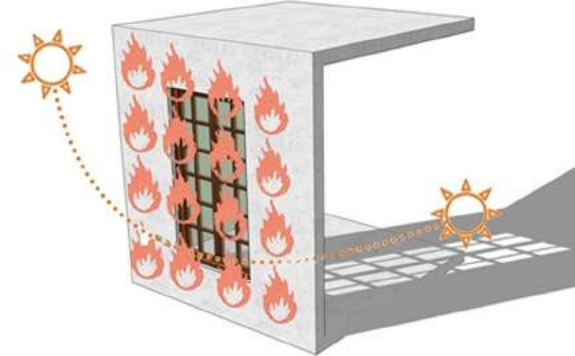
A SUSTAINABLE APPROACH TOWARDS UNIT DESIGN



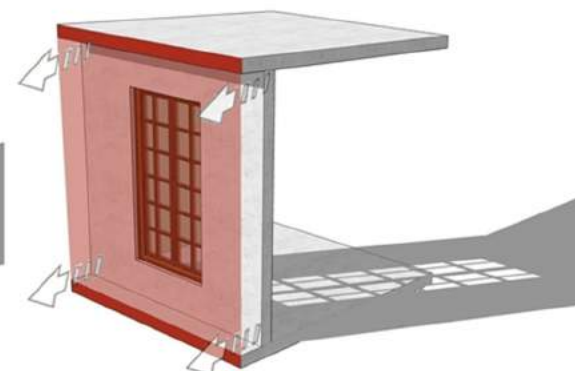
CONVENTIONAL WINDOW
 A window in a conventional orientation and proportion lets in a large volume of light. Since this window terminates at a lintel with a high sill, there is little opportunity for reflected light to be bounced off the floor and ceiling.



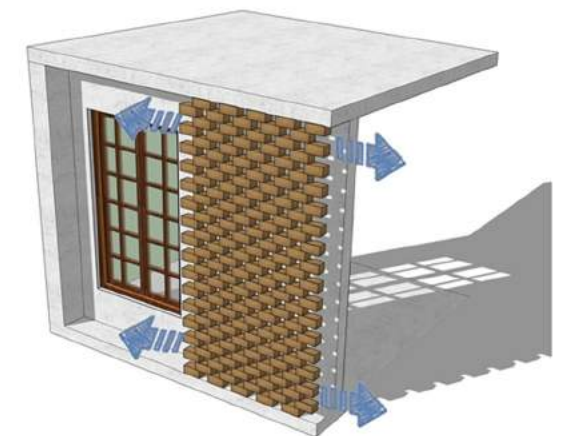
VERTICAL SLOT WINDOW & LIGHT DISTRIBUTION
 The vertical slot proportion allows for the light to be distributed evenly across the floor plate, allowing for natural light to be well distributed through floor space.



HEAT GAIN
 The surge of the built mass which face south and north are subject to a high amount of heat radiation. This translates as heat gain within the built environment.



PROJECTING CONCRETE SUPPORTS
 A solution to reduce heat gain manifested itself in the form of a skin wall along the north and south side of the living unit.



BRICK JALI SCREEN WITH AIR CAVITY
 The screen wall is a traditional brick jali screen with the stretcher course staggered at every alternate course creating the play of mass and void. The support structure for the jali screen was extended beyond the dimensions of a brick, resulting jali screen being placed away from the external walls. The air cavity acts as a 'Thermal Break'.

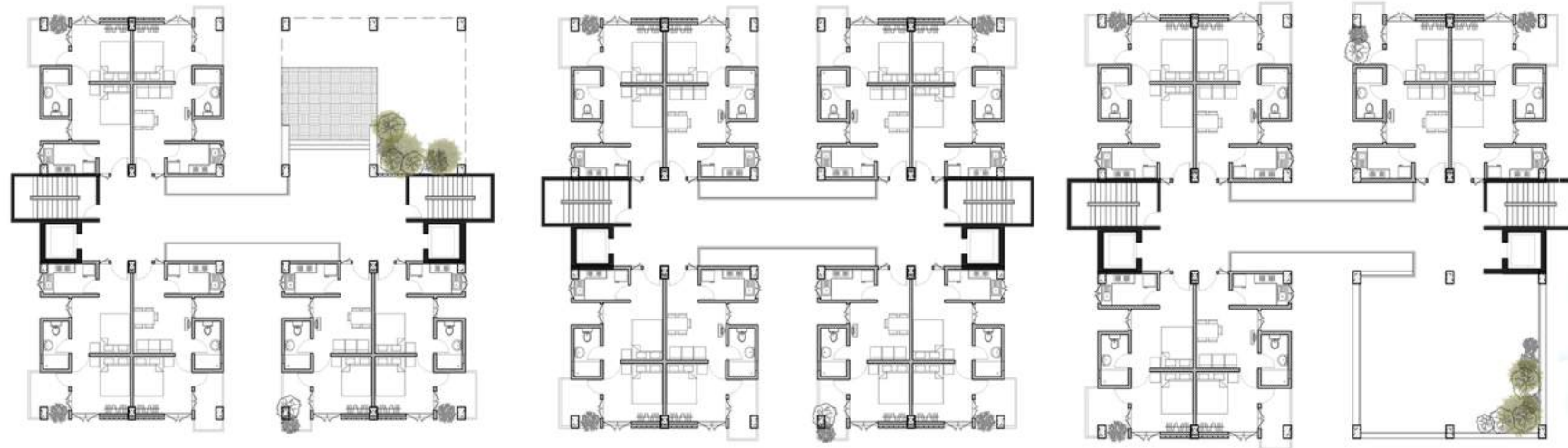
CLUSTER DESIGN

Two types of clusters have been designed based on the two types of units.

For Building Type A, two units of type A make a module. Four modules make a cluster in each floor. Every two or three floors a module on any side is taken out to create a common shared semi open space. This acts as an informal social gathering space in the form of a vertical courtyard.

For Building Type B, two units of type B make a module. As per the regulation of BNBC (Bangladesh National Building Code), three families can share a common bathroom and kitchen. So three unit modules and two modules of a shared service area makes a cluster in each floor.

BUILDING TYPE A PLAN



GROUND FLOOR PLAN

TYPICAL FLOOR PLAN



ELEVATION

BUILDING TYPE B PLAN



GROUND FLOOR PLAN

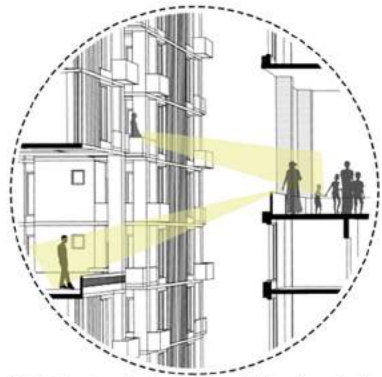
TYPICAL FLOOR PLAN



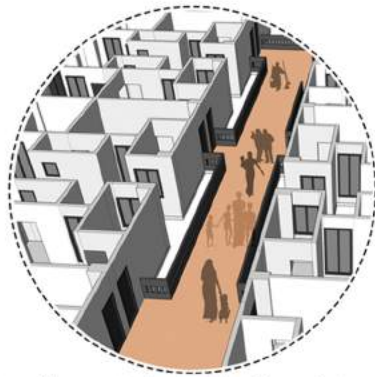
ELEVATION



NEIGHBORHOOD FEELINGS IN A MICRO SCALE



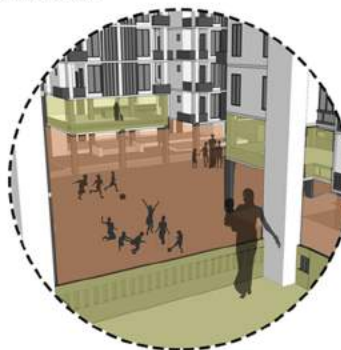
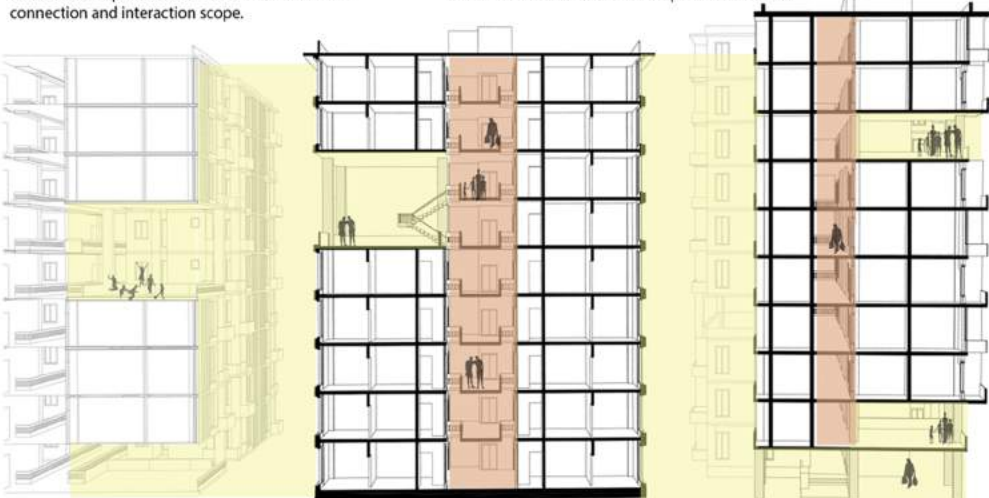
Vertical courtyards give a micro neighbourhood feelings. Between two apartment modules it creates visual connection and interaction scope.



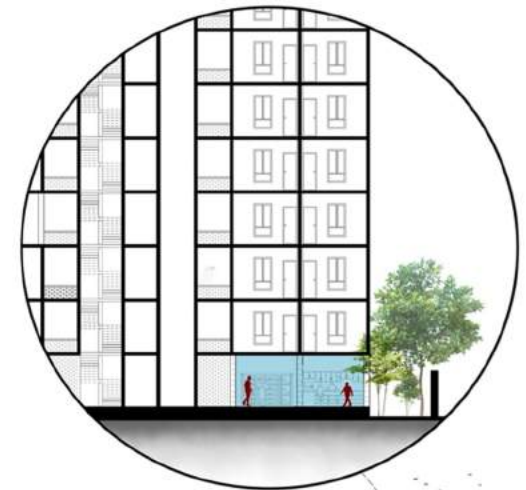
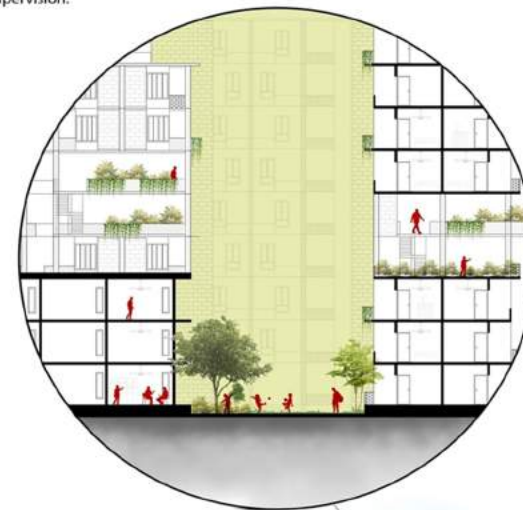
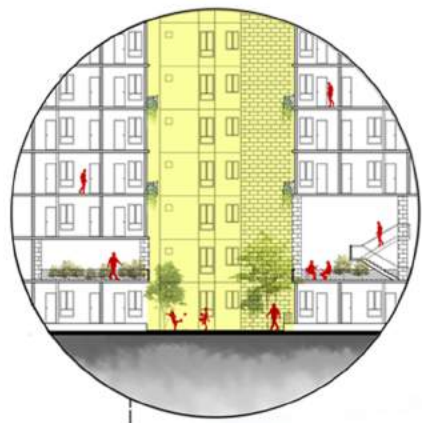
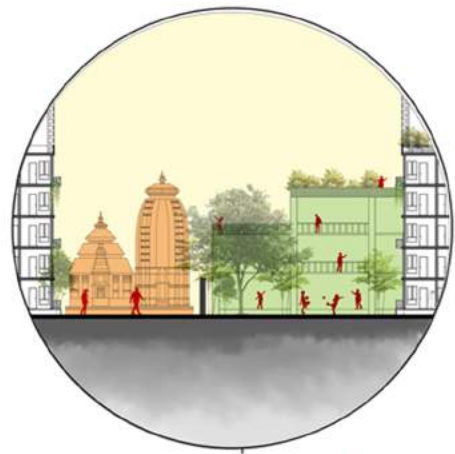
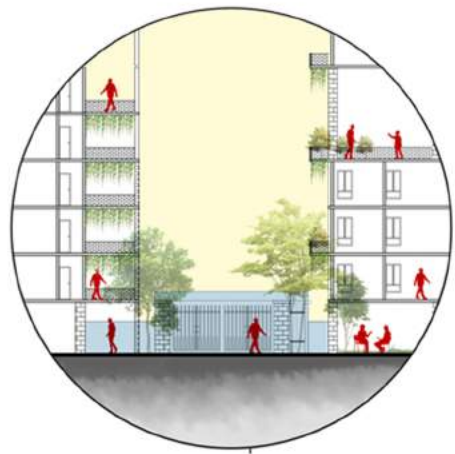
The corridors are not only potential social spaces but also an extension of the interior space of the home.



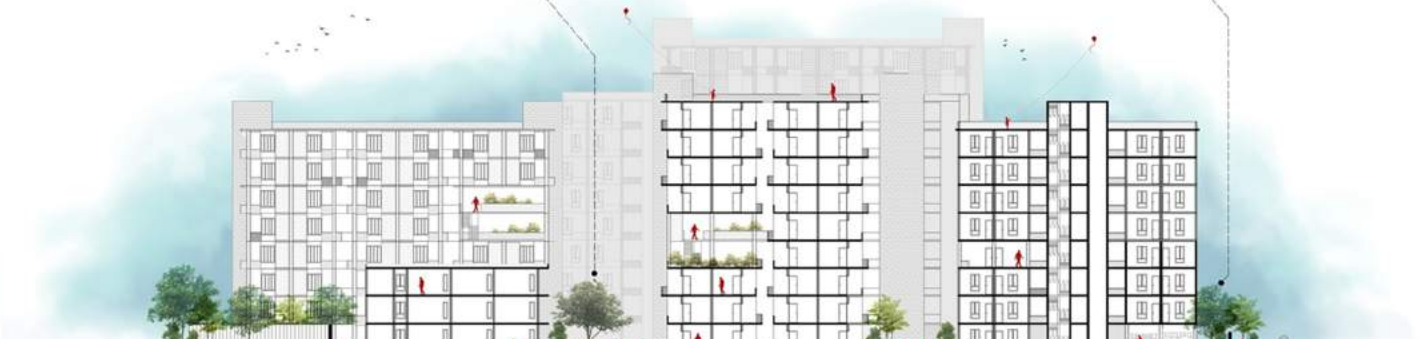
The proportions and architecture amongst the buildings act like 'chawl courtyard', creating a rich and vibrant social fabric. This continuous void space allows for visual connection between residents of different floor.



The first floor of all units are made into terraces which creates a visual connection with the connecting community space. In this way the children playing in the community space are always under supervision.



SECTION AA'



SECTION BB'