Inclusive interiorities

A focus on women; towards more inclusive designs

1.Background

Women & Mumbai

2.Research

Patterns
Indian modulor
Case study

3. Managerial concept

4. Design

Urban level
Building level
Unit level

1. Background

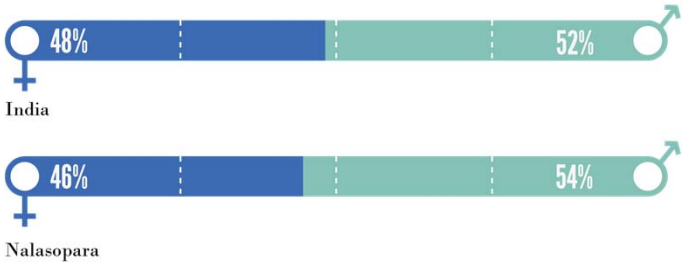
Women & Mumbai

IND: 127

NL: 3

Gender Inequality Index

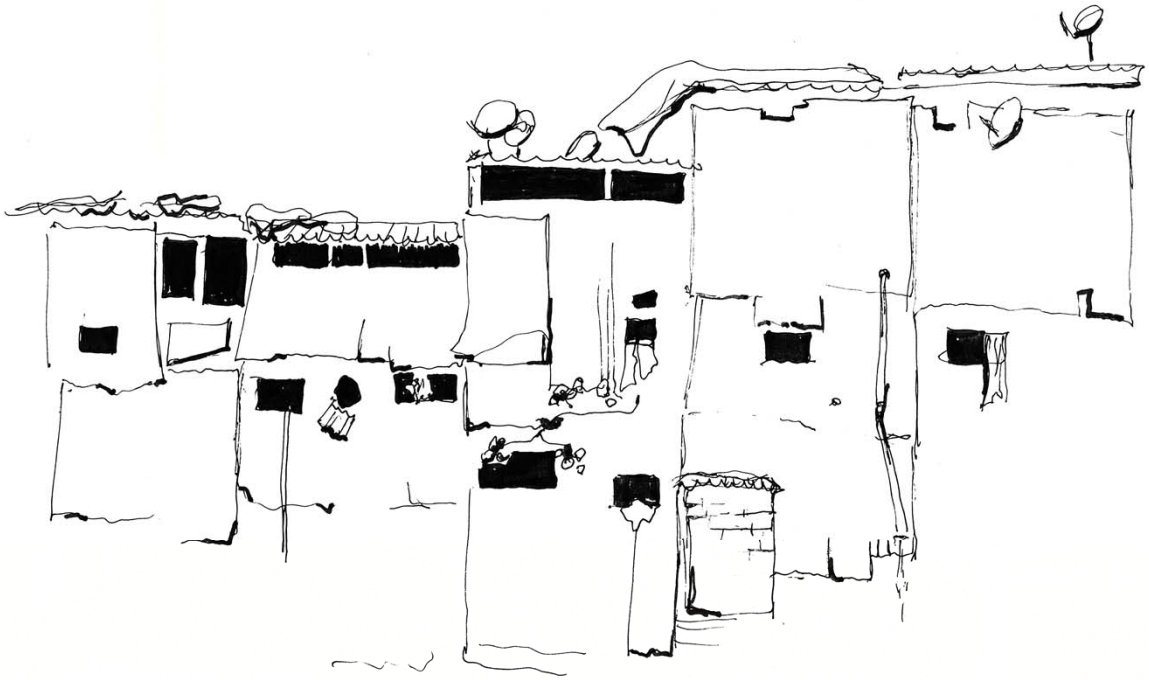
Comparison of sex ratio – 2010s



24%

considered women participation as labour force


5
GENDER
EQUALITY



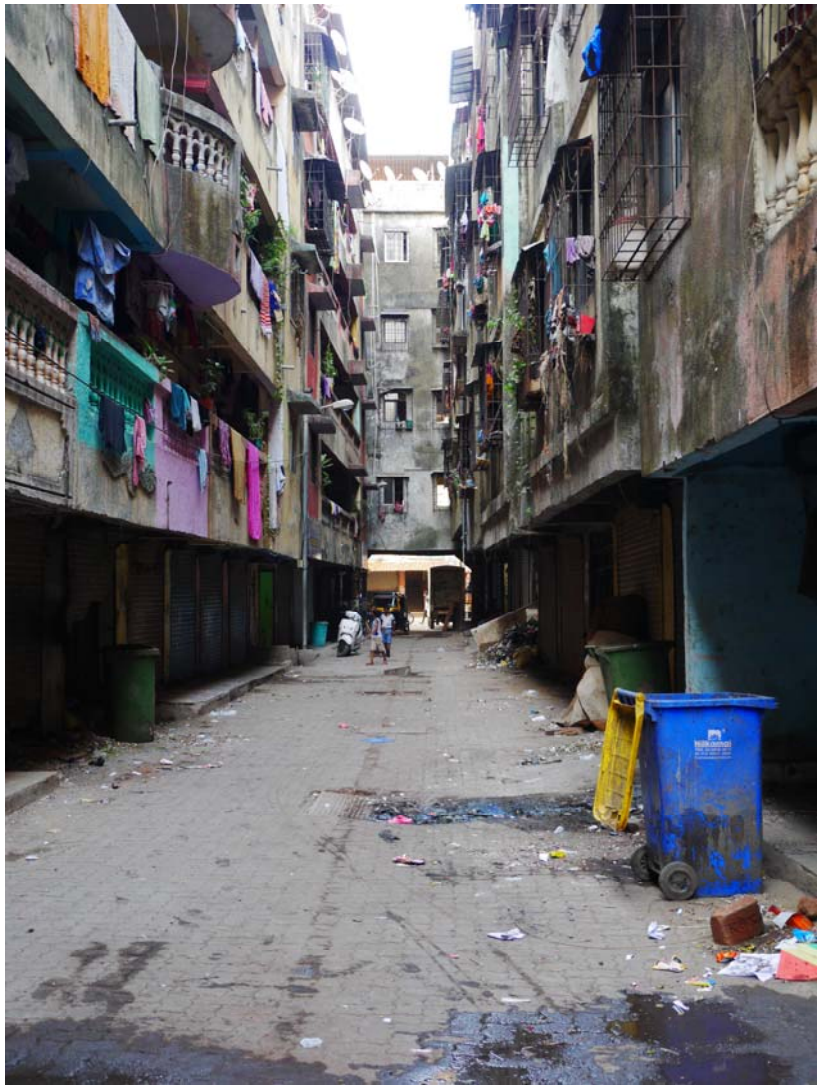


Photo: Fleur Melchers

‘Lack of infrastructure restricts the access but also **actively prevents people from participating** in shaping the future of the city’

(Phadke et al. 2011)

‘In Mumbai, a crowd is in average composed of **28% of women only**’

(Ranade, 2007)

‘Even though slum women **want private spaces**, they also wish to **access public space for fun** and when offered opportunities to do so, grab them with both hands’

‘Various slum redevelopment schemes may offer even **fewer opportunities** for women to have fun’

(Phadke et al. 2011)

Problem(s) statement

The lack of access to proper **sanitary** facilities, **education** and **public space**, together with societal constructs, undermine the role and status of women in India, and Nalasopara in particular.

Currently, women are undermined, under-represented and are not socio-economically independent. Their **living environment is unhealthy,** dangerous and not prone to sustainable development.

The current slum redevelopment schemes are **restricting women's participation** in public life.

Research question(s)

How can design **empower** women, give them more **freedom** and allow them to **participate** in the public realm?

What are the potentials of a **gender sensitive design**?

ACCESS TO PUBLIC SPACE

safety
comfort
privacy

2. Research

Patterns

PUBLIC

PRIVATE

front door step for food preparation

food sharing

kitchen utensils

kitchen storage

curtains for privacy

clothes drying

home-based work

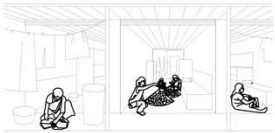
wet elements in the house

COMMUNAL SPACE

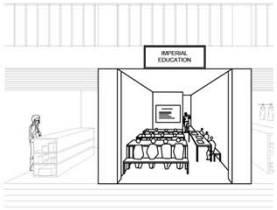
HOME

the informal corner

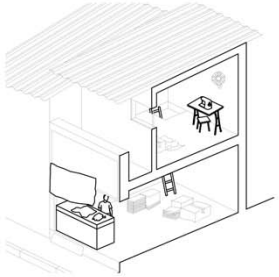
licensed location



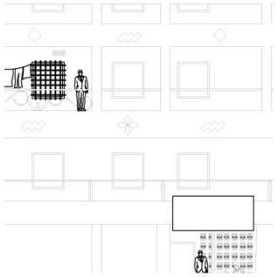
women work at home



education as an investment



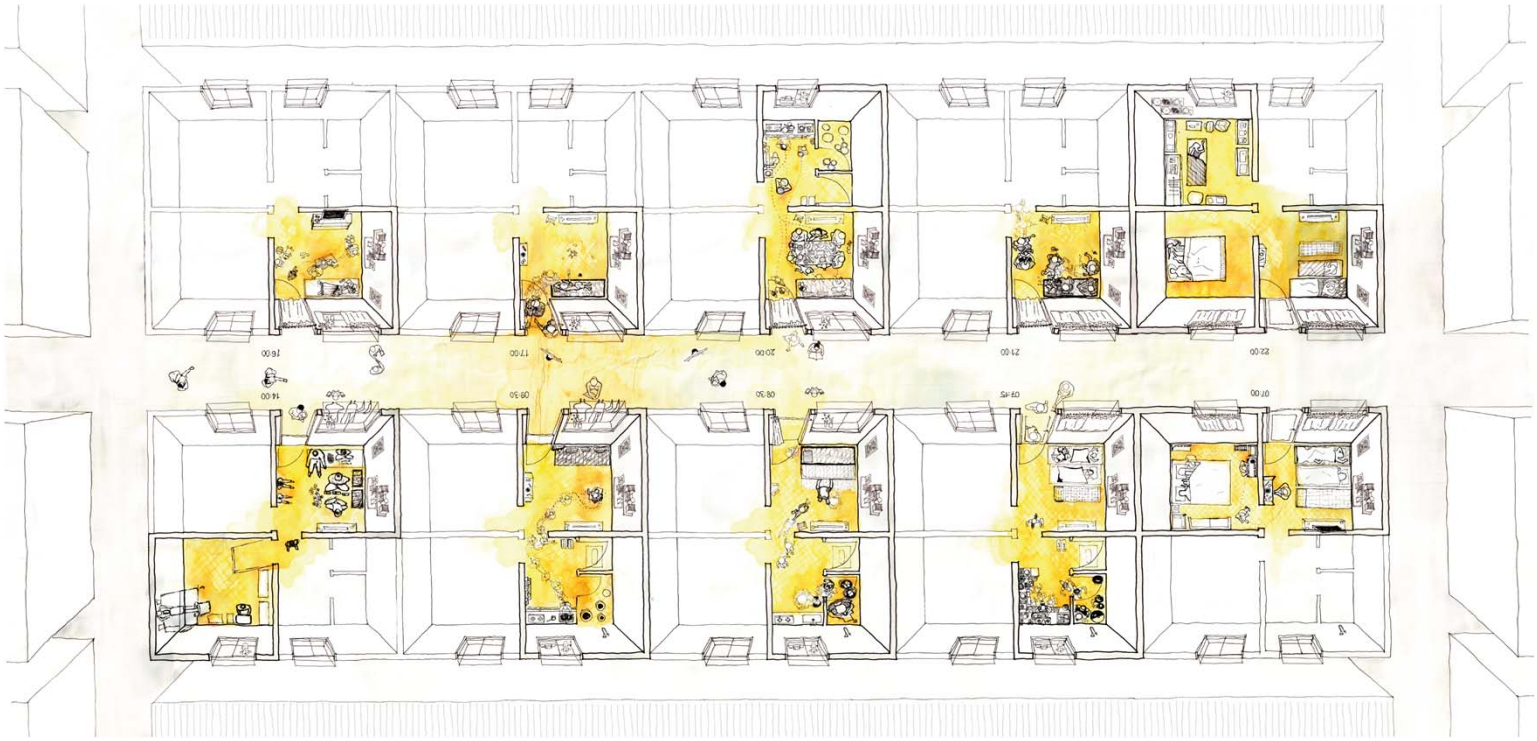
production and
consumption are never far
from one another



intimate working and
living

commercial extensions

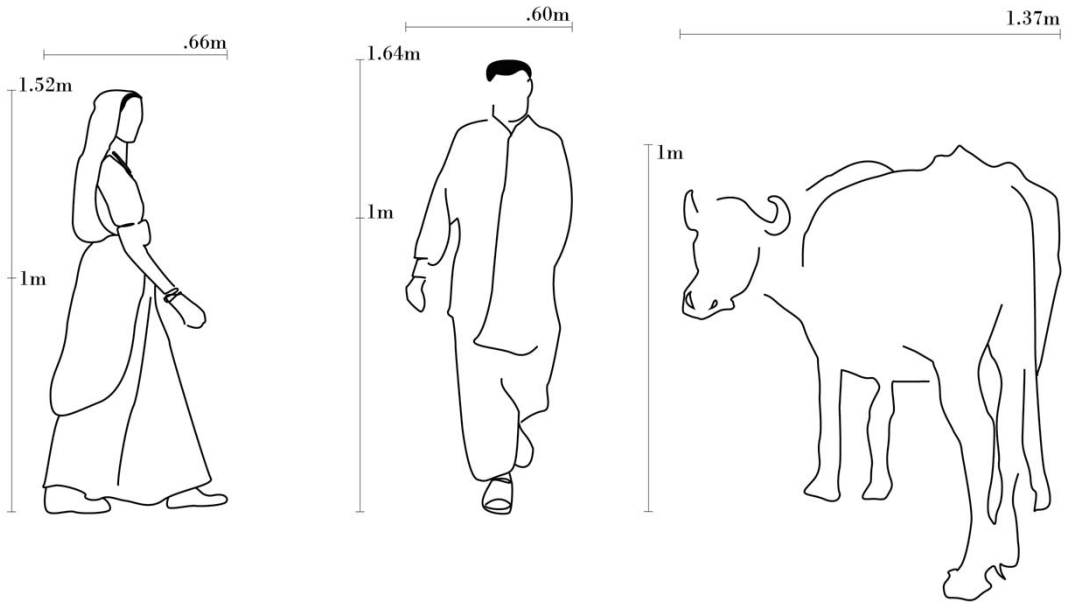
space is scarce - thus always
used for income generation


16:00
17:00
20:00
21:00
22:00
14:00
09:30
08:30
07:45
07:00

2. Research

Indian modulor

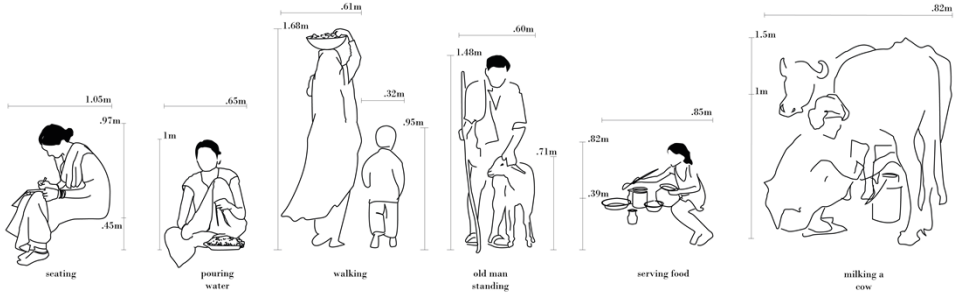
Indian ‘Modulor’

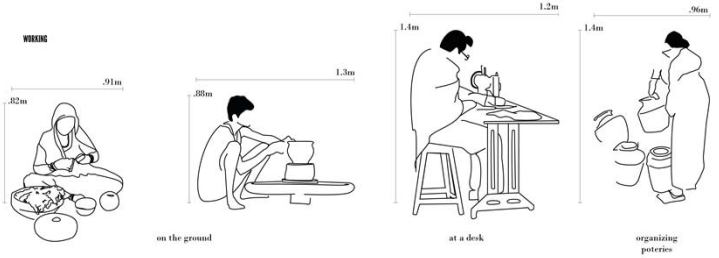


HEIGHT

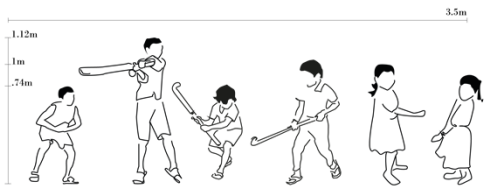
india		netherlands	
WOMEN	MEN	WOMEN	MEN
1.52m	1.64m	1.68m	1.81m

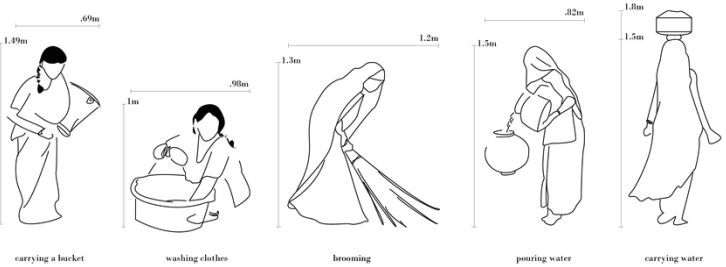
source: http://www.imperial.ac.uk/news/173634/dutch-latvian-women-tallest-world-according/


1.05m
.97m
.45m
seating
.65m
1m
pouring water
.61m
1.68m
.32m
.95m
walking
.60m
1.48m
.71m
old man standing
.85m
.82m
.39m
serving food
.82m
1.5m
1m
milking a cow


WORKING
.91m
.82m
on the ground
1.3m
.88m
1.2m
1.4m
at a desk
.96m
1.4m
organizing poteries


2.2m
.94m
running


3.5m
1.12m
1m
.74m
playing


.69m
1.49m
carrying a bucket
.98m
1m
washing clothes
1.2m
1.3m
brooming
.82m
1.5m
pouring water
1.8m
1.5m
carrying water

2. Research

Case studies

Resilient cities
Cities

Slum-free cities? How the women of Ahmedabad led a housing revolution

Carlin Carr *in Ahmedabad*
Thu 14 Apr 2016 11.43 BST

▲ Ahmedabad has the second largest slum population in the state of Gujarat. Photograph: Raquel Maria Carbonell

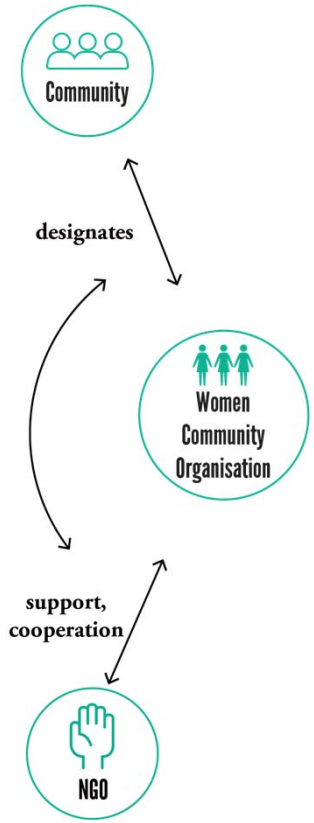
Mother Theresa Nagar, Pune

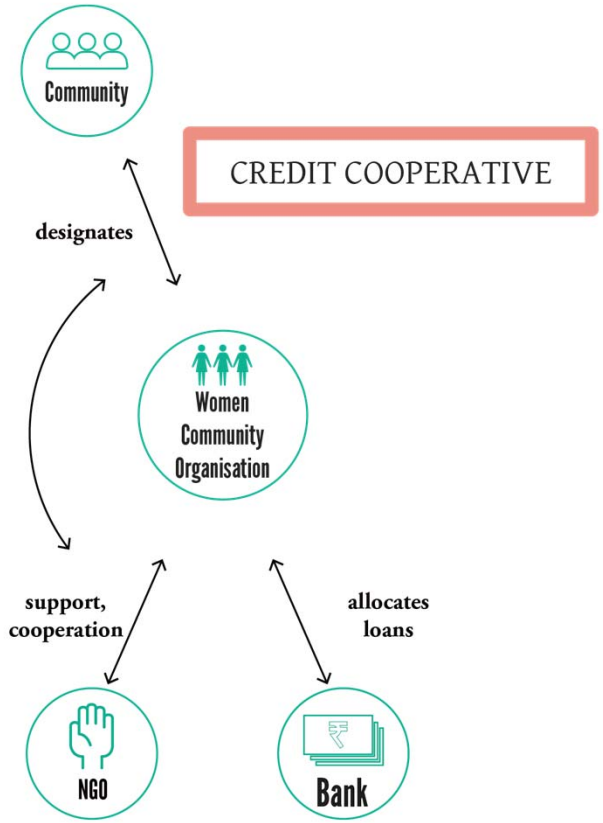
SPARC, Mahila Milan

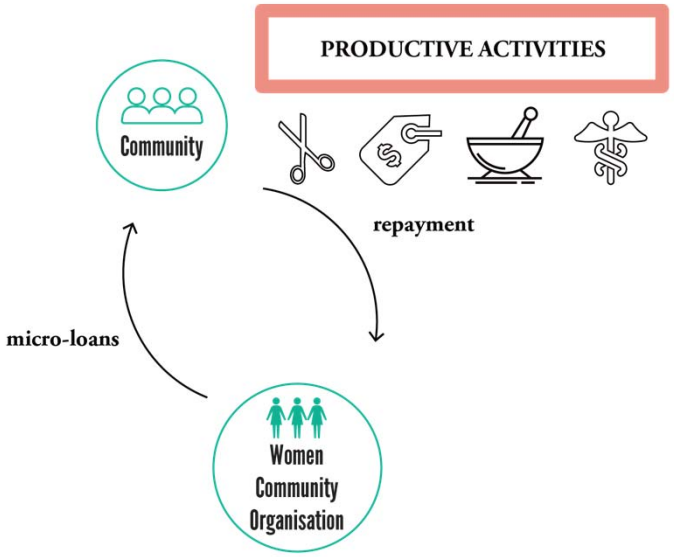
“One of the good things about Mother Teresa Nagar [...] is **freedom of girls to move around in the community, and participate** in celebration of major festivals.“

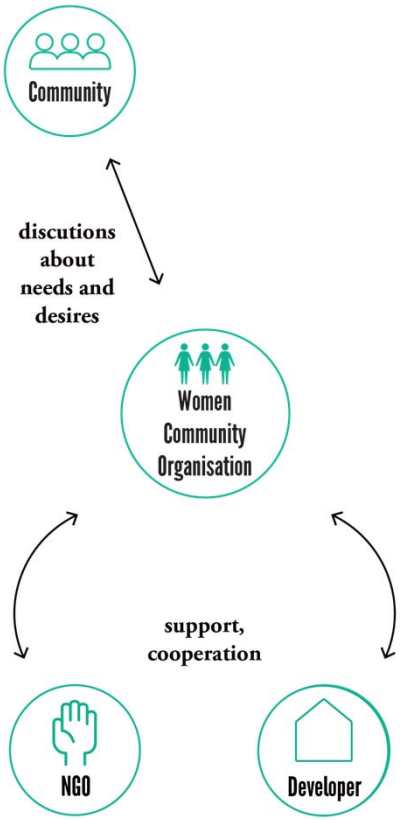
Insitu Slum Rehabilitation Project under BSUP (Basic Services for Urban Poor), JNNURM, Yerawada, Pune

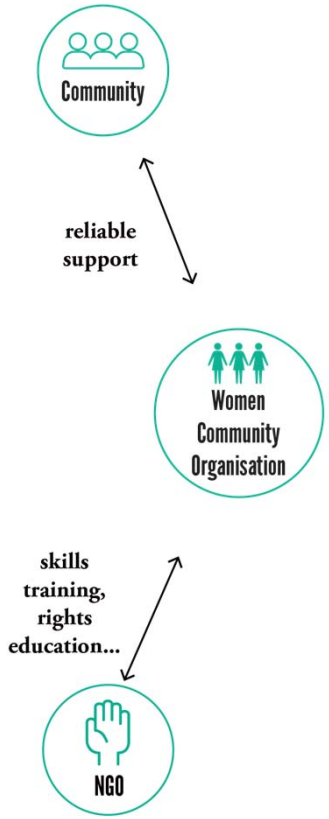
3. Managerial concept


Community
designates
Women
Community
Organisation
support,
cooperation
NGO


Community
CREDIT COOPERATIVE
designates
Women
Community
Organisation
support,
cooperation
allocates
loans
NGO
Bank


PRODUCTIVE ACTIVITIES
Community
repayment
micro-loans
Women
Community
Organisation


Community
discutions about needs and desires
Women Community Organisation
support, cooperation
NGO
Developer


Community
reliable support
Women Community Organisation
skills training, rights education...
NGO

4. Design

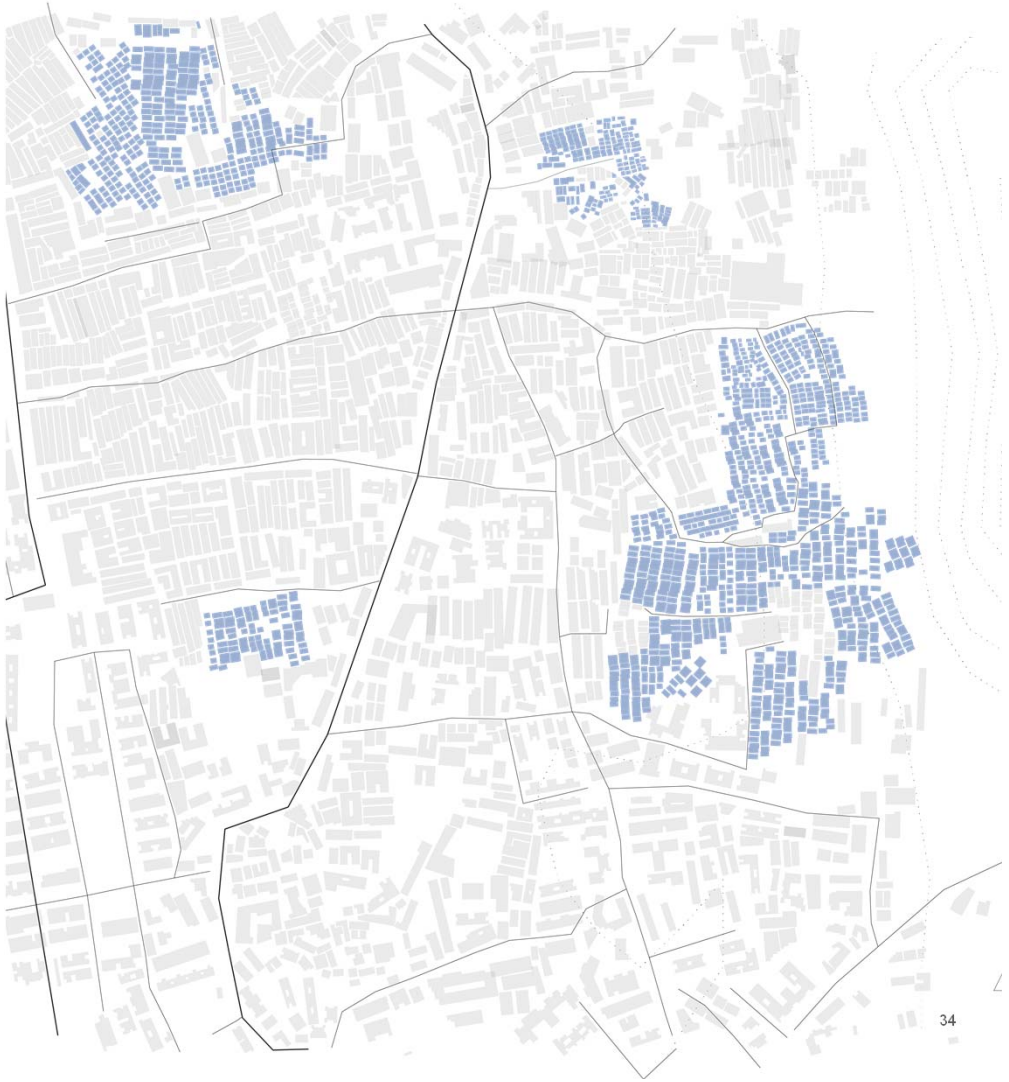
Urban level

Concept

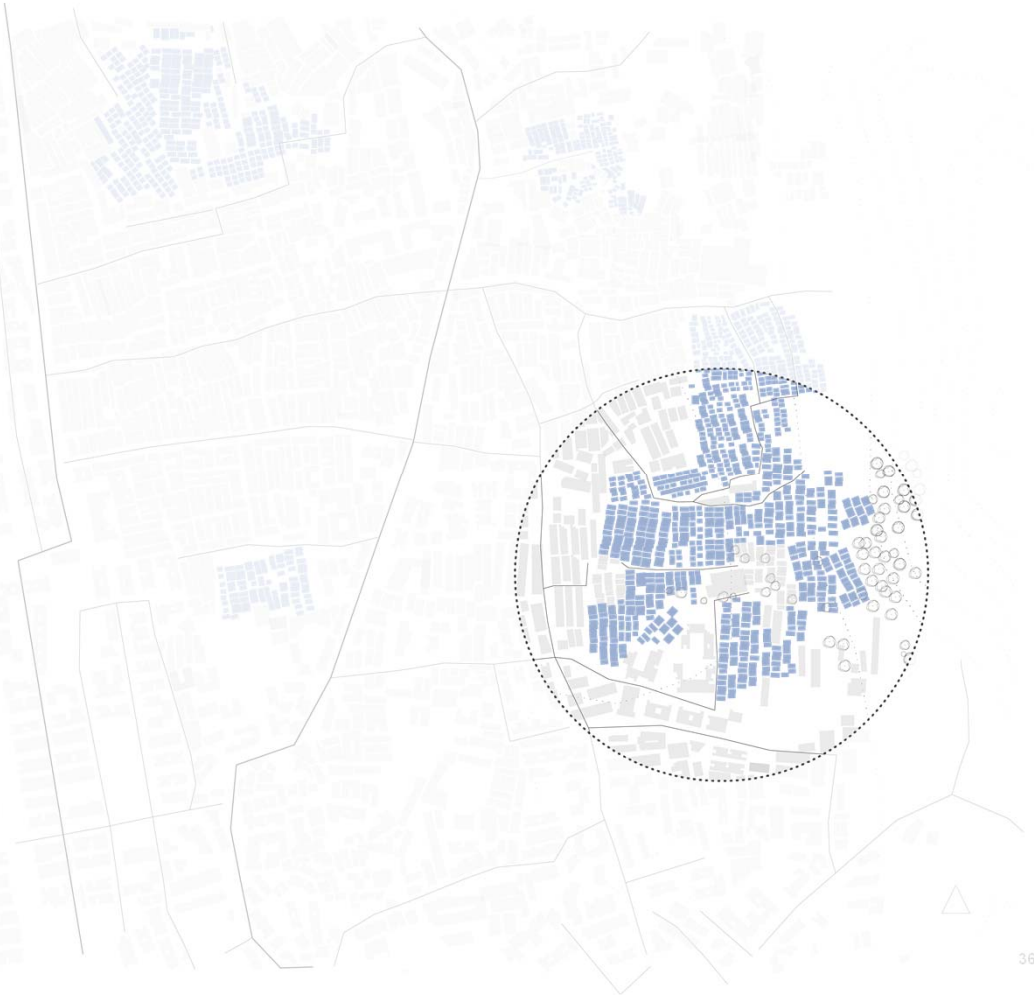
Nalasopara

Nalasopara

Baithi Chawls



Functions



People get together for redevelopment

Demolished buildings

New streets

Street hierarchy

Urban axis

Massing

Existing FSI: >1

New FSI: 2.9

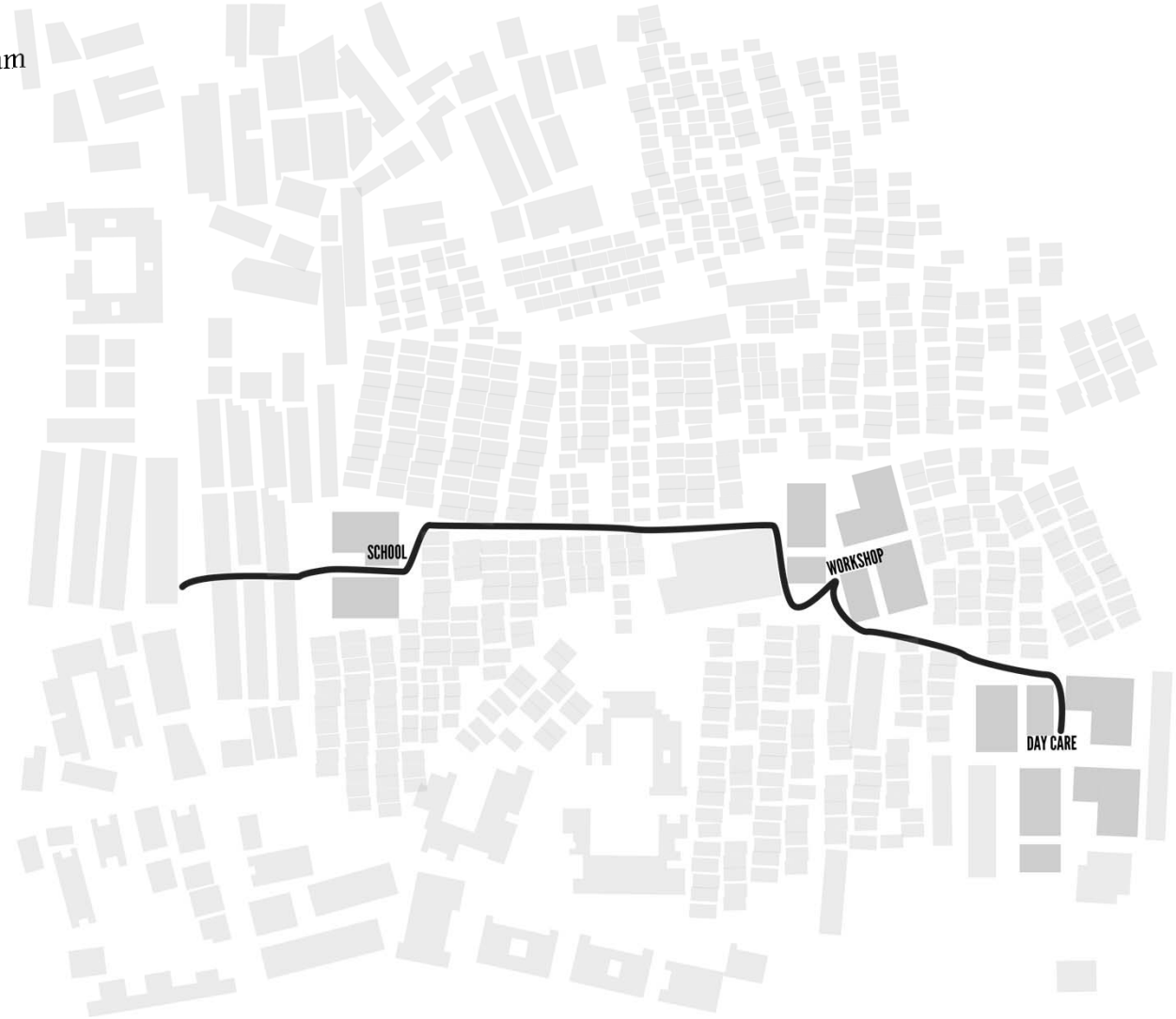
Public

Semi - public

Communal

Public squares

Public program



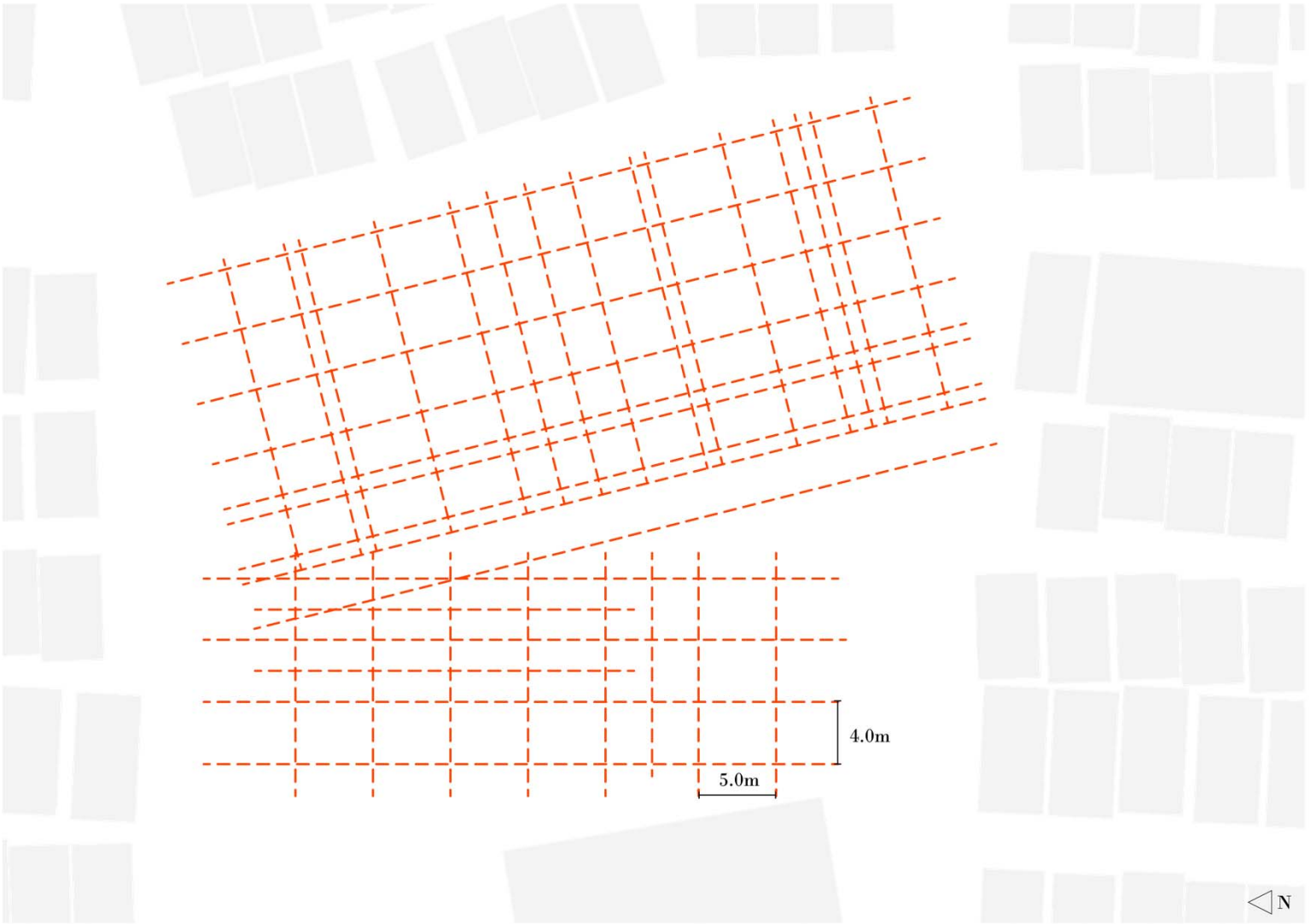
Semi – public spaces

Communal spaces

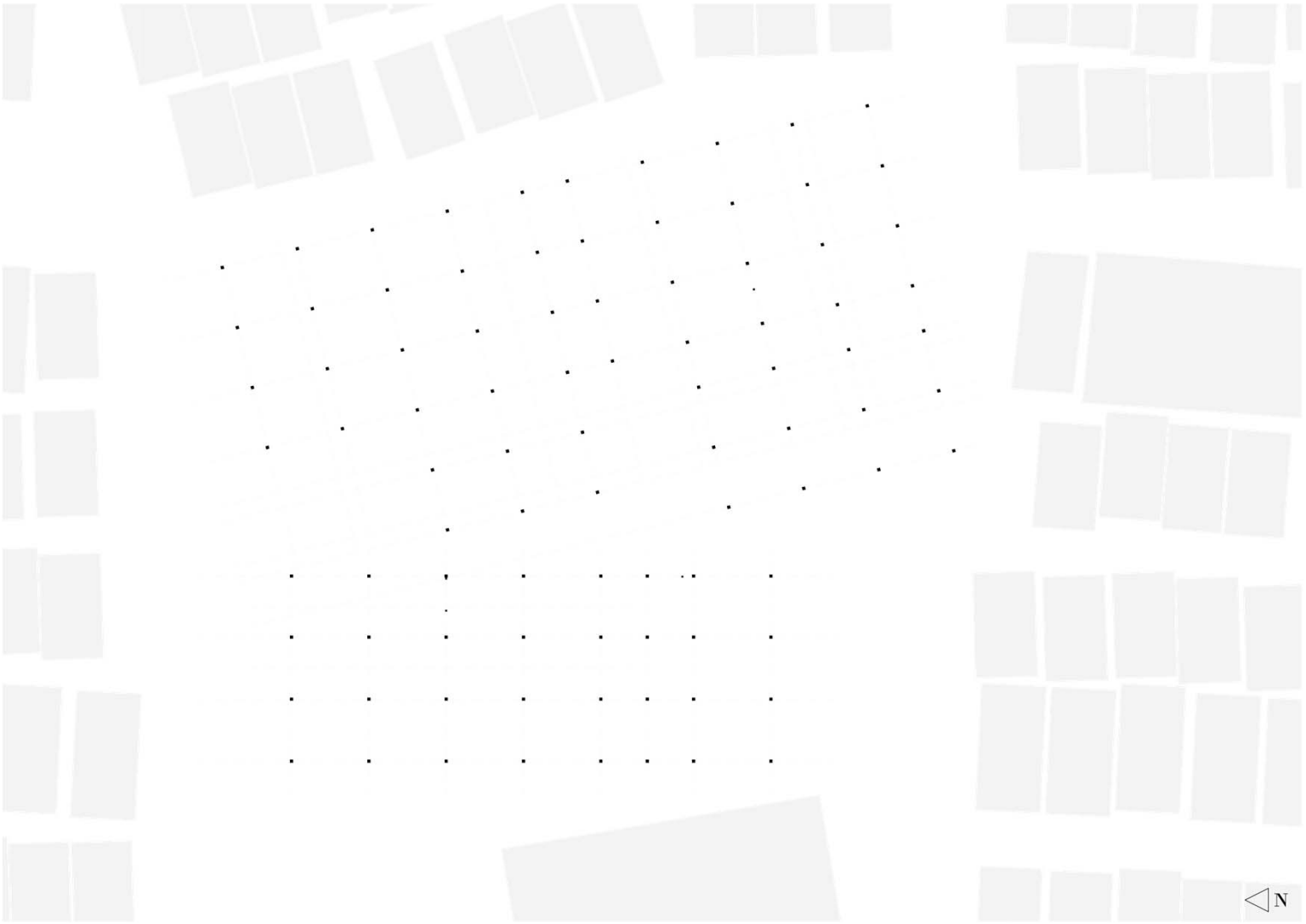
4. Design

Building level

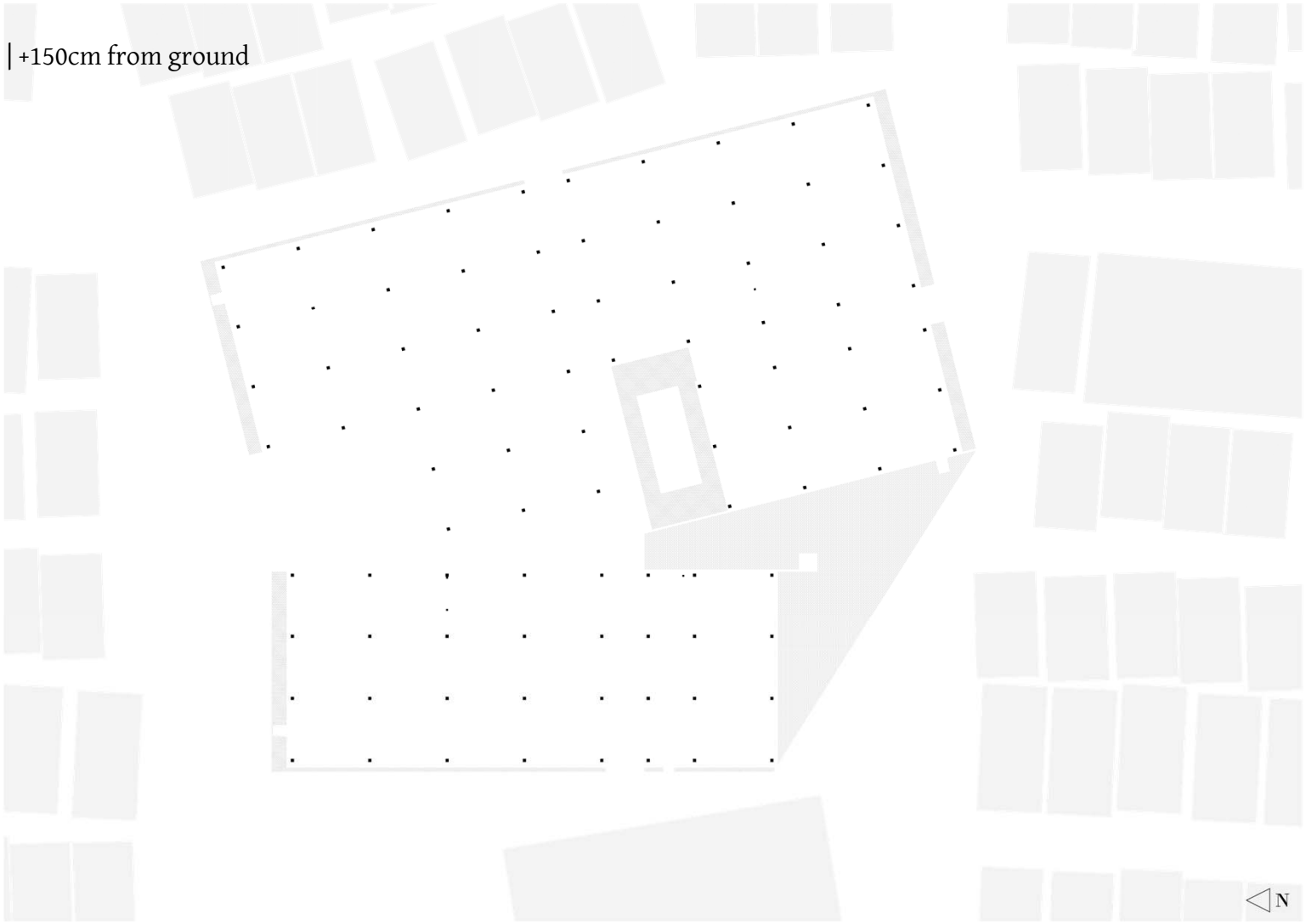
Grid



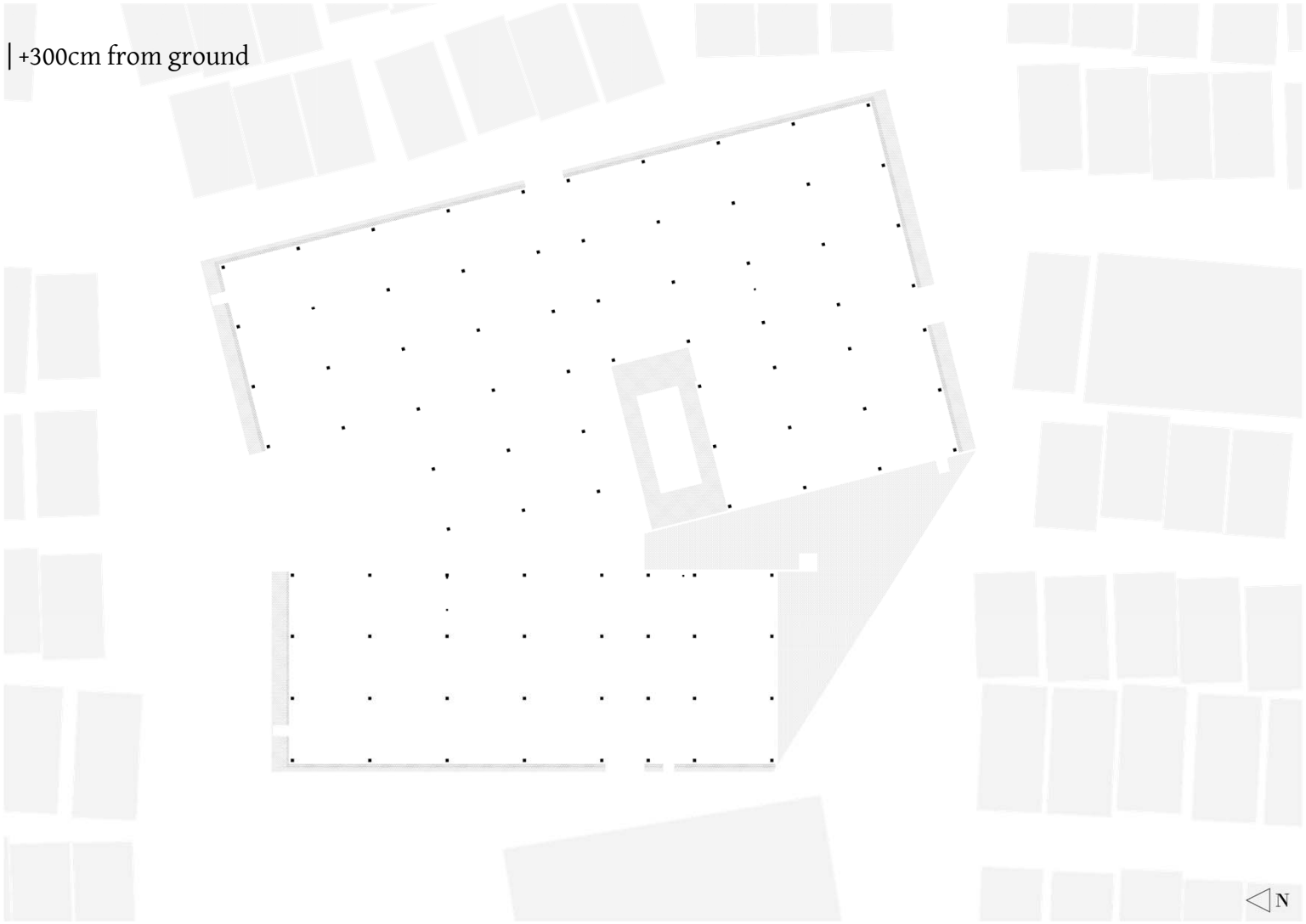
Columns



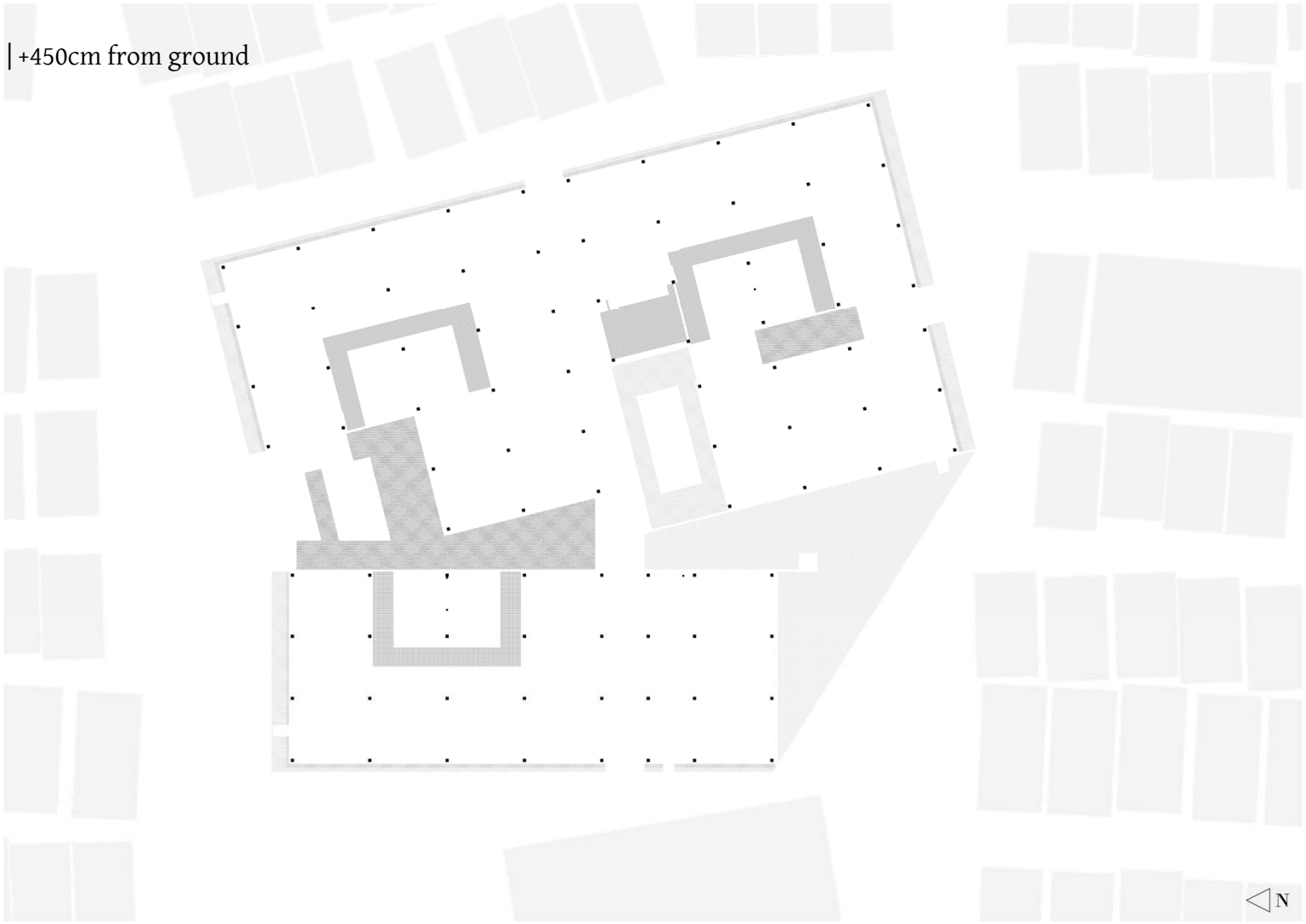
Thresholds | +150cm from ground



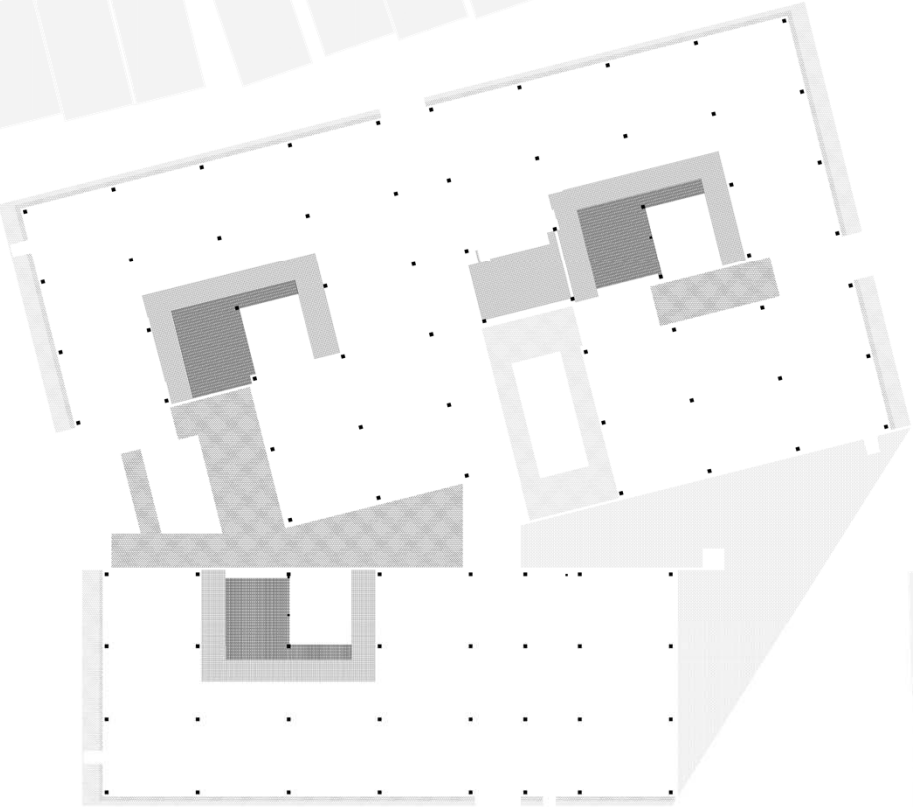
Thresholds | +300cm from ground

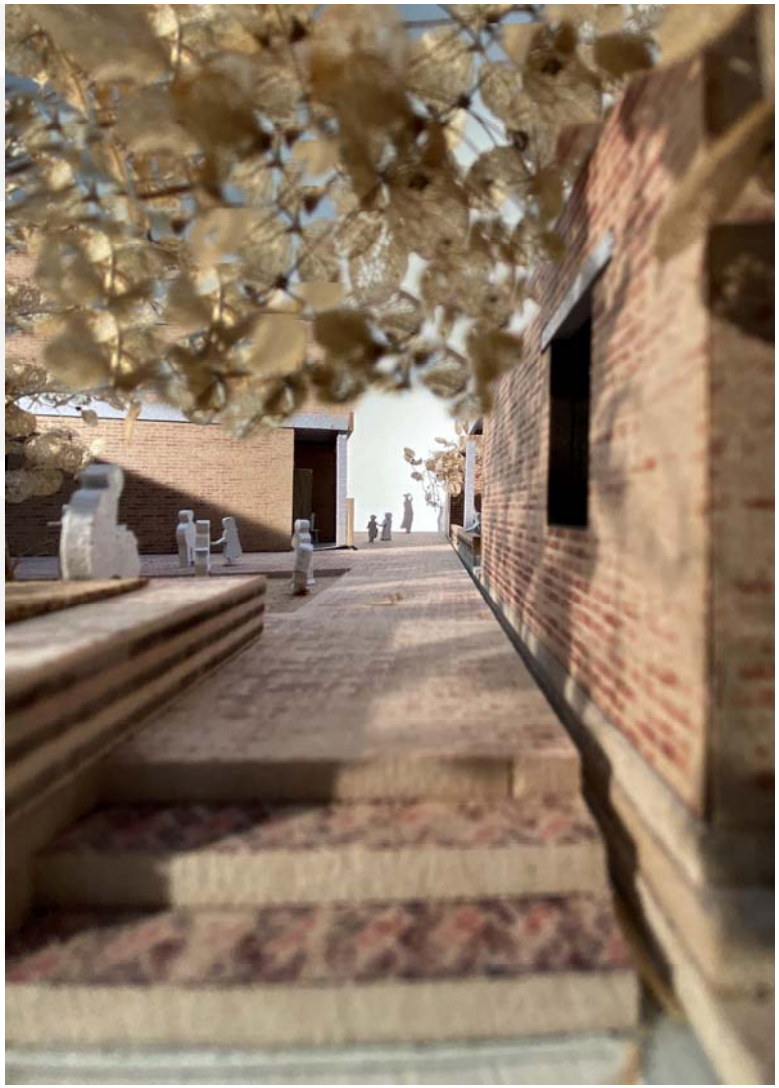


Thresholds | +450cm from ground

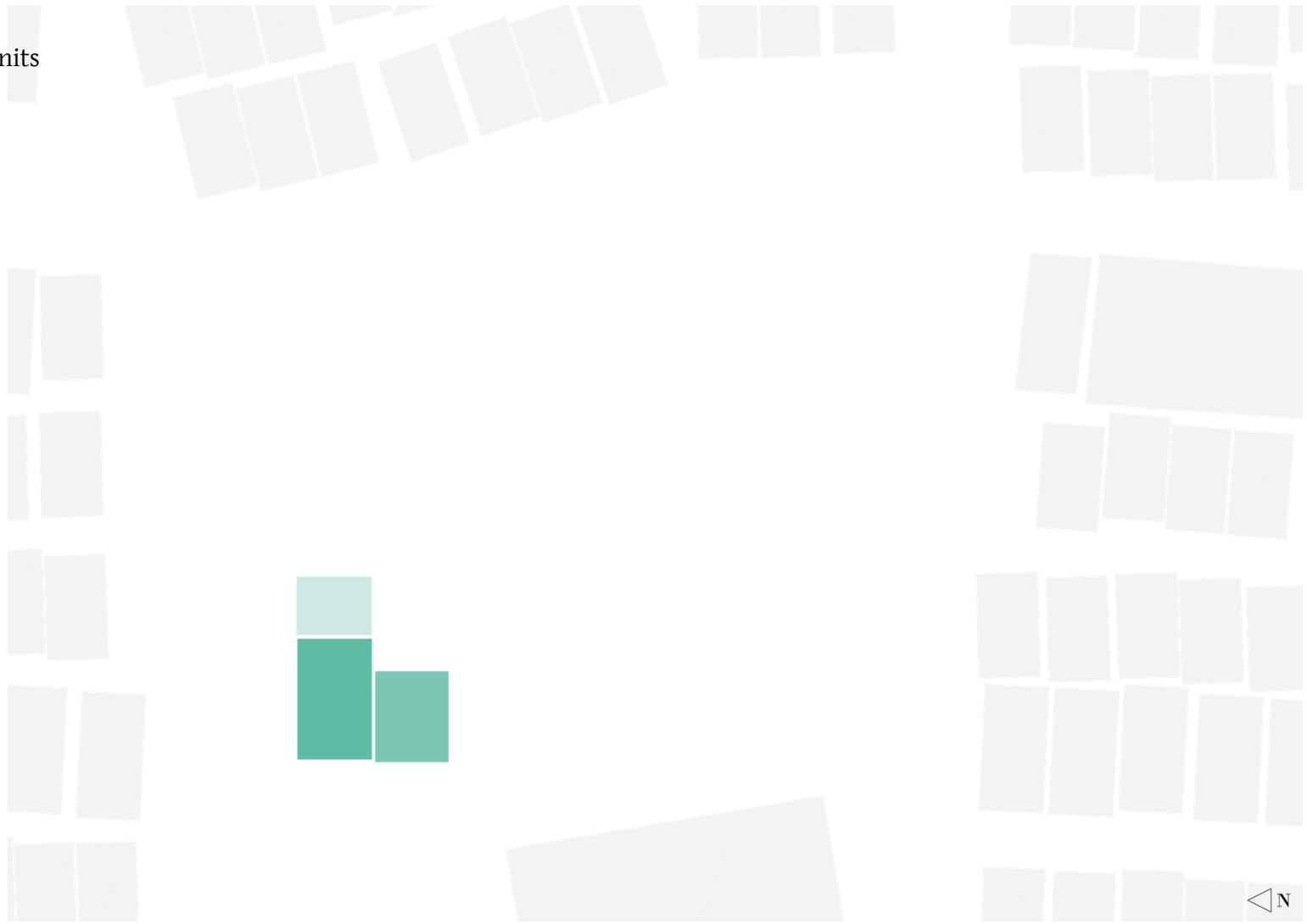


Thresholds | +600cm from ground

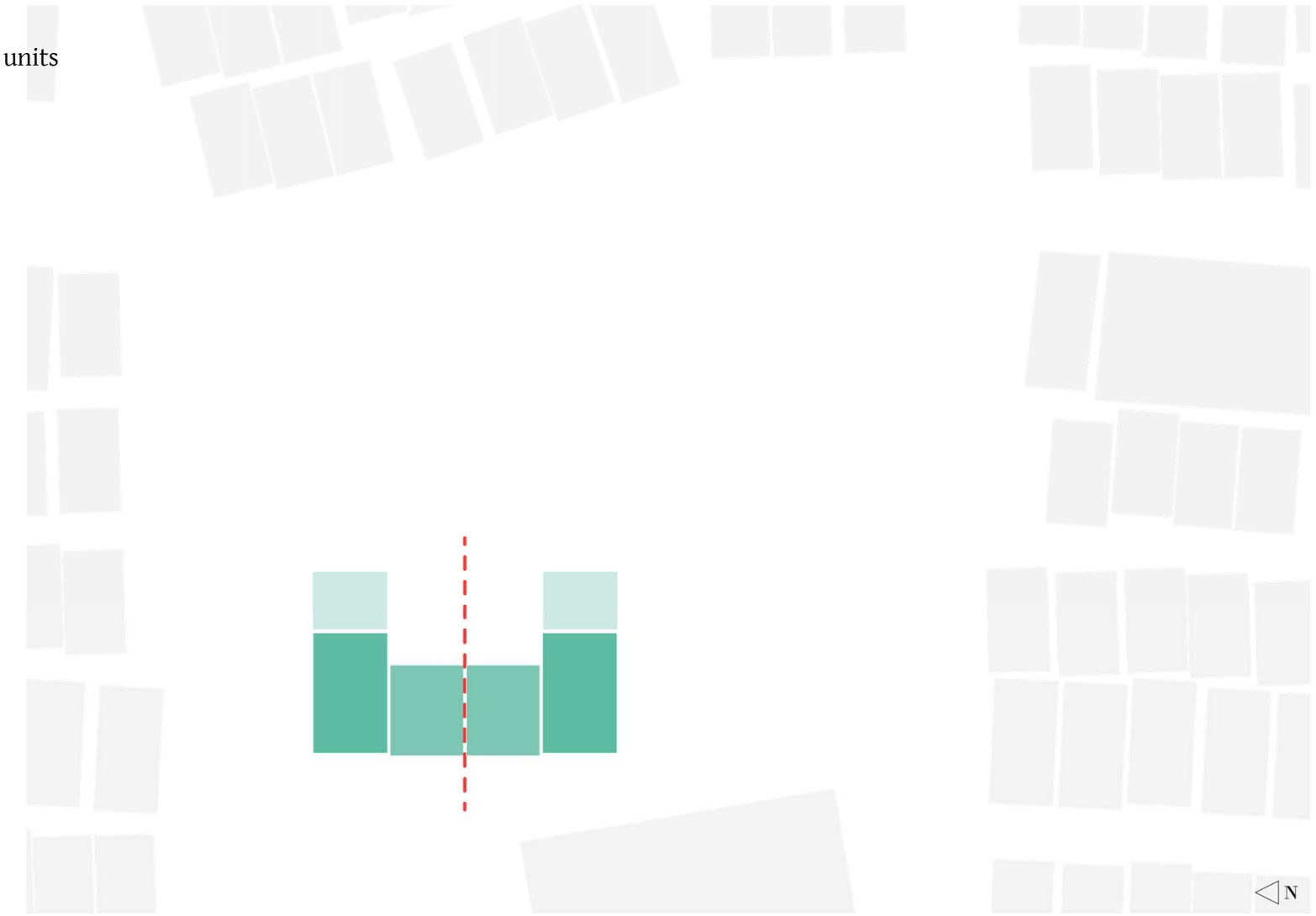




Dwelling units

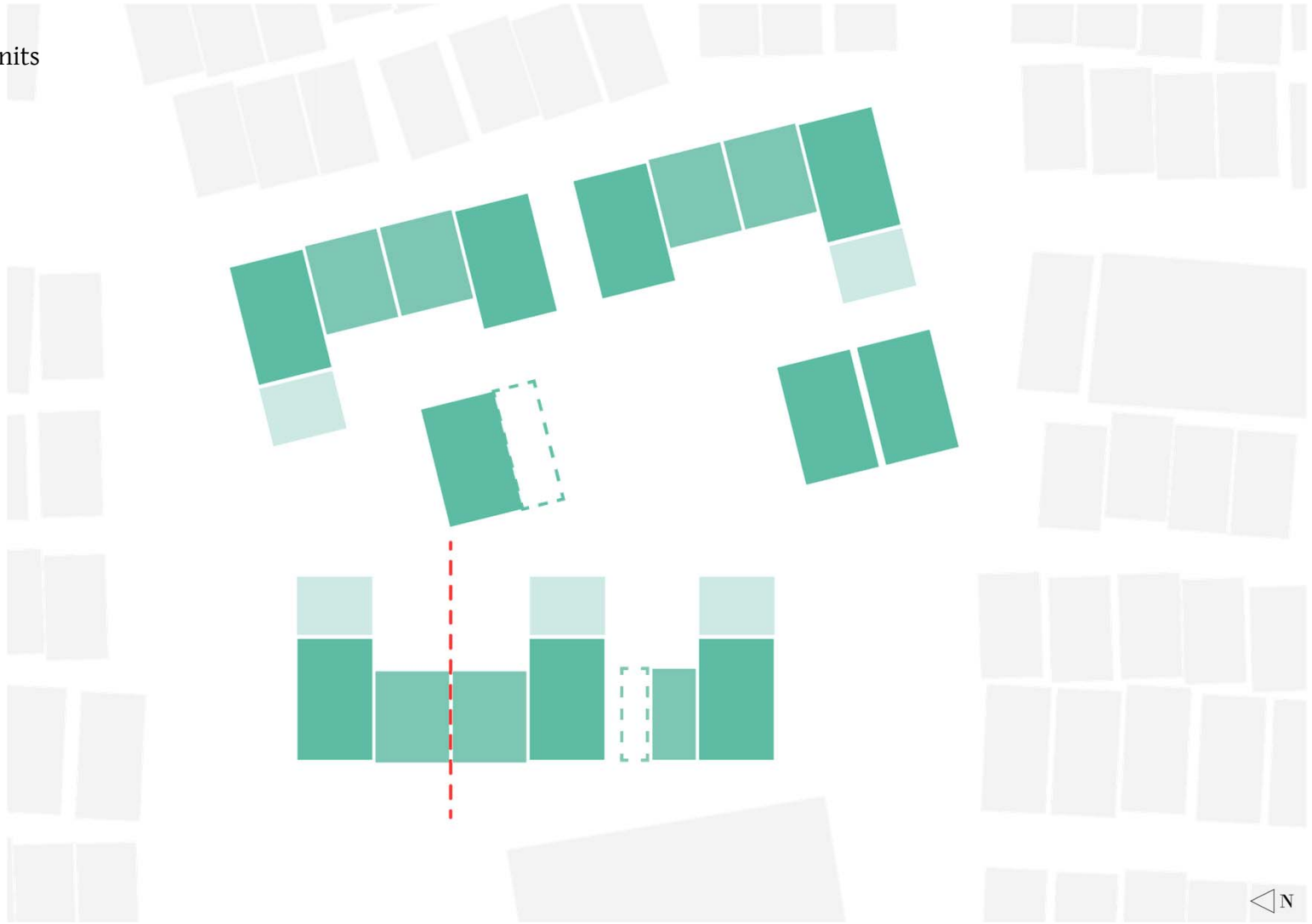


Dwelling units



Dwelling units

Dwelling units



Dwelling typologies per income group

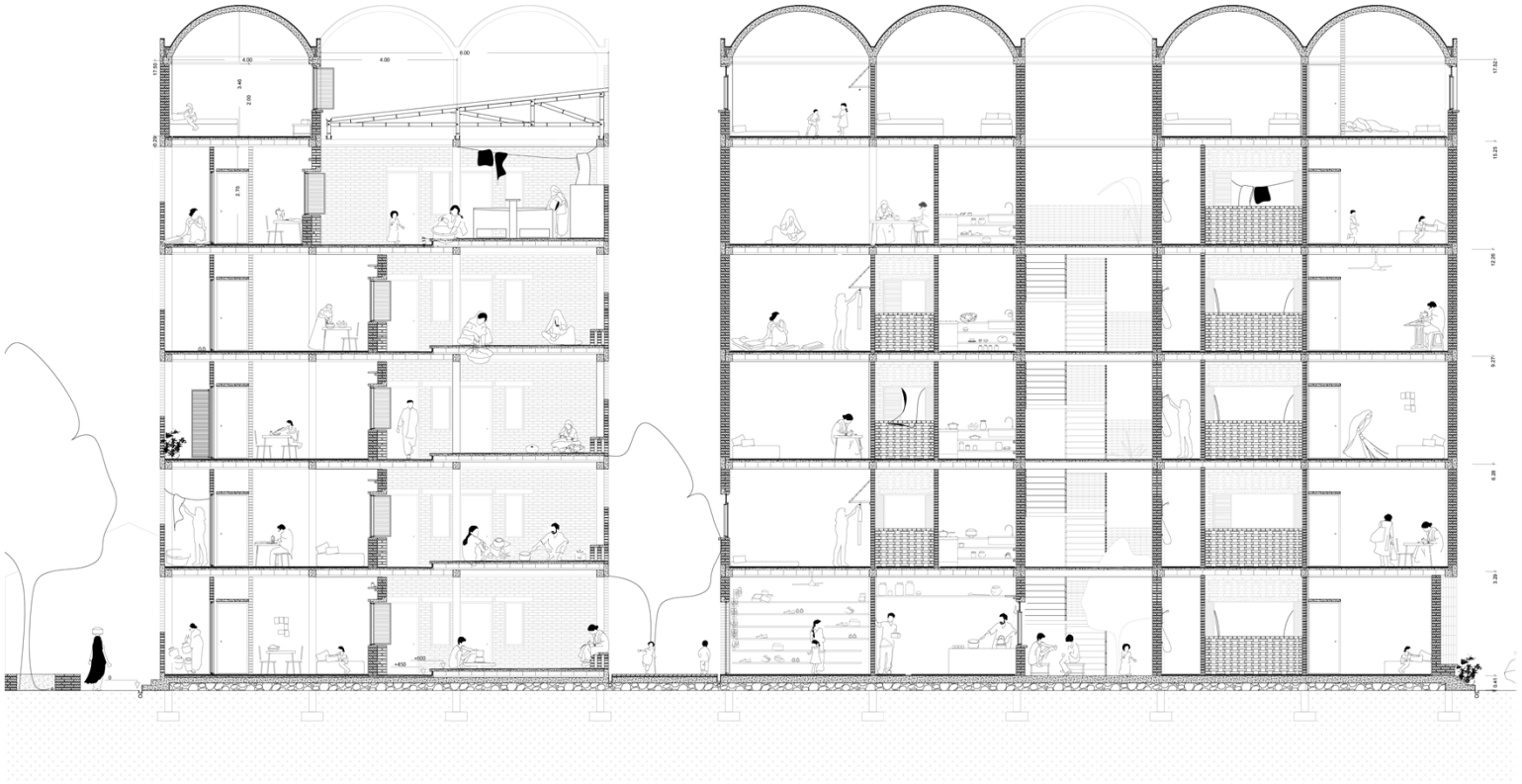
Courtyards

Communal areas

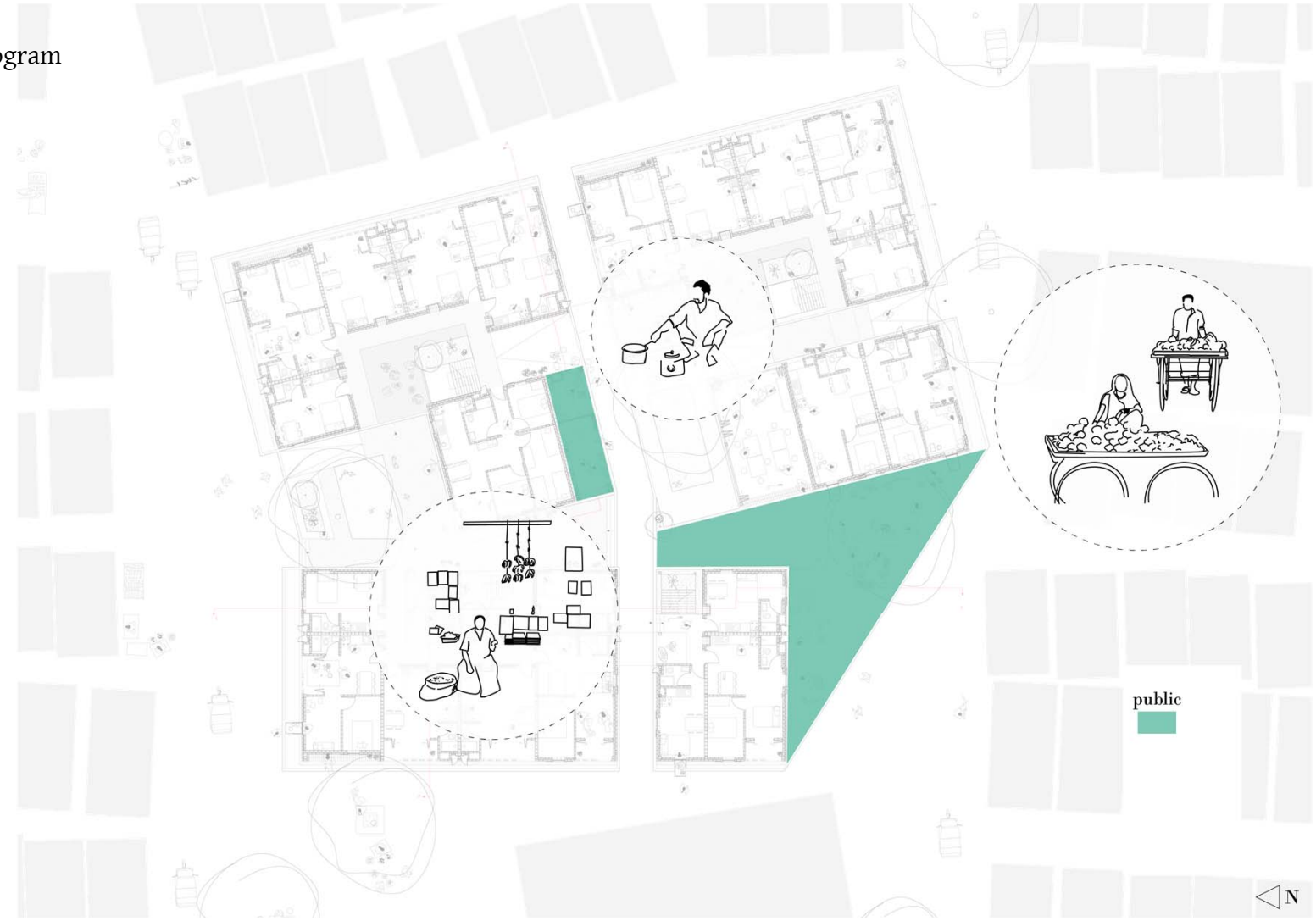
1st floor plan 1.200

Communal areas

Communal areas



Public program



Communal program

Home-based program

Gendering of the space

Gendering of the space

Gendering of the space

Gendering of the space

Gendering of the space

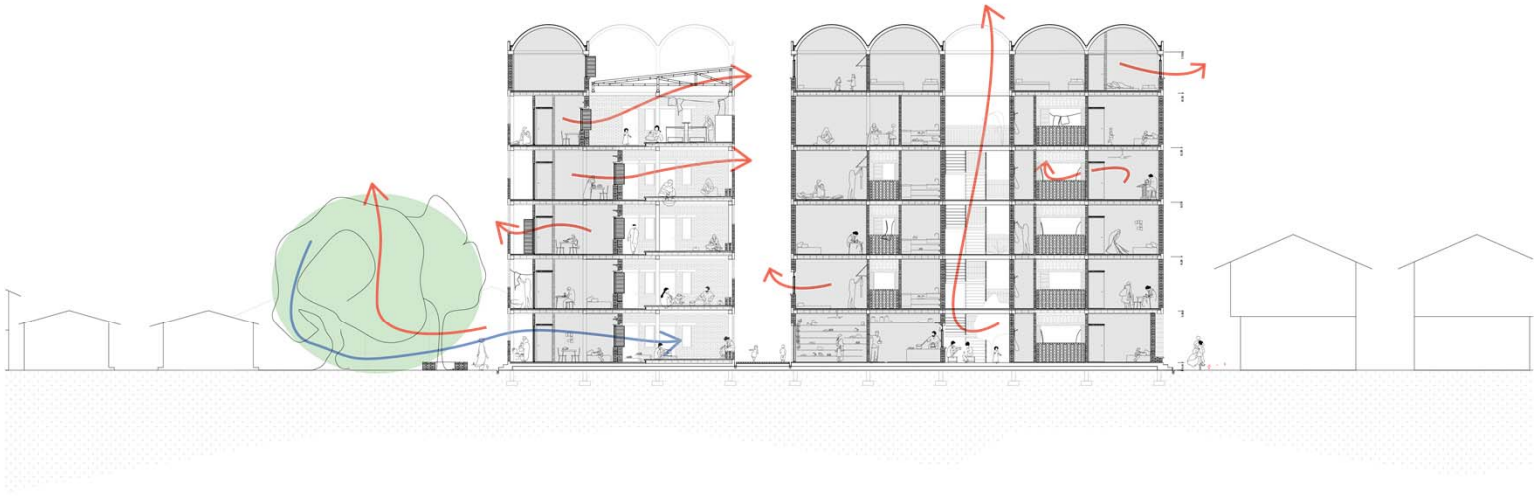
Gendering of the space

Gendering of the space

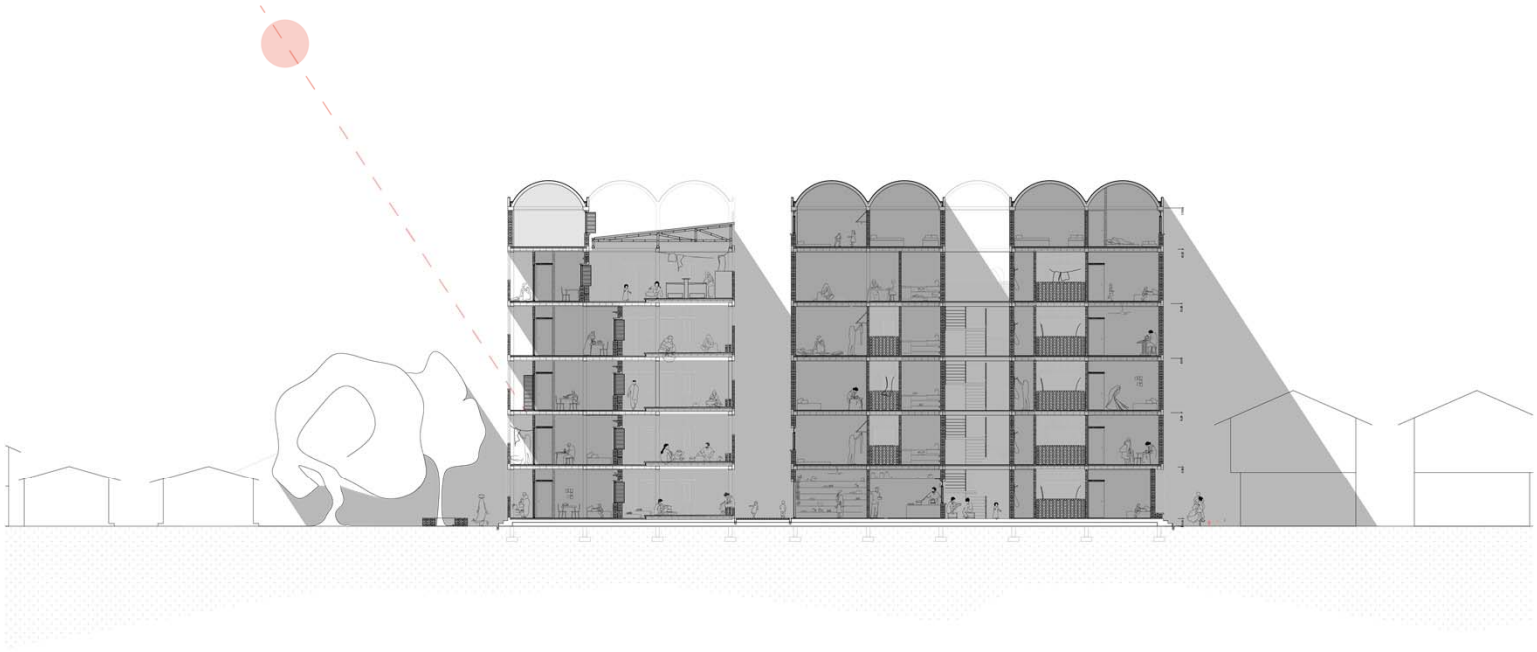
Water management

Climate section

Climate section



Shade



Structural system

Ceramic finish (crushed tiles from demolition)

Recycled concrete vault

Recycled bricks: demolished bricks + concrete mix

Recycled concrete beams

Ceramic flooring (crushed tiles from demolition)

Recycled concrete blocks in between recycled concrete beams

OPTIONAL ROOF:

Bamboo finish

Bamboo trusses

Recycled concrete beams

Floor system

1. (recycled) Concrete columns
   200x200 mm

2. Primary (recycled) concrete beams
   200x200 mm

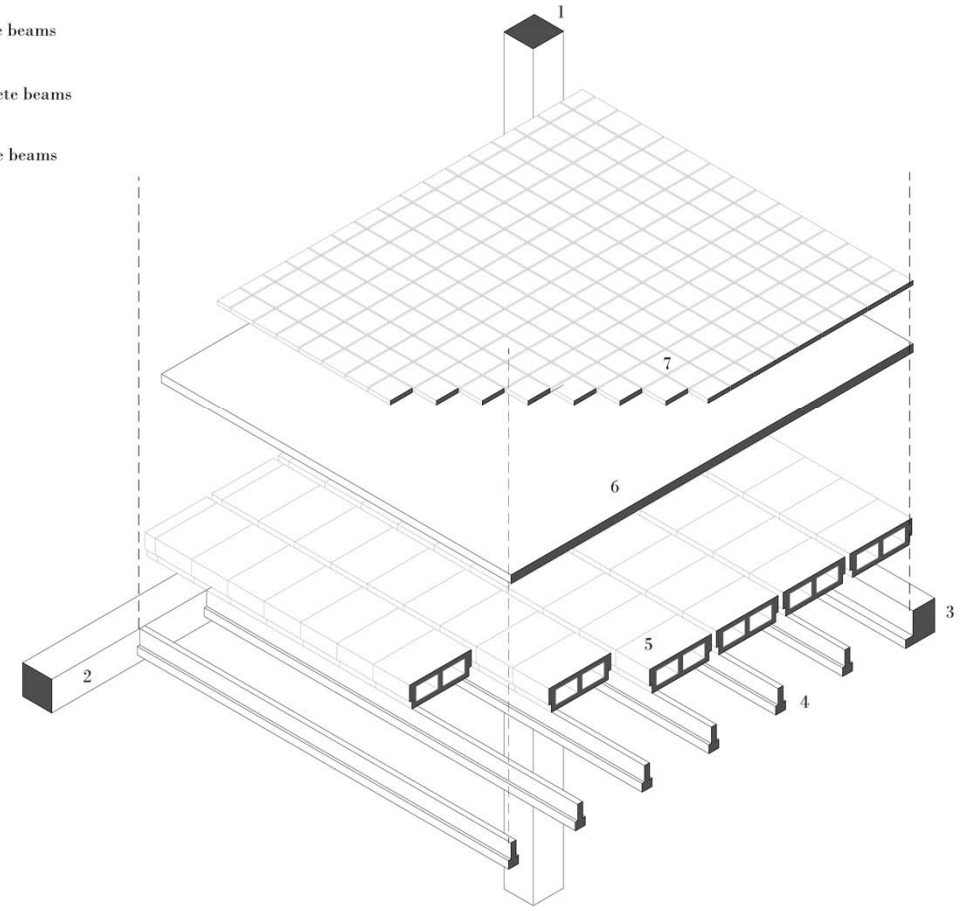
3. Secondary (recycled) concrete beams
   20x200 mm

4. Flooring (recycled) concrete beams
   150x70 mm

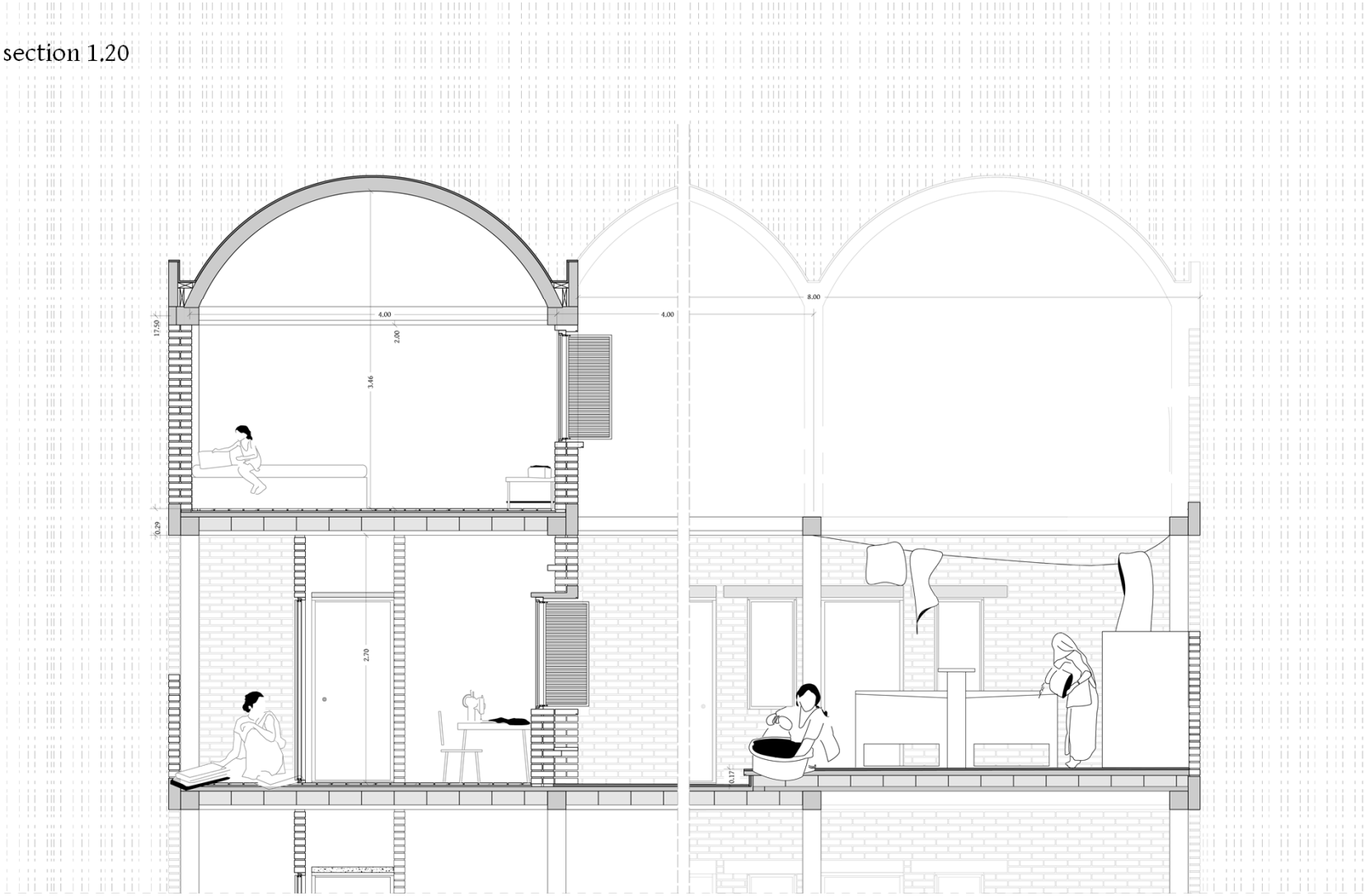
5. (recycled) concrete blocks
   250x400x150 mm

6. Concrete slab
   50mm

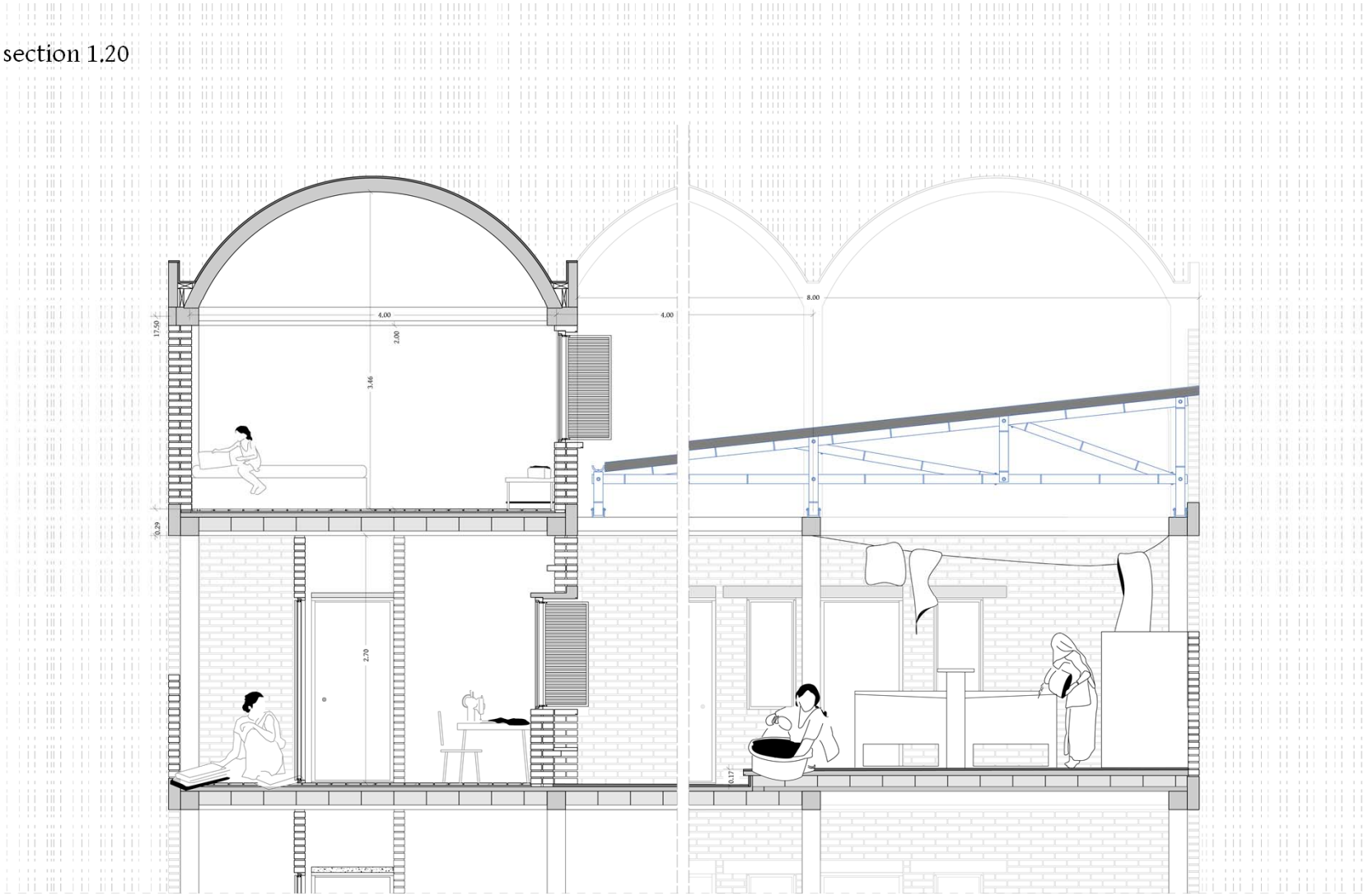
7. Ceramic tiles (reused from demolished buildings)
   25mm



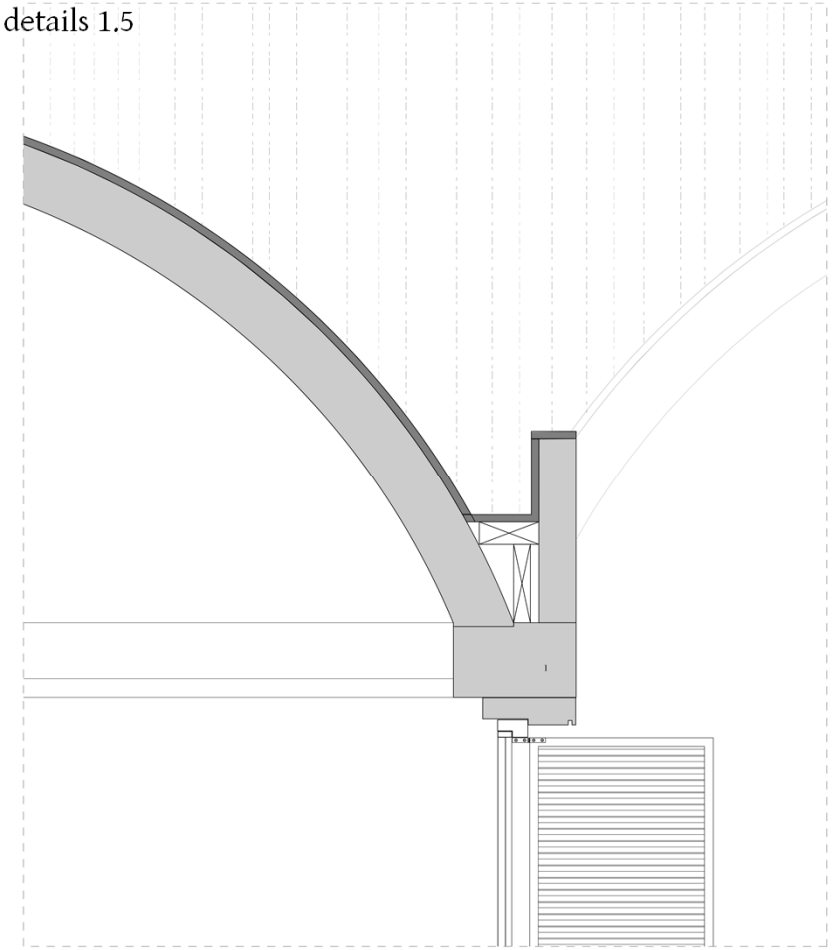
Roof section 1.20

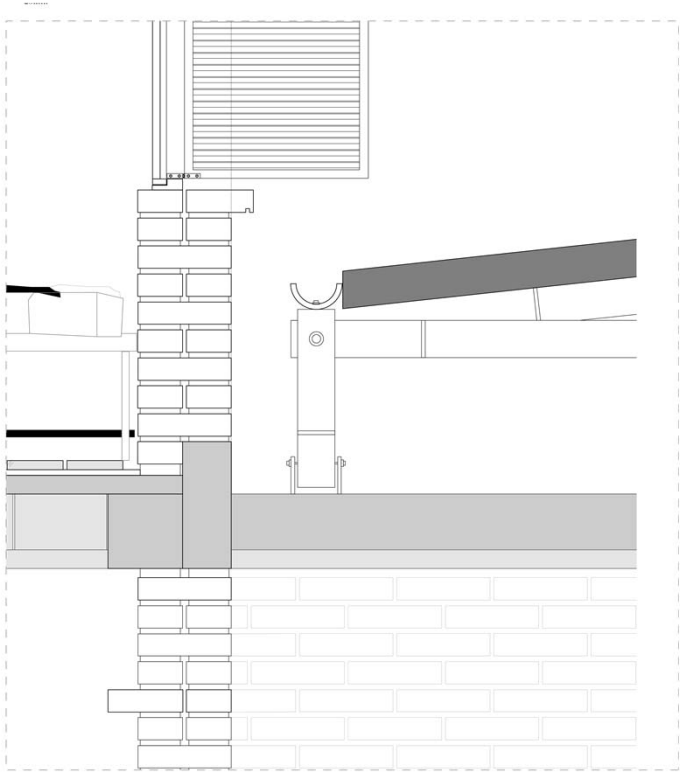


Roof section 1.20



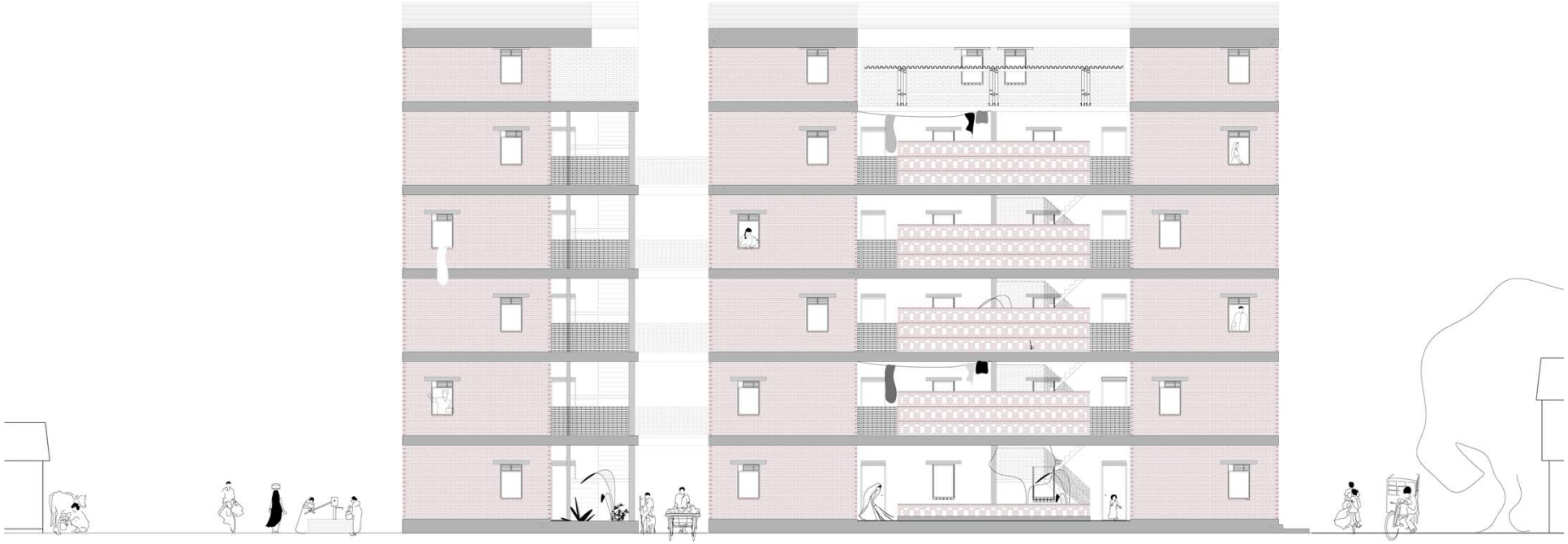
Roof details 1.5





City facade

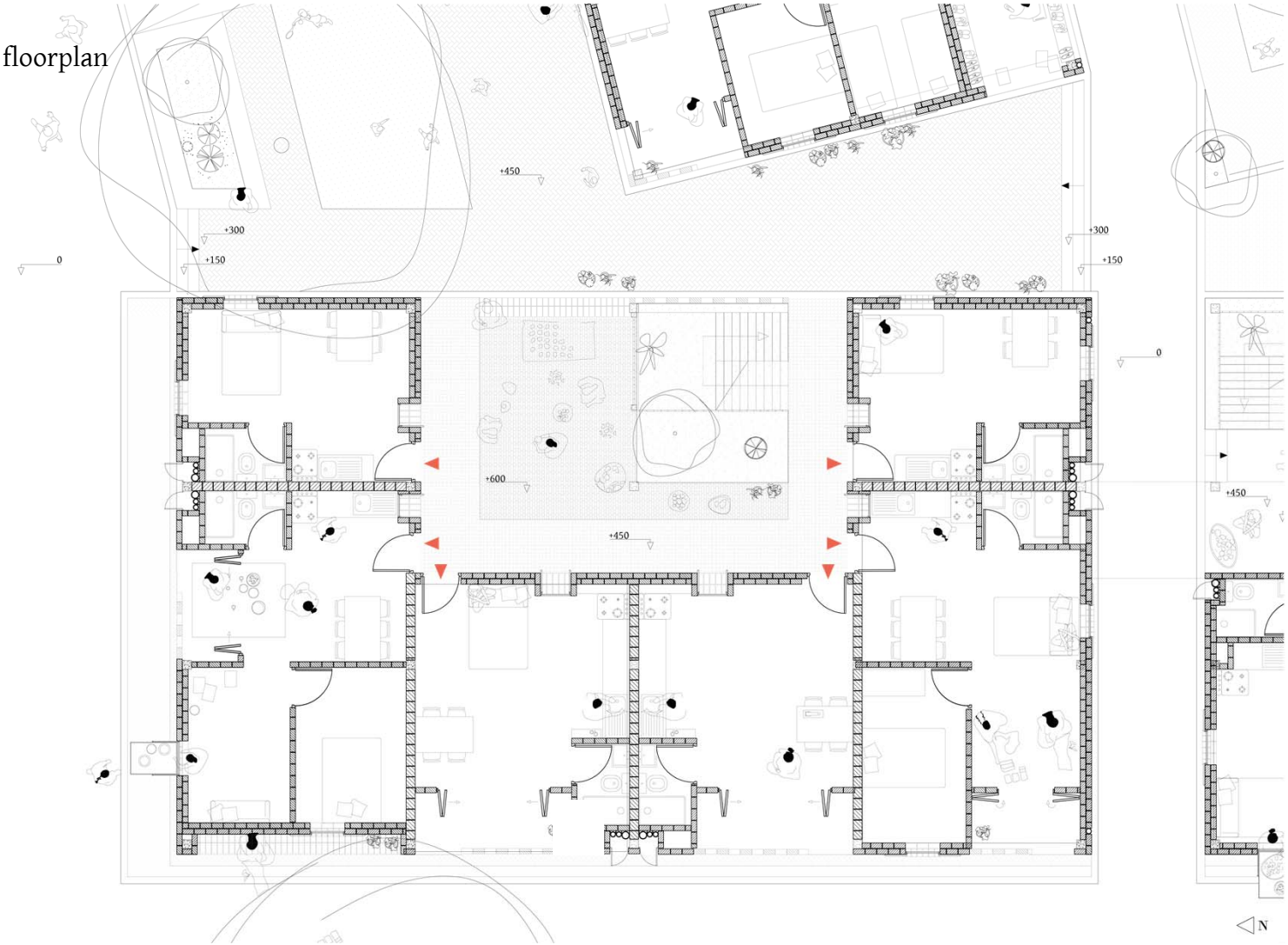
Interior facade



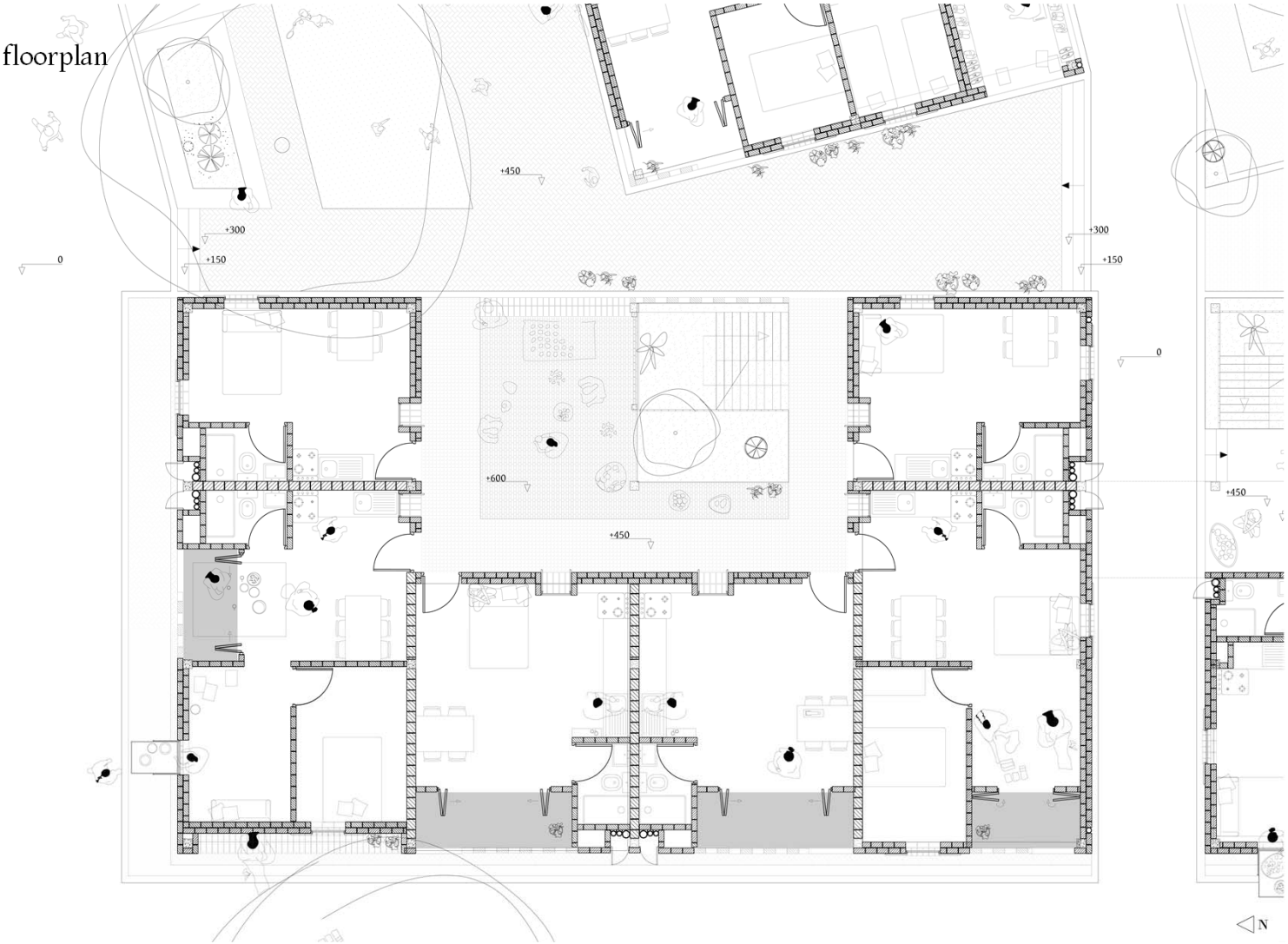
4. Design

Unit level

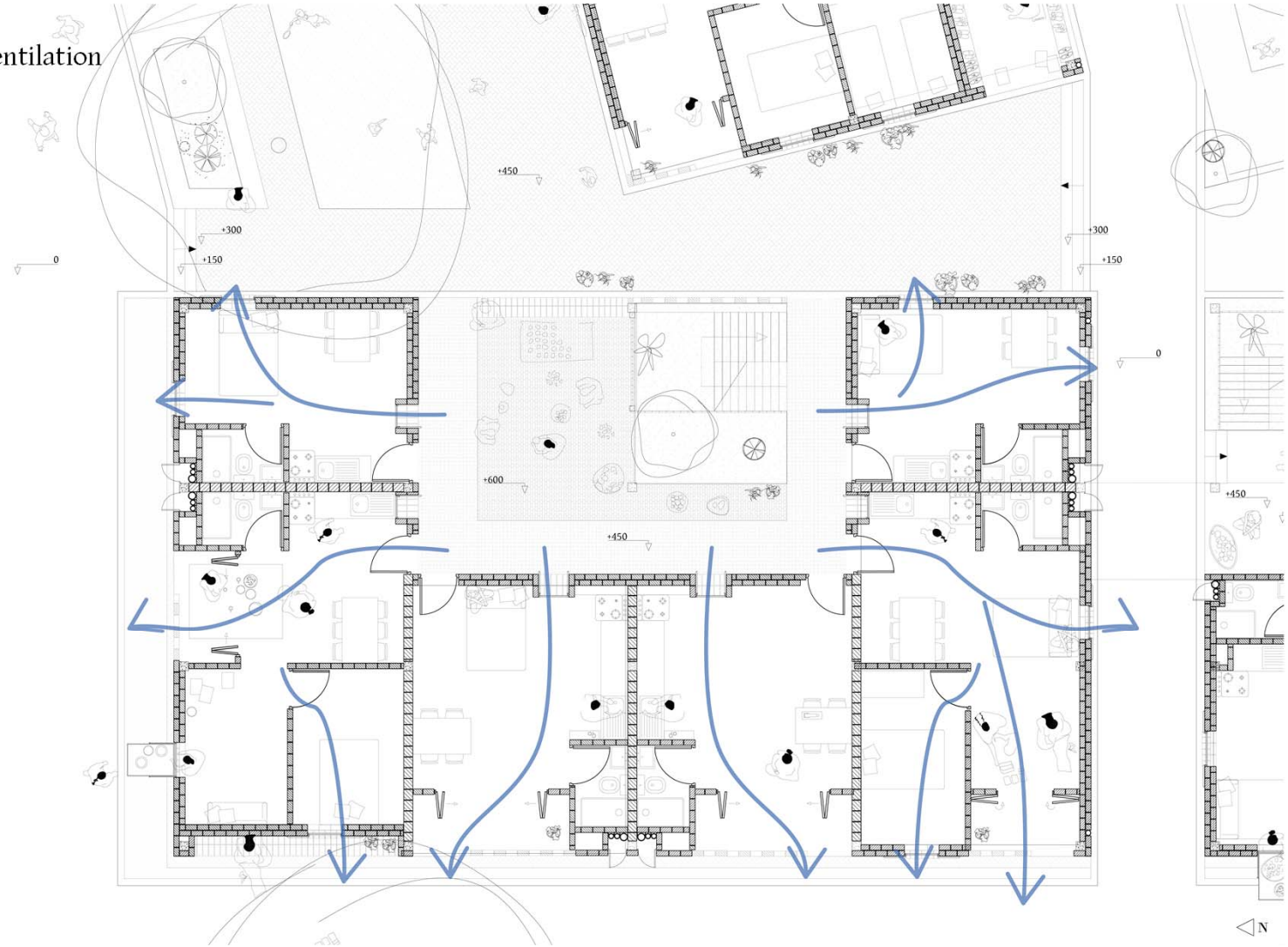
Typical floorplan



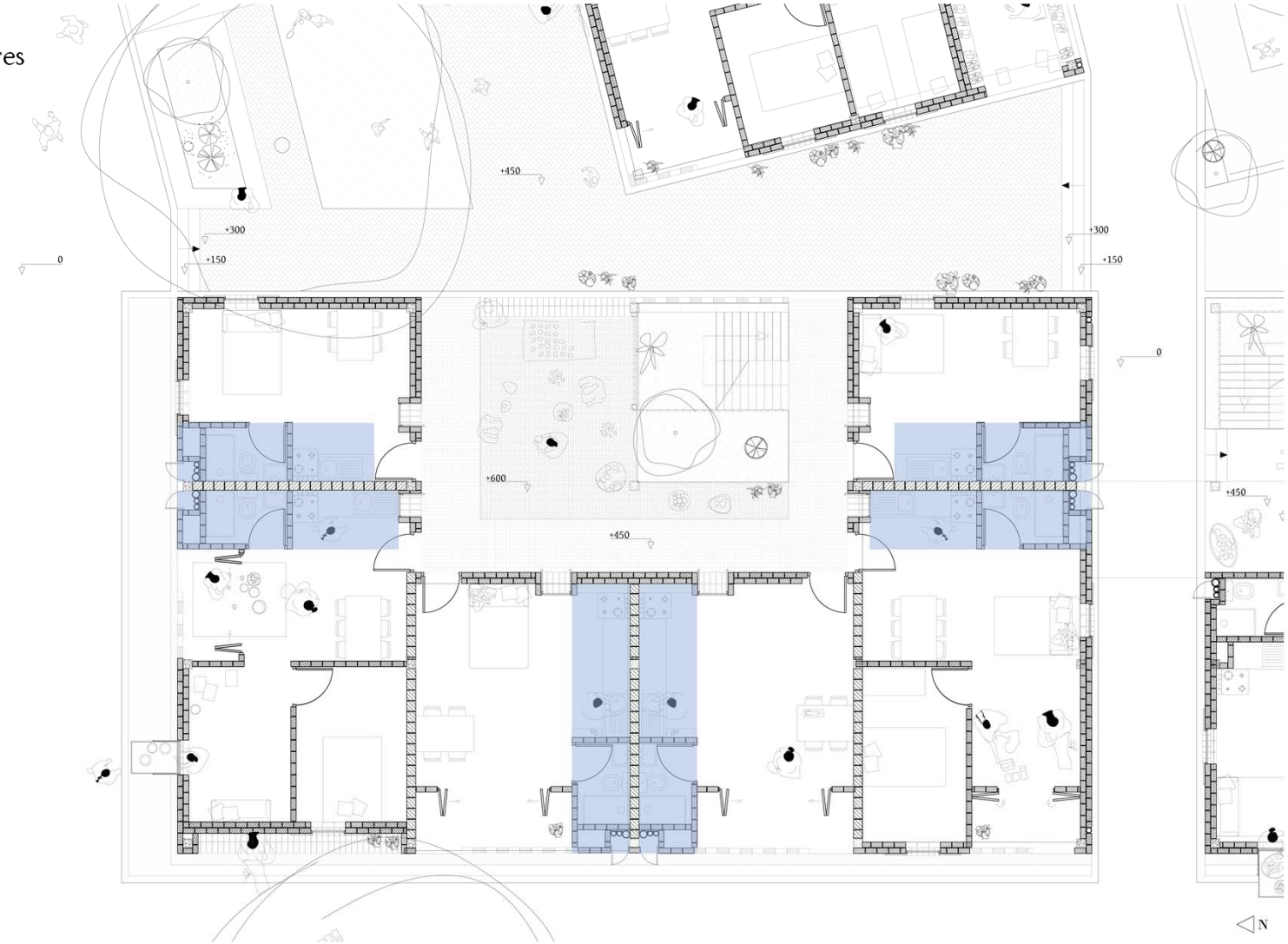
Typical floorplan



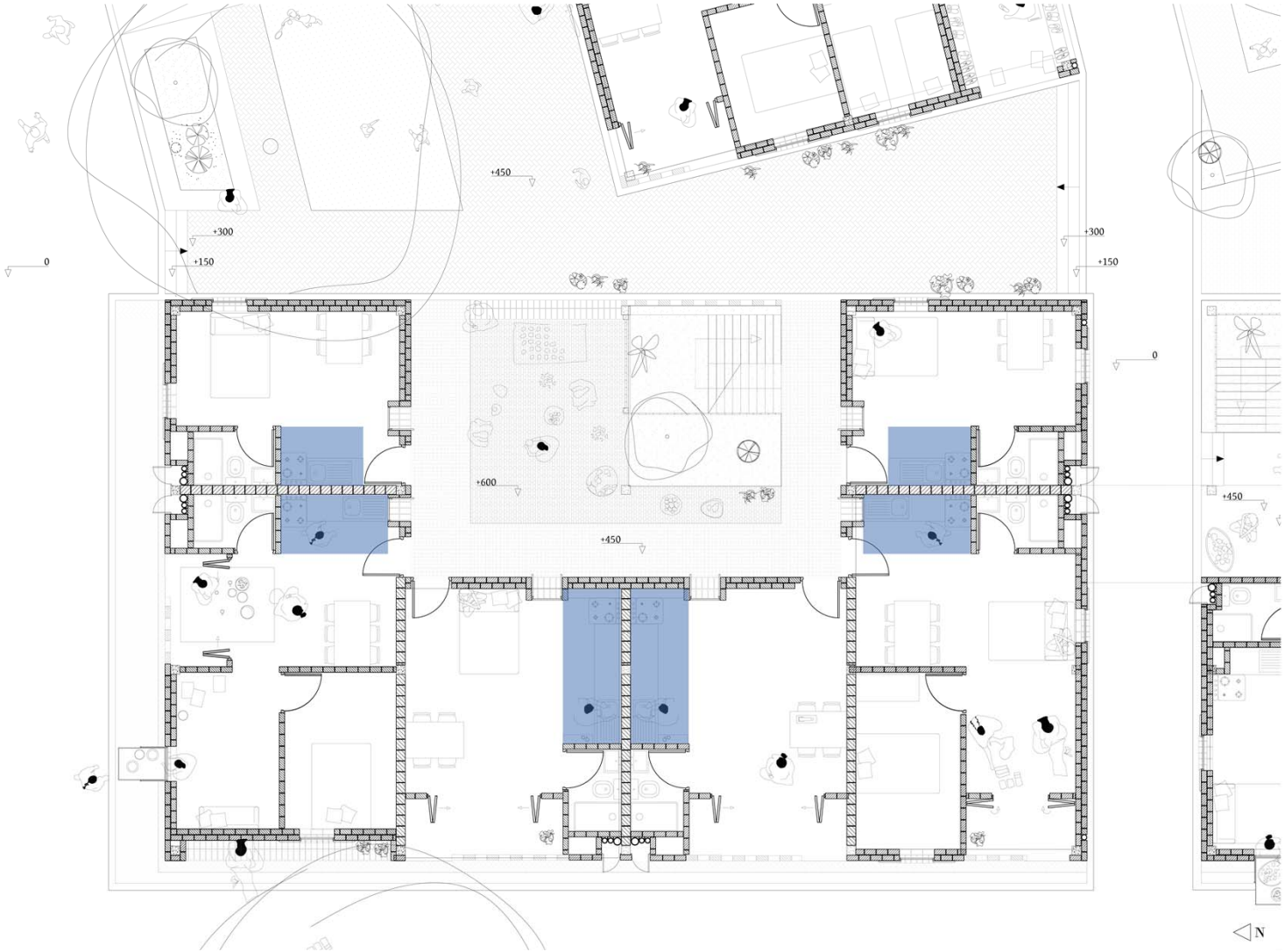
Cross ventilation



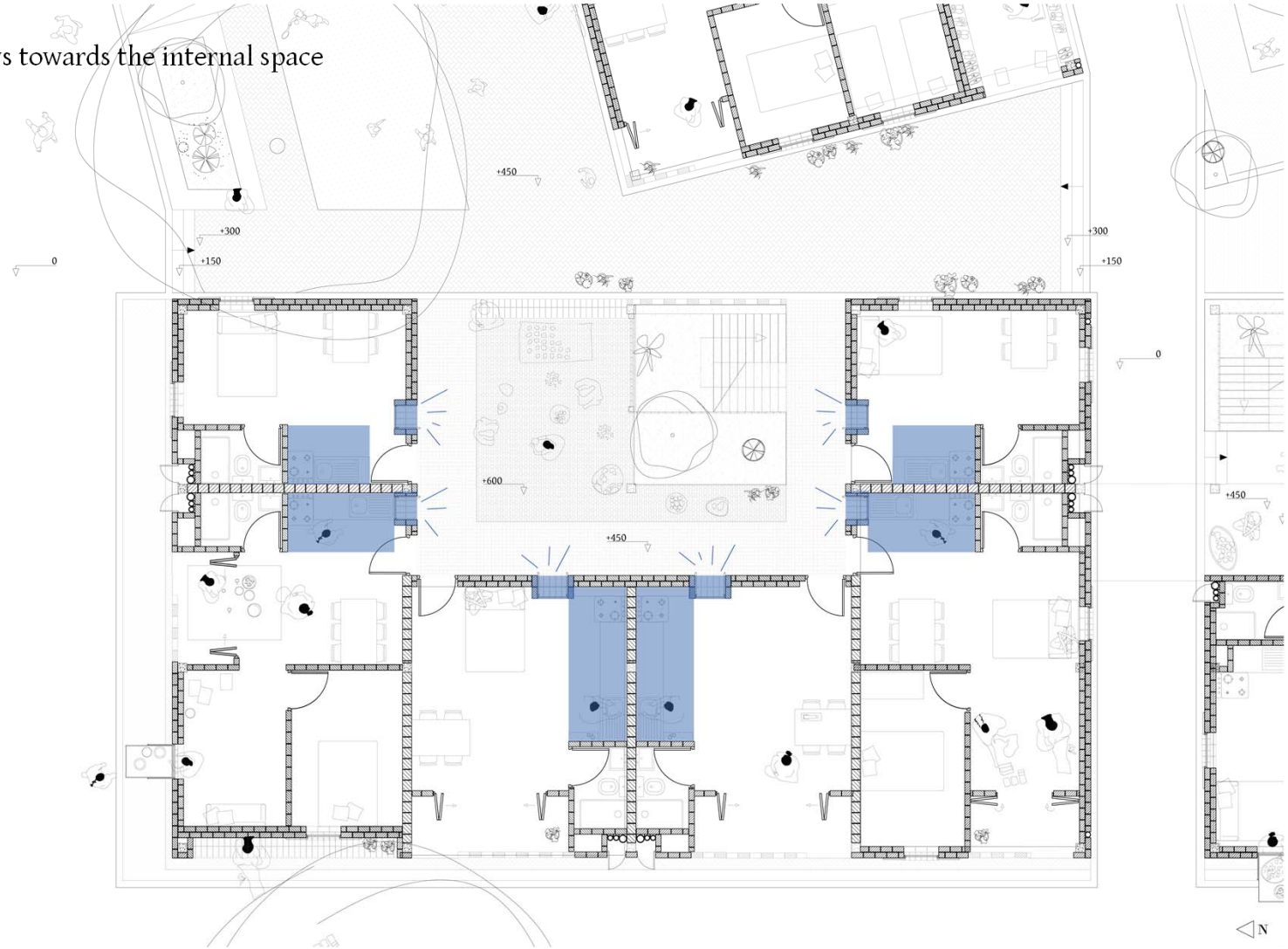
Wet cores



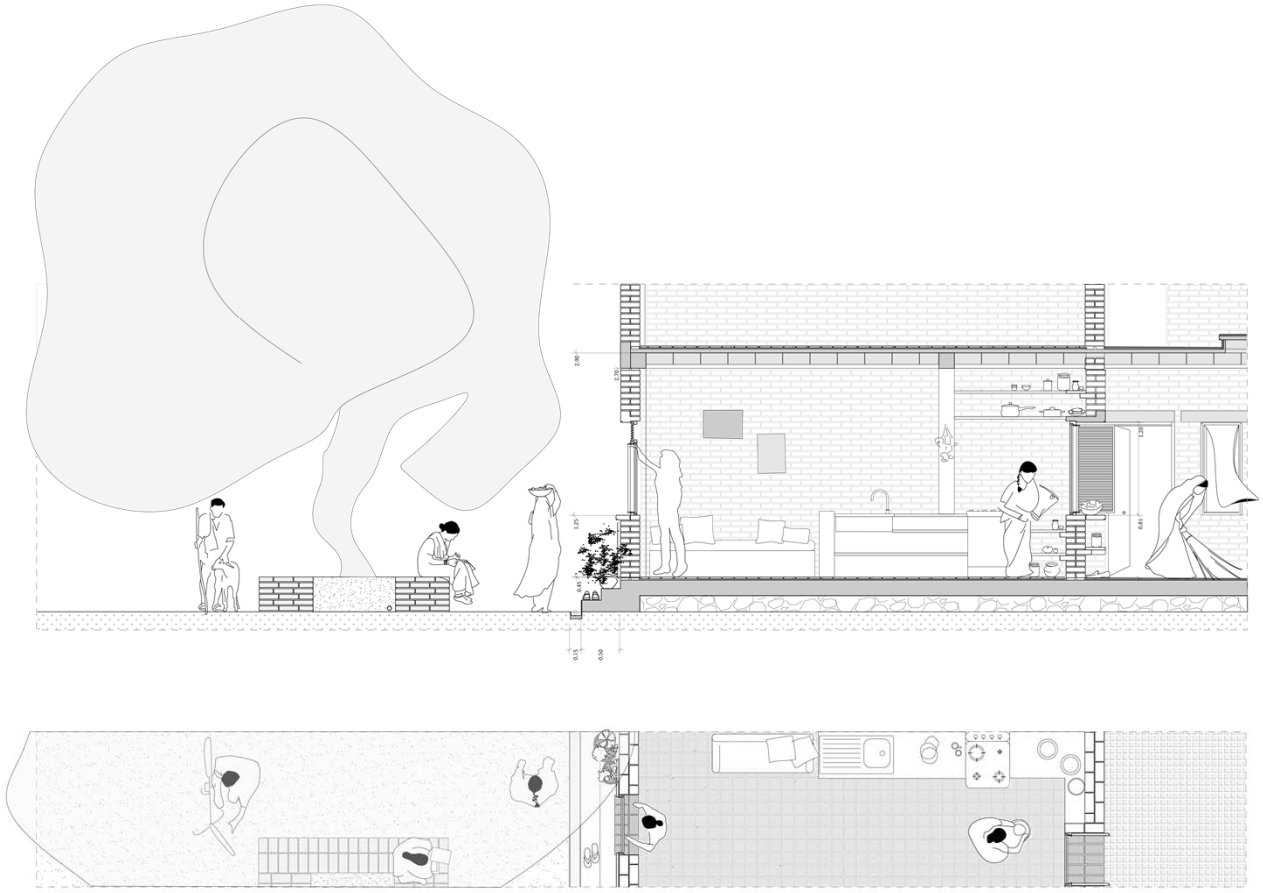
Kitchens



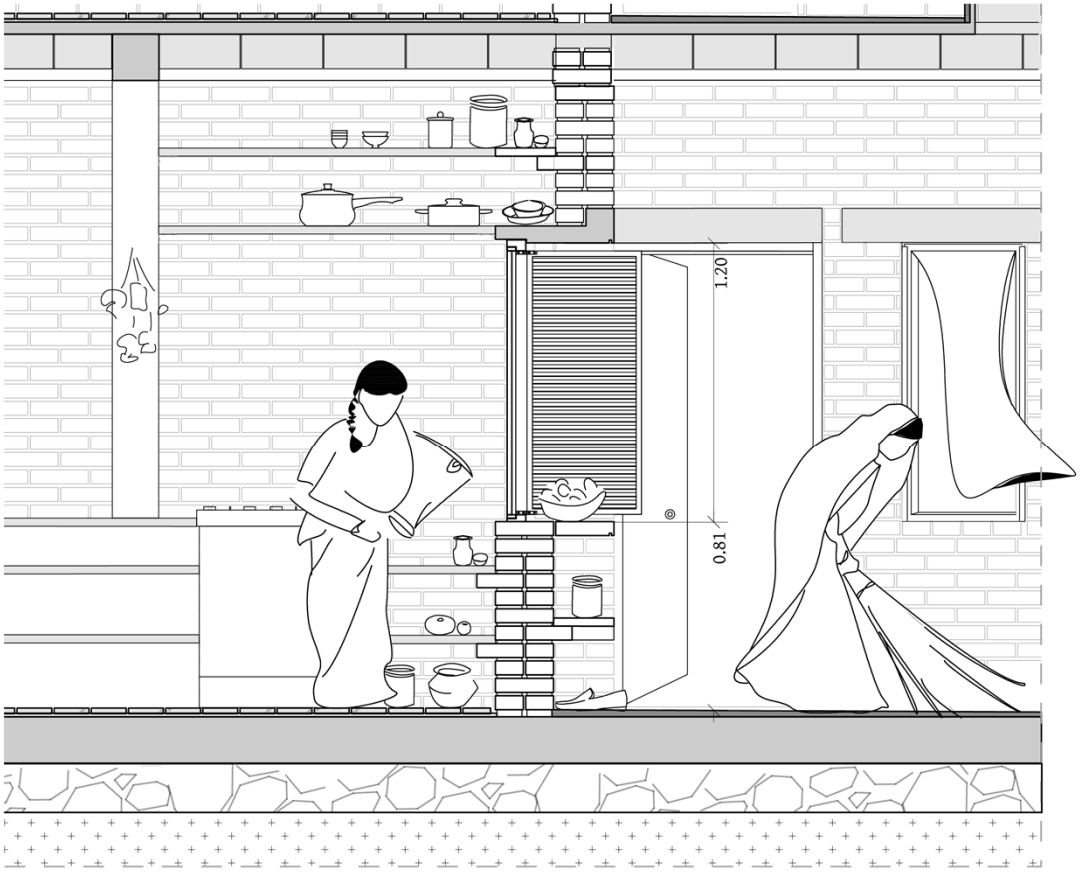
Windows towards the internal space



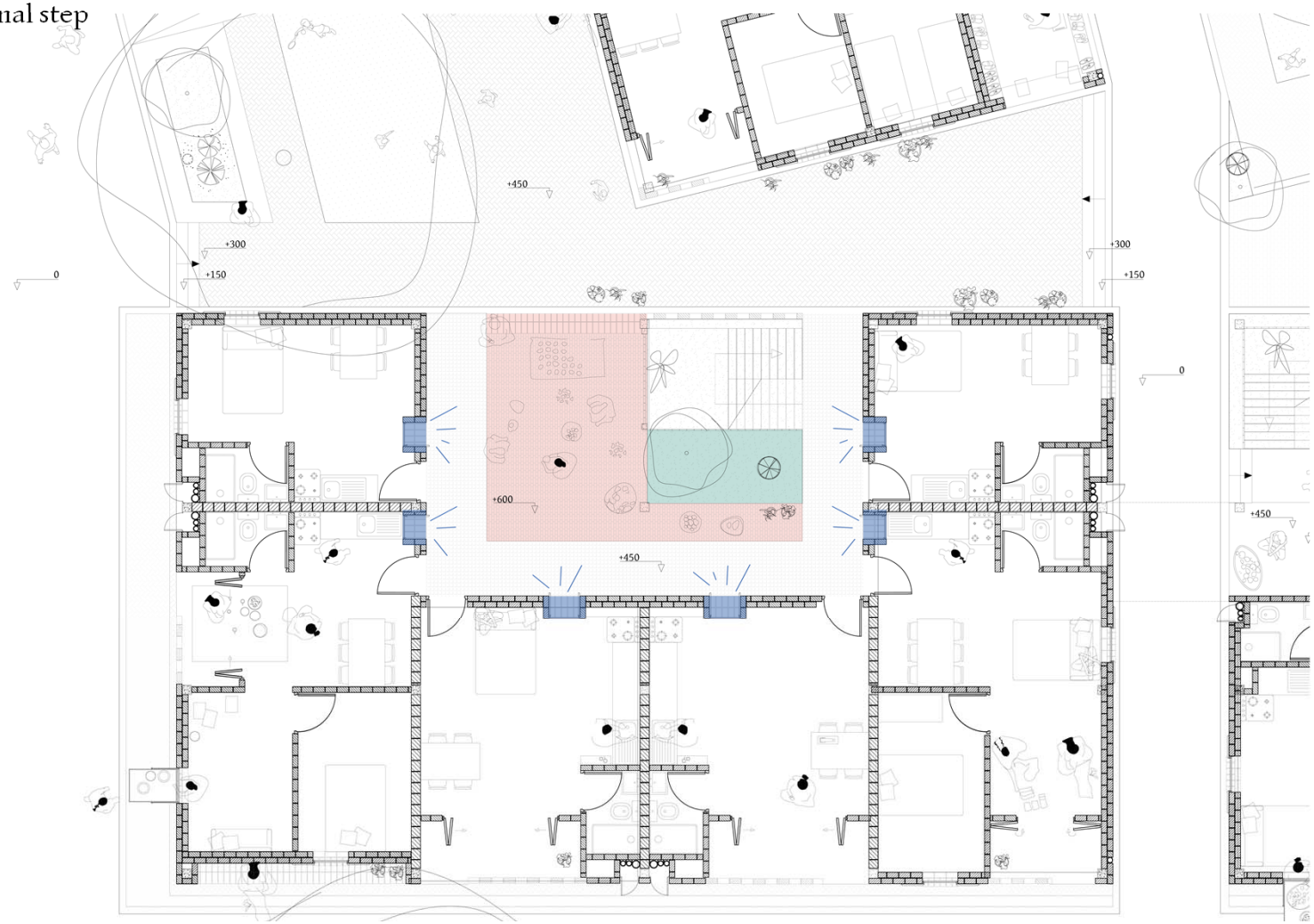
Window details



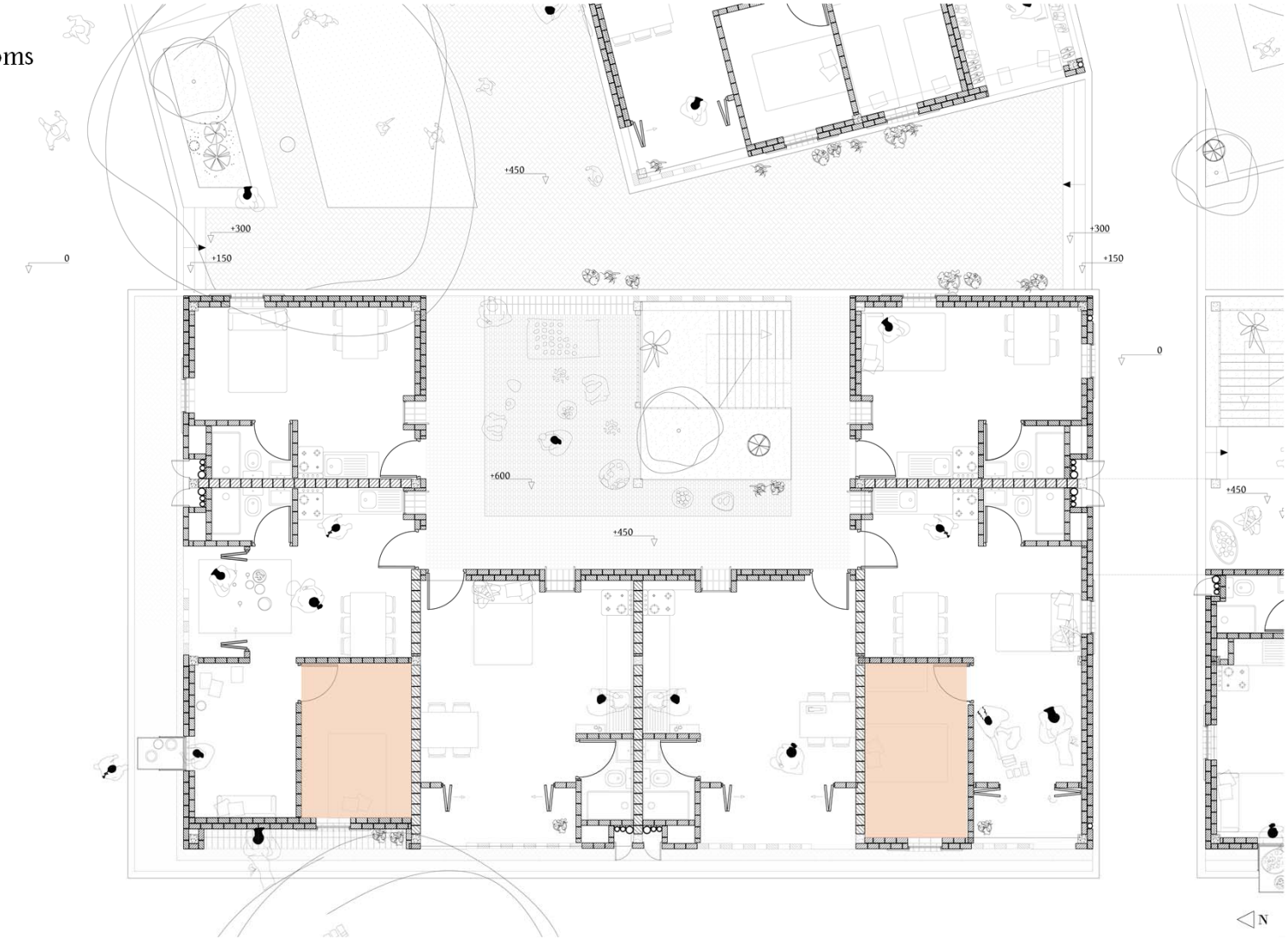
Kitchen window detail



Communal step

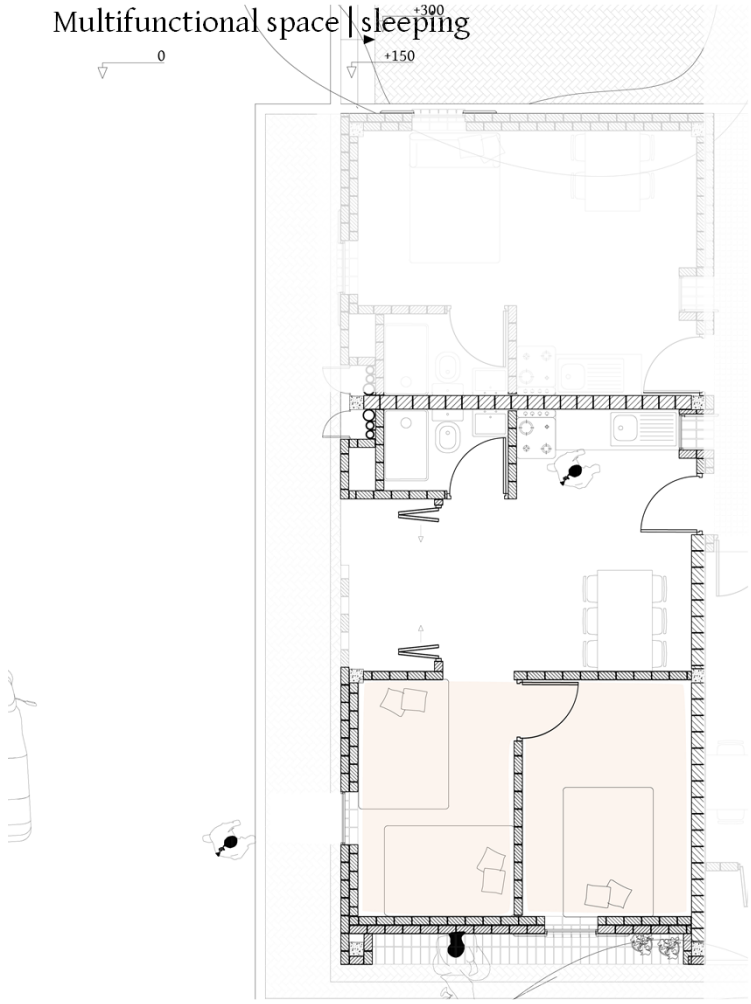


Bedrooms

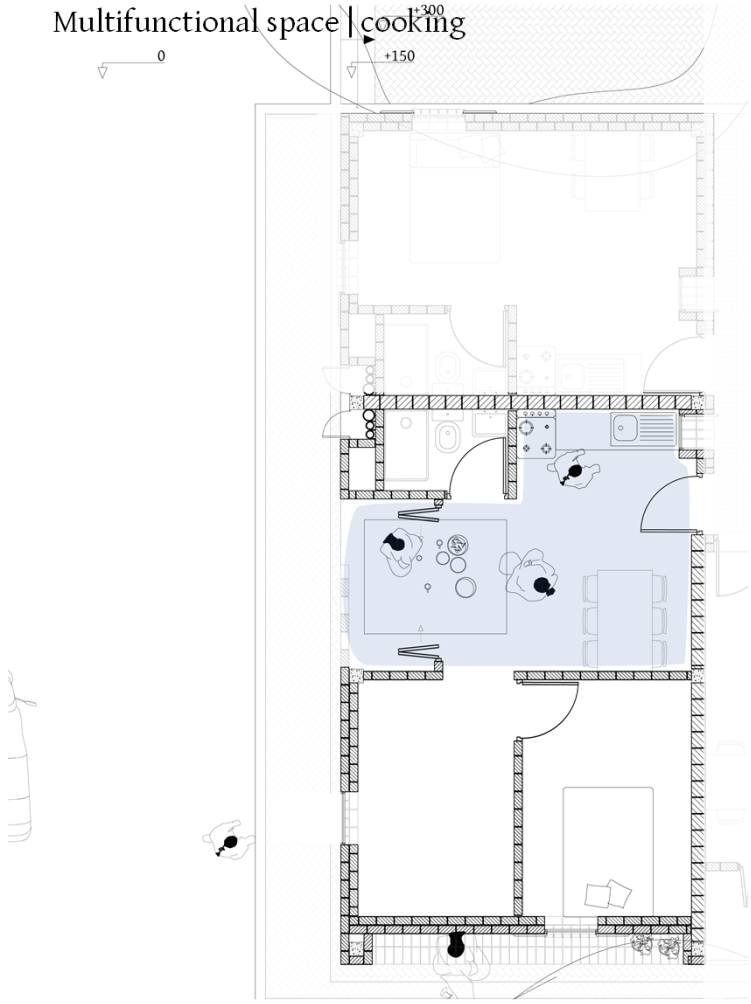


Multifunctional spaces

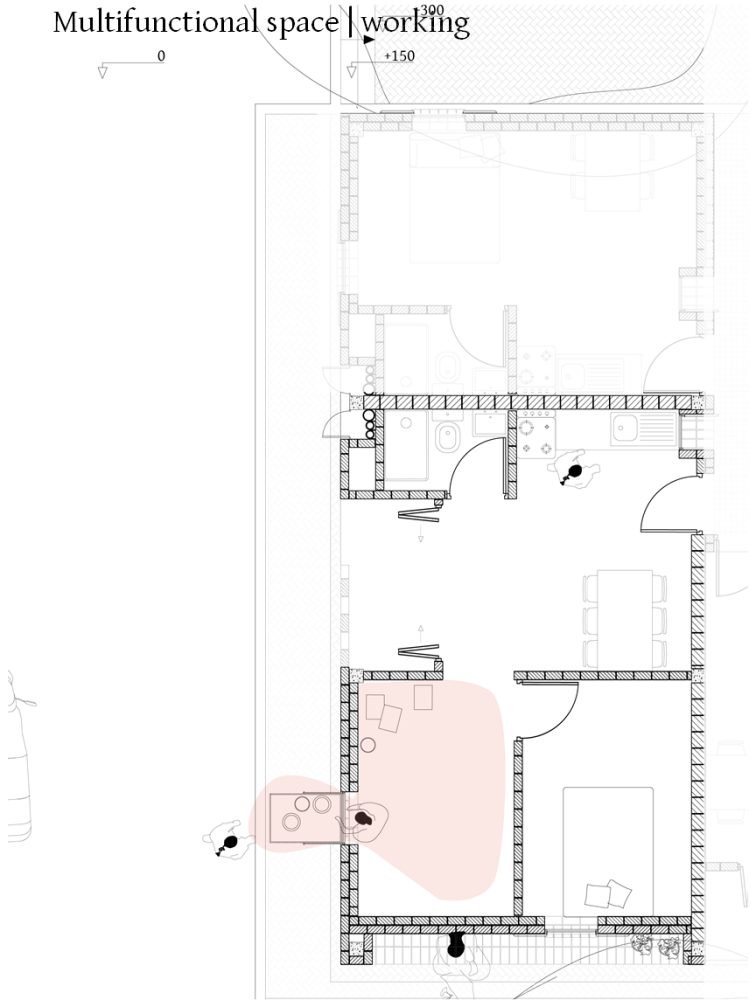
Multifunctional space | sleeping



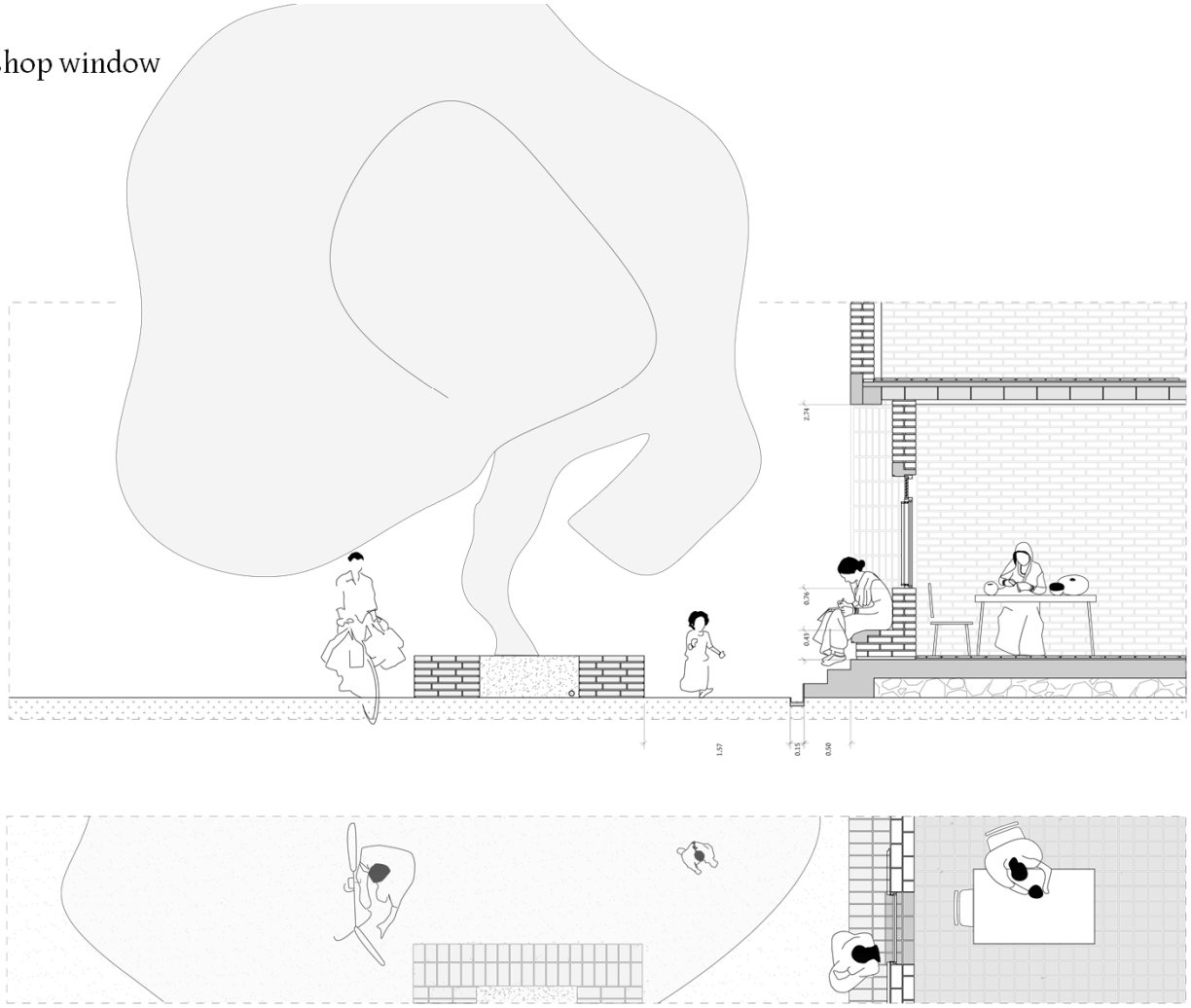
Multifunctional space | cooking



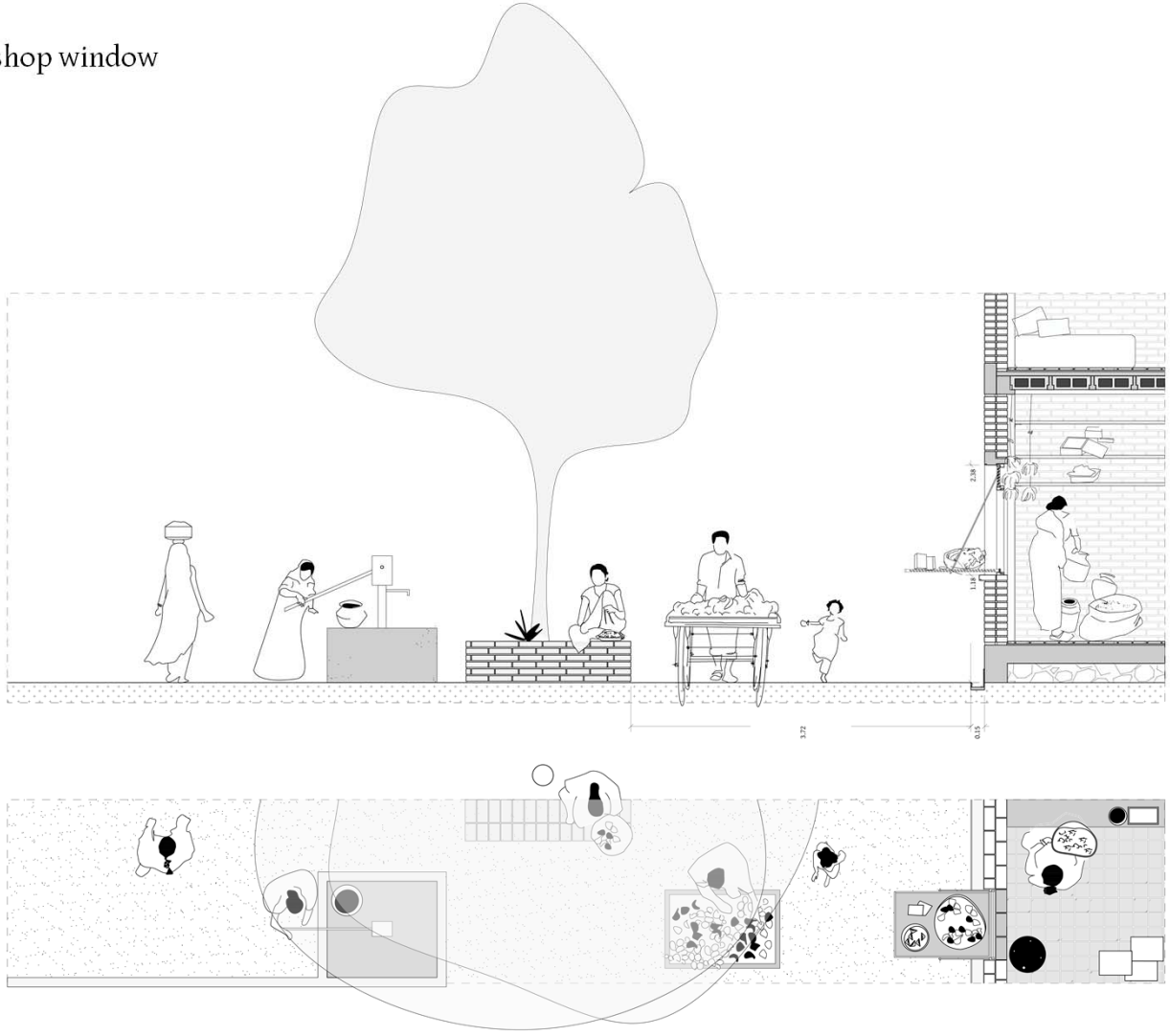
Multifunctional space | working



Multifunctional space | shop window

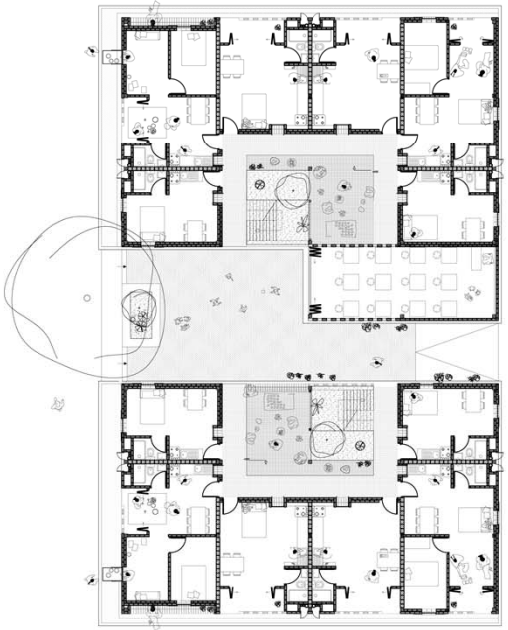


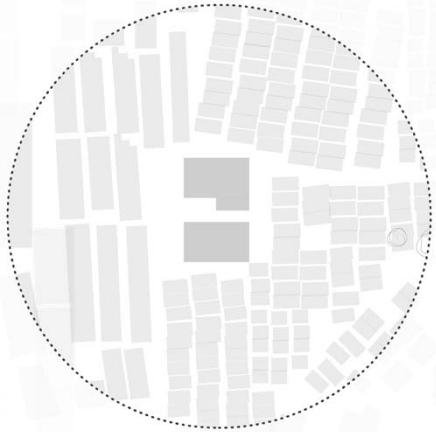
Multifunctional space | shop window



Evolution over time

Location 1





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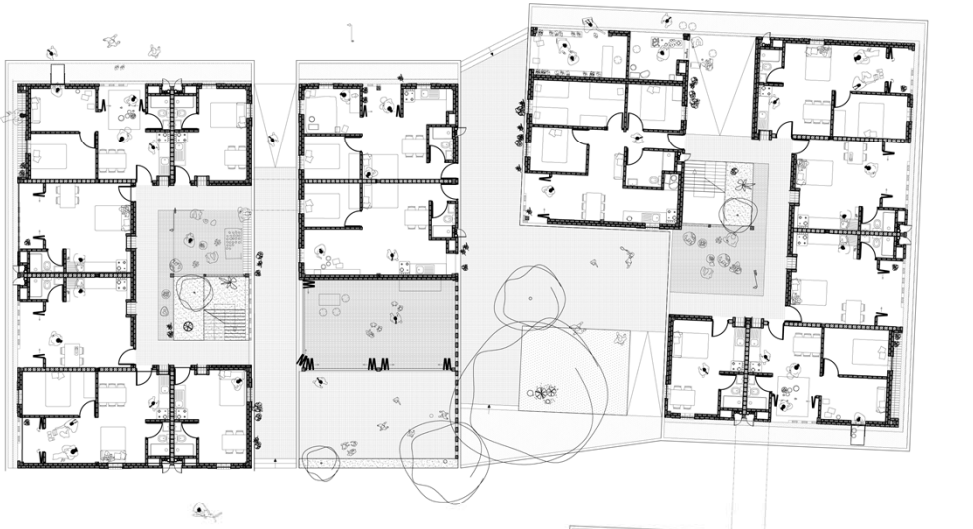
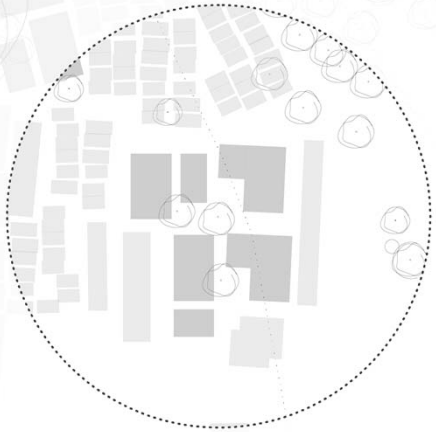
Location 3





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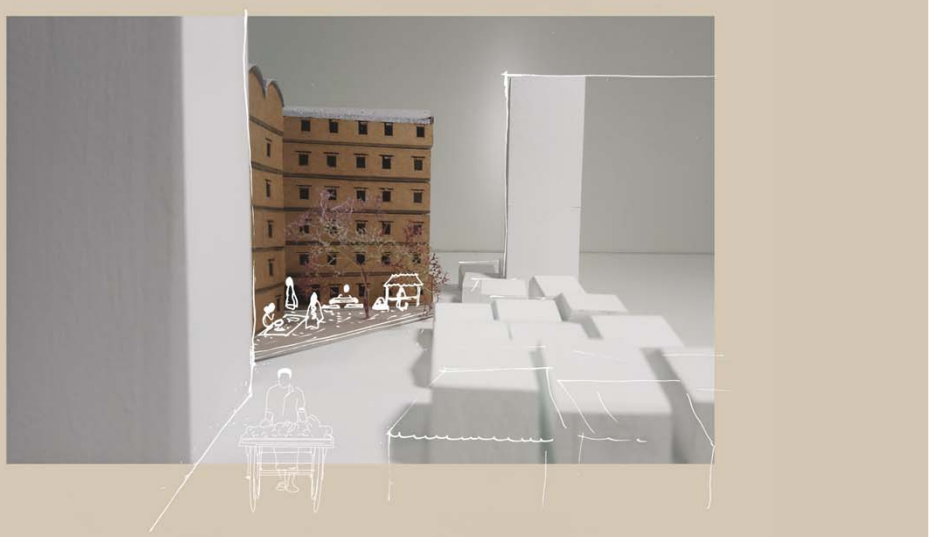

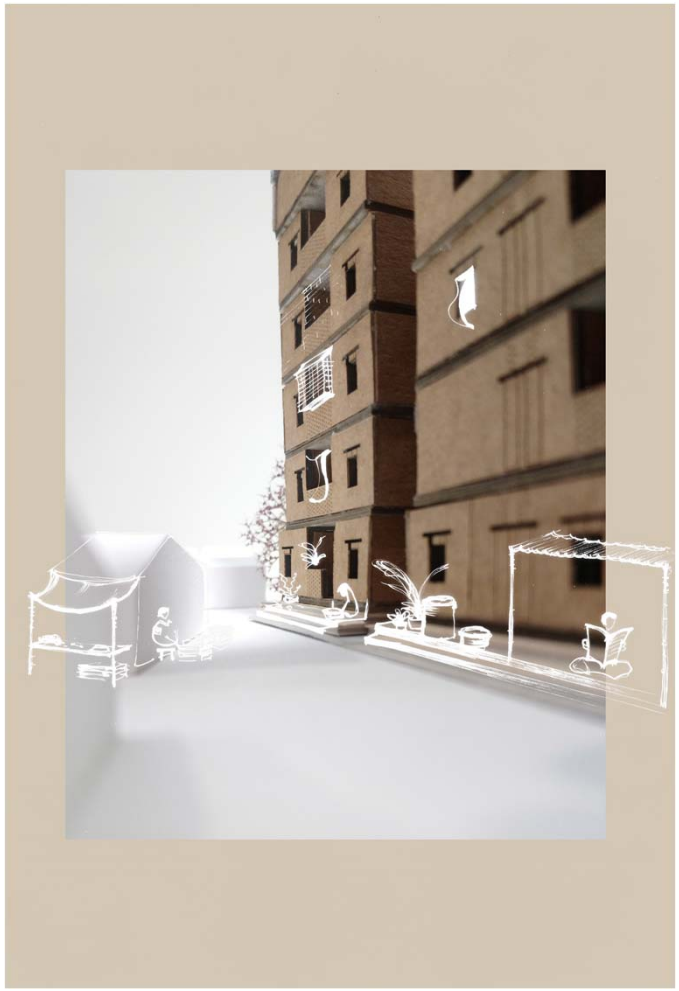

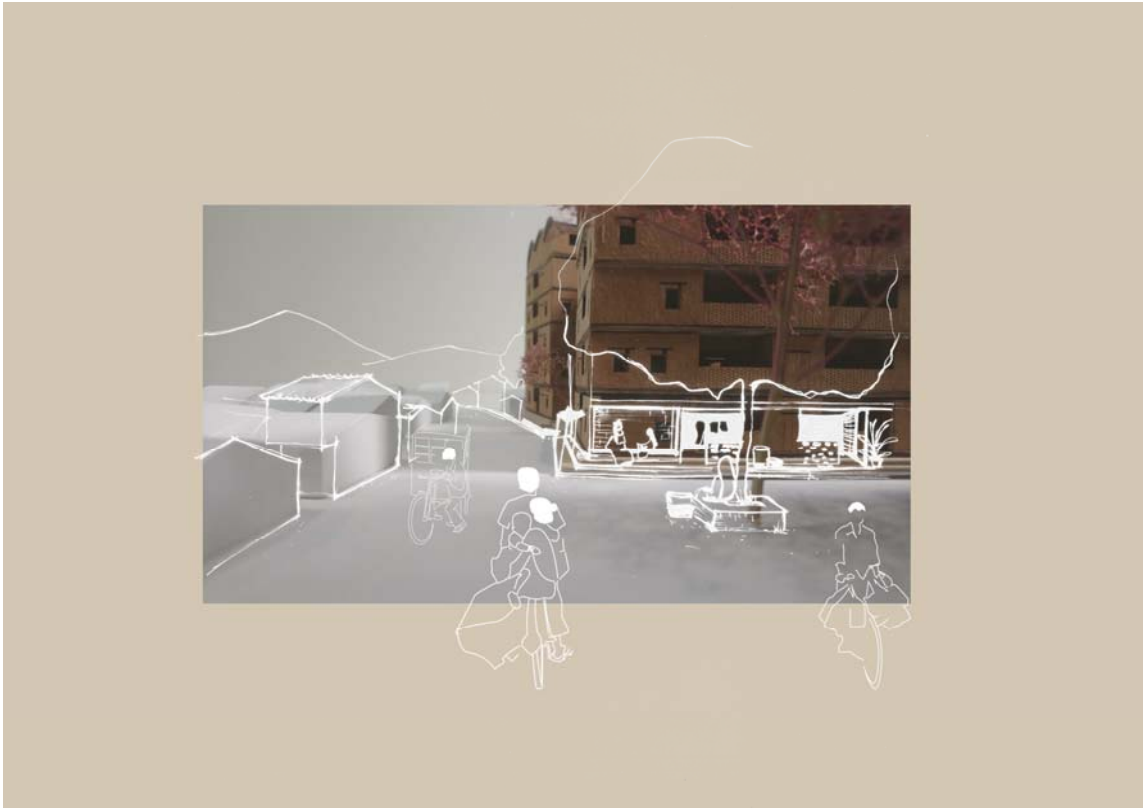

"As we collectively produce cities, so we collectively produce ourselves... [if] we accept that 'society is made and imagined', then we can also believe that it can be **'remade and reimagined**'"

David Harvey (2000)

Thank you