ARC210

Habitat

MAYA ANGELUS



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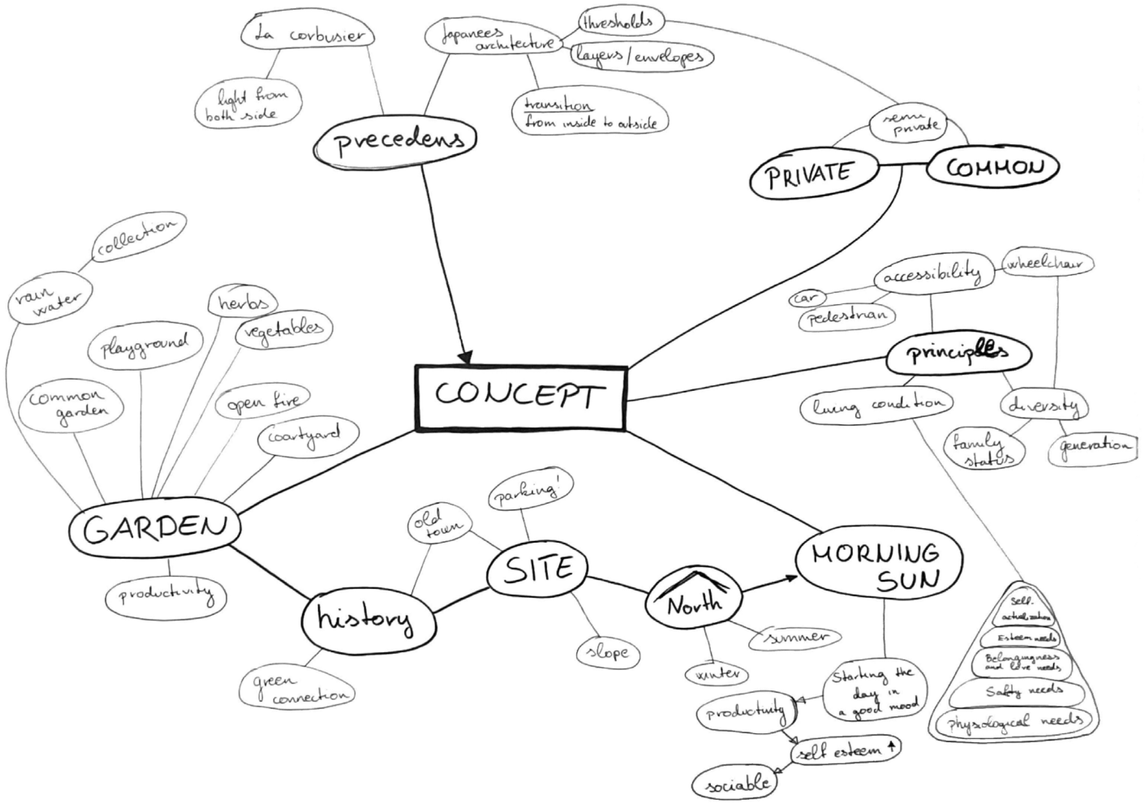
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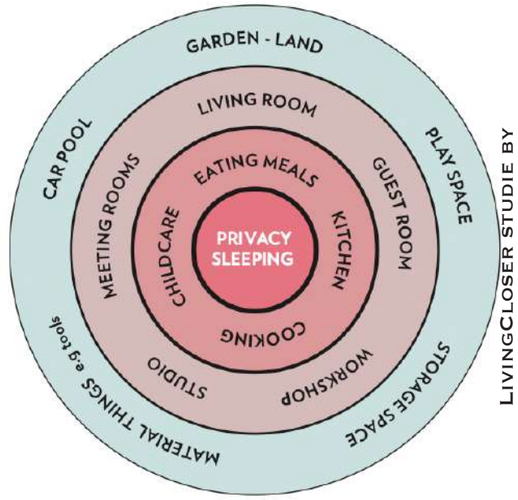
- 5.1. Proposal

Context - Brief



My brief

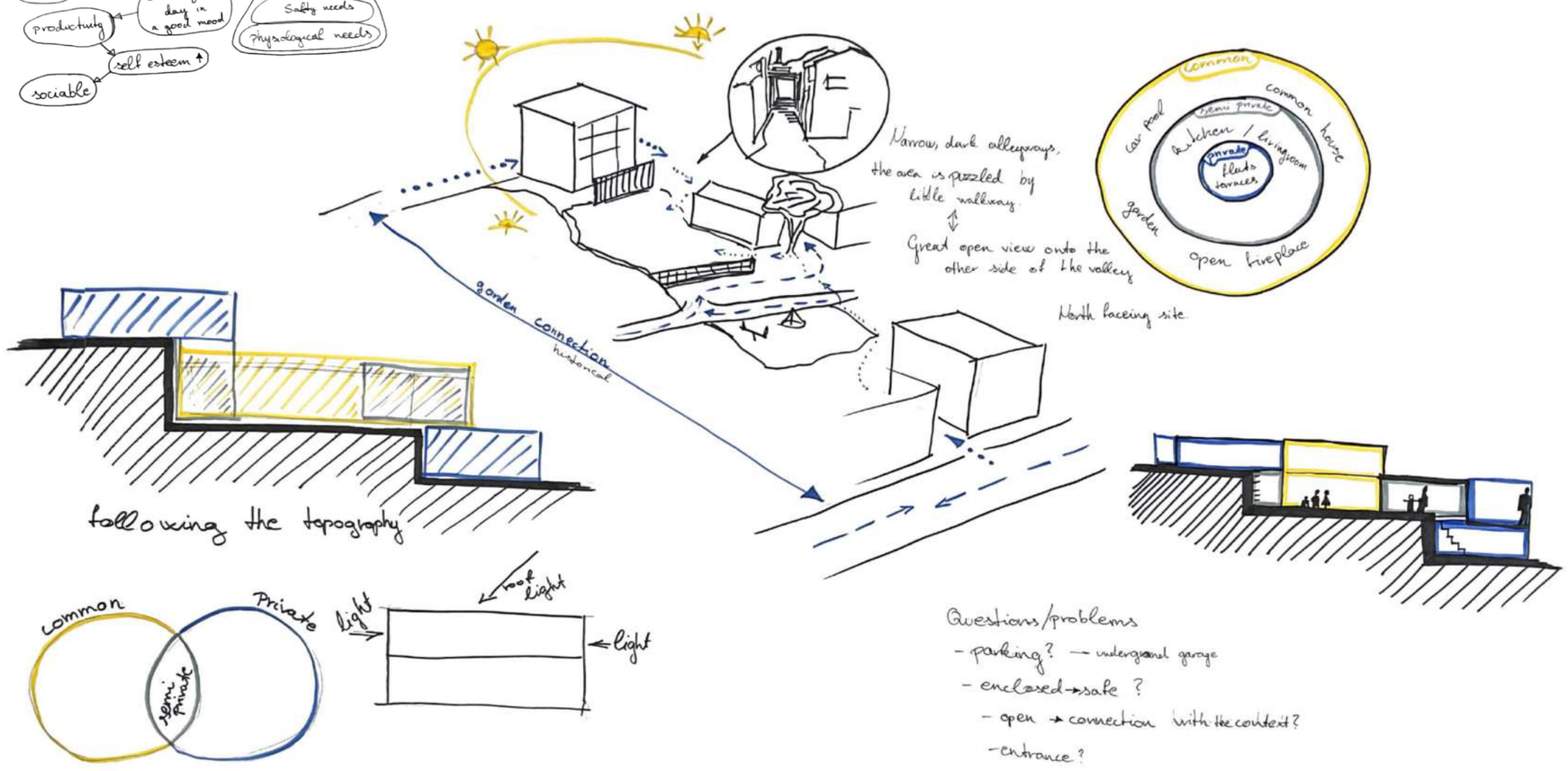
- Common - Semi private - Private
- Morning sun
- Haritage (emphasis on textu
- Historical site - garden
- Context conscious



LivingCloser studie by StudioWawe

The brief

- CoHousing
- 10 dwellings
  (4x4p, 4x2p, 2x1p)
- Common house



Context - Site



Context - Site









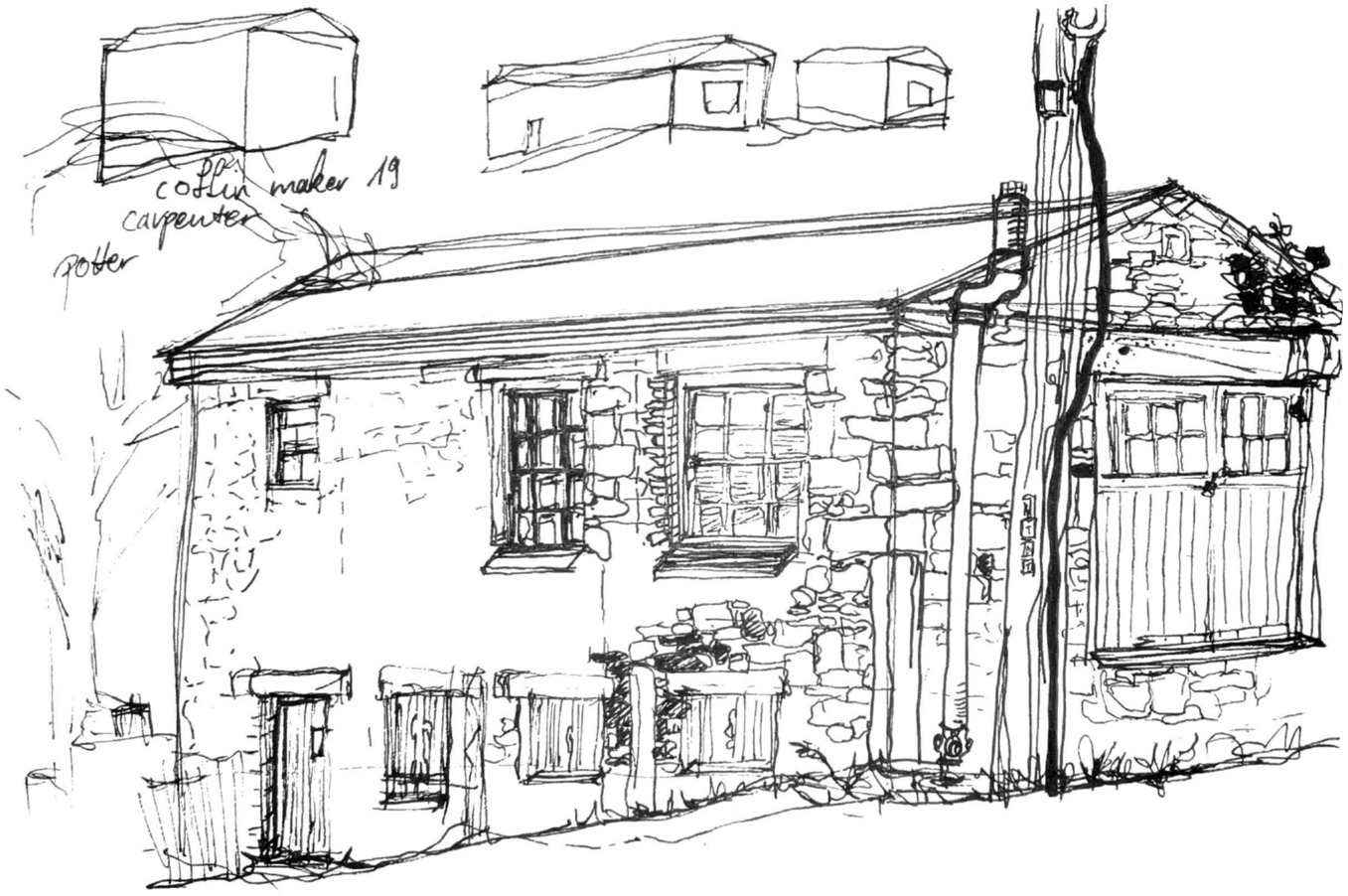


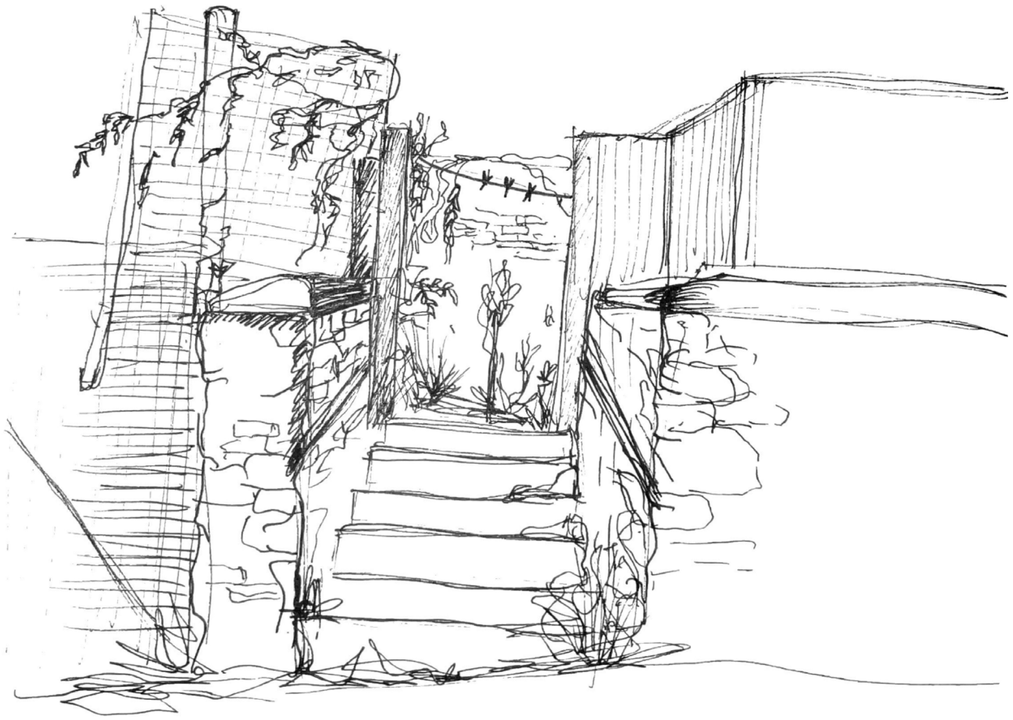






Context - Site







Site sketches

- Textures
- Walkways
- Greenery find it's way

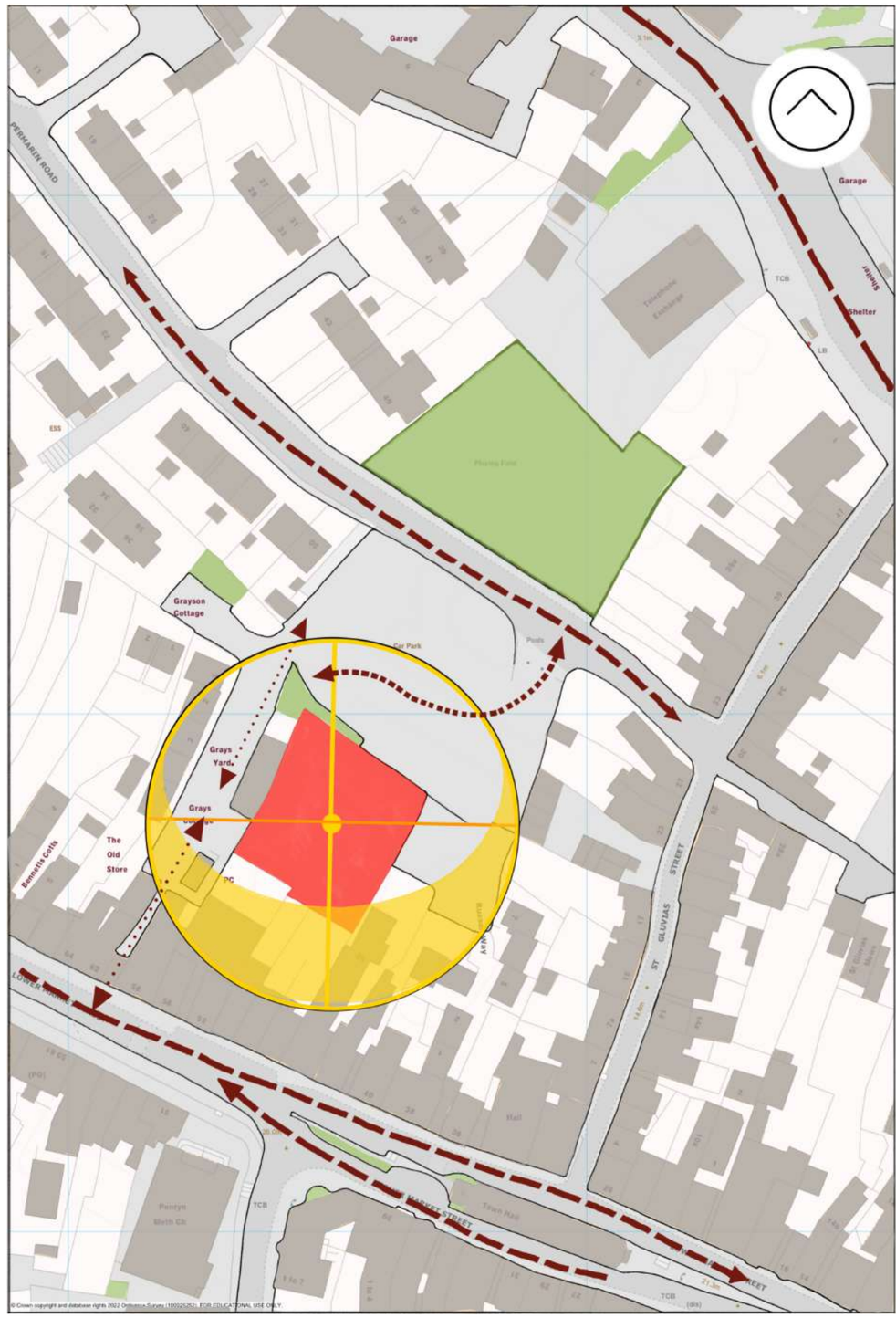
Context - Site



Site map 1:1600

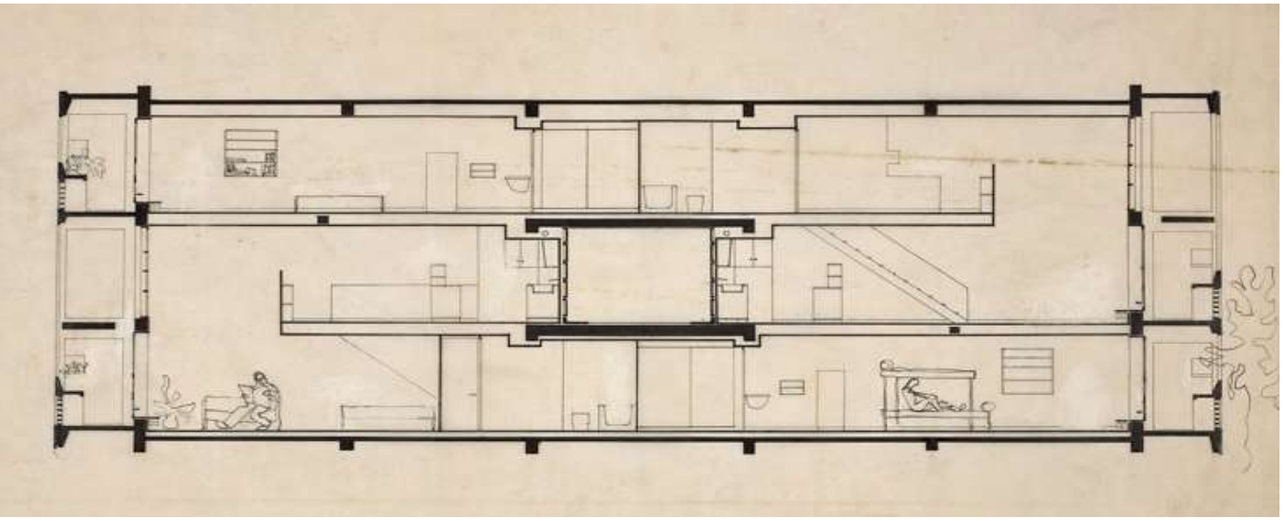
Site analysis

+ North facing site - Morning sun
+ Valley, Water - Cooling effect
+ tall buildings - shadowed
+ 900 m²



Site analysis 1:500

Context - Precedent



Le Corbusier

+ L'habitation - Light from both sides
+ Villa Savoye - Elevation with Pillars

Kondaya Genbei

+ Direct relationship with nature

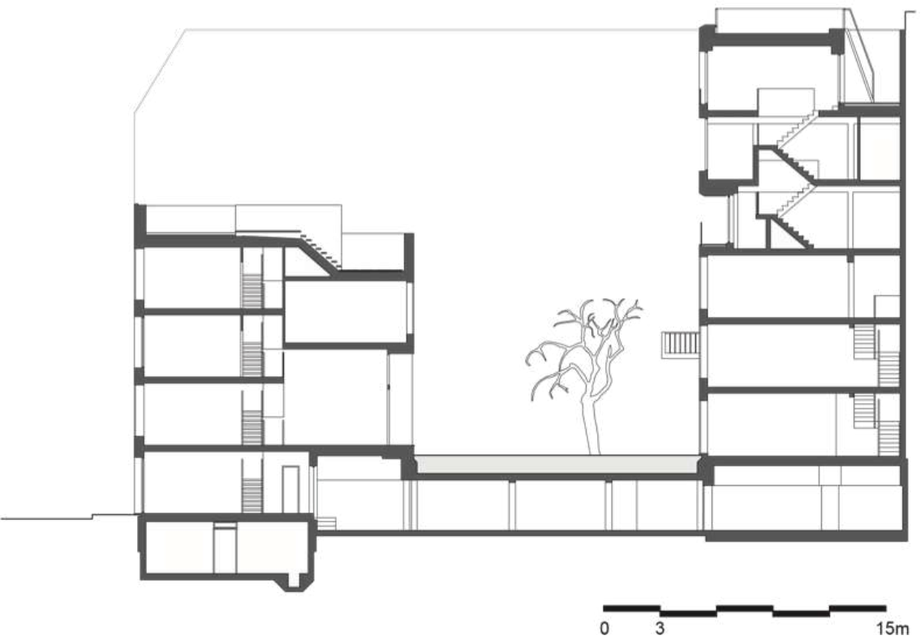




Context - Precedent







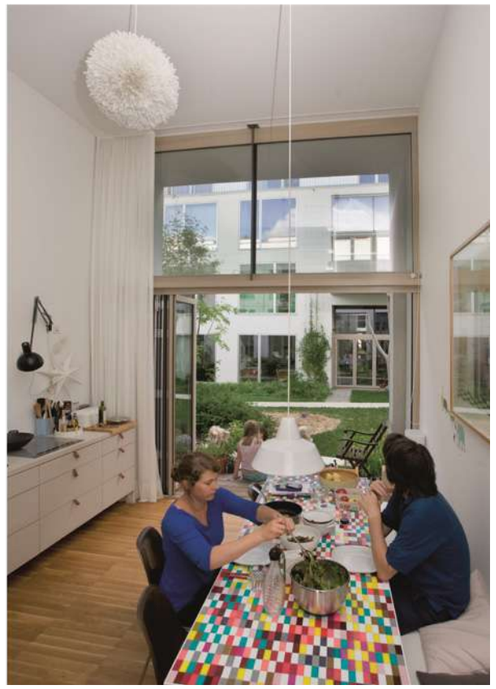
Zelterstrasse, Berlin

- Zanderroth Architekten, 2008-10
- Cohousing
- courtyard garden
- overlooking flats - self policing
- direct nature connection
- pricate space
- family friendly
- urban area



Context - Precedent









Niall Mclaughlin Architects

magdalene college library

University of Cambridge

- Heavy dividing walls
- tall chimneys
- brick
- timber structure
- CLT



OFFICE SIAN ARCHITECTURE + DESIGN

PHOENIX GARDEN COMMUNITY BUILDING

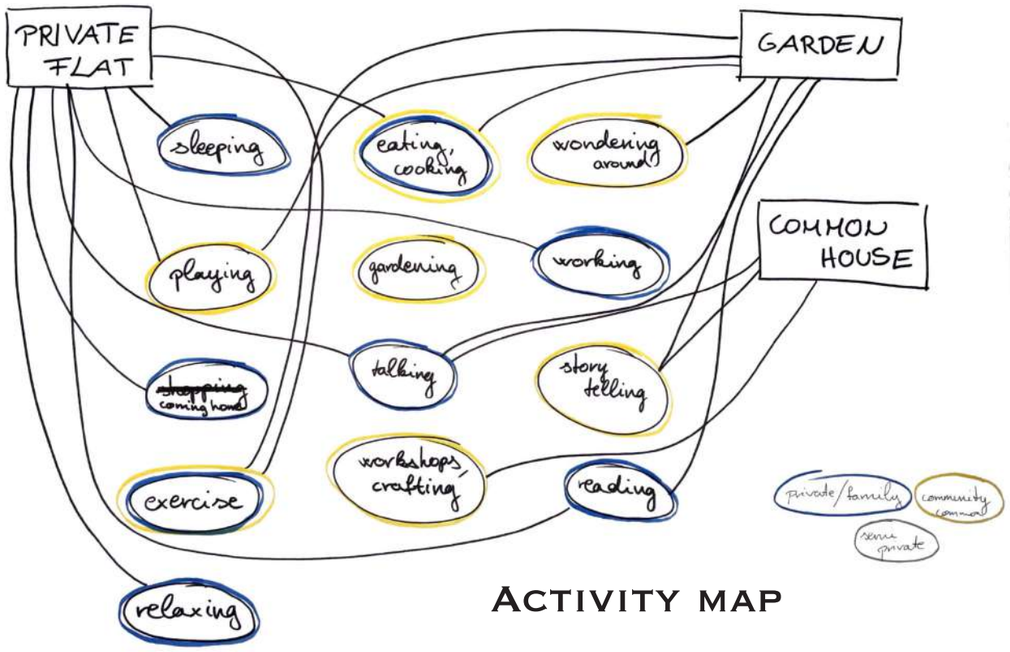
- Heavy load bearing walls
- warm cladding
- glass - transparency



Concept proposal - proposal



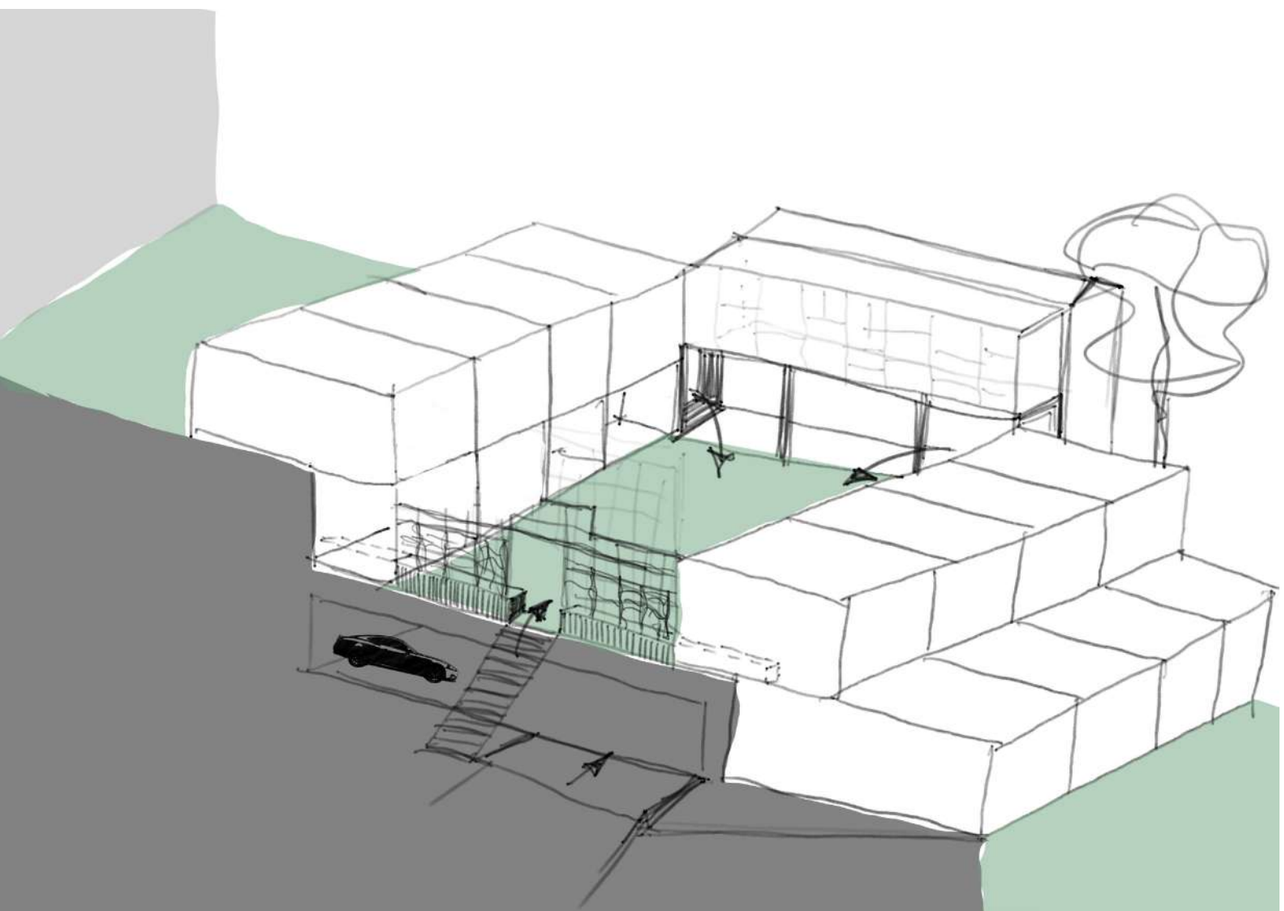
Concept proposal - proposal



Activity map

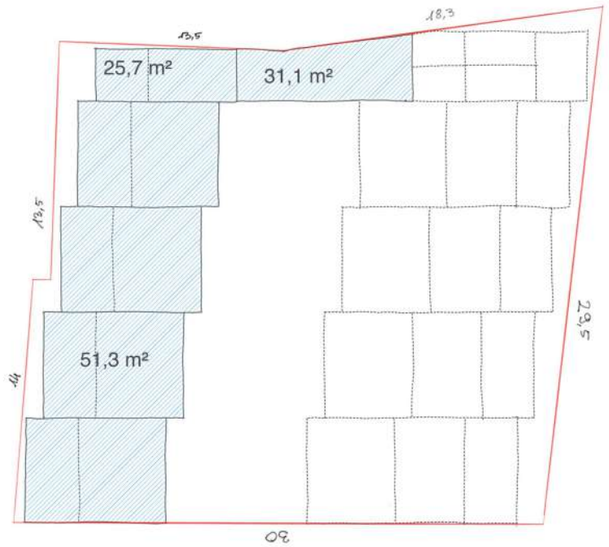
Proposal

- Common - Semi private - Private
- Common house - workshops, gatherings
- Common garden - playing, harvesting
- Private outdoor space - terrace/ rooftop garden
- Safe courtyard - overlooking, enclosed
- rainwater recycling

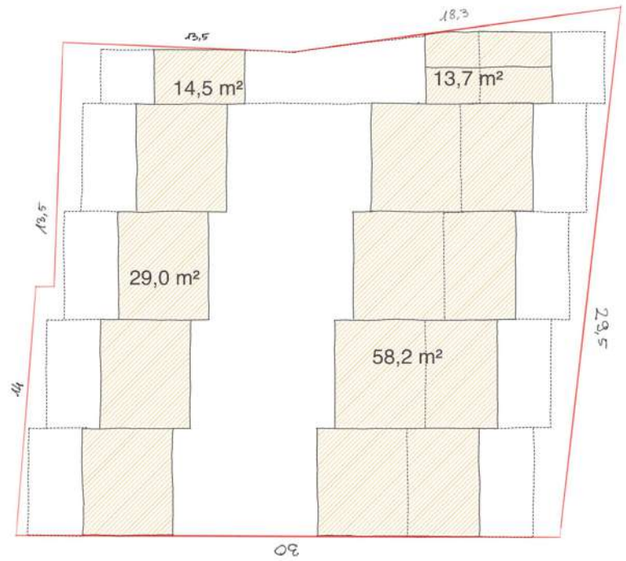




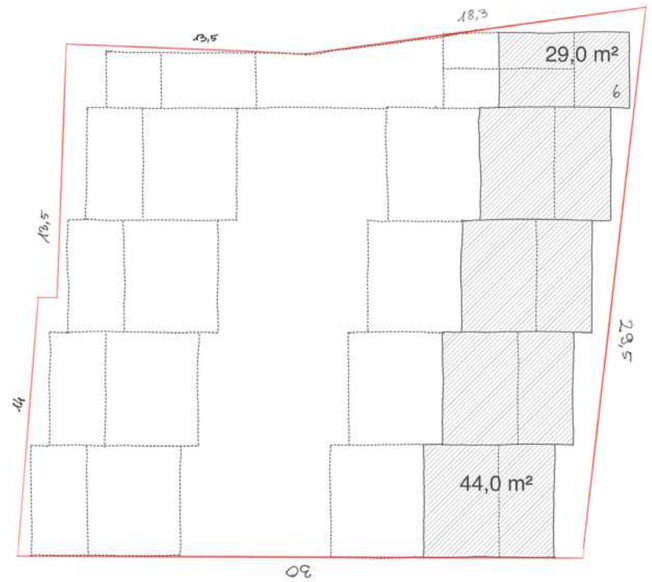
Concept proposal - proposal



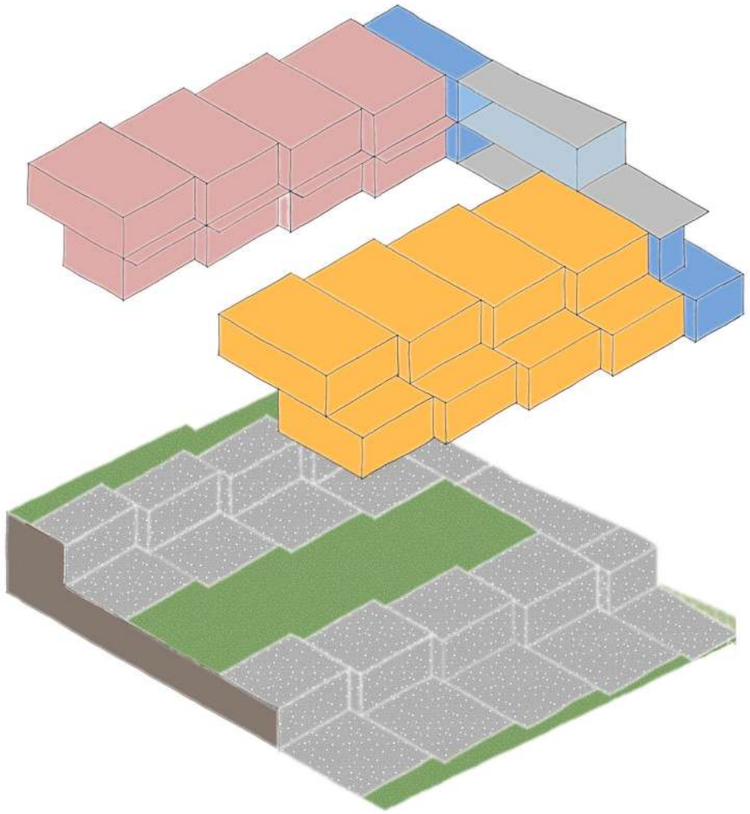
THIRD FLOOR



SECOND FLOOR

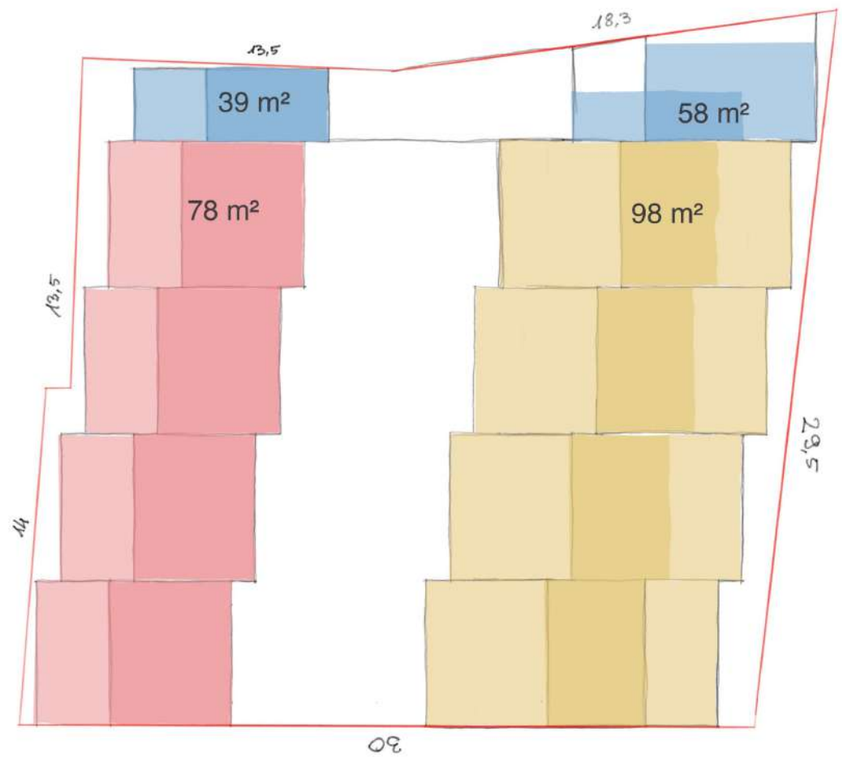


First floor

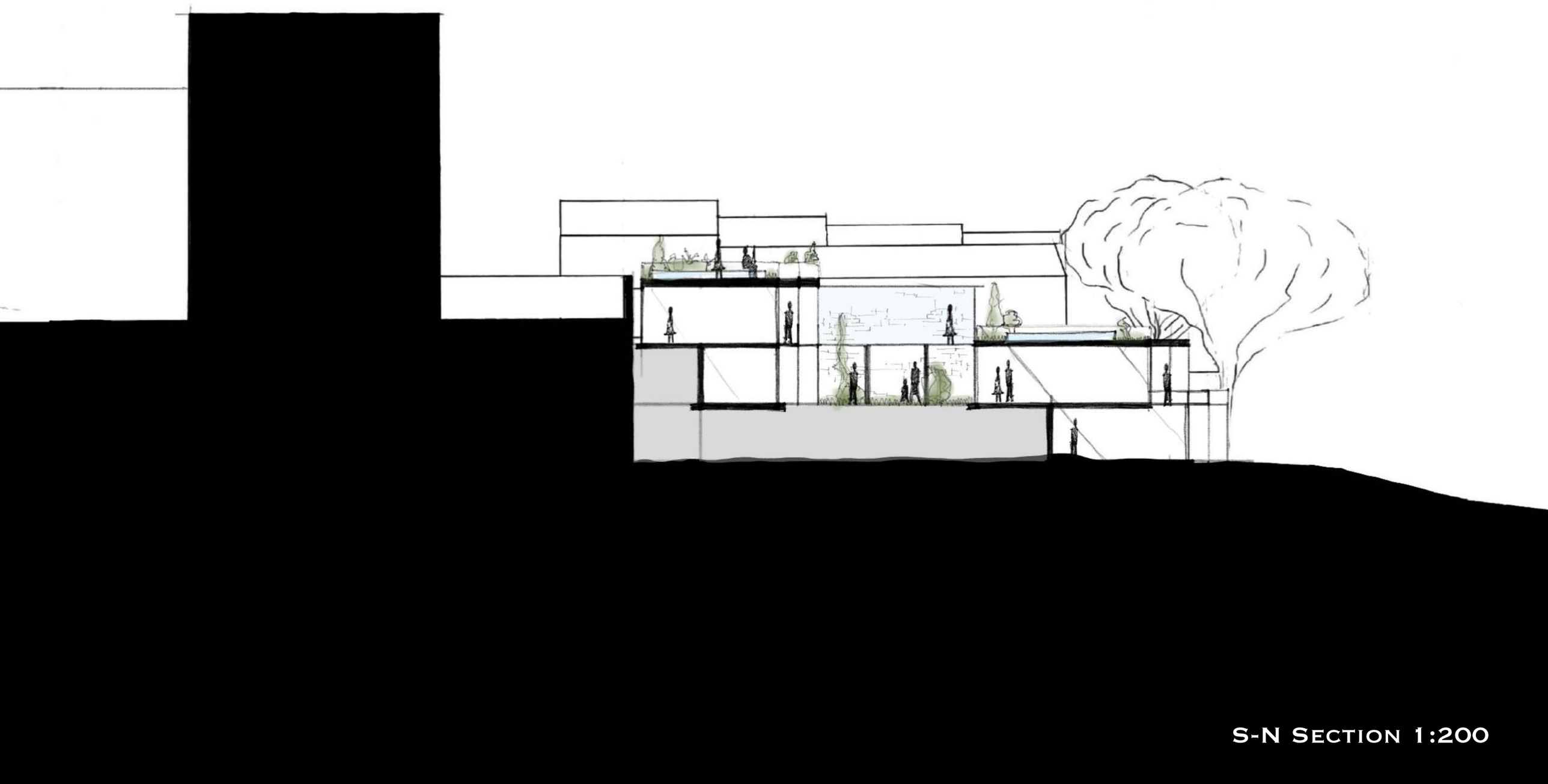


Proposed floor plan I.

- 4 maisonettes
- 4 apartments
- 2 studio apartments

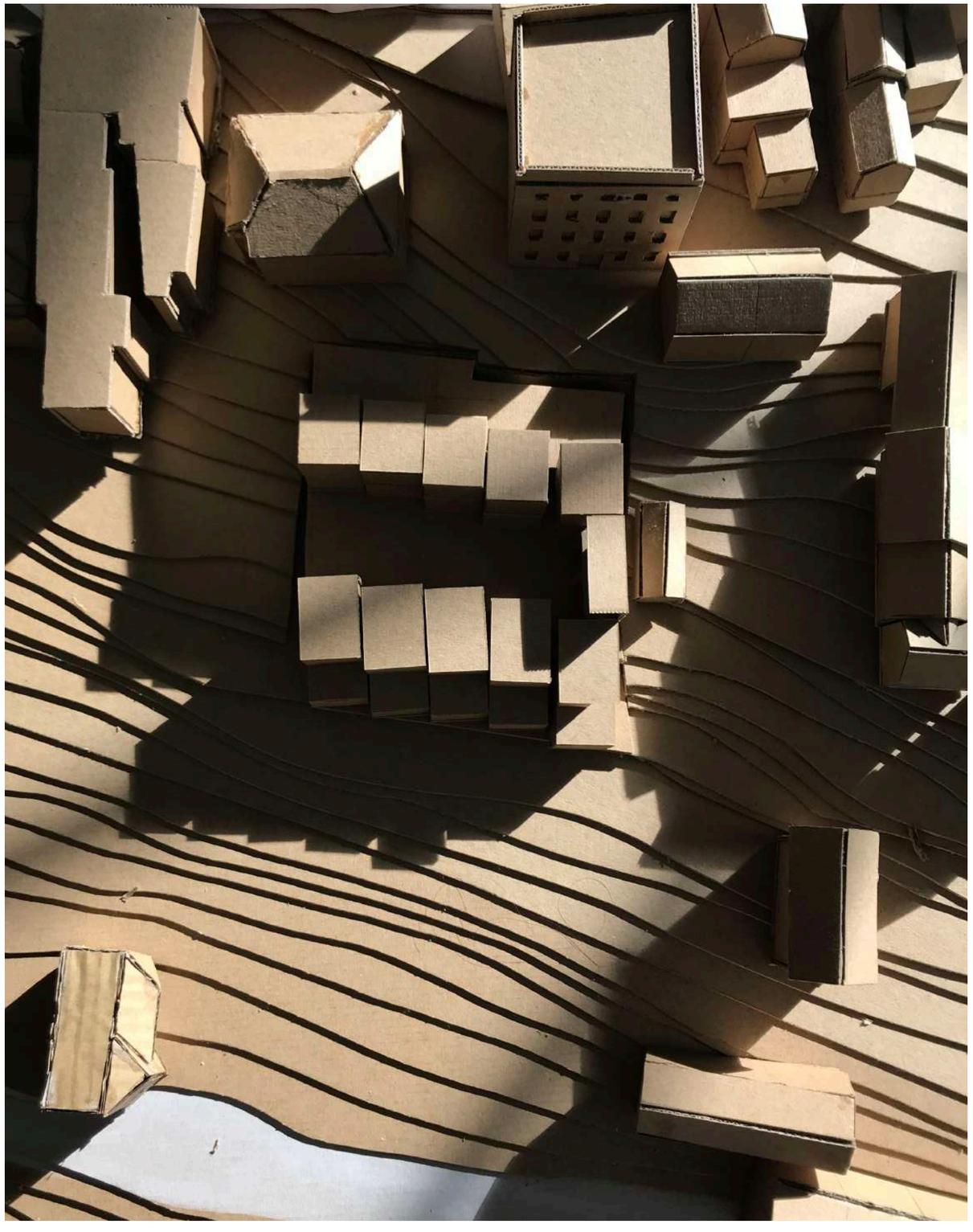


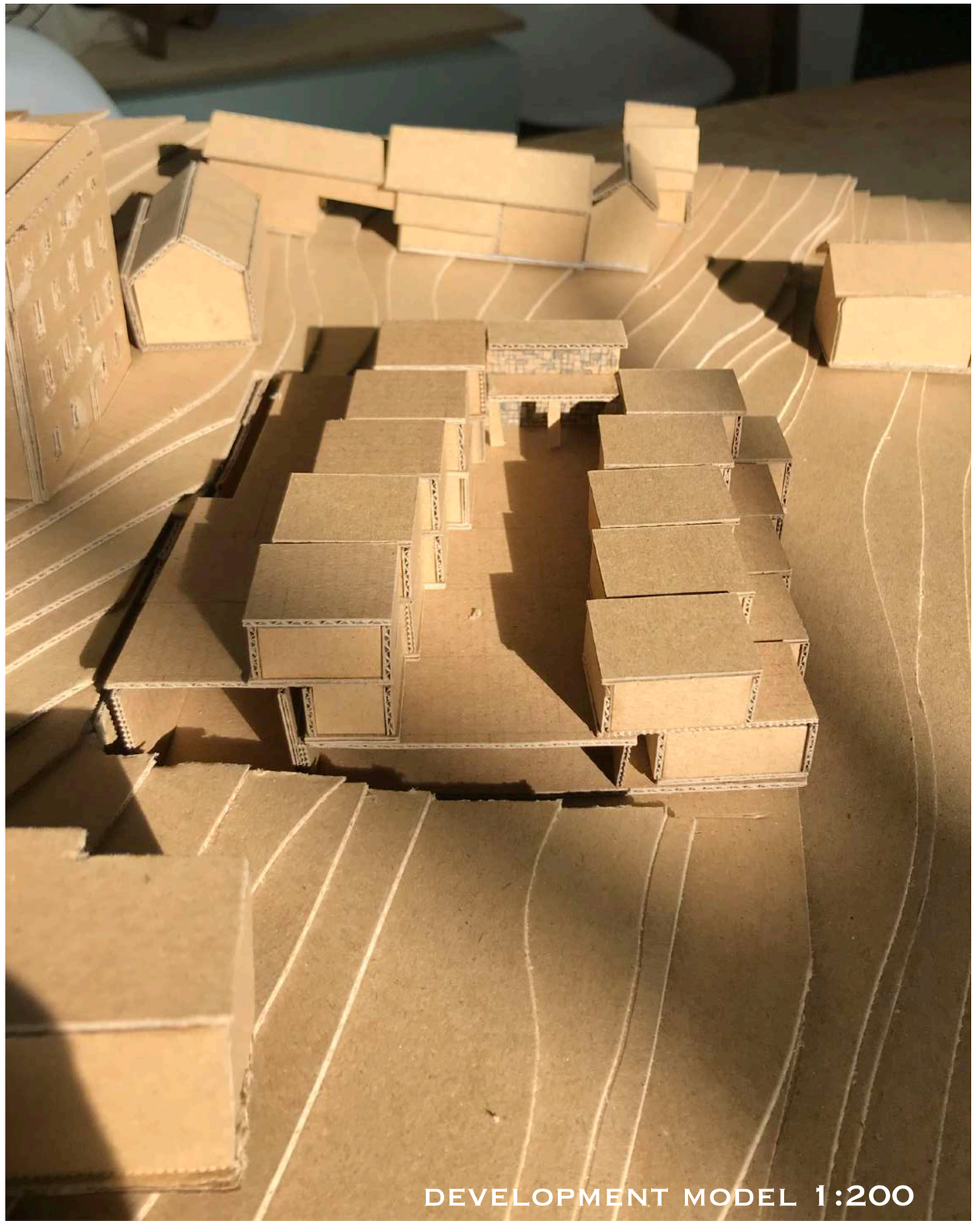
Concept proposal - proposal



S-N Section 1:200

Concept proposal - proposal





DEVELOPMENT MODEL 1:200

Proffesional contex

Development control / Town regulations

- The New Cohousing project fits into the surrounding therefor it doesen't disturbe the townscape
- On site parking helps the town with it's difficult parking problem
- A lift allows wheelchair access to all floors

Cost analysis

PROPOSAL ONE - with basement
- 3542 £/ m2

PROPOSAL TWO - without basement
- 3282 £/ m2

Cost increase

- Passivehause wall construction adds 15%
- Ground work, excavation
- renewable energy systems
- stone finish 3x
- glass wall 5x

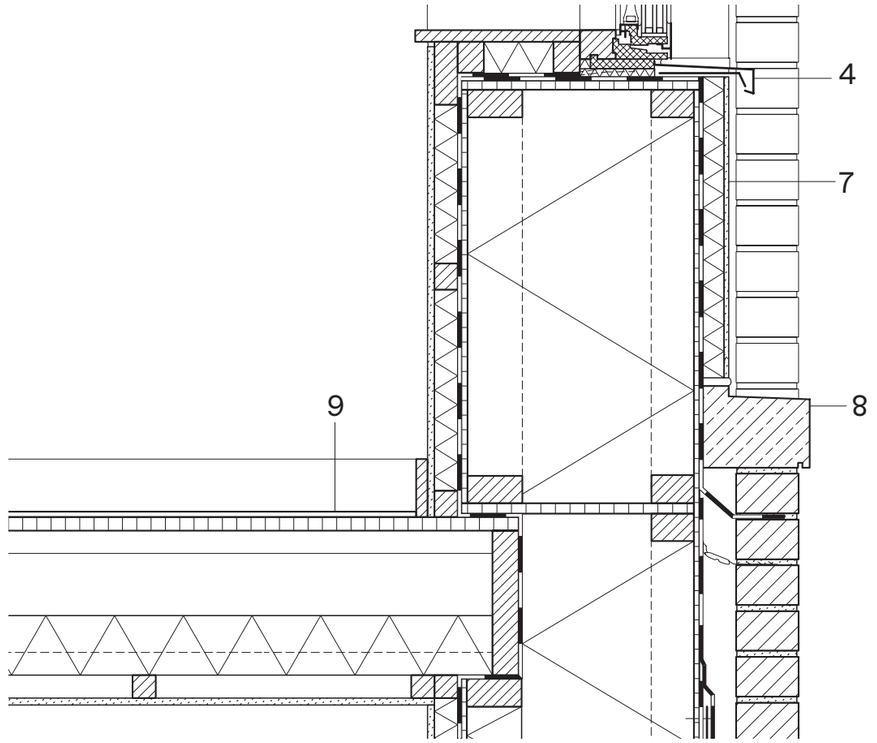
Cost reduction

- prefabricated timber frame stuctur
  -construction time reduced
- renewable energy systems
  -longterm payback
- repetition, standardized
- stait forward forms - standard sizes

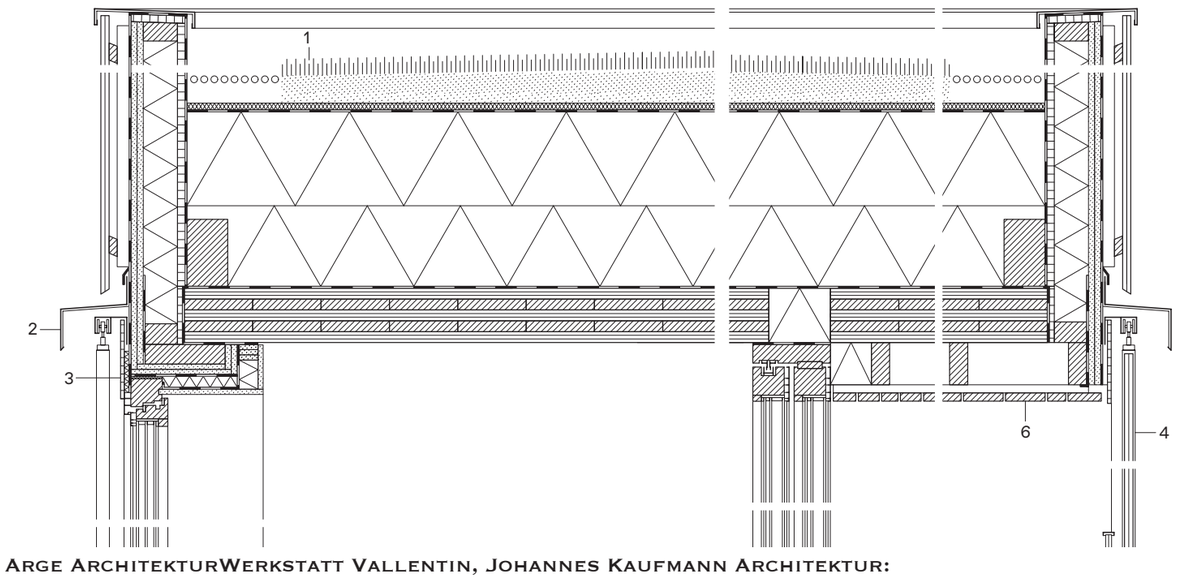
Technology - structural strategy

Parapet construction

- external render 35 mm EPS thermal insulation breather membrane;
- 12 mm marine grade plywood;
- timber I joists with 381 mm cellulose thermal insulation in between;
- 9 mm OSB board;
- vapour retarder;
- 45/45 mm battens with mineral wool thermal insulation in between;
- 12 mm gypsum plasterboard



Mikhail Riches, Cathy Hawley:
Social Housing Units with Passive House Standard



Arge ArchitekturWerkstatt Vallentin, Johannes Kaufmann Architektur:
Timber Ensemble for the Building Group Team3

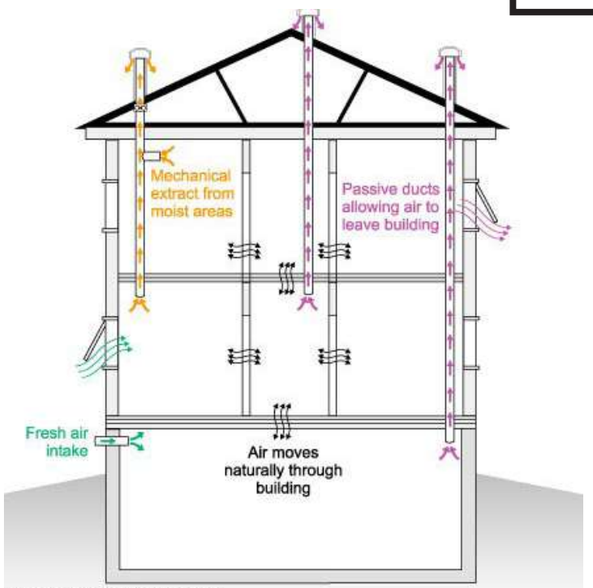
Walk-on roof

- wooden decking (80 mm planting)
- 20 mm drainage mat
- waterproof sheeting
- 275 mm thermal insulation with 2 % fall
- 240 mm PIR thermal insulation; vapour
- barrier; 160 mm cross-laminated timber

Technology - environment strategy

Natural ventilation

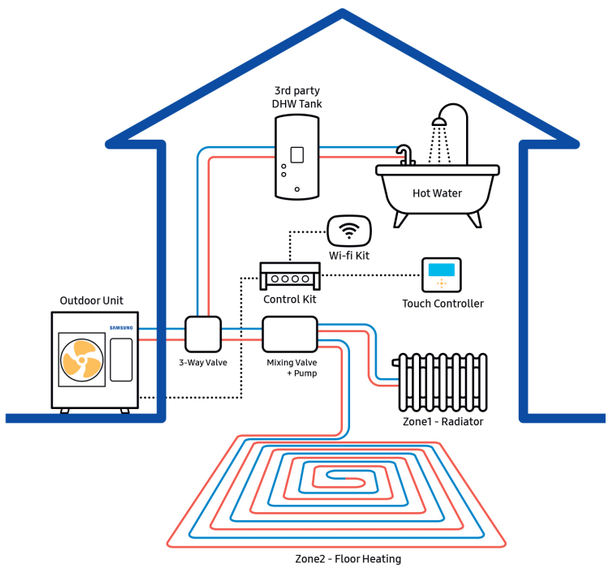
+ Air filtering - Better air quality
+ cost effective



Natural ventilation system

Heat pump

+ Air and Ground source



LIFETIME ENERGY USE

Rainwater harvesting

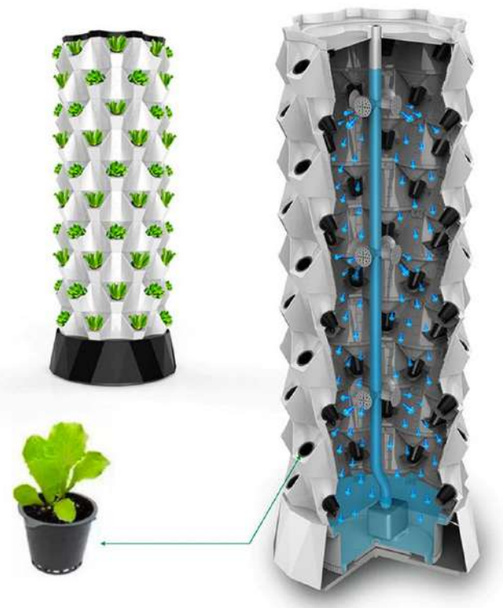
+ Rainwater collection
+ Smaller filtering tank for drinking water
+ Cisterns for Toilet, washing, garden watering, tower farms
+ hidden gutters

Sewige treatment

+ Grey water recycling for use

Biodiversity

+ maintaining biodiversity on site
+ Courtyard garden
+ Vegetable / herb harvesting
+ Vertical gardening - **Tower Farms**



Technology - sustainable strategy

Wood

- Wood frame construction
- CLT
- Glulam
- (Naturally wood)



Rainscreen

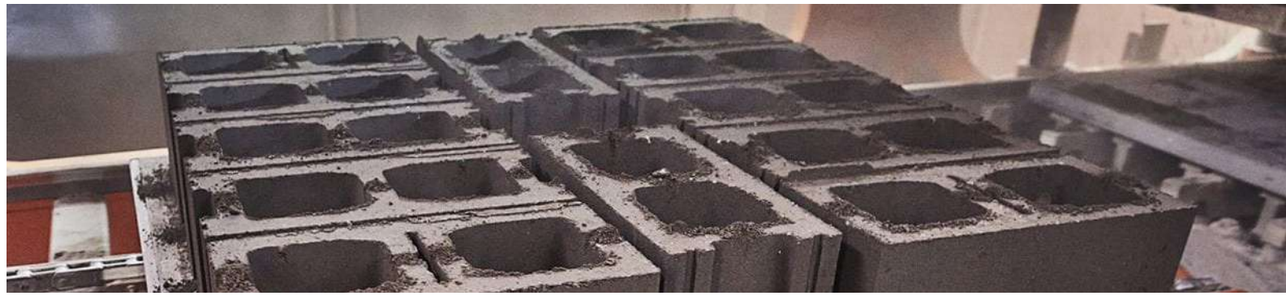
- Timber cladding (Russwood)
- Load bearing walls - stone/granite





Concrete

- For base, basement
- green cement, carbon-capturing concrete, Carbon negative concrete
- (Blue Planet, Carbon Cure, Carbi Brete)



Outdoor spaces

- Composite decking board
- (Plaswood, Duraplast, Highwood, Cladco decking)
- maintaining biodiversity on site - Coartyard garden

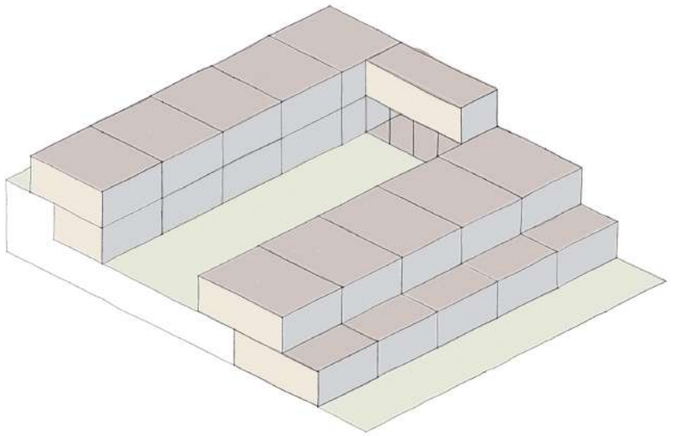


Proposal - design development

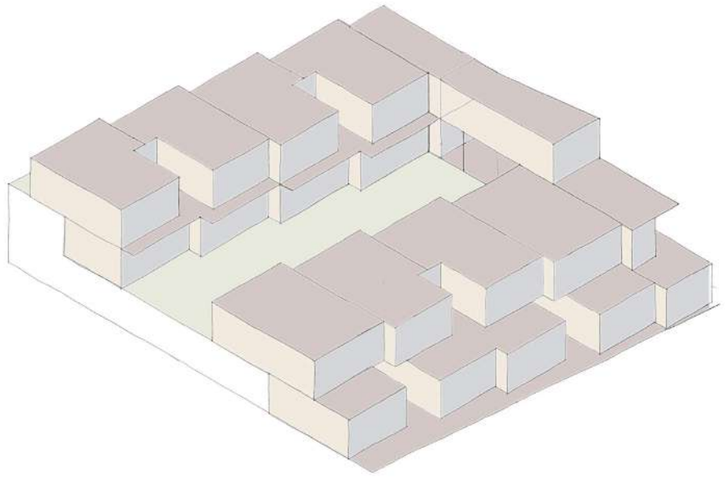
dwelling arrangement

- 4 maisonettes
- 4 apartments
- 2 studio apartments

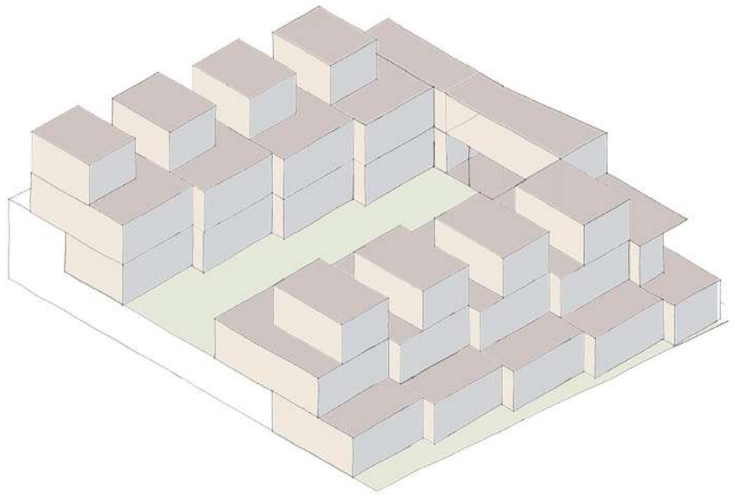
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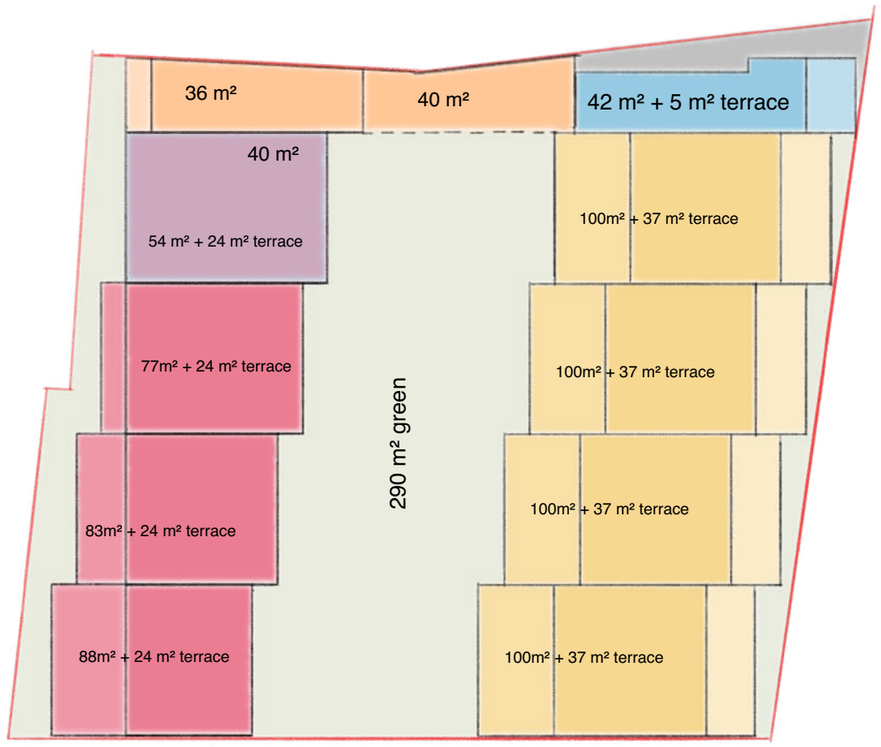


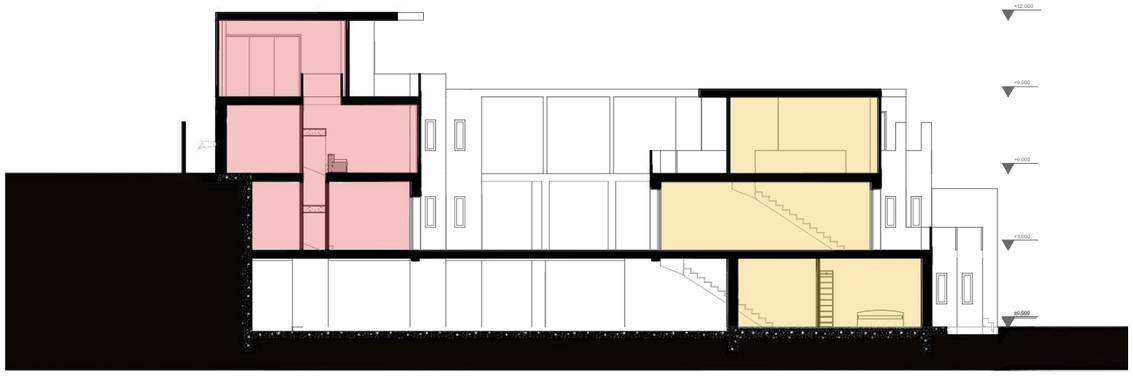
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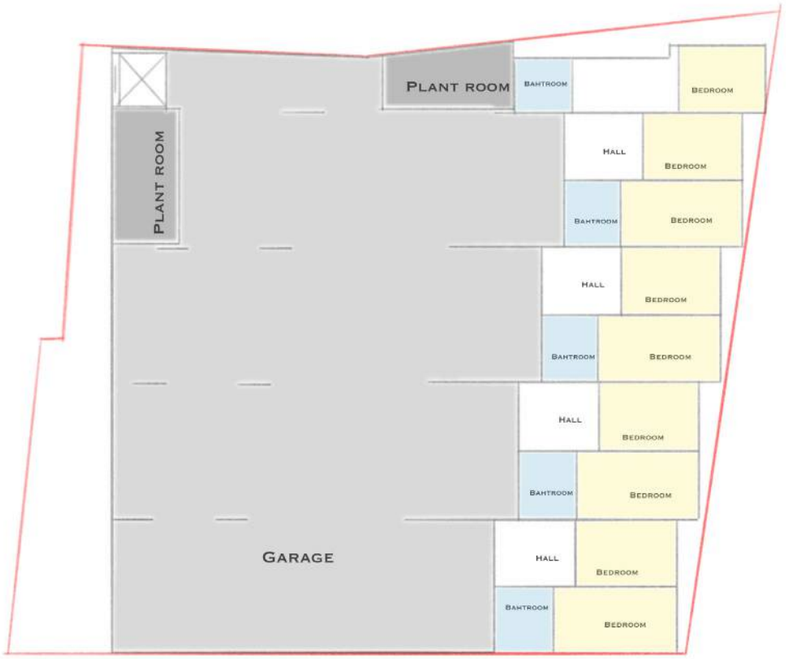
III.

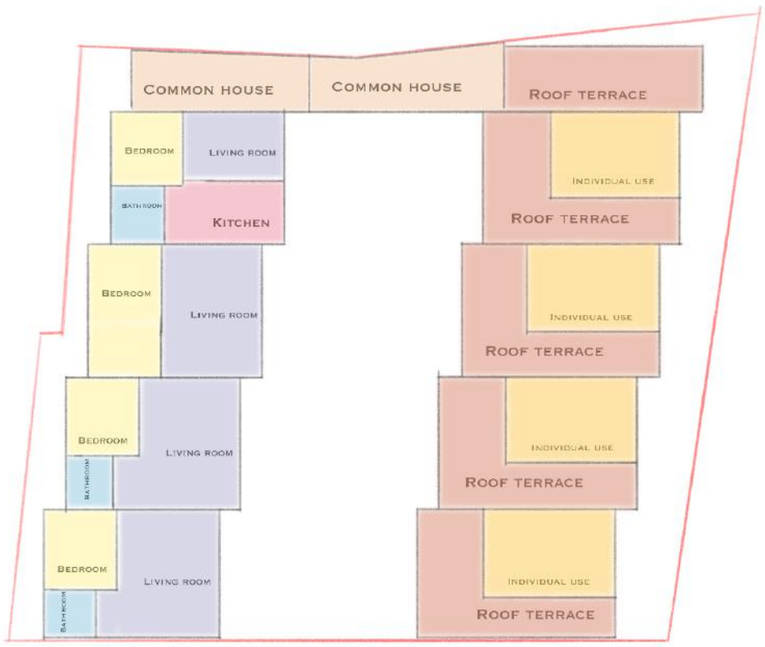


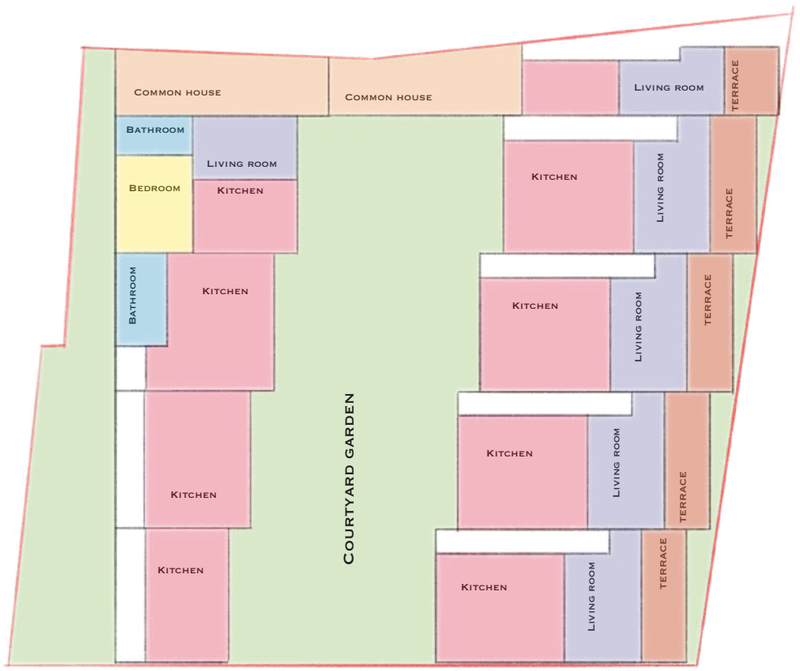


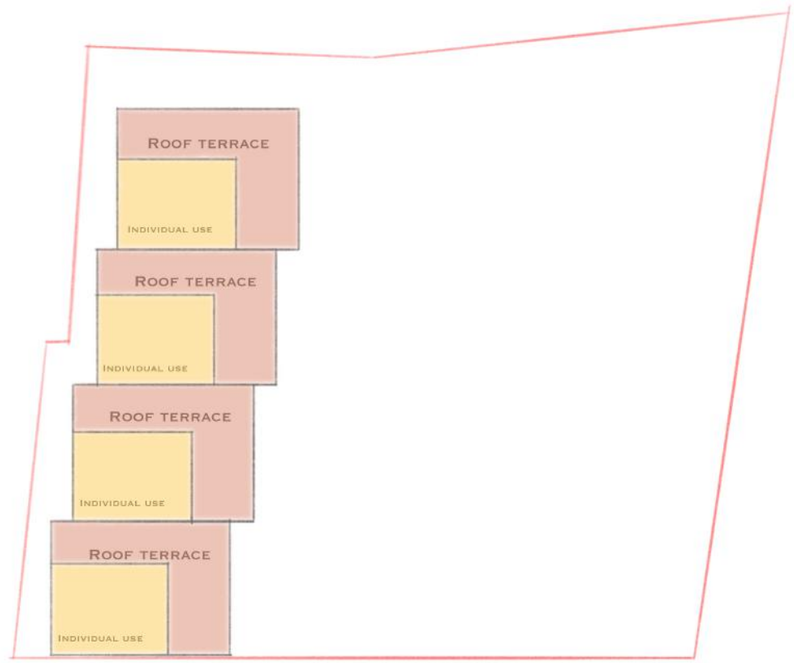


Proposal - Function sceme

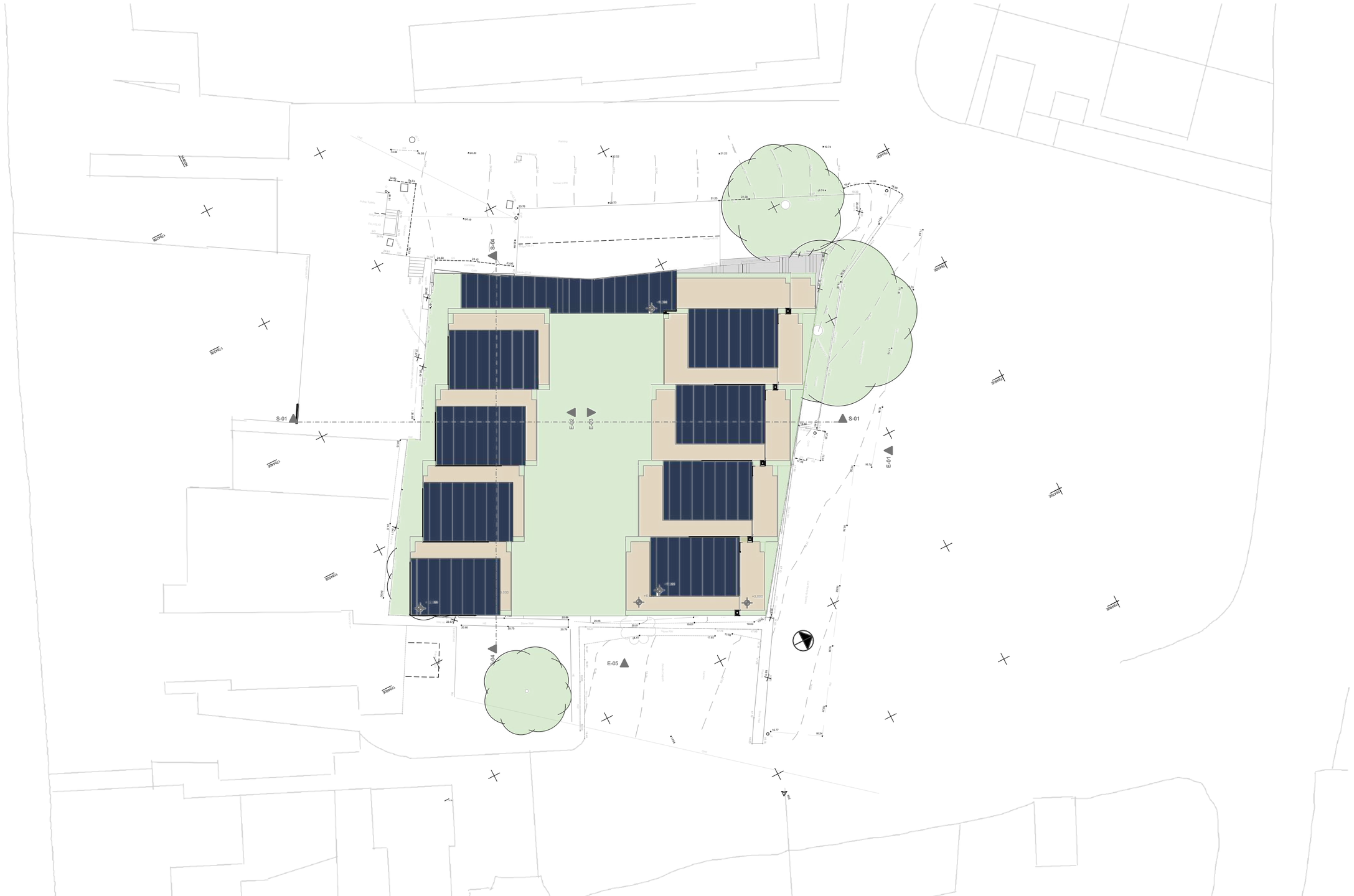






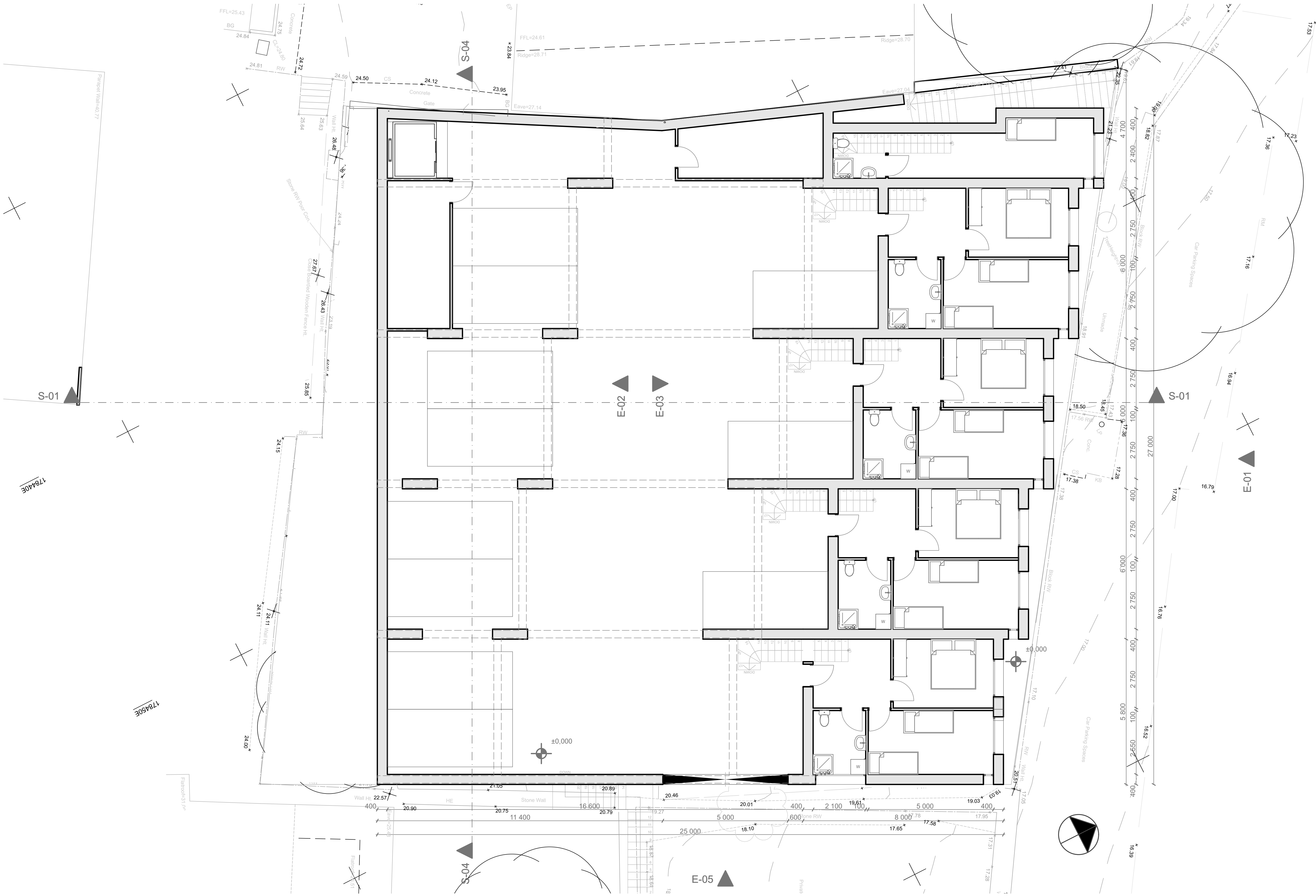


Proposal



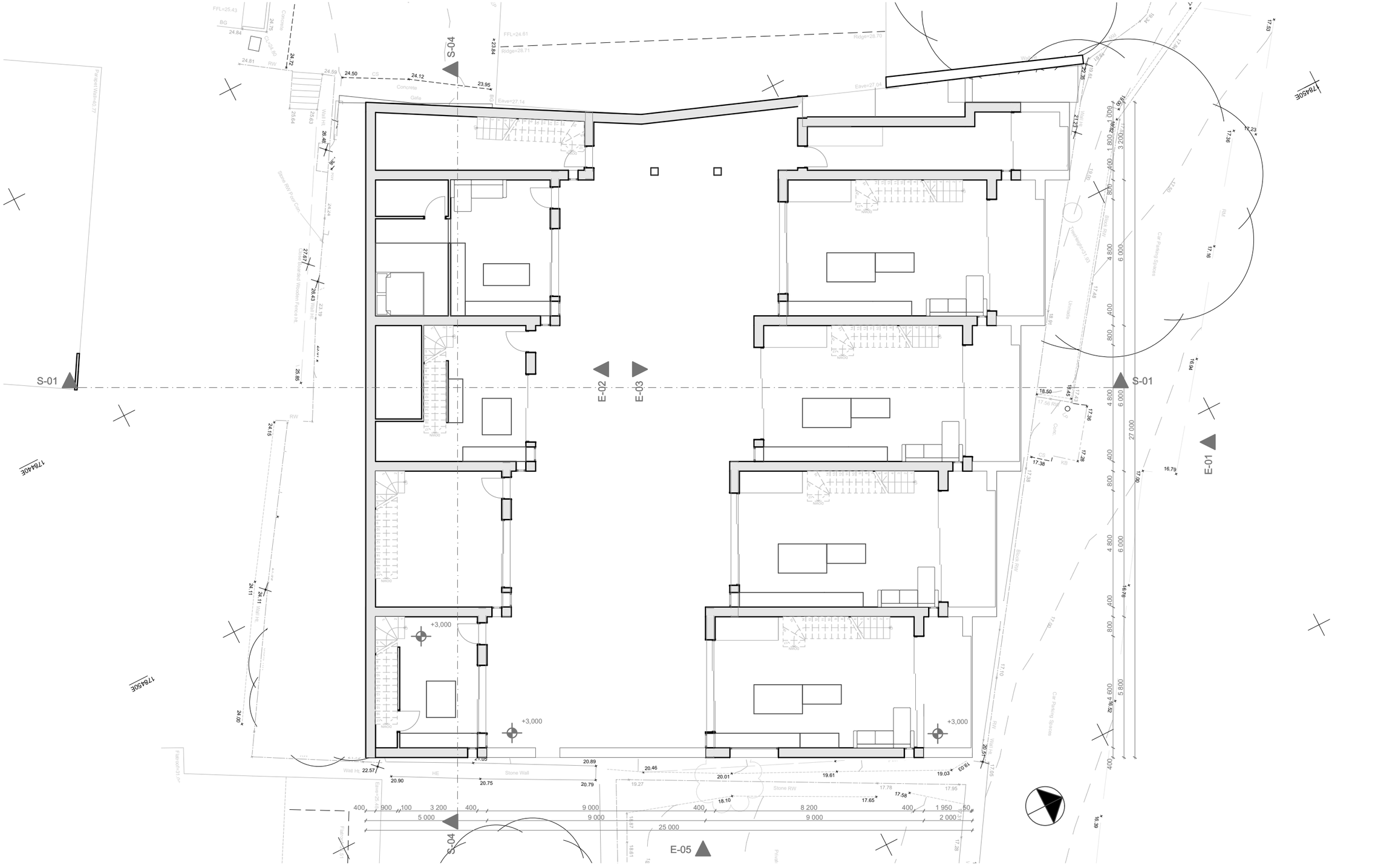
Maya Angelus	1:200	BSL 16,5= +-0,00	Block Plan

Proposal



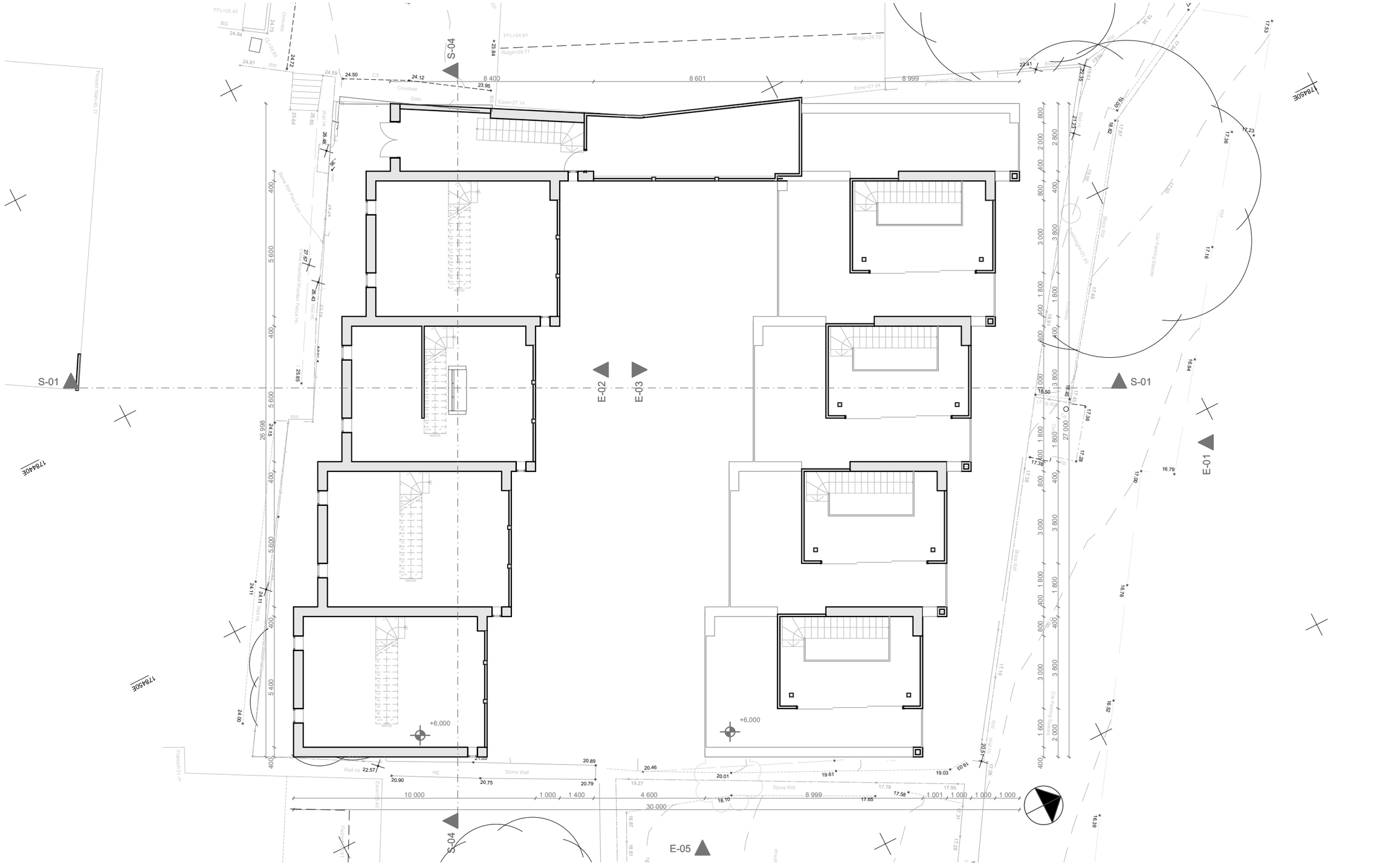
Maya Angelus | 1:100 | BSL 16,5= +-0,00 | Secondary Ground Floor

Proposal



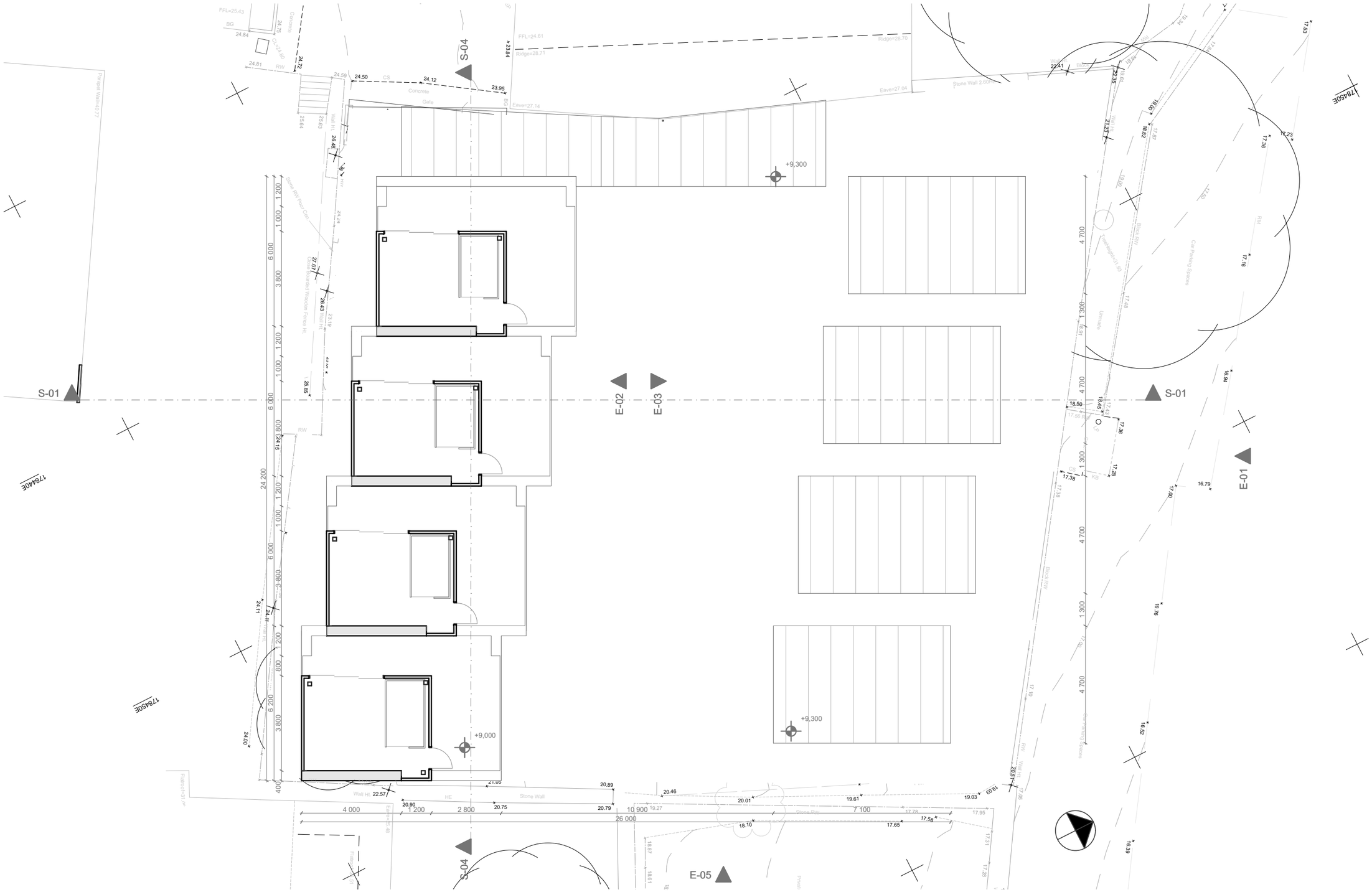
Maya Angelus	1:100	BSL 16,5= +-0,00	Ground Floor

Proposal



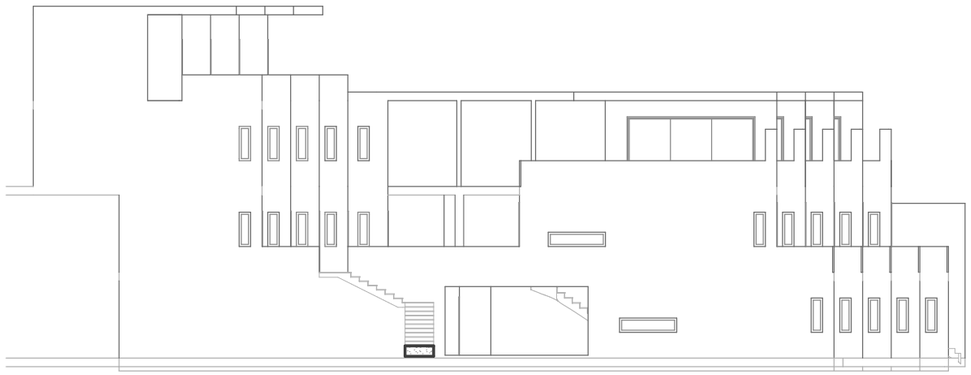
Maya Angelus	1:100	BSL 16,5= +-0,00	First Floor

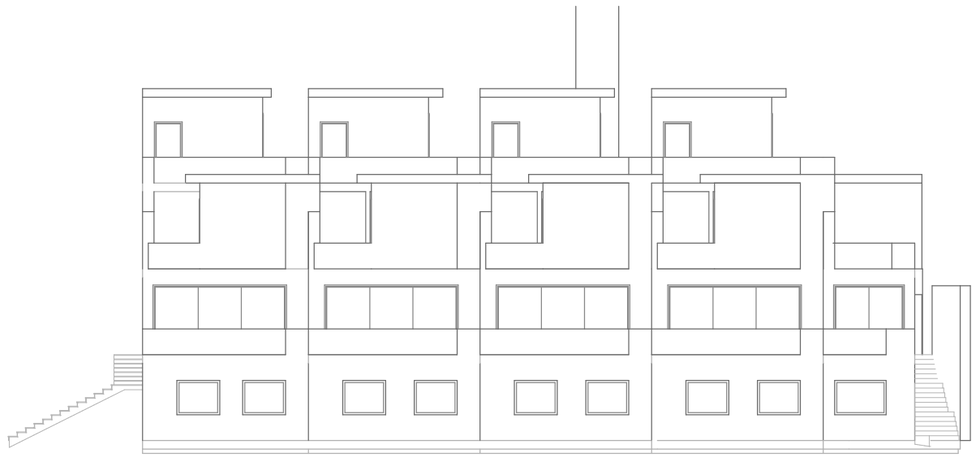
Proposal

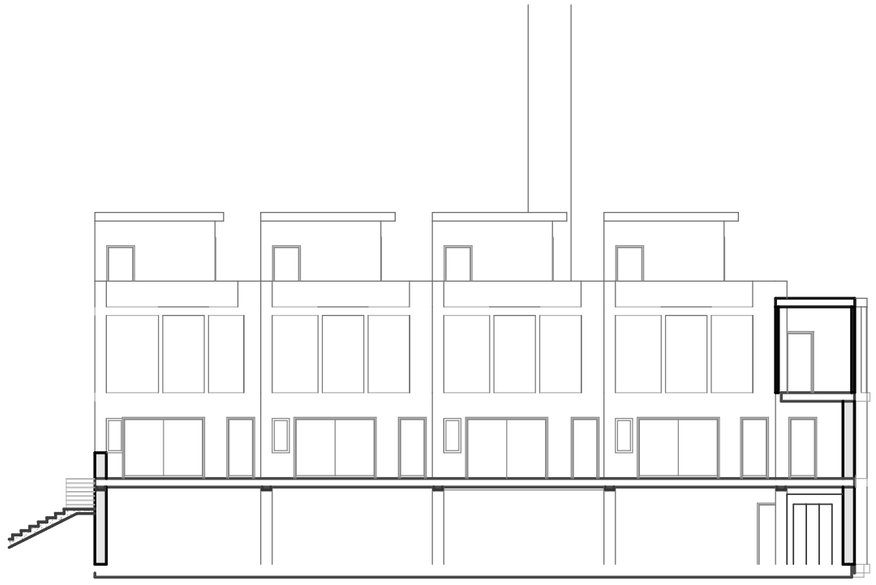


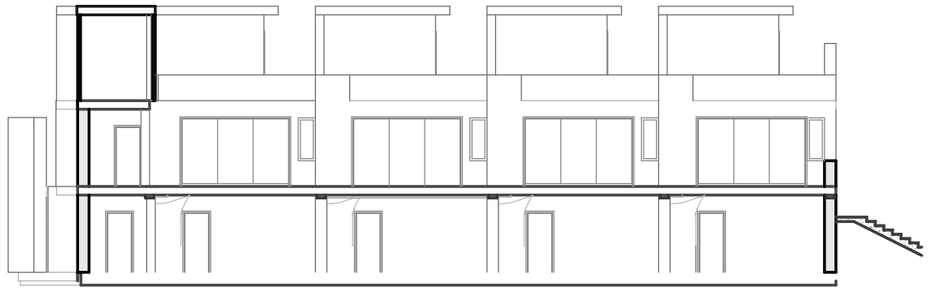
Maya Angelus	1:100	BSL 16,5= +-0,00	Second and Roof plan

Proposal



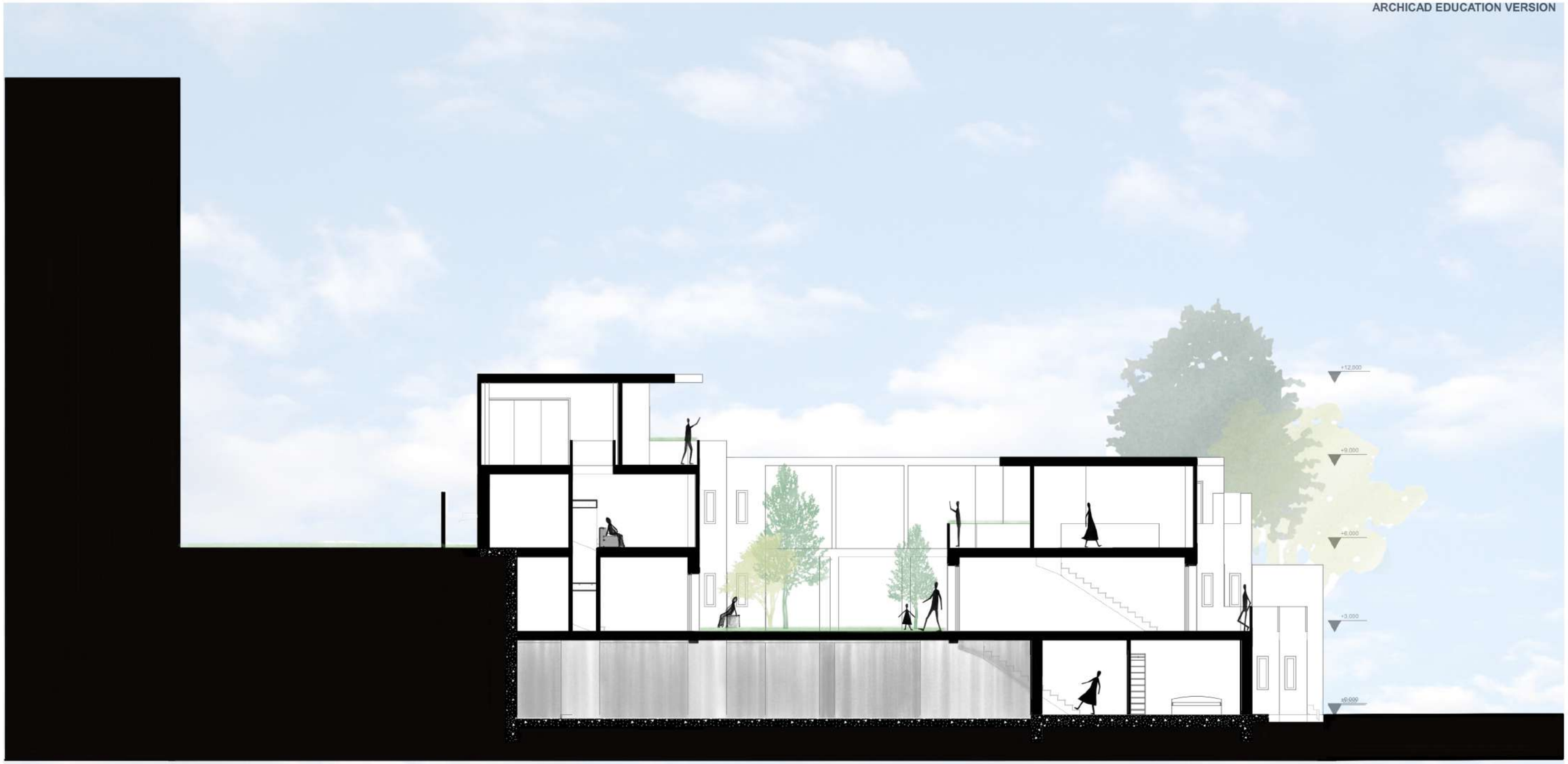






Maya Angelus	1:200	BSL 16,5= +-0,00	Elevation

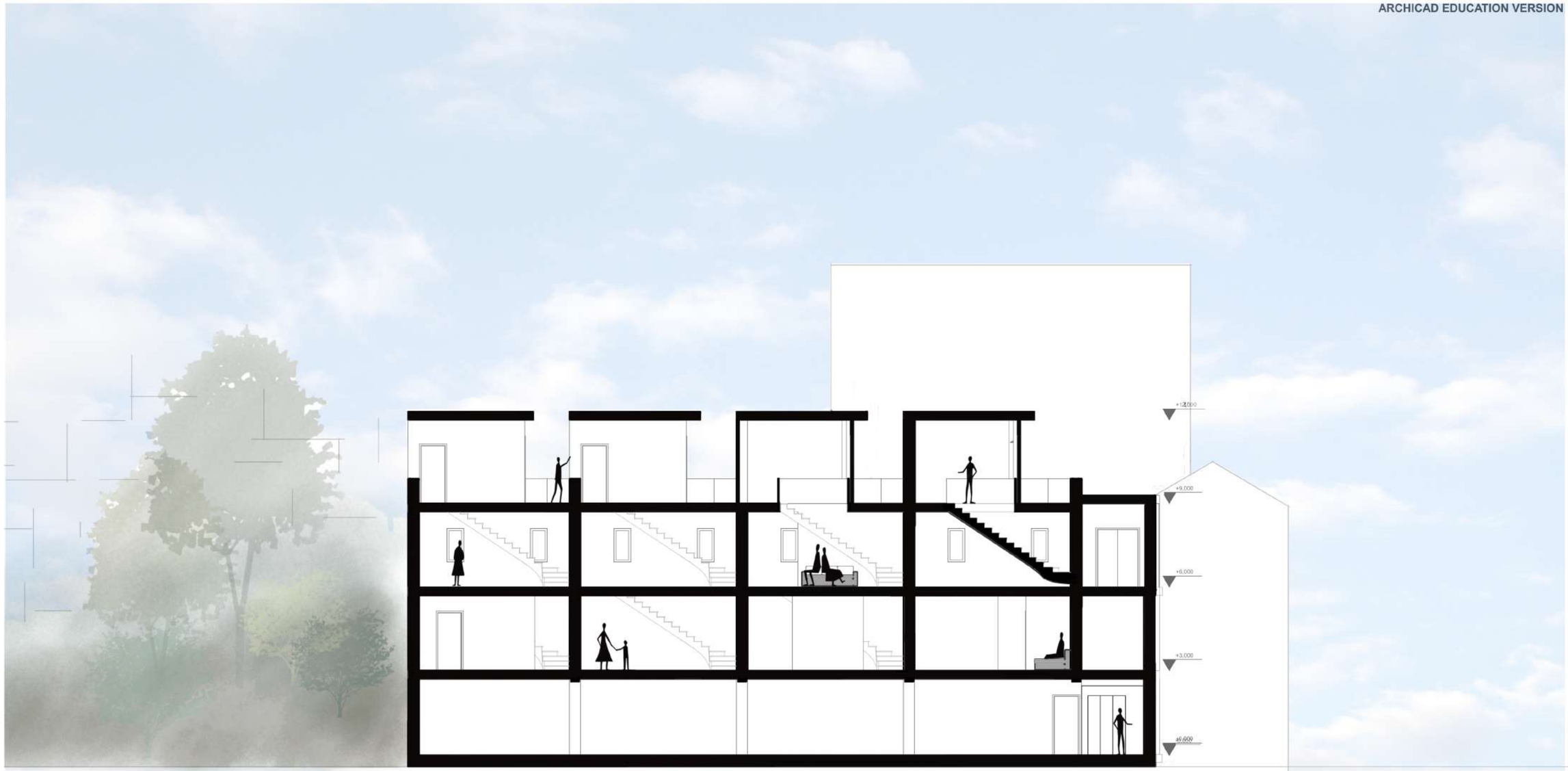
Proposal



Maya Angelus	1:100	BSL 16,5= +-0,00	S-01 Building Section

Proposal

ARCHICAD EDUCATION VERSION



Maya Angelus	1:100	BSL 16,5= +-0,00	S-04 Building Section

Proposal



Maya Angelus	1:50	BSL 16,5= +-0,00	Front Elevation

Proposal



Proposal



Proposal



Proposal

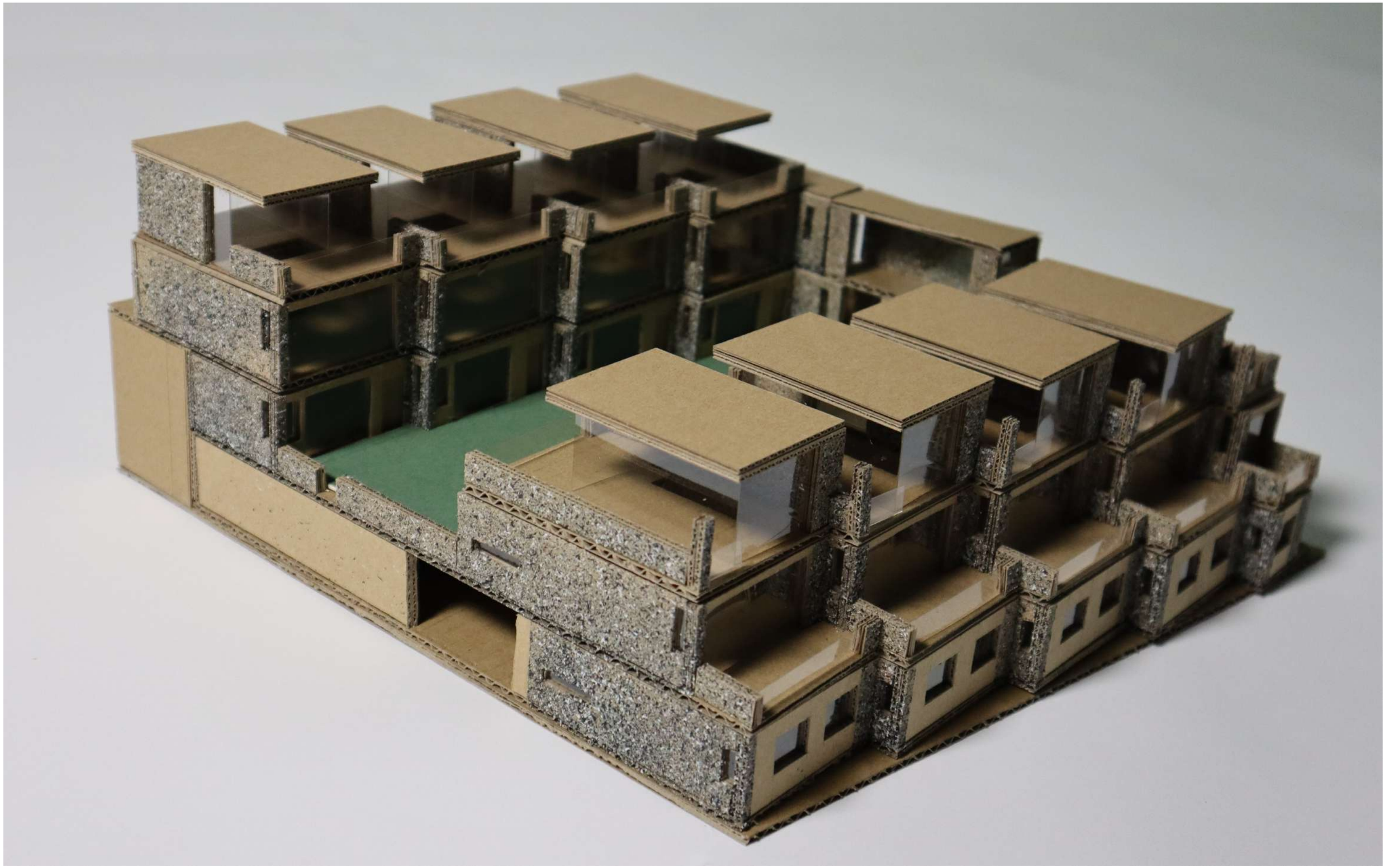




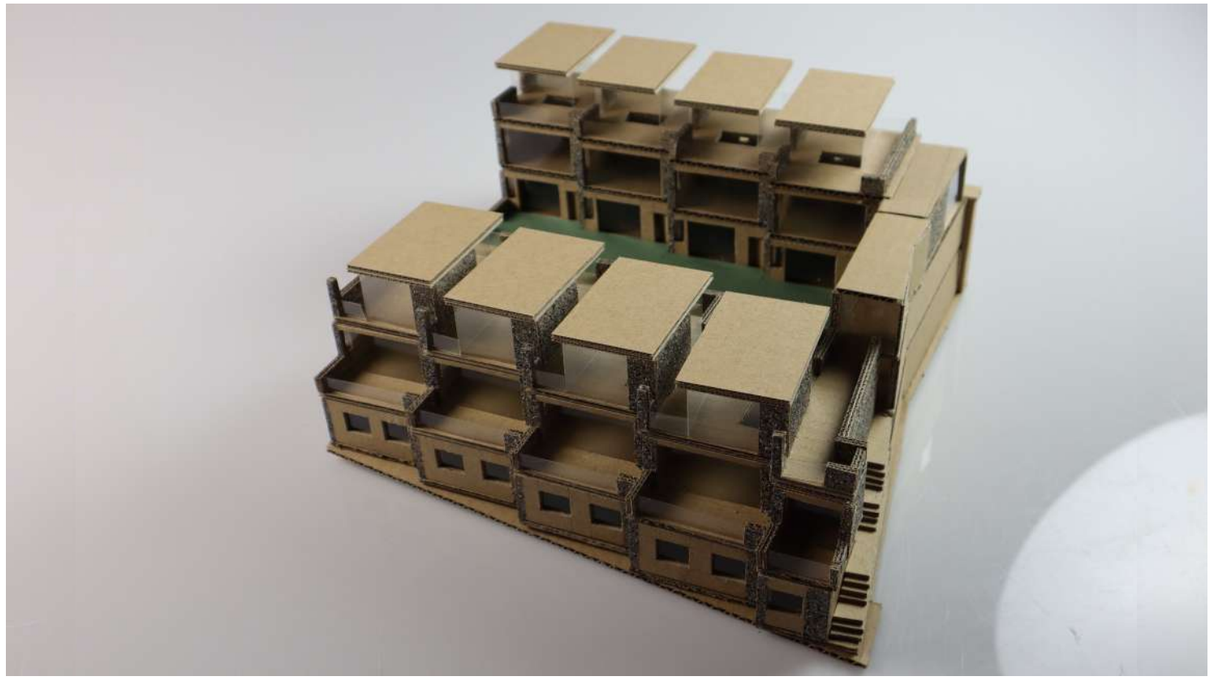


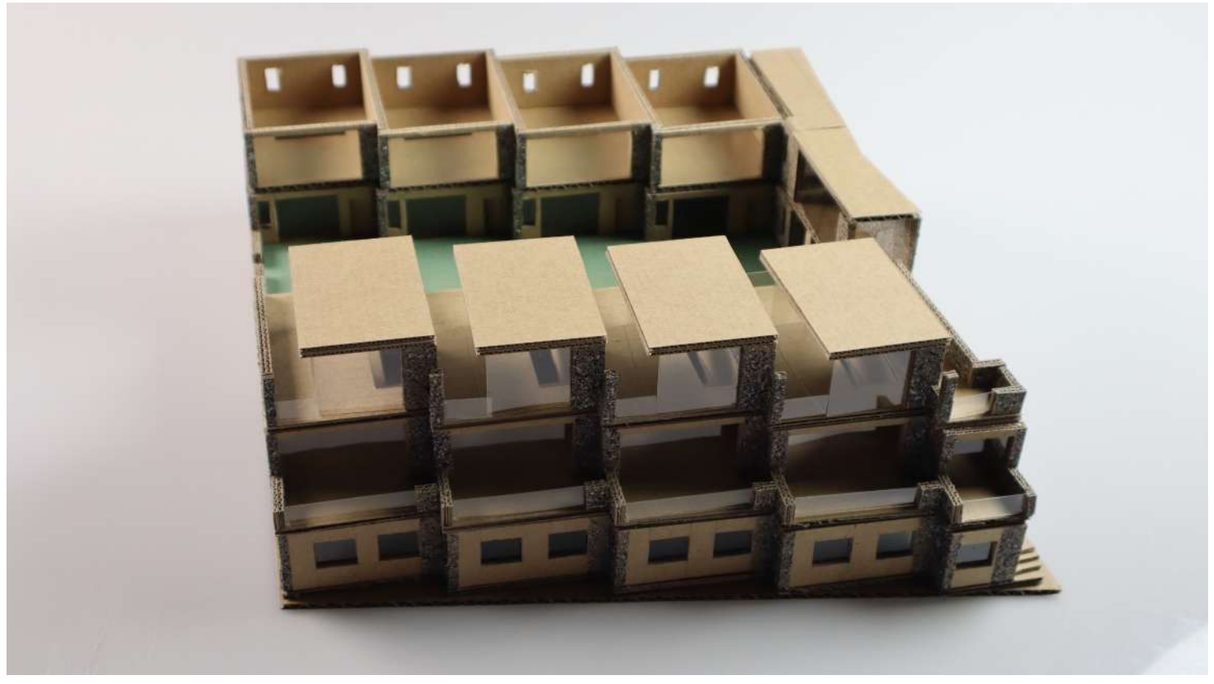


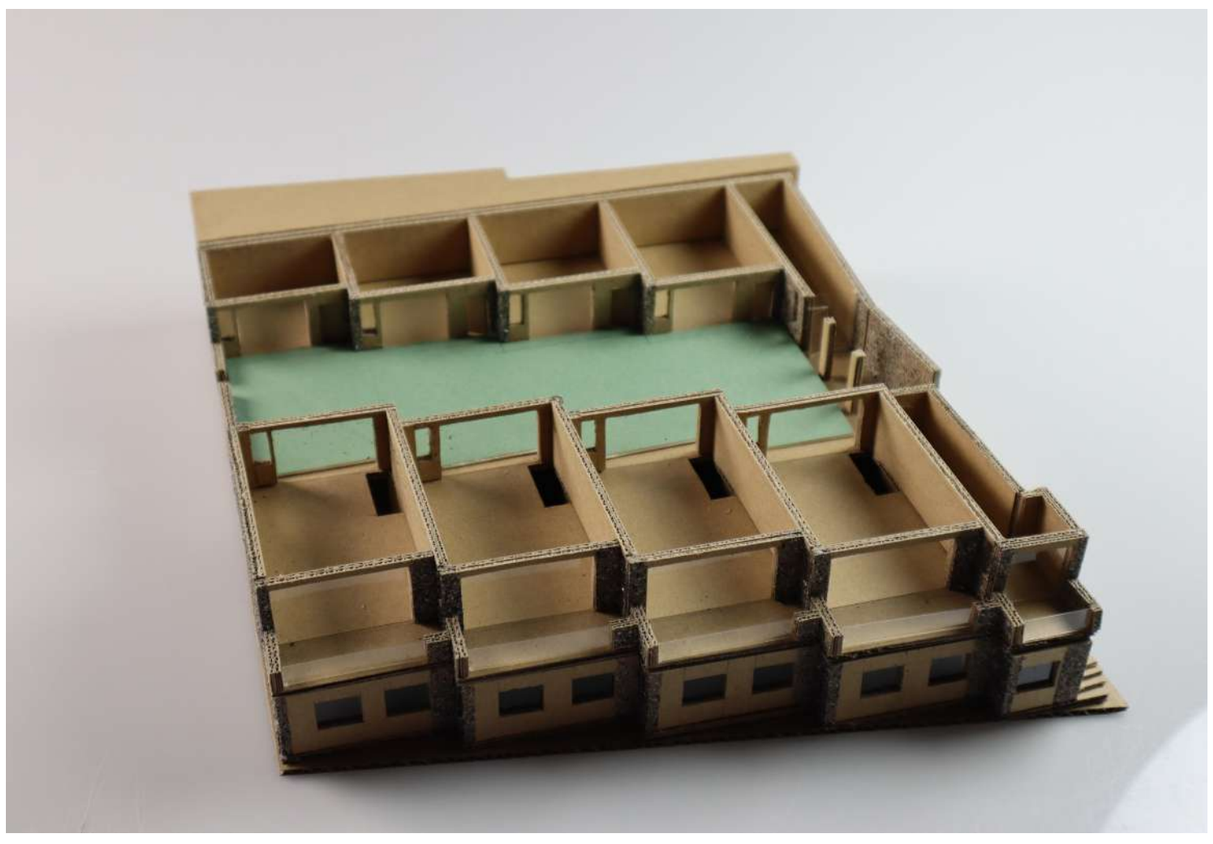
Proposal

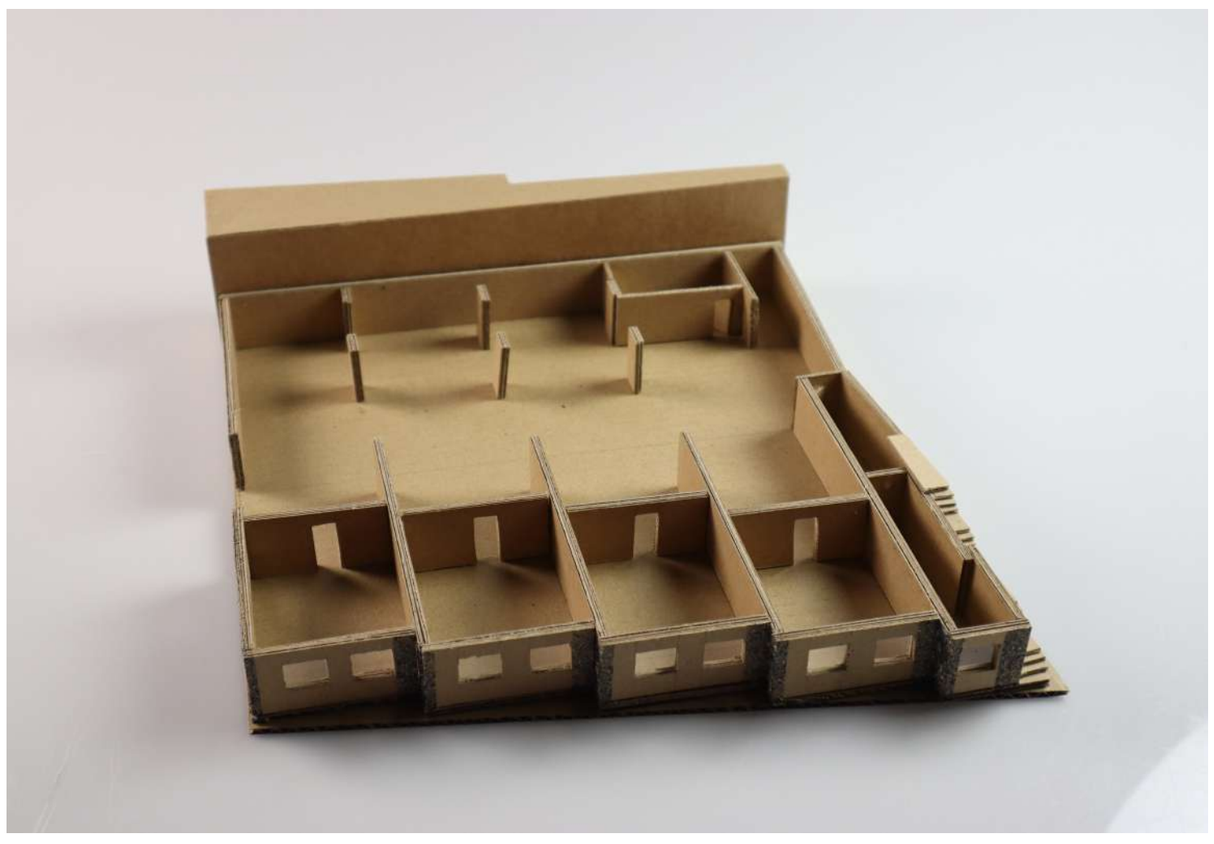


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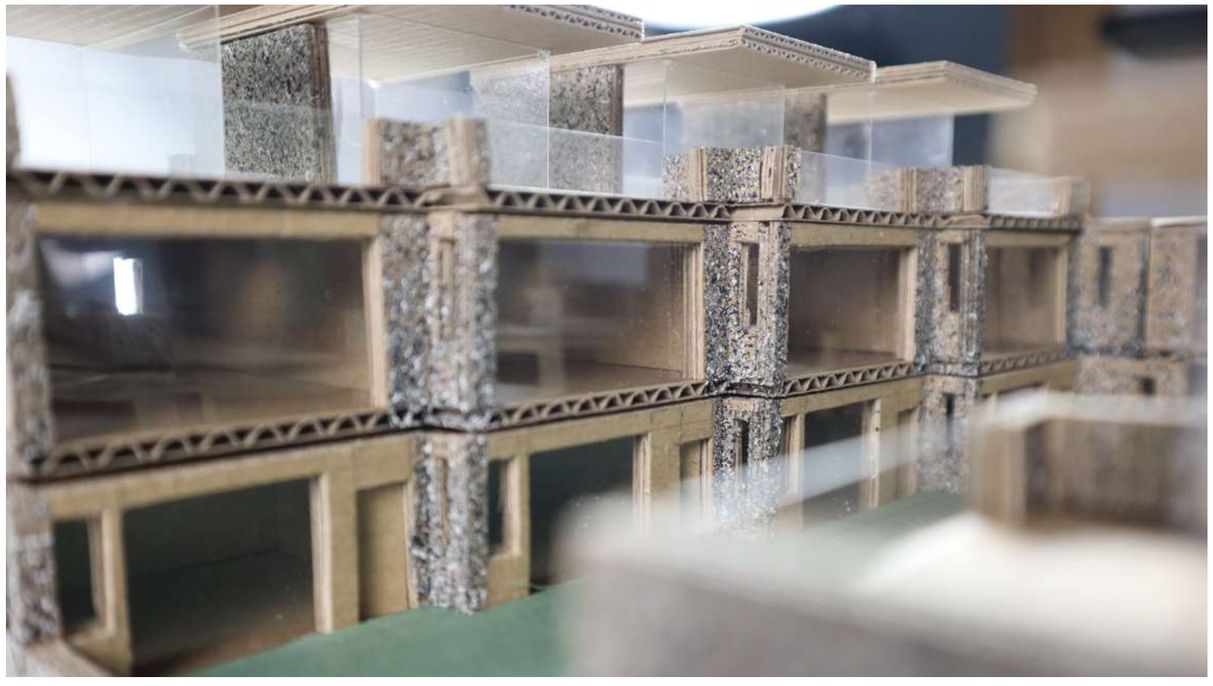


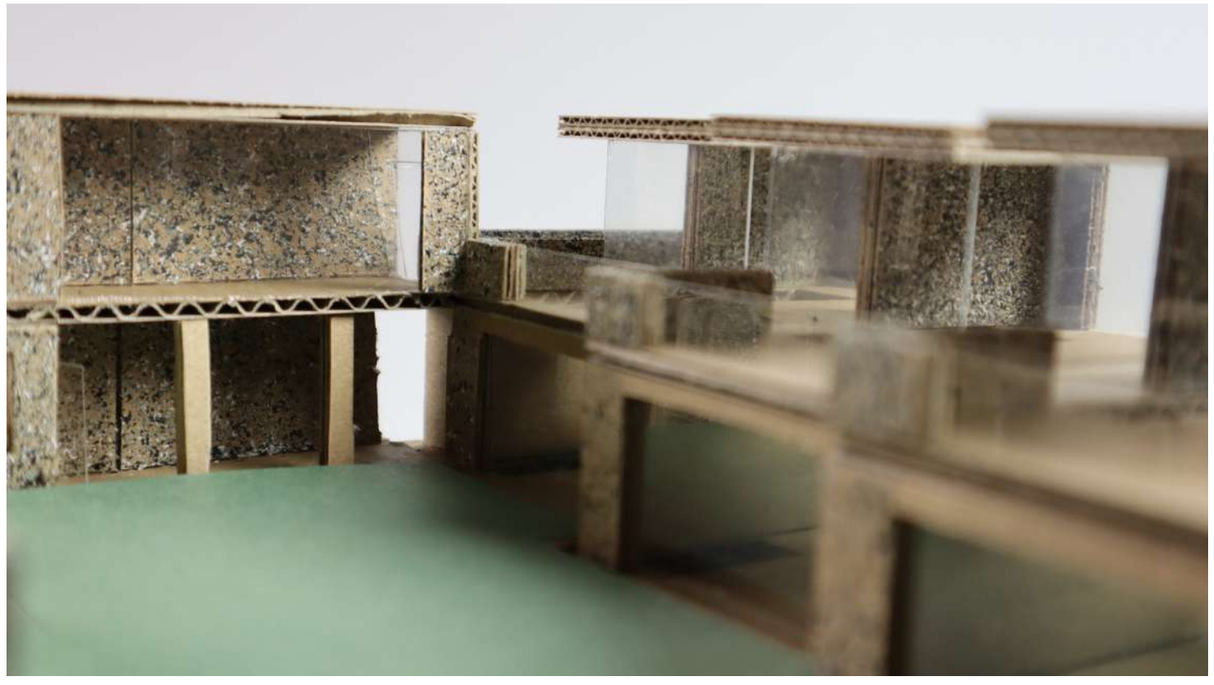




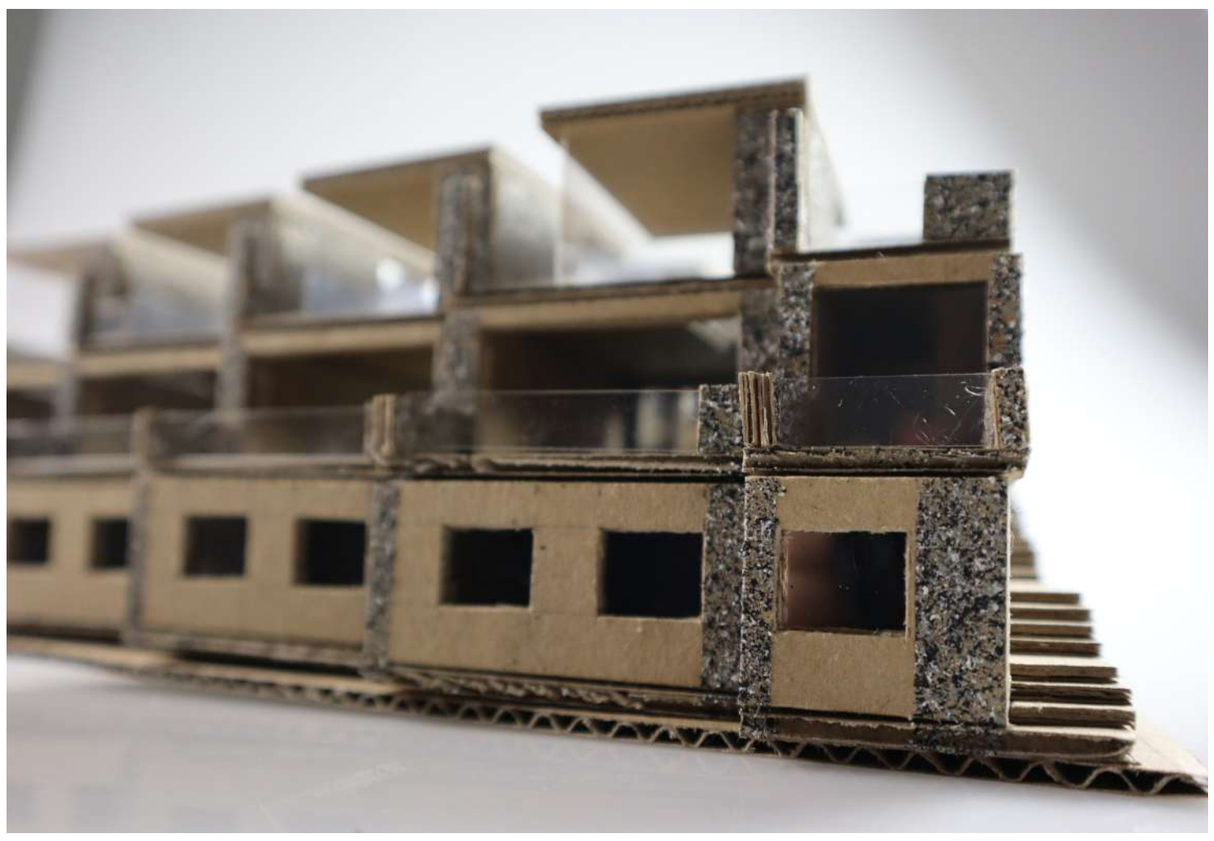


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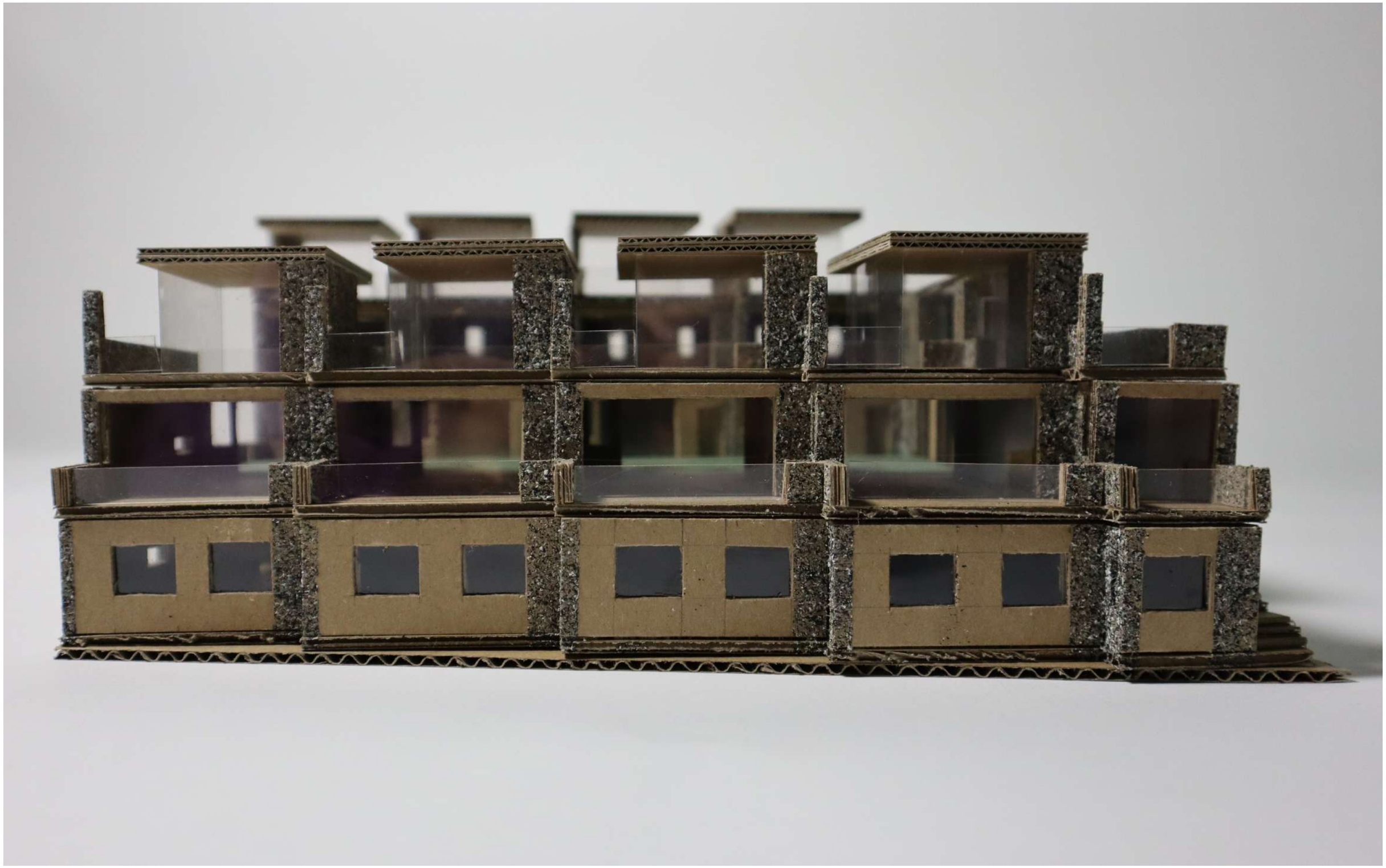








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