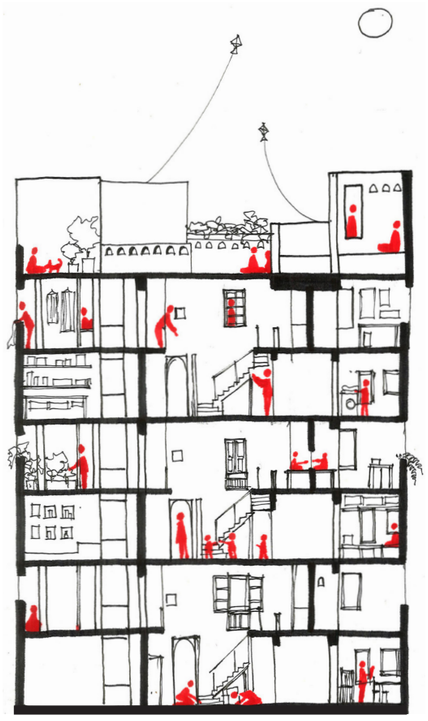
P O R T F O L I O



Adhrita Roy | UG190032

DESIGN INTENT

Given the location of the project; the user group the project is for people who work at general stores, as household help, as drivers for the public transport system or students who look for cheap flats for temporary residence. The aim of the project was to try and establish the traditional vertical relations which exist in a two storey house, in an apartment housing - yet keeping the project affordable.

This was attempted by designing units where the rooms are designed with the exact dimensions required for the functions they intend to hold within. This helps reduce the carpet area and thus, the cost, making apartments affordable.

Challenges in housing :

1. Many apartments are provided with halls, dining areas, vestibules which become areas that are rarely used. What if one were to try to remove such spaces within the house (reducing carpet area and thus the cost) and offer more multi - use open spaces along the periphery to allow for spill-over functions? It was this exploration that was attempted in the project.

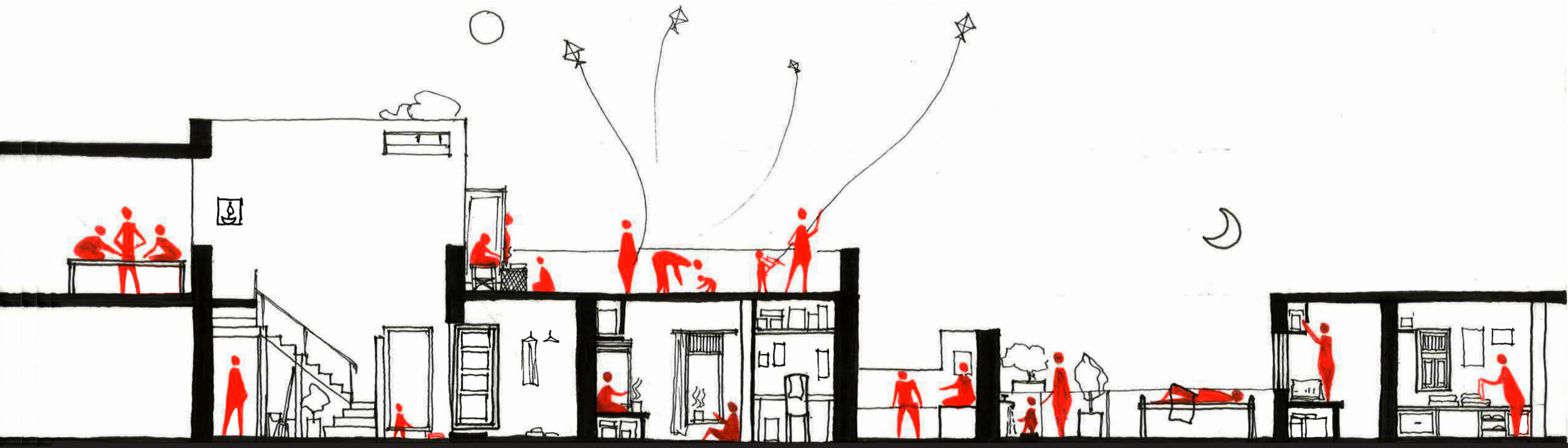
2. In most housing projects, the flats are seen as an investment. They are rented out for additional income. This often means that the family that buys the apartment - may not live in their own home. It is often the case in low cost housing too. Can apartments be designed around this? Where residents can still have the choice to arrange their lives in their own 'homes'. In which way can this be explored?

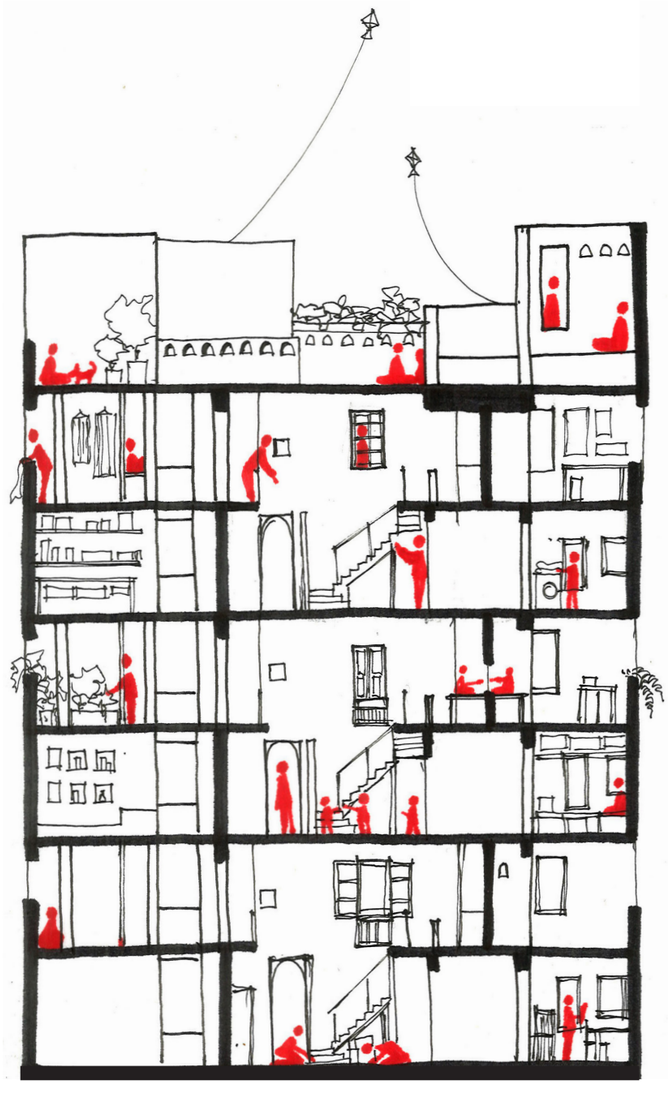
3. In apartments there is a very sudden and ambiguous transition from public to private - from the unit to a plain, linear corridor, to enclosed lifts, and then to the very public ground. How can this transition be manipulated to allow one to curate more spaces for neighbourly interaction?

WHAT IS A HOME?

The home as a collection of withdrawing spaces

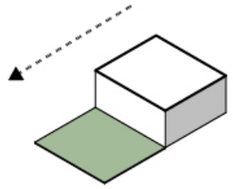
The home manifests itself as a place to ‘withdraw’ in peace after a long day of work. Yet, it is also a place to meet with friends, a place for kids to play, a place to work and a place to celebrate festivals with your community. However, when we talk of the relations and activities which should exist in a home, and between neighbours; it usually seems like one imagines low - rise houses. How can one establish the same relations, between people and spaces, in a high - rise housing scheme?



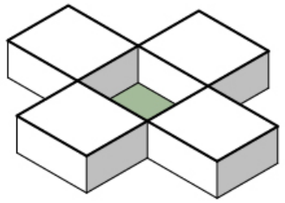


CONCEPT DEVELOPMENT

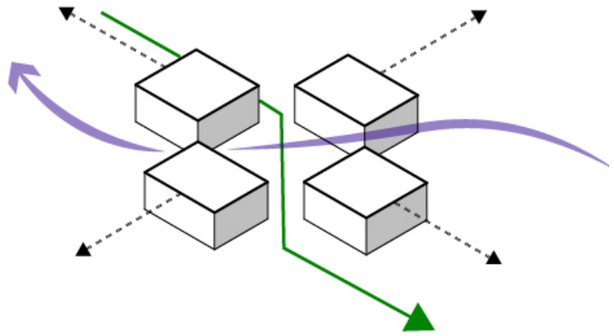
Conceptual massing development of a cluster of 4 individual 'duplex' houses. (Below) conceptual sketches taken forward to design spaces in the project



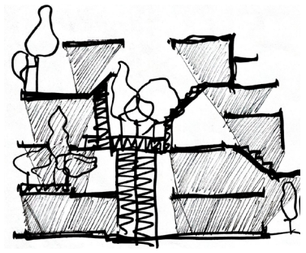
Mass of a typical apartment (conceptual)

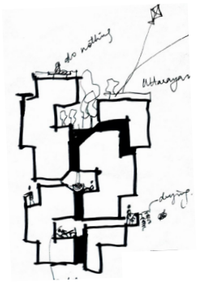


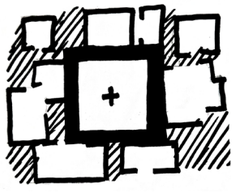
Extending front of the mass (denoting open space)

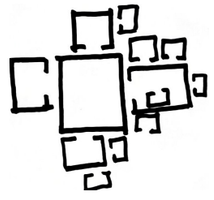


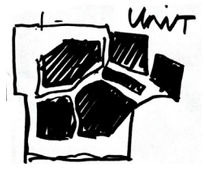
Splitting the masses apart to allow space for movement and air flow

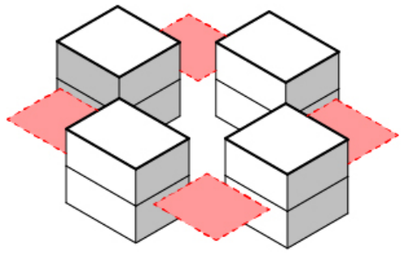




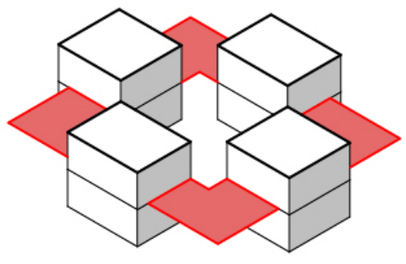




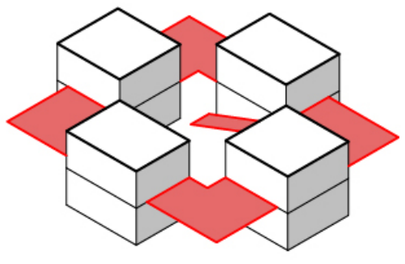




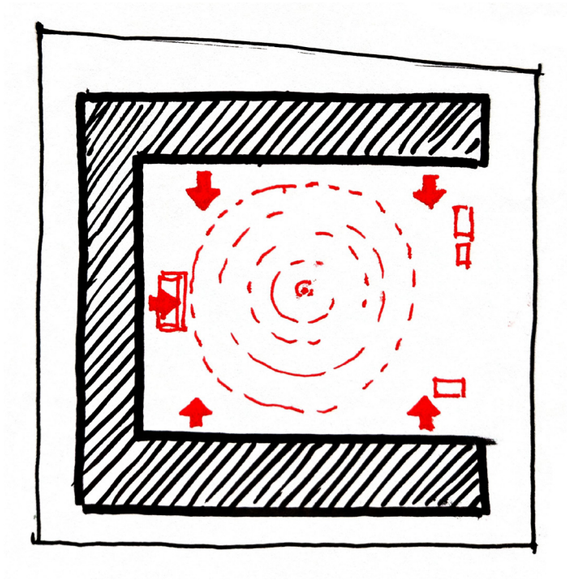
Adding additional open spaces (red) along the corners of the stacked masses



Joining the fragmented open spaces (red) to allow continuous circulation on both levels



Pushing back stacked masses to allow access to upper level from central void



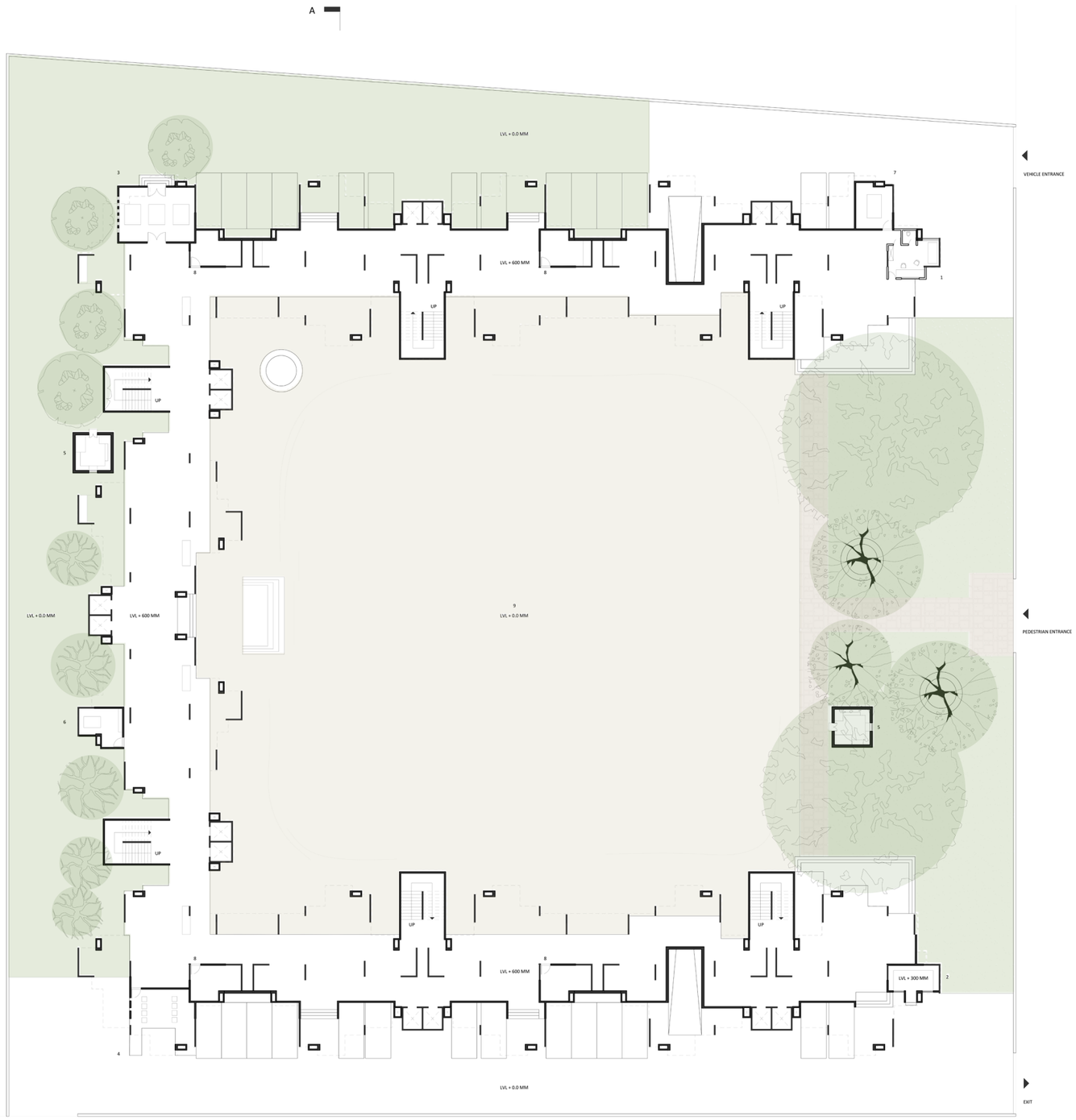
Pushing building mass to the periphery to allow for a communal gathering space in between to celebrate garba nights

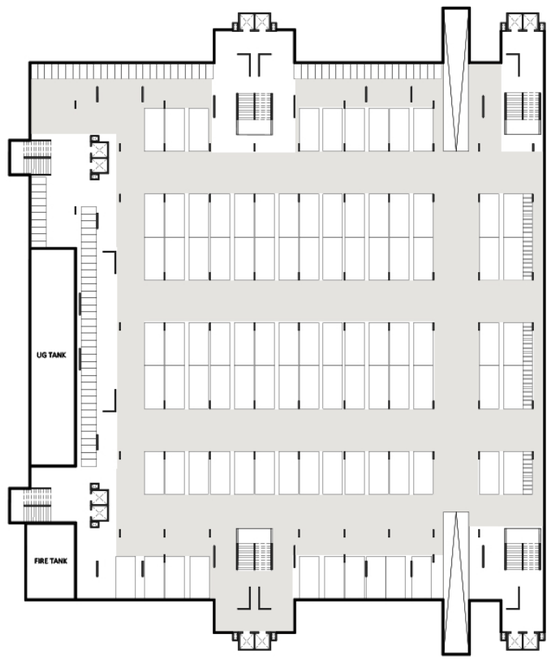
PLAN

Site plan (left) and underground parking plan (below)

PROJECT DETAILS :

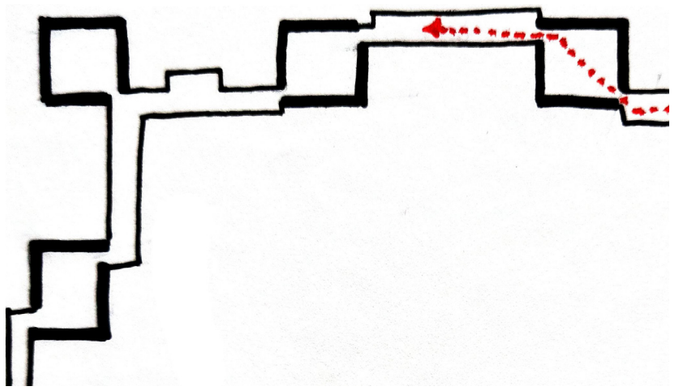
Site - Chandkheda, Ahmedabad
Ground cover - 2526 sq.m.
Total height - 33.5 m
Permissible FSI - 27200 sq.m.
FSI consumed - 27400 sq.m.
No. of units - 240 units



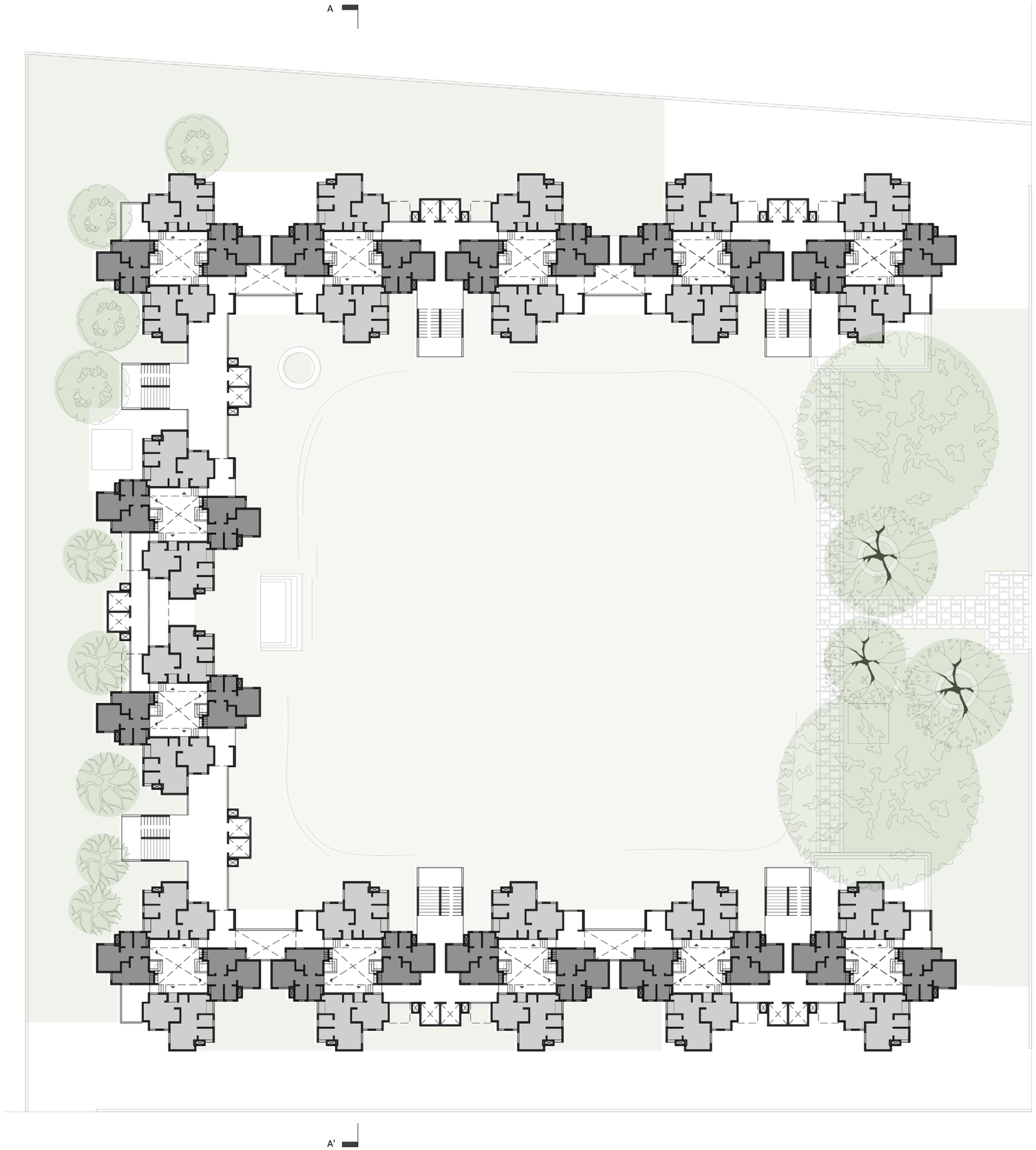


TYPICAL FLOOR PLAN

0 5 10 20 M

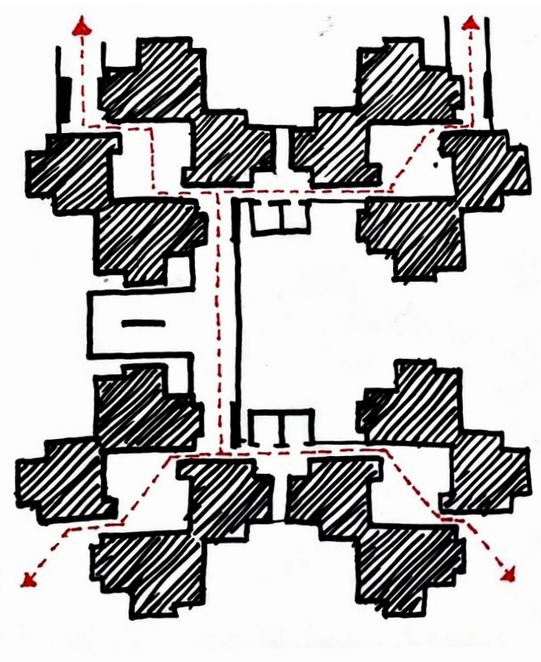


Twisting passages meandering through common lobbies, shared ‘voids’ and corridors makes the passages a play - area for children.



PLAN AND DESIGN DETAIL

The cluster of 4 houses mirror and repeat themselves in a way to facilitate a diagonal movement, from end to end, on each floor of the housing. Weaving through central 'courtyards' of different houses - it opens up possibilities of interactions between neighbours. This also allows 8 units on each floor to share each staircase and lift - making the layout more efficient.

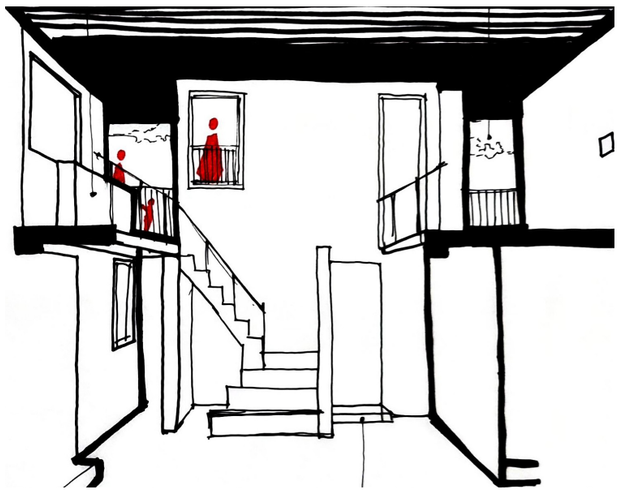


RESIDENTIAL UNIT TYPE A (2 BHK)

RESIDENTIAL UNIT TYPE B (2 BHK)

TYPICAL FLOOR PLAN

0 5 10 20 M



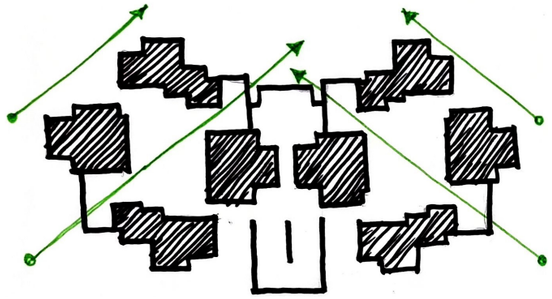
Breaking the corners of the mass in a double height space, with a visually heavy slab on top - breaks the overall height of the building from within.

A

A'

PLAN AND DESIGN DETAIL

On the upper floor of the cluster of 4 duplex houses, the mass breaks itself at the corners - in the direction of the prevailing winds - to allow good ventilation; not only in the individual apartments but also through the twisting and double heighted corridors.

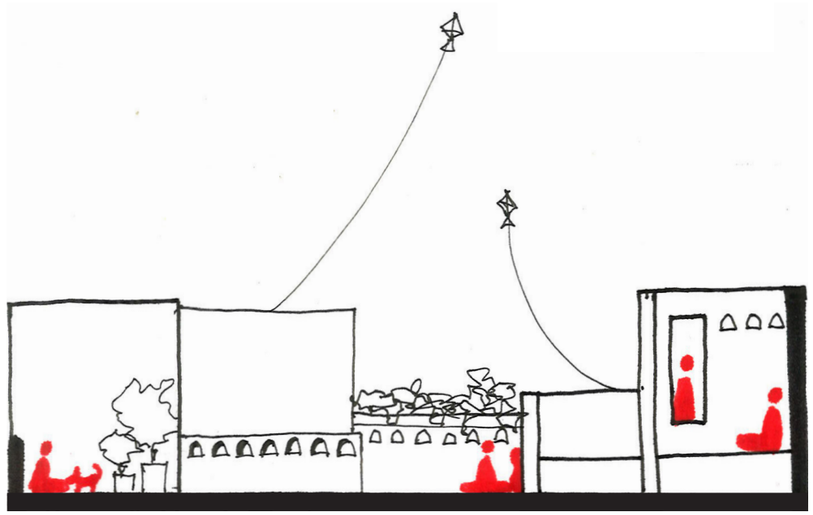


RESIDENTIAL UNIT TYPE A (2 BHK)

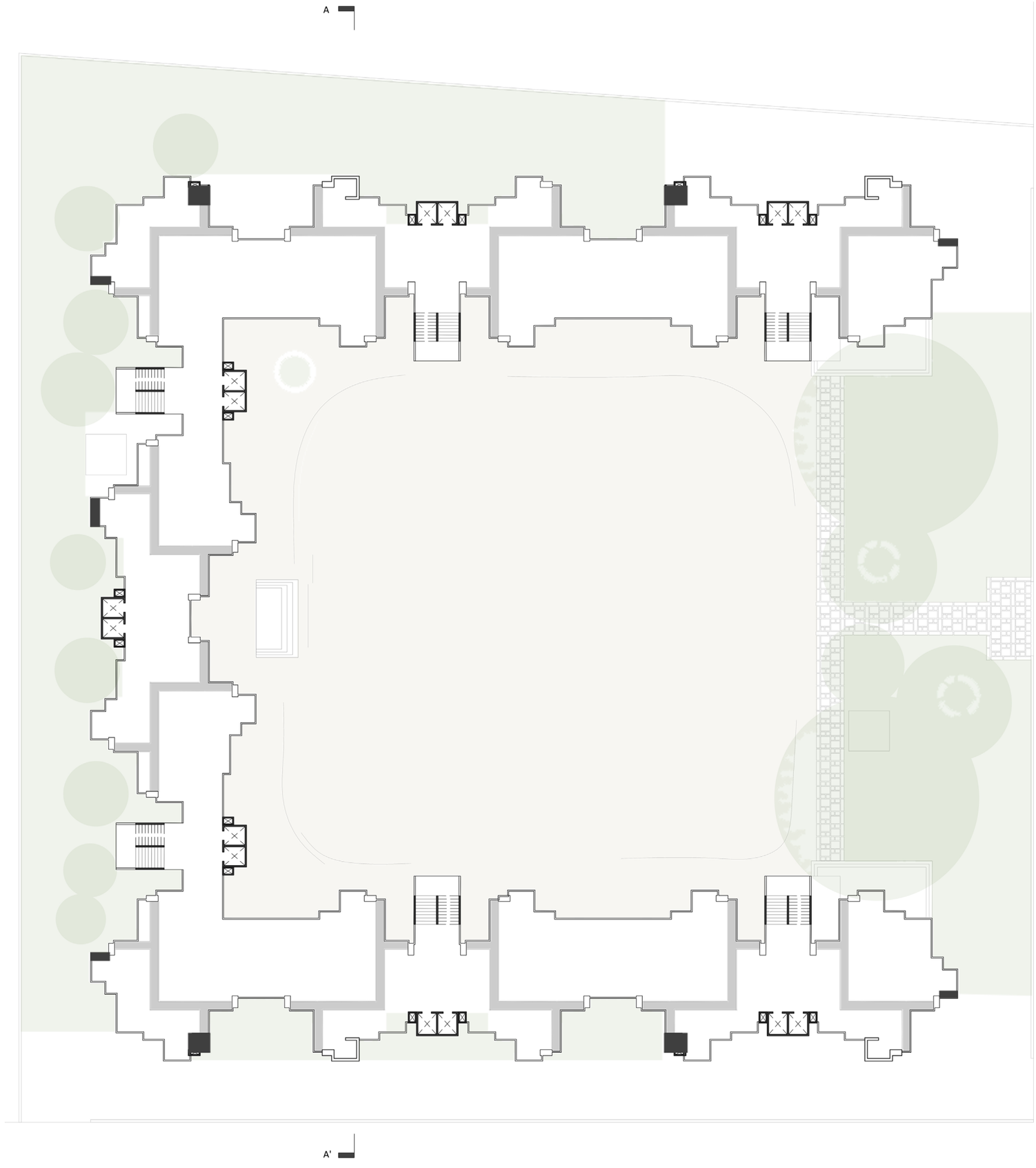
RESIDENTIAL UNIT TYPE B (2 BHK)

TYPICAL FLOOR PLAN

0 5 10 20 M

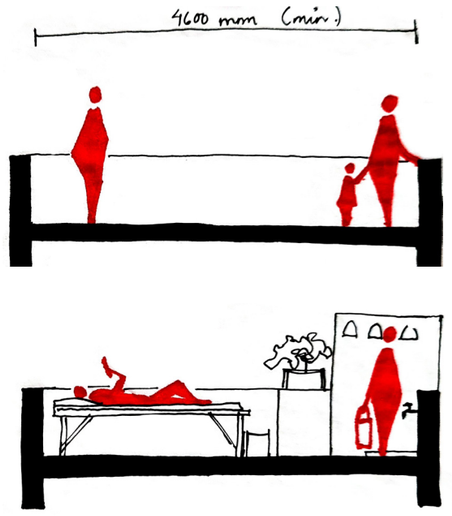


The terrace parapet wall modulates in height to create spaces of ‘gathering’ and areas to ‘withdraw’



PLAN AND DESIGN DETAILS

The terrace lends adequate open space for all residents to either celebrate communals festivals, for children to play, to dry spices or to lay under the sky on hot summer nights. The water pipes are concealed under grates , strategically laid across the terrace, to allow children to run across freely. The terrace also has toilets and running tap water facility placed at determined corners; for convenience.

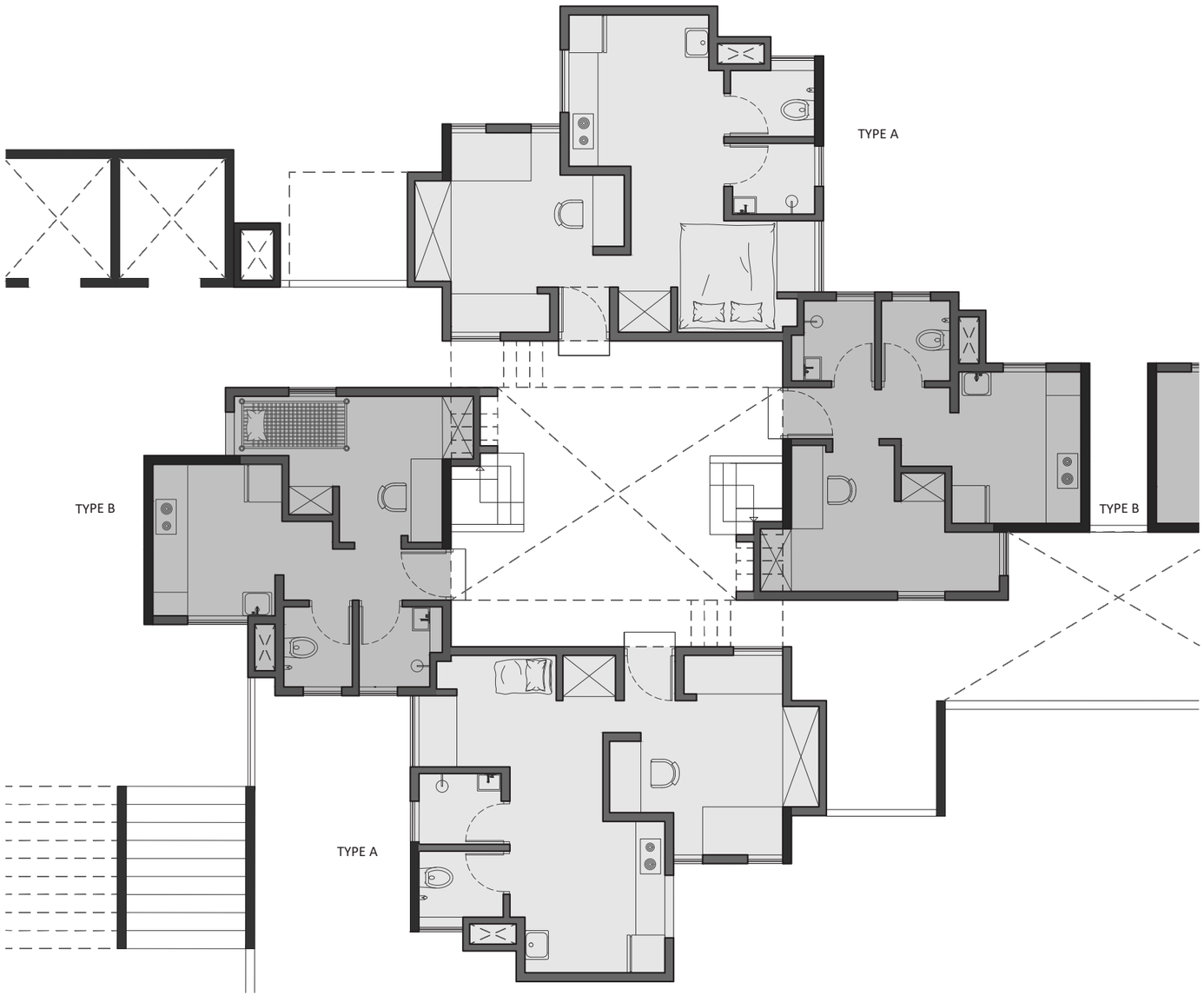


Provision of washrooms and running water

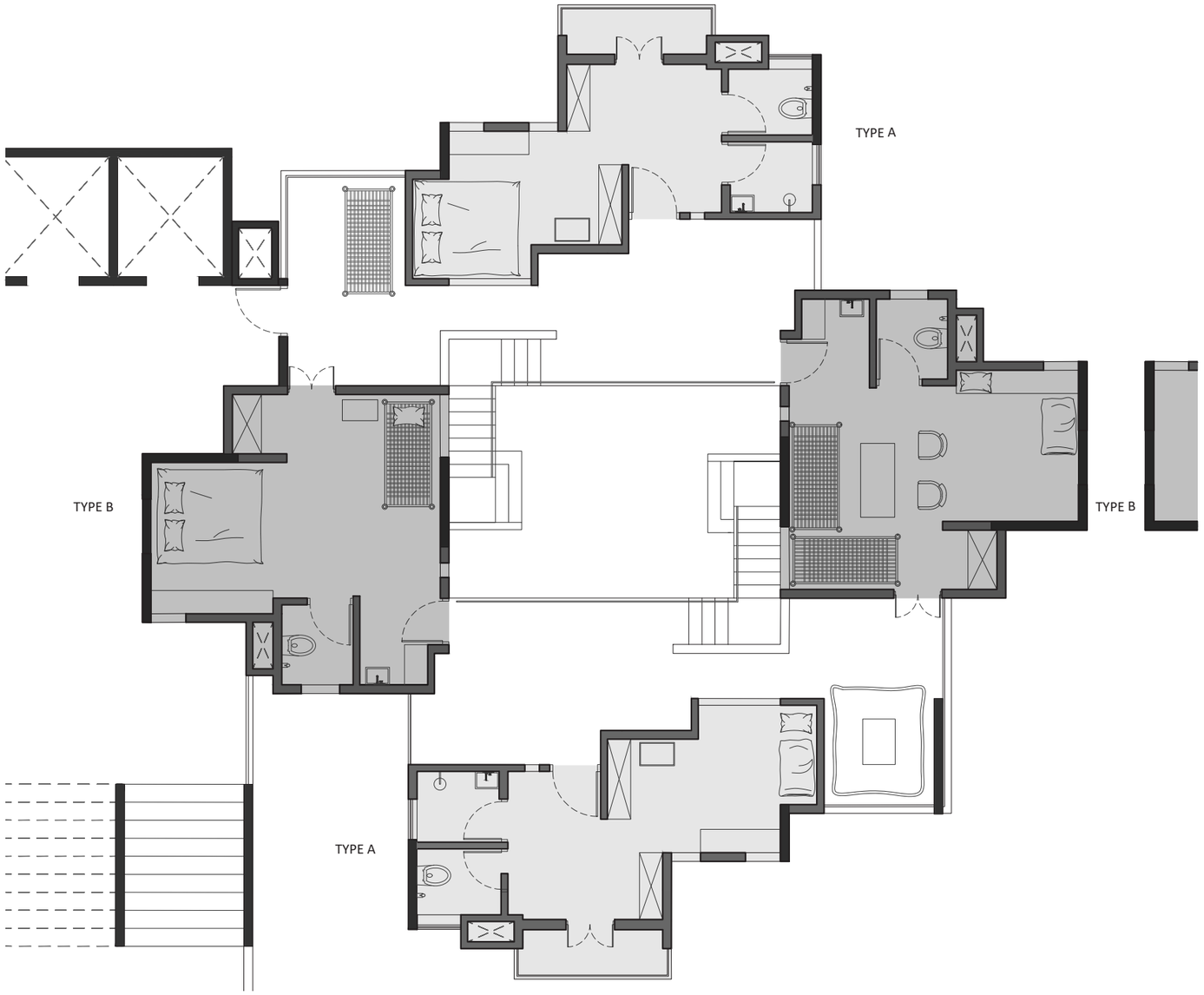
Layout of water pipelines

TYPICAL FLOOR PLAN

0 5 10 20 M



Ground floor for the ‘duplex’ units



First floor for the 'duplex' units

TYPICAL UNIT PLANS

Deviating from the typical layout of most housing plans where individual units line a linear corridor - here the attempt was to create a sub-cluster typology where 4 units around a central 'courtyard' forms the core of the design. This sub-cluster was then repeated to form the housing cluster. The unit and its bordering shared spaces lends itself to be used in varied ways throughout the day.

UNIT DETAILS -

Type A :

Carpet area - 65 sq. m.
Built up area - 75 sq.m.
40 lacs

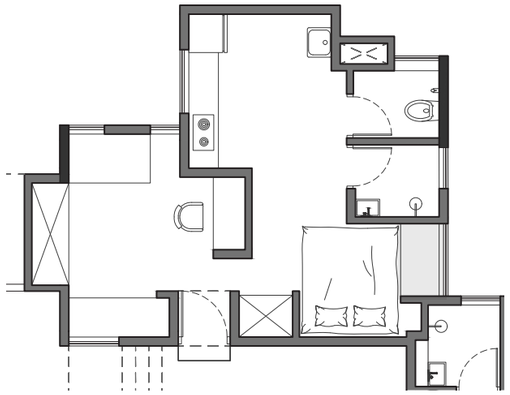
Type B :

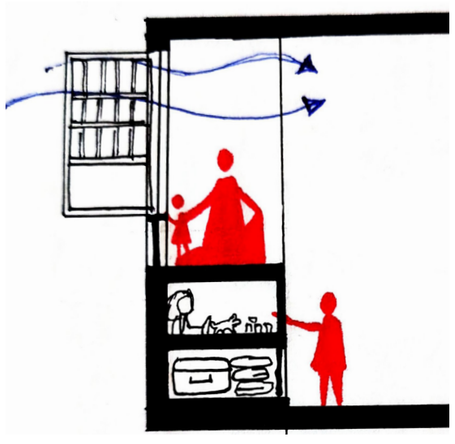
Carpet area - 60 sq.m.
Built up area - 70 sq.m.
36 lacs

WALL TO CEILING STORAGE UNIT
RESIDENTIAL UNIT TYPE A (2 BHK)
RESIDENTIAL UNIT TYPE B (2 BHK)

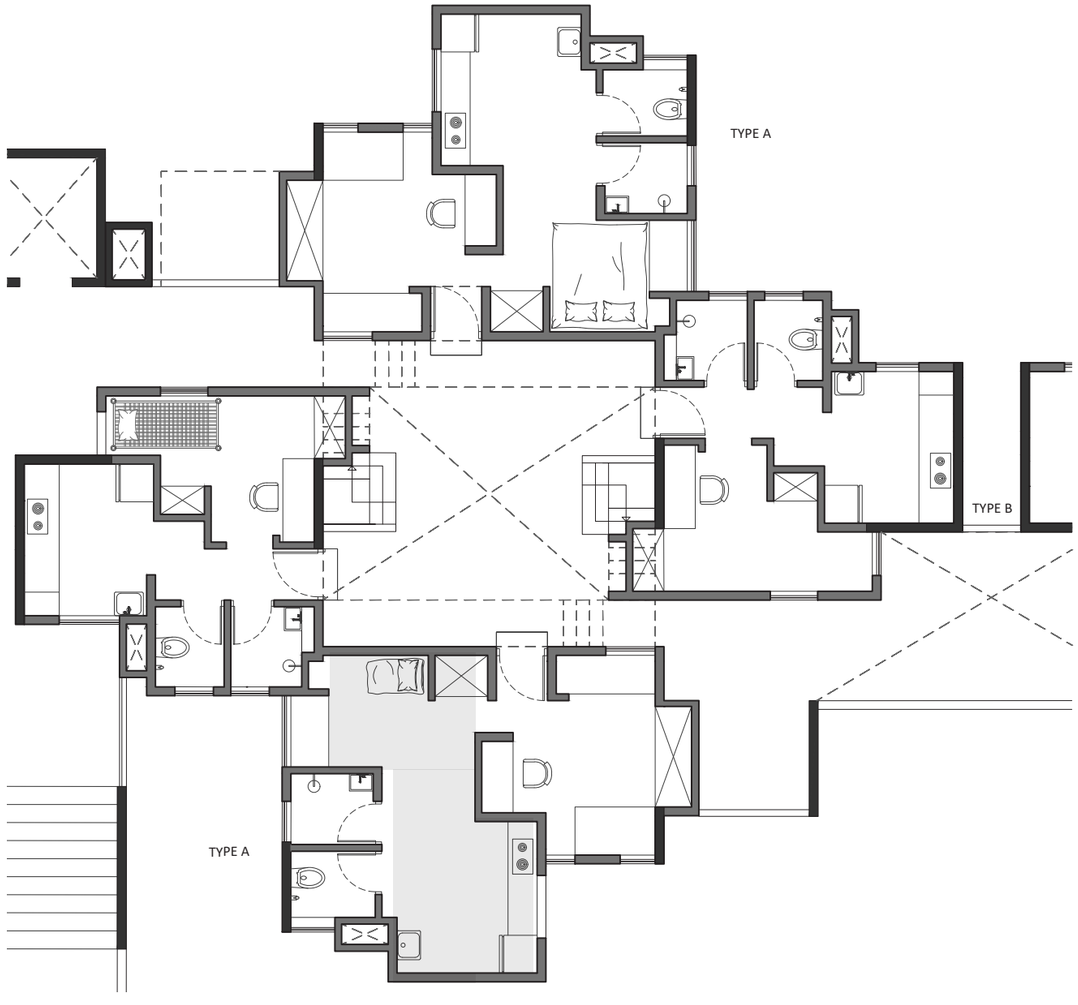
TYPICAL UNIT CLUSTER (LOWER FLOOR)

0 1 3 6 M





The habitable window becomes a space where residents can sit and enjoy the breeze or peek into the central ground to people playing games or celebrating festivals



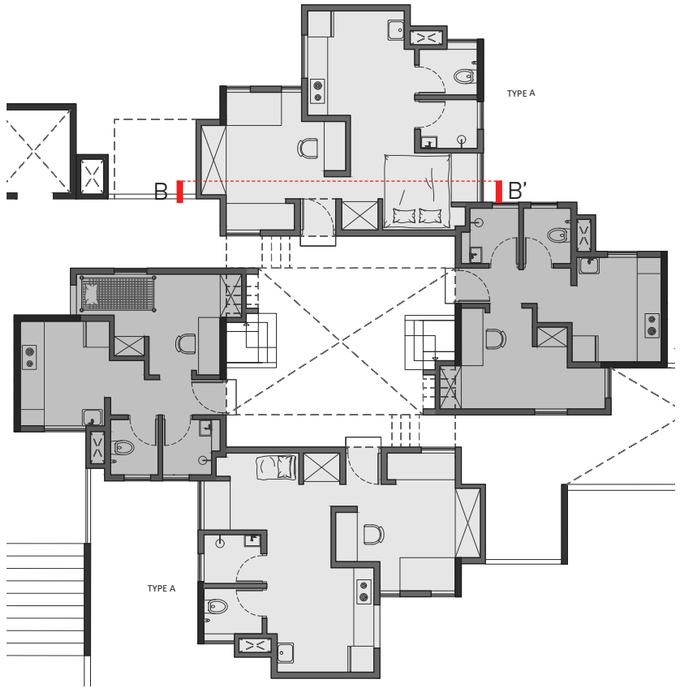
As shown in the sectional illustrations on the right, during the day when the mattress is rolled up and put aside; the sleeping space becomes a spill - over of the kitchen space.

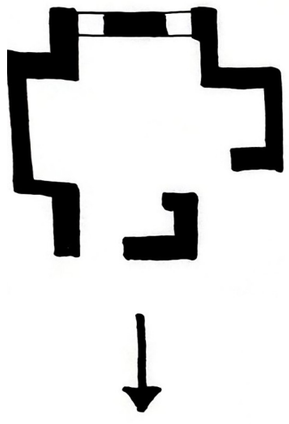
SECTION BB' - Using a mattress for sleeping, frees the floor space for toher activities in the day

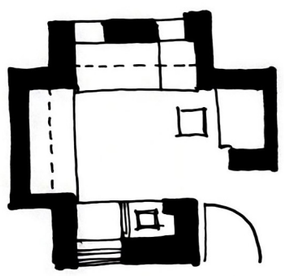
SECTION BB' - Sleeping space repurposed into a spill - over cooking space

DESIGN DETAILS

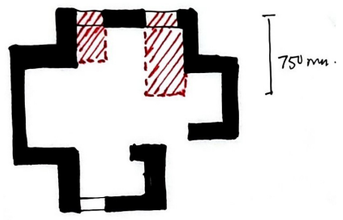
The sectional diagrams illustrate how life is imagined in these units and how the spaces within have the potential to accommodate various types of activities throughout the day.



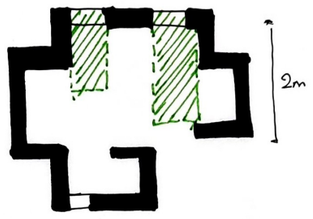




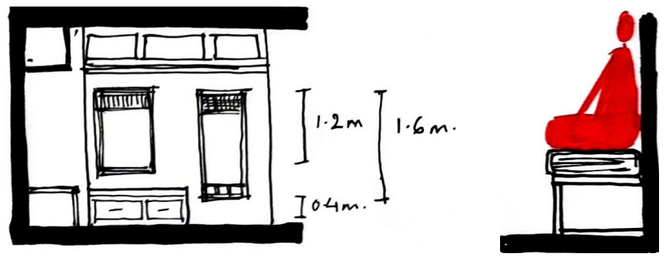
Suggested layout



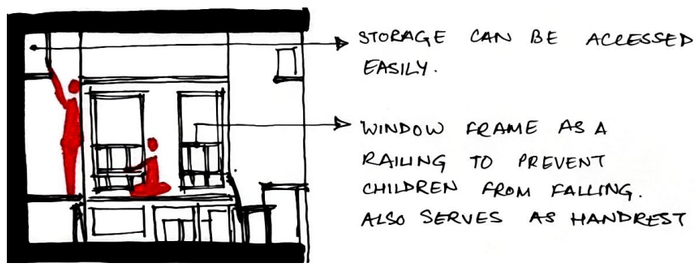
Summer : Angle - 59°
Sunlight is not allowed to permeate deep into the room thus keeping the space cooler in summers



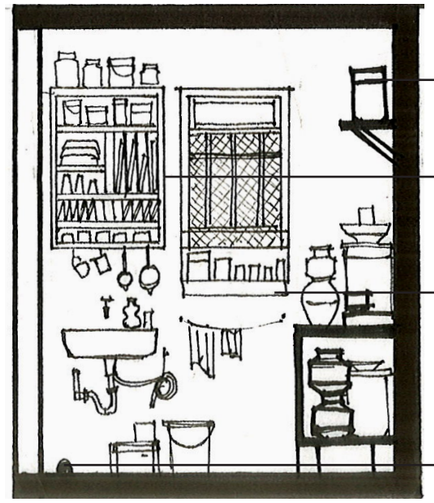
Winter : Angle - 33°
Lower angle of the sun allows light to permeate further into the room thus warming the room during winters



Size and height of placement of the windows vary to modulate the amount of light entering the room. Storage units can also be utilised as seating spaces



Having a storage/seating space (having a greater depth than that of the storage unit above) would allow one greater ease to access the overhead storage unit



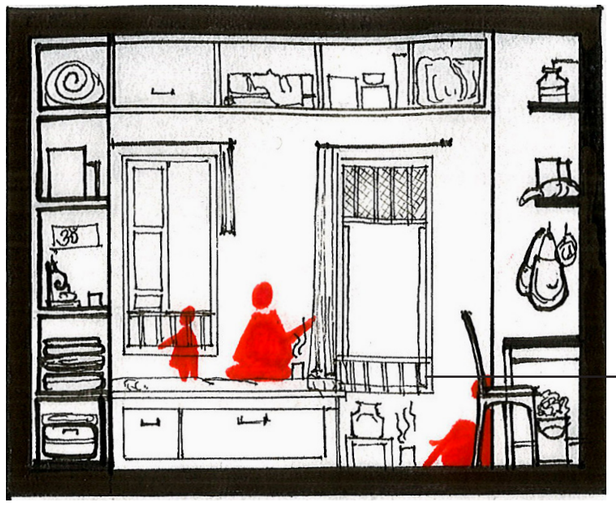
Overhead storage spaces help free more floor area in a small space

Sink provided with a wall mounted unit above it to allow one to dry dishes.

Window being pushed to the other edge, frees the sill space. It can be utilised to keep storage containers

To drain out water spilled from the sink or water used to clean the kitchen floor

SECTION CC' - Sectional illustration of the kitchen area

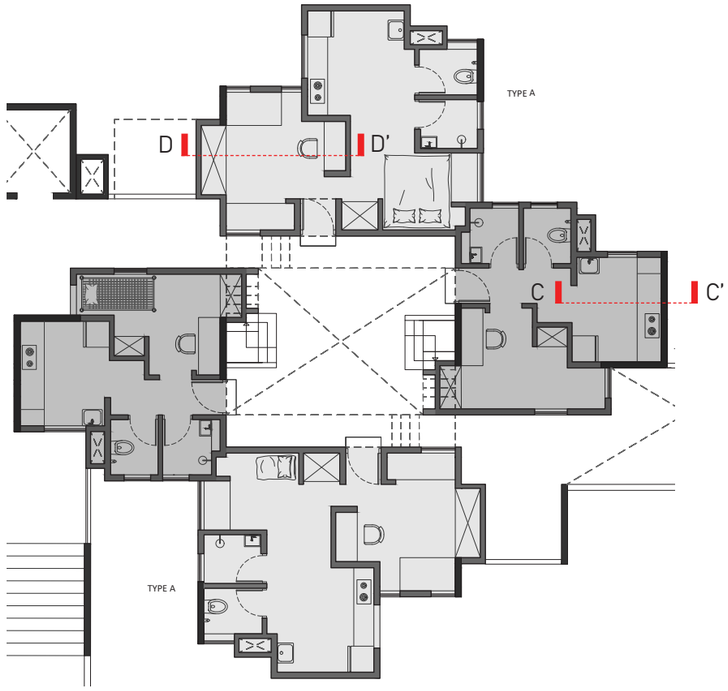


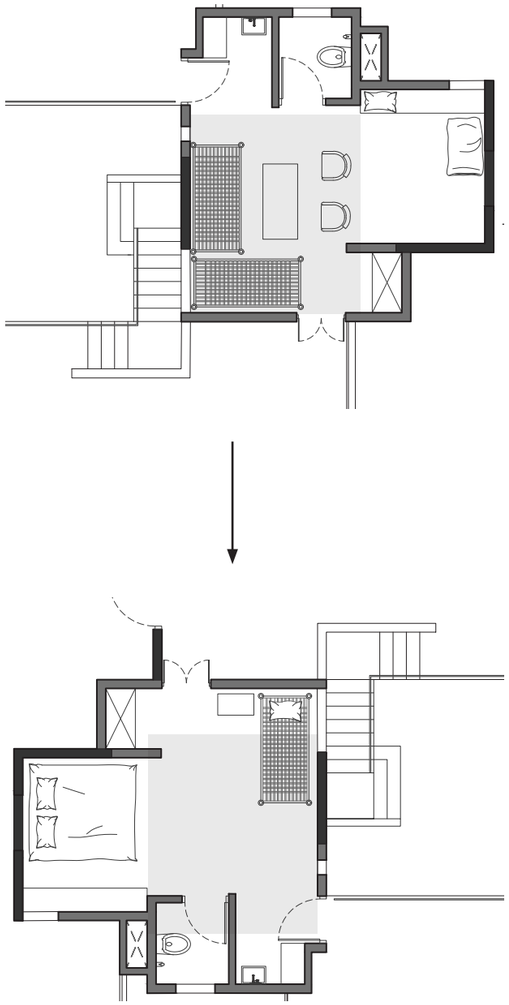
Adding rails along the lower half of the windows to prevent children from falling over

SECTION DD' - Sectional illustration of the study area

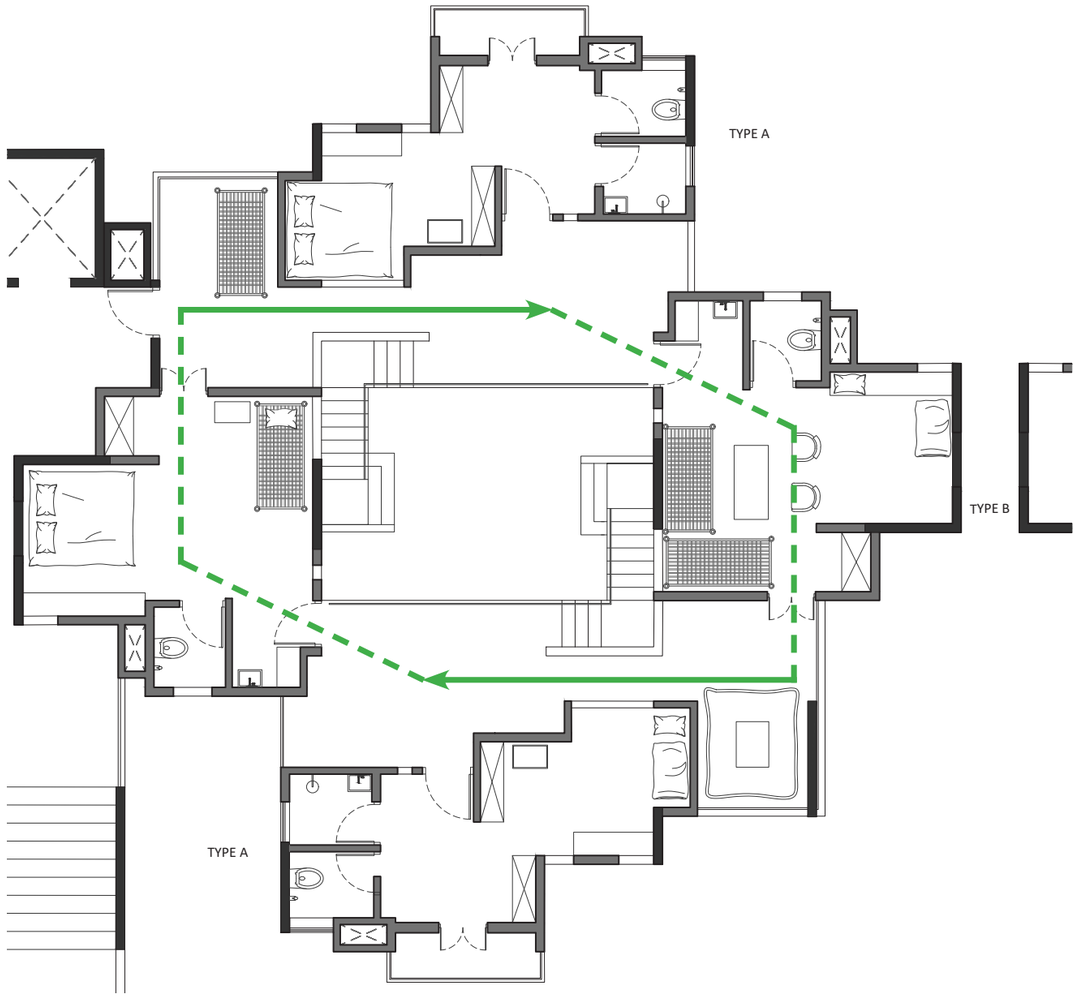
DESIGN DETAILS

The sectional diagrams illustrate how life is imagined in these units. The diagrams further illustrate how the window openings, furniture and placement of services; and the dimensioning of turn of the walls are done with the intention of harbouring these activities.

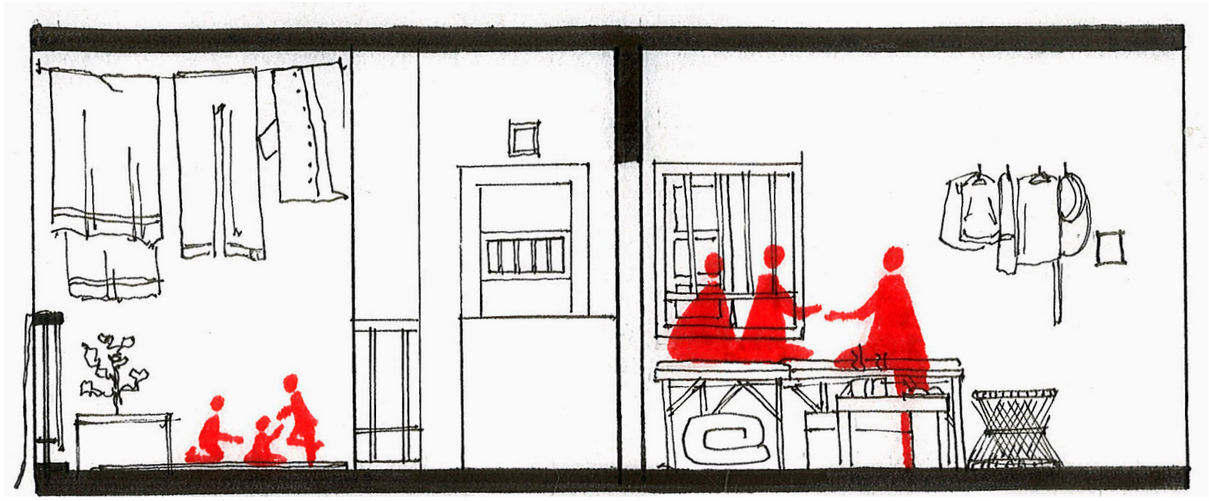




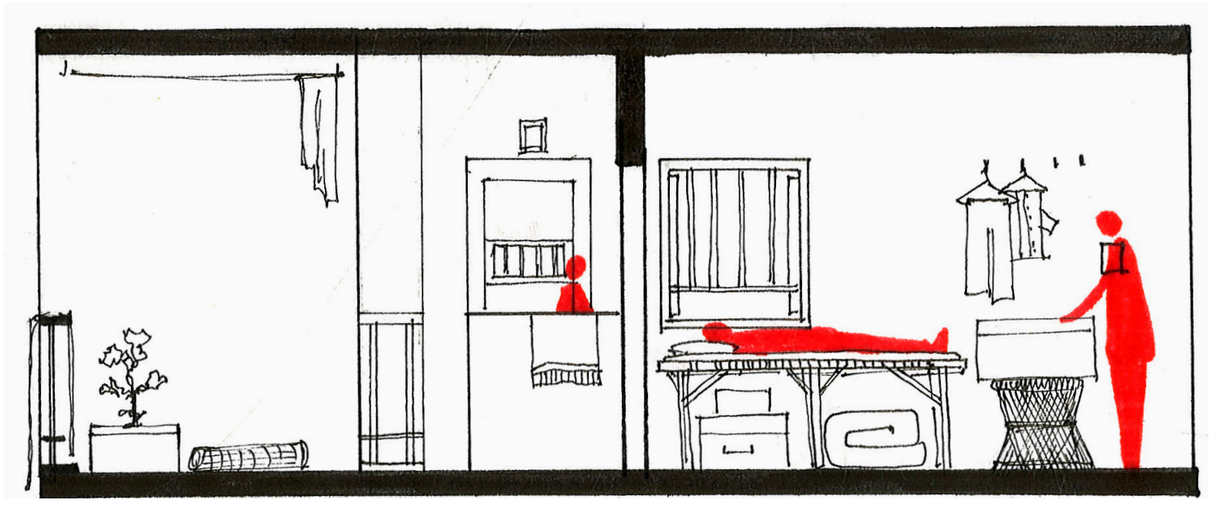
While the charpais can be pushed against the wall and serve as a seating for guests during the day - at night they can also be used as a bed for sleeping.



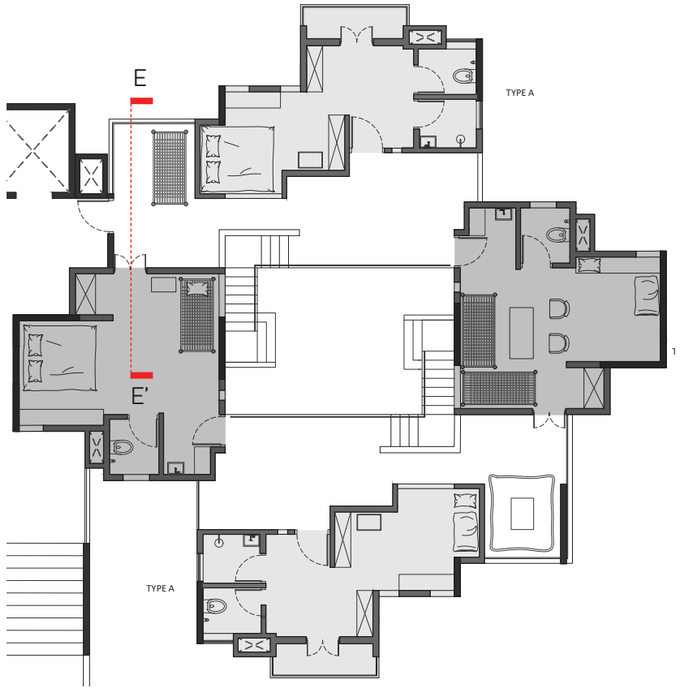
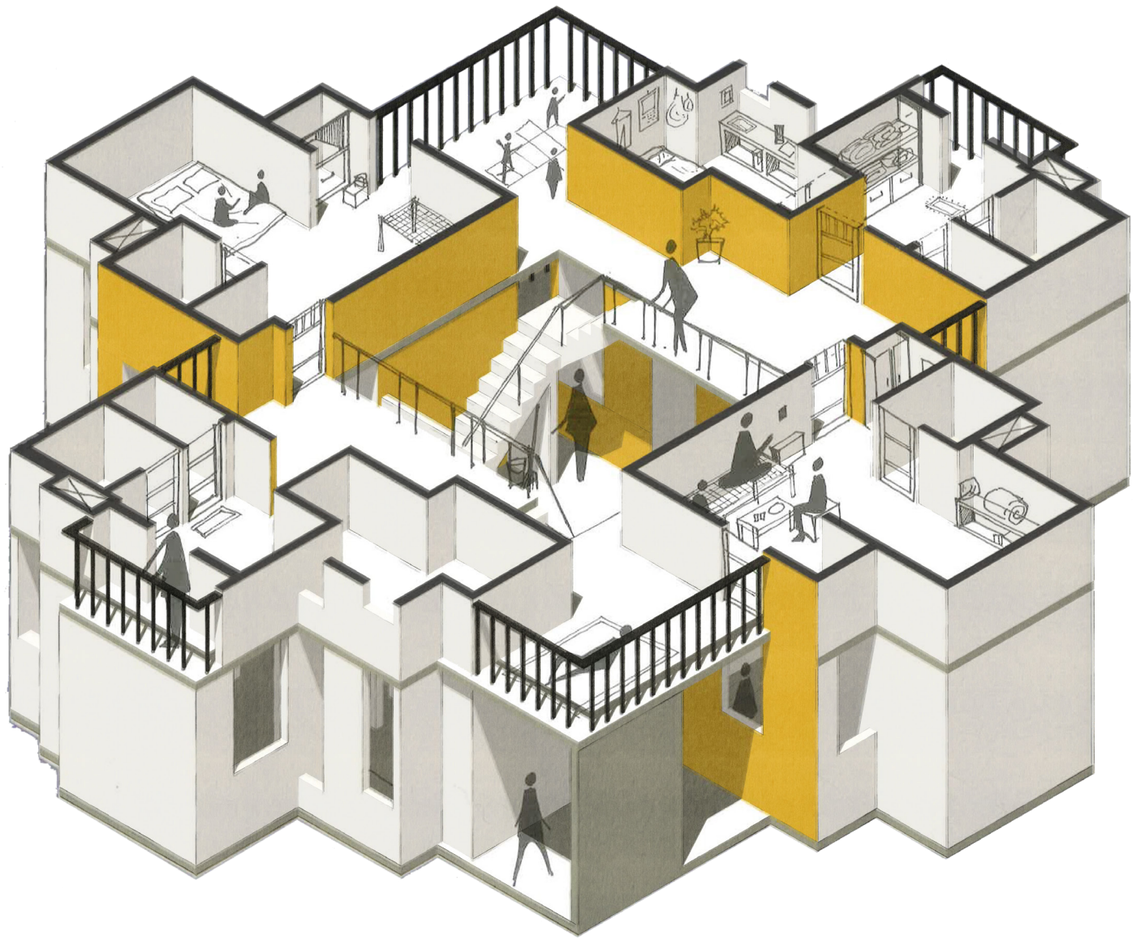
The openings of the units are positioned such that each unit has easy access to the stairs. When all four units have the doors open - it creates a circular loop of movement. This could also allow the units and the shared space between the units to act as a play - area for kids.



SECTION EE' - Sectional illustration showing guests visiting and the children playing



SECTION EE' - Sectional illustration showing the space changed into a sleeping area

DESIGN DETAILS

The sectional diagrams illustrate how life is imagined in these units and how the spaces within have the potential to accommodate various types of activities throughout the day.