



# THE GREAT INFILL

The Great Infill reimagines Canterbury's future through inward growth rather than outward expansion, transforming overlooked and underused spaces within the city centre into opportunities for sustainable urban living. Rather than a series of isolated architectural interventions, the project establishes a framework for the Eco-Densification movement through low rise, high density live/work housing, integrated ecology, and material reuse.

Operating across Canterbury's city centre, The Great Infill introduces a network of interventions that reconnect fragmented urban spaces, improve the public realm, and reinforce the role of the city centre as a place of living and working. Public gardens, communal courtyards, terraces, and green spaces are embedded throughout the strategy, integrating ecology directly into the urban fabric and encourage a more localised way of life.

The project focuses on Watling Street as a test site for how these principles can be realised architecturally and materially. Drawing from the surrounding grain, rhythms, and movement of the city, a four storey live/work prototype is developed as a model for future infill housing. Designed around adaptability, the proposal explores four potential live/work arrangements, focusing in detail on one dwelling occupied by a family running an architectural practice.

At the centre of the design is a solid masonry service wall constructed from blocks made using reclaimed construction waste sourced directly from the site. This wall forms the structural and organisational backbone of the building, containing the stairs, storage, entrances, and bathroom facilities. Timber beams act as the secondary structure, spanning from the wall to create flexible internal spaces capable of adapting over time.

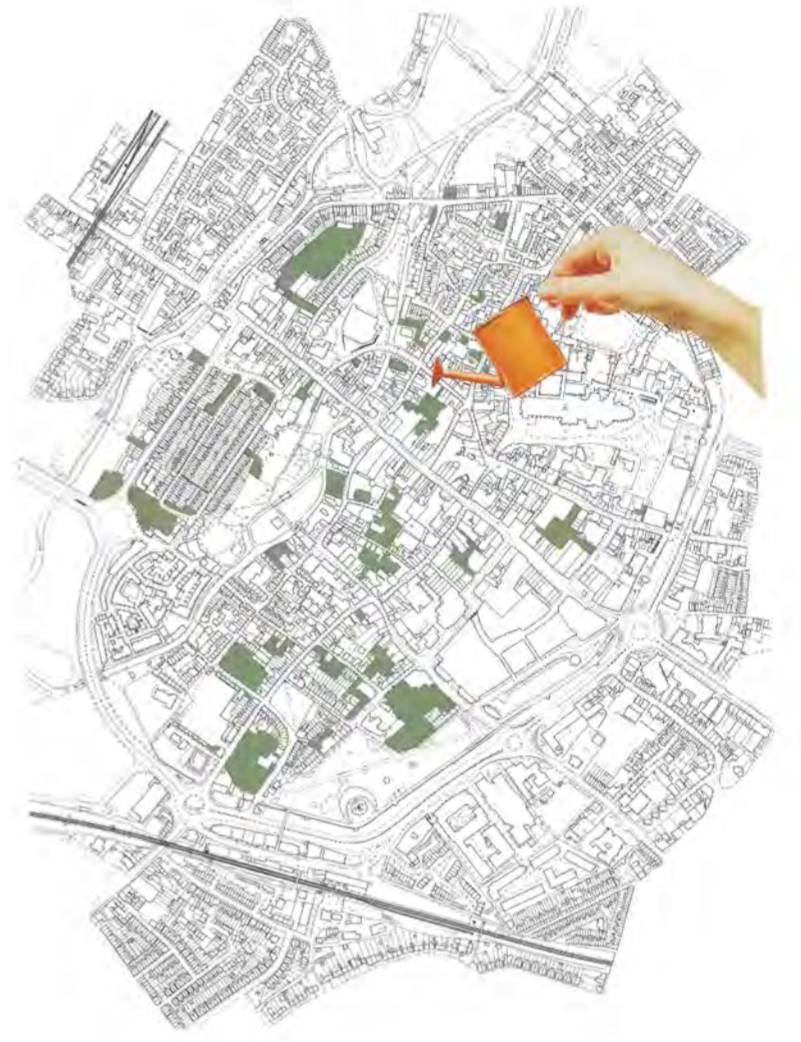
Through this approach, the project rethinks waste not as something discarded, but as a material resource embedded within the architecture itself.

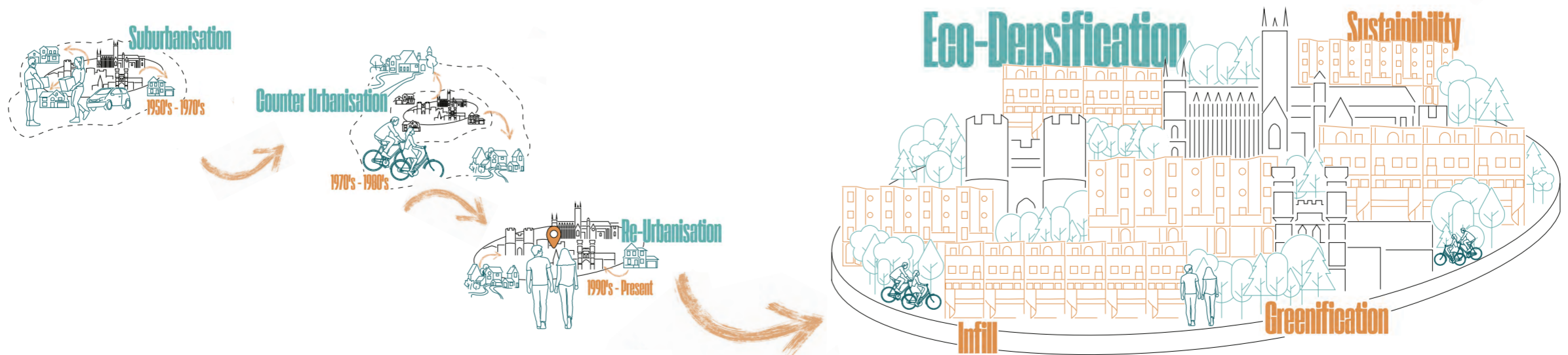
The dwelling is arranged across three floors, with a connected workspace operating as an architectural office on the ground floor. While the workspace can function independently, within this proposal it remains linked to the house, reinforcing the relationship between domestic and working life. The first floor contains an open plan kitchen, dining, and living arrangement, with the living space centred around a double height volume and external terrace. Above, the second floor accommodates the main bedroom with an en-suite and mezzanine balcony overlooking the living space. The third floor contains two additional bedrooms, a family bathroom, and a roof terrace overlooking Dane John Gardens. A dual entrance system separates public and private functions, allowing the office and home to operate together while maintaining individual identities.

Materiality forms a key part of the environmental strategy. Construction waste blocks, coppiced timber cladding, and recycled asphalt are integrated throughout the proposal to reduce embodied carbon and support local material economies. Recycled asphalt is reused within gabion structures that act as rainscreens and vertical gardens, linking waste reuse directly with the ecological ambitions of the scheme.

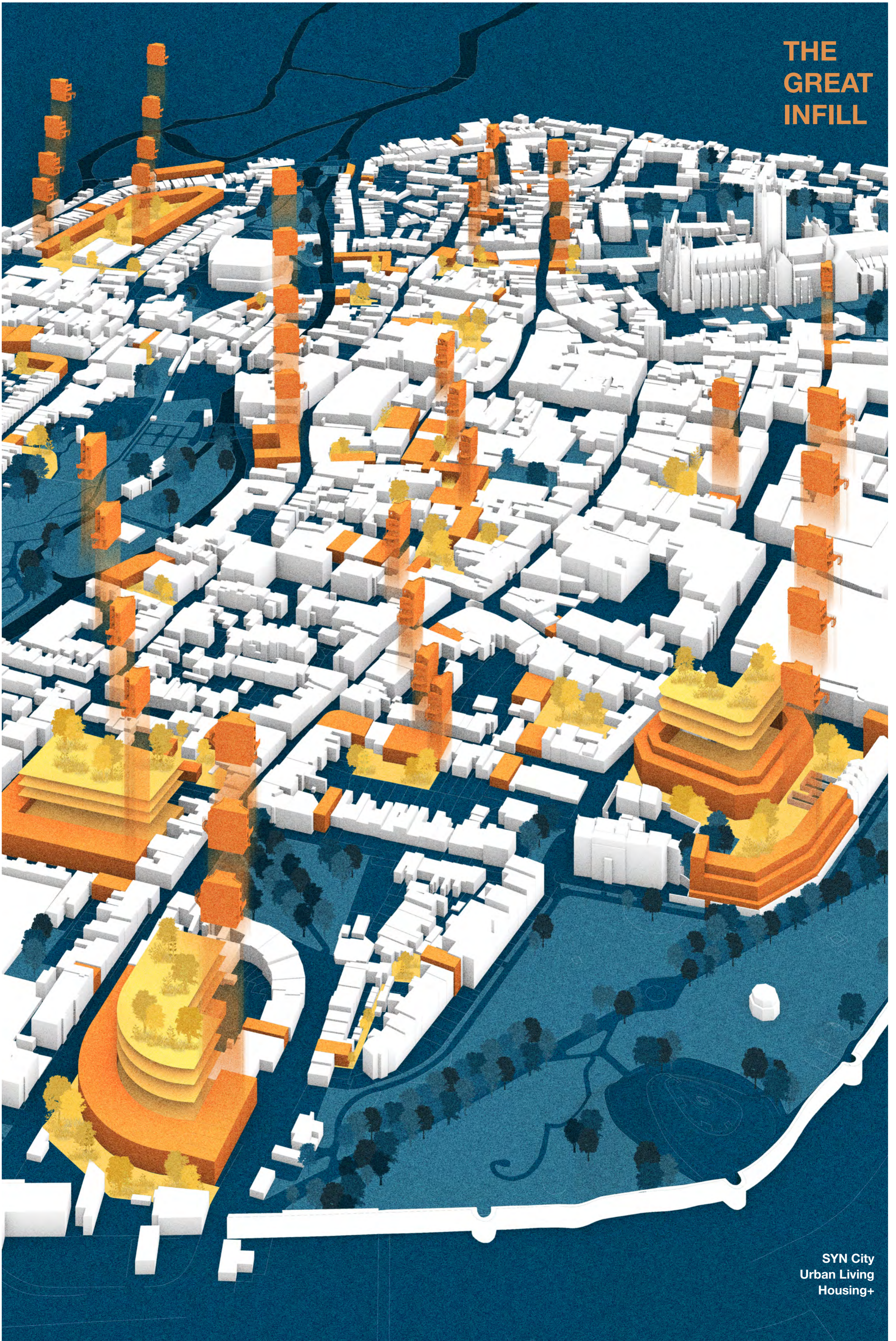
The Great Infill positions architecture as part of a wider urban and environmental system. Through adaptable live/work housing, greenification, and the reuse of construction waste, the project proposes a framework for the Eco-Densification movement, demonstrating how Canterbury can grow sustainably from within while reinforcing the city centre as a place for living, working, and ecological urban growth.

JACK CIRKET



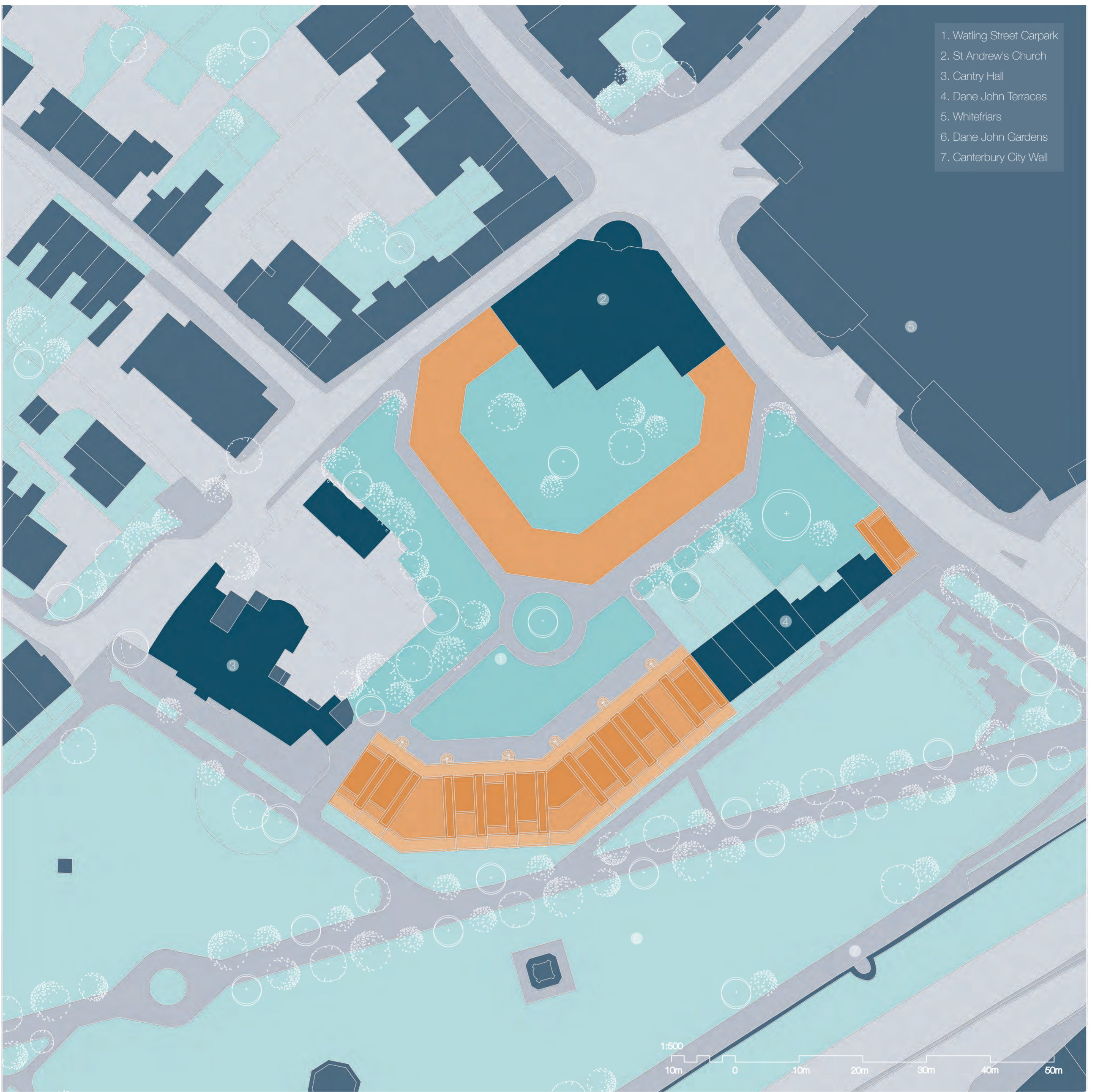


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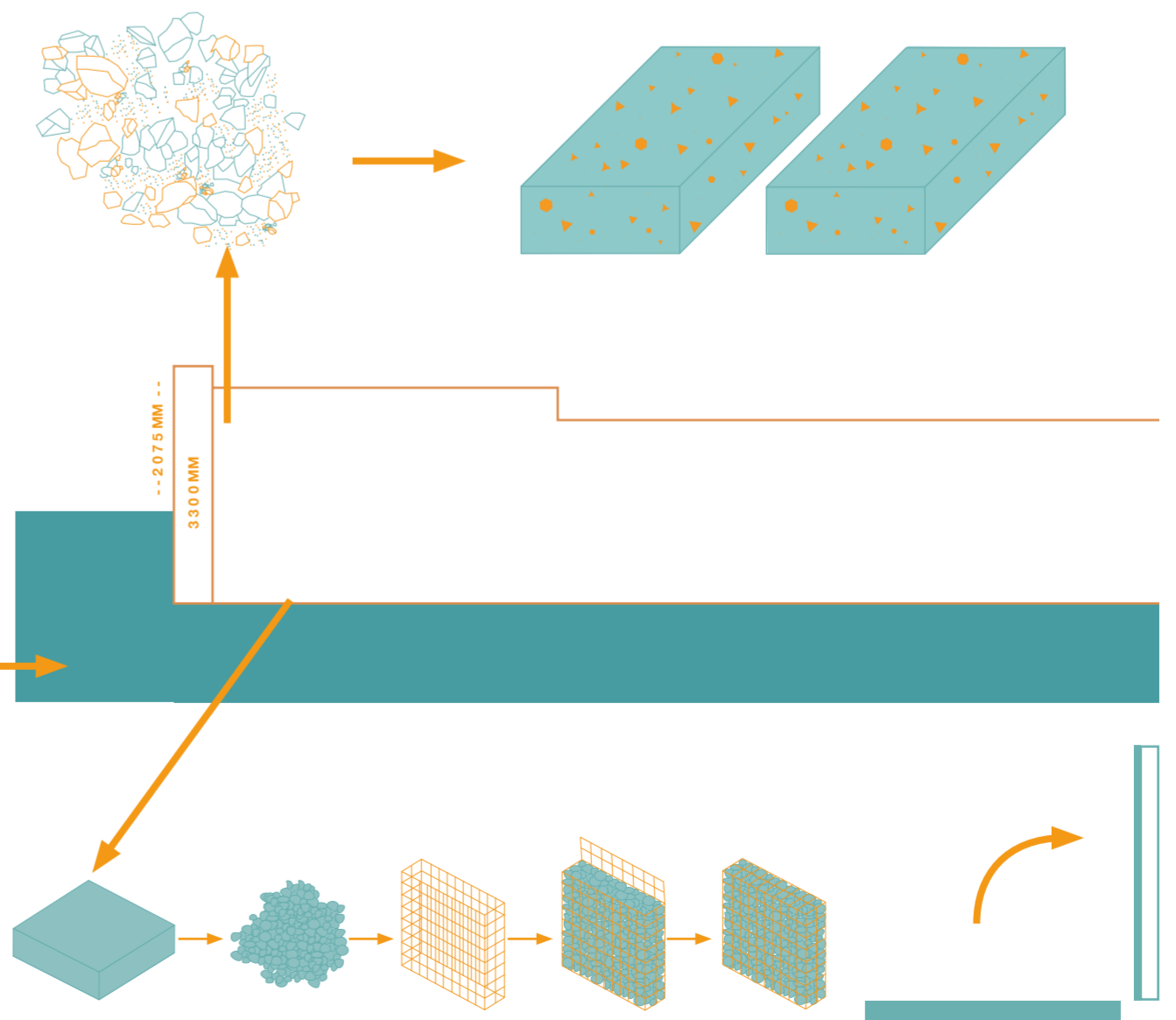




**SITE PLAN // 1.500**



**SITE CONDITIONS**

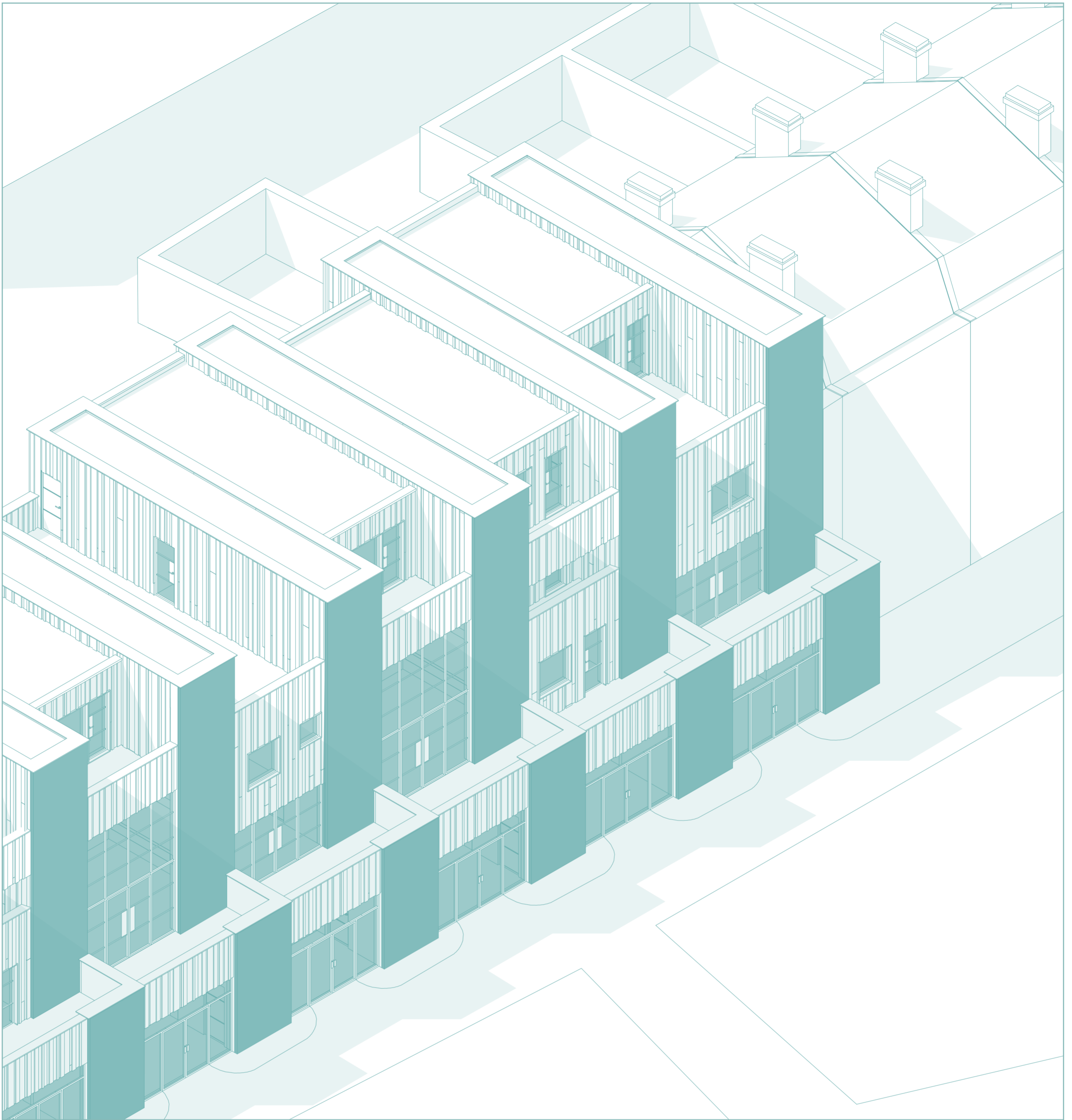




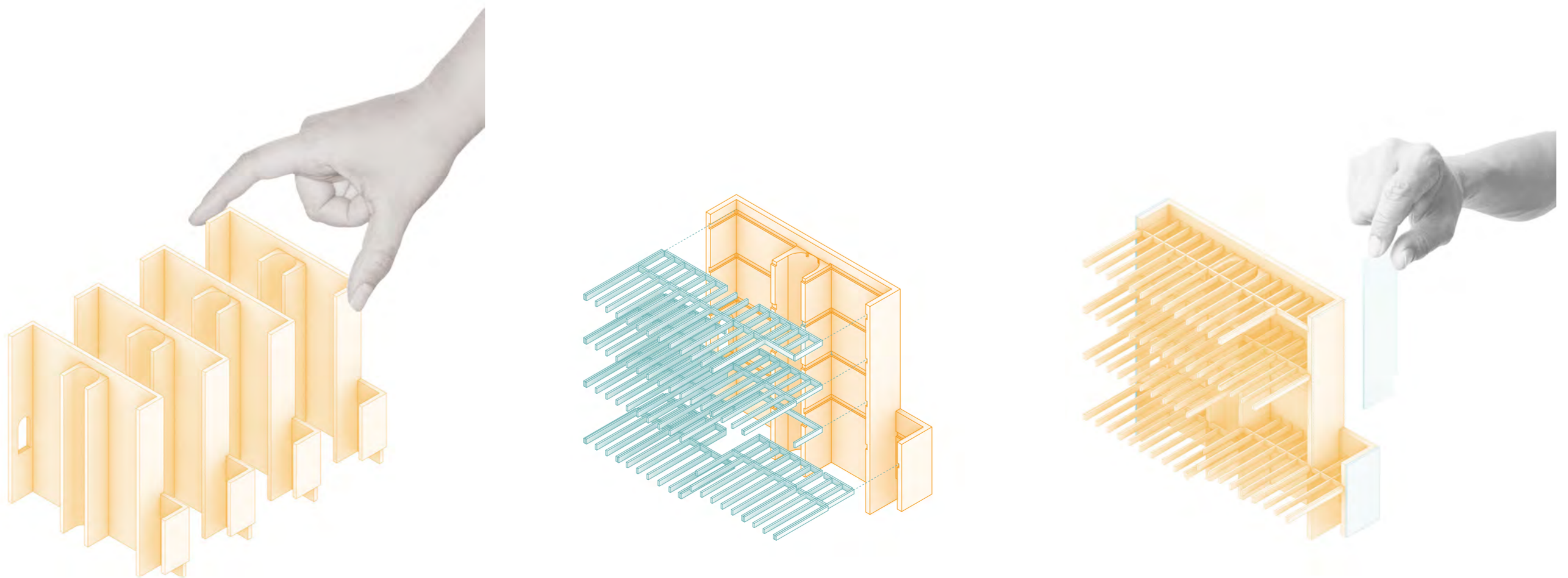
**SITE ISOMETRIC**



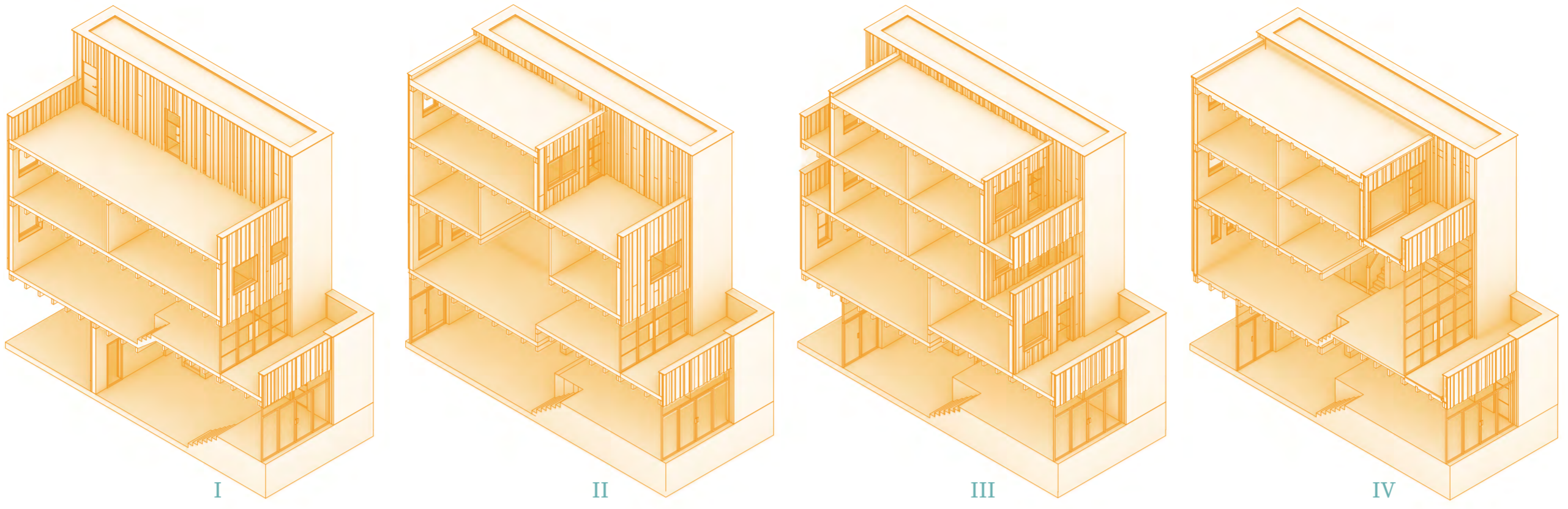
**ARCHITECTURE / ECOLOGY / PEOPLE**



**NORTH ISOMETRIC**



**CONSTRUCTION DIAGRAMS**



## HOUSE TYPES



SOUTH ISOMETRIC

## HOUSE I - 2 BED

RESIDENTIAL SPACE - 108 M<sup>2</sup>

OUTSIDE SPACE - 65 M<sup>2</sup>

WORK SPACE - 49 M<sup>2</sup>

2 double bedrooms with a whole floor roof terrace with the potential to expand over the years.

A smaller work space connected to the house acts as a crafts workshop for the couple in the house.



## HOUSE II - 3 BED

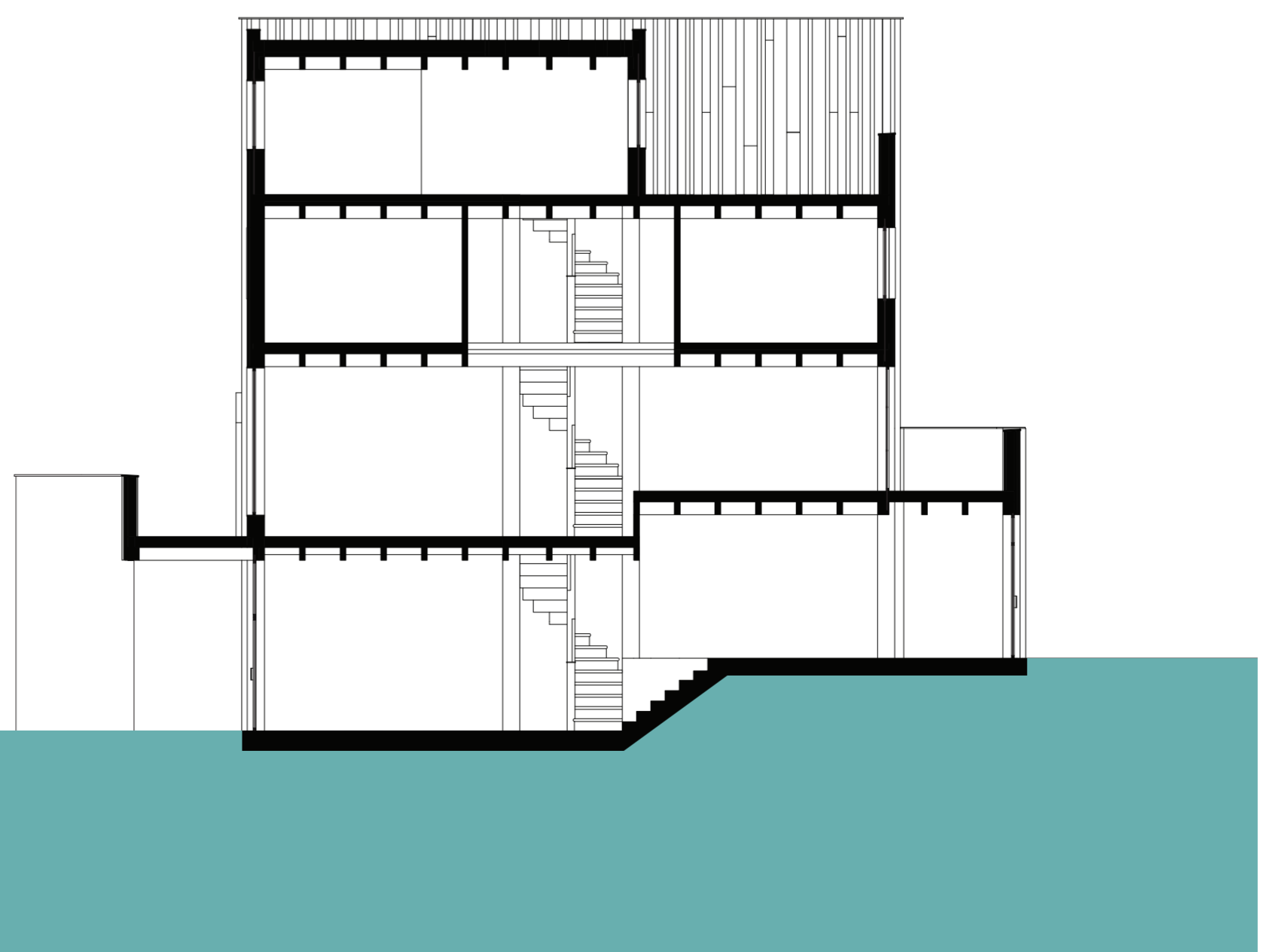
RESIDENTIAL SPACE - 138 M<sup>2</sup>

OUTSIDE SPACE - 25 M<sup>2</sup>

WORK SPACE - 65 M<sup>2</sup>

2 double bedrooms with a master suite on the top floor with an ensuite and large roof terrace. This features a double height space above the living area.

The connected work space is a coffee shop run by the family, providing Dame John a place to stop for drink and something to eat.



### HOUSE III - 5 BED HMO

RESIDENTIAL SPACE - 129 M<sup>2</sup>

OUTSIDE SPACE - 37 M<sup>2</sup>

WORK SPACE - 57 M<sup>2</sup>

5 double bedrooms all with en-suites and private balconies with a shared living space. Perfect for working professionals or students.

The separate work space is a book shop run by one of the occupants of the house.



### HOUSE IV - 3 BED

RESIDENTIAL SPACE - 132.5 M<sup>2</sup>

OUTSIDE SPACE - 28 M<sup>2</sup>

WORK SPACE - 54 M<sup>2</sup>

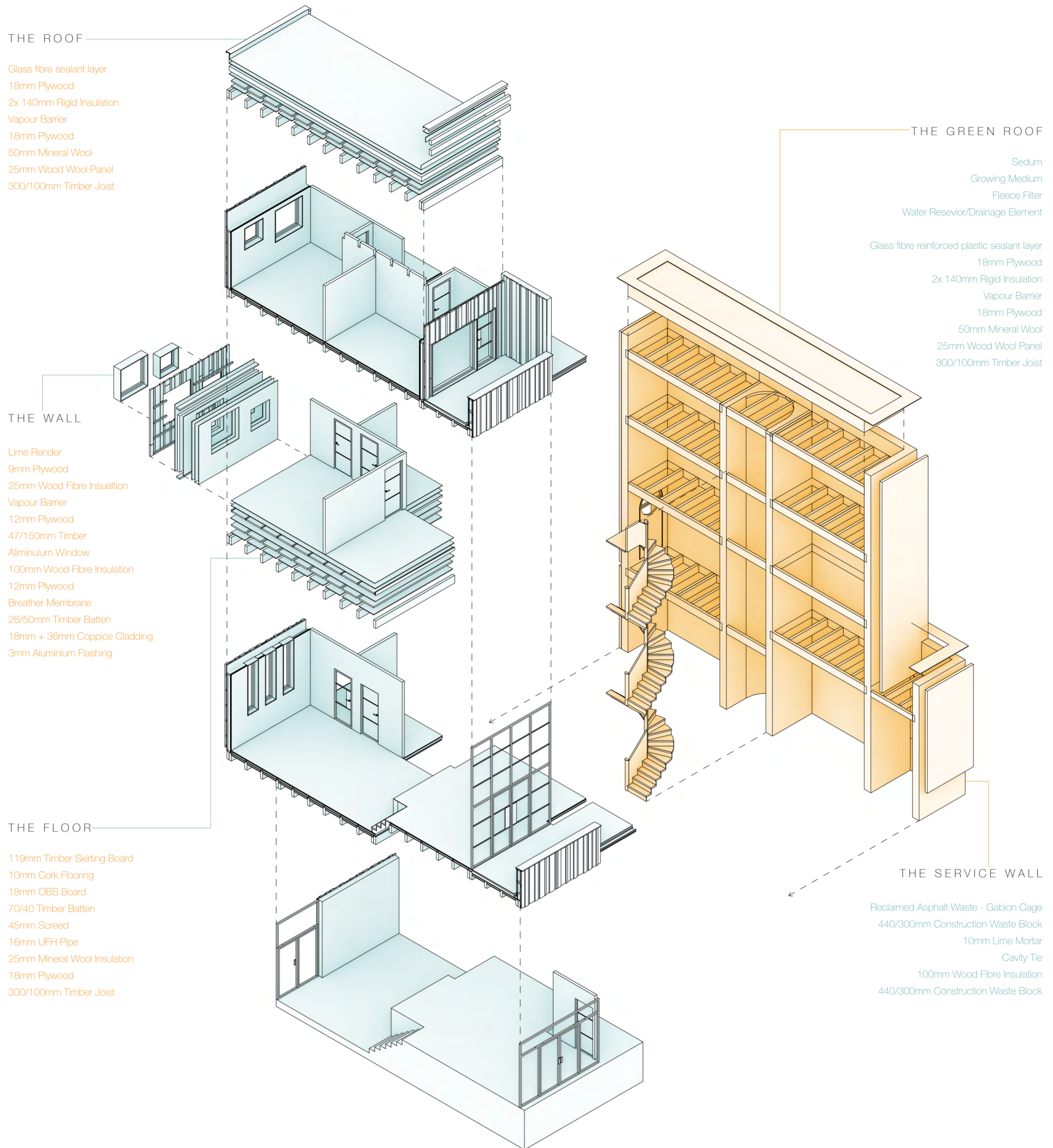
2 double bedrooms with a family bathroom - one with a roof terrace for the parents and a first floor large double with en-suite for the grandparents. The house features a double height space offering a luxury living area with views of Dame John gardens.

The connected workshop spaces acts as an architectural practice office that both the parents work in, providing a flexible work/live arrange to help balance their life with their little child.





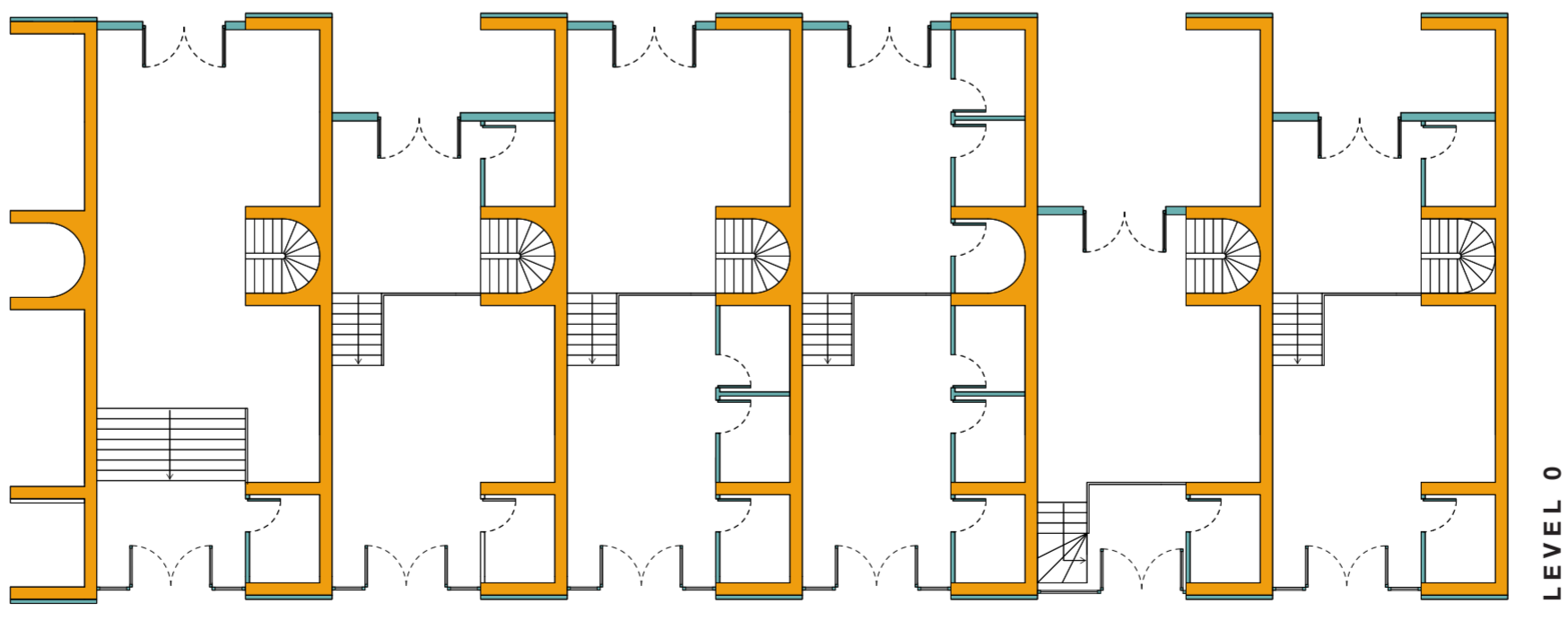
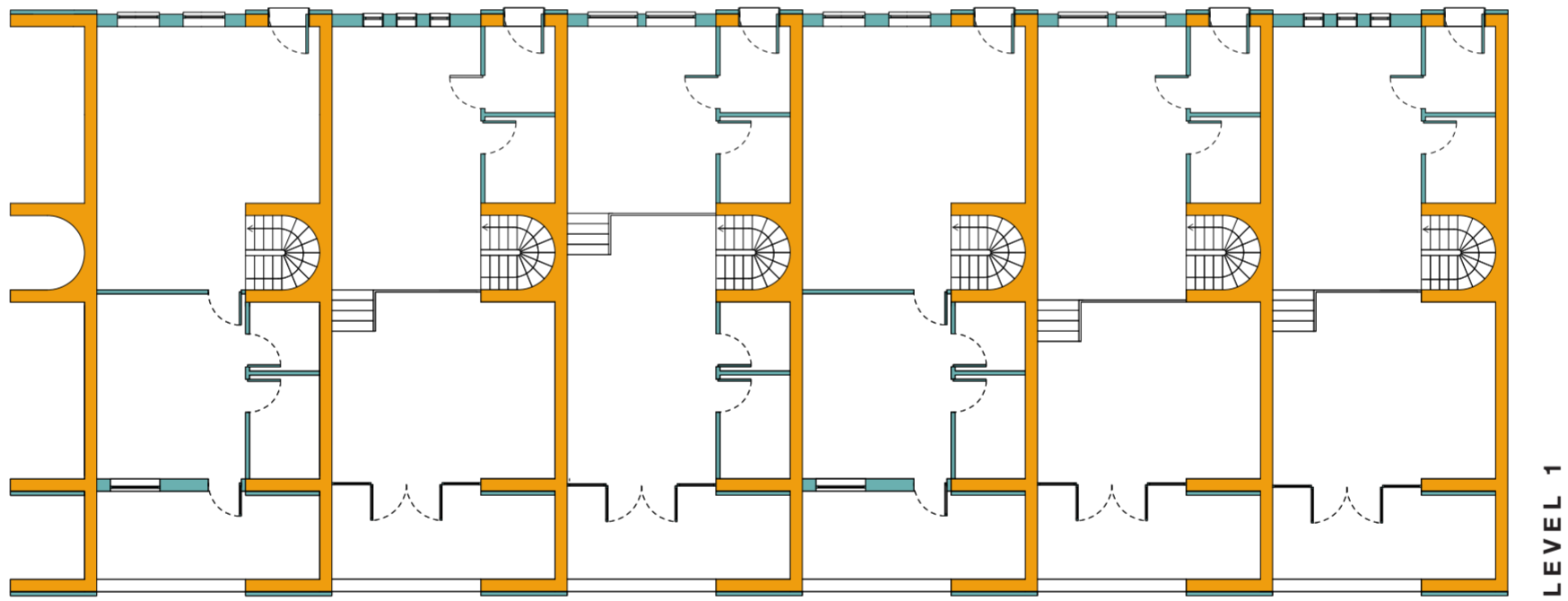
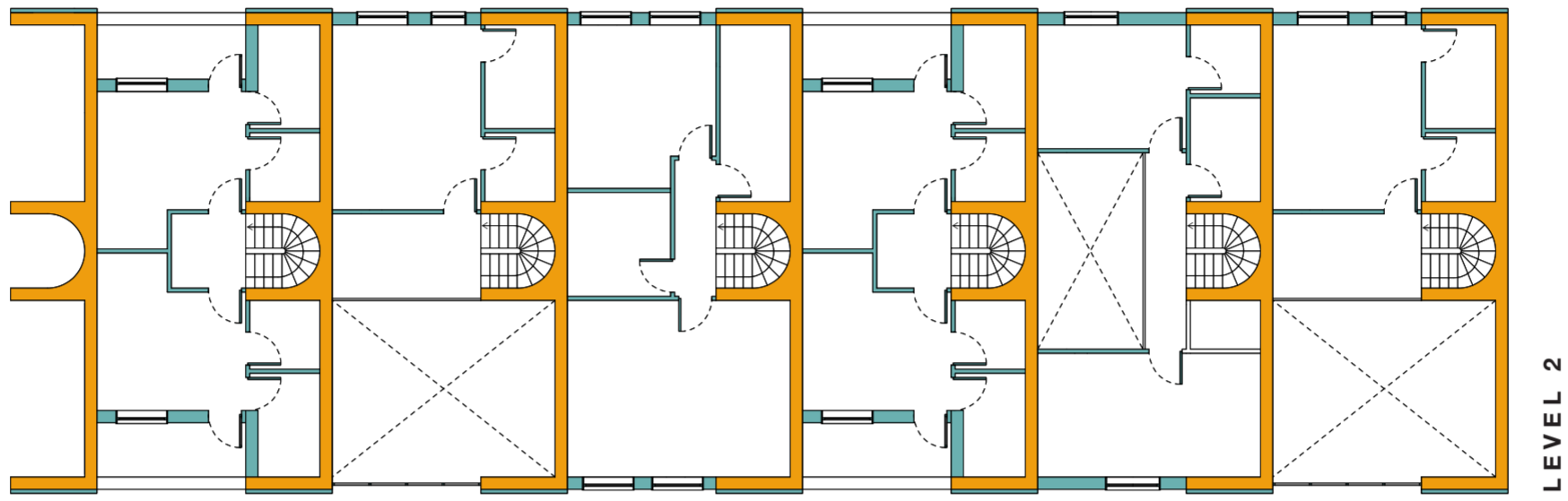
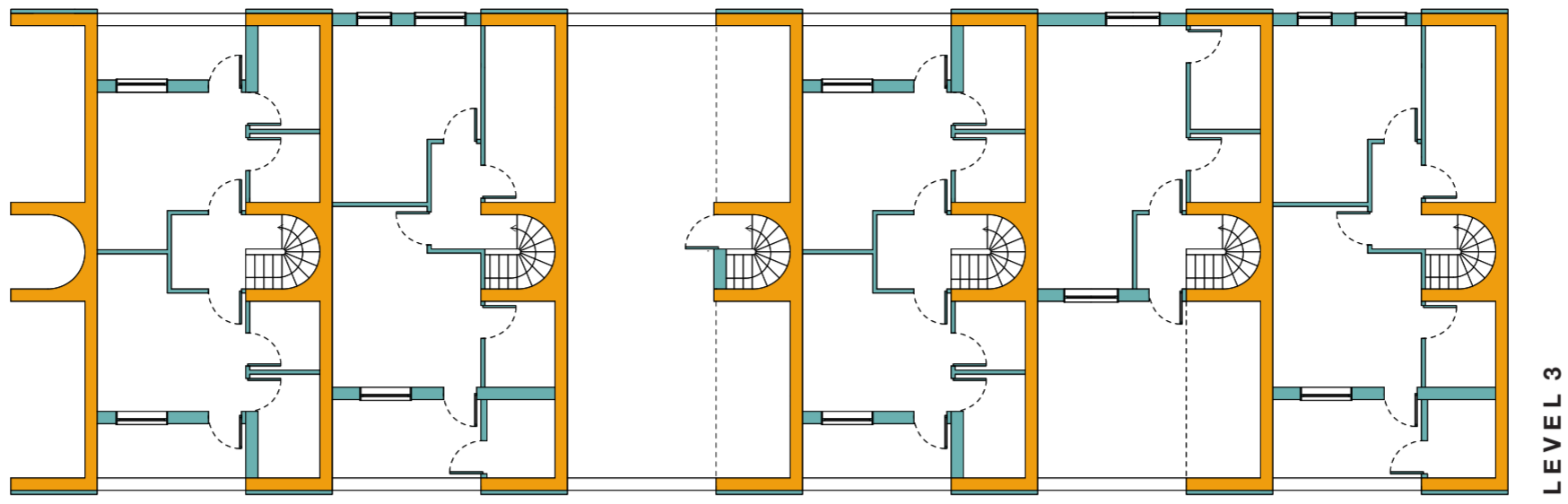
PERSPECTIVE SECTION

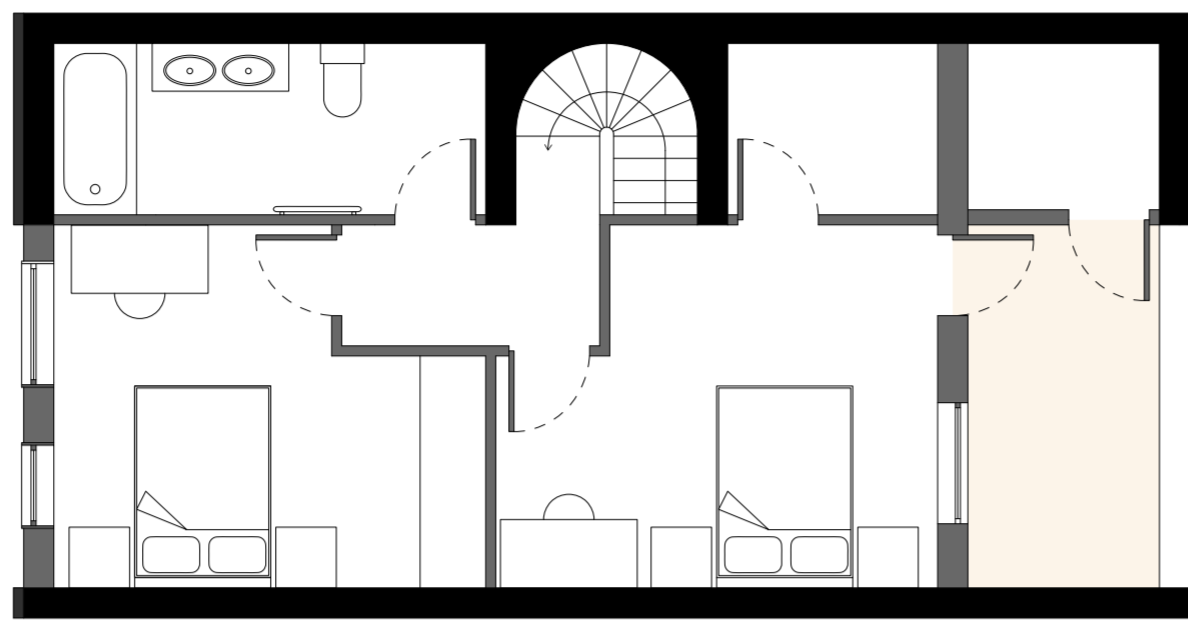


**EXPLODED ISOMETRIC**



**1.50 CONSTRUCTION MODEL**

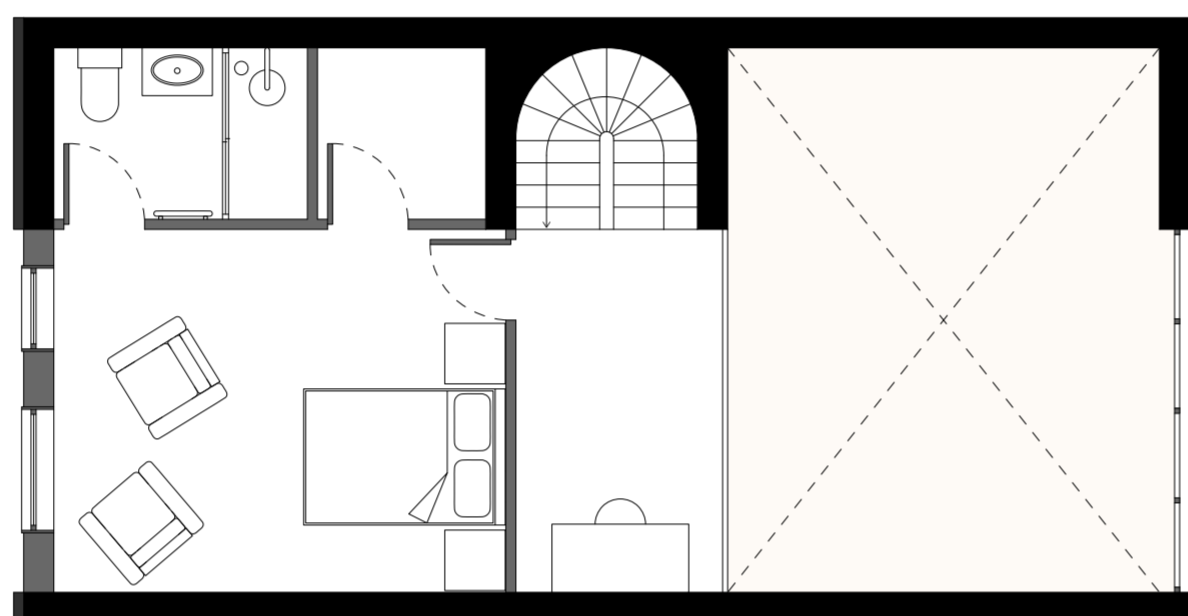




**FLOOR 3**

INSIDE SPACE - 44 M<sup>2</sup>  
OUTSIDE SPACE - 10.2 M<sup>2</sup>

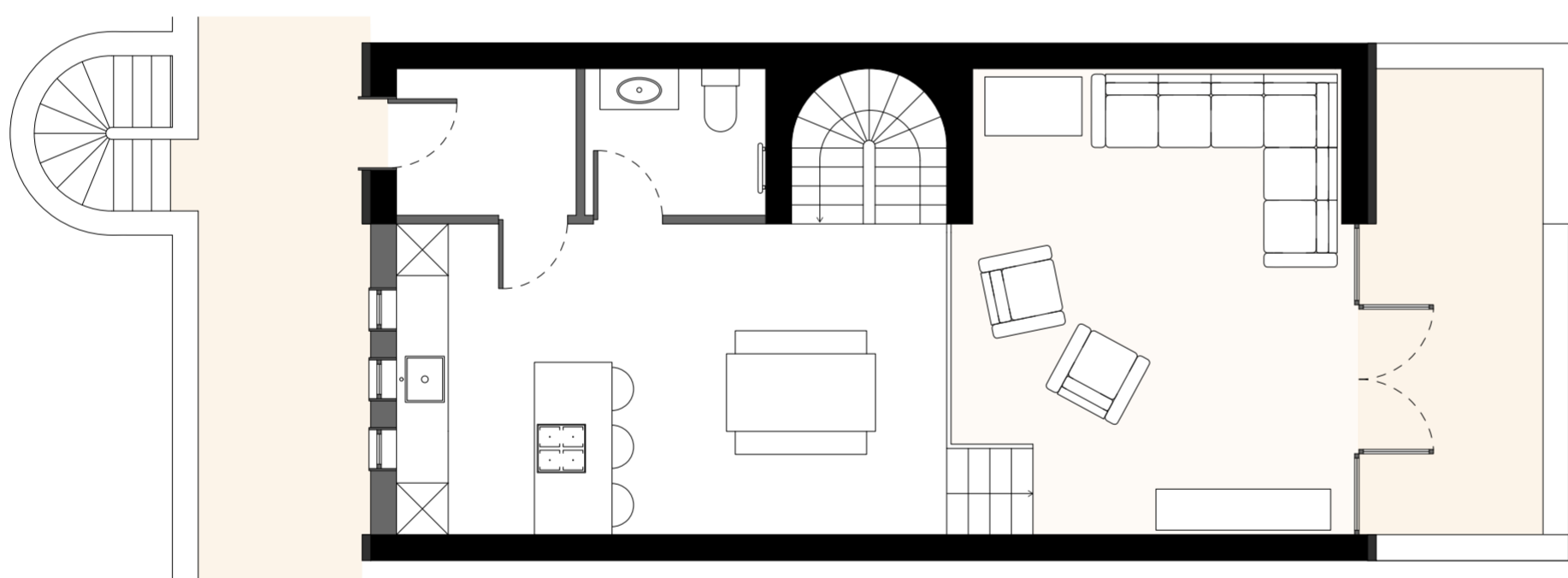
- 2 Double bedrooms
- Family Bathroom
- Roof Terrace



**FLOOR 2**

INSIDE SPACE - 36 M<sup>2</sup>

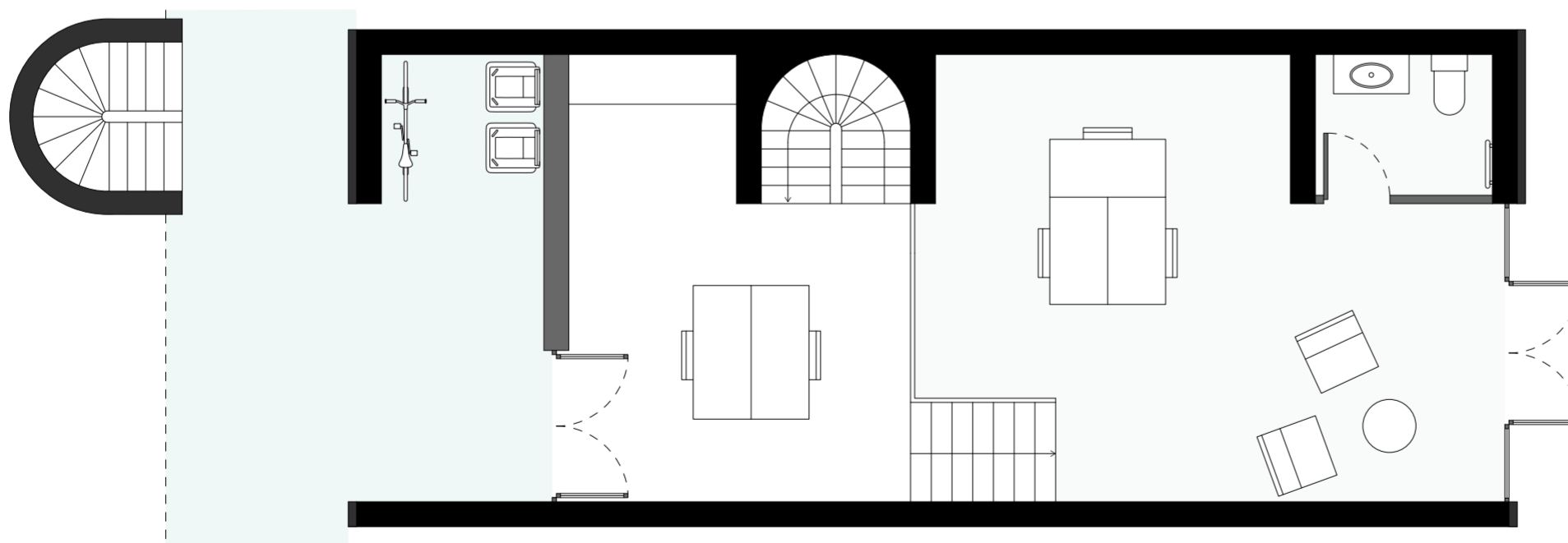
- Master Bedroom
- En-suite
- Mezzanine
- Double Height Space



**FLOOR 1**

INSIDE SPACE - 59 M<sup>2</sup>  
OUTSIDE SPACE - 10.4 M<sup>2</sup>

- Main Entrance
- Toilet
- Open Plan Kitchen/Dining Room
- Living Room
- Terrace



**FLOOR 0**

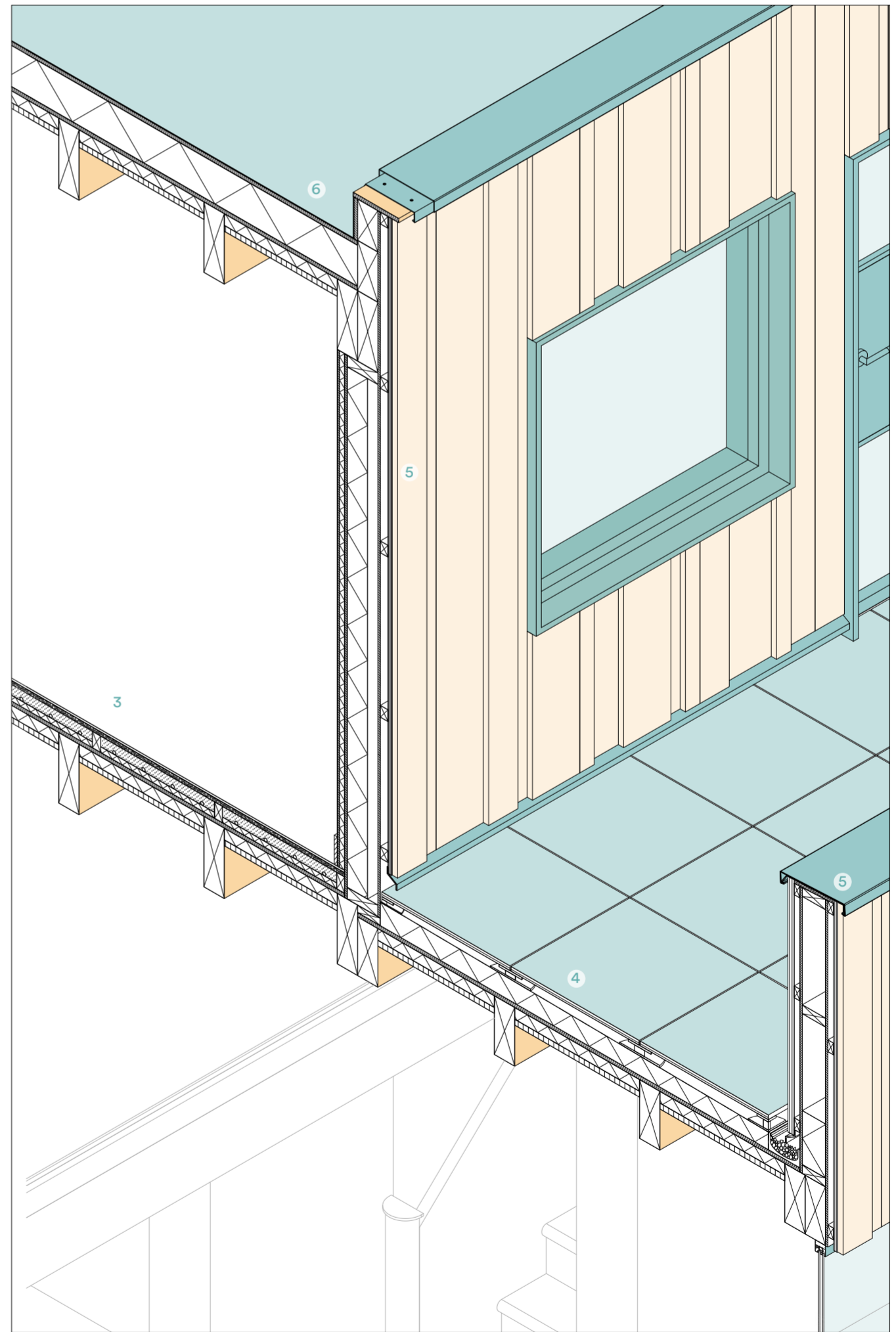
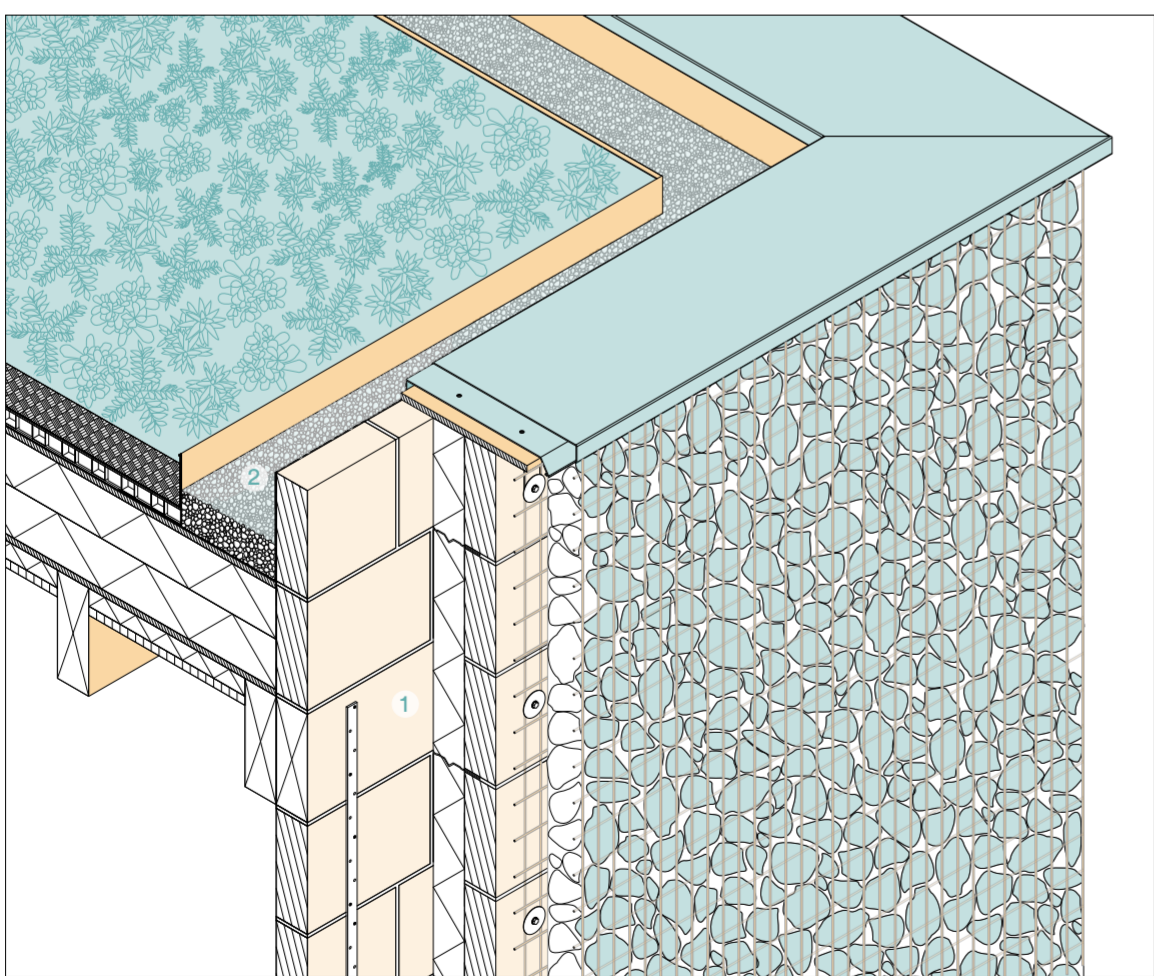
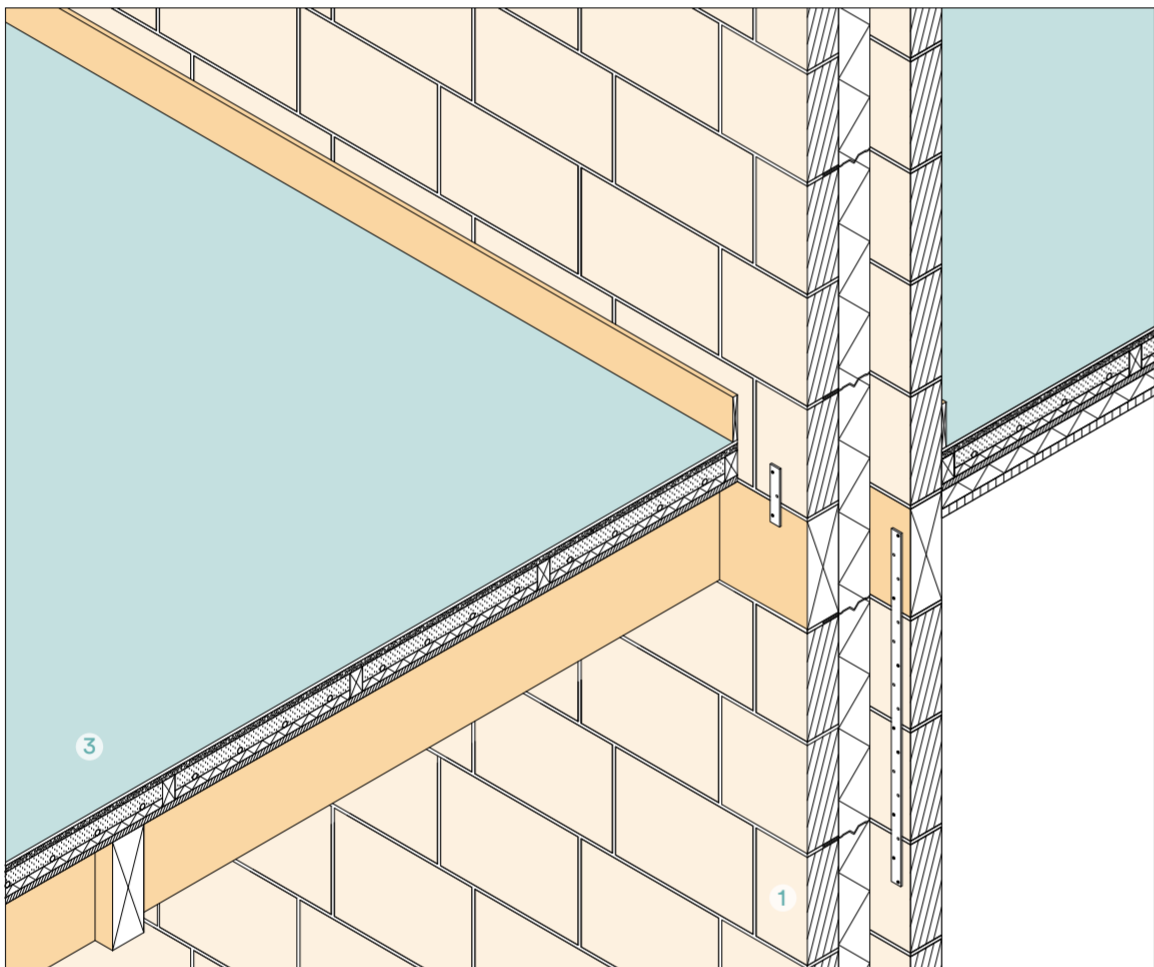
WORK SPACE - 54 M<sup>2</sup>  
OUTSIDE SPACE - 11.2 M<sup>2</sup>

- Office Space
- Toilet
- Kitchen
- Bin/Bike Storage



The construction waste blocks explore how discarded site material can be reintroduced into the building process as a low carbon structural component. Developed through a series of material tests and prototypes, the blocks combine reclaimed brick waste with earthenware clay to create an alternative to conventional masonry. The process investigates how local waste can be transformed into usable architecture, reducing landfill, limiting extraction, and supporting a more circular approach to construction.

### CONSTRUCTION WASTE BLOCKS



1 - MASONRY WALL

2 - GREEN ROOF

3 - FLOOR

4 - TERRACE

5 - TIMBER WALL

6 - FLAT ROOF

Aluminium Caping  
Reclaimed Asphalt Waste Gabion  
Construction Waste Block  
Lime Mortar  
Steel Restraint Strap  
Wood Fibre Insulation  
Timber Joist

Green Roof  
Glass fibre sealant layer  
Rigid Insulation  
Plywood  
Mineral Wool  
Wood Wool Panel  
Timber Joist

Cork Flooring  
OBS Board  
UFH in Screed  
Plywood  
Timber Joist  
Mineral Wool Insulation  
Wood Wool Panel

Tile  
DD Adjustable Pedestals  
Breather Membrane  
Rigid Insulation  
Mineral Wool Insulation  
Wood Wool Panel  
Timber Joist

Aluminium Caping  
Coppice Cladding  
Timber Batten  
Plywood  
Insulation  
Timber Joists  
Aluminium Window

Glass Fibre Sealant Layer  
Plywood  
Wood Fibre Insulation  
Plywood  
Mineral Wool Insulation  
Wood Wool Panel  
Timber Joist

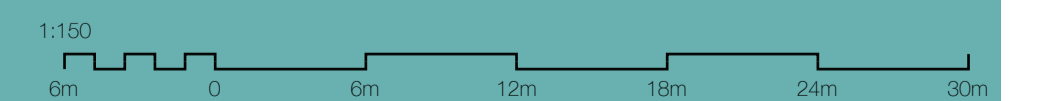
### REALISATION DETAILS



FRONT ELEVATION // 1.150



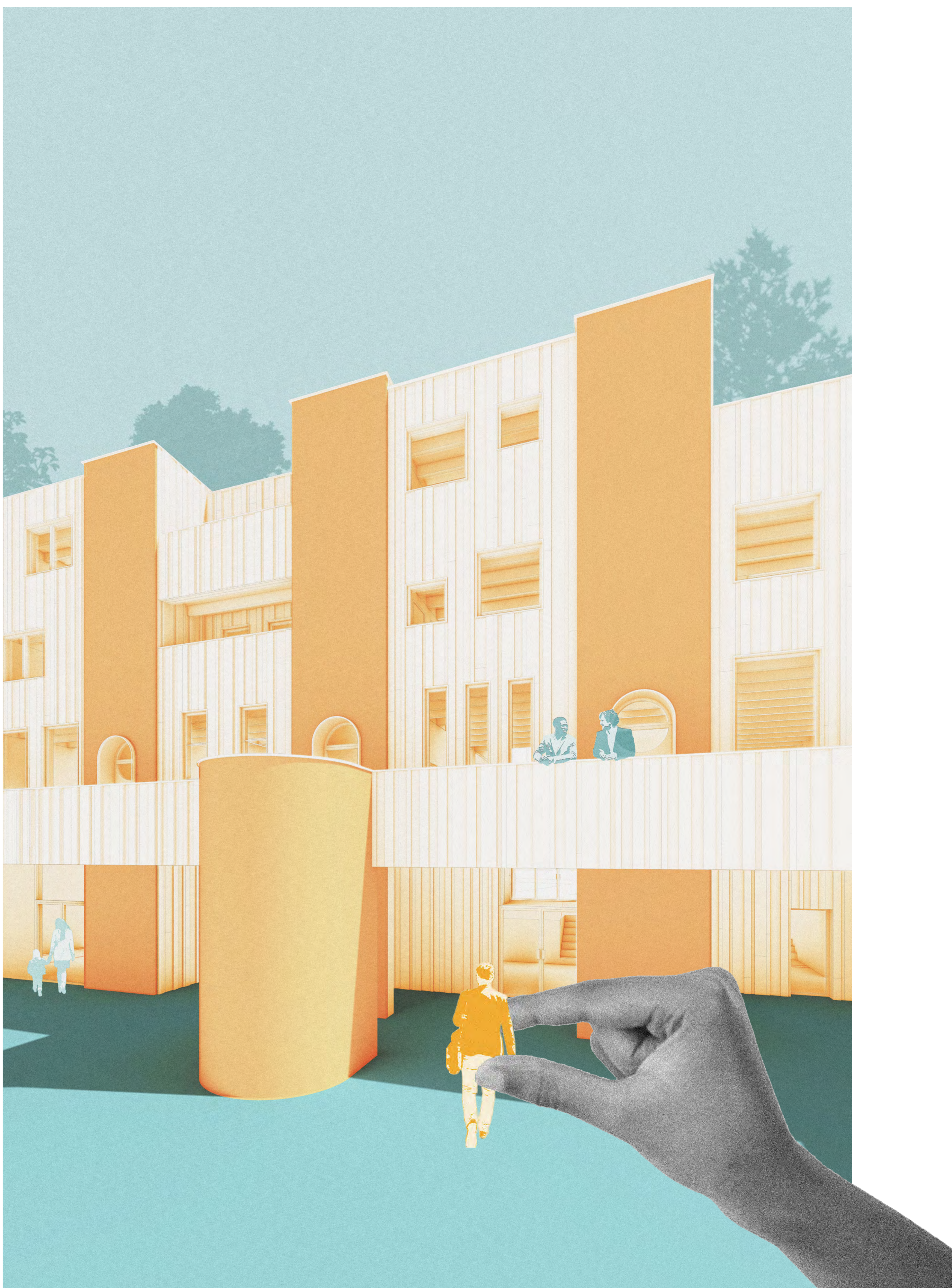
REAR ELEVATION // 1.150



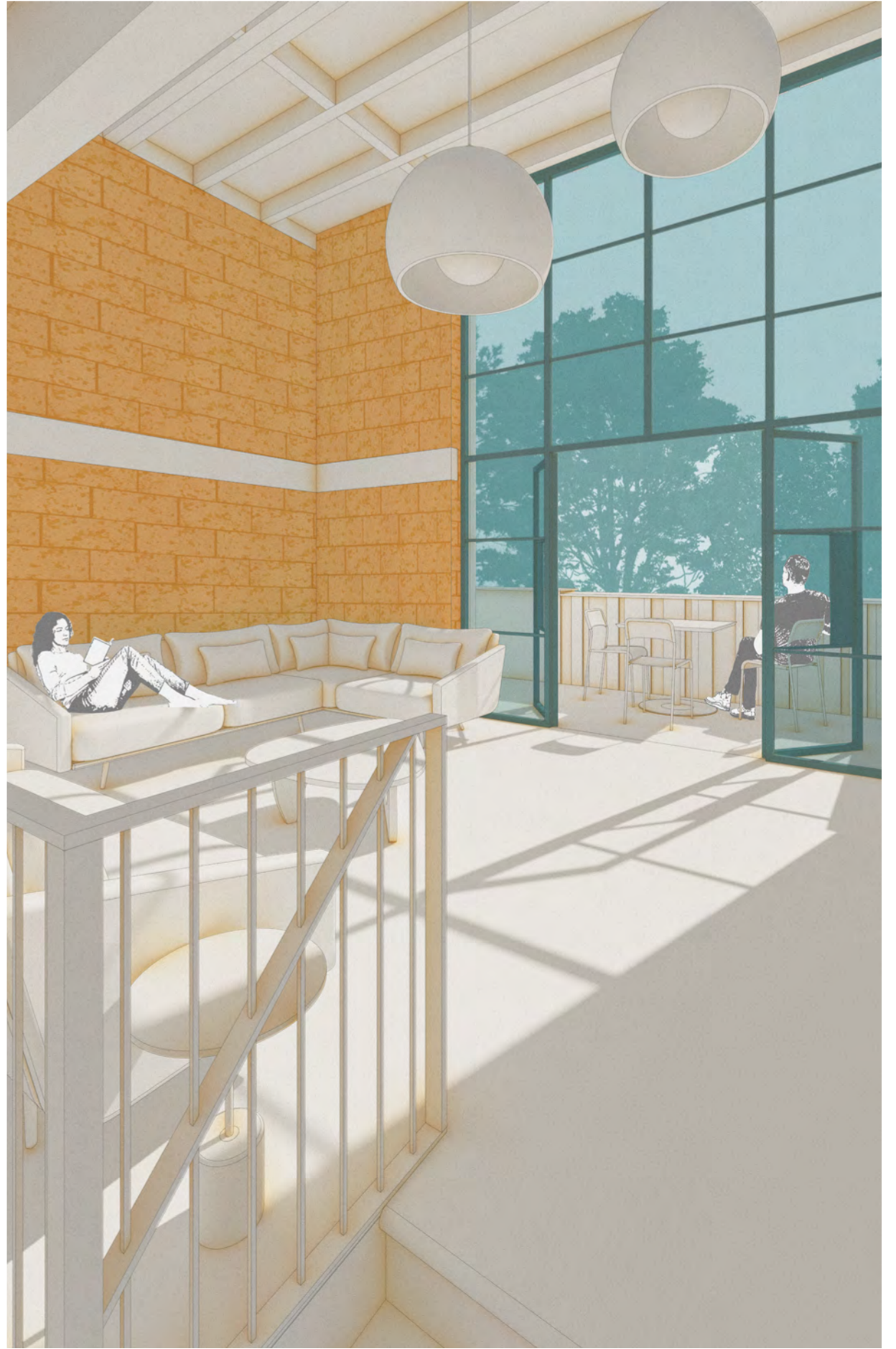








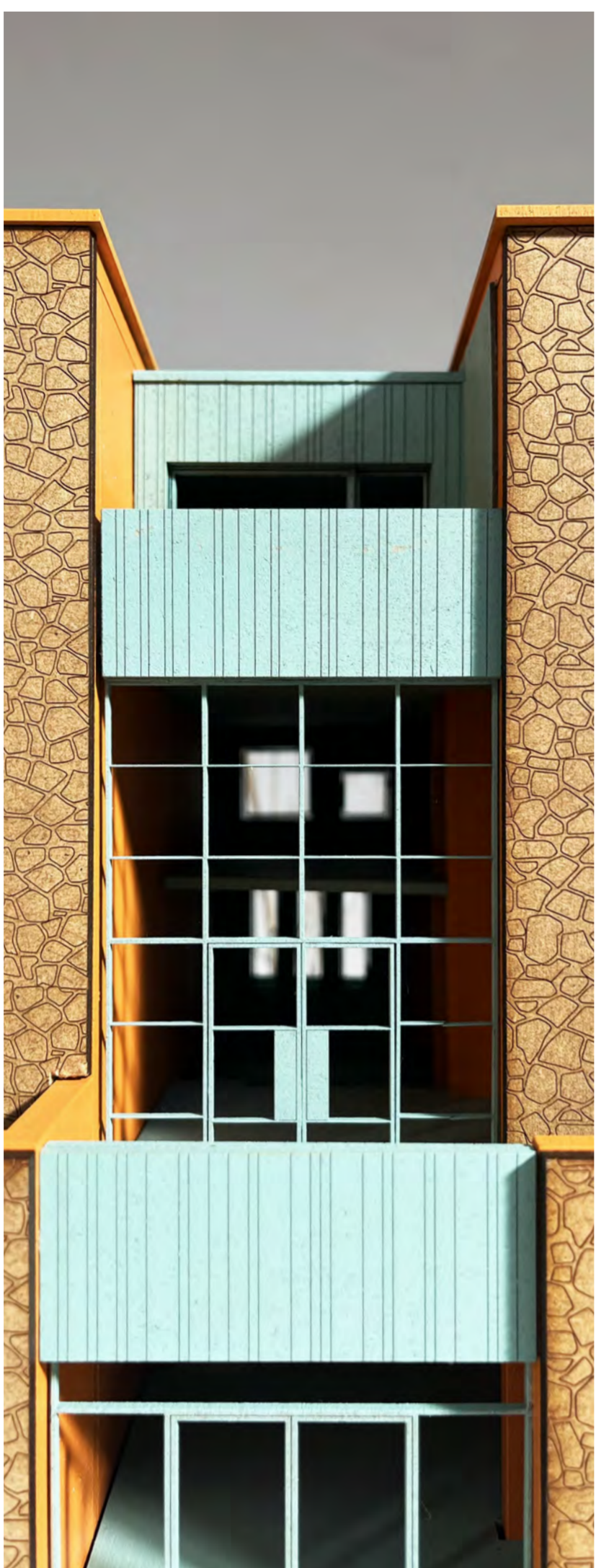








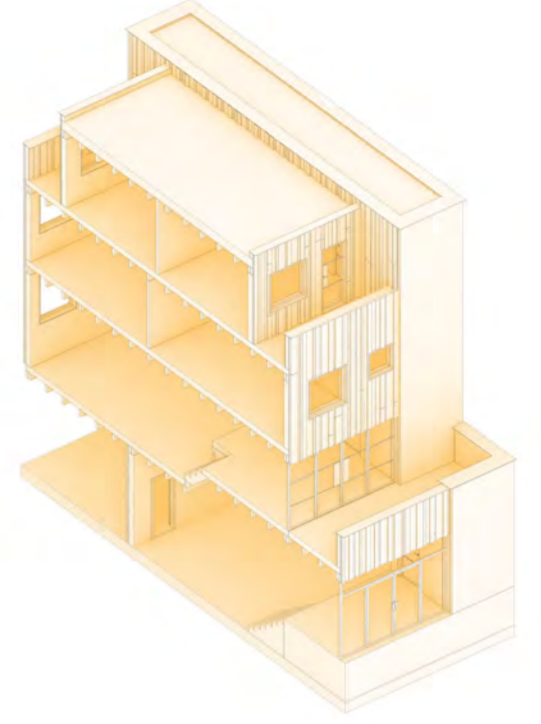
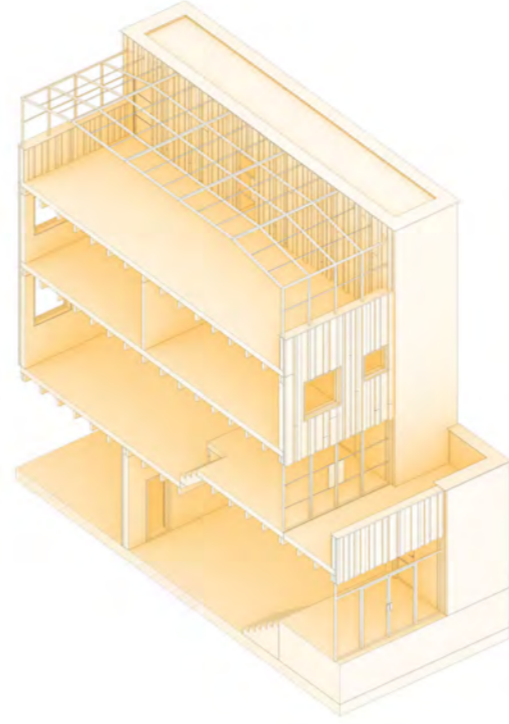
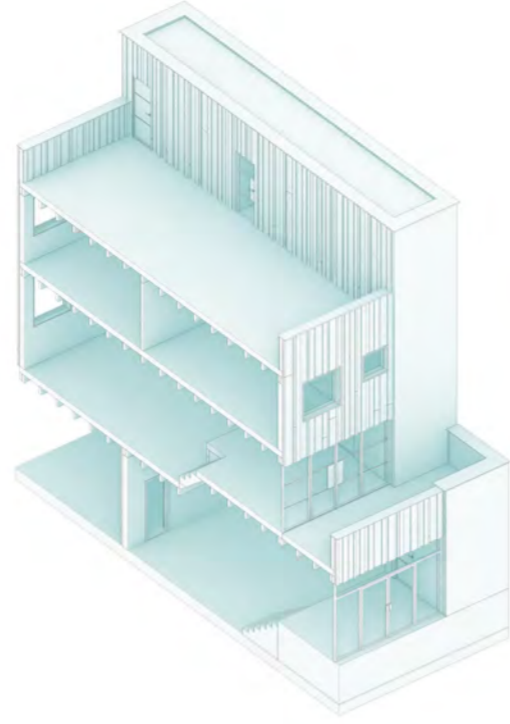




### HOUSE I

The roof terrace could be enclosed and converted into a conservatory or greenhouse garden, creating additional usable living space.

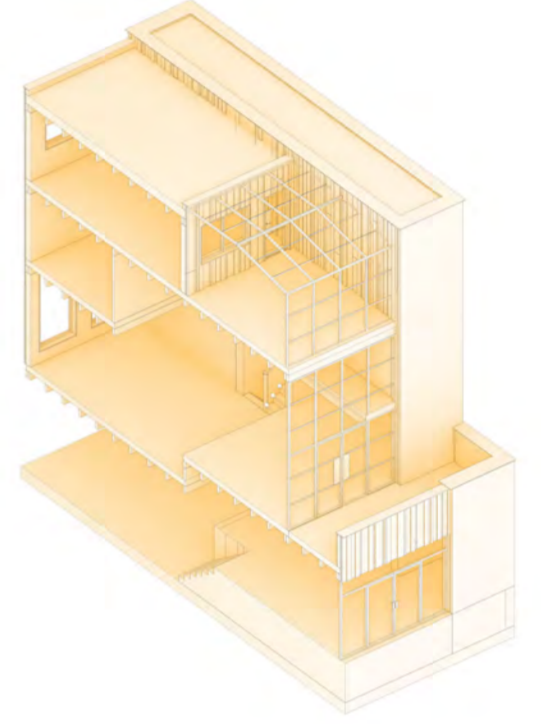
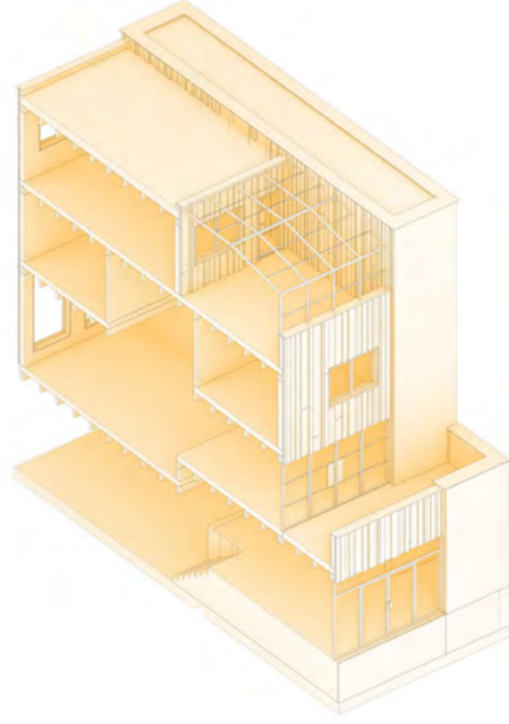
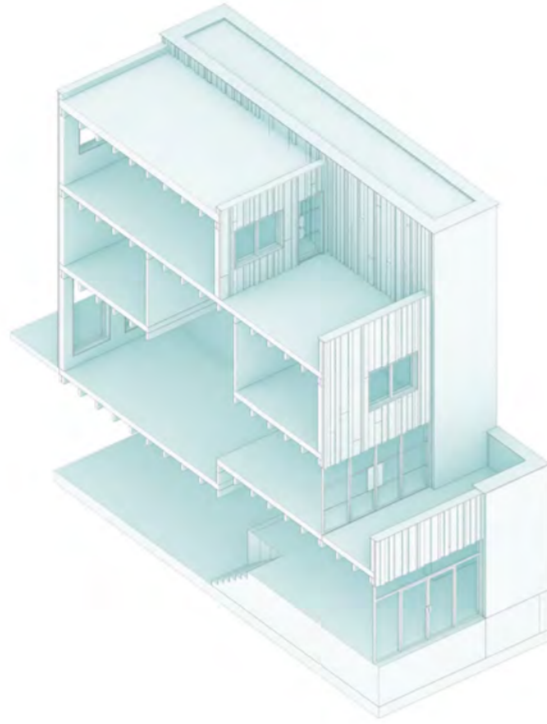
Alternatively, the property could be extended with the addition of a third floor, providing two extra bedrooms with the option for en-suite bathrooms.



### HOUSE II

The roof terrace could be enclosed and converted into a conservatory or greenhouse garden, creating additional usable internal space.

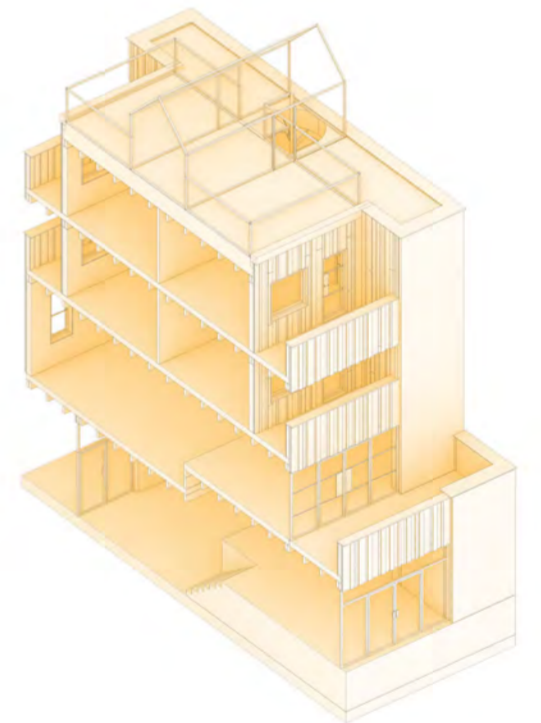
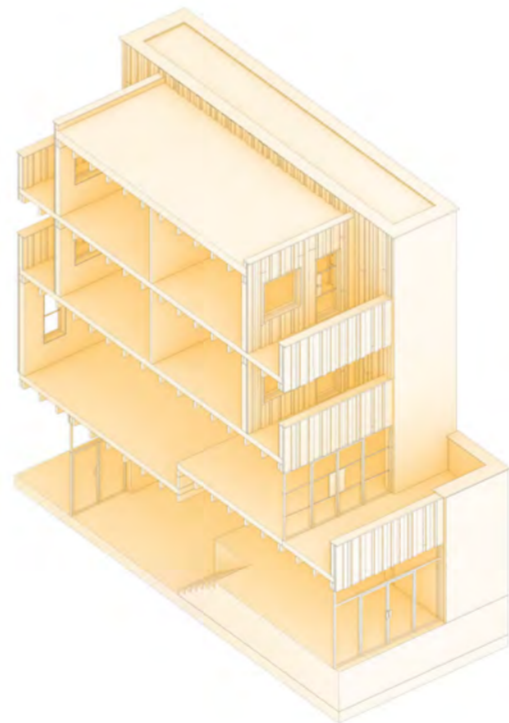
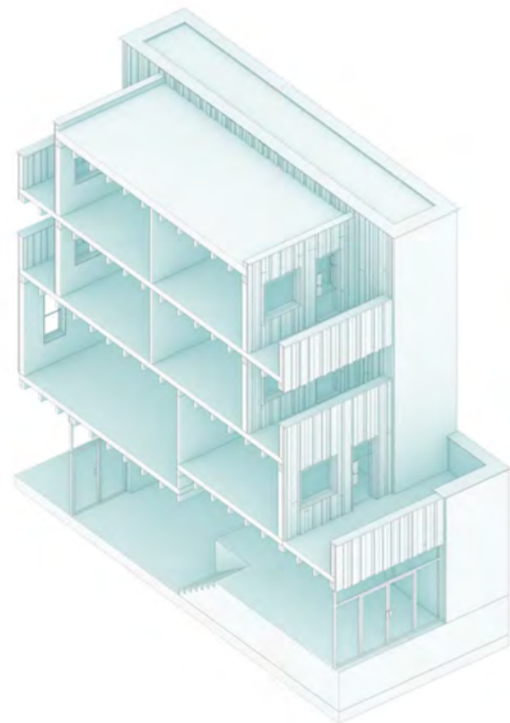
The double height space could also be extended by removing one of the second floor bedrooms, increasing openness and light within the house.



### HOUSE III

The first floor bedroom is removed to create an open living area, allowing increased light and openness within the space.

The roof is extended to provide stair access through a greenhouse-style structure, creating additional external amenity space for the house.



### HOUSE IV

The first floor roof terrace is enclosed and converted into a conservatory/sun room, creating additional internal living space.

The existing double height space above the living area is infilled to provide an additional room within the house.

