



The Cauliflower 2.0

Re-design of the Raadsledenbuurt in Houtwijk

A4 Presentation June 16 2026 - Hieke Teunissen - 5483867

Designing for Health and Care Graduation Studio

Content.

Context.

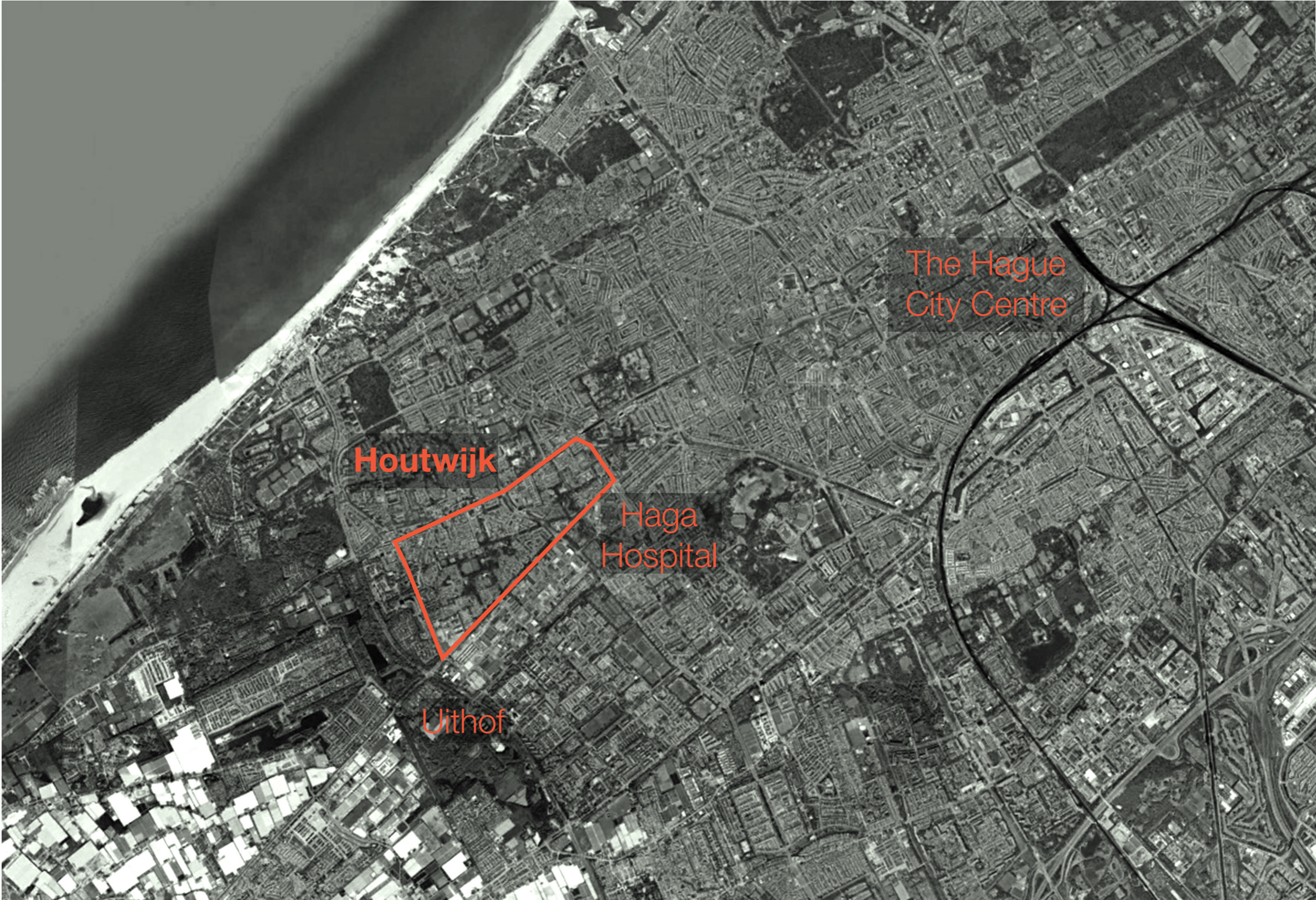
Research.

Design.

Bigger Picture.

Conclusion.

Context.



Fragmented Green Structure + Nuisance & Unsafety + Low Public Health + Mismatch between Demographic & Housing/Facilities



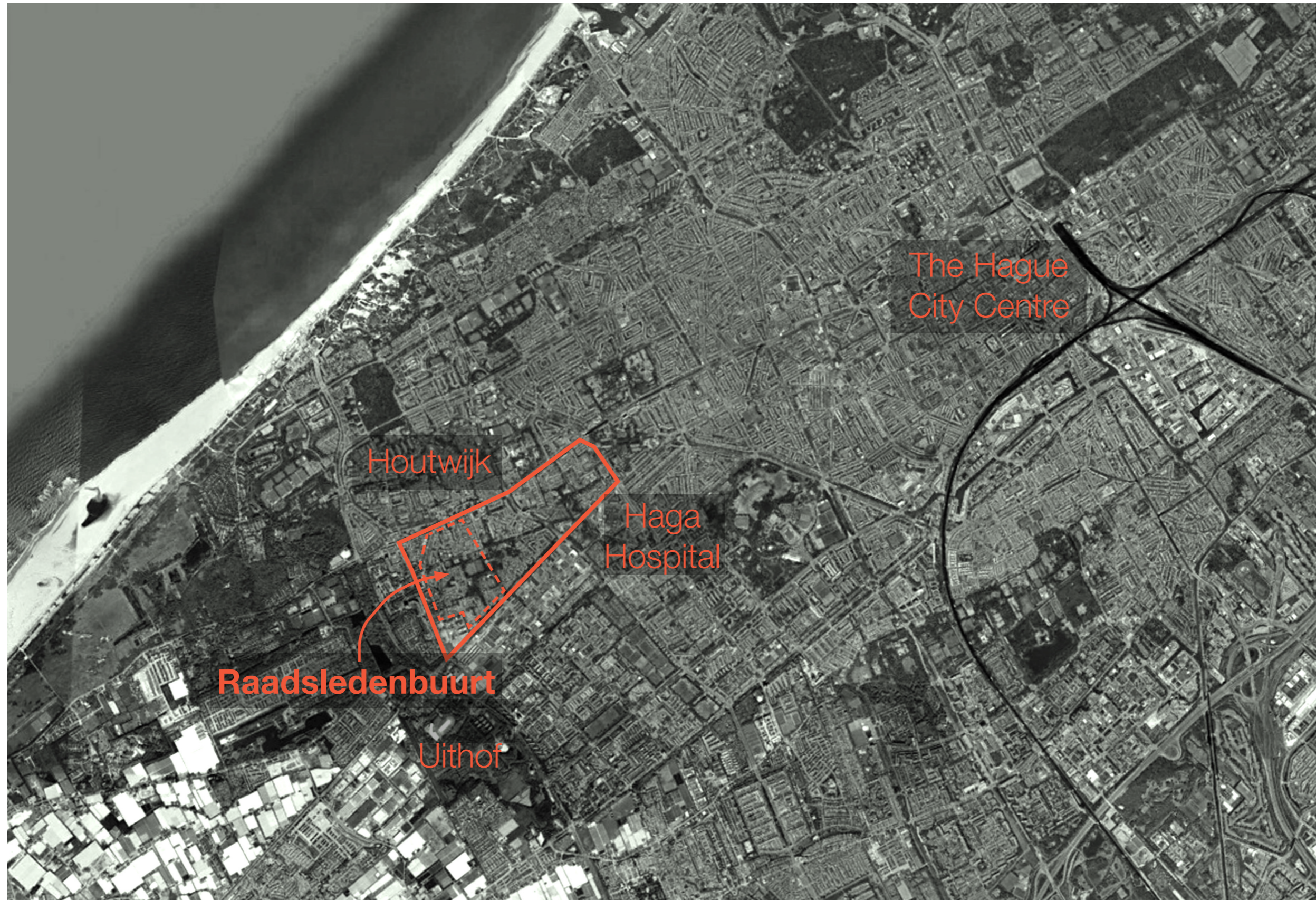
Sleepy Neighbourhoods



Cauliflower Neighbourhoods

What is a cauliflower neighbourhood?

Research.

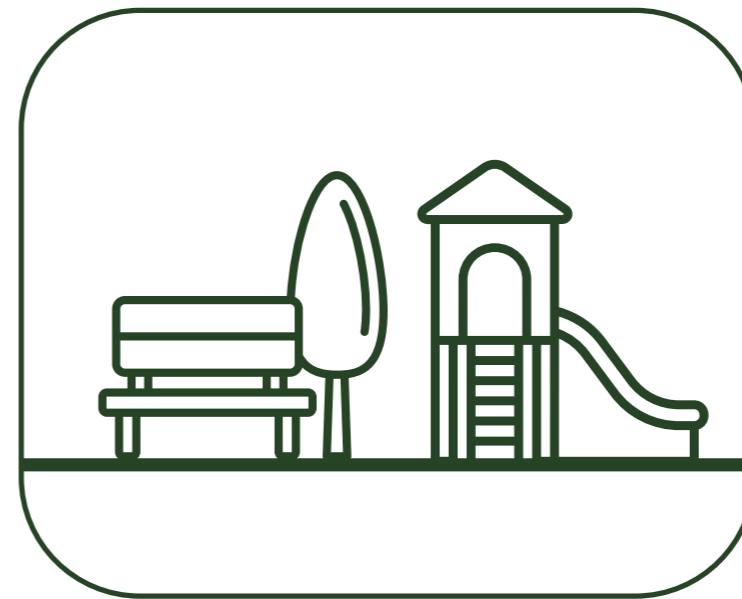


“How can architectural and spatial design strategies transform the cauliflower neighbourhood of Raadsledenbuurt in Houtwijk into a resilient 21st-century neighbourhood?”

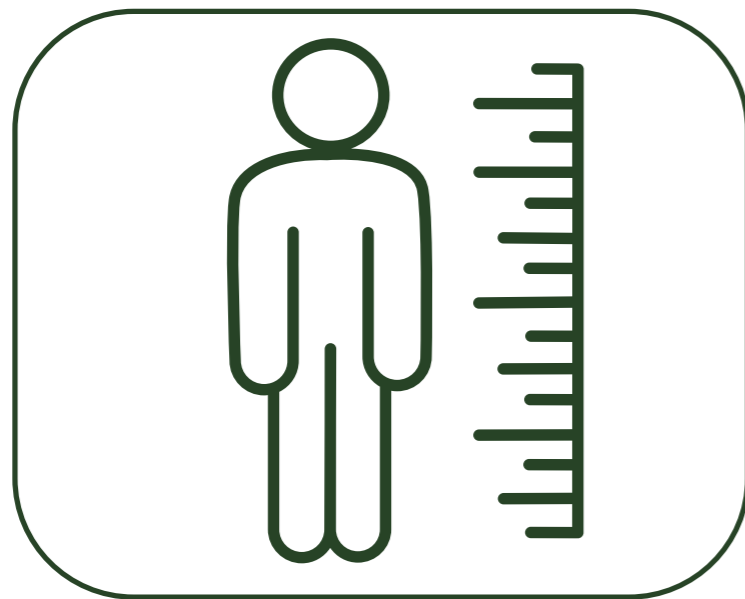
- 1.** Which **problems are current** in the cauliflower neighbourhood of Raadsledenbuurt in Houtwijk?
- 2.** What are the architectural and spatial **criteria of a resilient 21st century neighbourhood**?
- 3.** What are the architectural and spatial **characteristics of a typical cauliflower neighbourhood**?
- 4.** Which architectural and spatial characteristics of a typical cauliflower neighbourhood are **present, absent or underrepresented in the Raadsledenbuurt in Houtwijk**?



Diversity of Built Form



Diversity of Outdoor Space



Human Scale

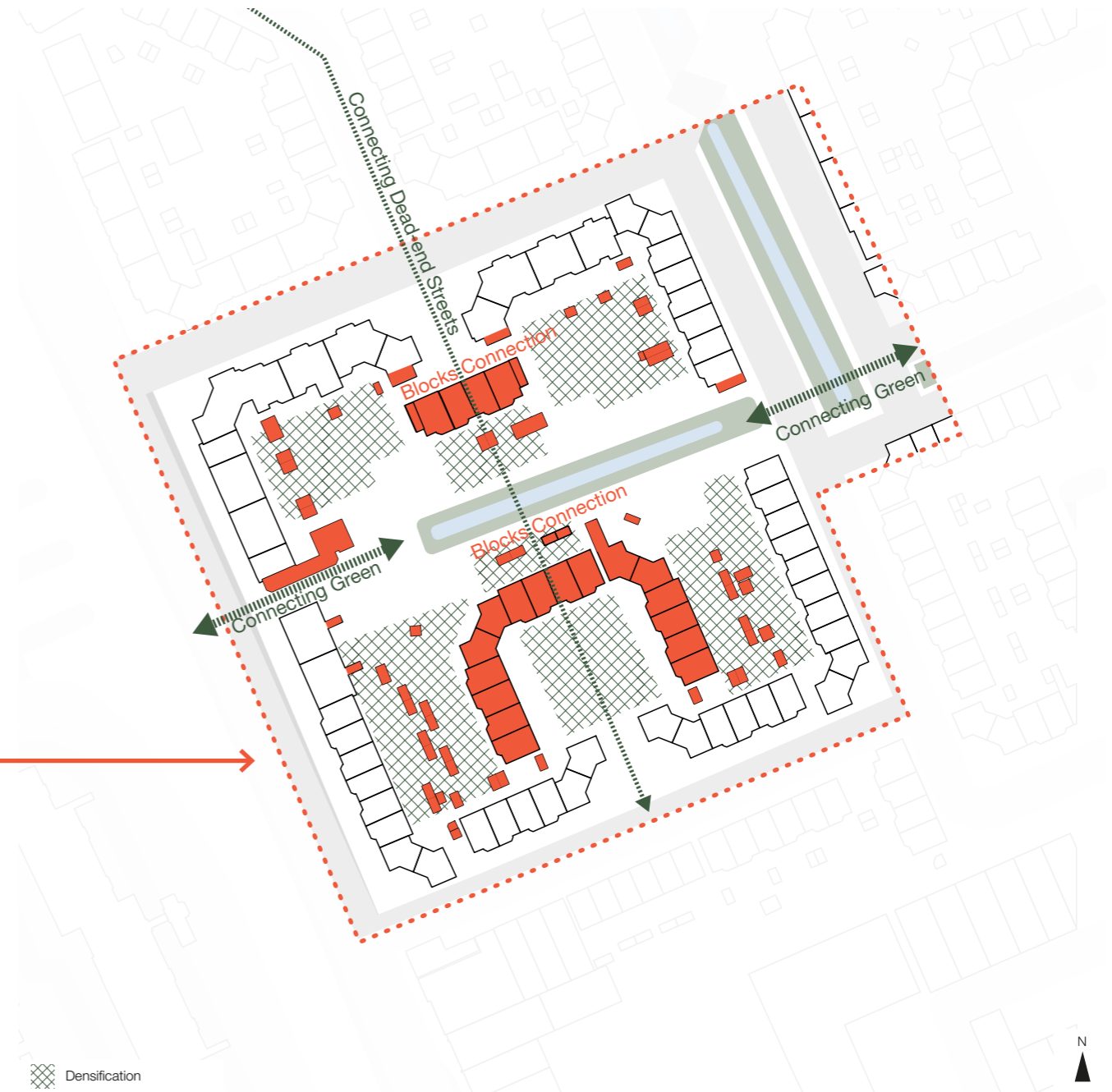


Sense of Control & Identity



Greater Biodiversity

Based on: (Sim, 2019)

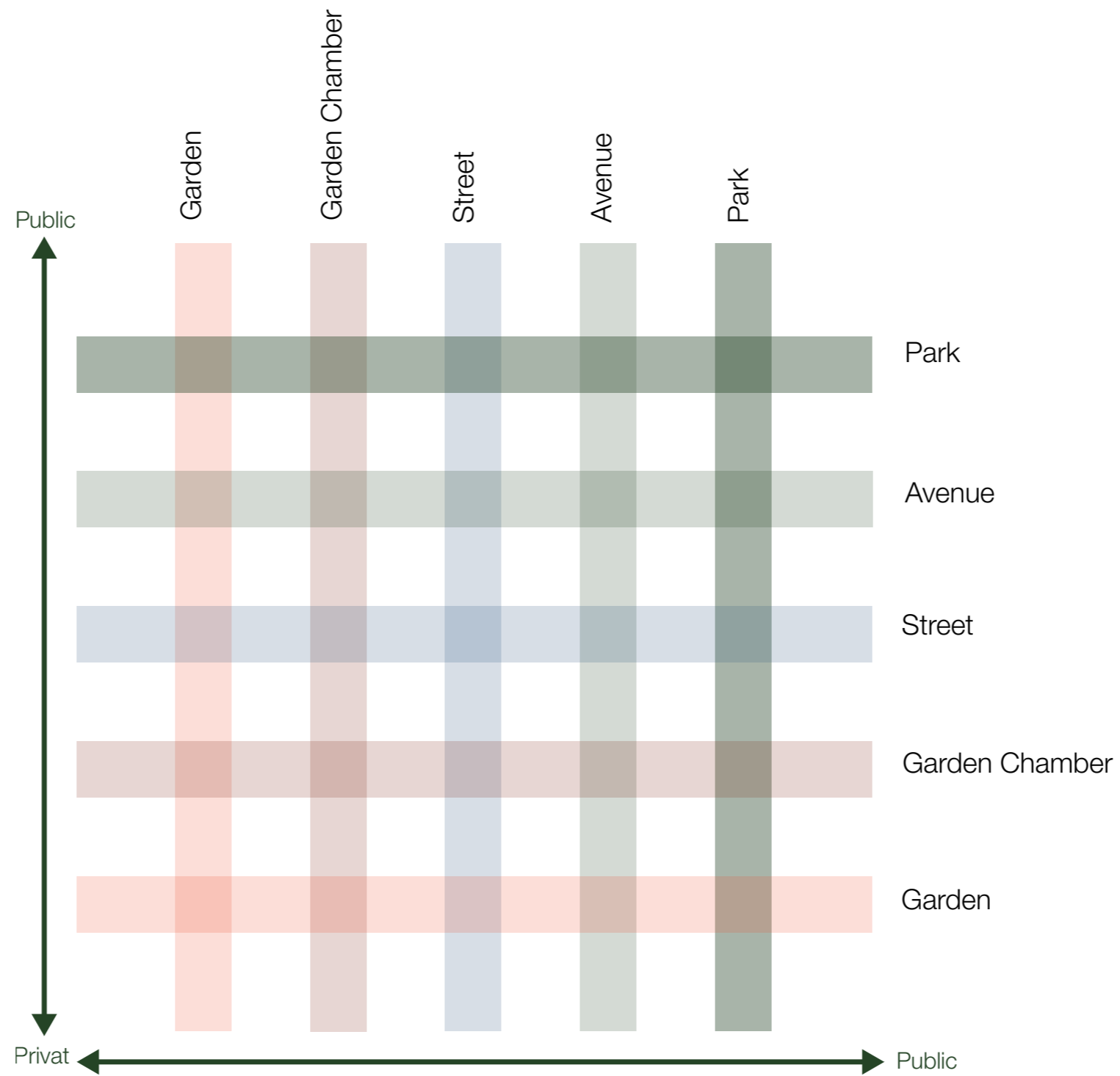


Program

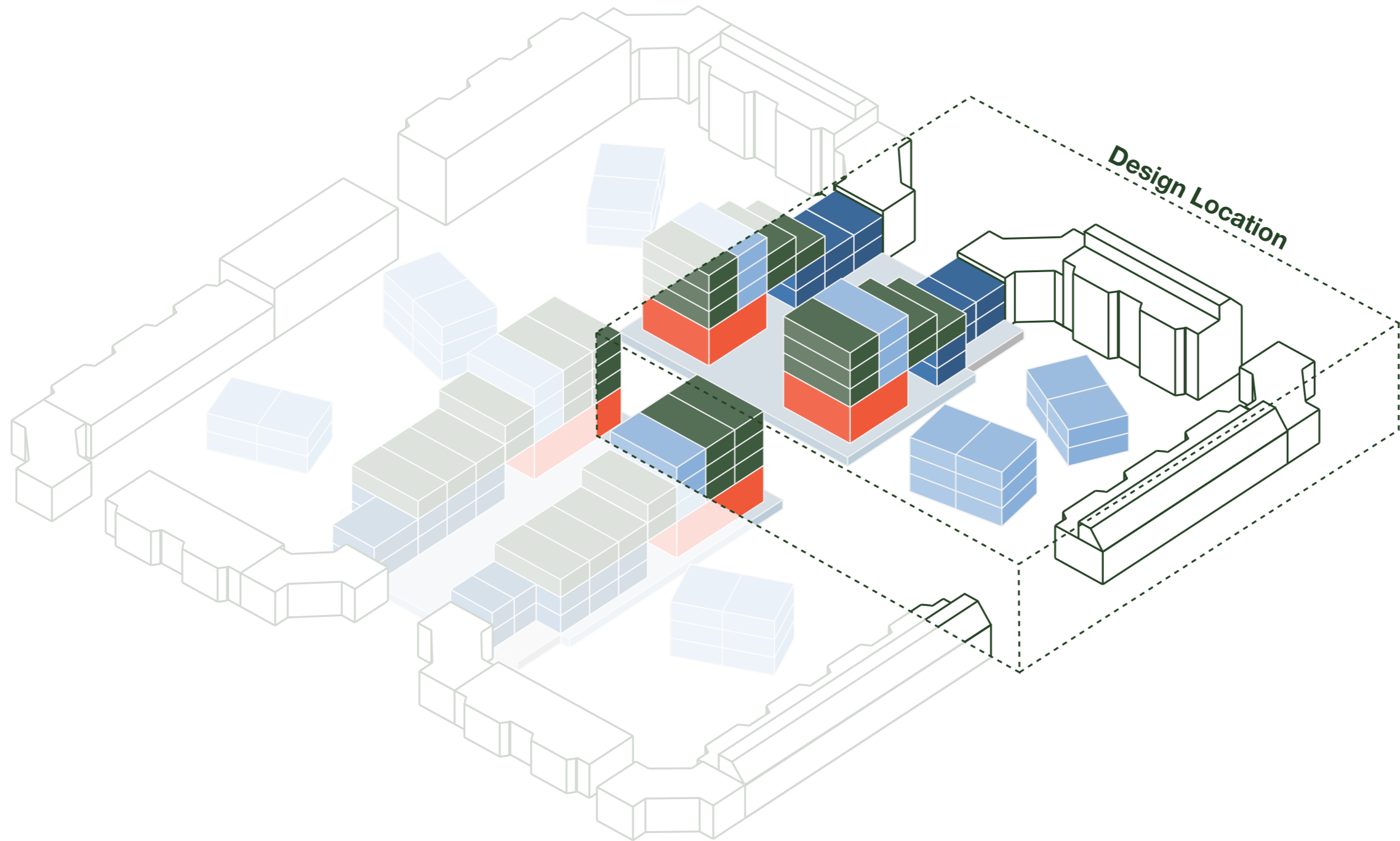
Existing Housing	104 houses
Demolished Housing	-20 houses
Newly Added Housing	94 houses
Total Housing	178 houses

Total Housing Increased by 71%

Design.



“Patchwork of Landscapes”



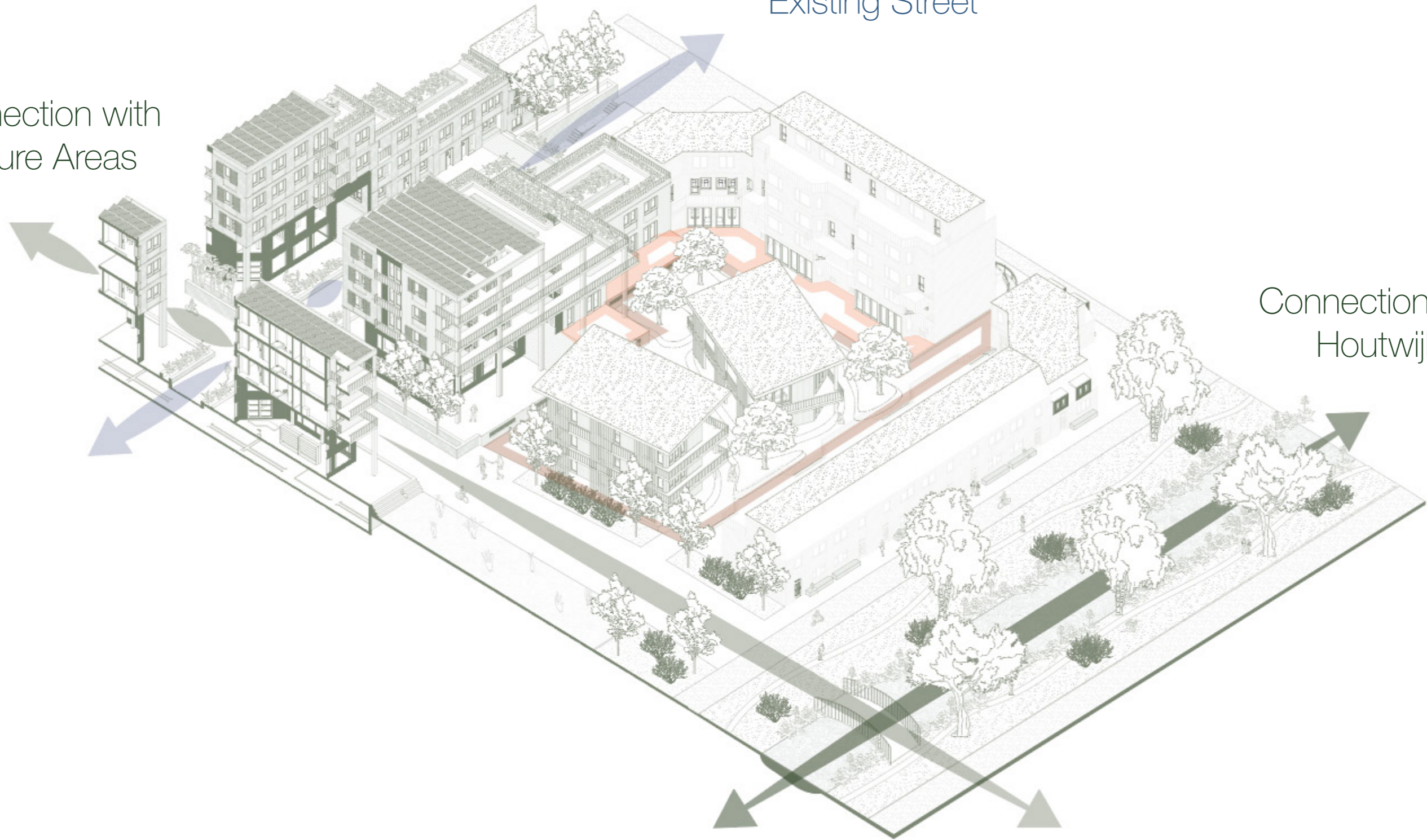
- Family house
- Apartment
- Studio
- Public Function
- Existing

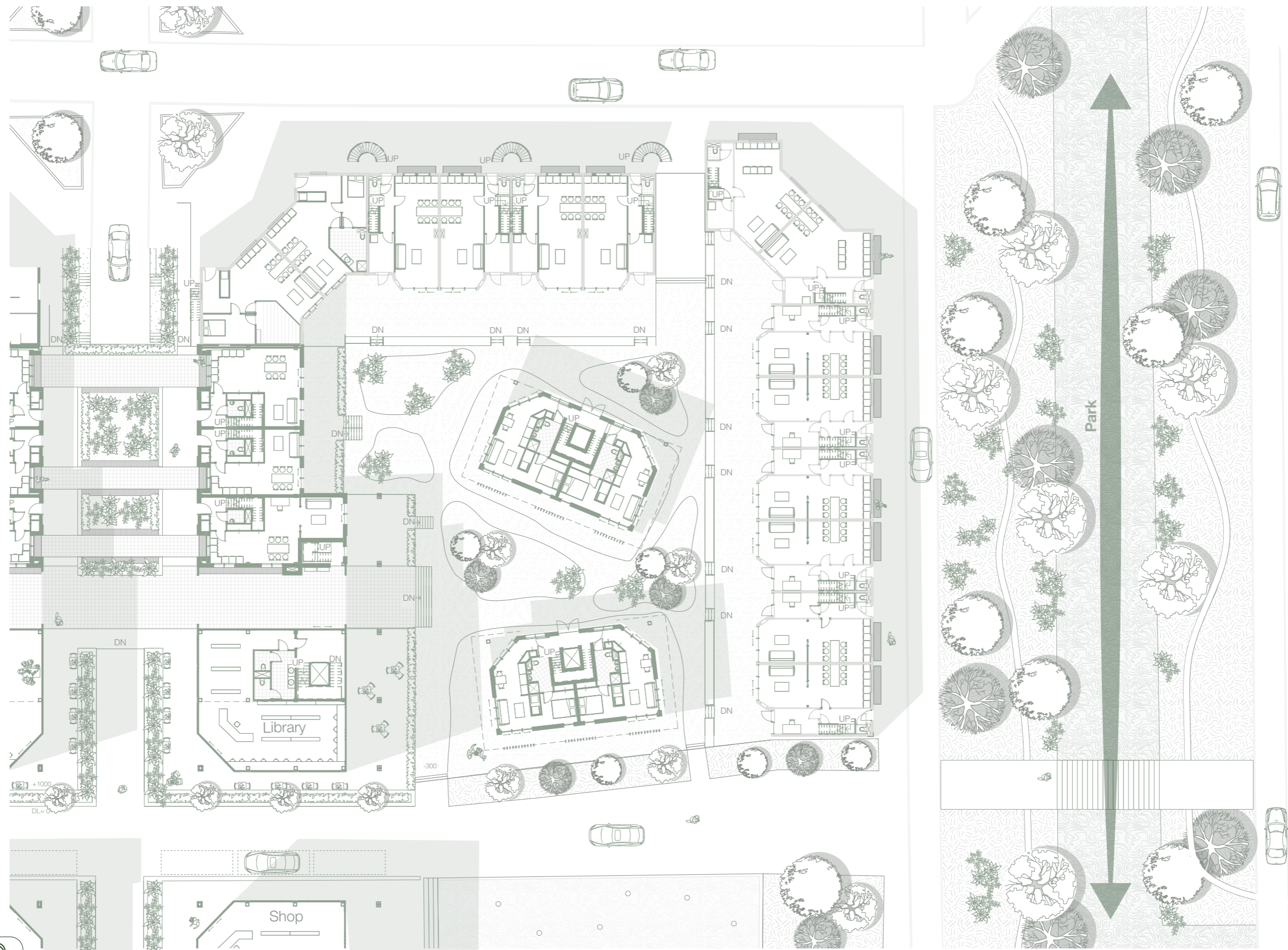


Connection with Existing Street

Connection with Nature Areas

Connection with Houtwijk

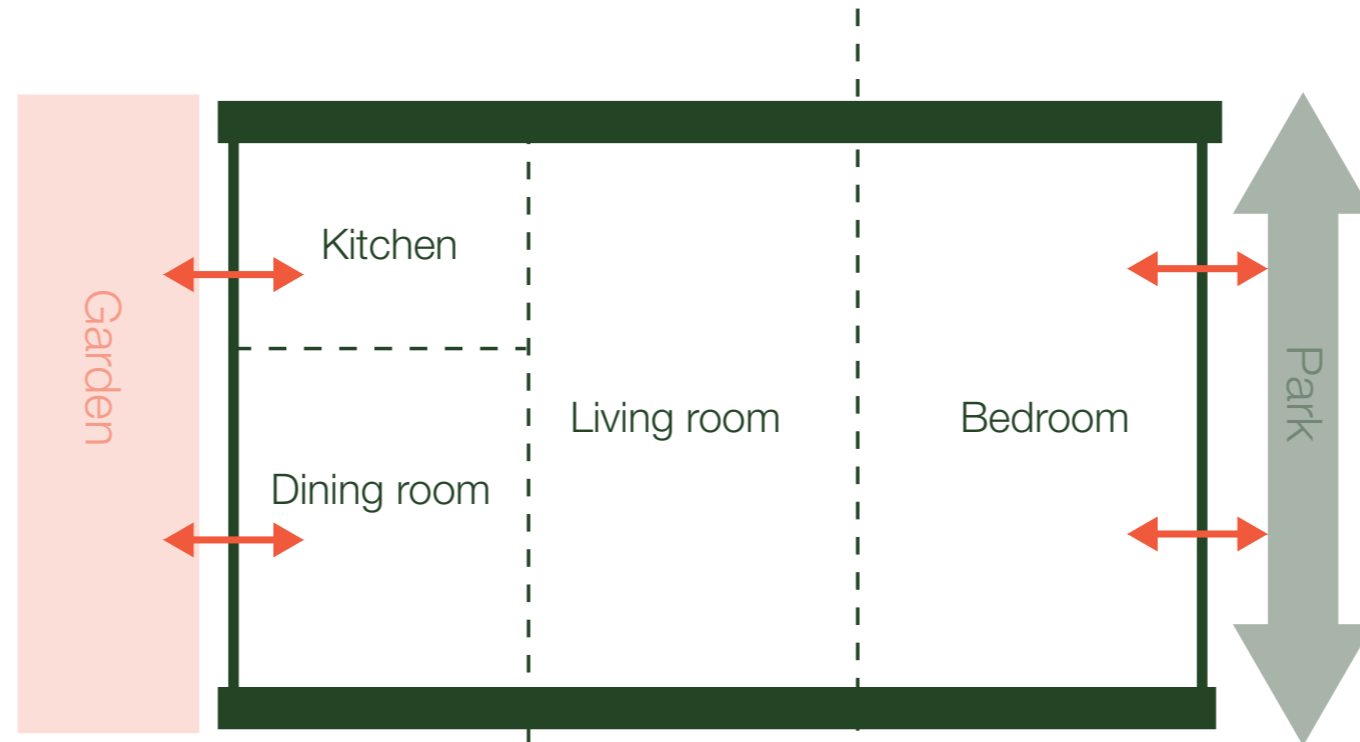




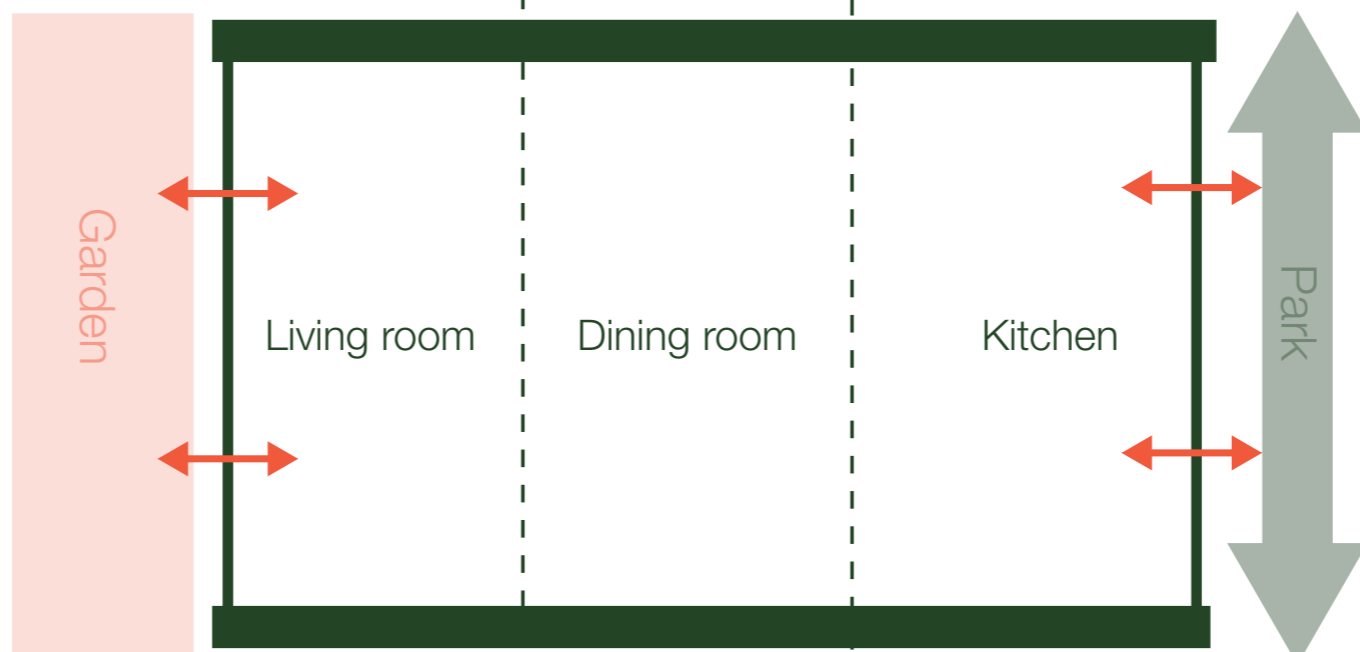
18 | Floorplan Ground Floor

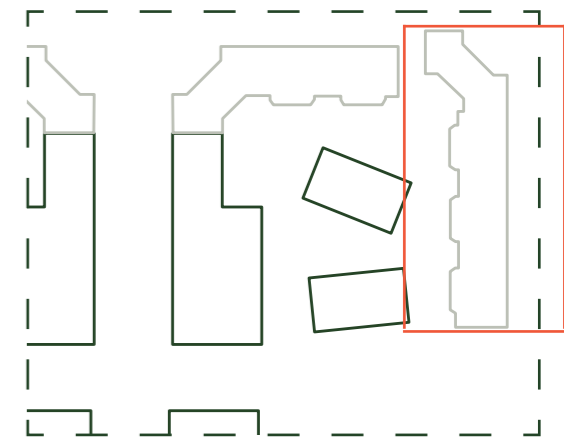
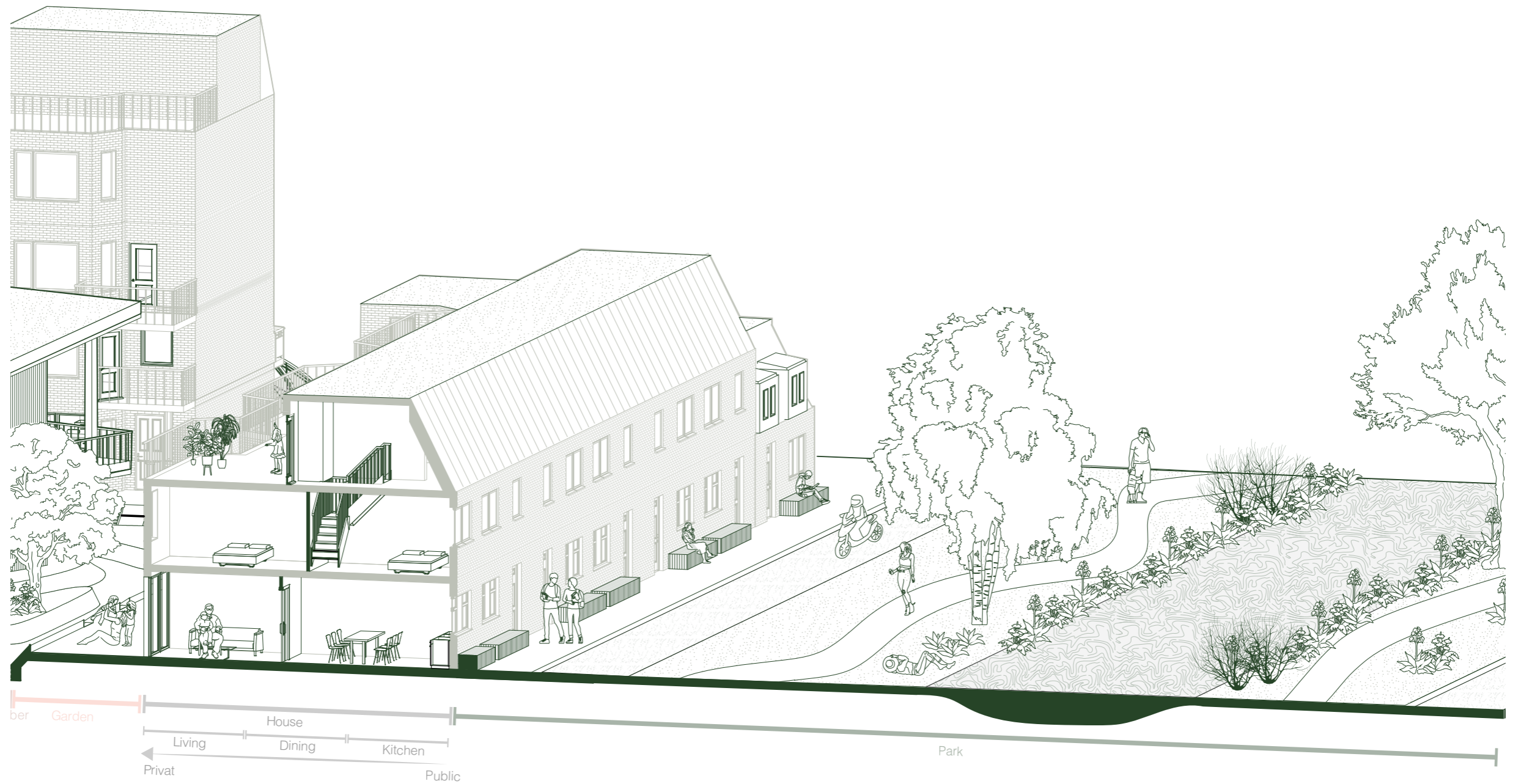


Old Situation



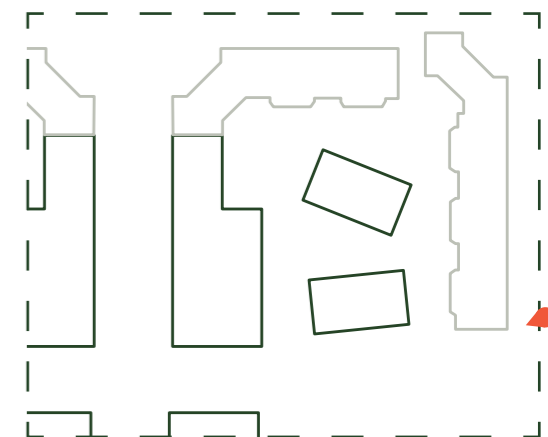
Redesigned

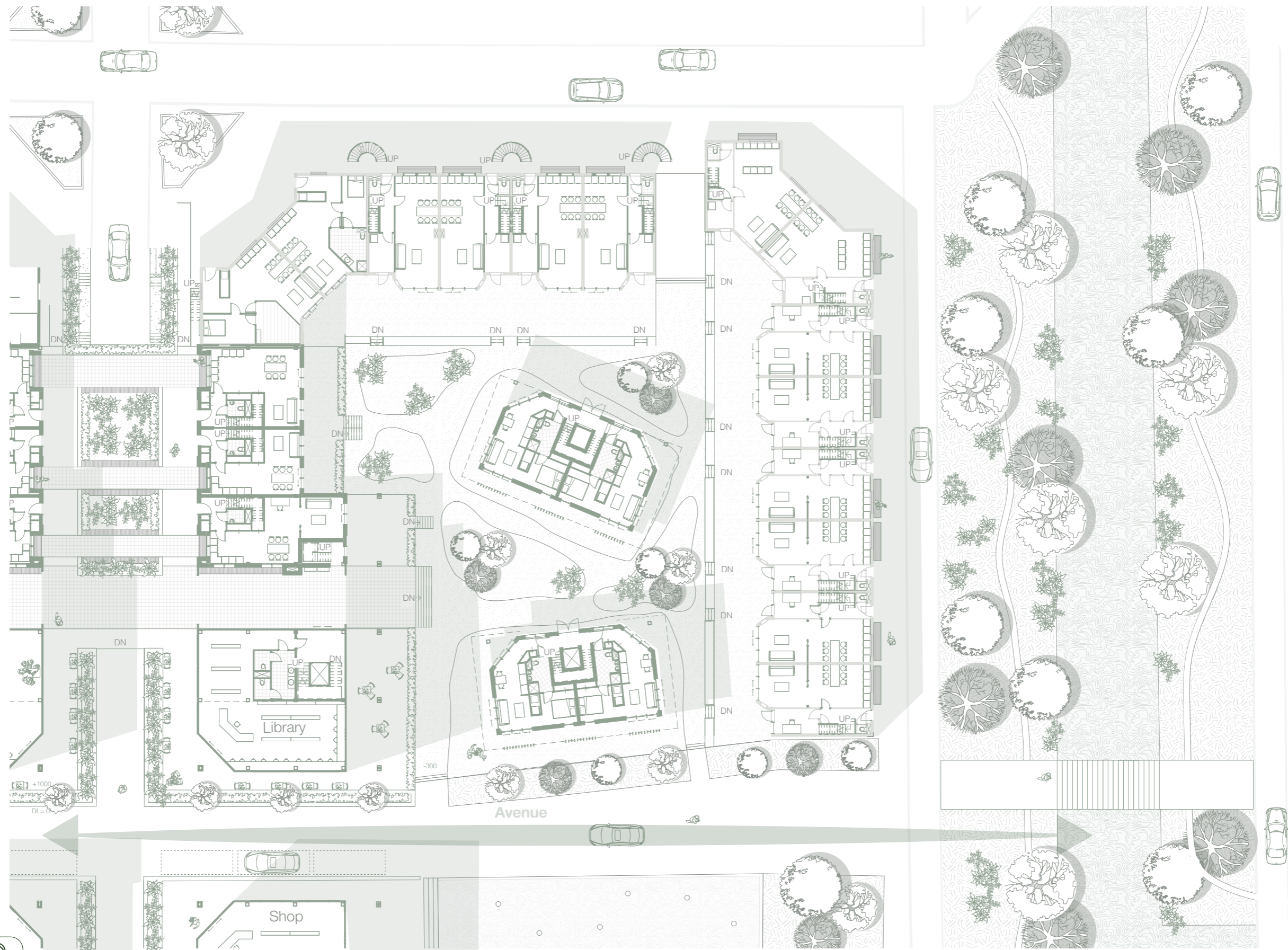


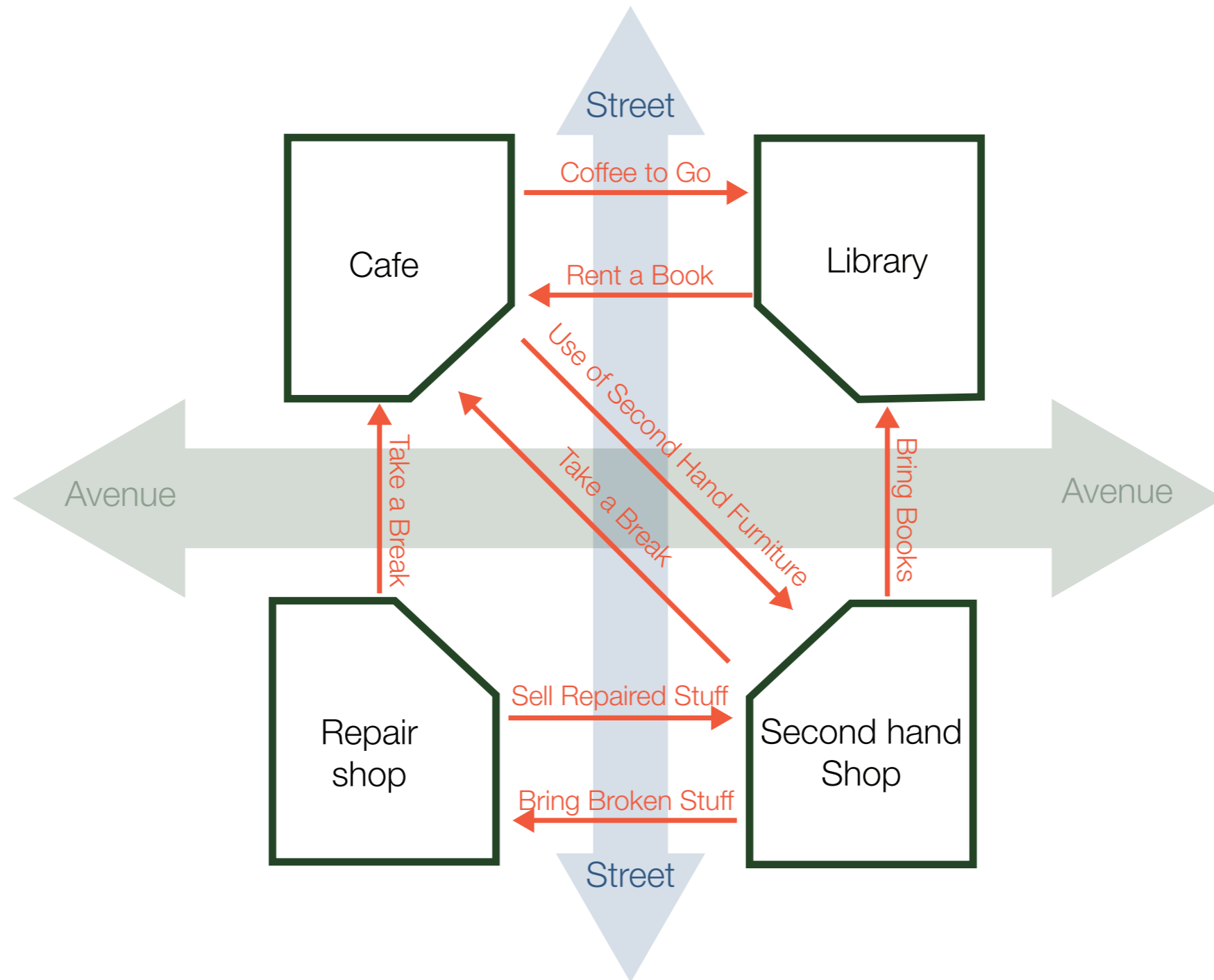




21 | Visualisation Green Space

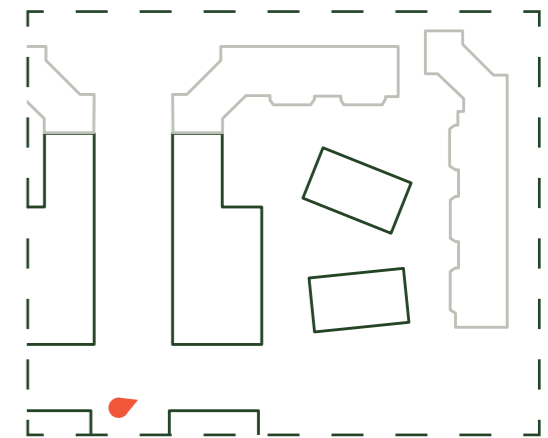


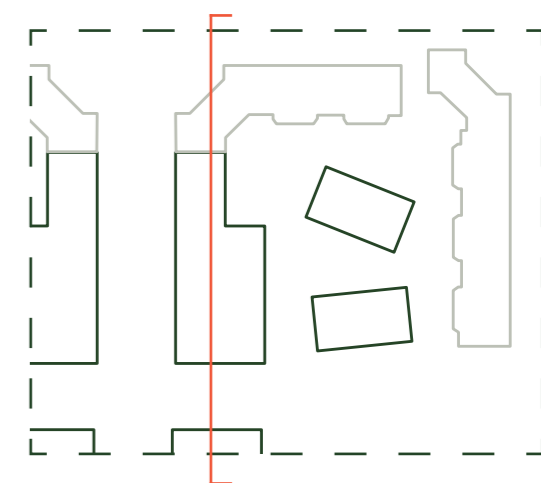
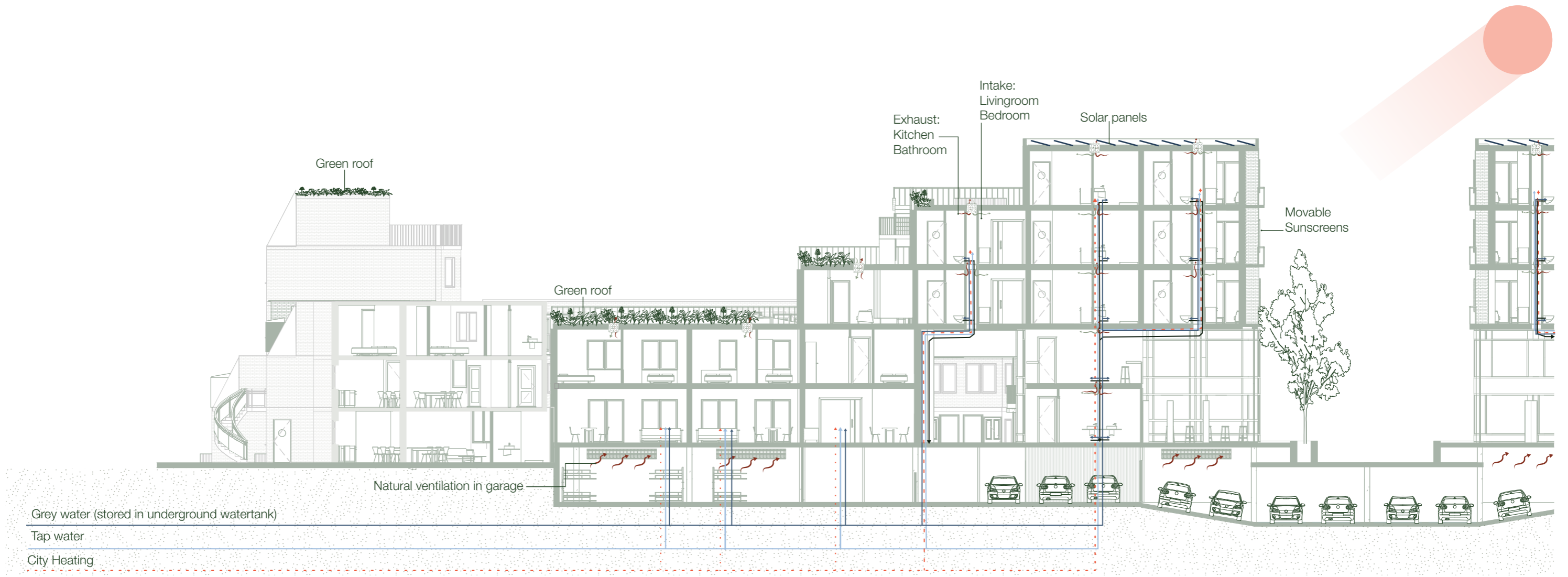


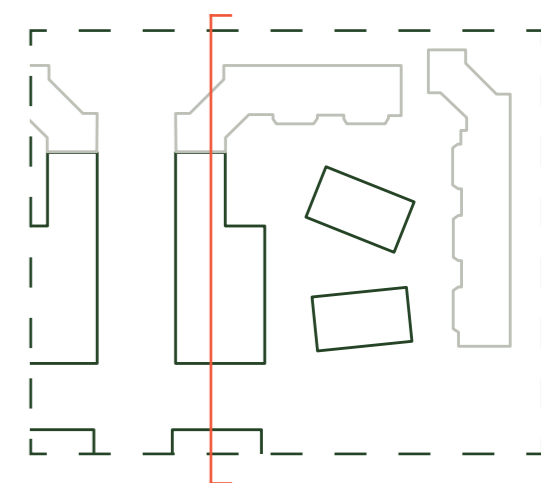
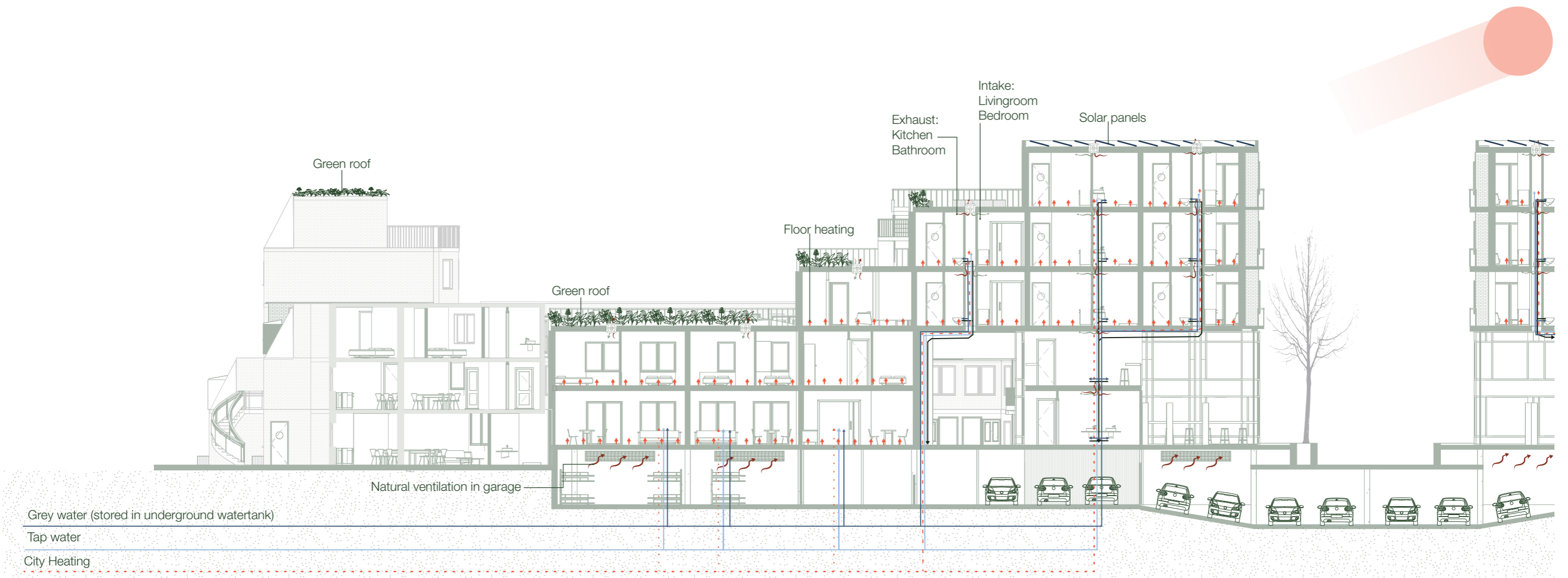


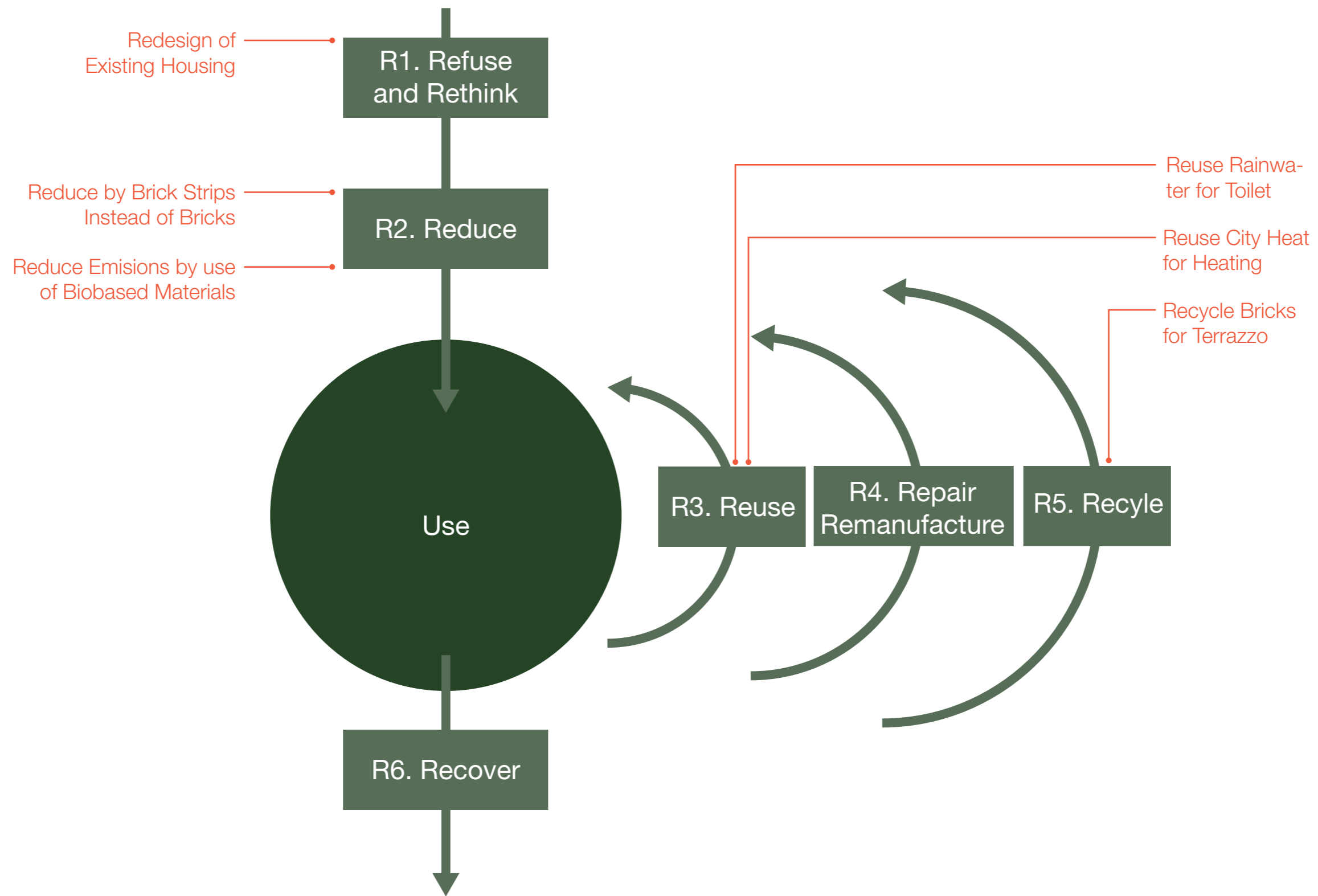


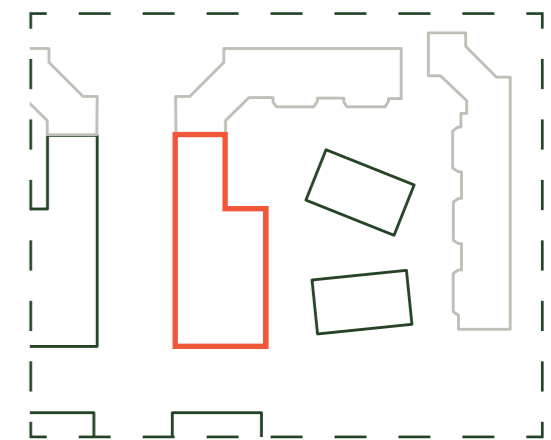
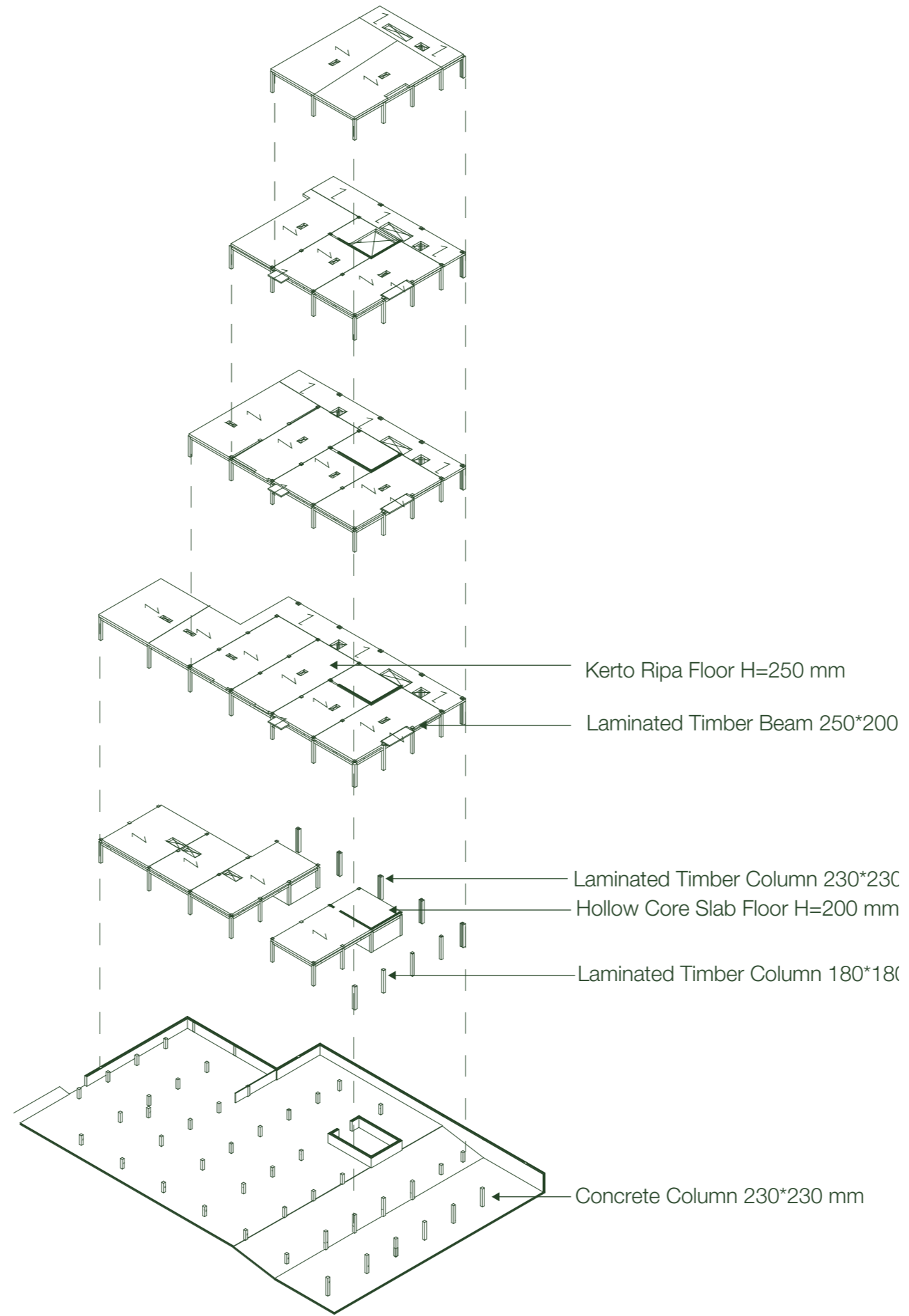
24 | Threshold Between Avenue & Street

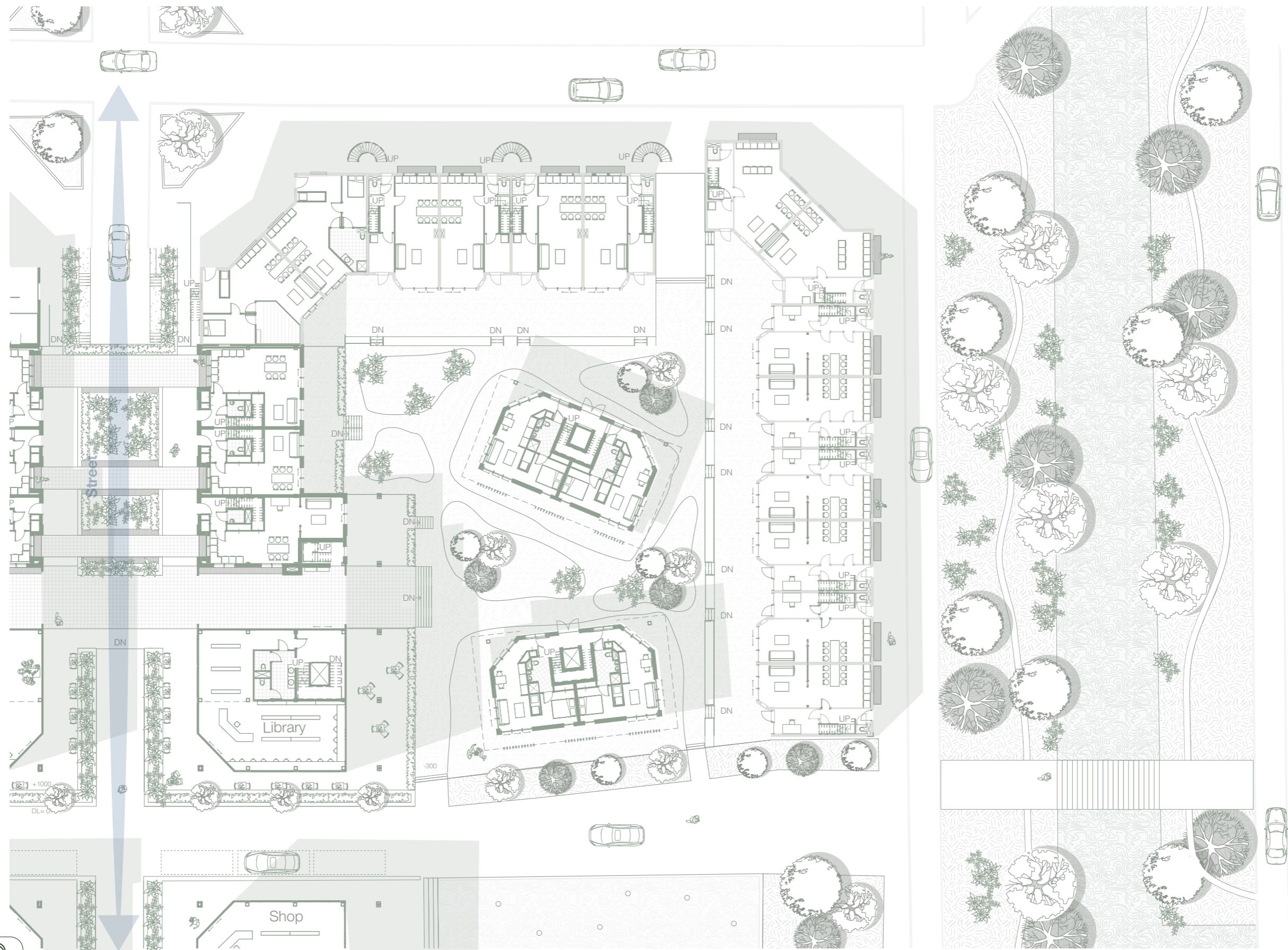






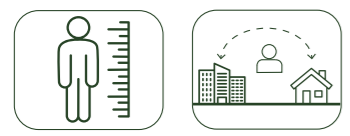
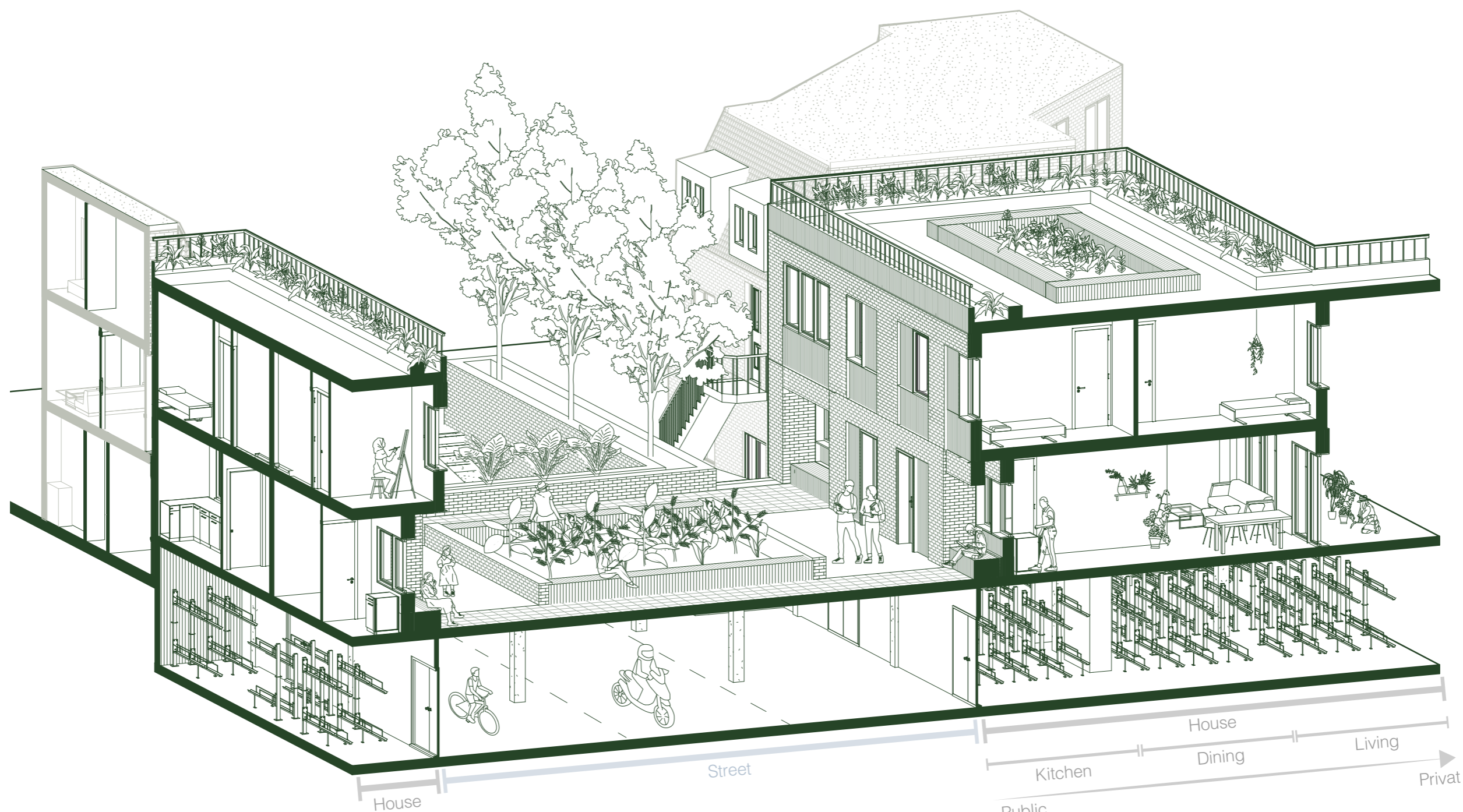




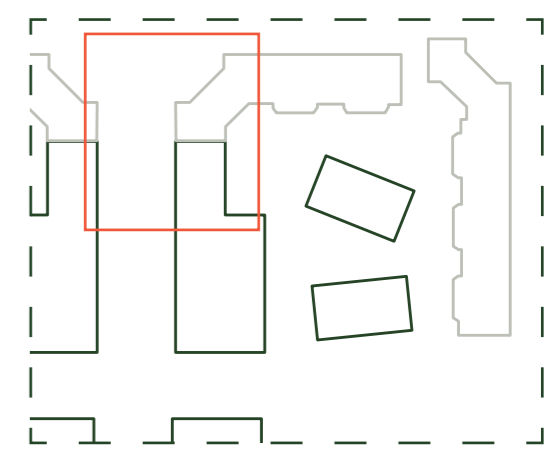


29 | Floorplan Ground Floor



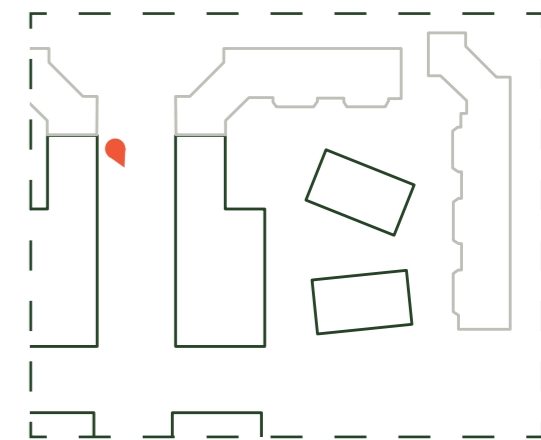


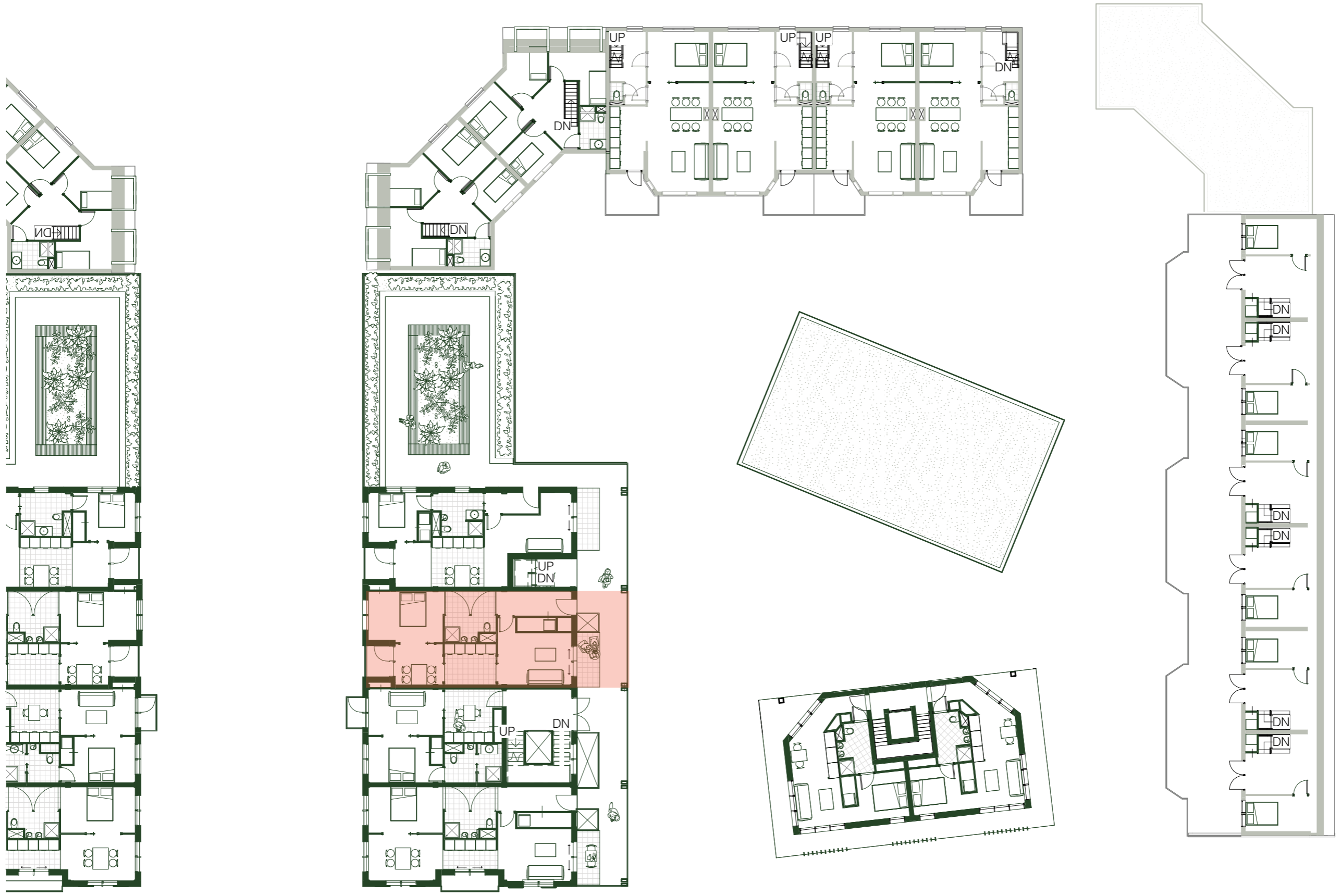
30 | Functional Layout Family House





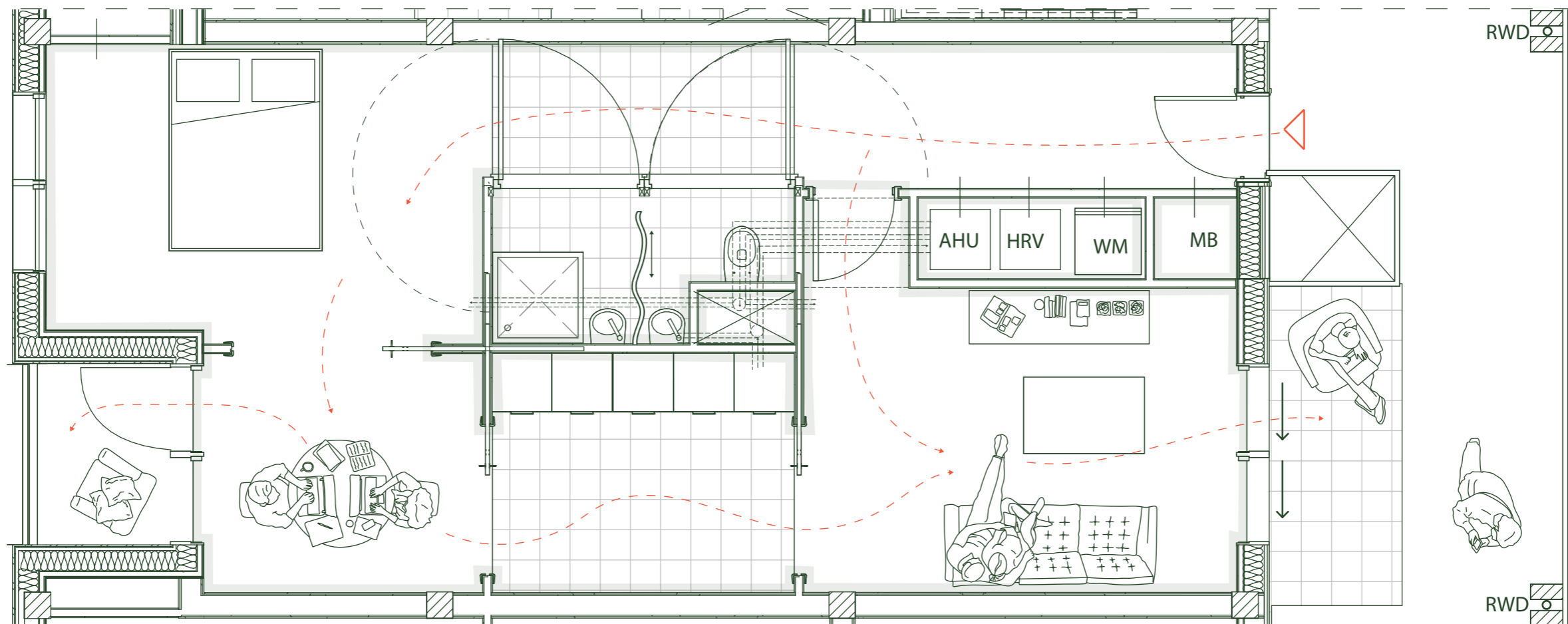
31 | Visualisation Green Space





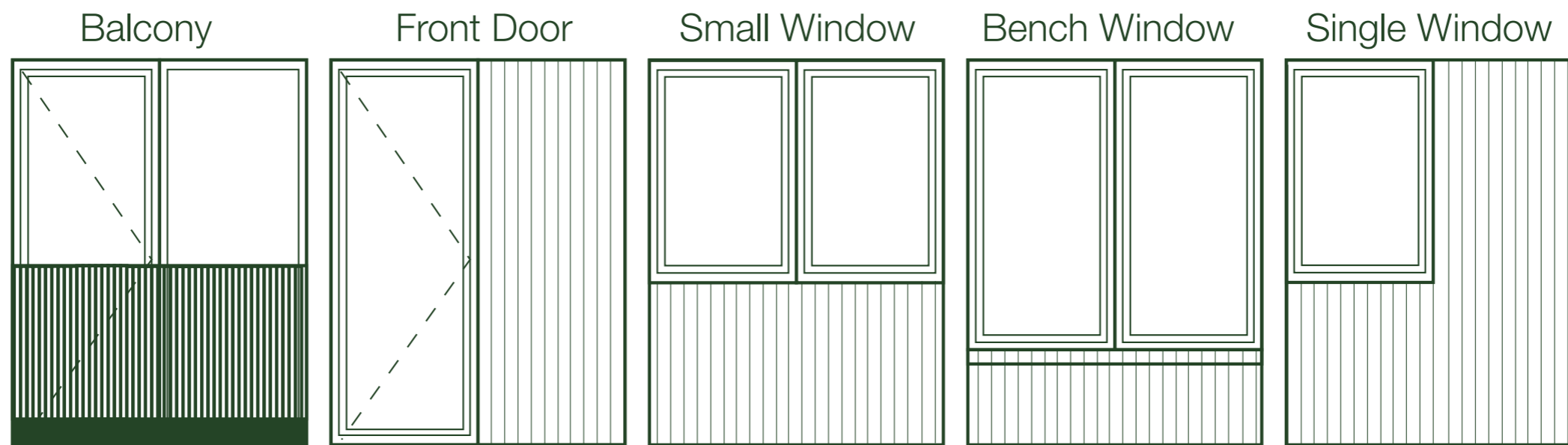
32 | Floorplan 1st Floor

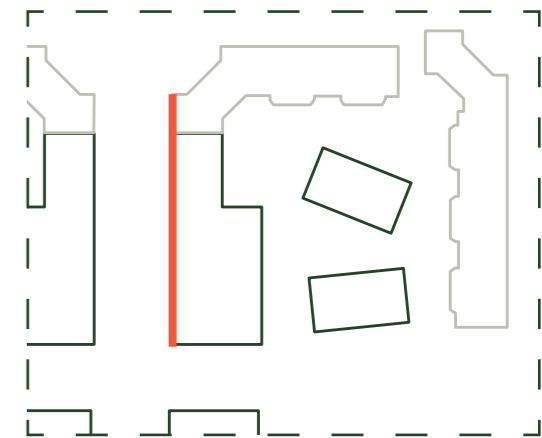
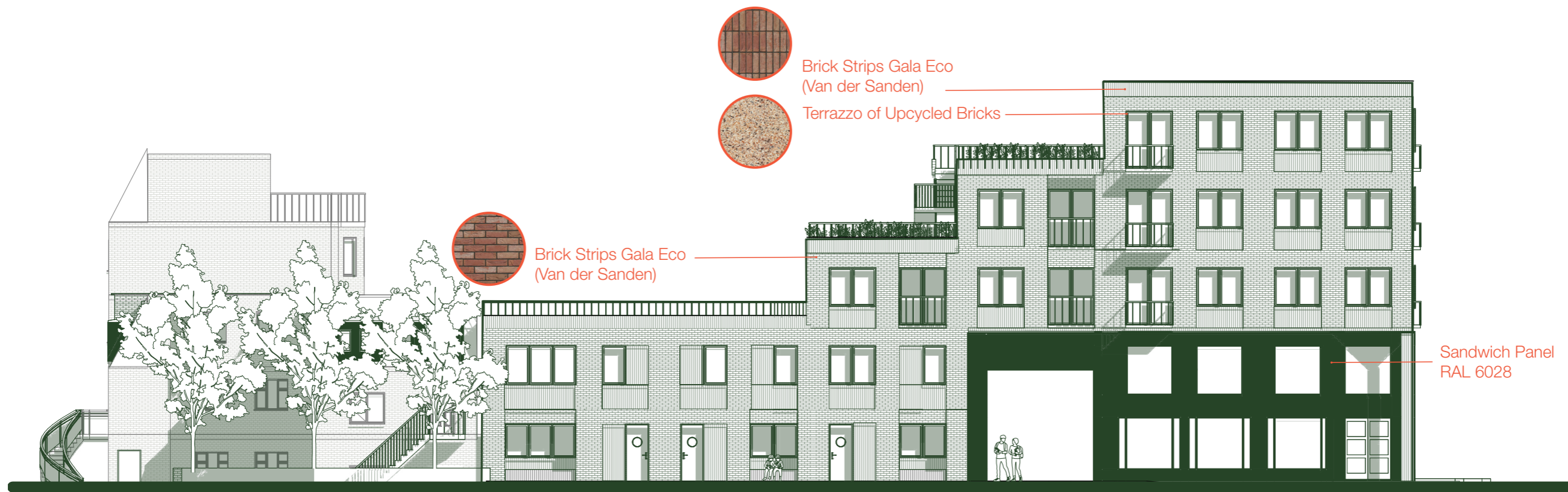




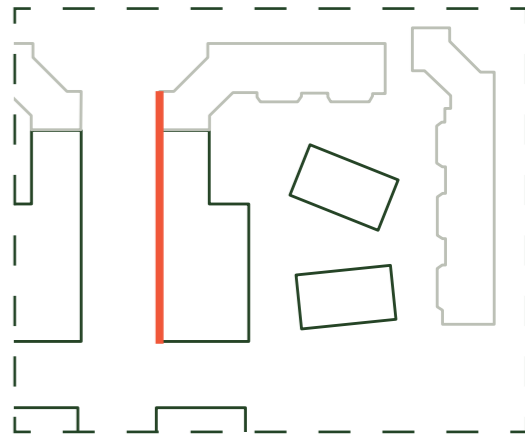
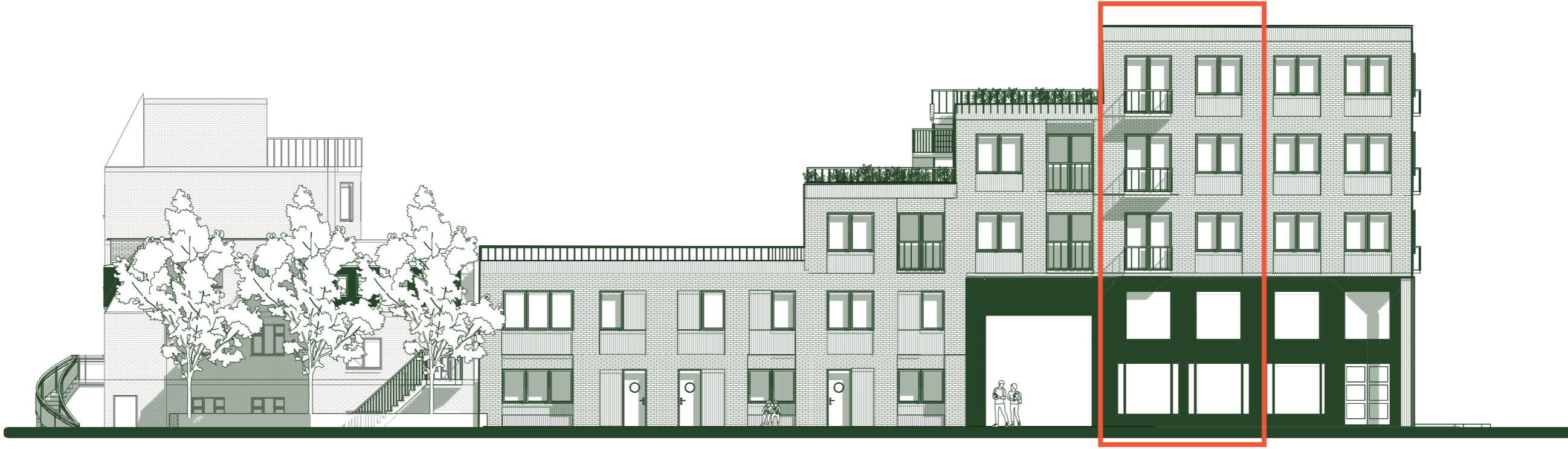
33 | Flexible Floorplan Apartment

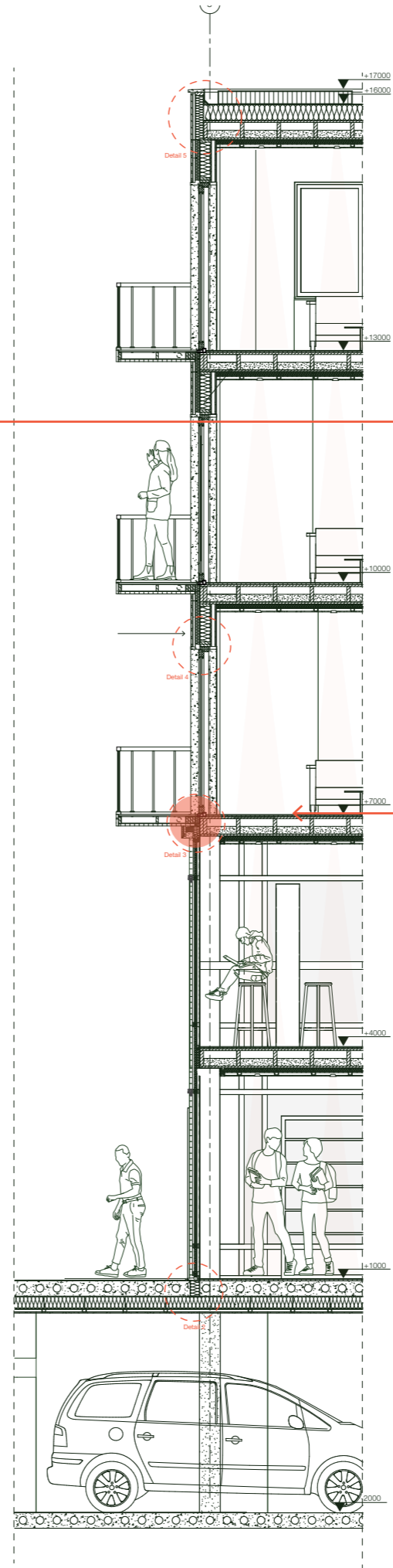






Fragment



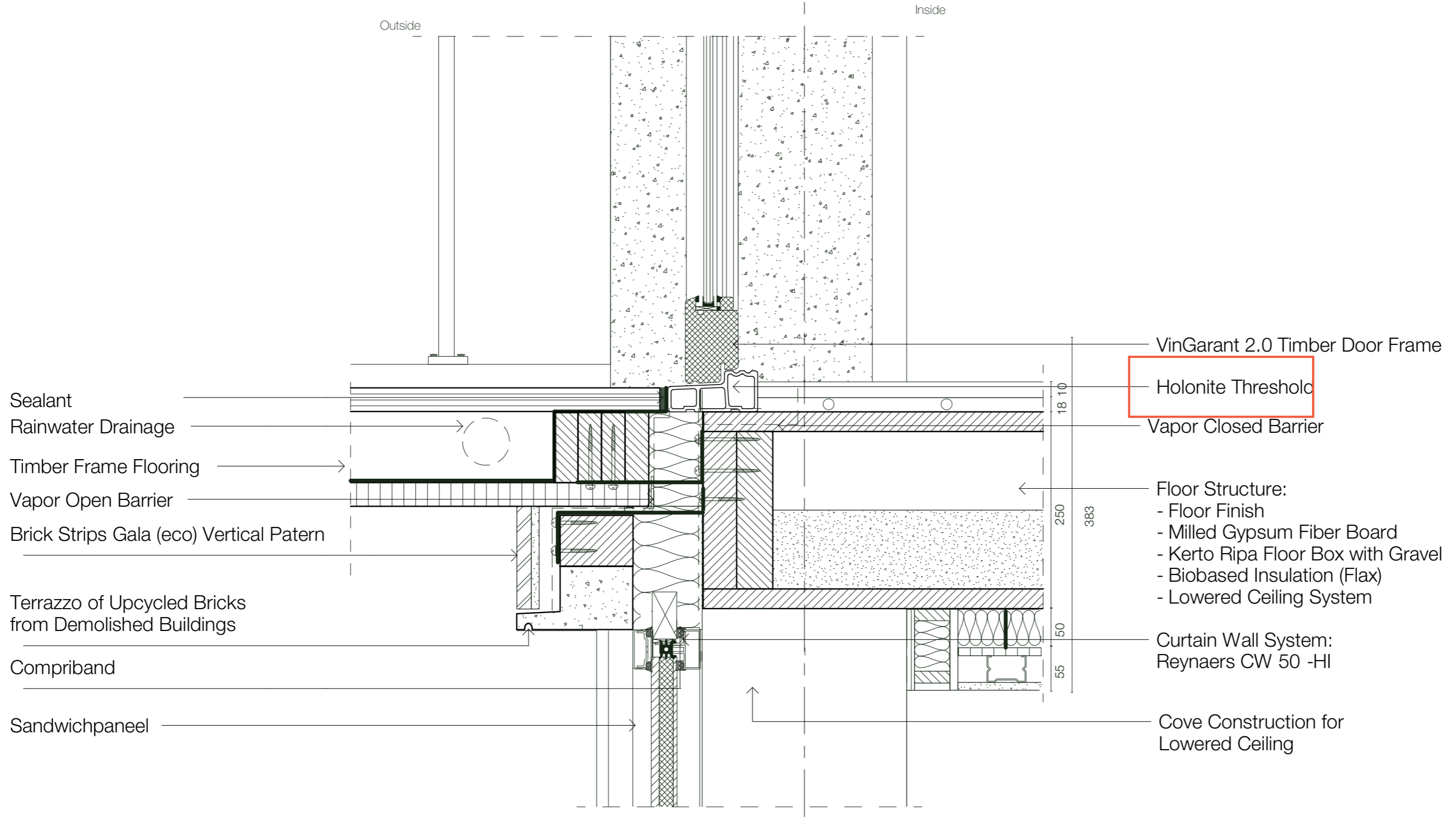


| Detail 6 Windowframe

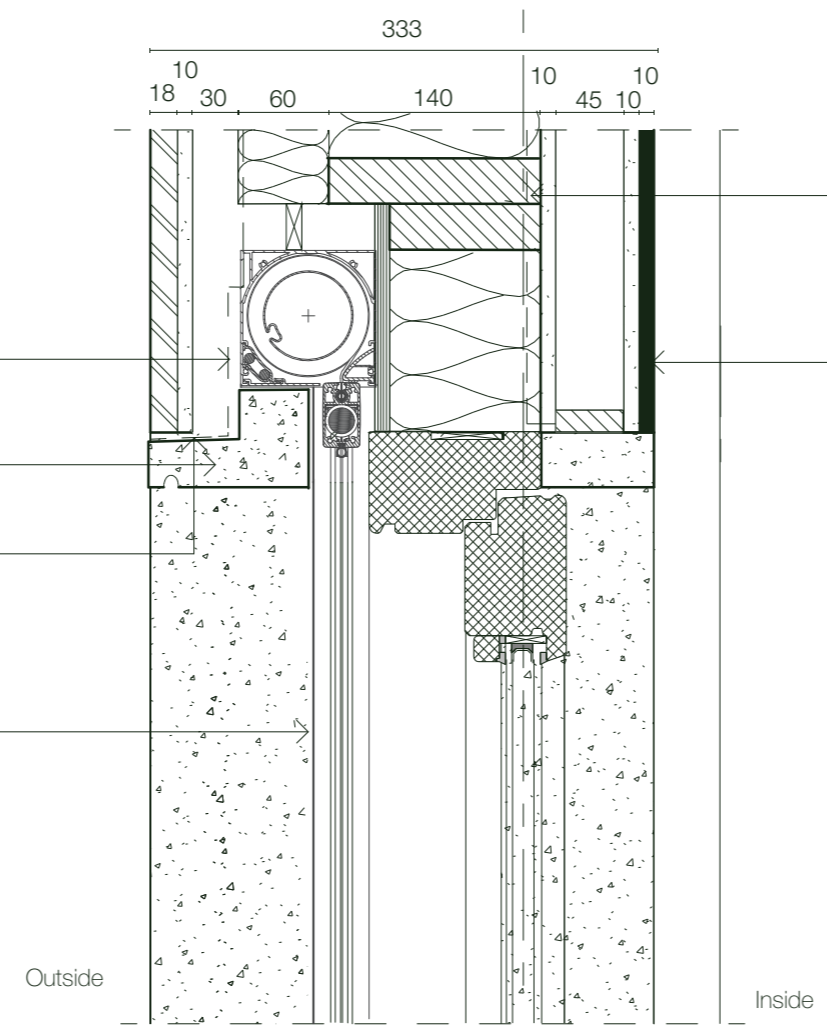
| Detail 3 Balcony Floor



9



9



DucoScreen Front 95 CW

Terrazzo of Upcycled Bricks from Demolished Buildings

Vapor Closed Barrier

VinGarant 2.0 Timber Window Frame

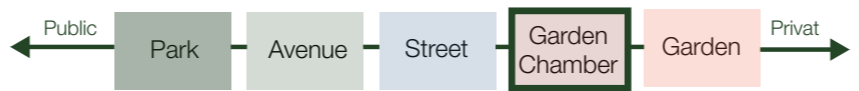
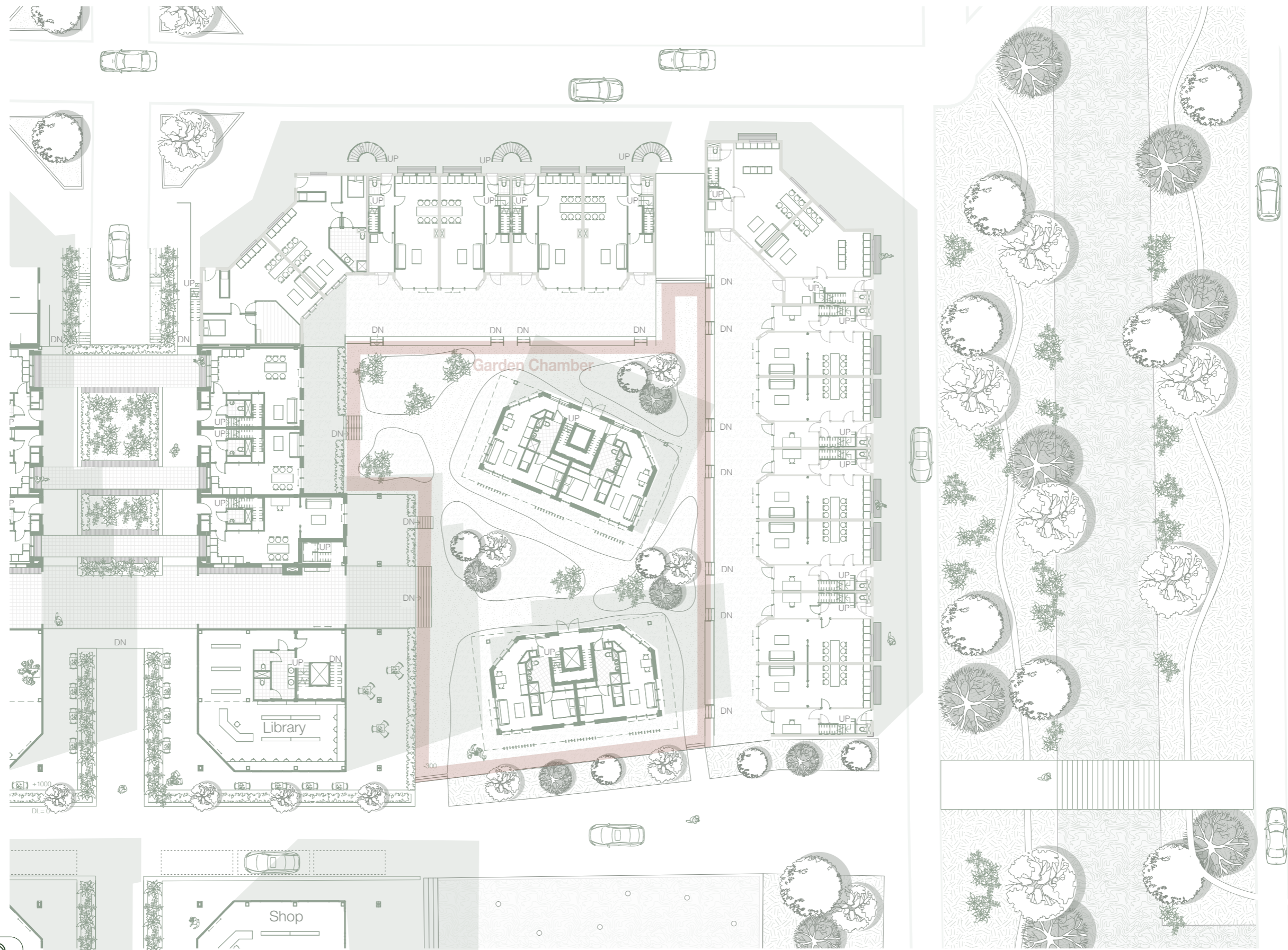
Vapor Open Barrier

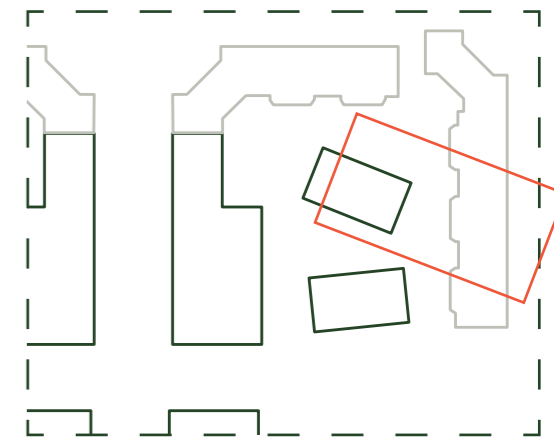
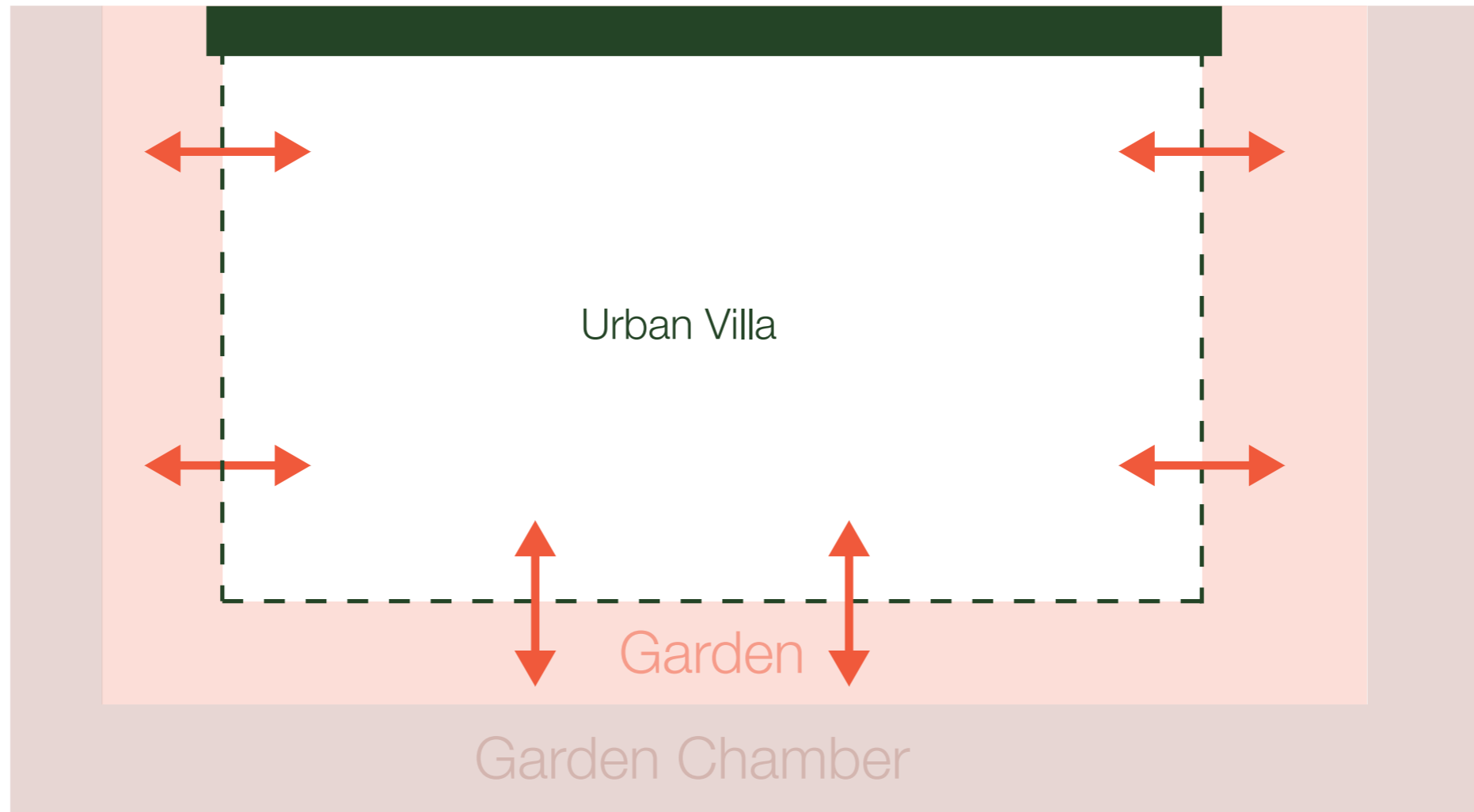
Facade Structure:
 Gala (eco) Brick Strips (van der Sanden)
 Fermacell
 Cavity
 Biobased Insulation (Flax)
 Timber Frame Structure with Biobased Insulation (Flax)
 Fermacell
 Installation Cavity
 Gypsum Board
 Stuco

Outside

Inside

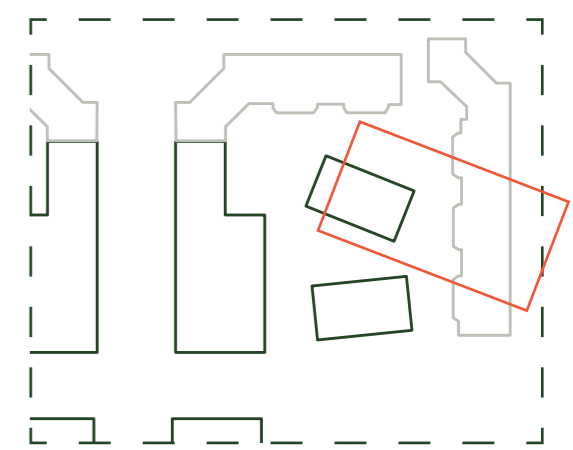






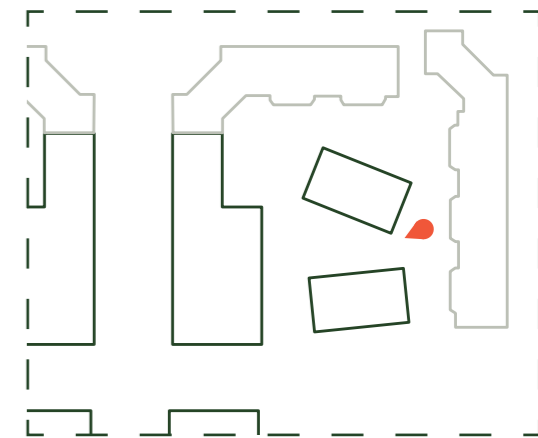


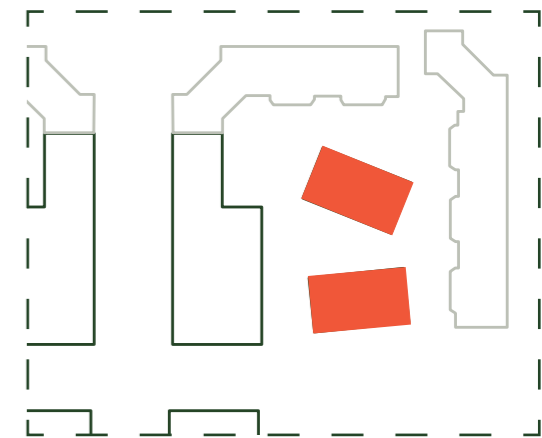
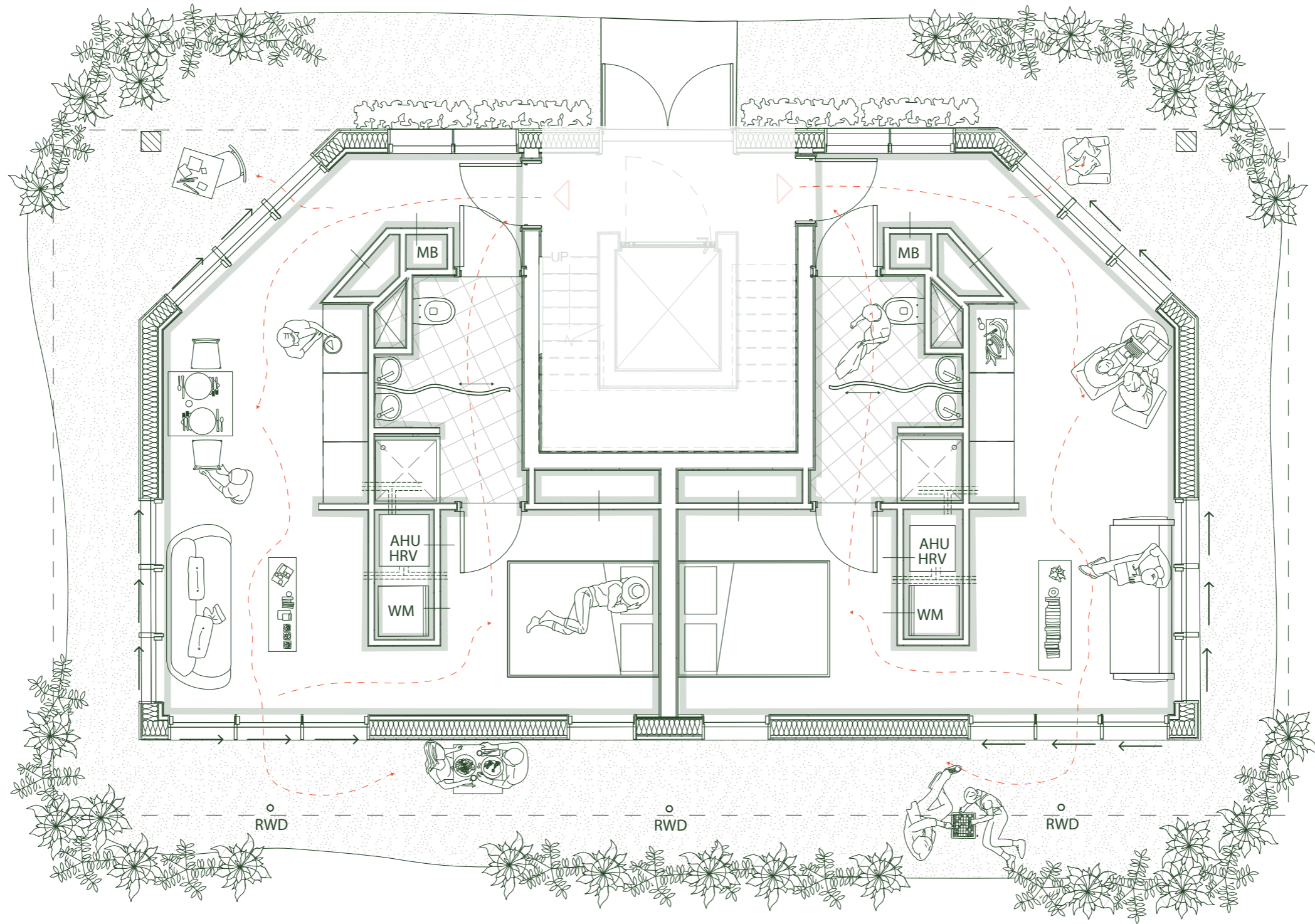
42 | Transition Zone Urban Villa

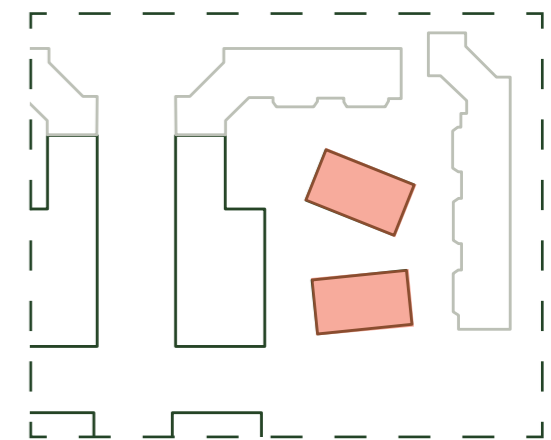
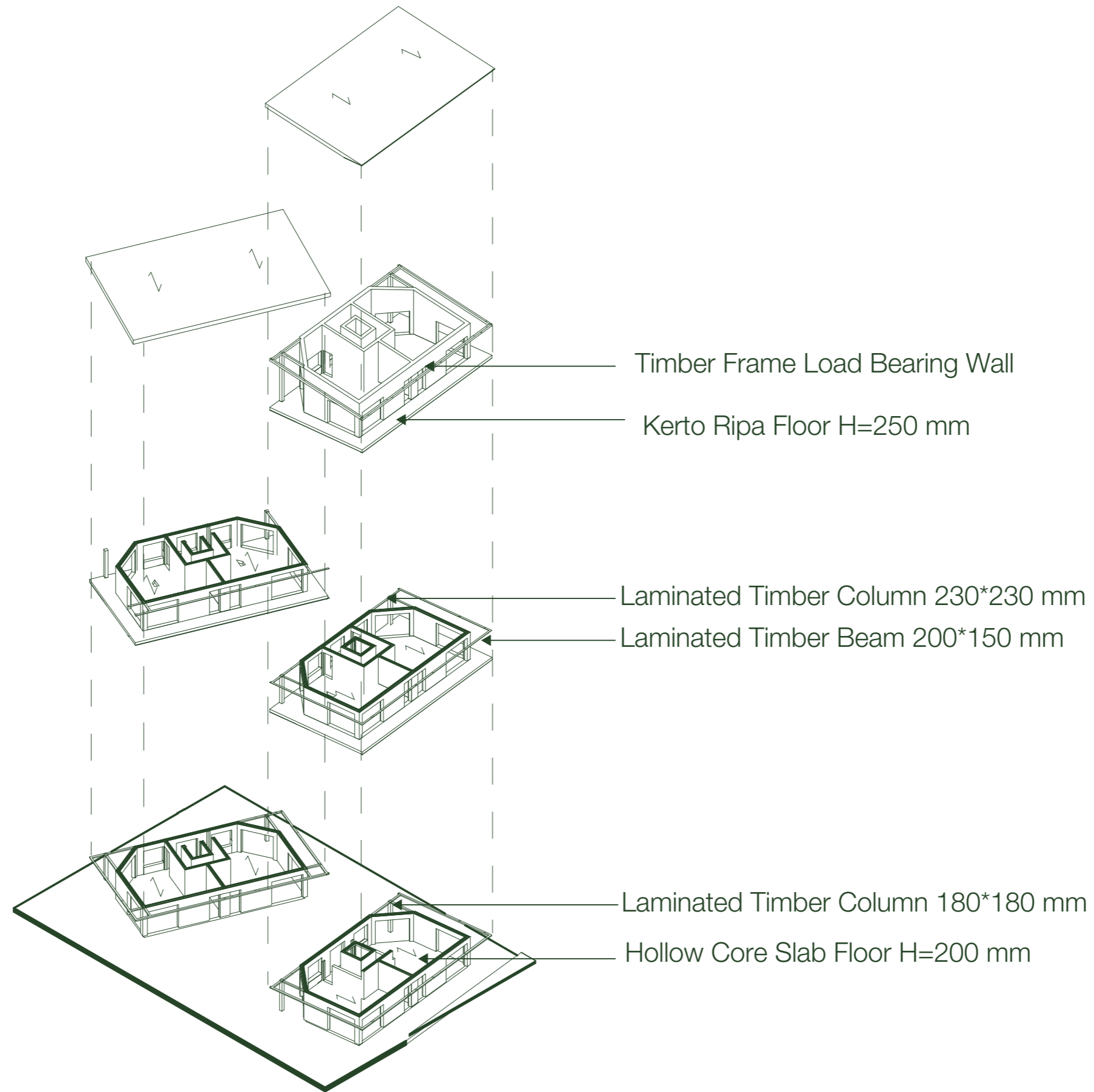


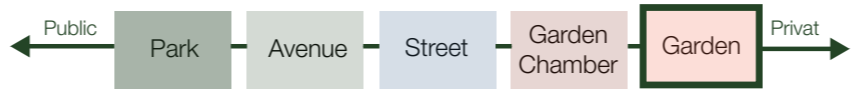
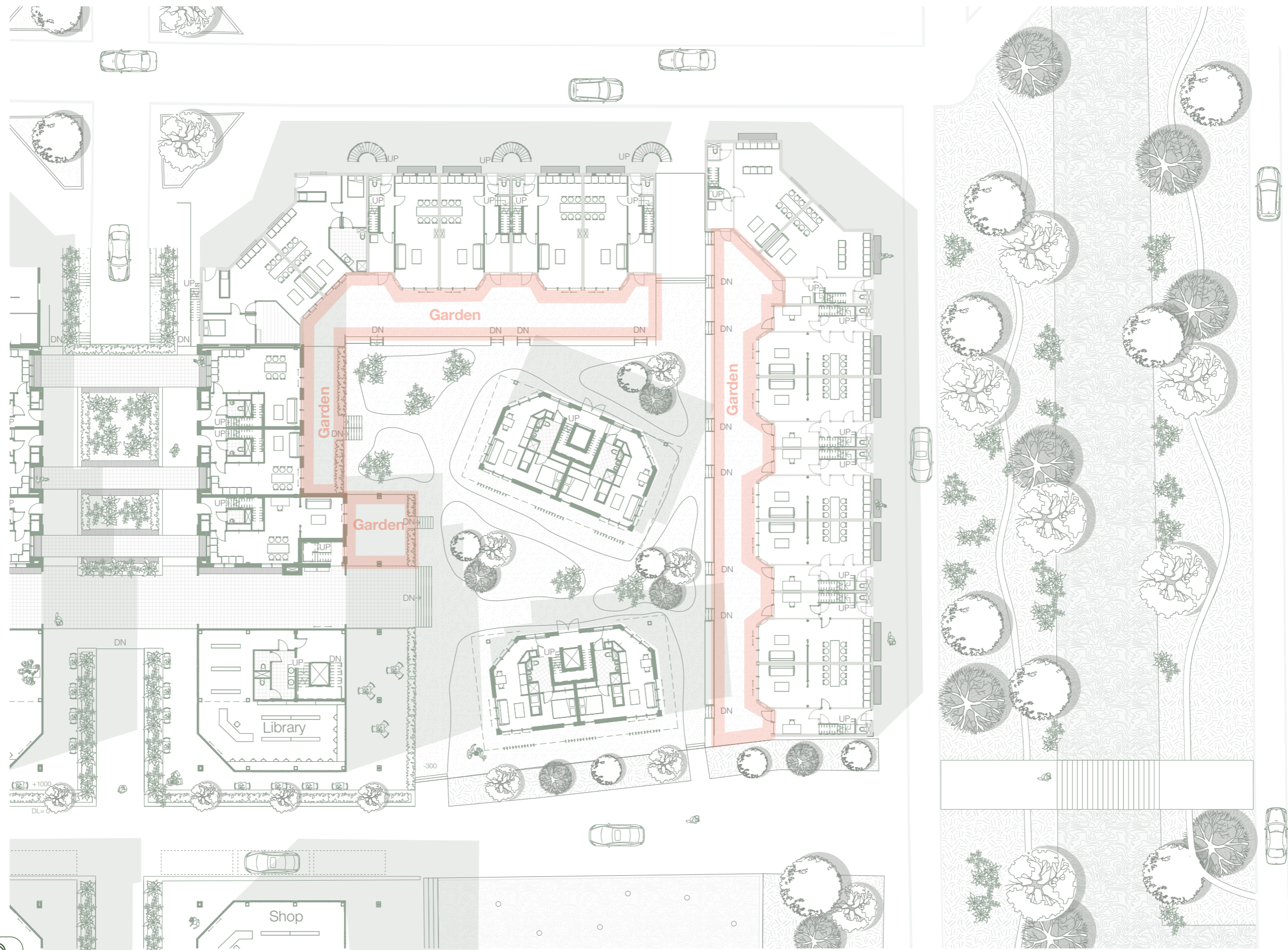


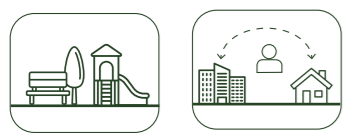
43 | Visualisation Green Space



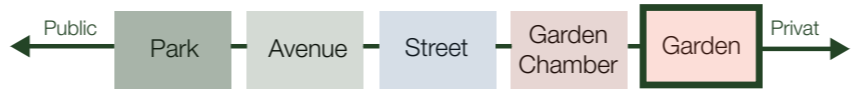






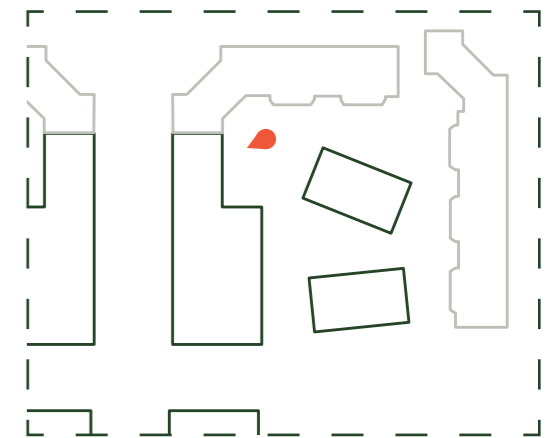


47 | Transition Zone Existing Housing





48 | Transition Zone New Housing



Bigger Picture.

What does it mean for
Raadsledenbuurt and Houtwijk?

Conclusion.

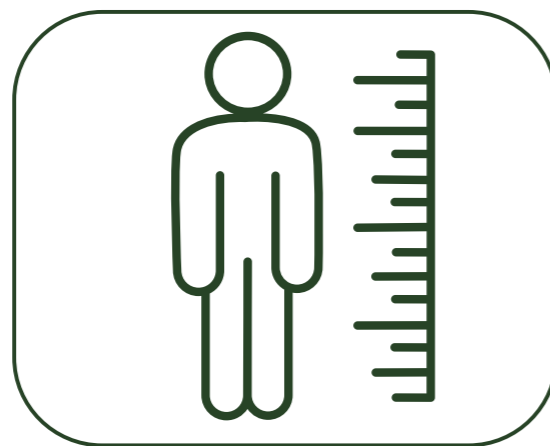
“How can architectural and spatial design strategies transform the cauliflower neighbourhood of Raadsledenbuurt in Houtwijk into a resilient 21st-century neighbourhood?”



Diversity of Built Form



Diversity of Outdoor Space



Human Scale

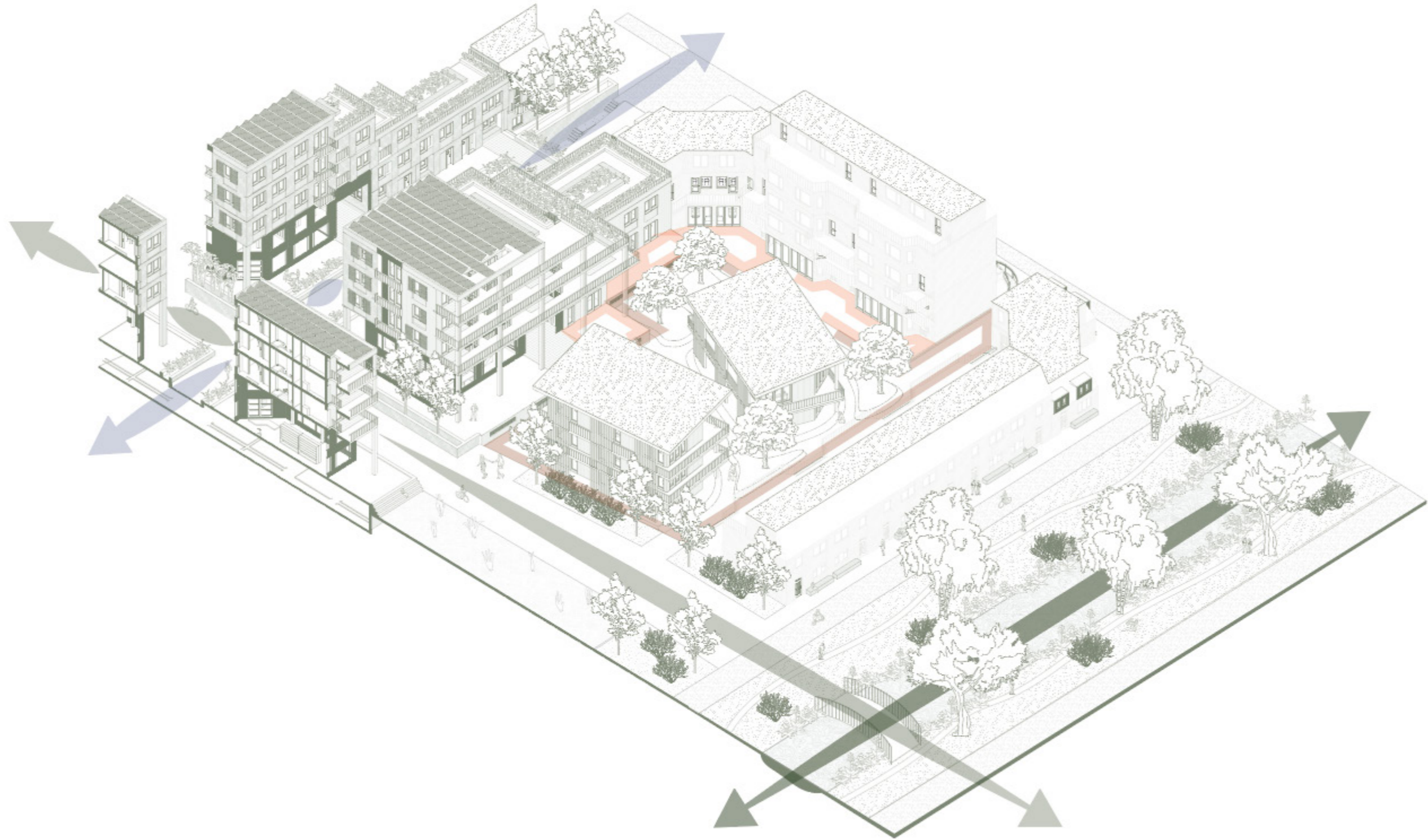


Sense of Control & Identity



Greater Biodiversity

Based on: (Sim, 2019)



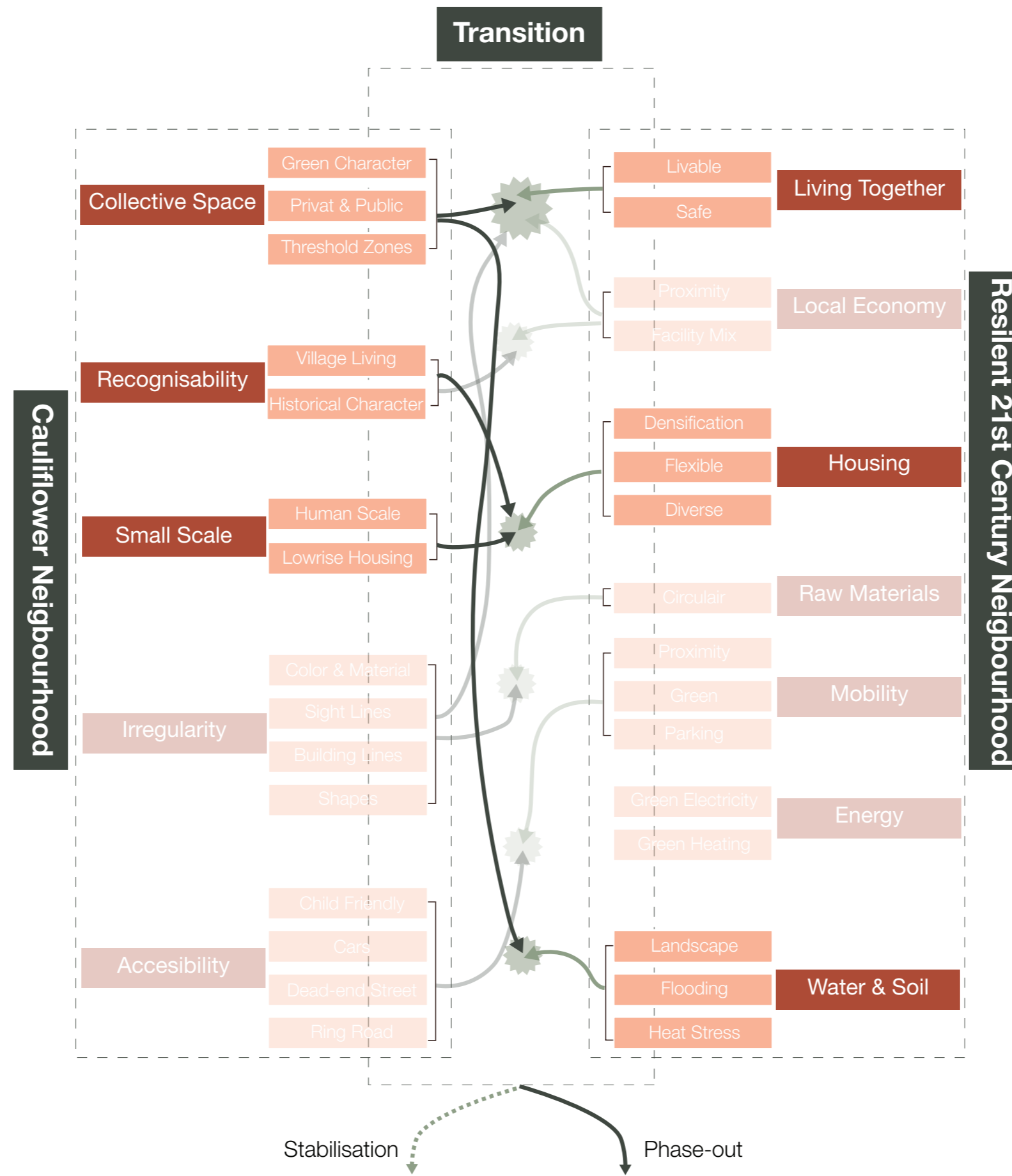
The Cauliflower 2.0:

“From Fragmentation to Resilience”

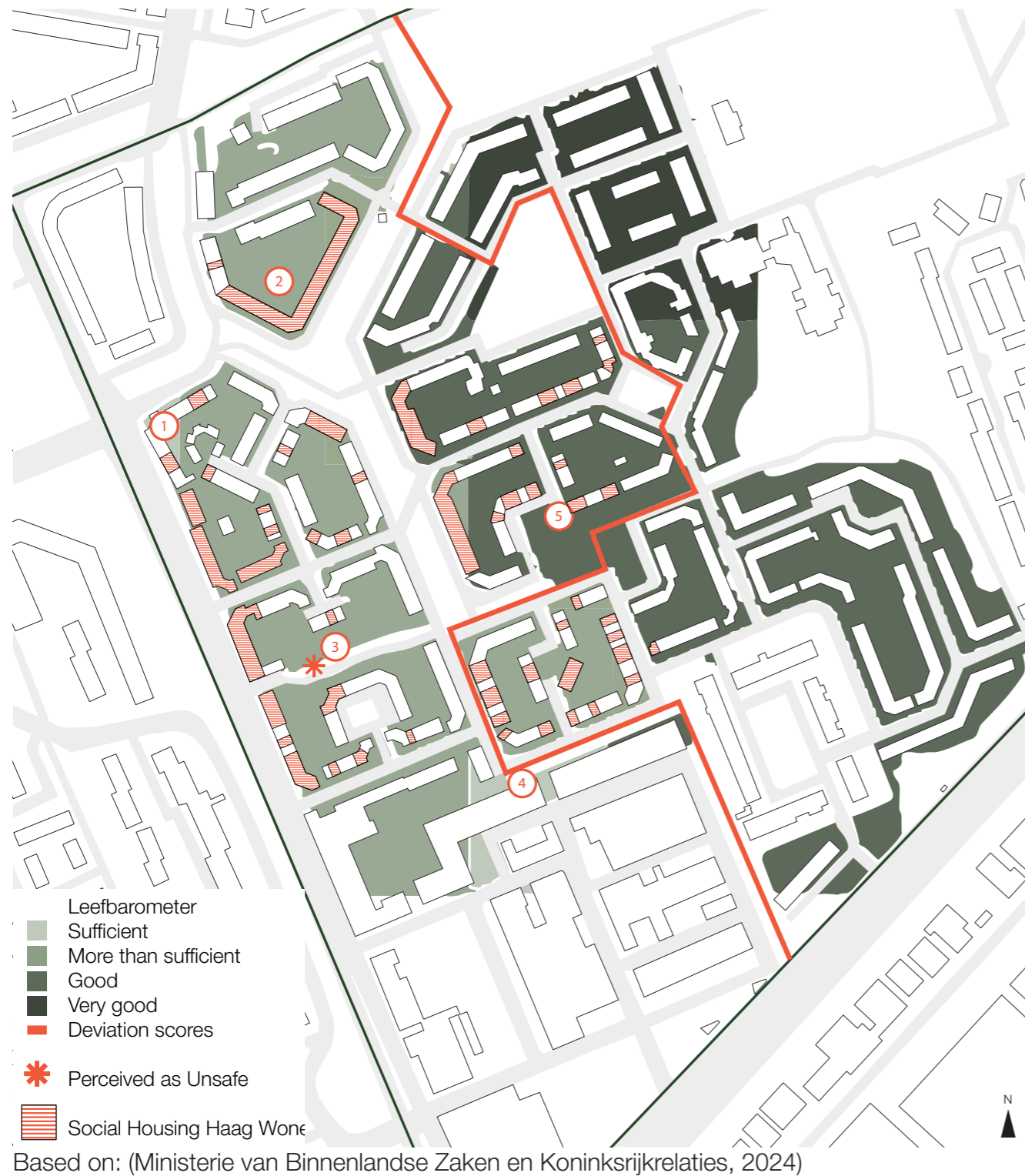
**Thanks for
Listening.**

**Any
Questions?**

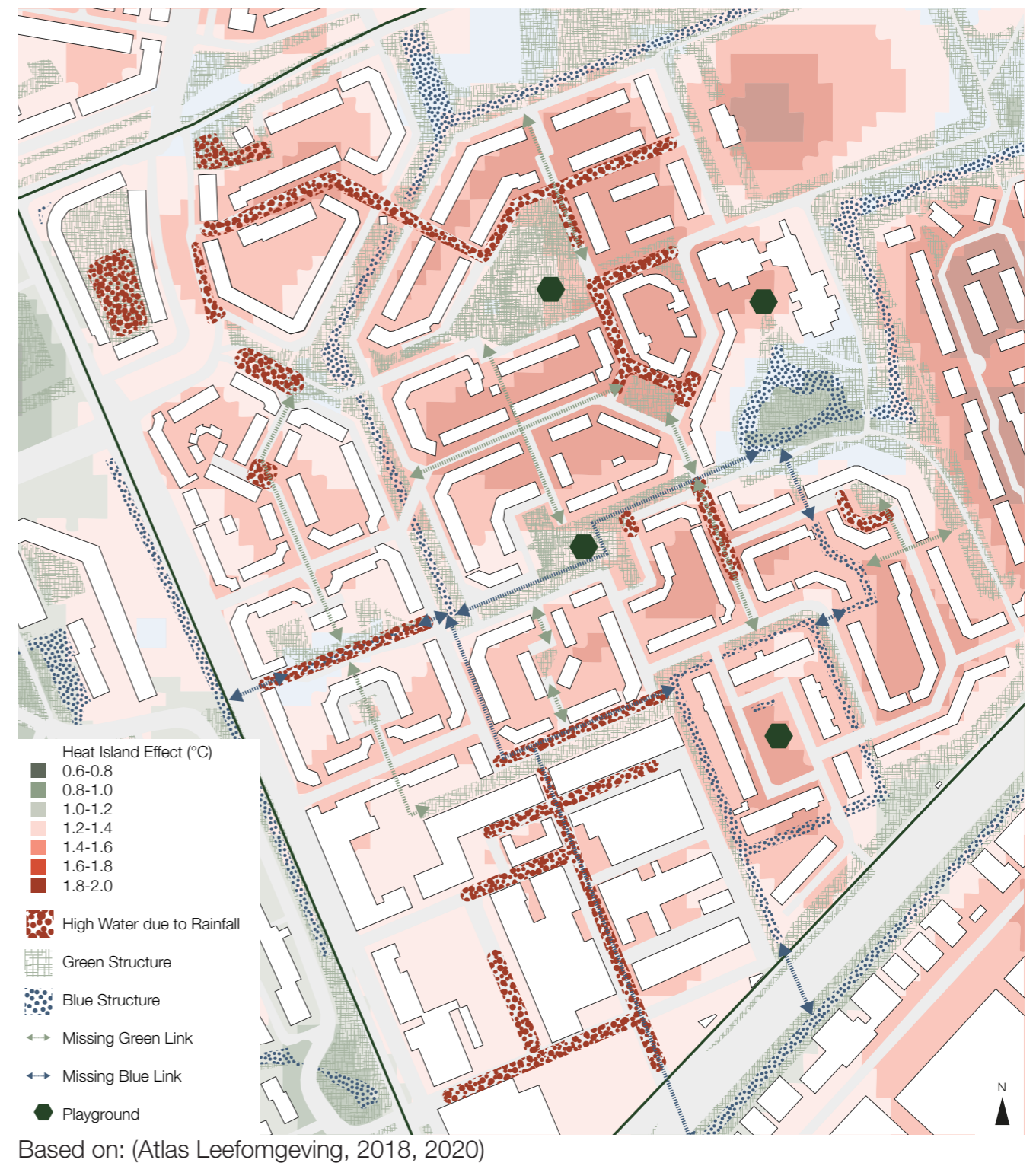
Extra Slides.



Livability and Safety



Climate and Nature



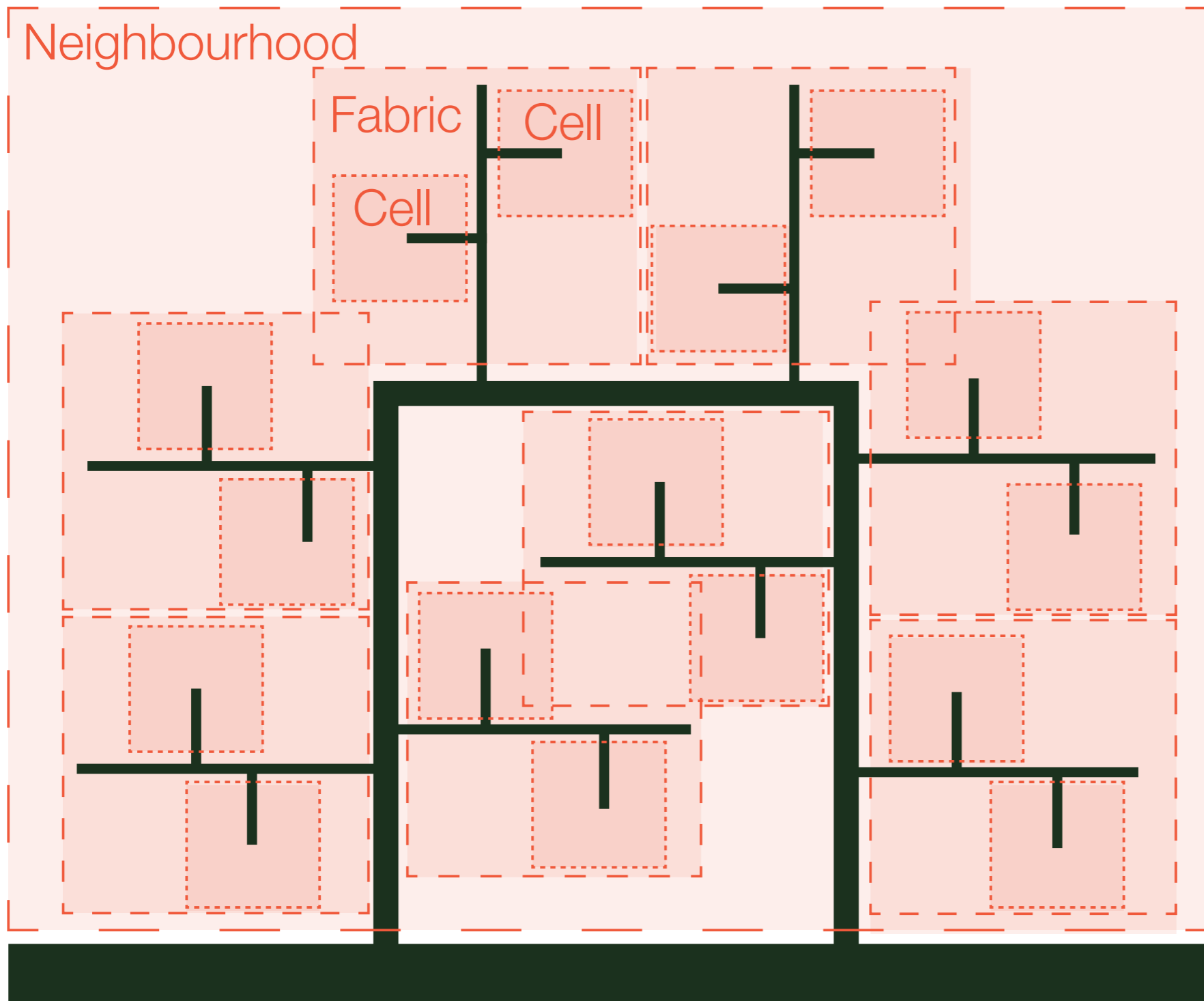
What are the architectural and spatial criteria of a 21st century neighbourhood?

Diversity		
1	Diversity of Built Form	
A	Difference in buildings, dimensions, typologies	
B	Visual variation	
2	Diversity of Outdoor Space	
A	Difference in public, private and shared	
B	Different typologies of space for activities	
C	Hybrid space that connect inside and outside	
D	Streets as public spaces	
E	Public spaces as places for mobility	
3	Flexibility	
A	Multipurpose indoor and outdoor spaces	
B	Biggest proportion of volume is ground floor	
C	Backs with room for growth	
D	Enclosed spaces for activities	
E	Room on edge for temporary overflow	
F	Independent building parts	

Human		
4	Human Scale	
A	Smaller dimensions and spaces	
B	No higher than six stories, ideally four or five	
C	Multi sensory experiences	
D	Particular care for eye-level	
5	Walkability	
A	Walk-in, through and up buildings	
B	Higher proportion of ground floor	
C	Visual and physical connection inside outside	
D	Direct access to useful outside spaces	
E	Walkability at neighbourhood scale	
6	Sense of Control and Identity	
A	Hierarchy of identifiable territories	
B	Clarity between public and private	
C	Fronts and Backs	
D	Enclosure	
E	Smaller units	
F	Shared spatial focus	
G	Useful edge zones	
H	Significant Corners	

Earth		
7	Pleasant Microclimate	
A	Consistent microclimatic conditions	
B	Protection from strong wind	
C	Solar penetration and avoidance of shadows	
D	Protected outdoor spaces	
E	Useful openings	
F	Rain protection at edges	
8	Smaller Carbon Footprint	
A	Fewer exposed facades	
B	Smaller dimensions for light and ventilation	
C	Simpler construction and foundation system	
D	Less reliance on complex technology	
E	Layout on walking promotion	
9	Greater Biodiversity	
A	Multiplicity of smaller, individual outdoor spaces	
B	Many protected spaces and edges	
C	Smaller dimensions for greenwalls and roofs	
D	Smaller scale for water management infiltration	
E	Soft landscaping where possible.	

Based on: (Sim, 2019)



Source: (Abrahamse, 2019; Ubink & Van der Steeg, 2011)

Urban Layout

structured by traffic
and nature

neighbourhood, fabric, cell

Collective Space

courtyards

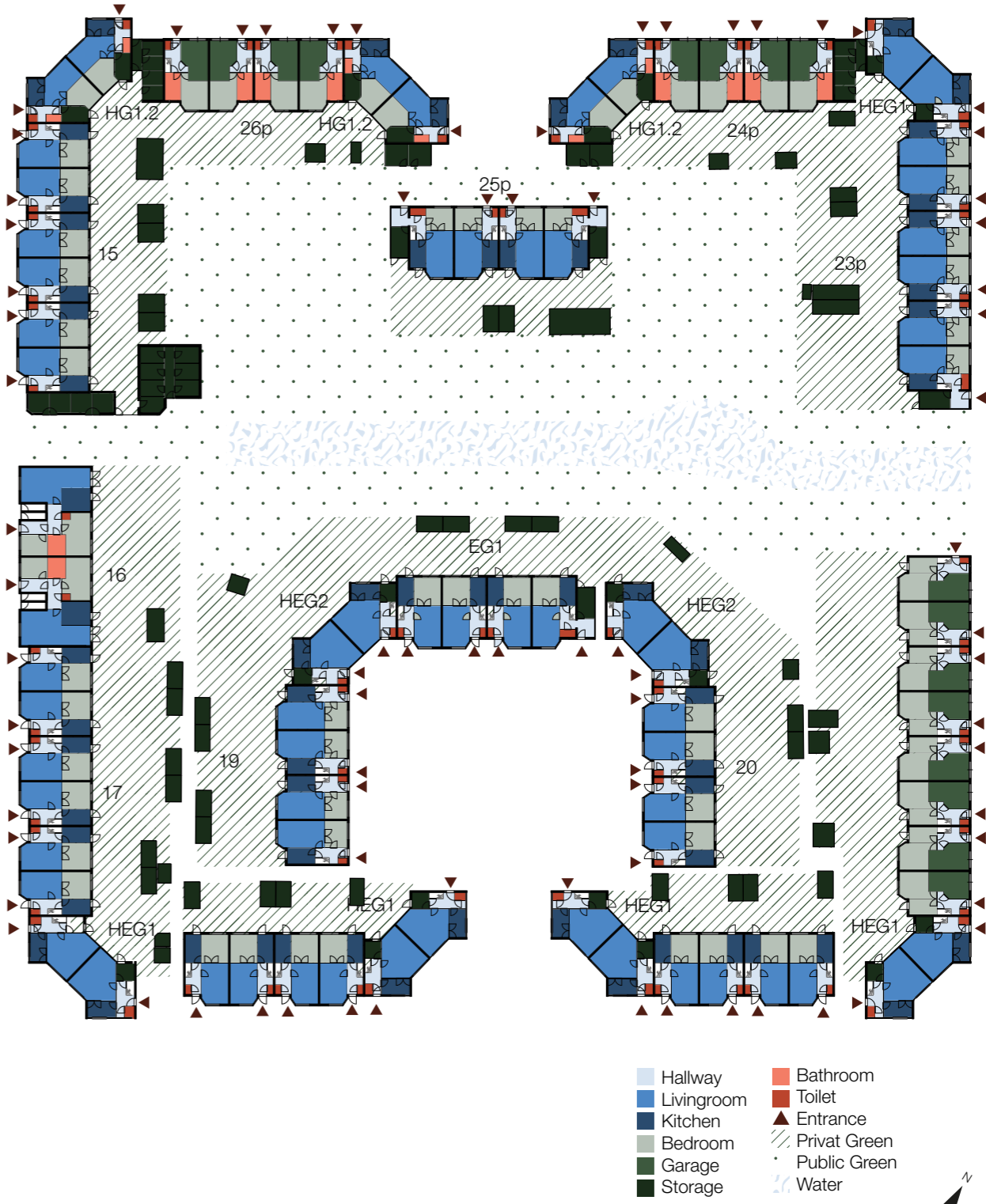
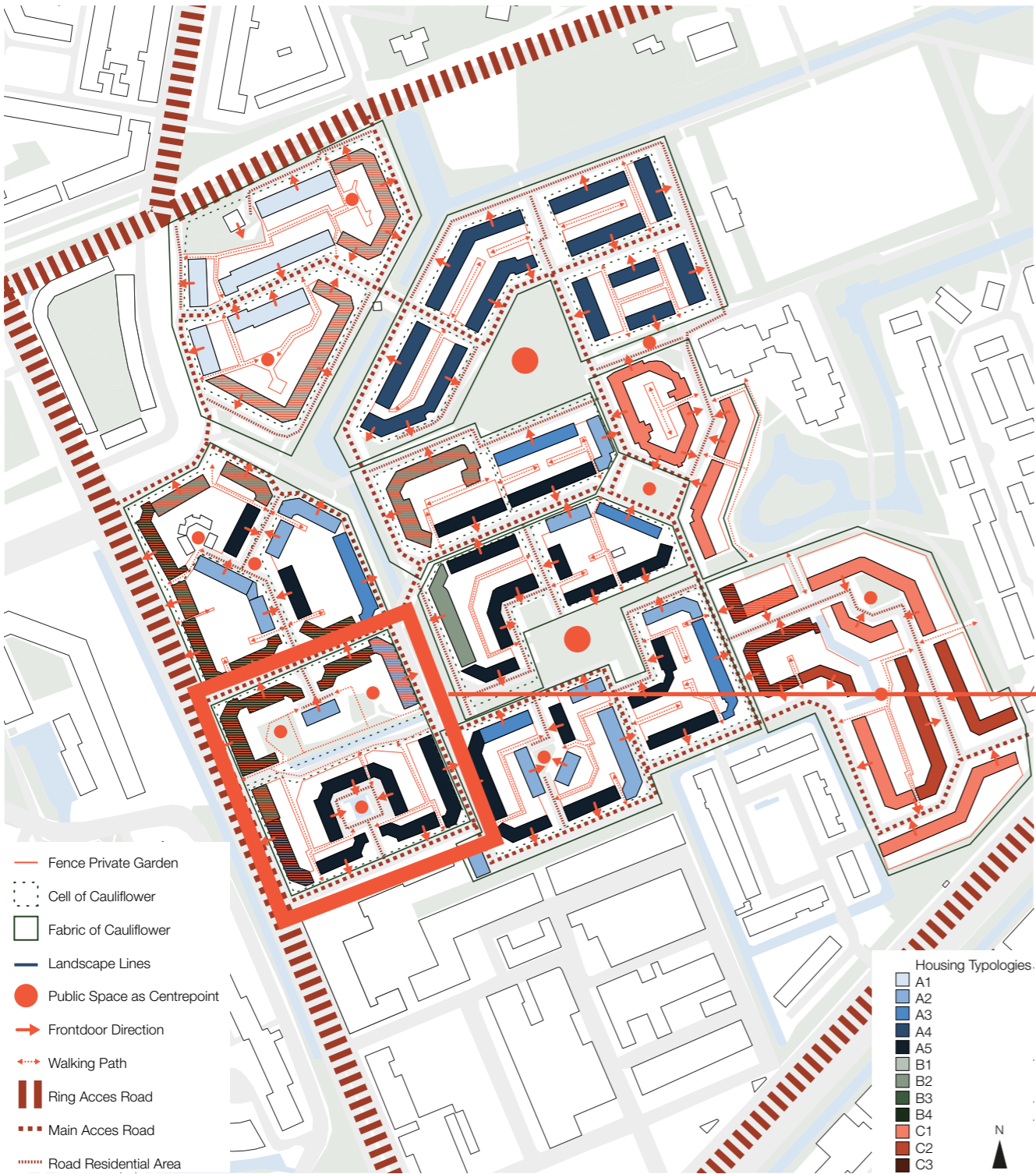
tresholdzones between
housing and public space

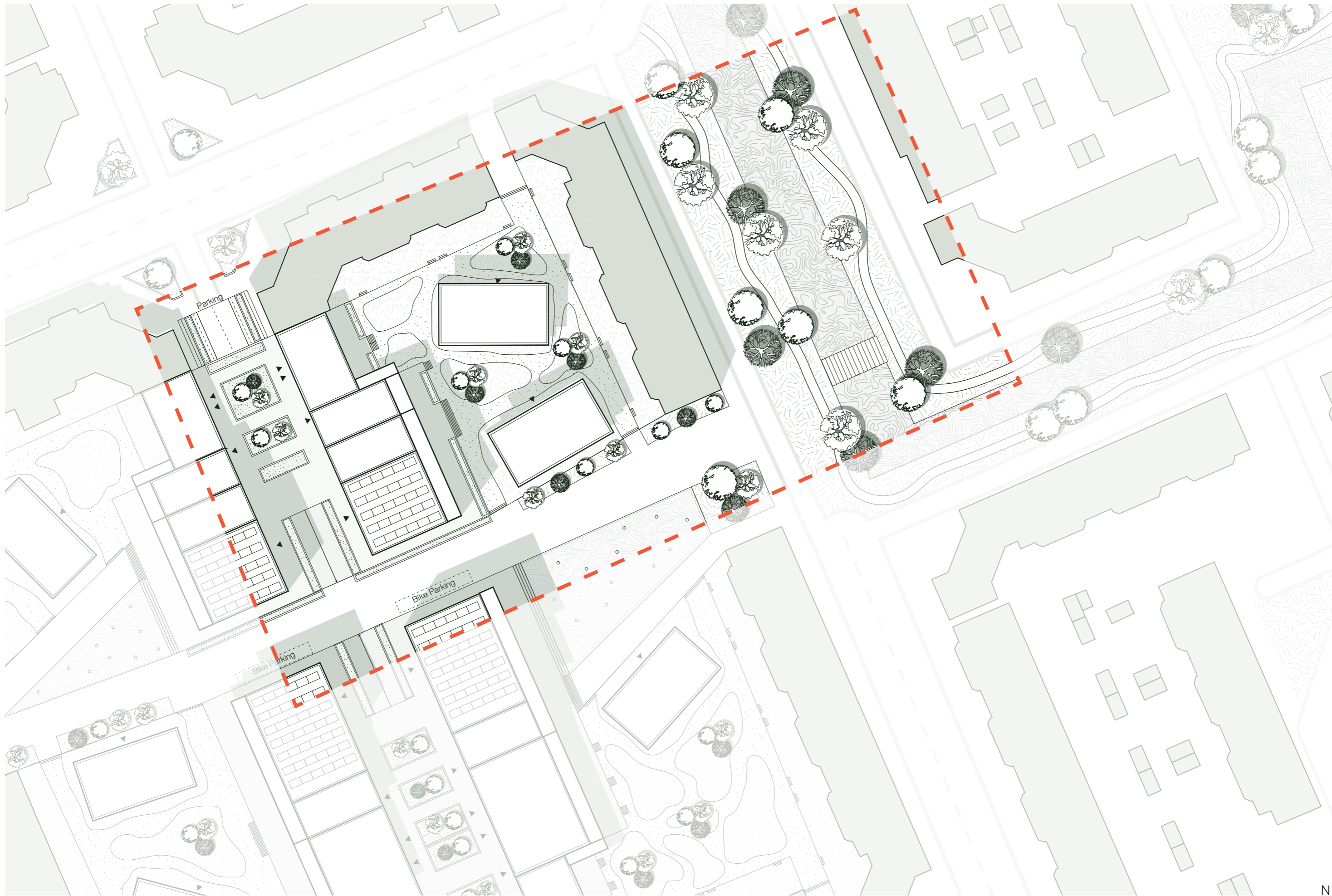
Architecture

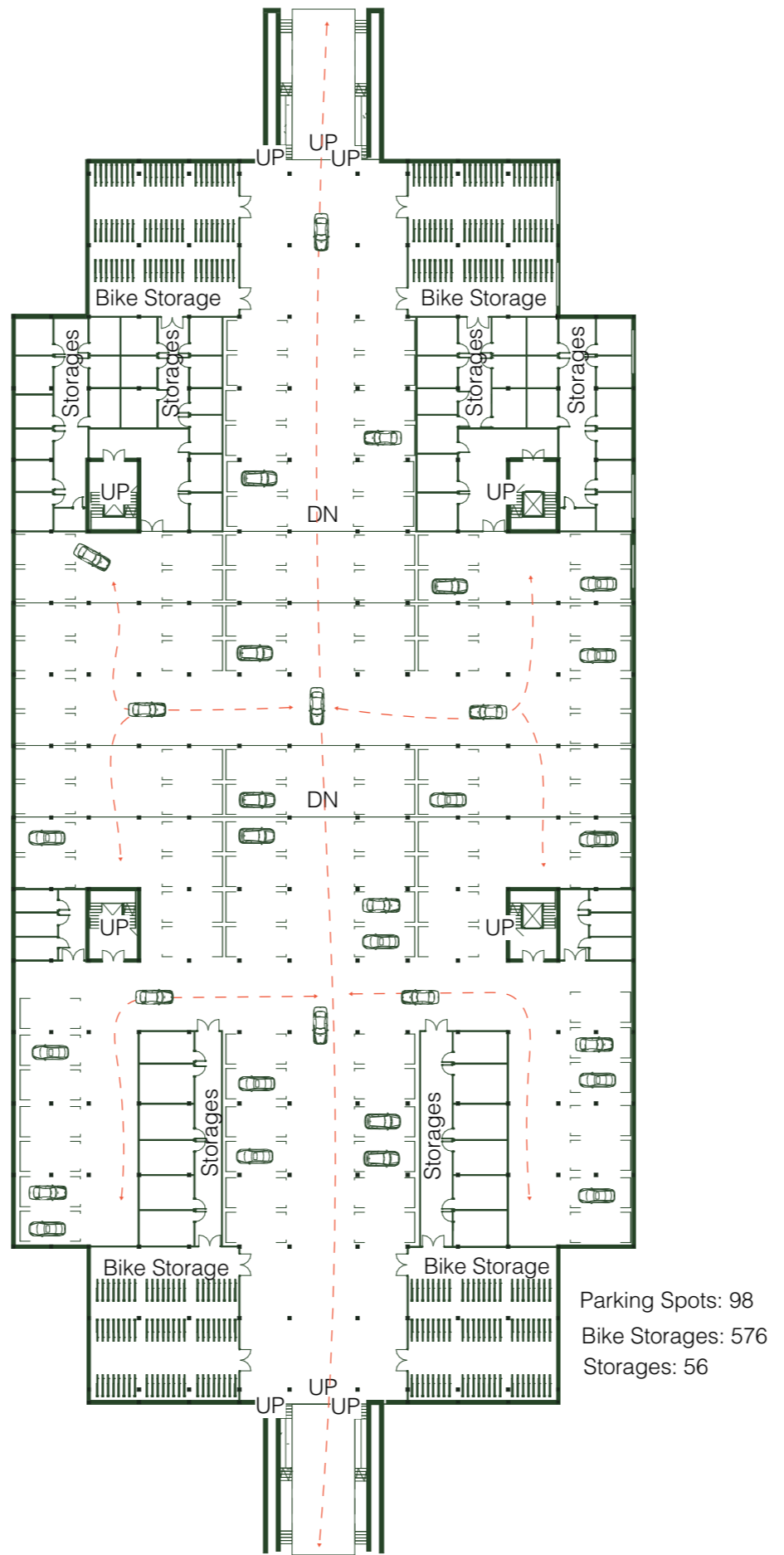
irregularity in shapes, color
and sightlines

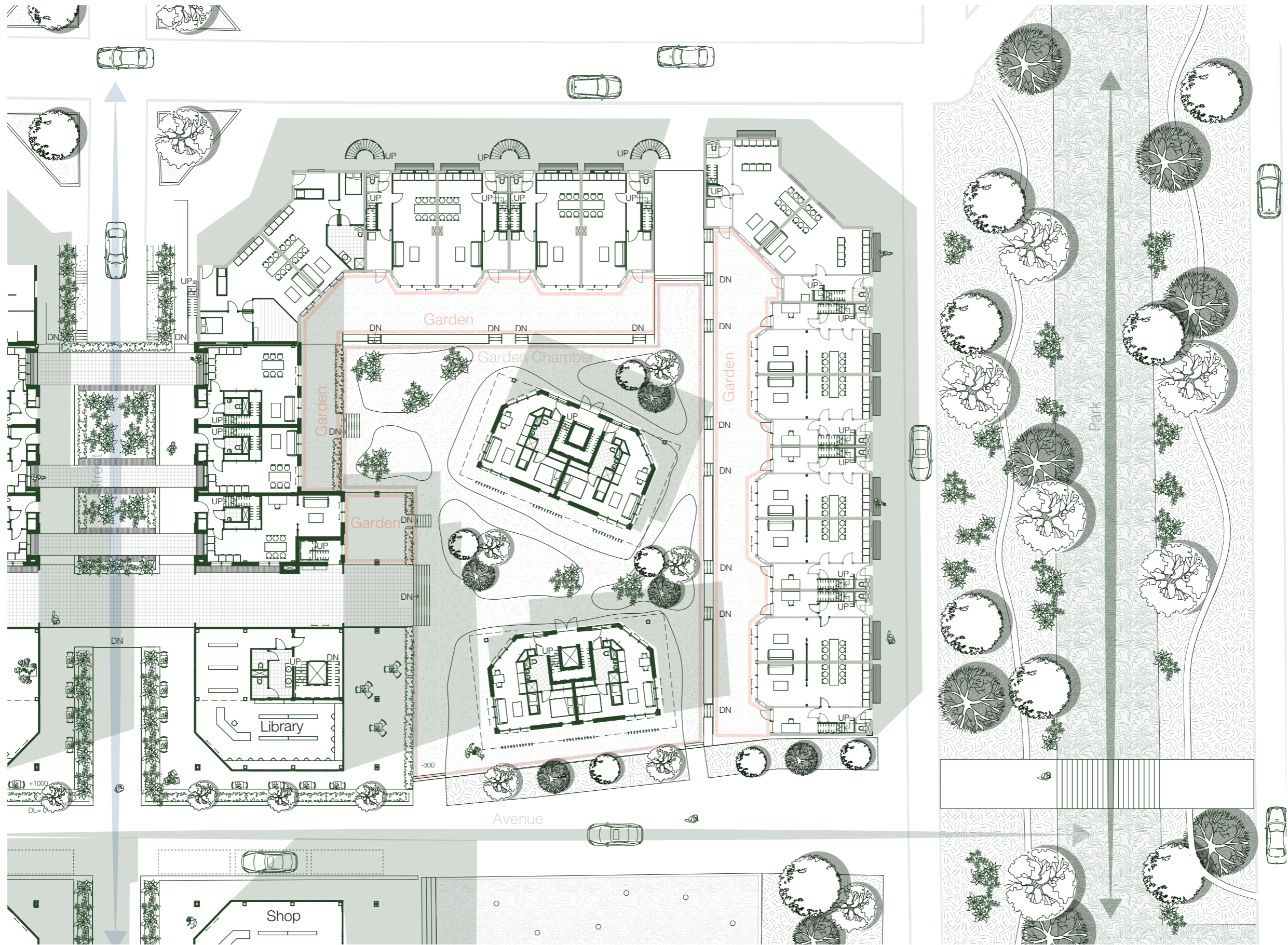
orientation

Which architectural and spatial characteristics of a typical cauliflower neighbourhood are present, absent or underrepresented in the Raadsledenbuurt in Houtwijk?





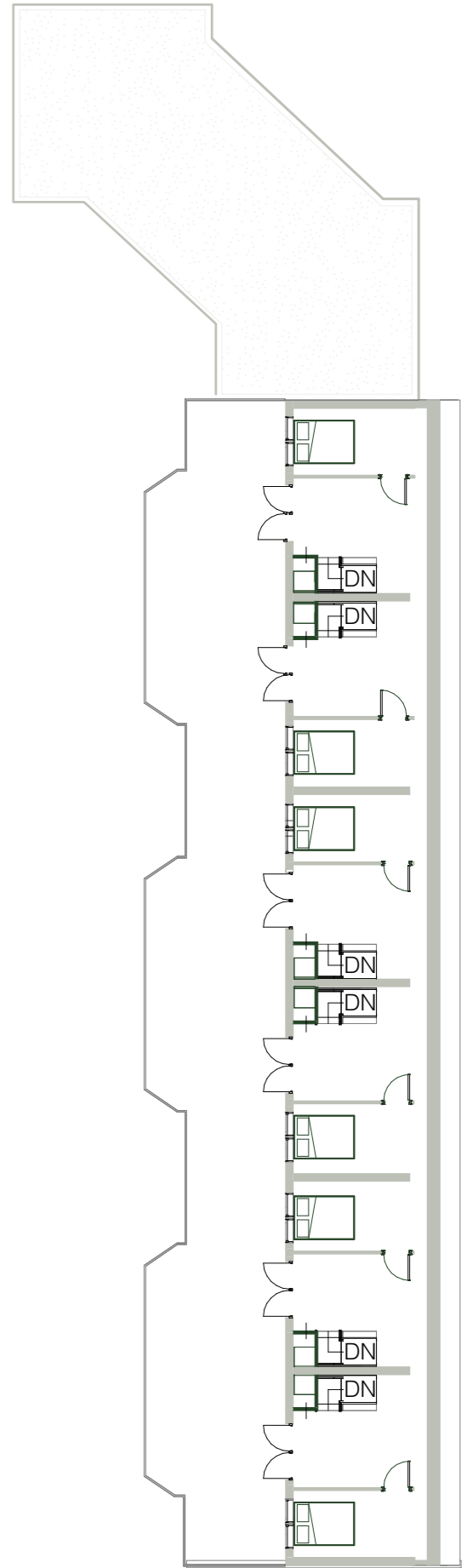


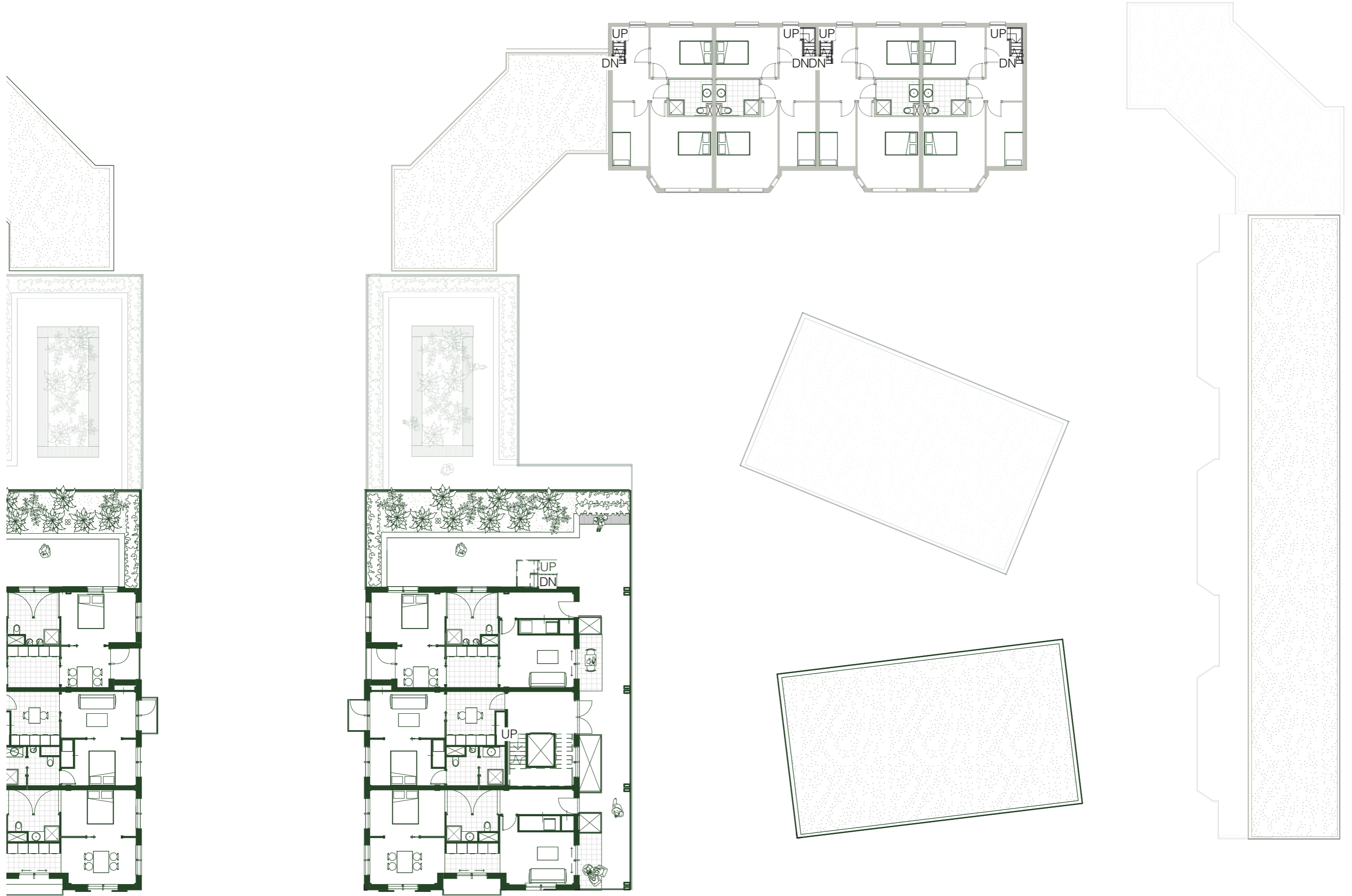


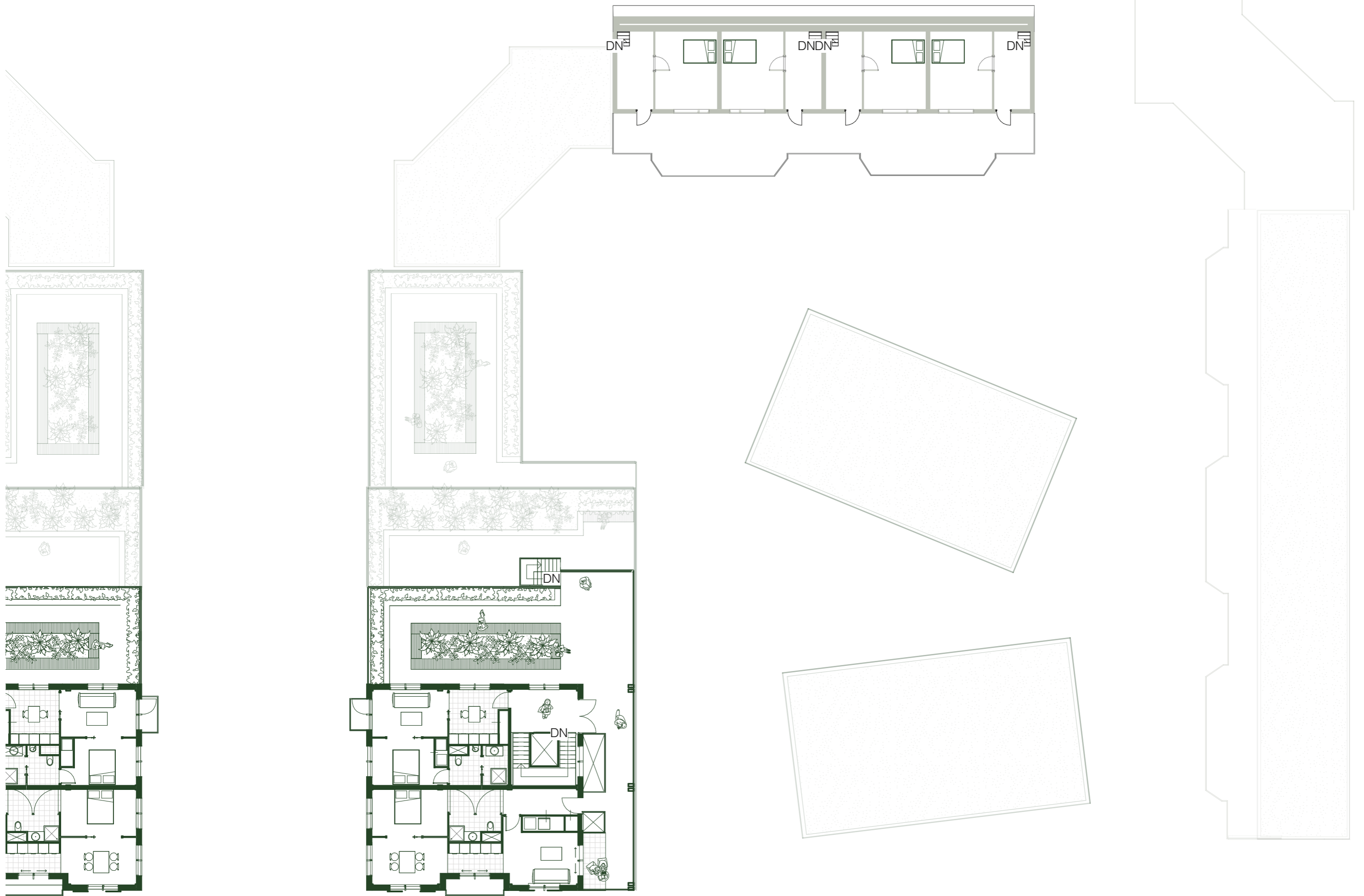


64 | Floorplan 1st Floor



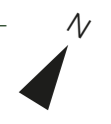
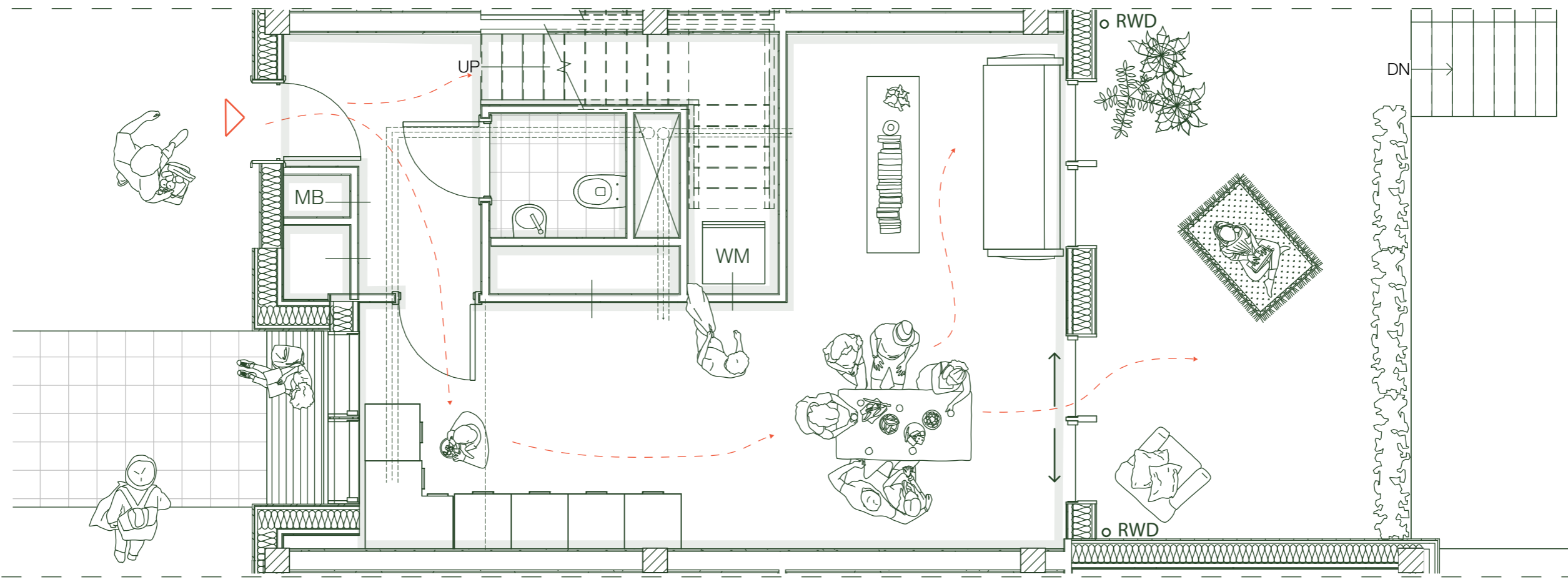
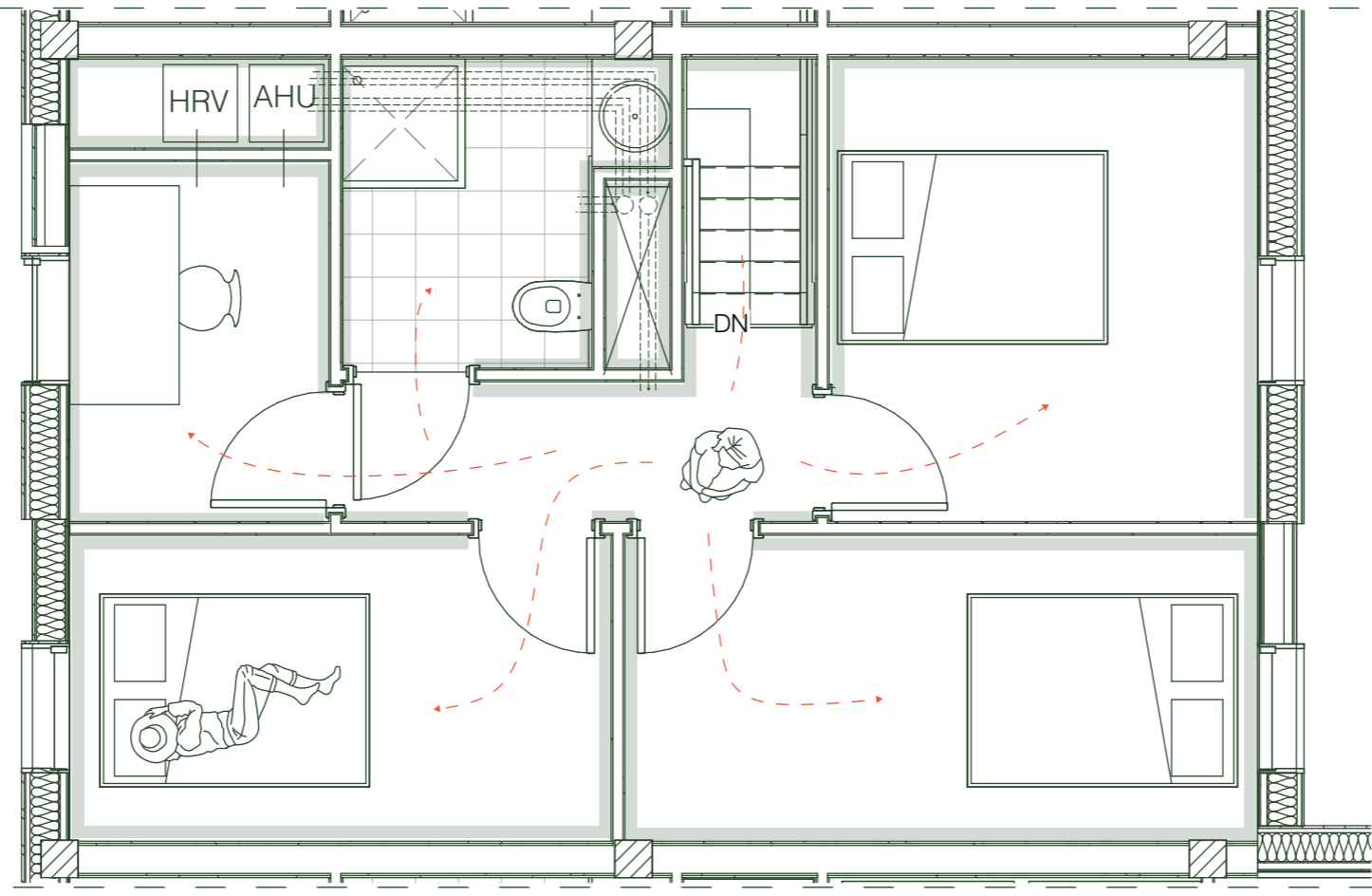


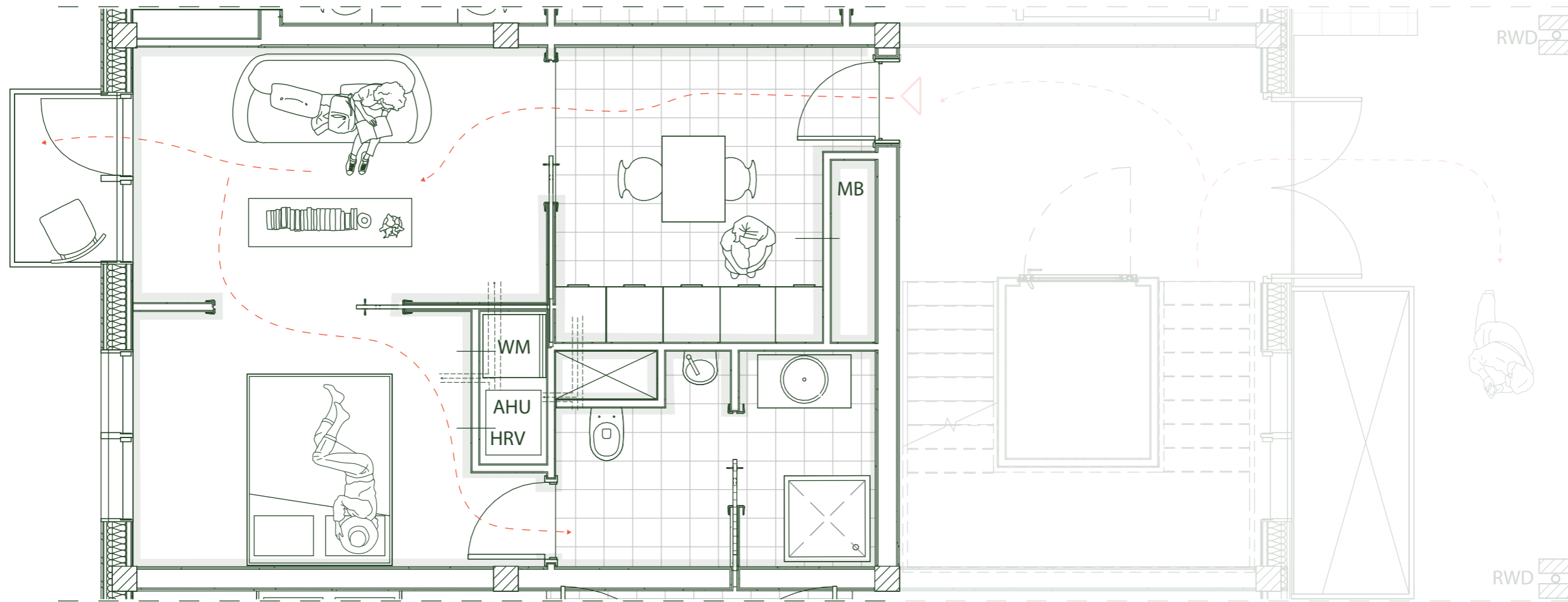


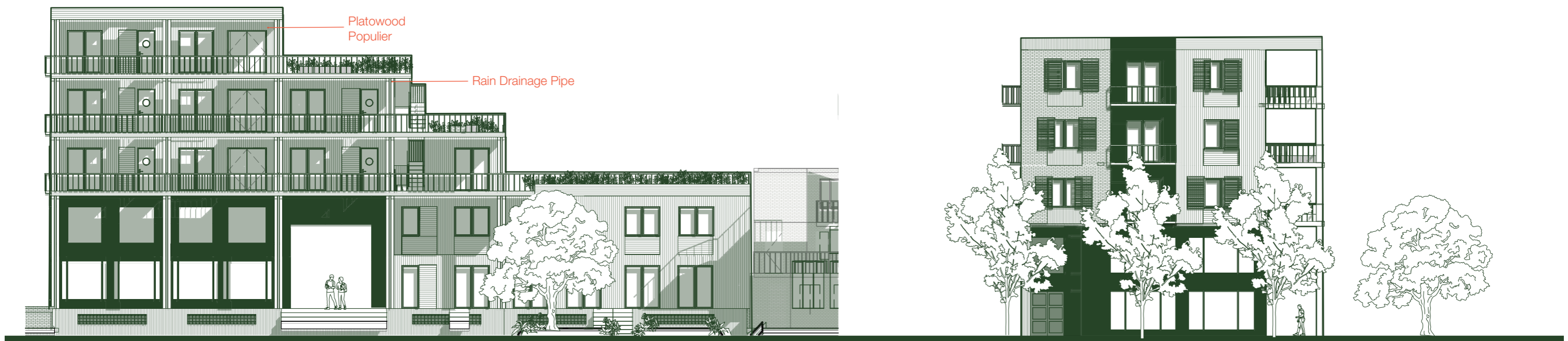
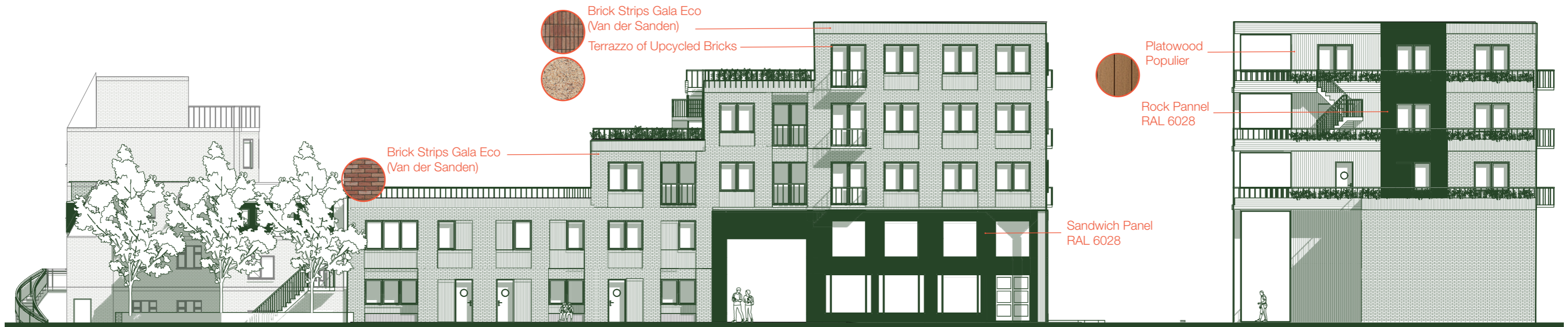


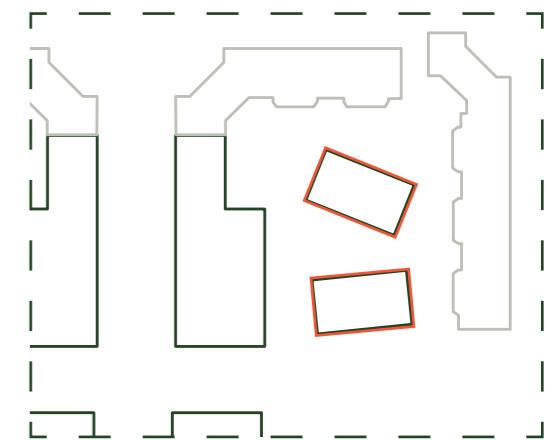
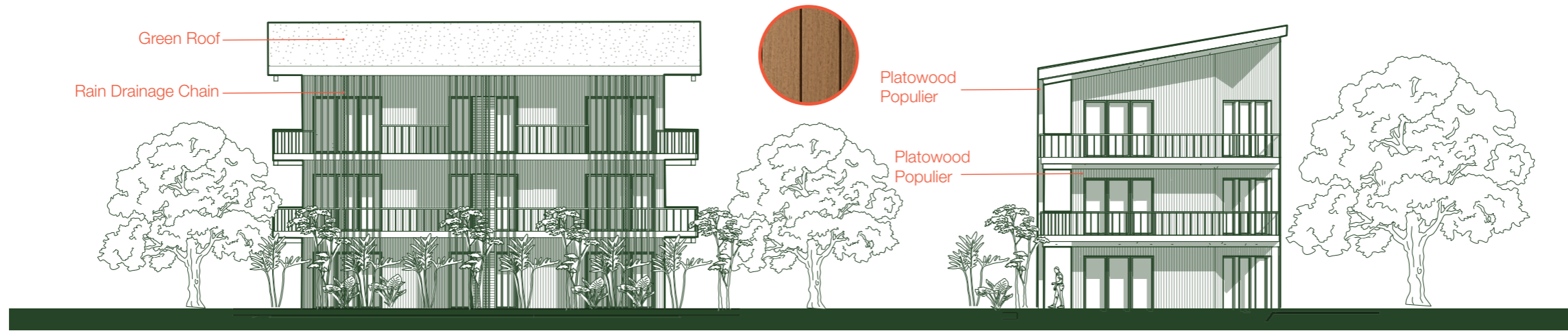
67 | Floorplan 4th Floor



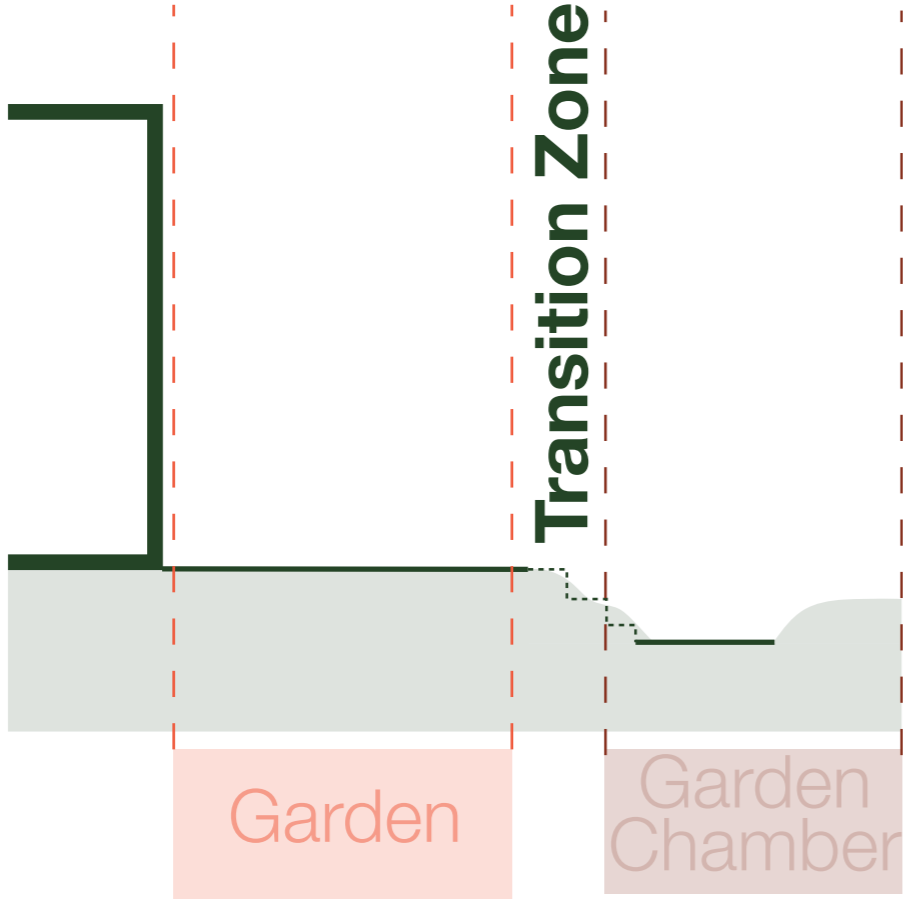




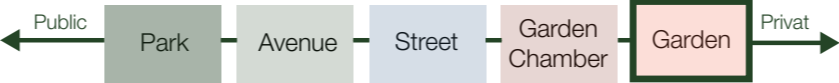
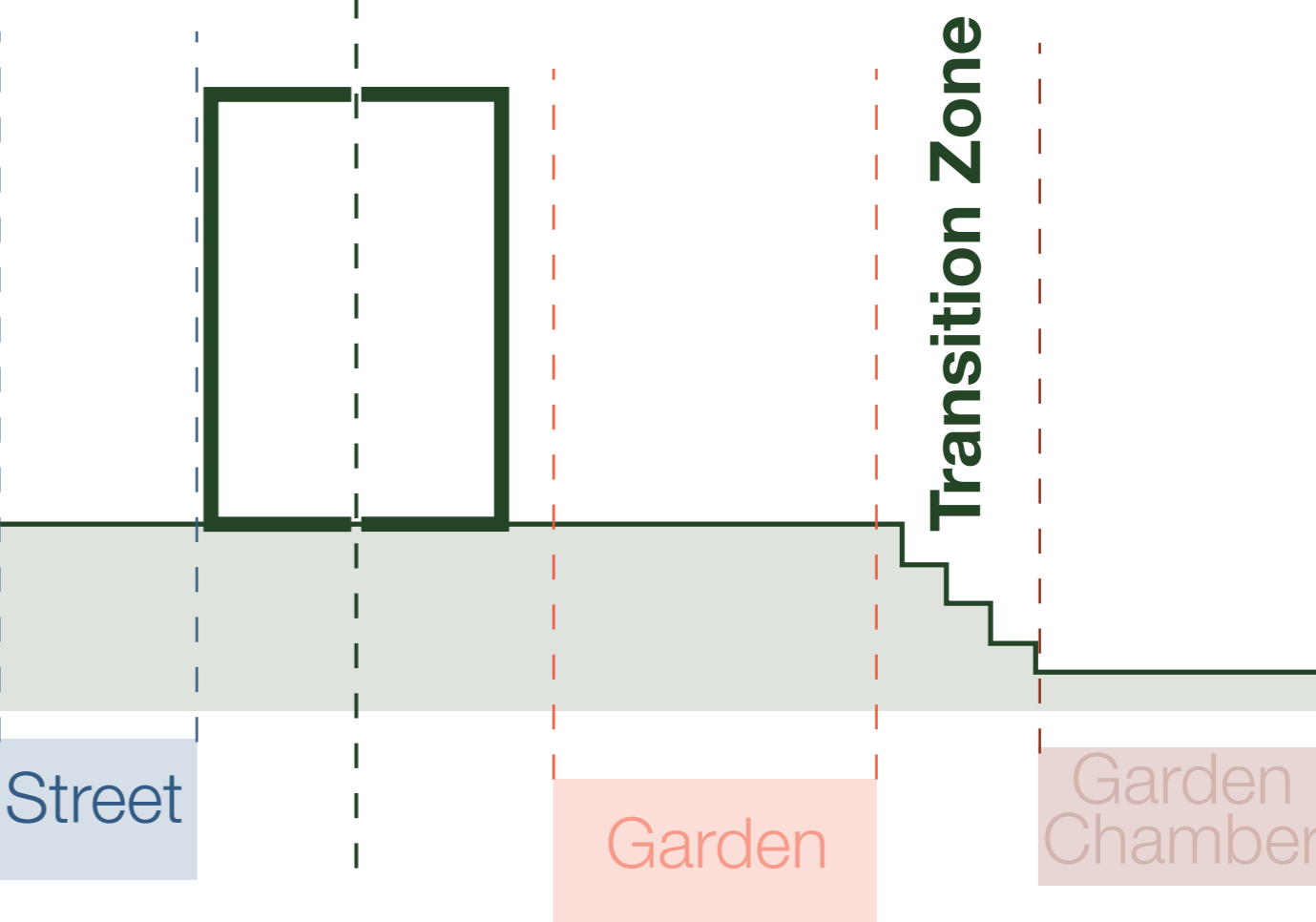


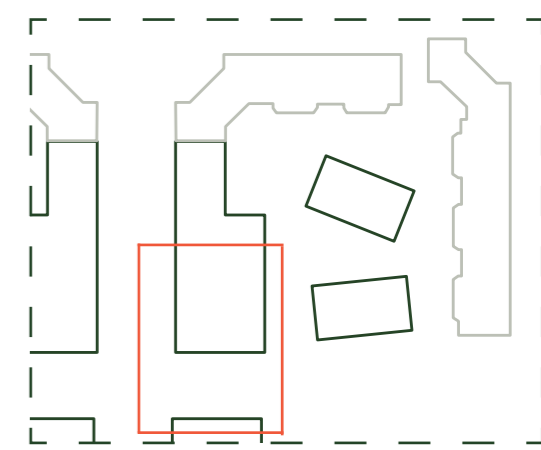


Existing Housing



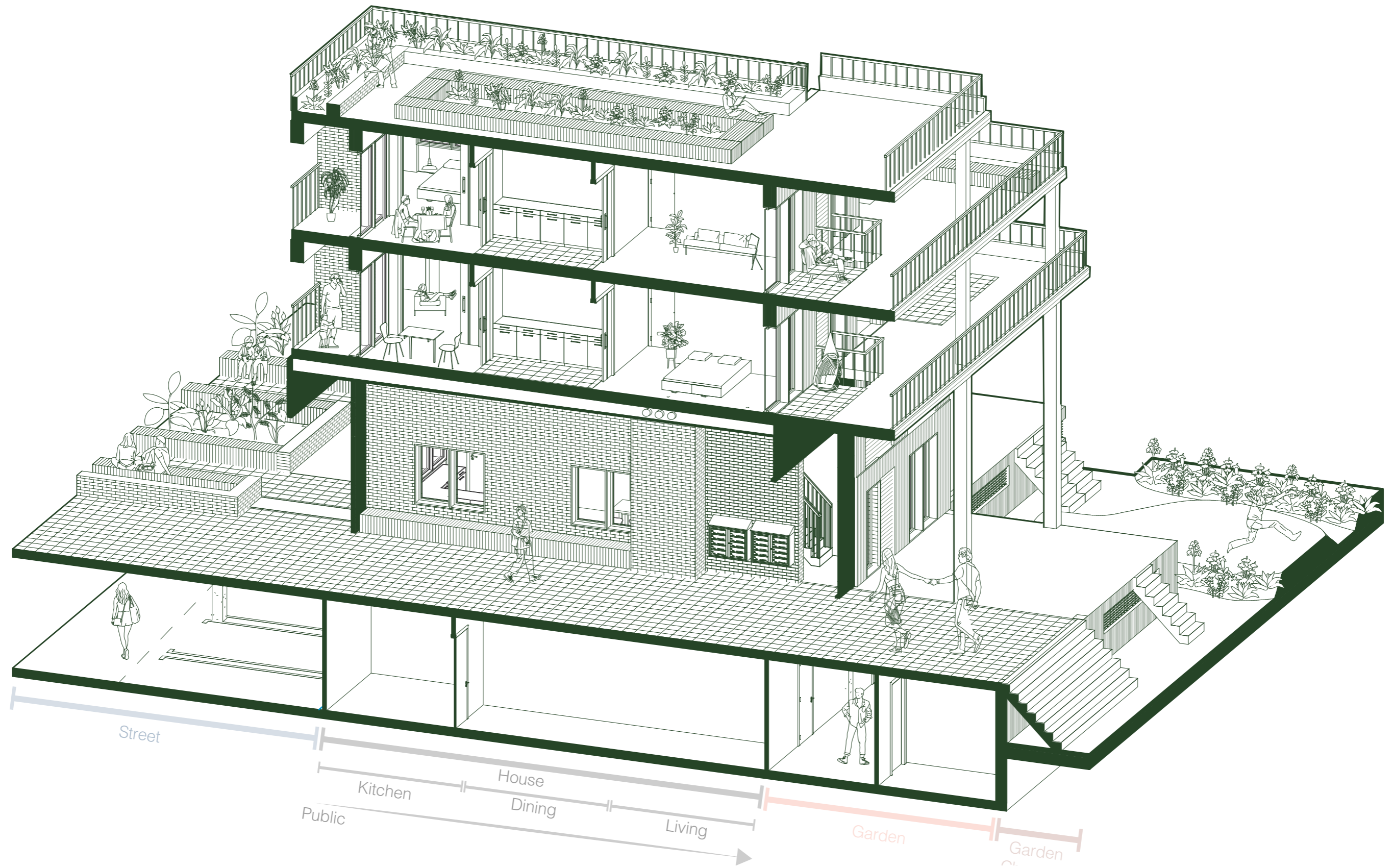
New Build Housing



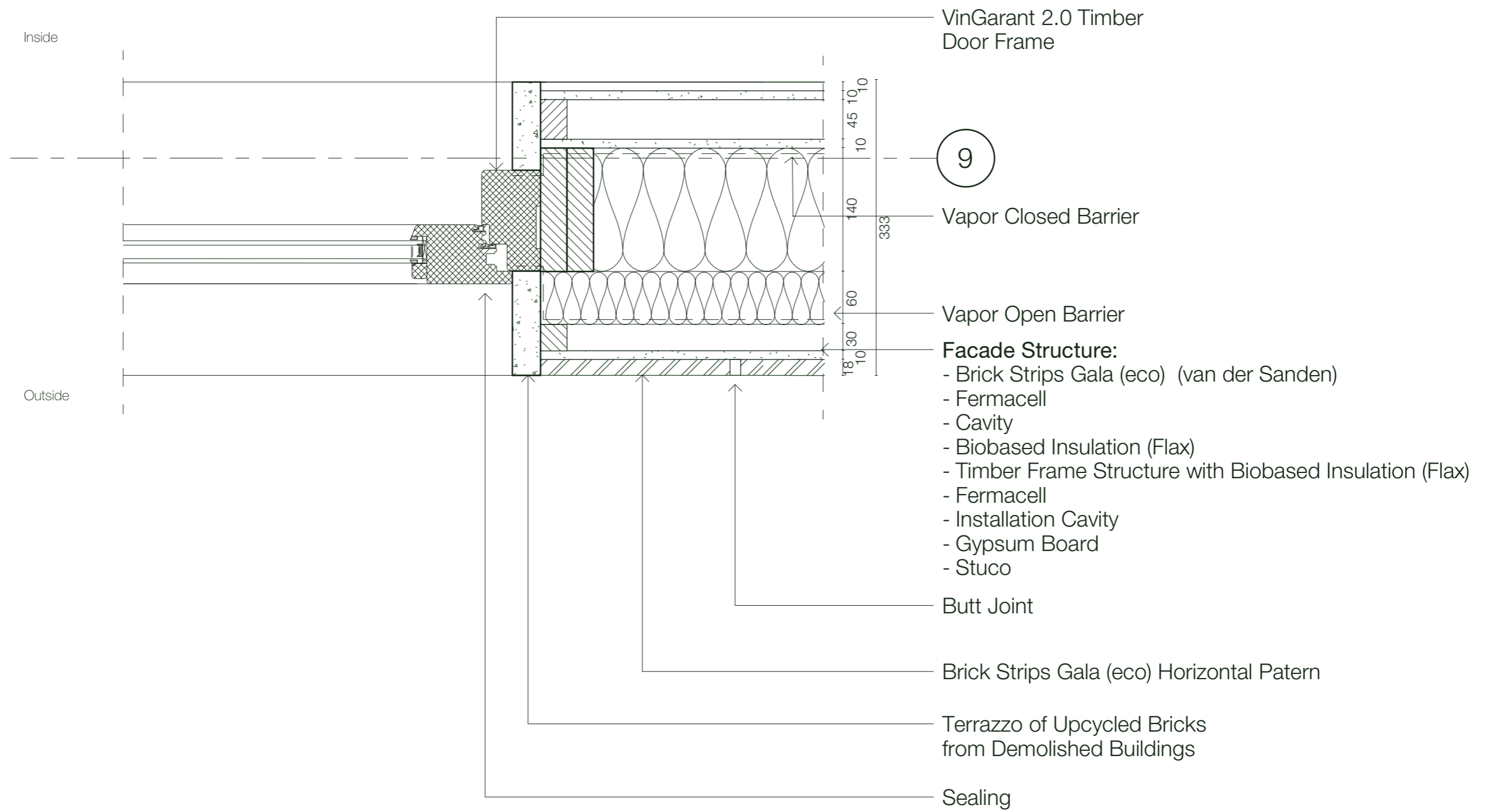


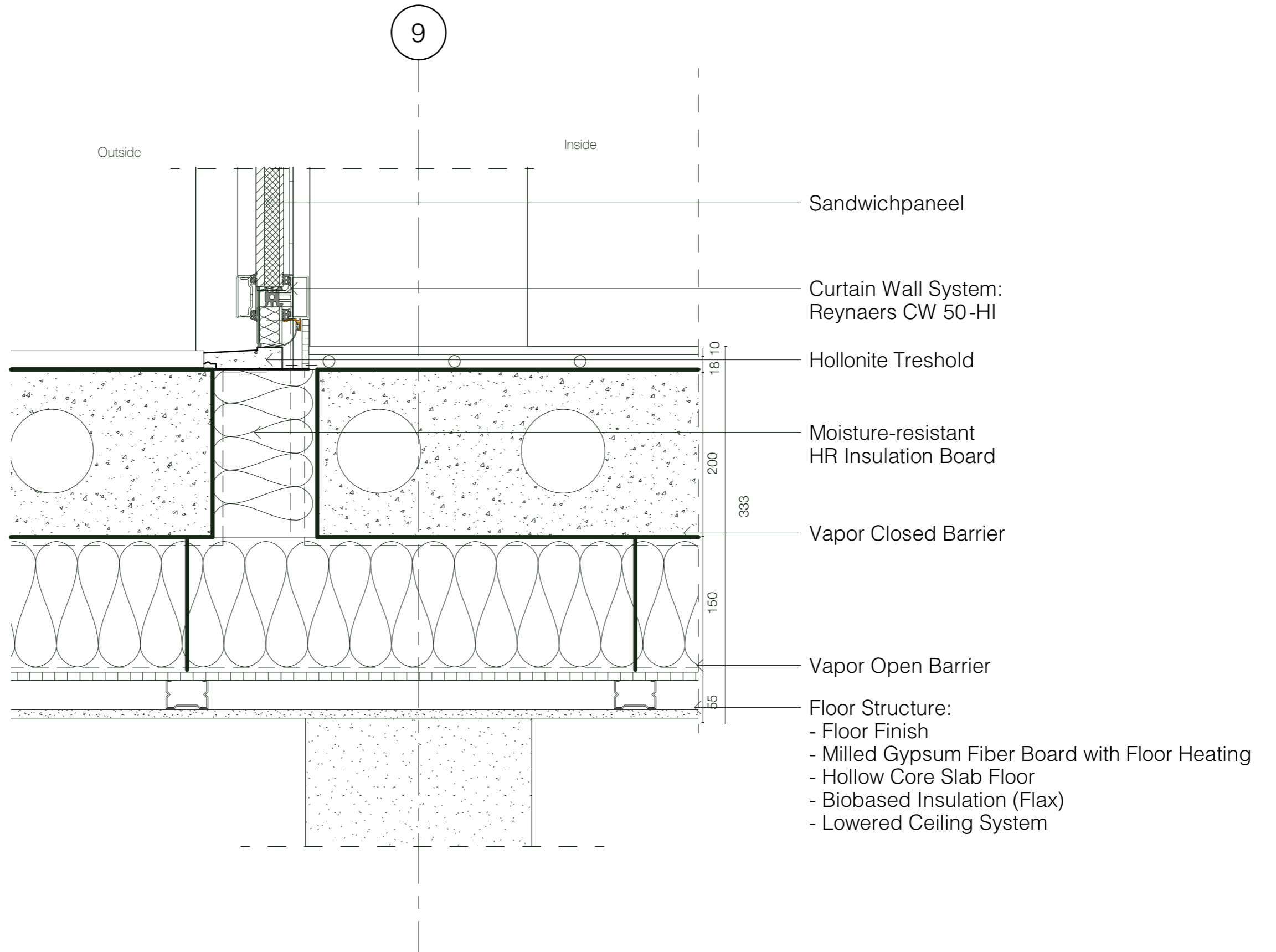
73 | Transition between Avenue & Street





74 | Perspective Section Corridor Street and Garden





9

Terrazzo of Upcycled Bricks from Demolished Buildings

Brick Strips Gala (eco) Vertical Patern

Facade Structure:

- Brick Strips Gala (eco) (van der Sanden)
- Fermacell
- Cavity
- Biobased Insulation (Flax)
- Timber Frame Structure with Biobased Insulation (Flax)
- Fermacell
- Installation Cavity
- Gypsum Board
- Stucco

Brick Strips Gala (eco) Horizontal Patern

Outside

Inside

Slope: 1,5 mm/m

Solar Panel

Vapor Open Barrier

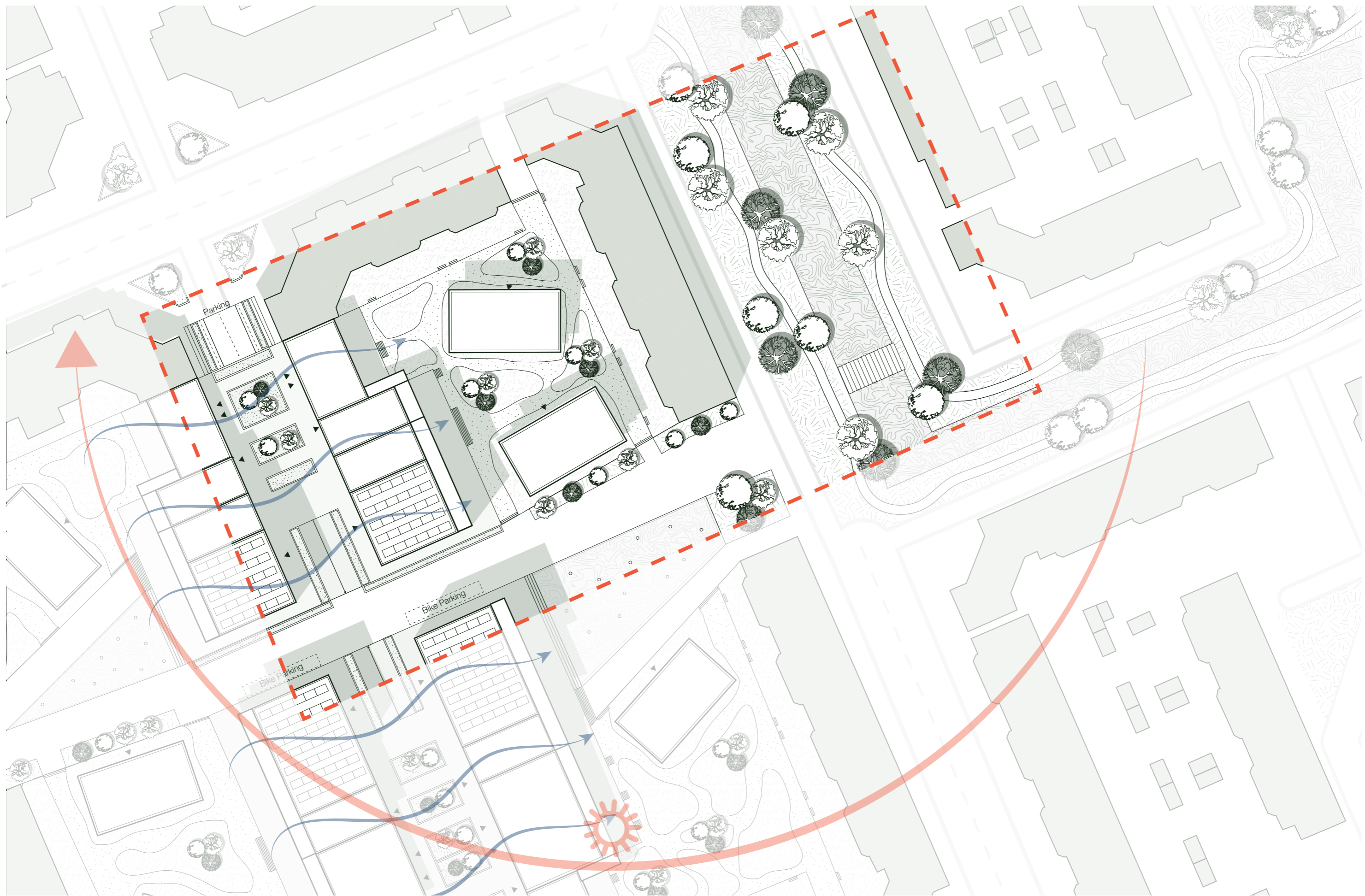
Vapor Closed Barrier

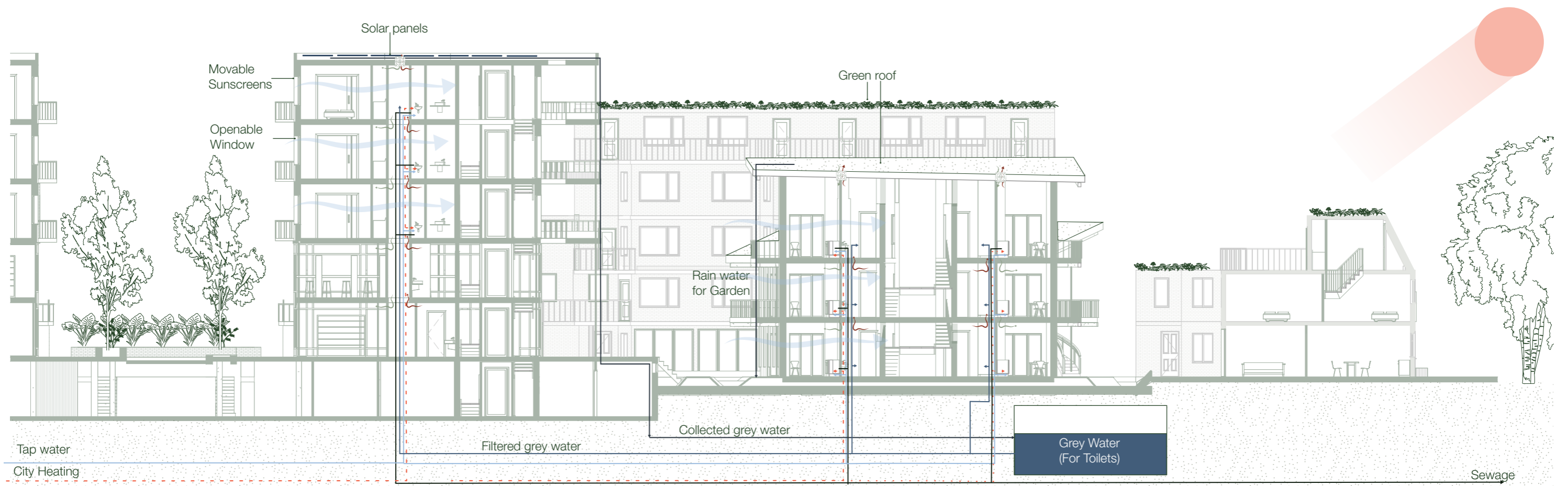
Roof Structure:

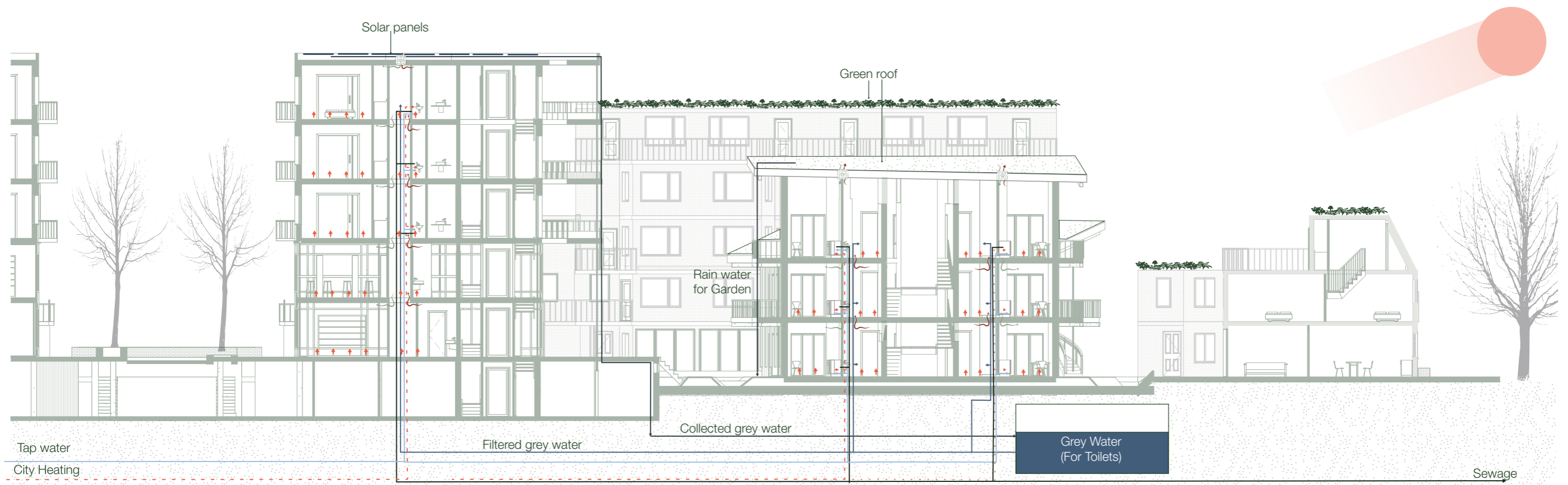
- Bitumen
- Biobased Insulation (Flax)
- Kerto Ripa Floor Box with Gravel
- Biobased Insulation (Flax)
- Lowered Ceiling System

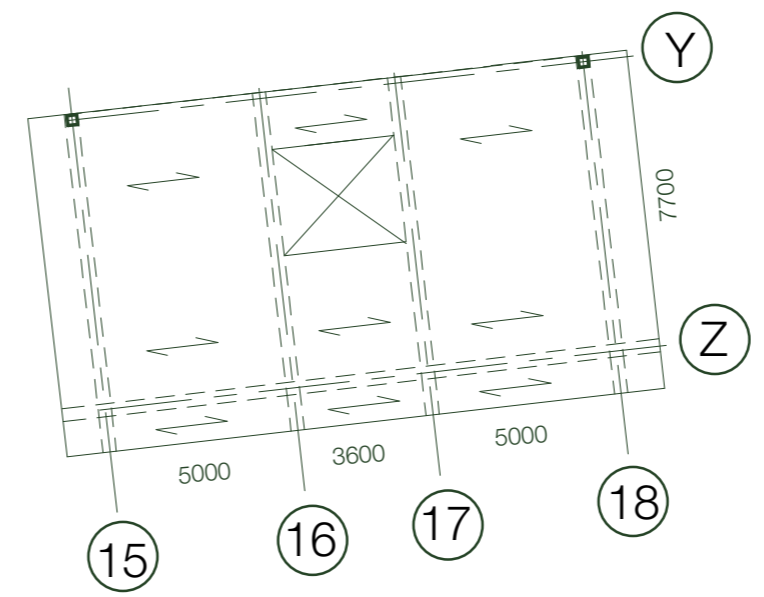
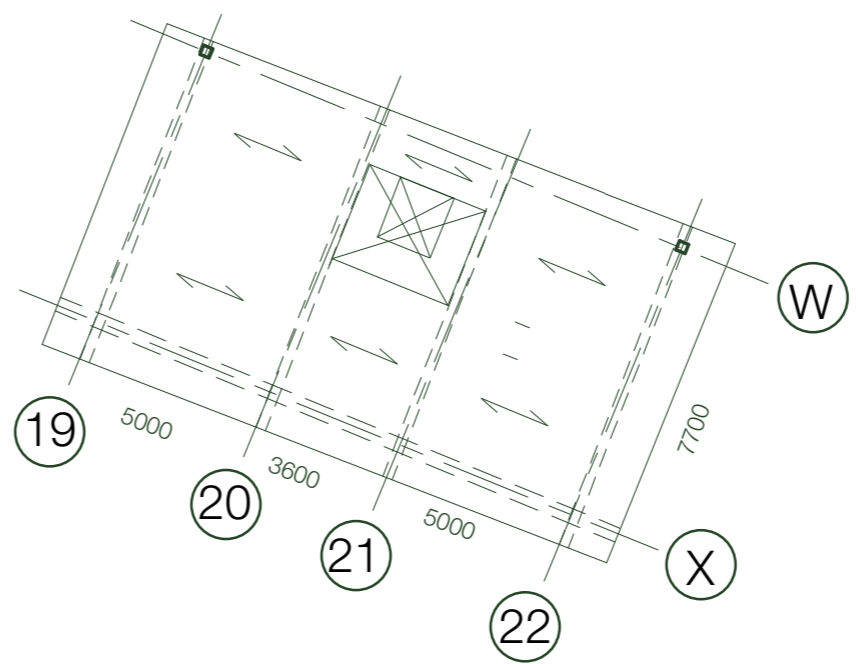
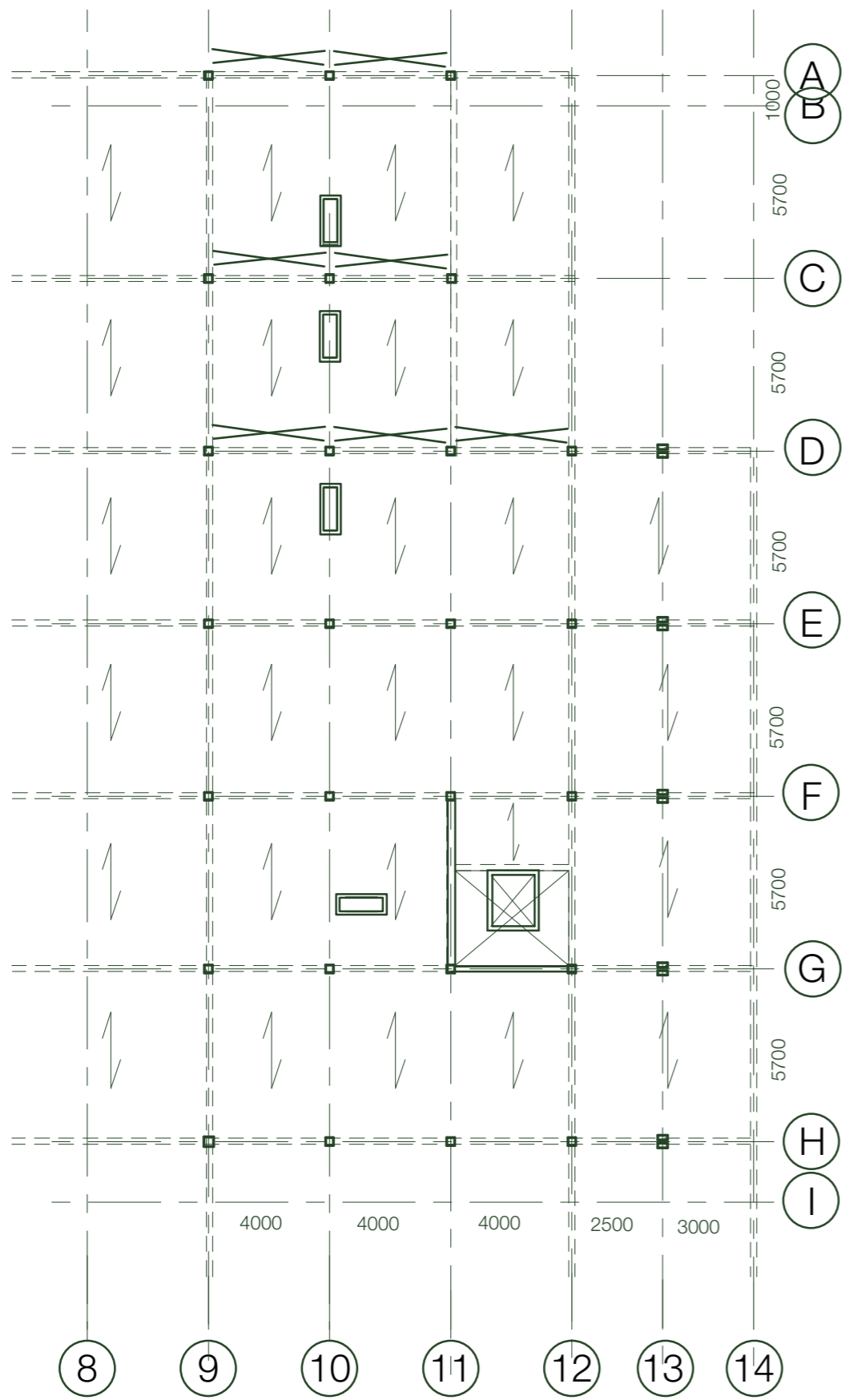
18 30 60 140 10 45 10 10
333

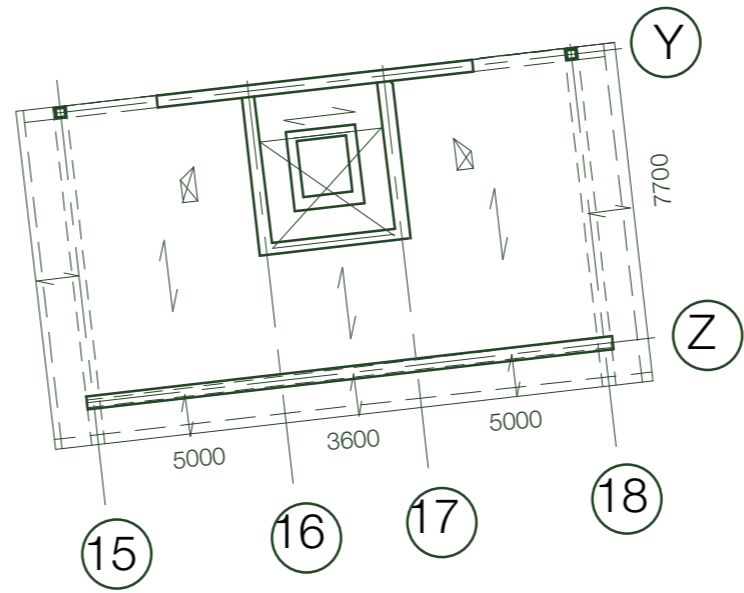
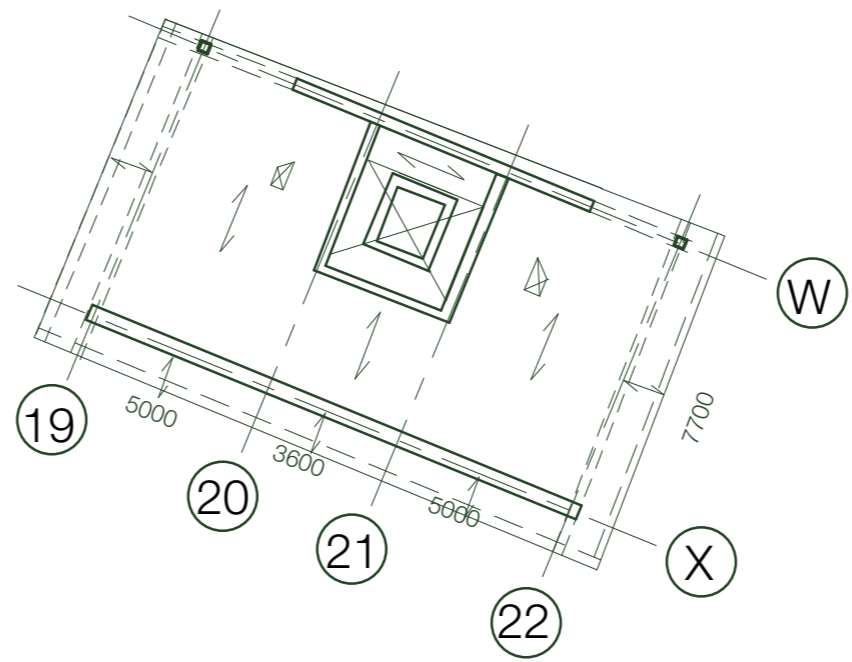
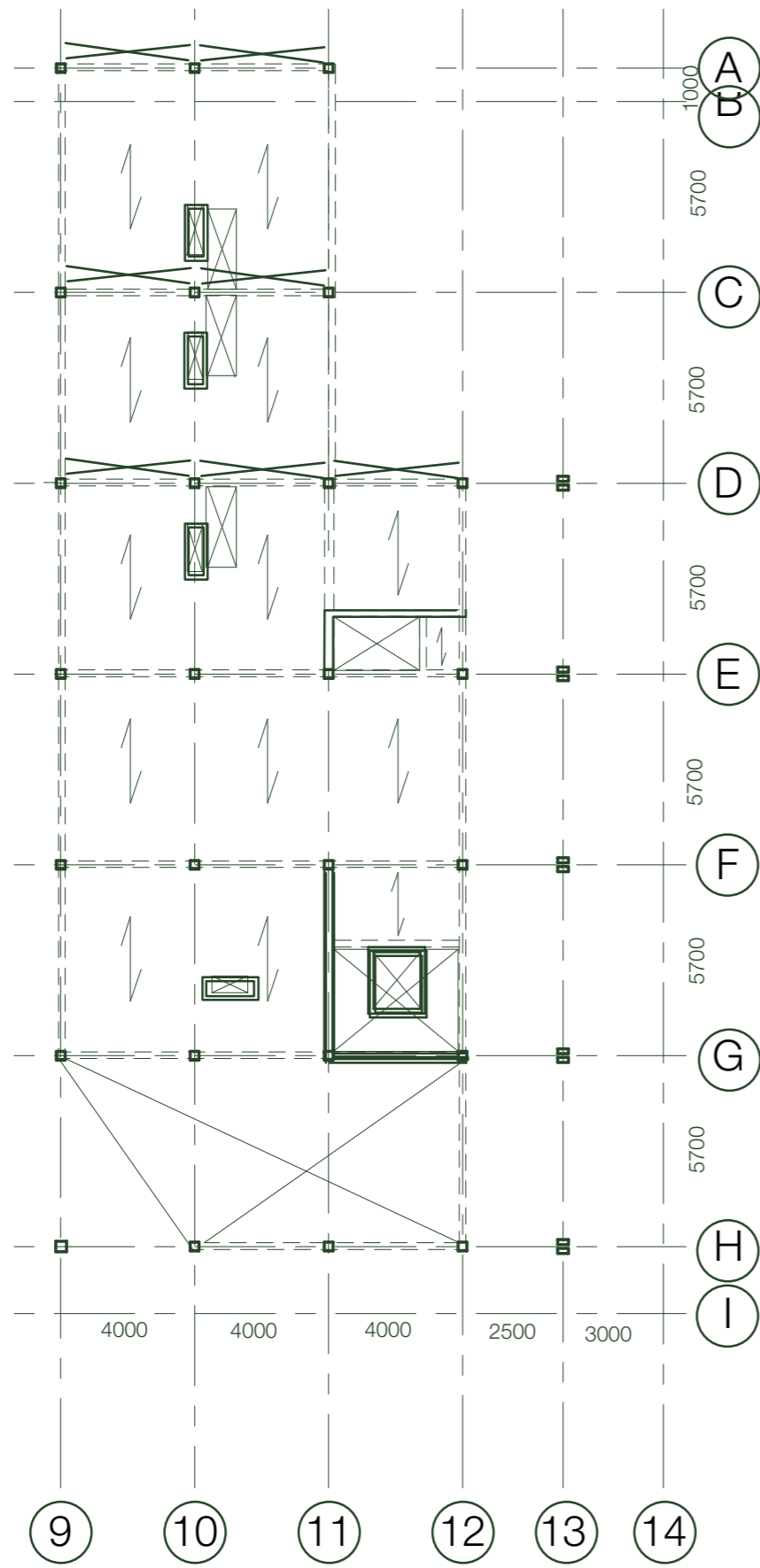
10
200
250
50
66
565

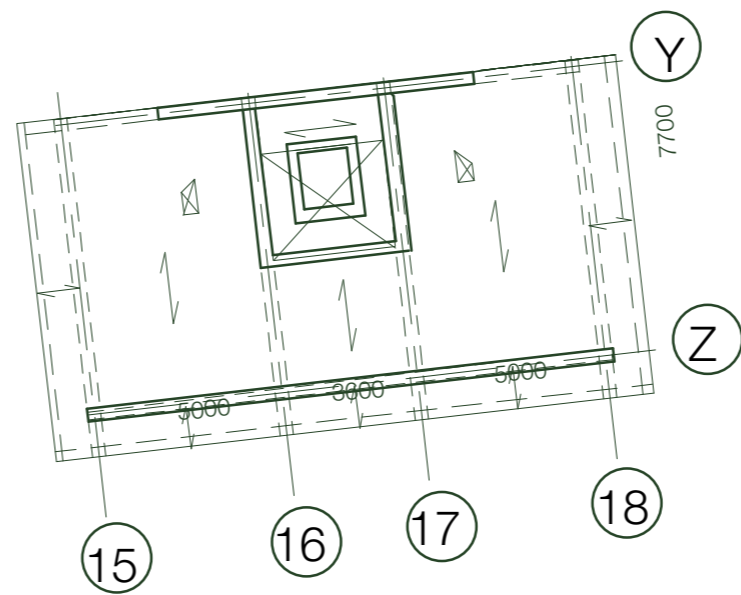
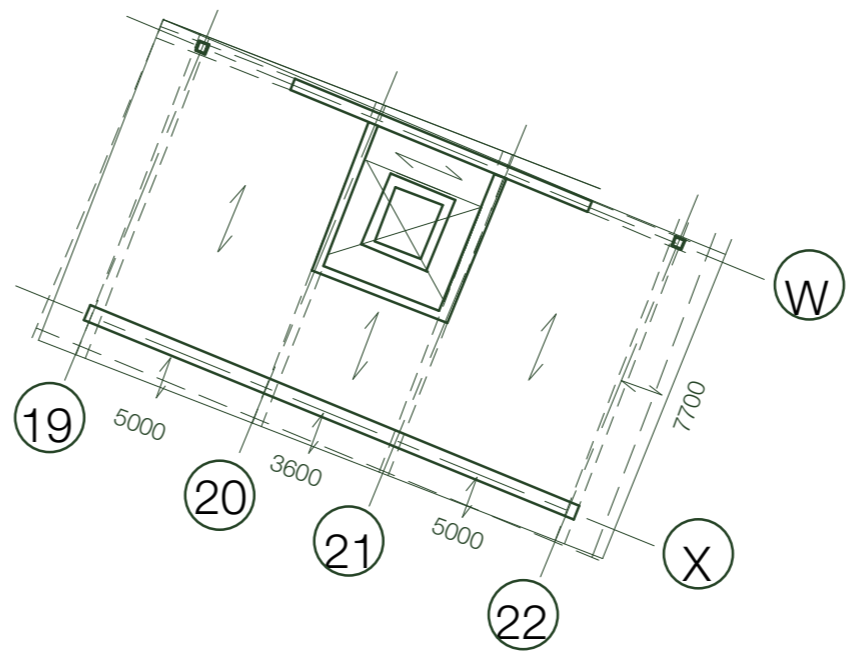
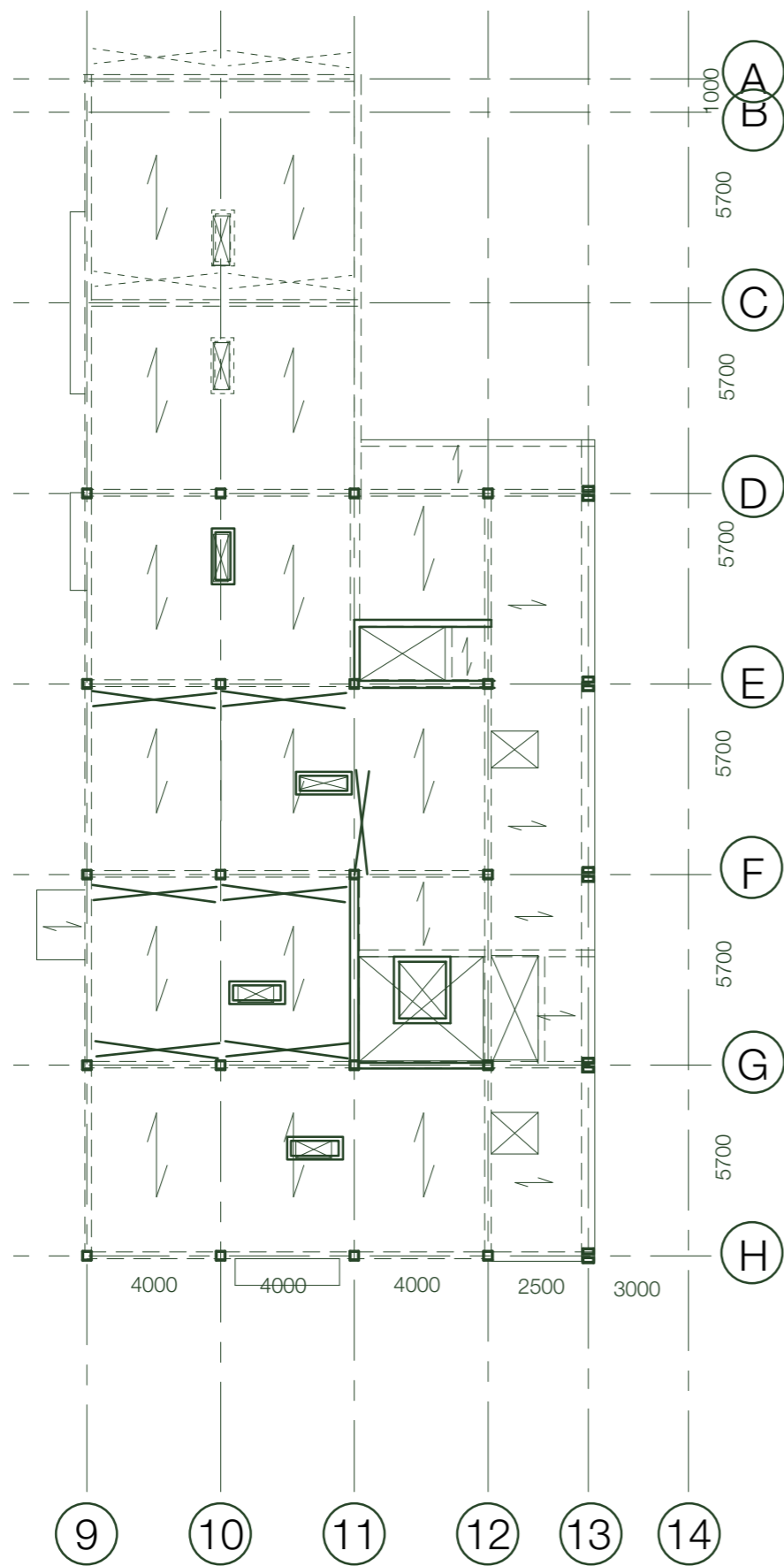


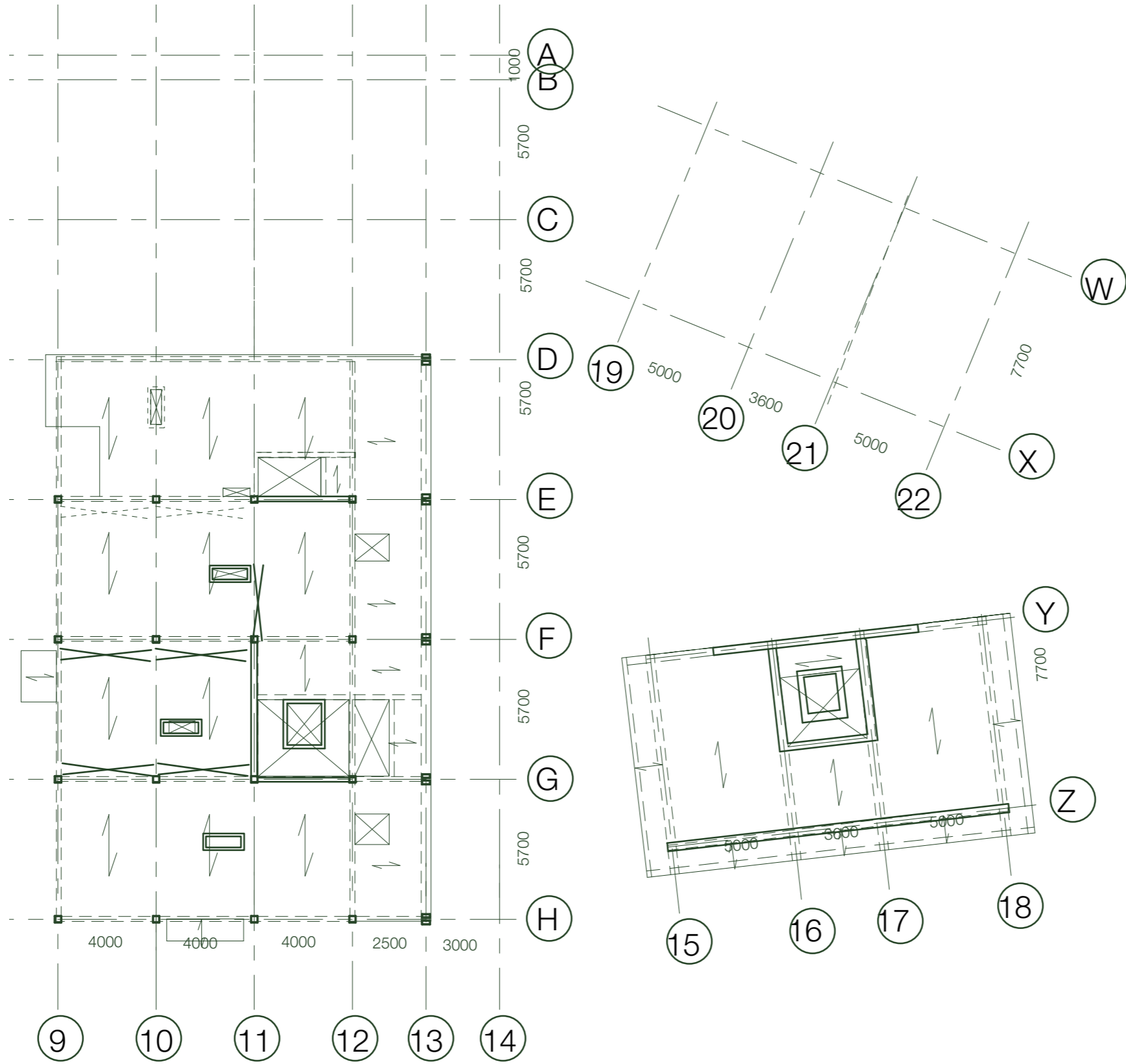


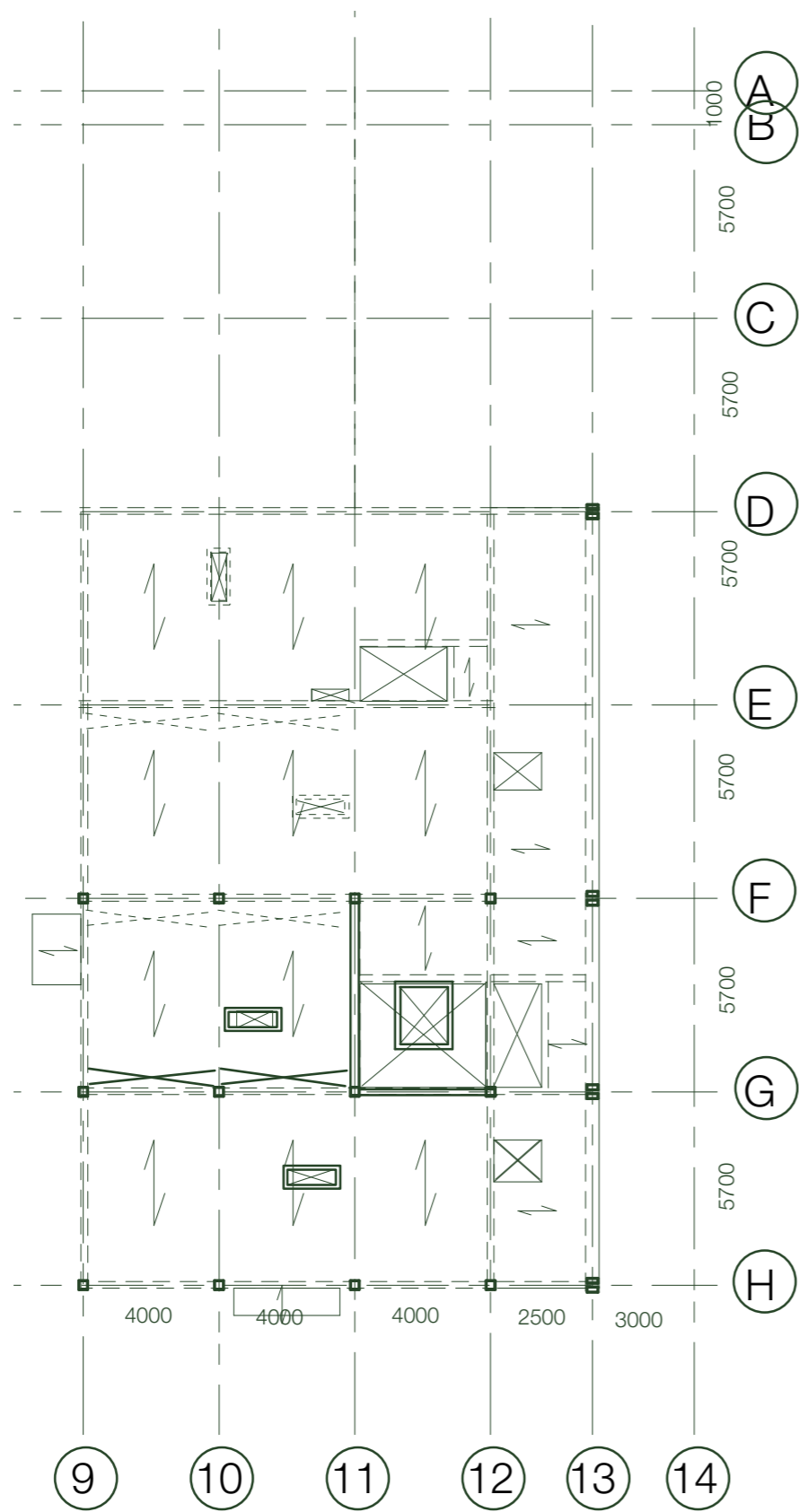


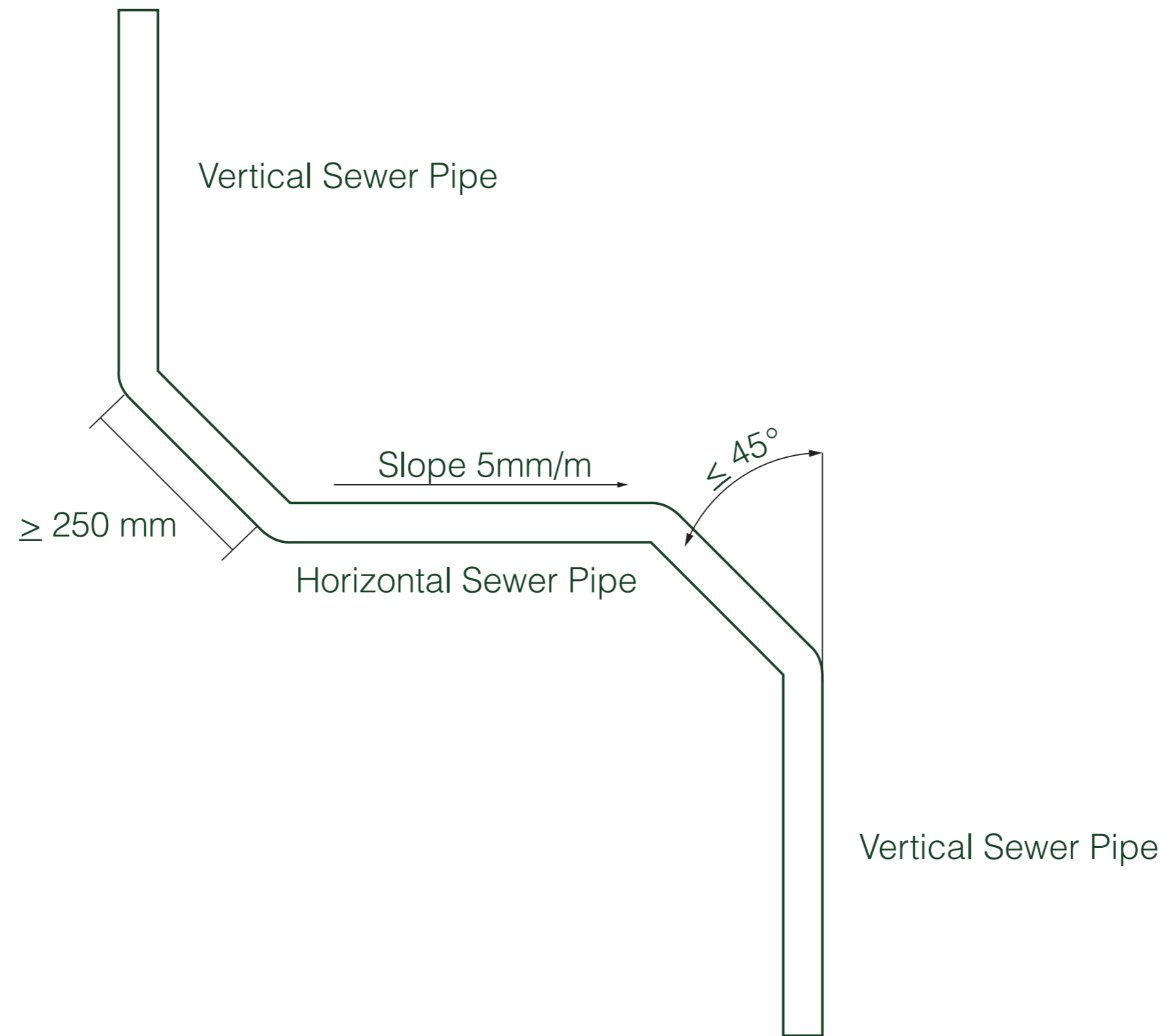




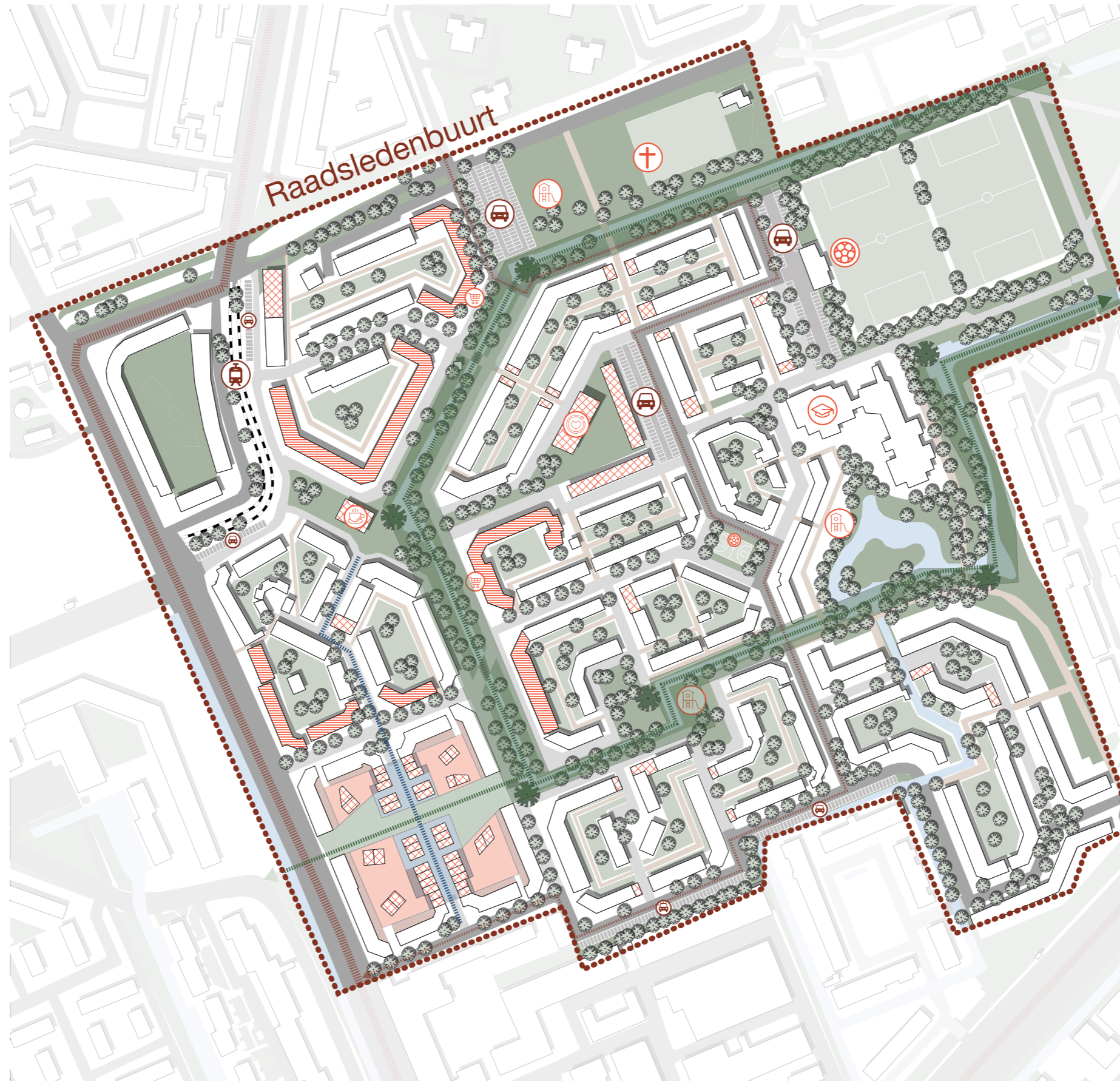








Source | DYKA. (2022). [Technisch handboek binnenriolering] (2nd ed.). <https://www.dyka.nl/media/documents/technisch-handboek-binnenriolering-nl.pdf>



Raadsledenbuurt



