

URBAN FLOW

“Designing the link between city and dwelling”



Research

Design process

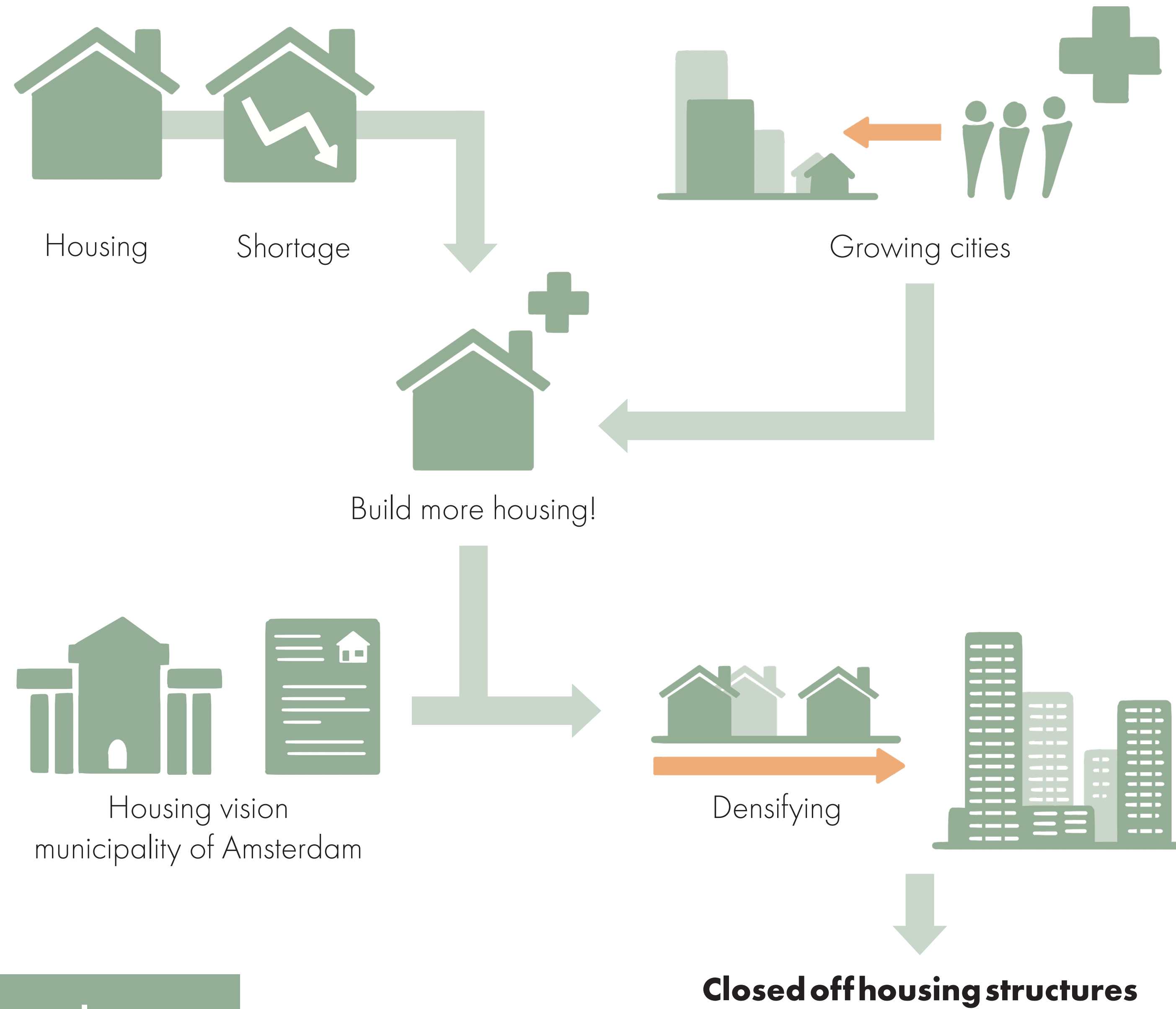
Construction

Routing

Dwelling

Facades

Conclusion



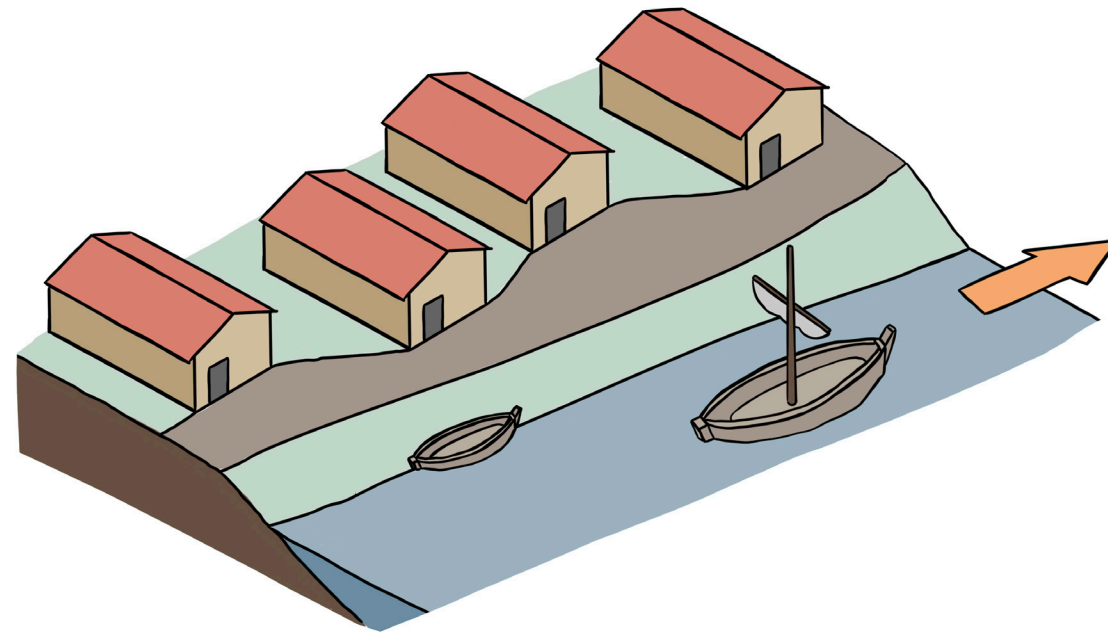


Zuid-as



NDSM- Werf

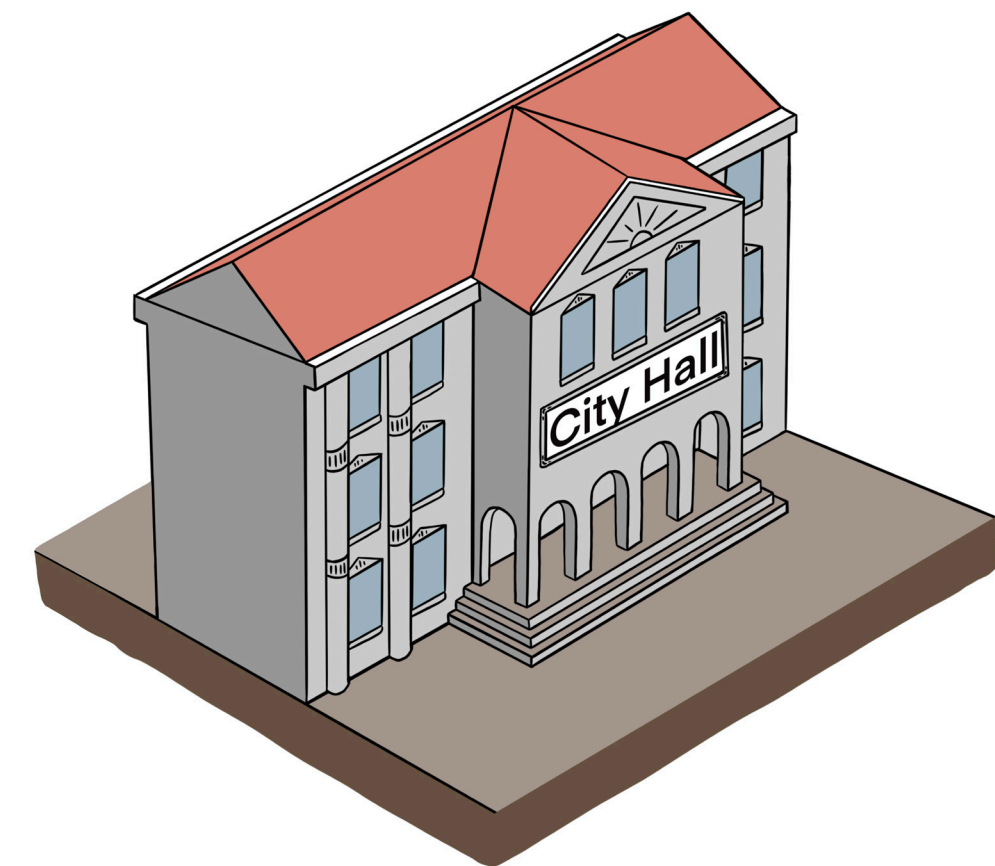
Closed off housing structures



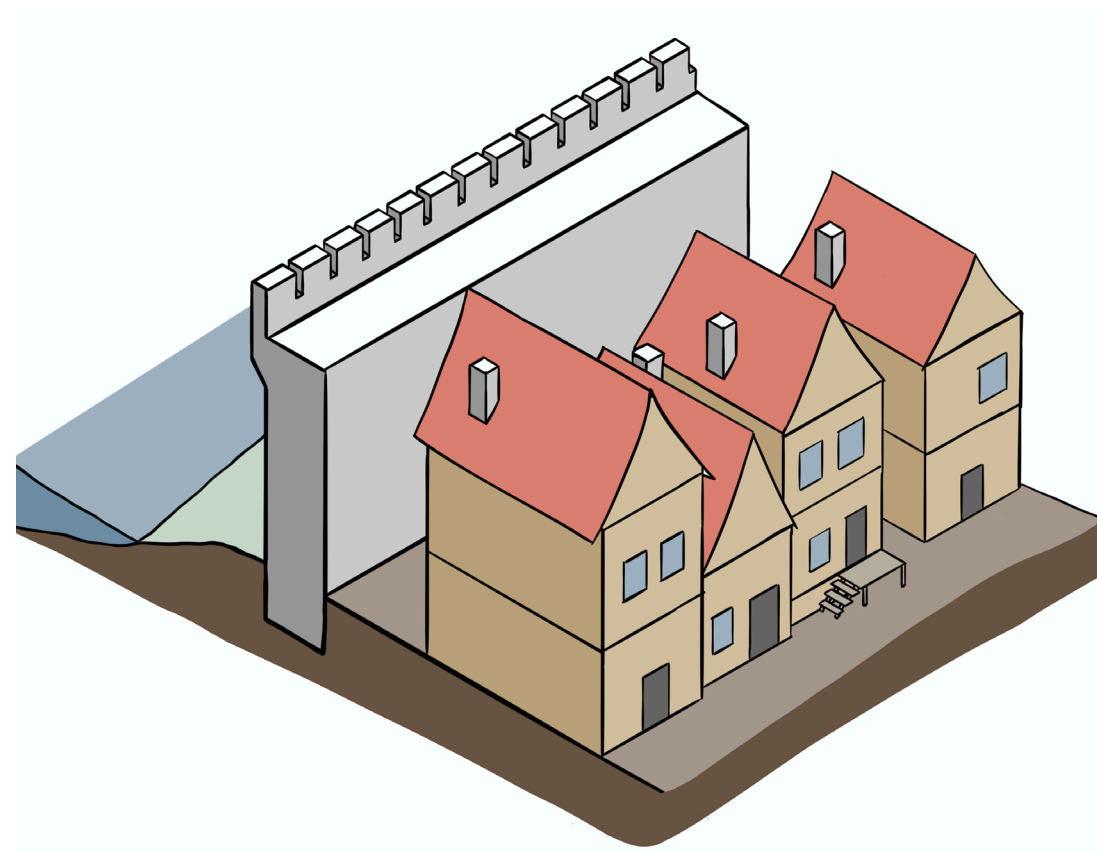
Trading and work opportunity



Facilities and amenities

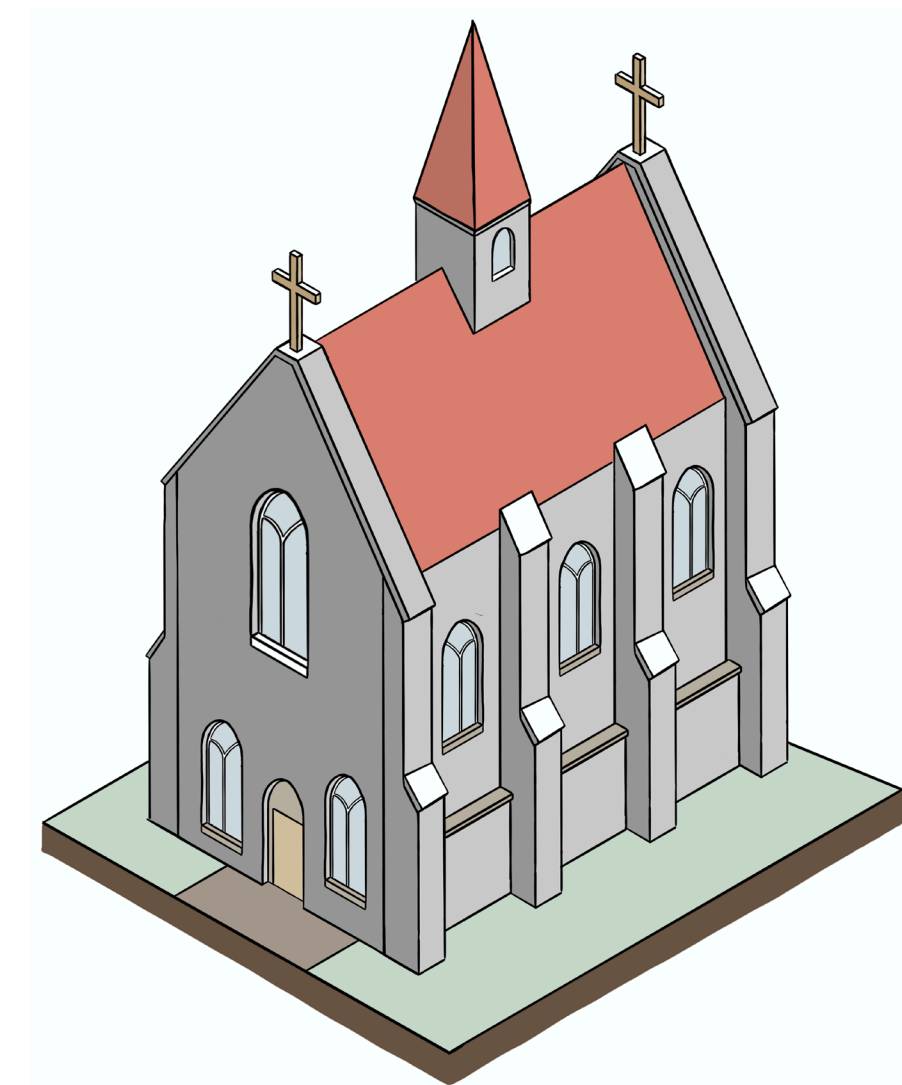


Social organization and governance



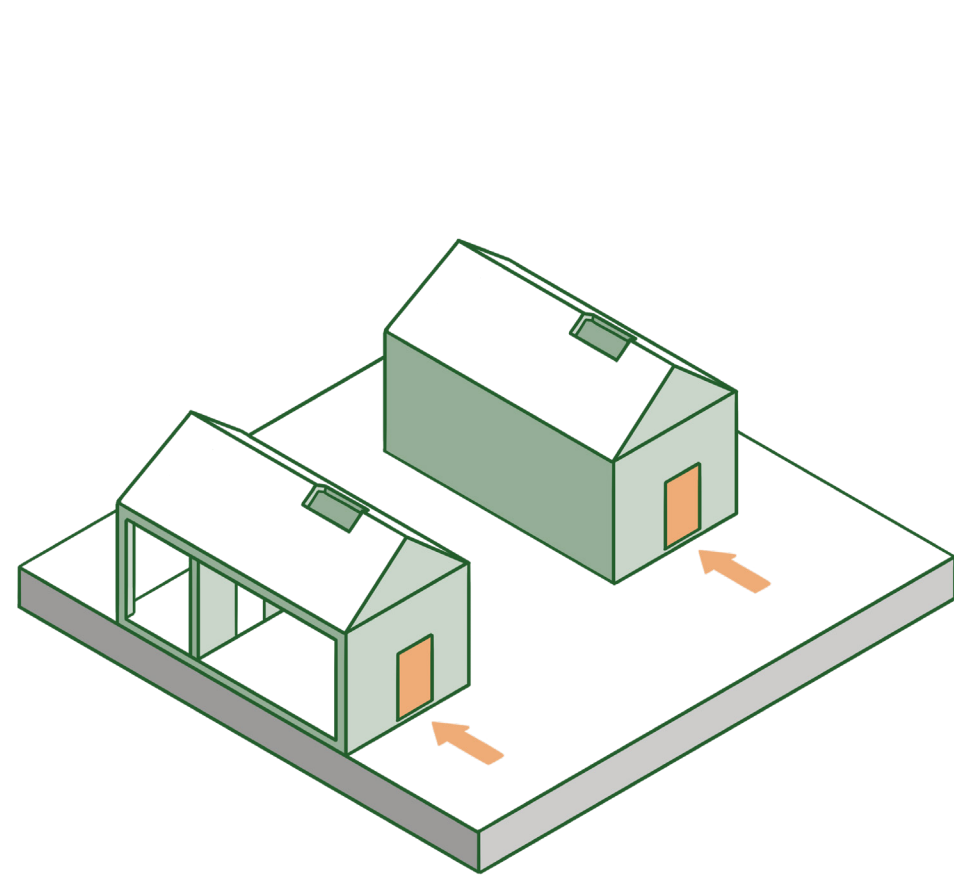
Safety and defence

"Cities have the capability of providing something for everybody"
- Jane Jacobs (1961)

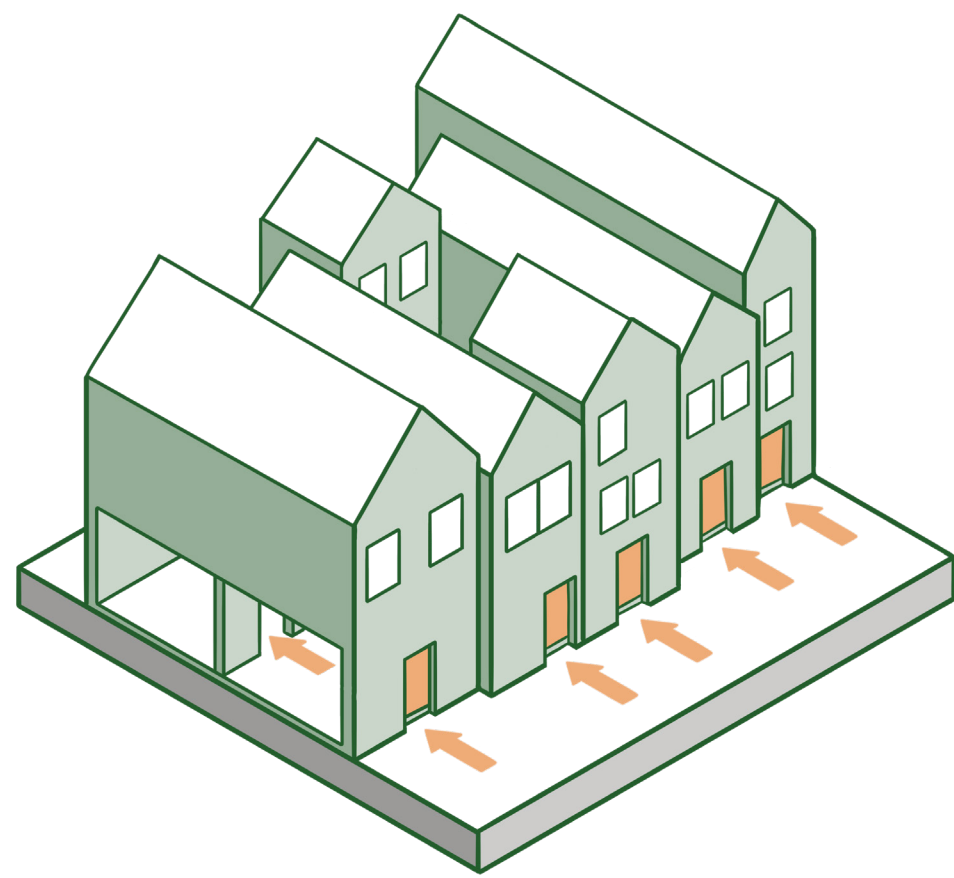


Religion and community

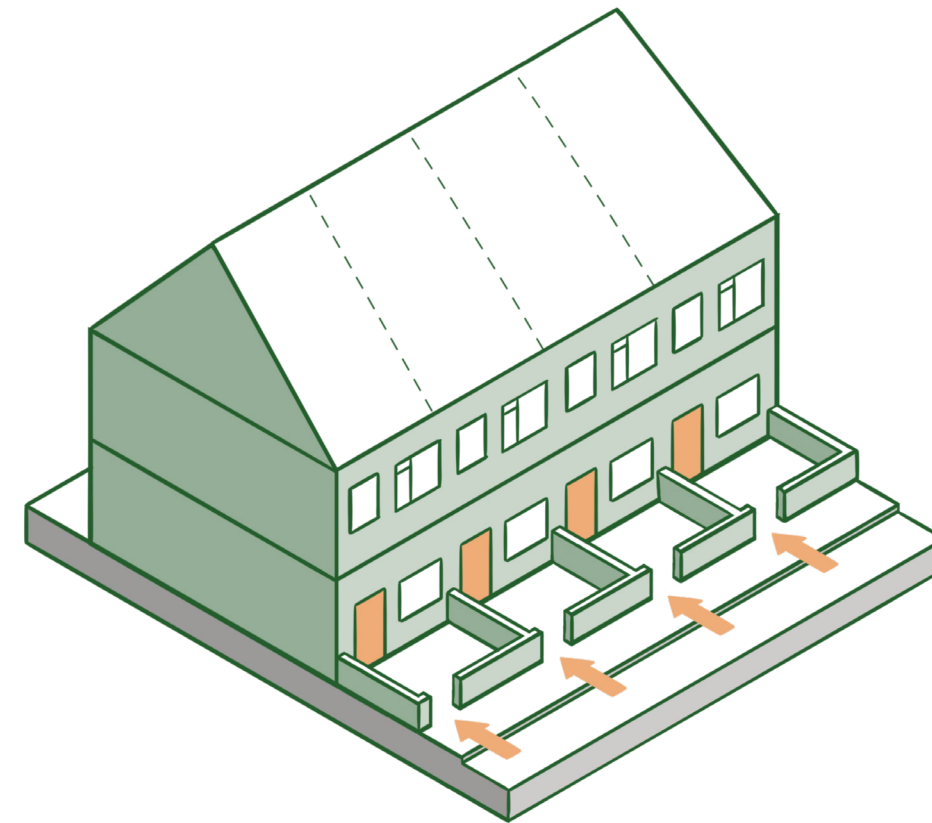
Defining "Urban flow"



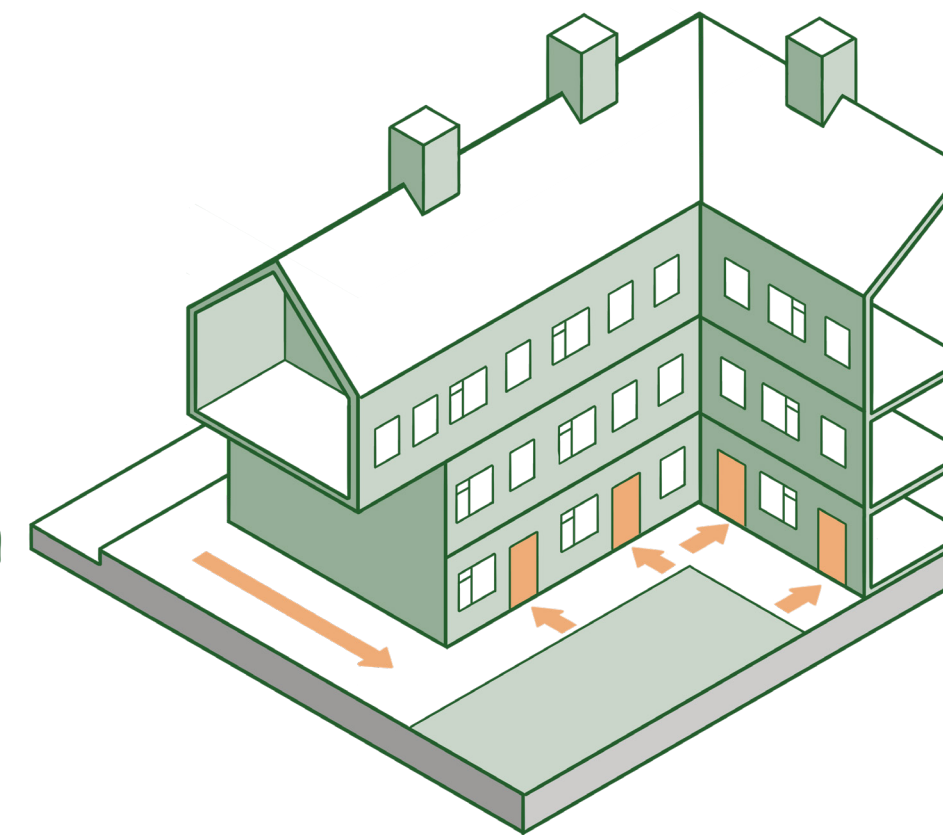
First houses



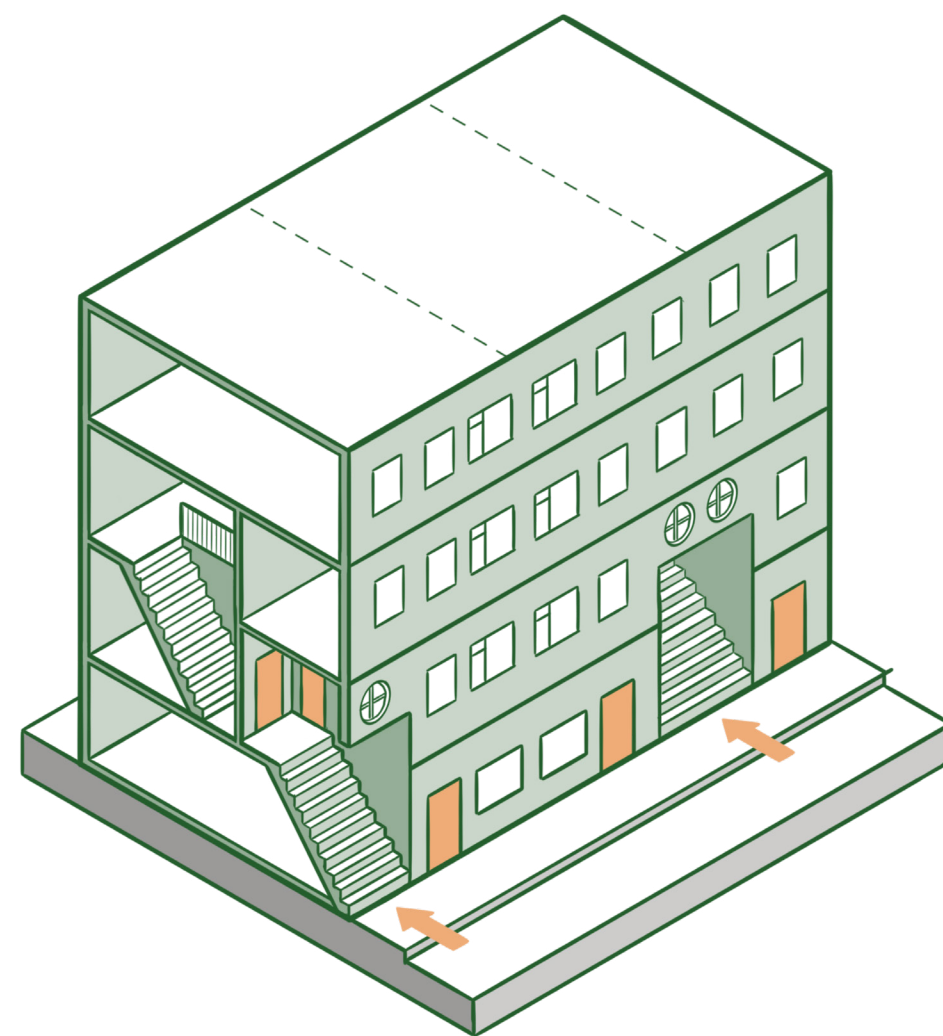
Front and back house



Row house



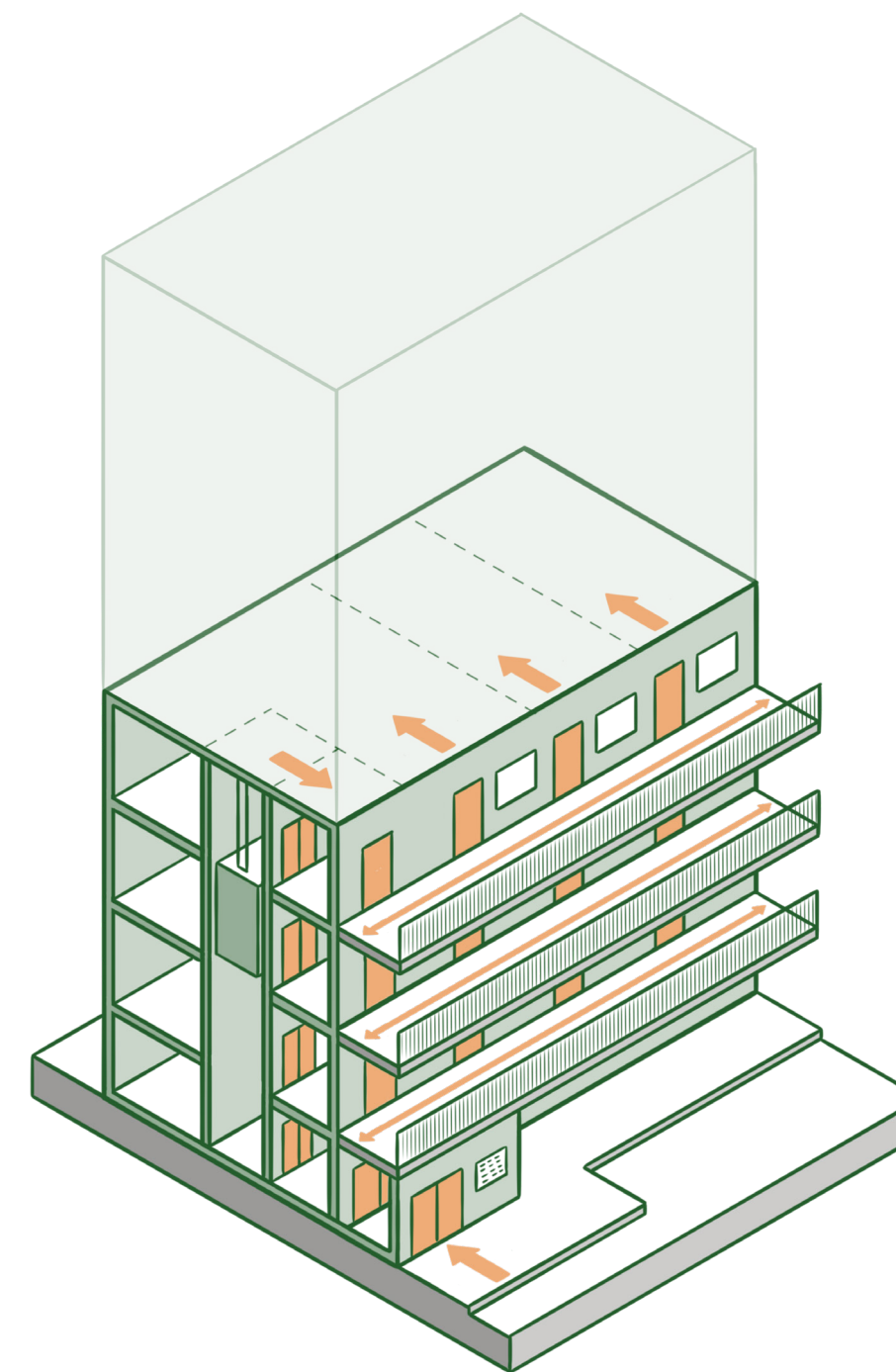
Courtyard



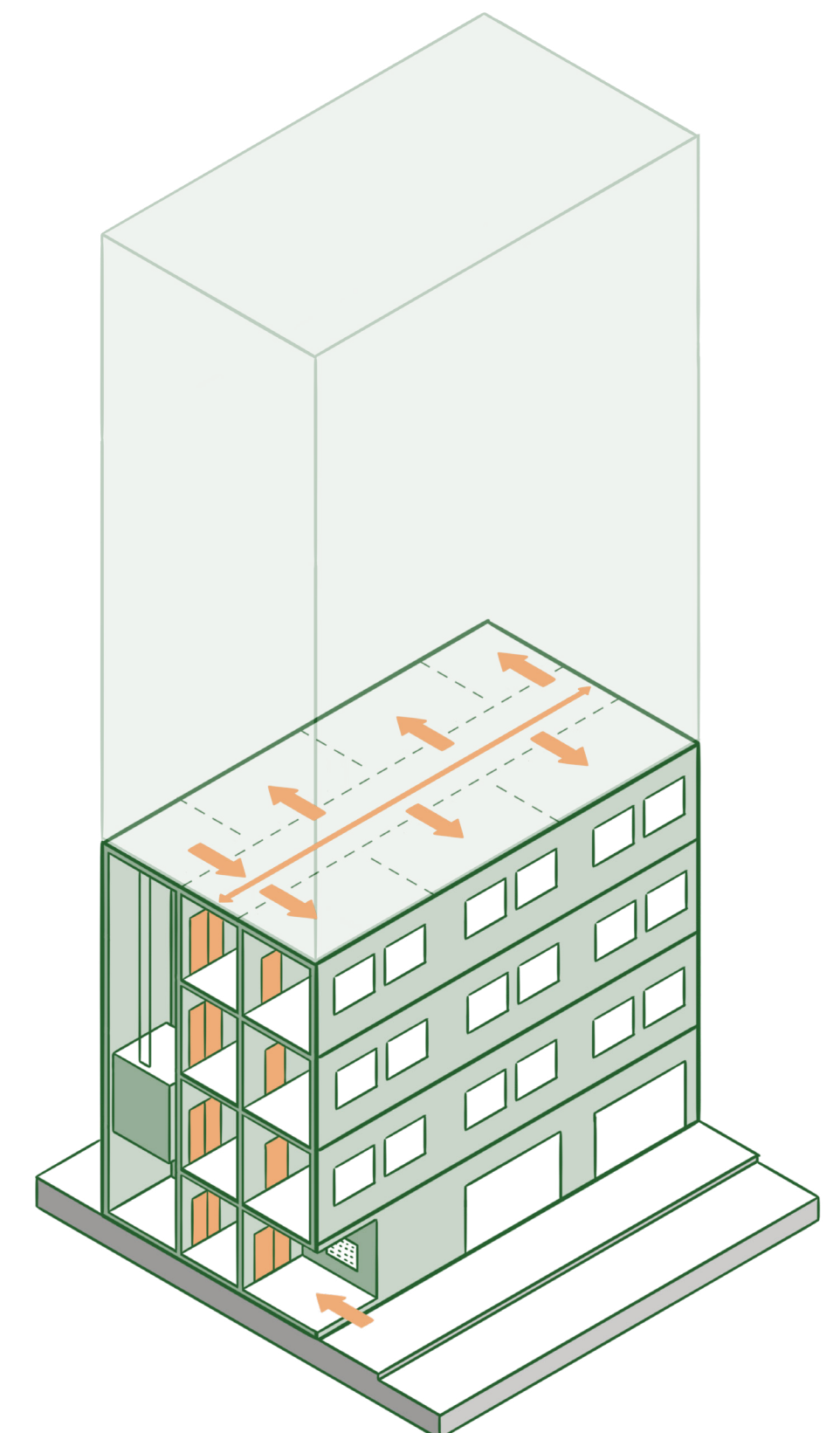
Haags portiek



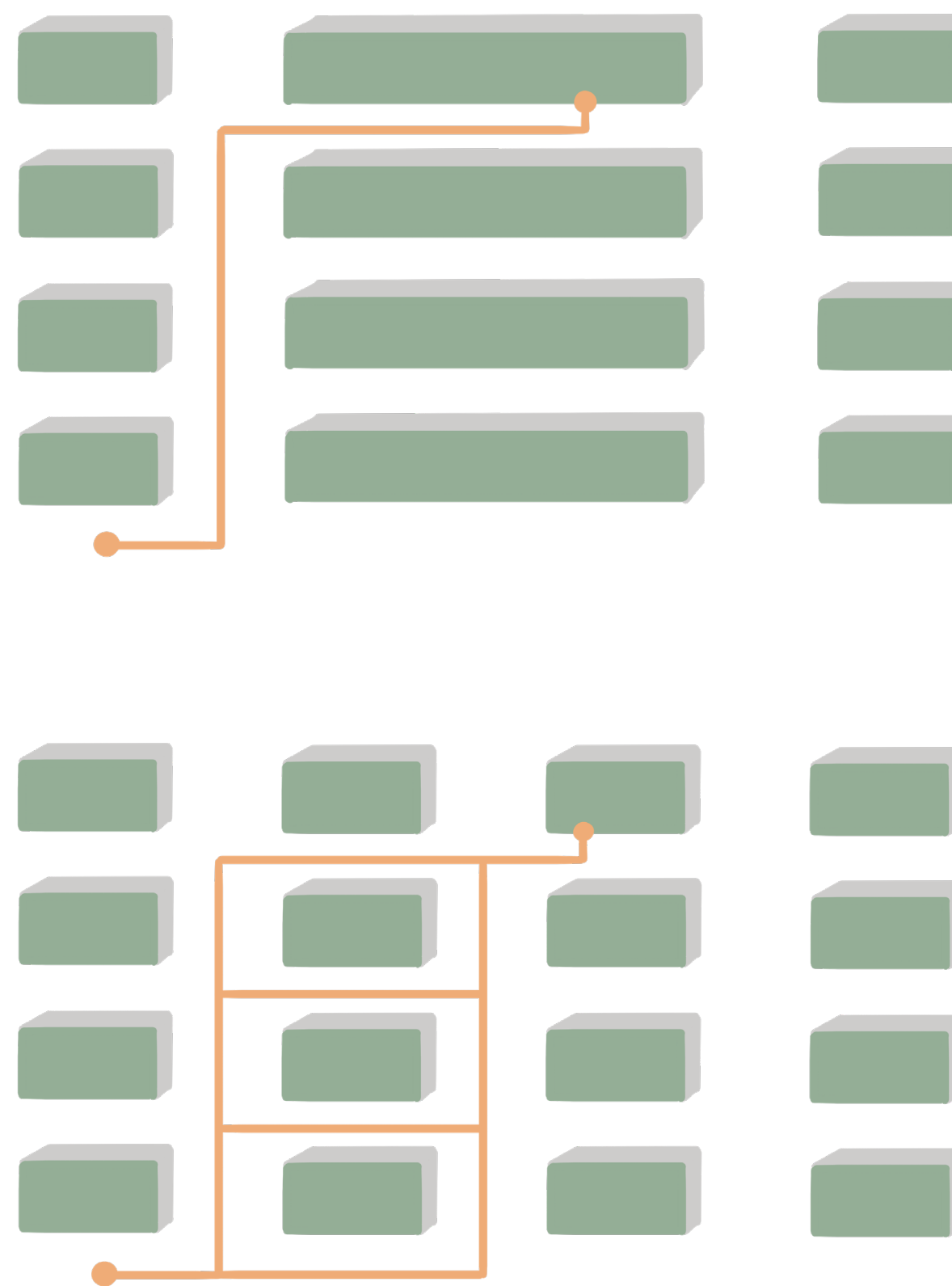
Portico



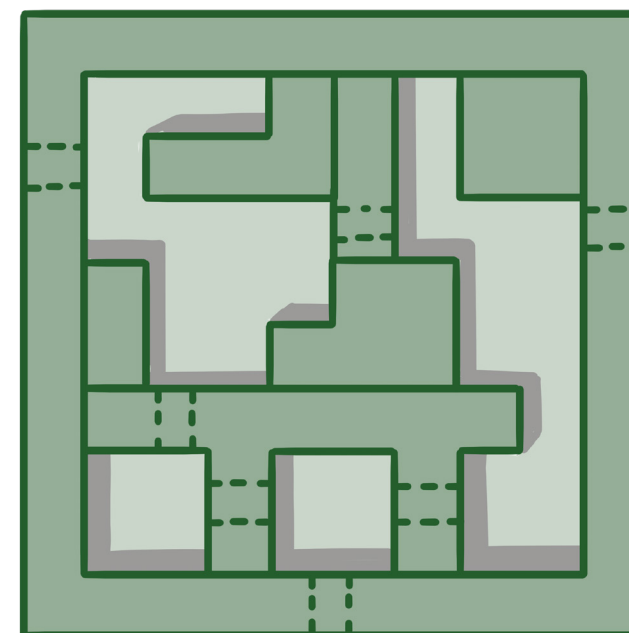
Gallery



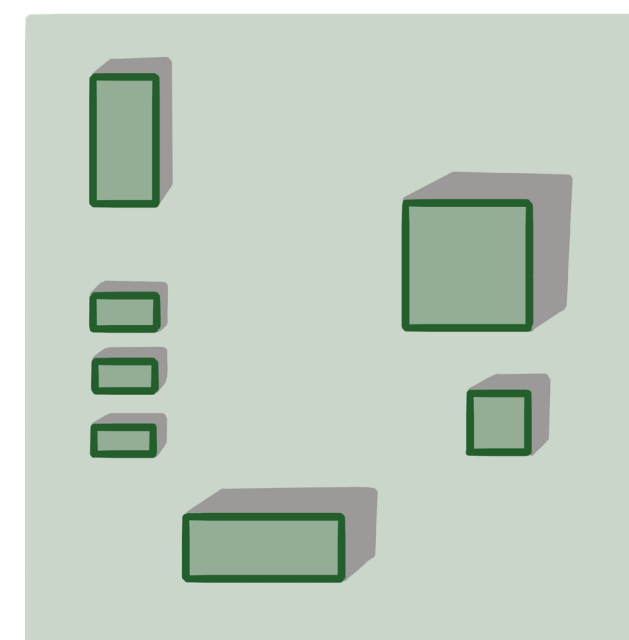
Corridor



Small blocks: porosity



College vs Campus



Continuation of space



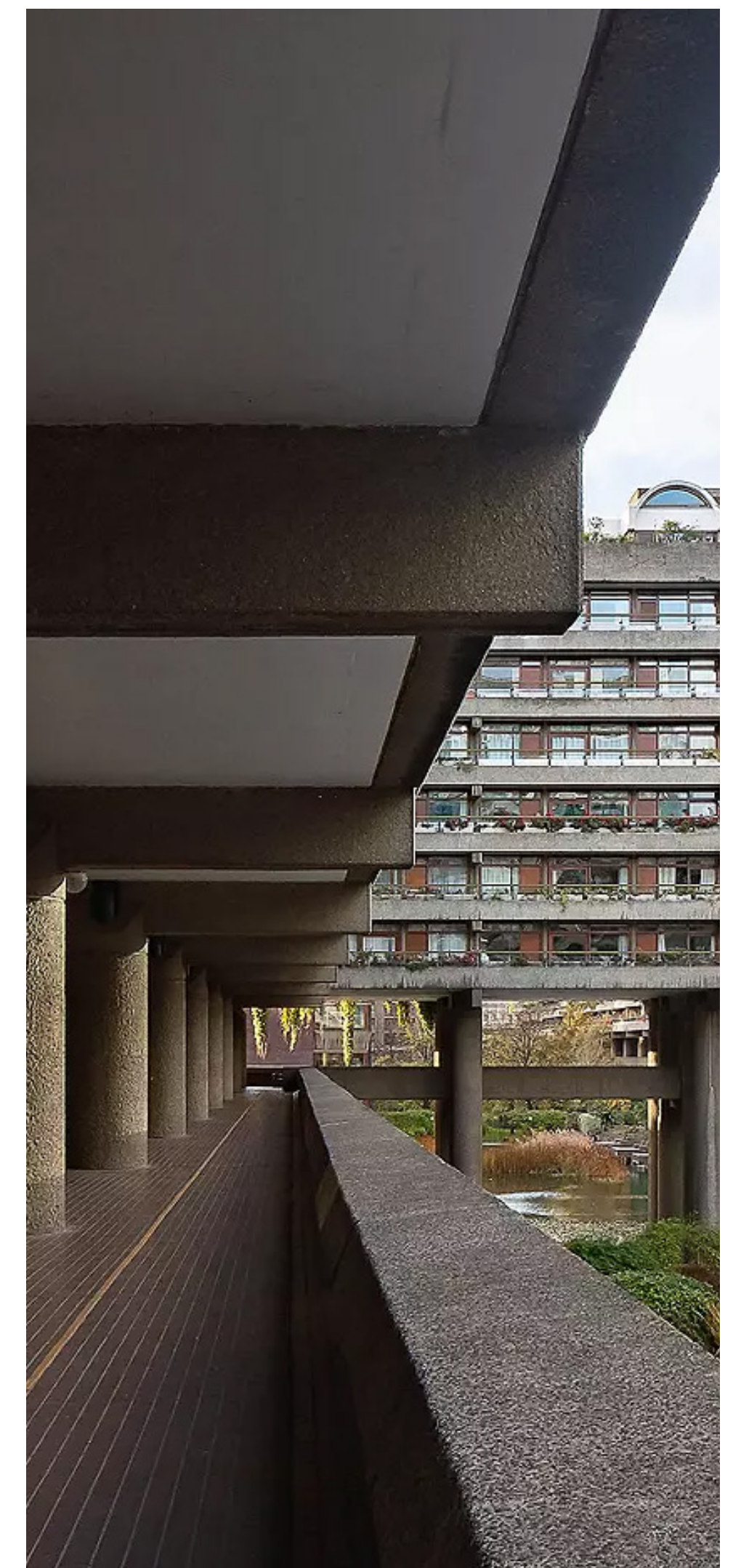
Odhams walk



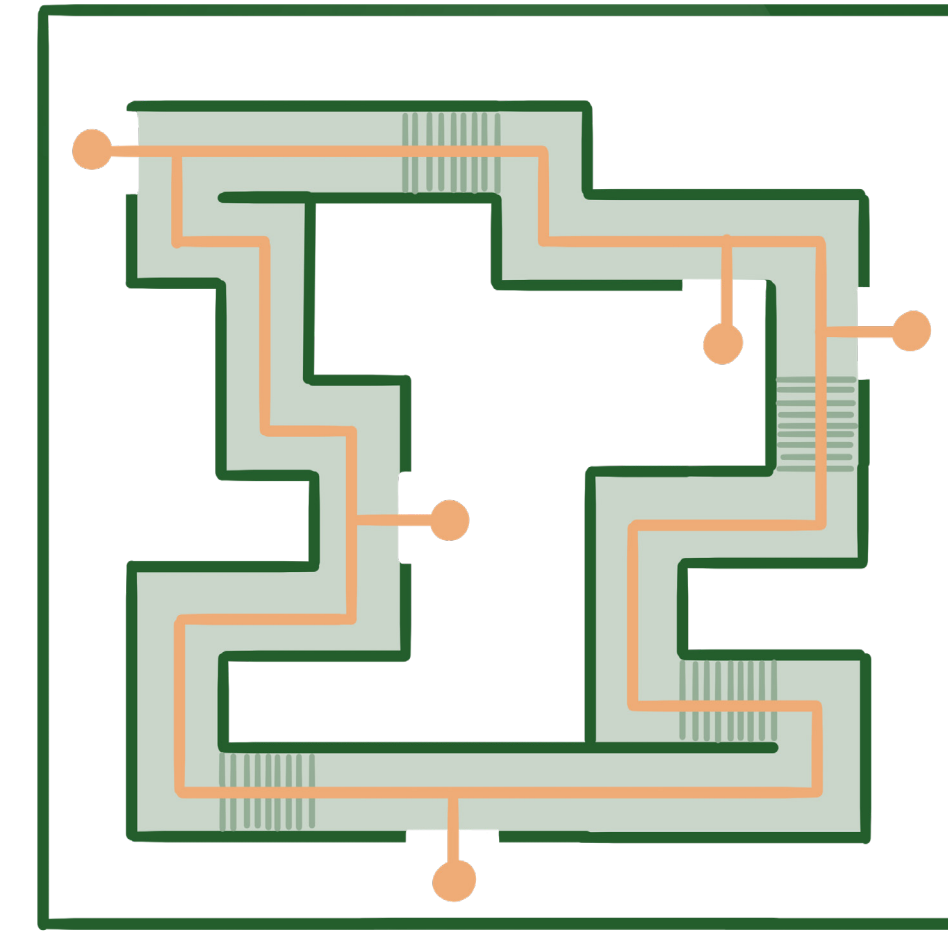
Habitat 67



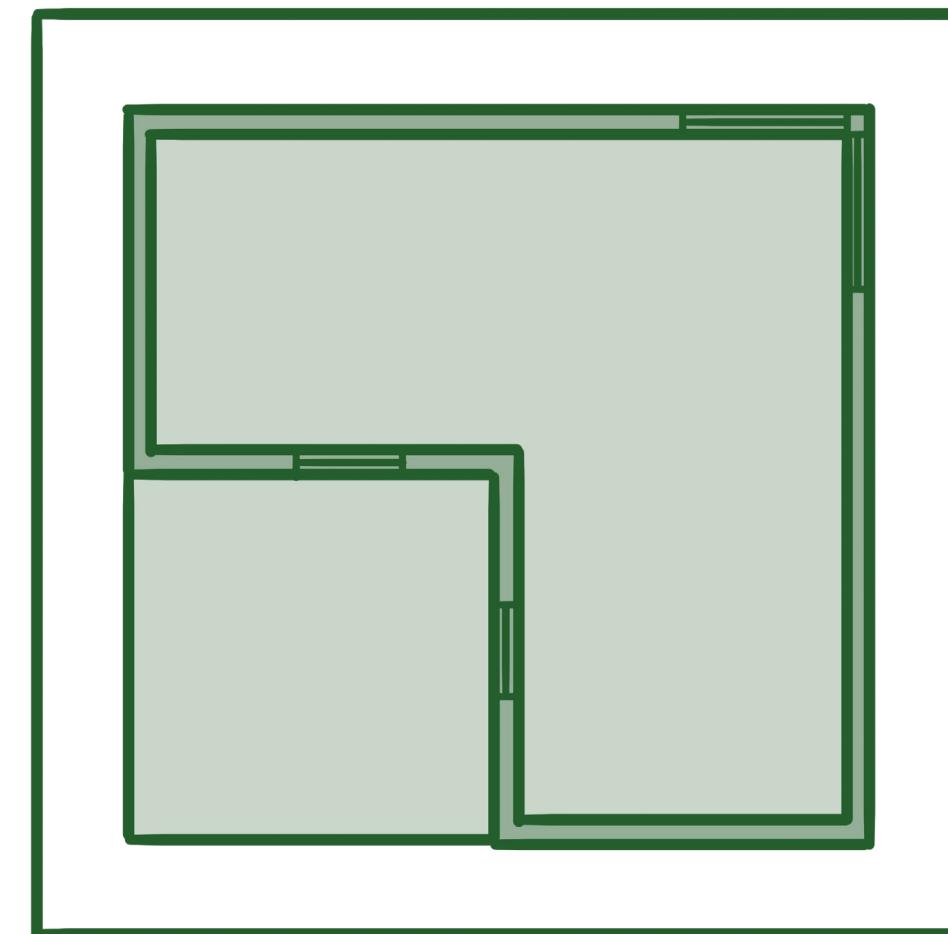
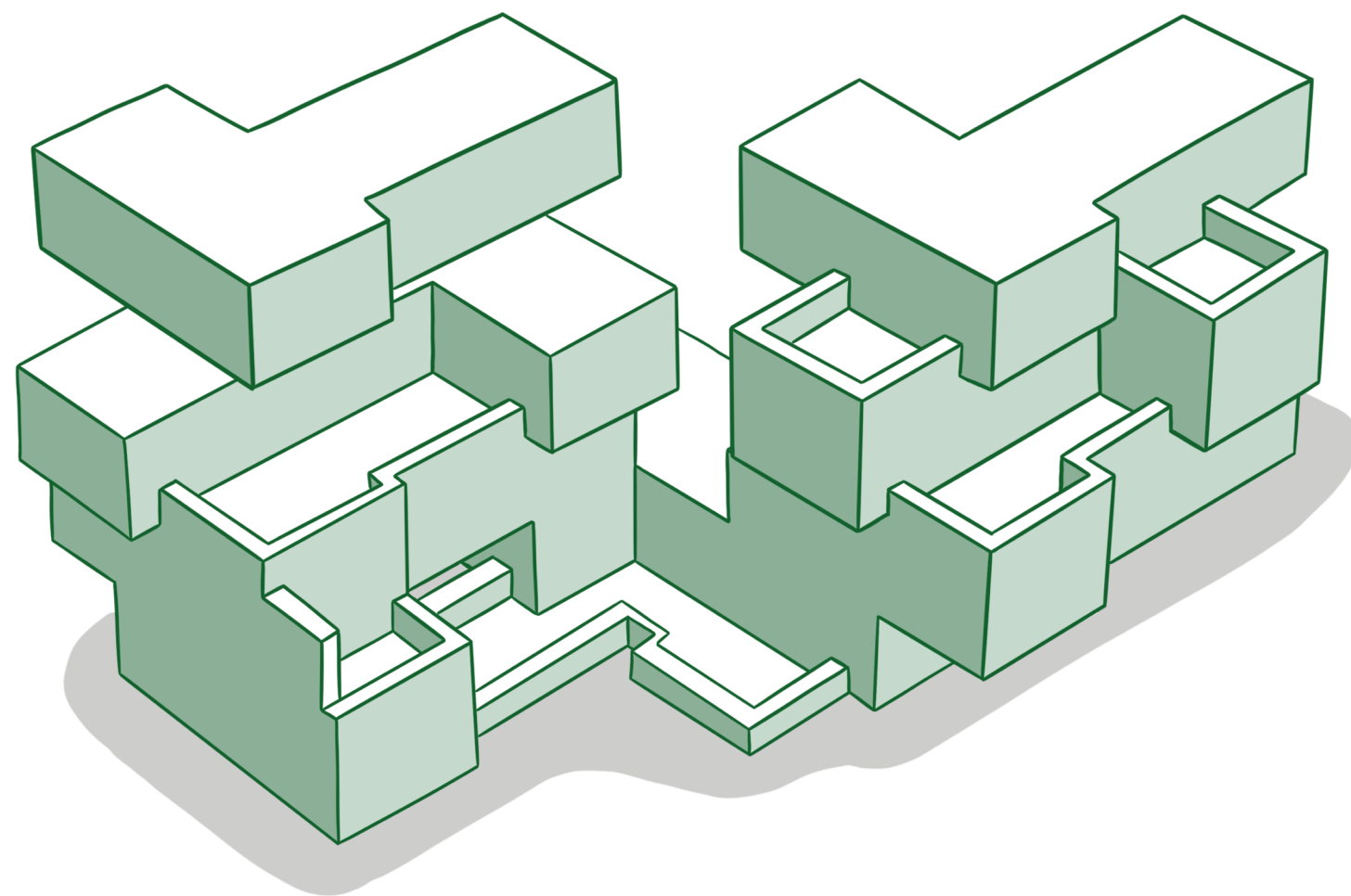
Belapur housing



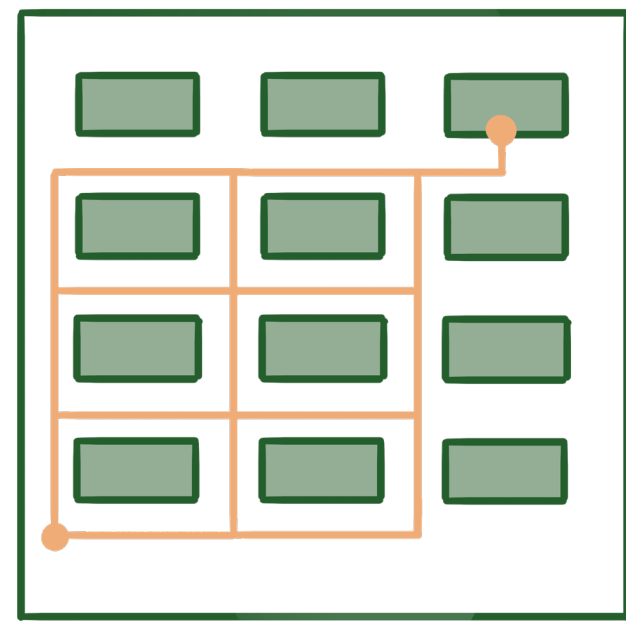
Barbican



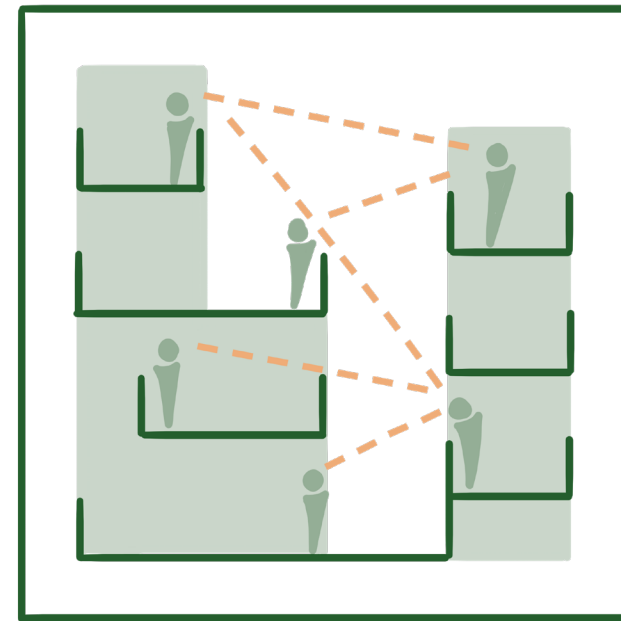
Central route:



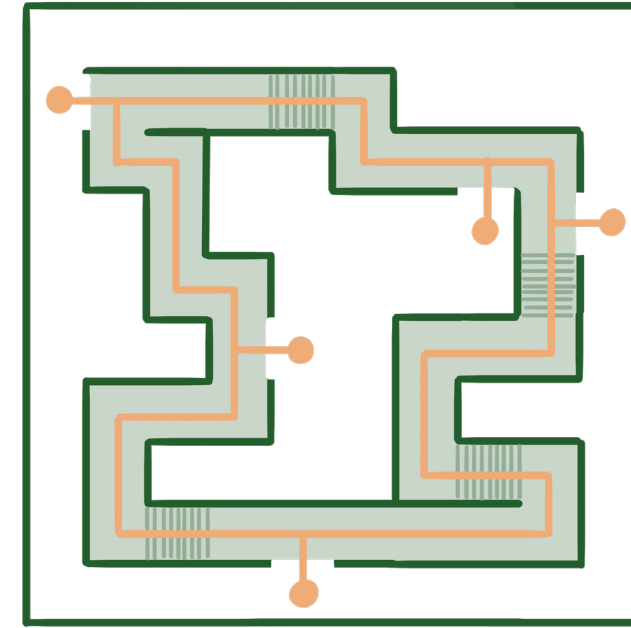
L-shaped dwellings:



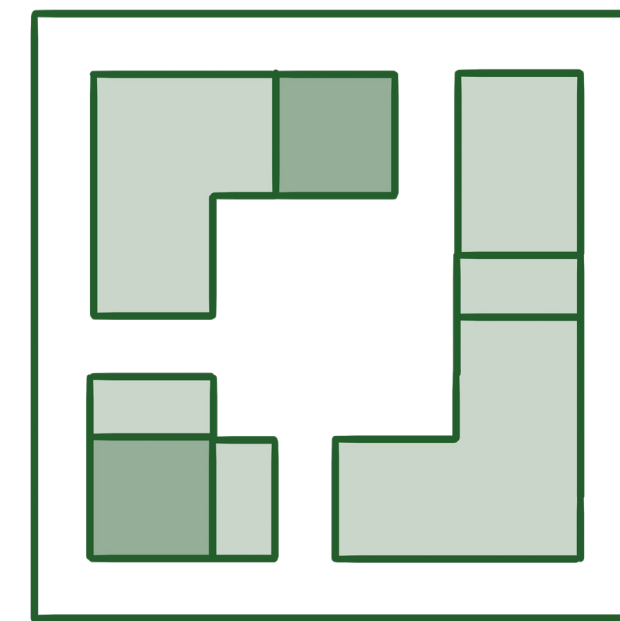
Small blocks



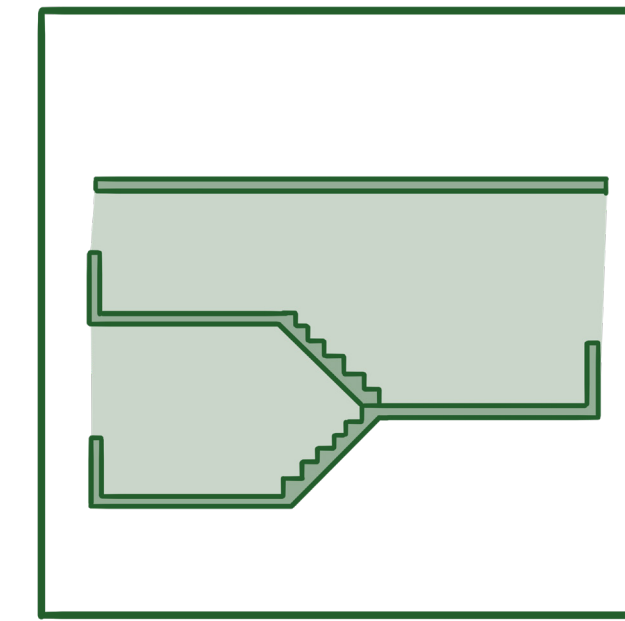
Interaction:



Central route:



Different dwelling types:



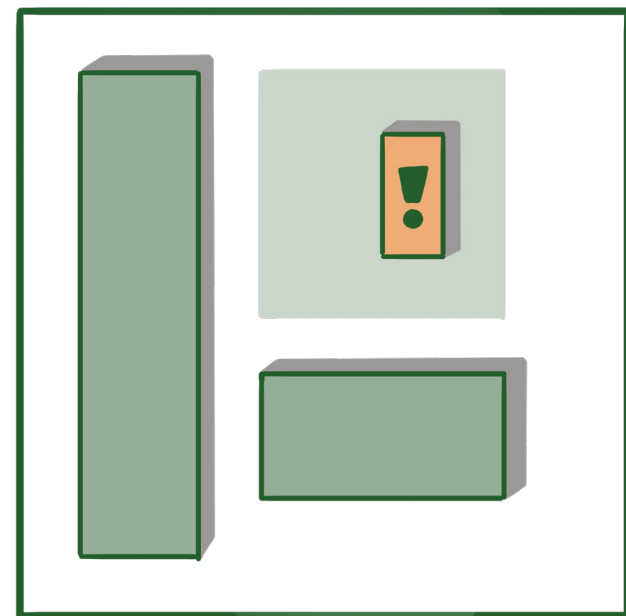
Staggered housing layout:

City

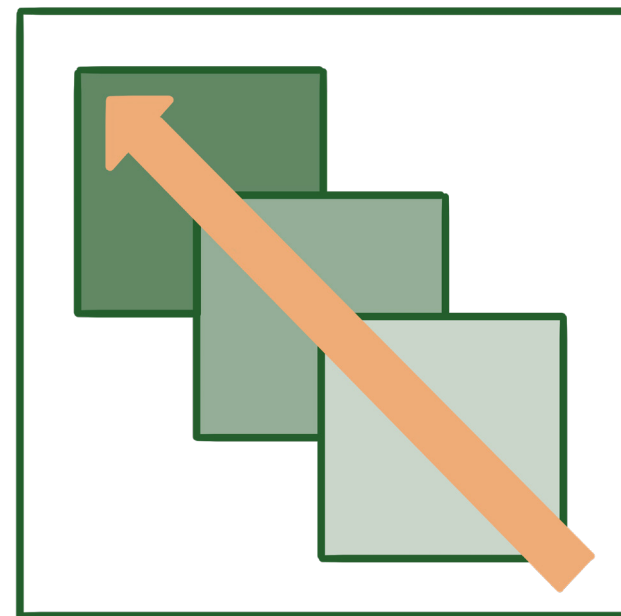
Building block

Dwelling

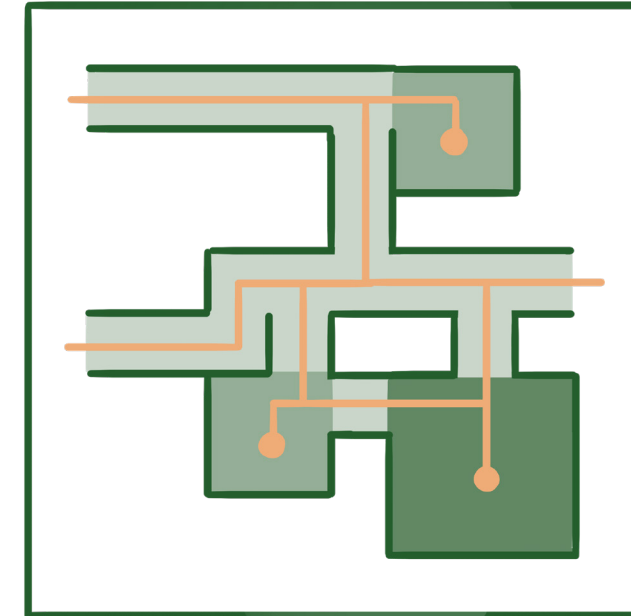
Urban flow



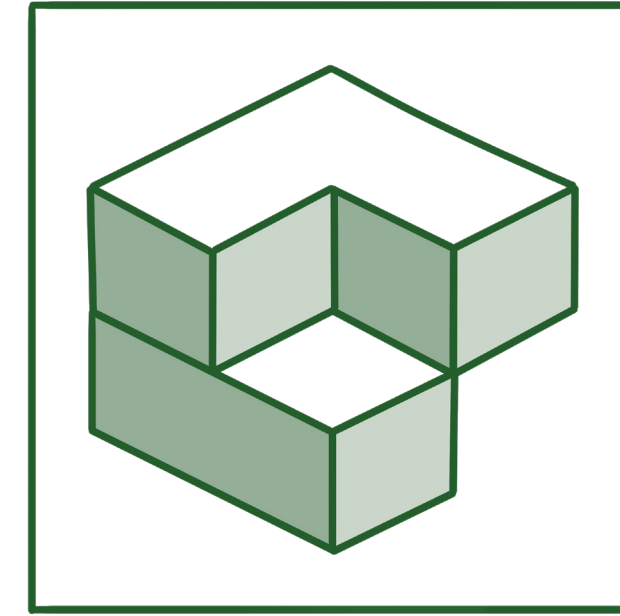
Function in public space:



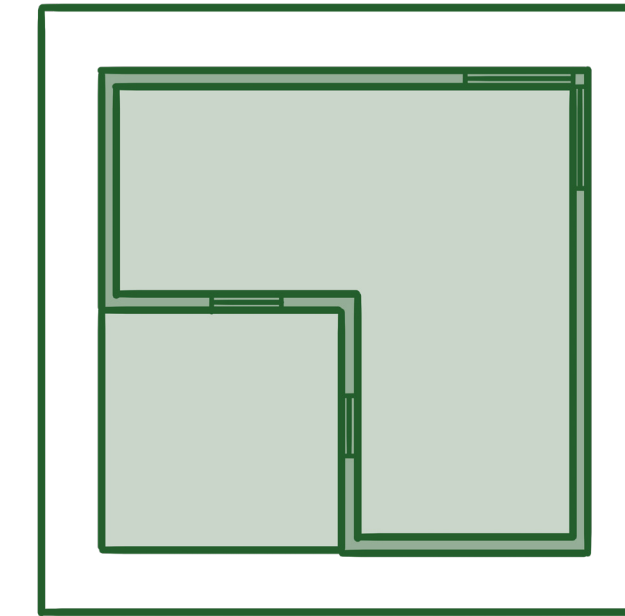
Public - collective - private:



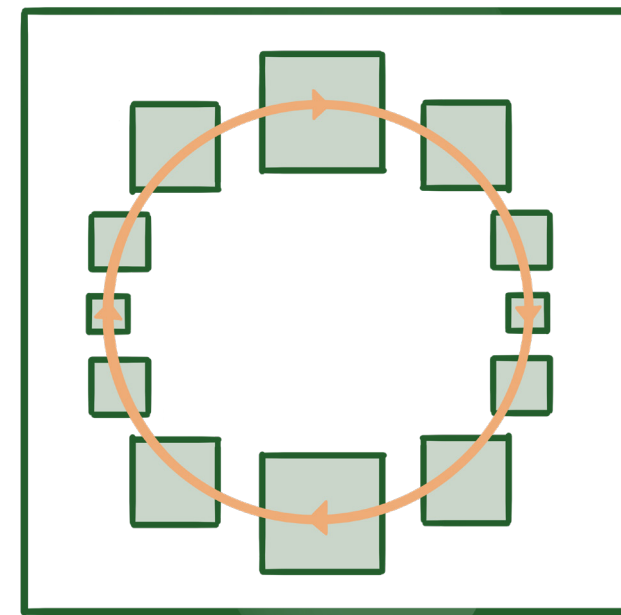
Variation in space:



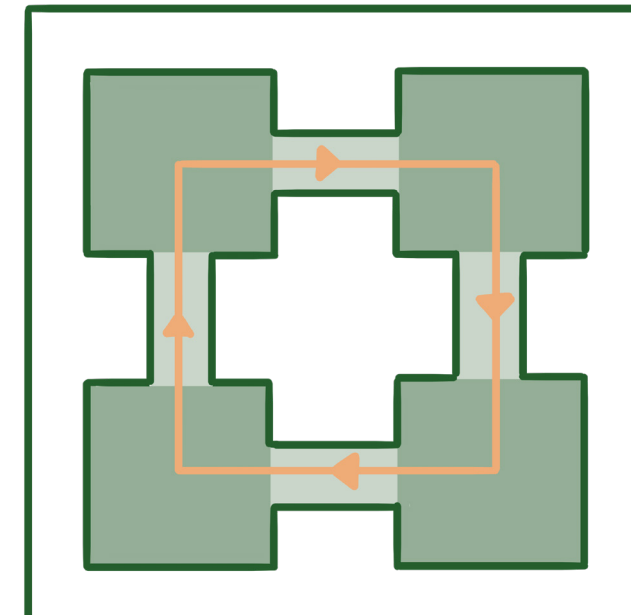
Stacking prefab modules:



L-shaped dwellings:



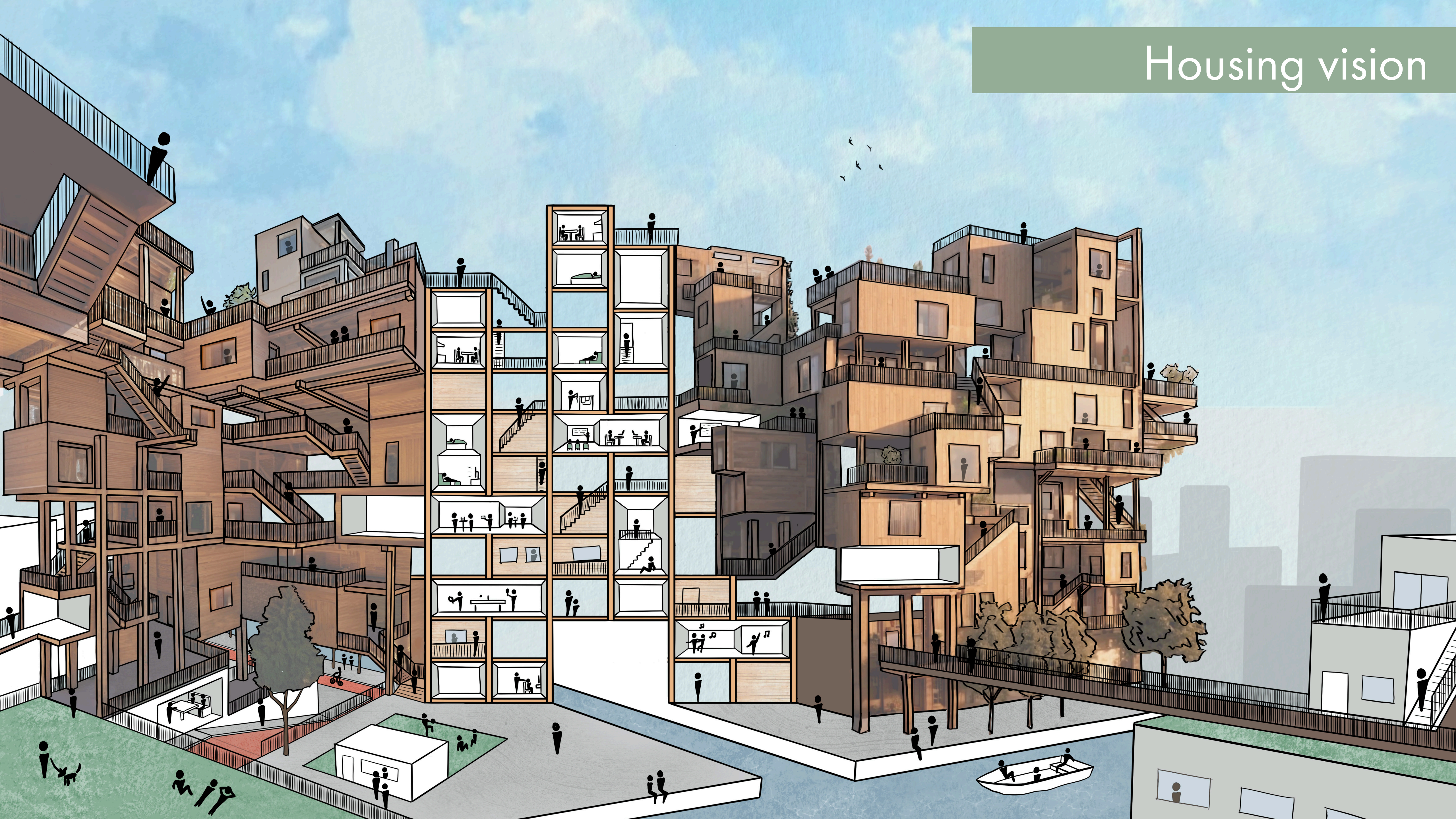
Continuation of scale



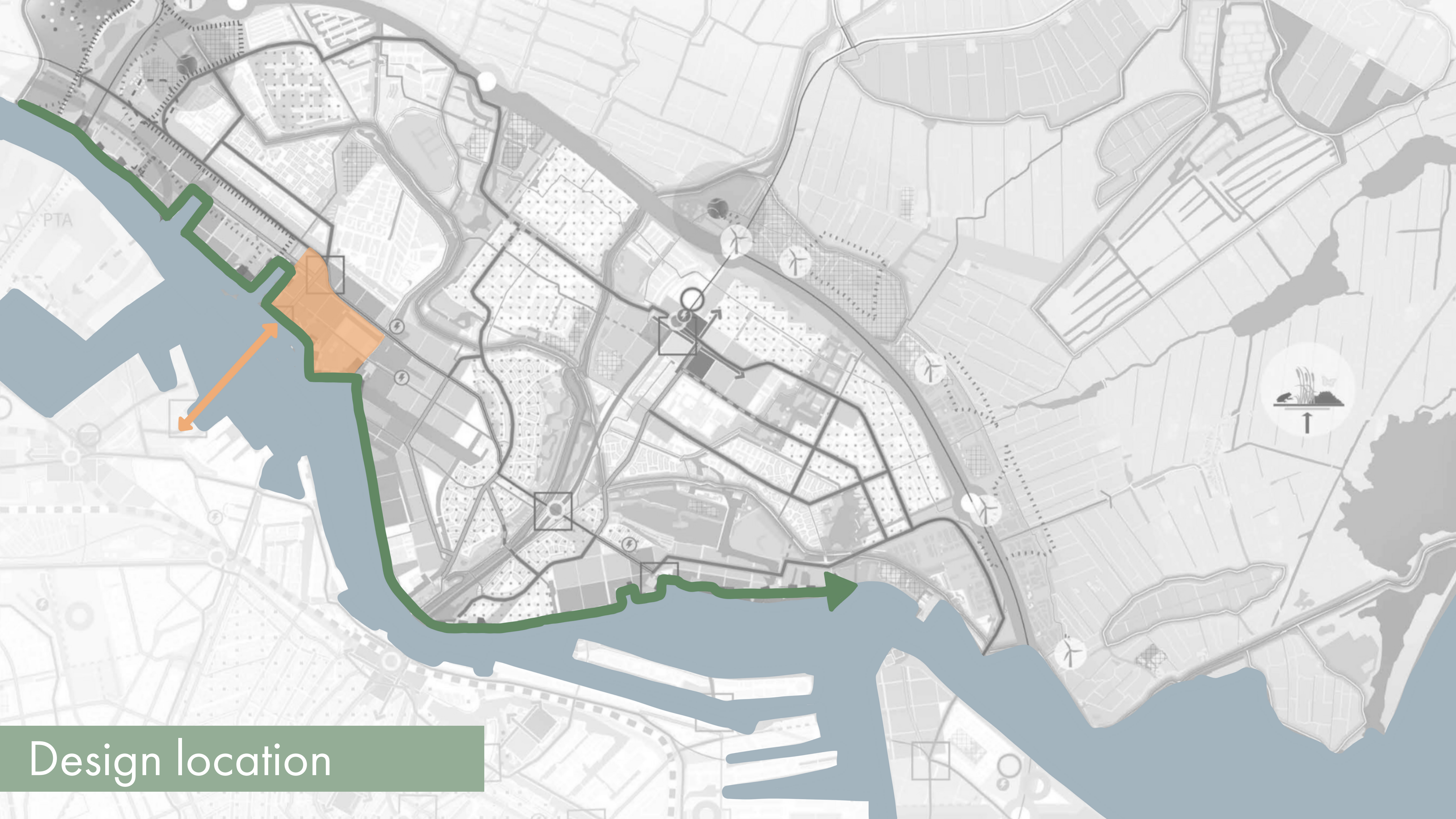
Continuation of space:

Conclusion diagram

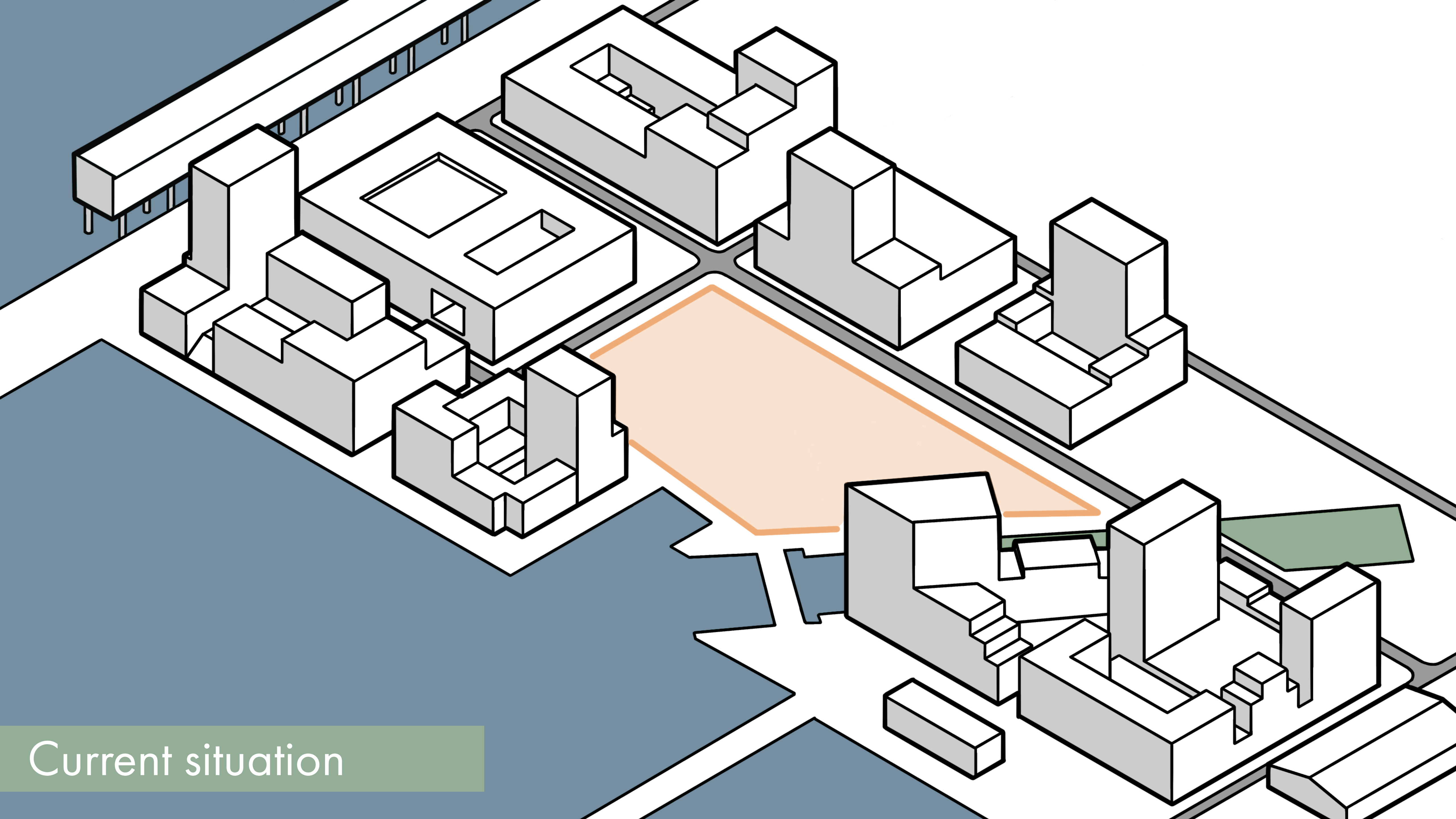
Housing vision



DESIGN PROCESS



Design location



Current situation



Future plans



Barren public space

Inaccessible inner
courtyards

No interaction
between dwelling,
building and city



Problem statement

Building plot ~ 7000m²

Requires ~ 140 dwellings

Desired FSI > 2.0 for urban density

Variety of typologies for mixed inhabitants

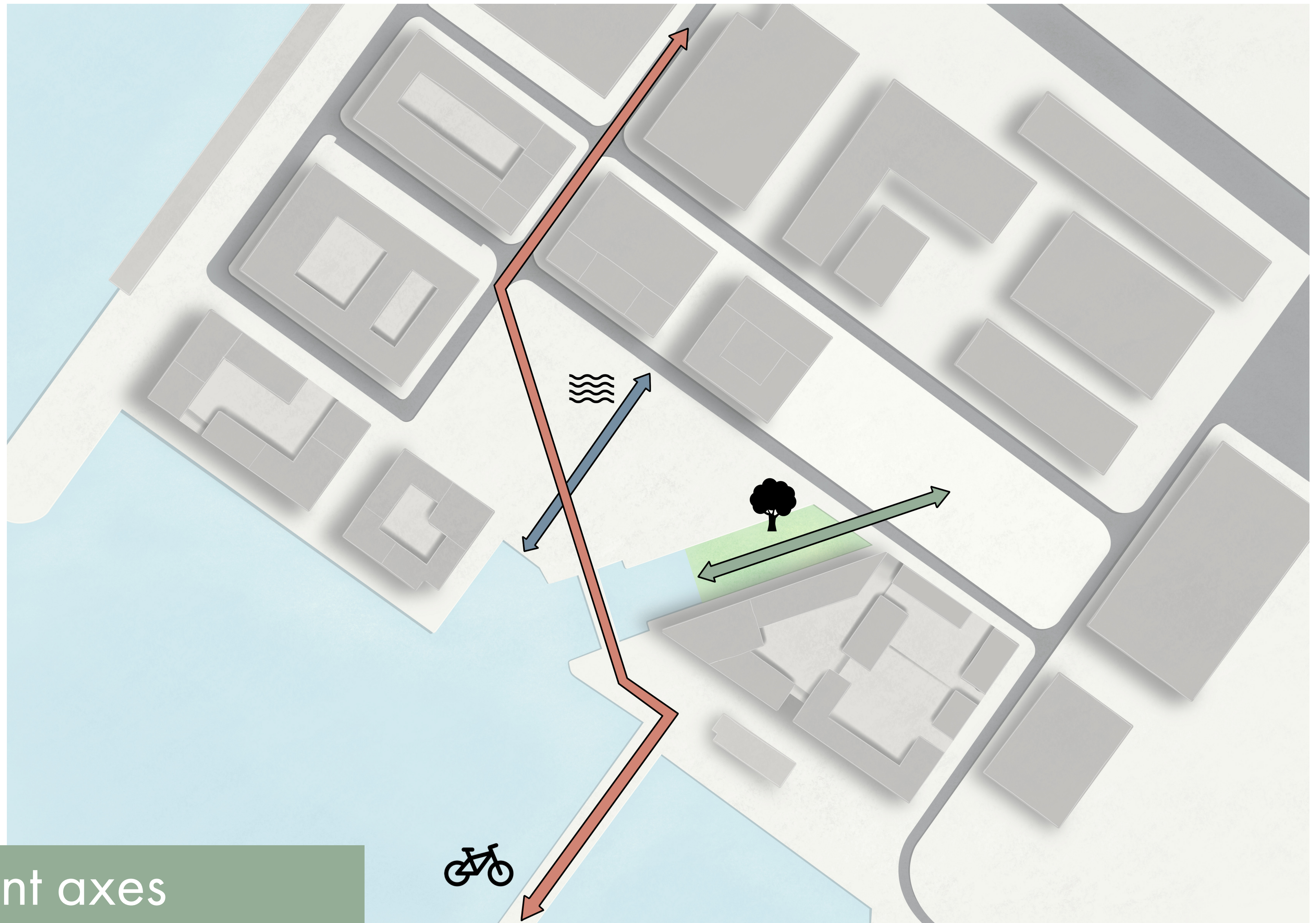
Dwellings connect to central access route

Multifunctional program:

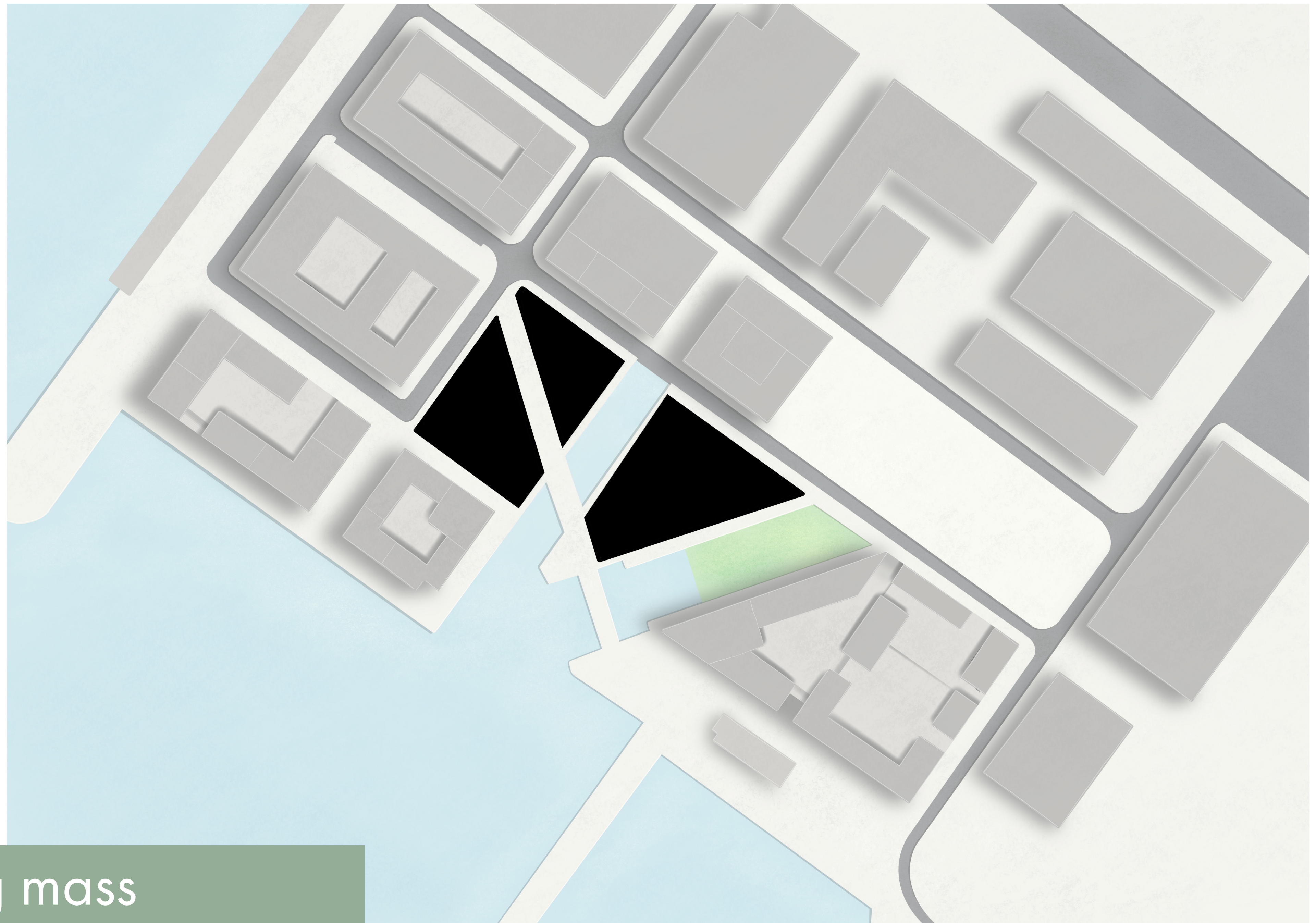
- Small local shops
- Urban facilities
- Work spaces
- Hospitality industry



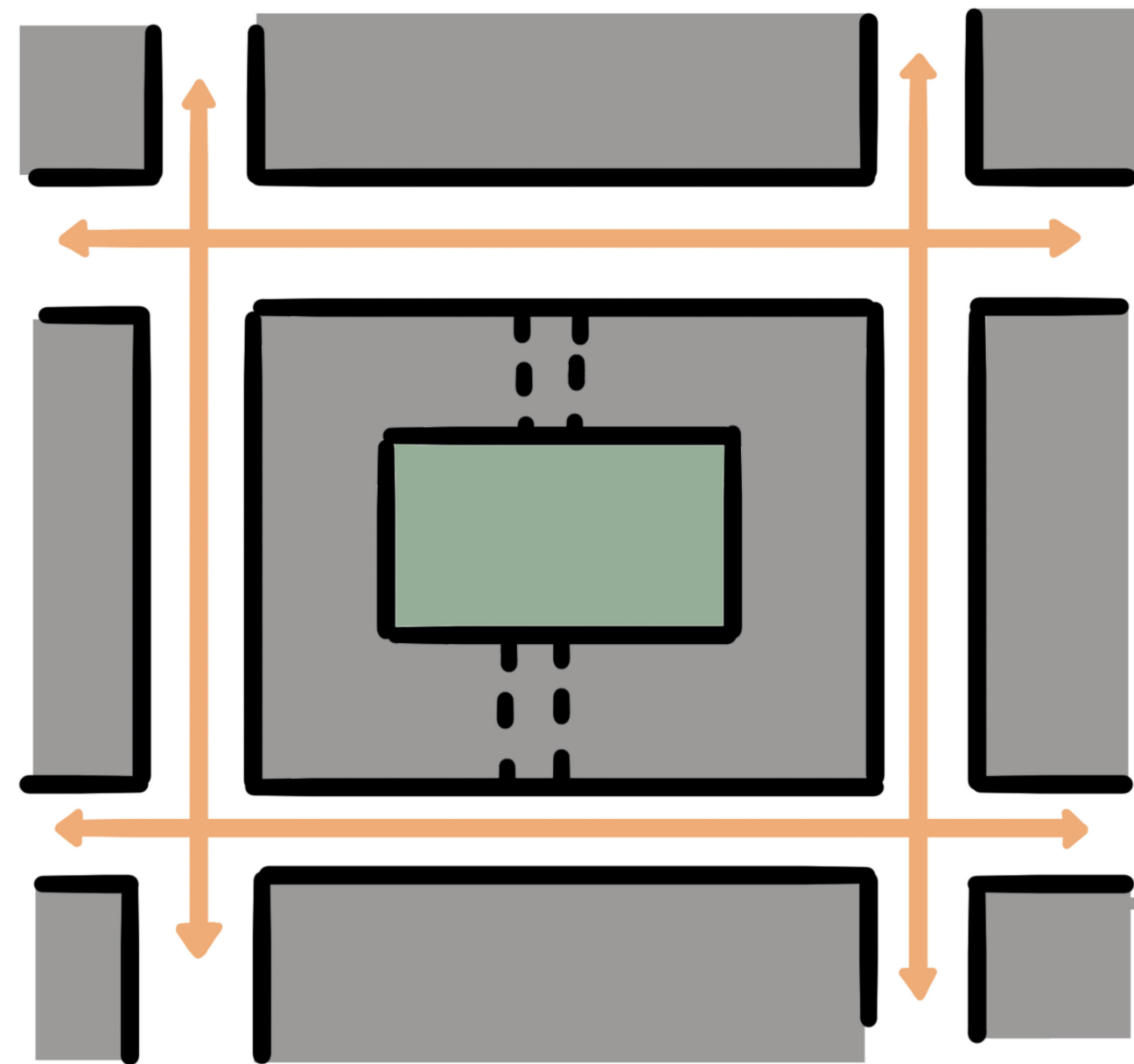
Current situation



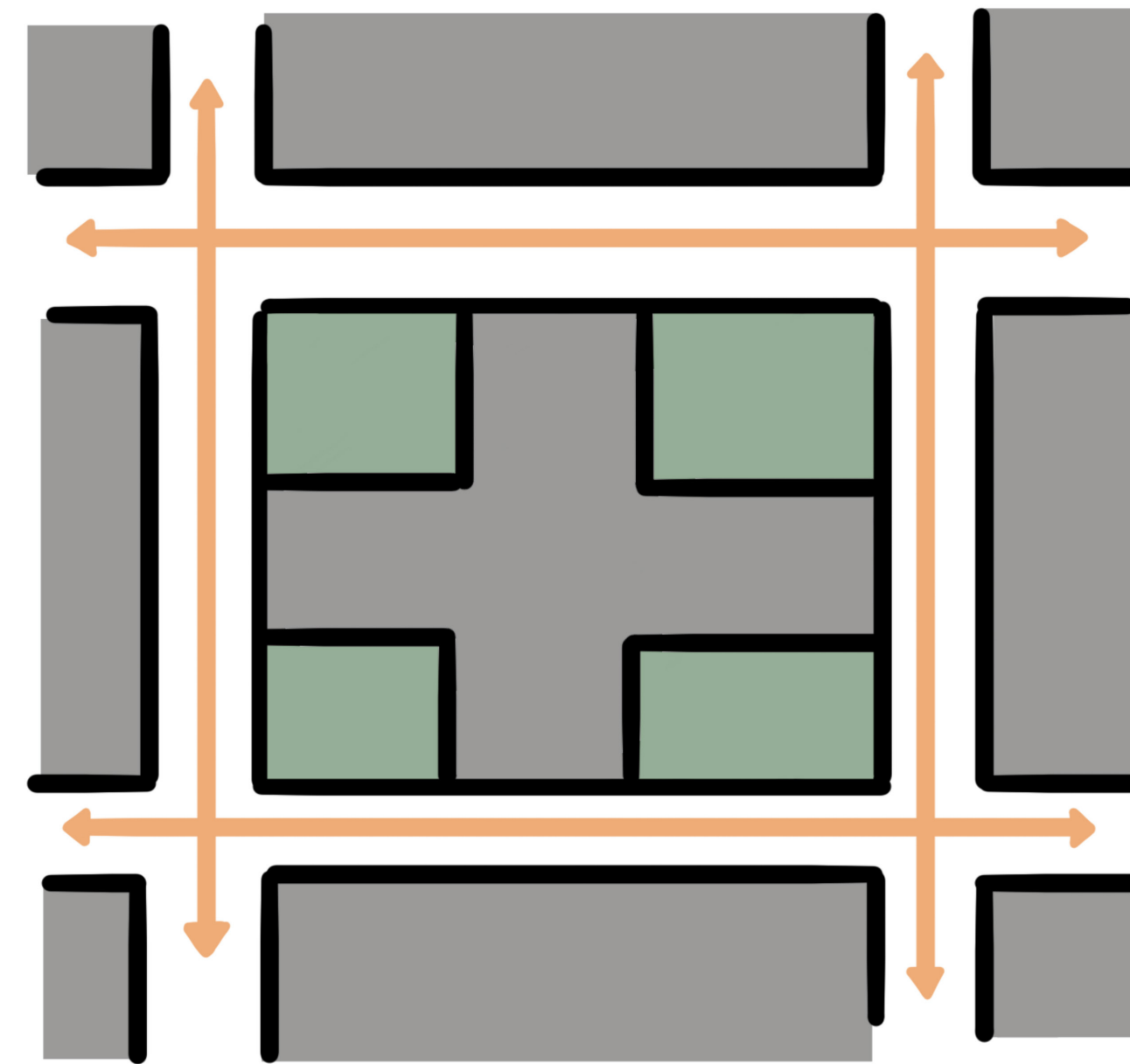
Important axes



Building mass

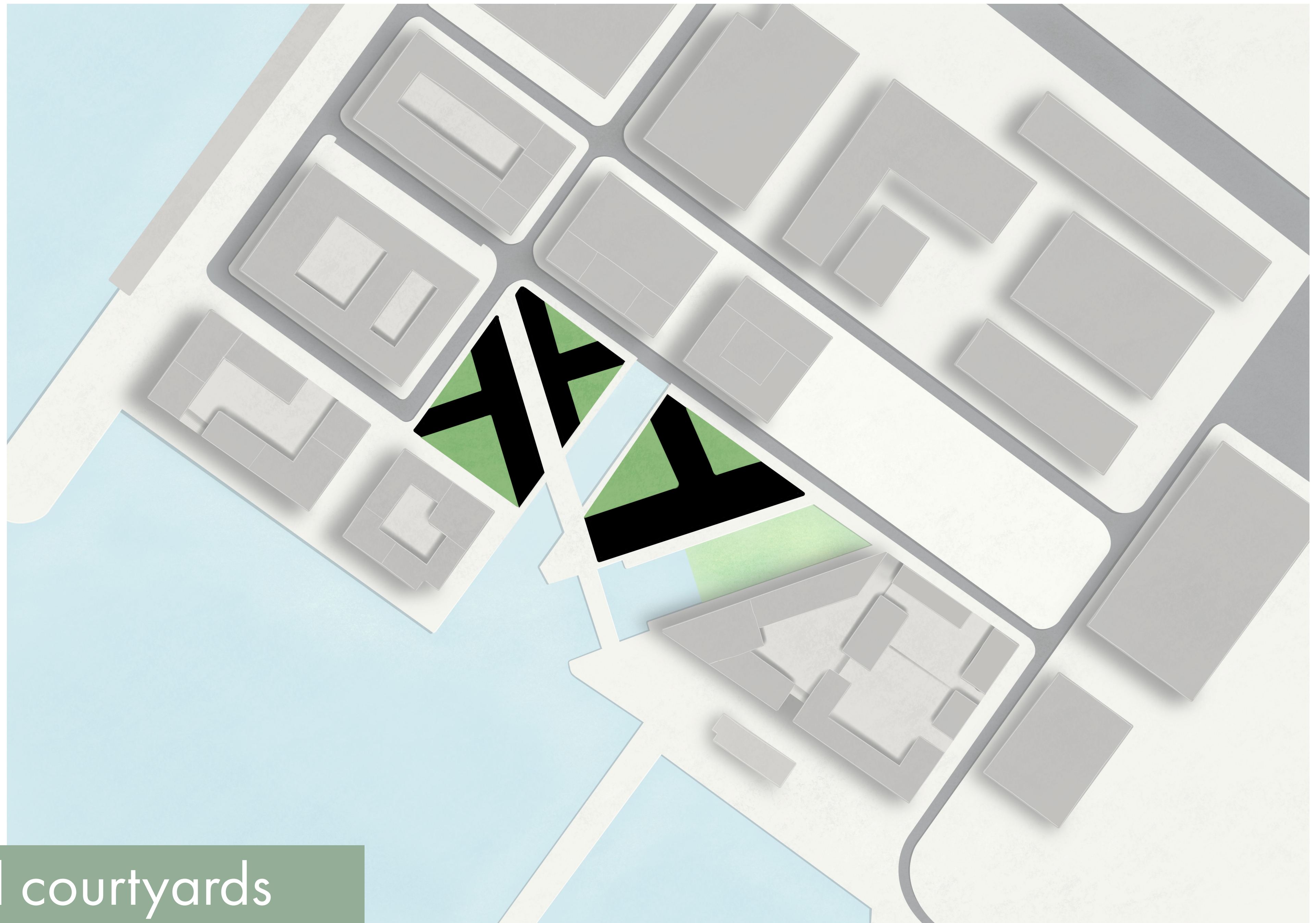


Internal courtyards

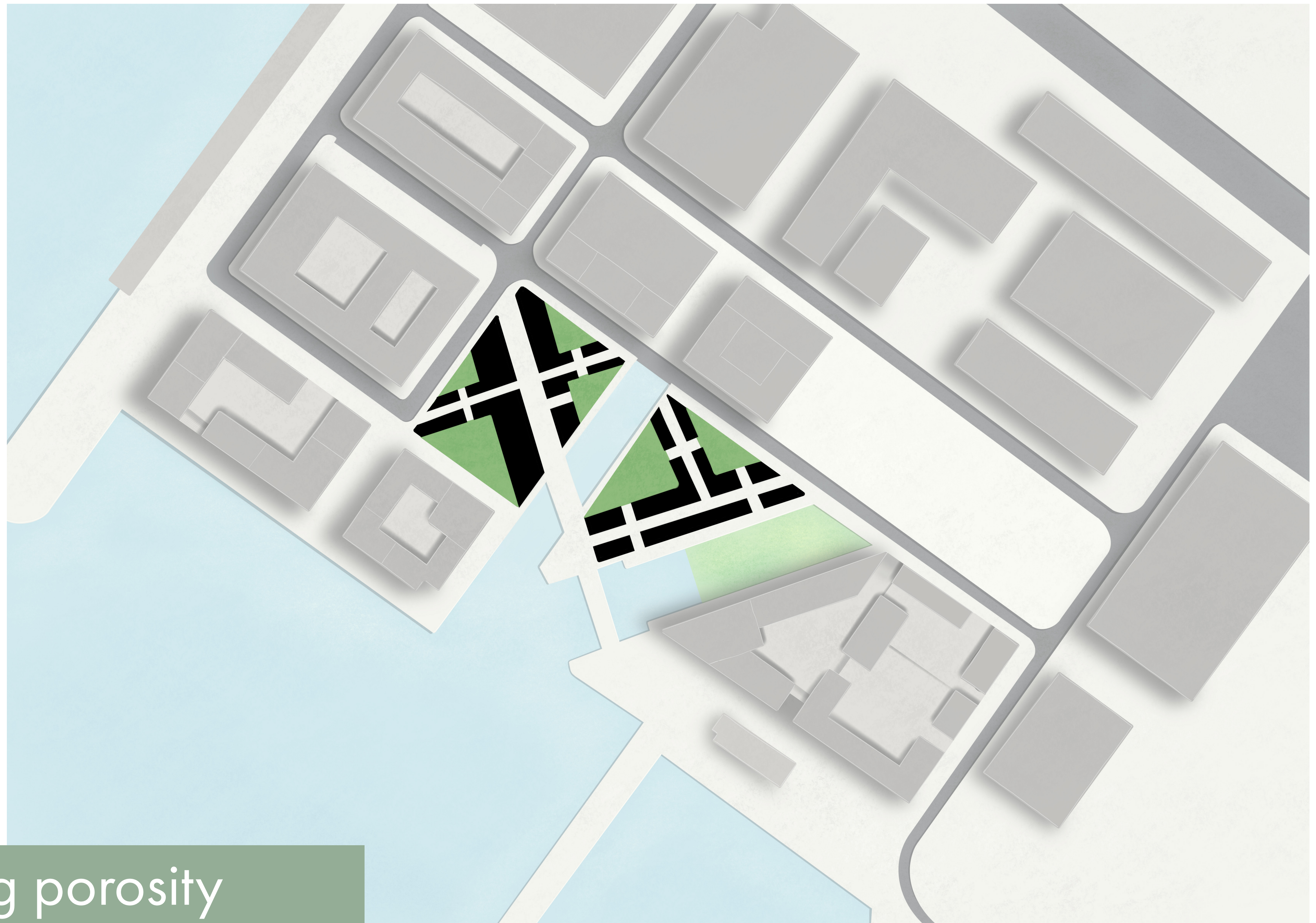


External courtyards

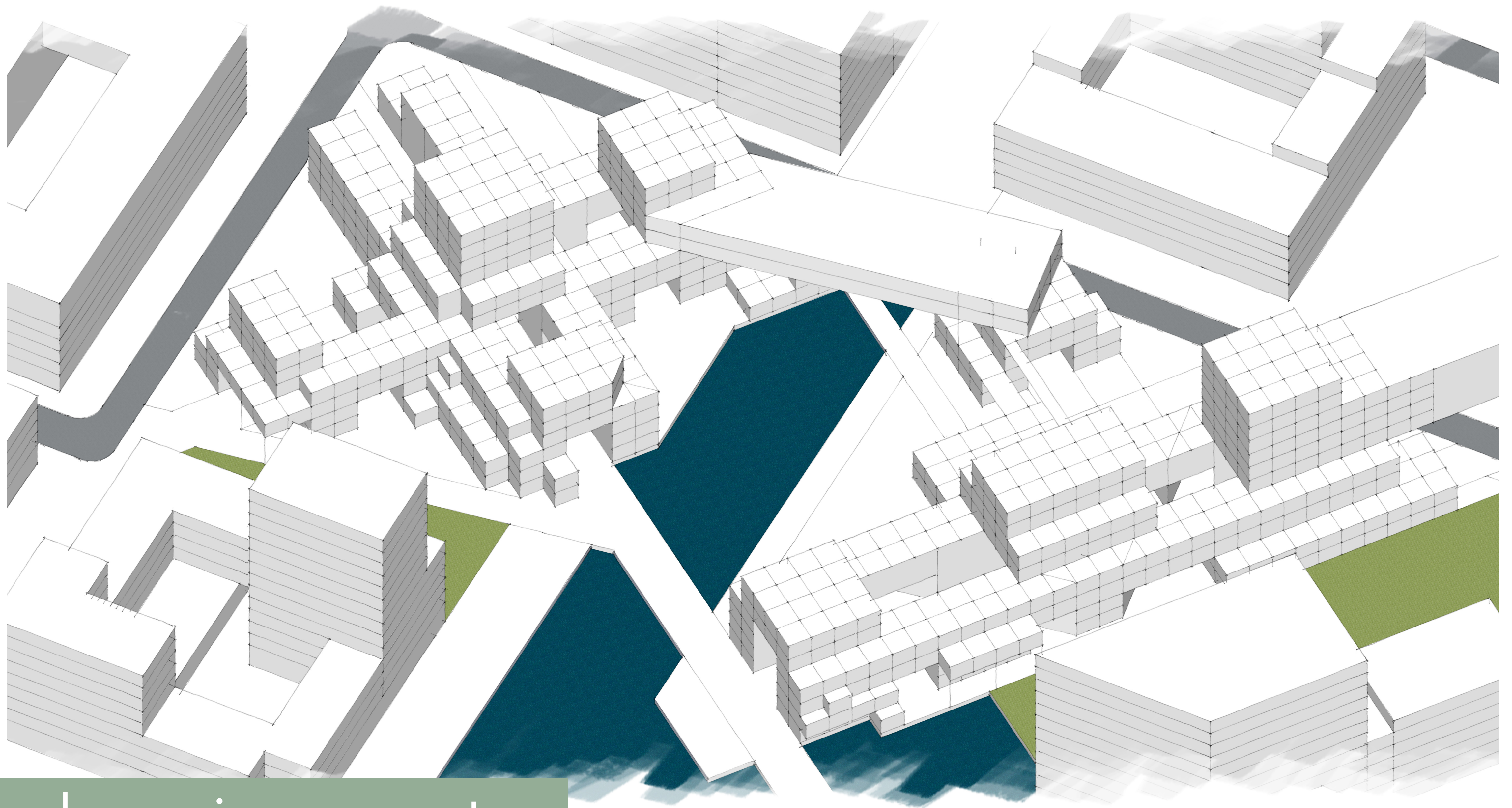
Inversing courtyards



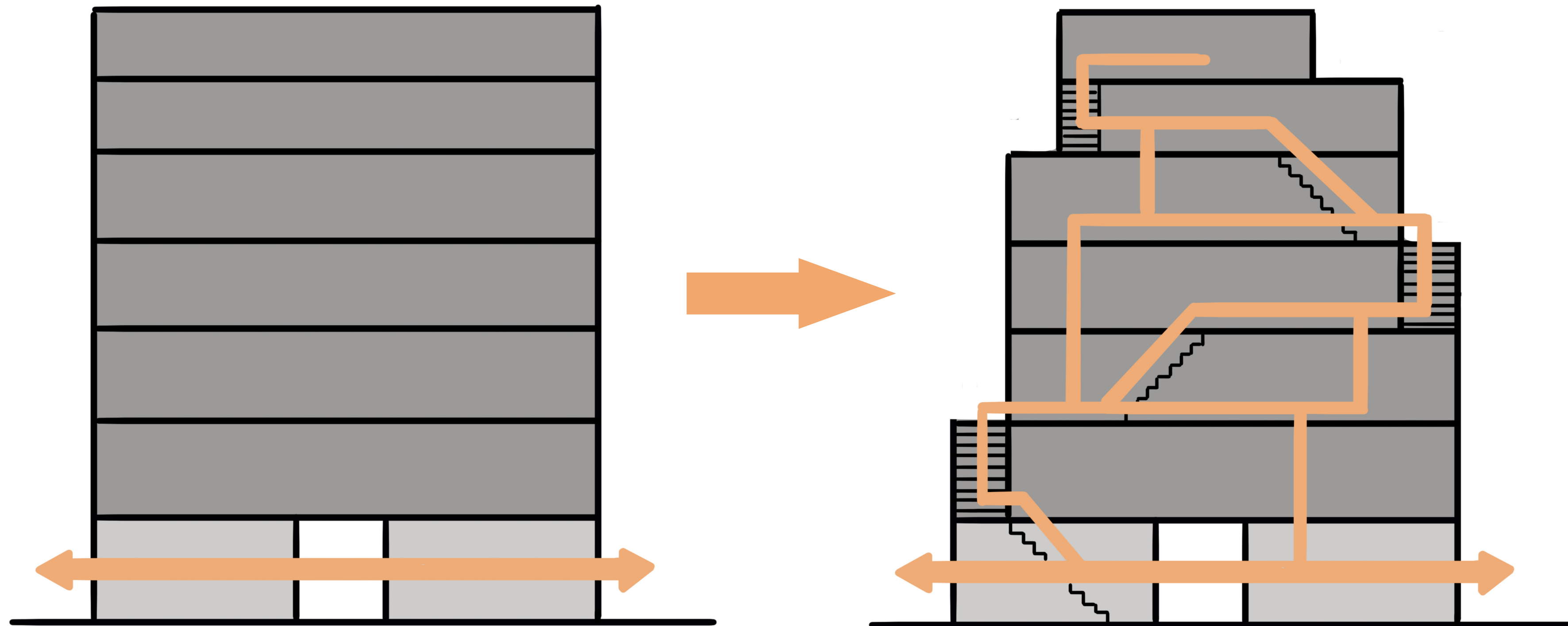
External courtyards



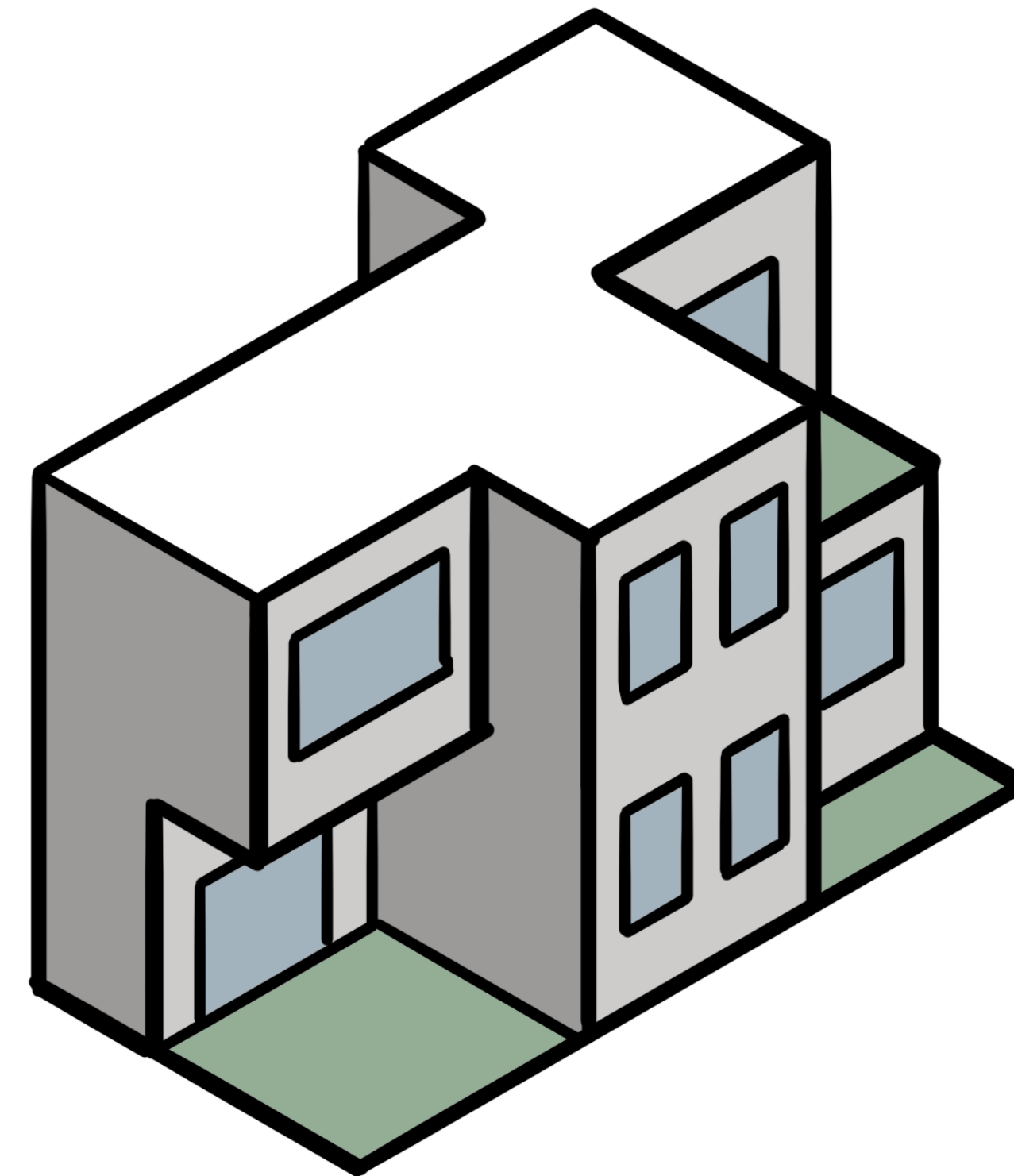
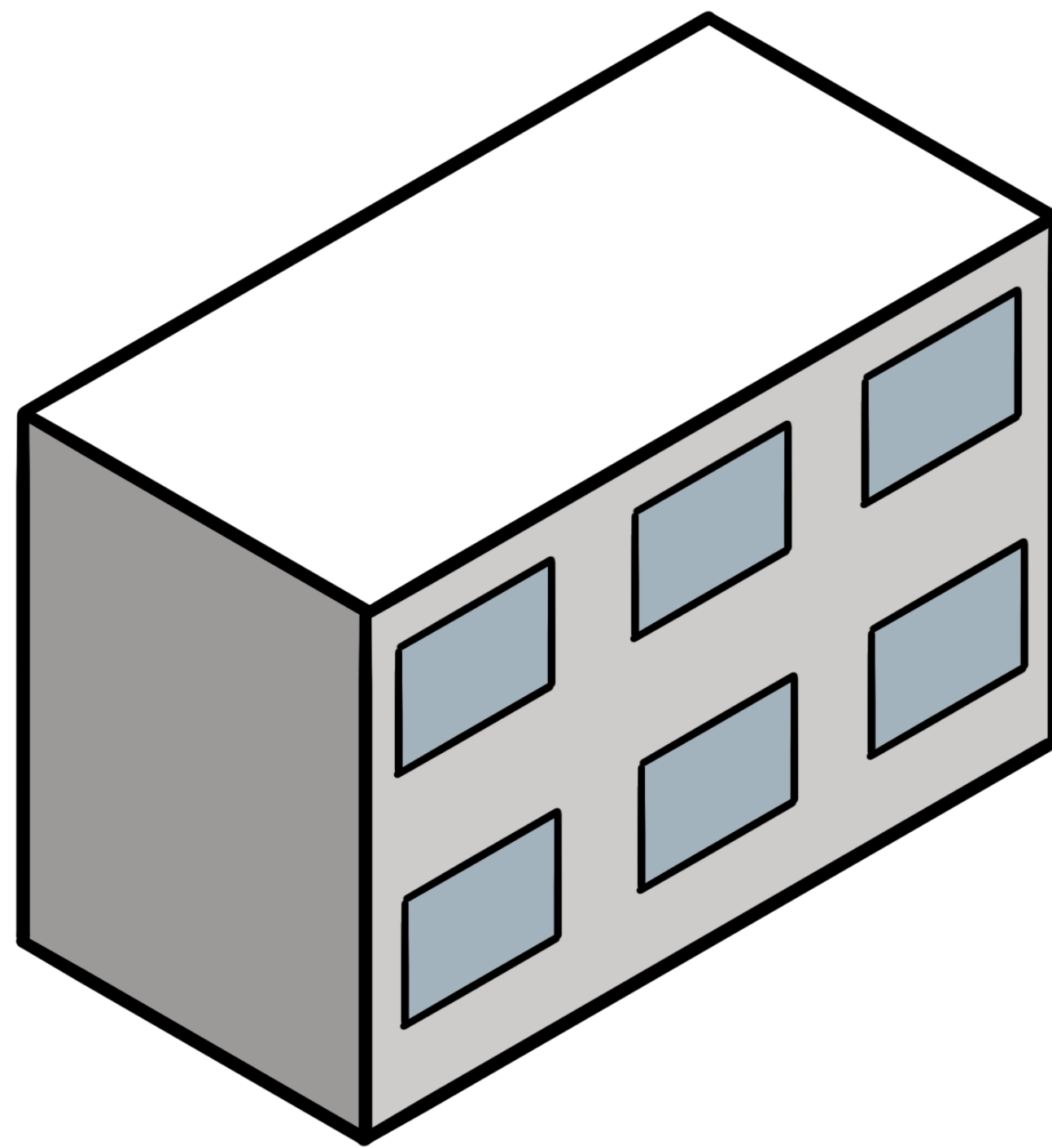
Creating porosity



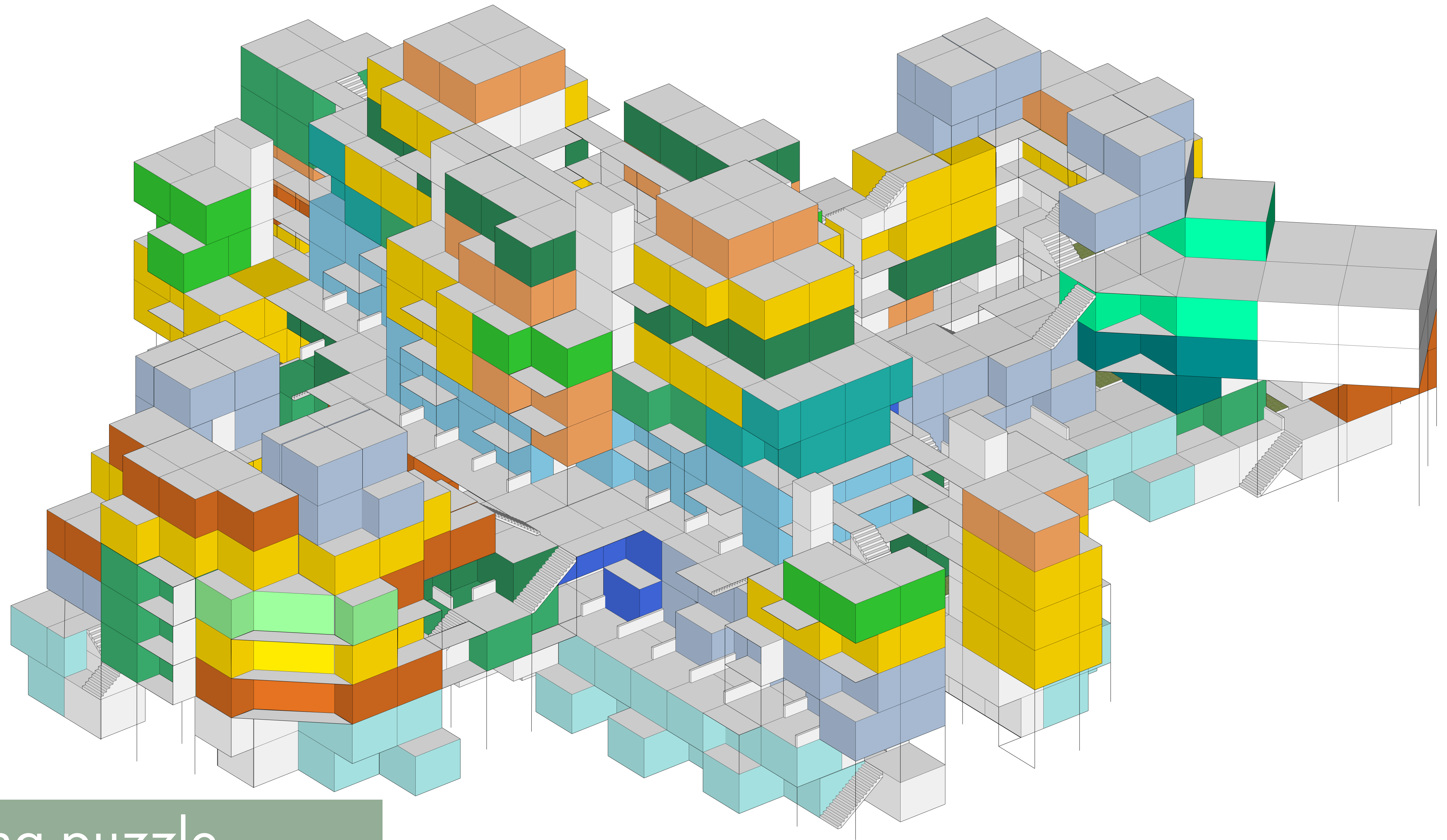
Rough massing concept



Vertical porosity



Staggering mass



Dwelling puzzle

Total: 138 dwellings

FSI: 2,1

~3000m² shared / public functions

~11500m² dwelling space

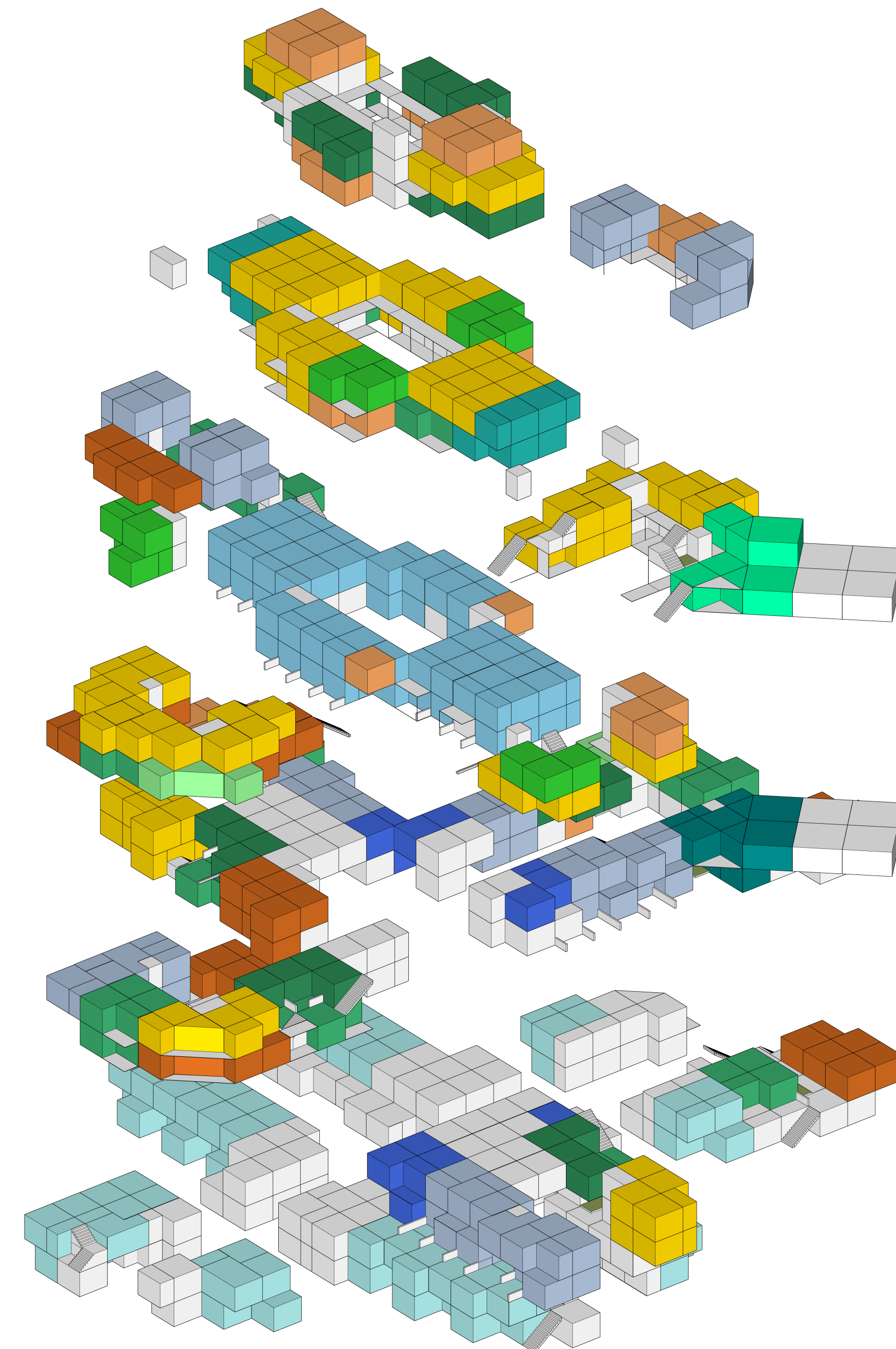
34 - one bedroom apartments (~45-60m²)

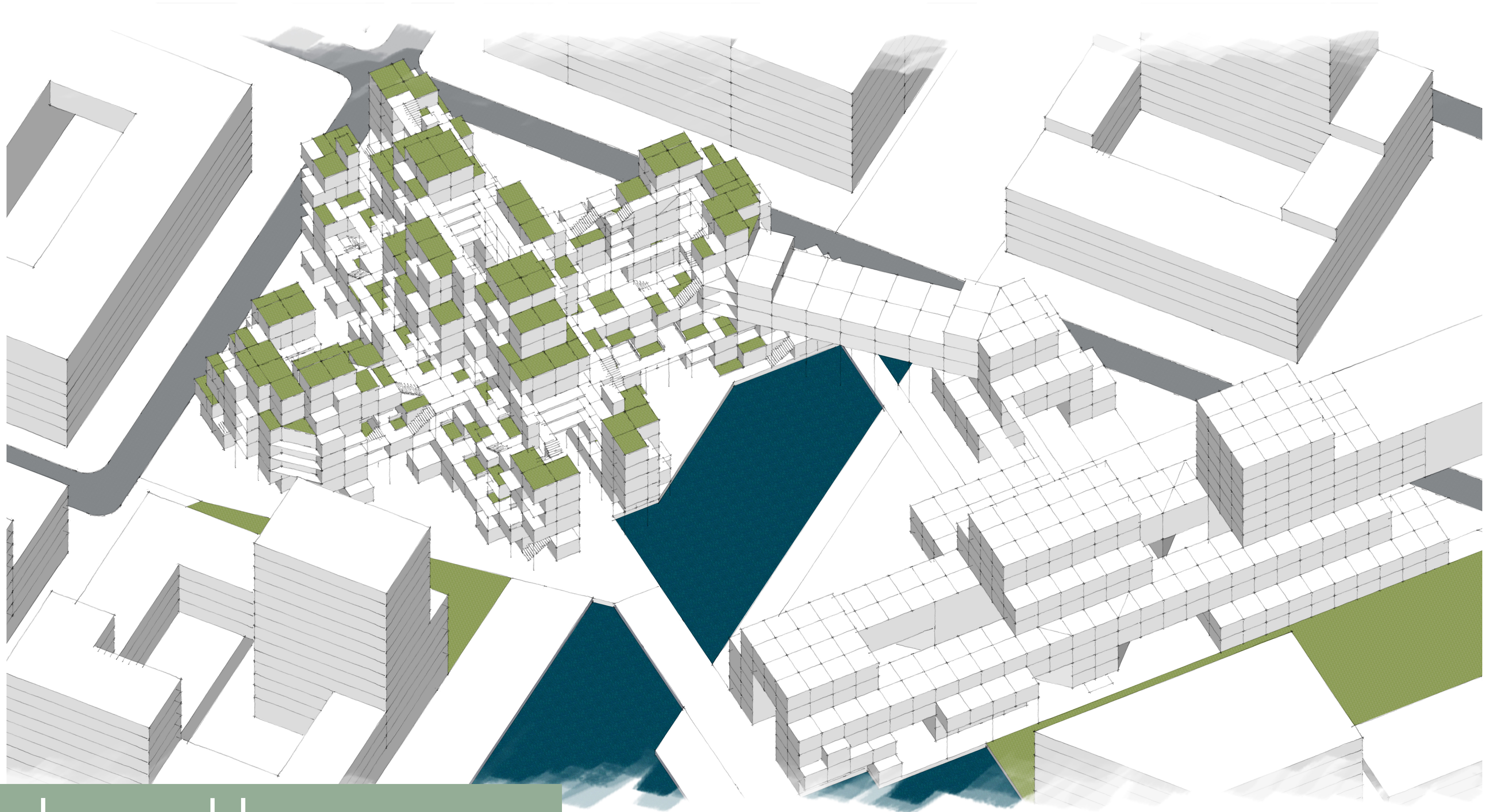
40 - two bedroom apartments (~70-80m²)

22 - three bedroom apartments (~90-100m²)

38 - family dwellings (~100-130m²)

Avarage dwelling size ~84m²





Final ensemble



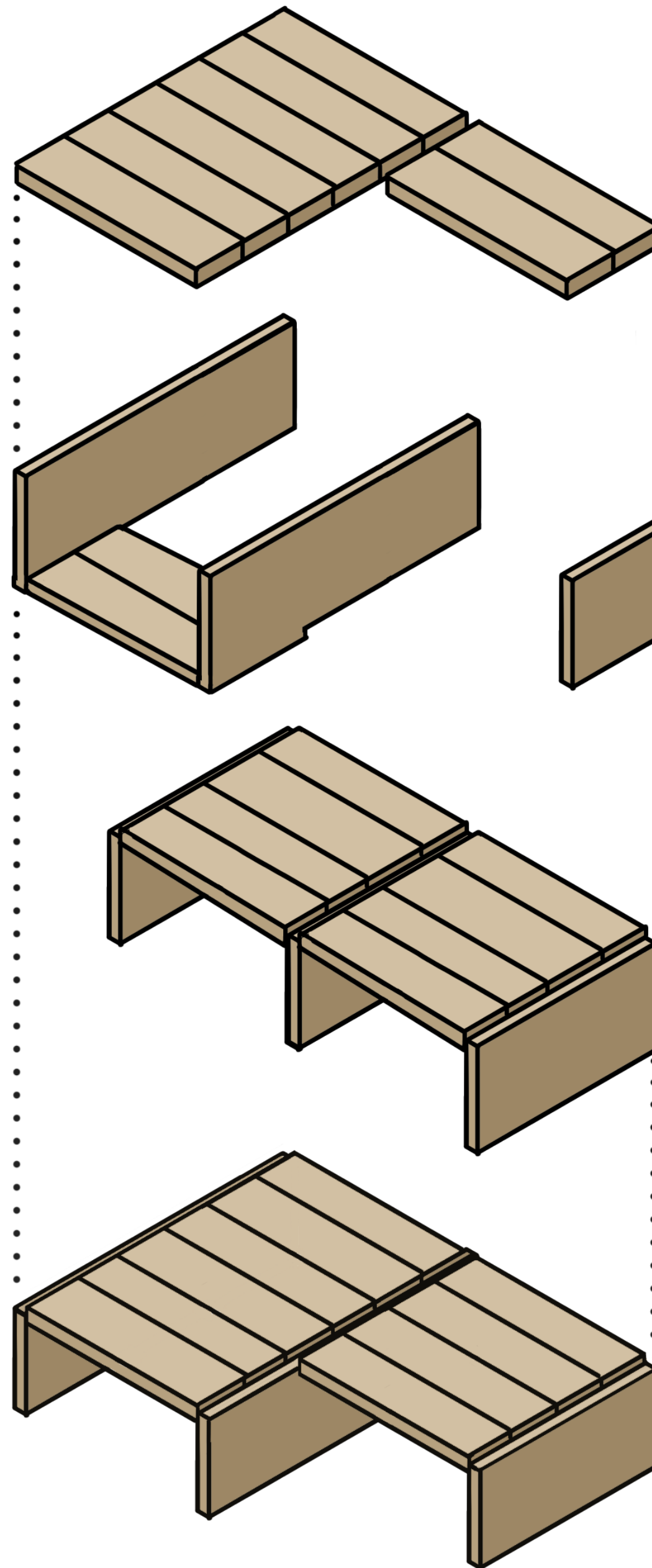
Plinth impressions



CONSTRUCTION



Construction concept

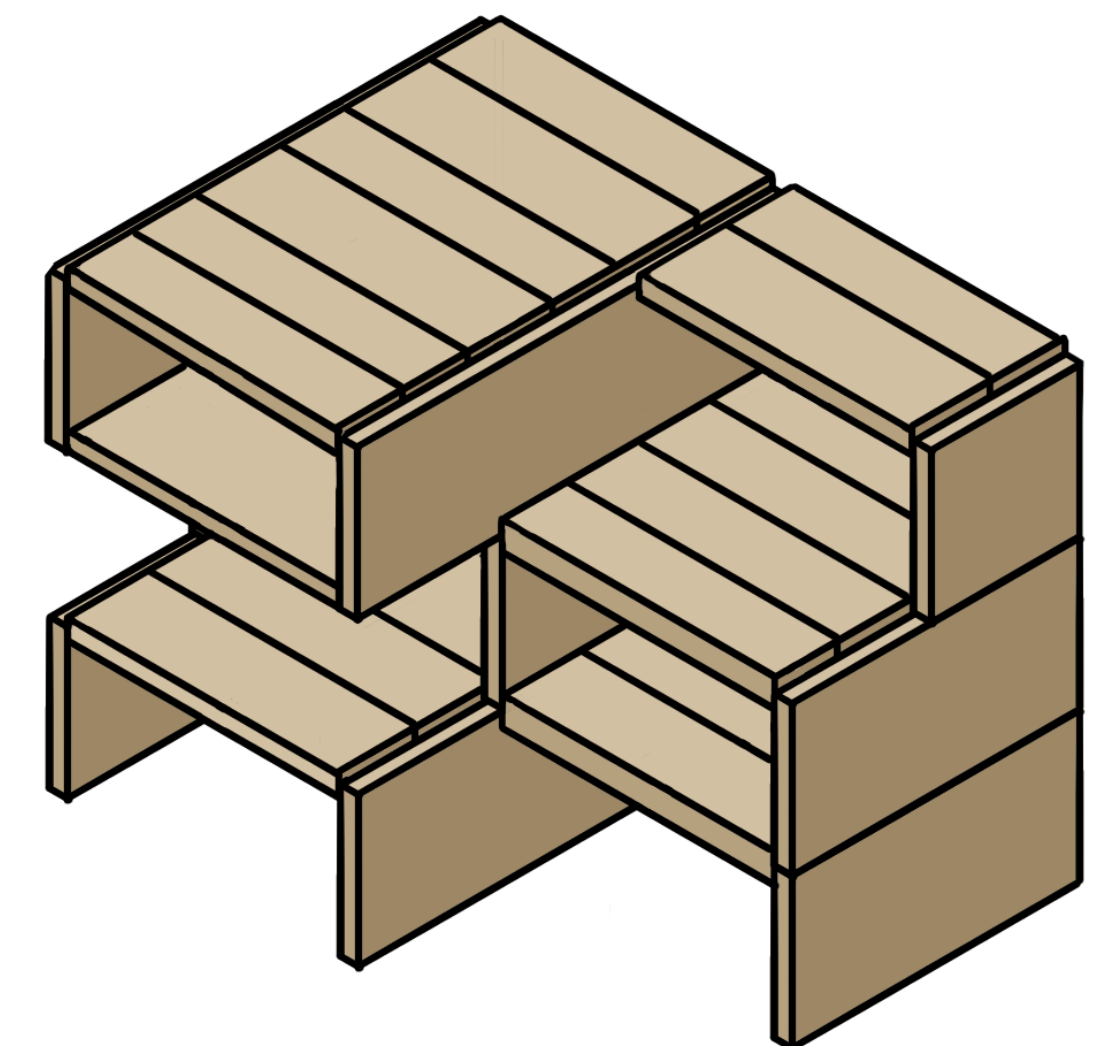


Lignature flooring

Wooden hollow core floor system

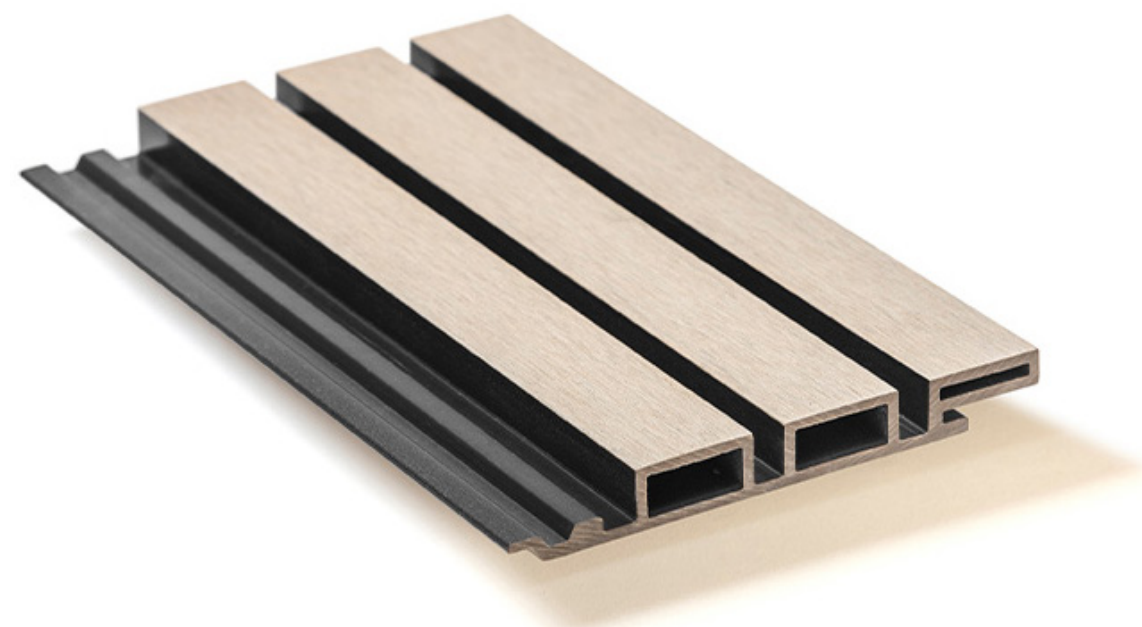
CLT Walls

Cross laminated timber
Massive wooden slab construction





Construction application



Resysta facade panels



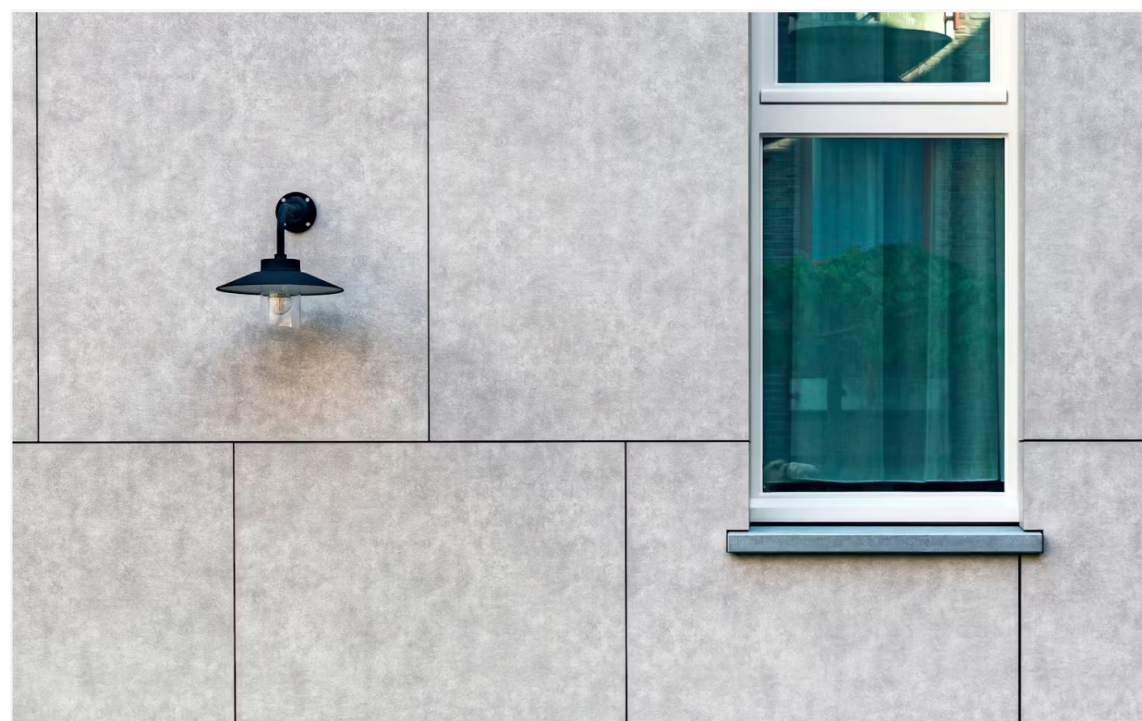
Base material



Biolith stonestrips



Used on facades on public route



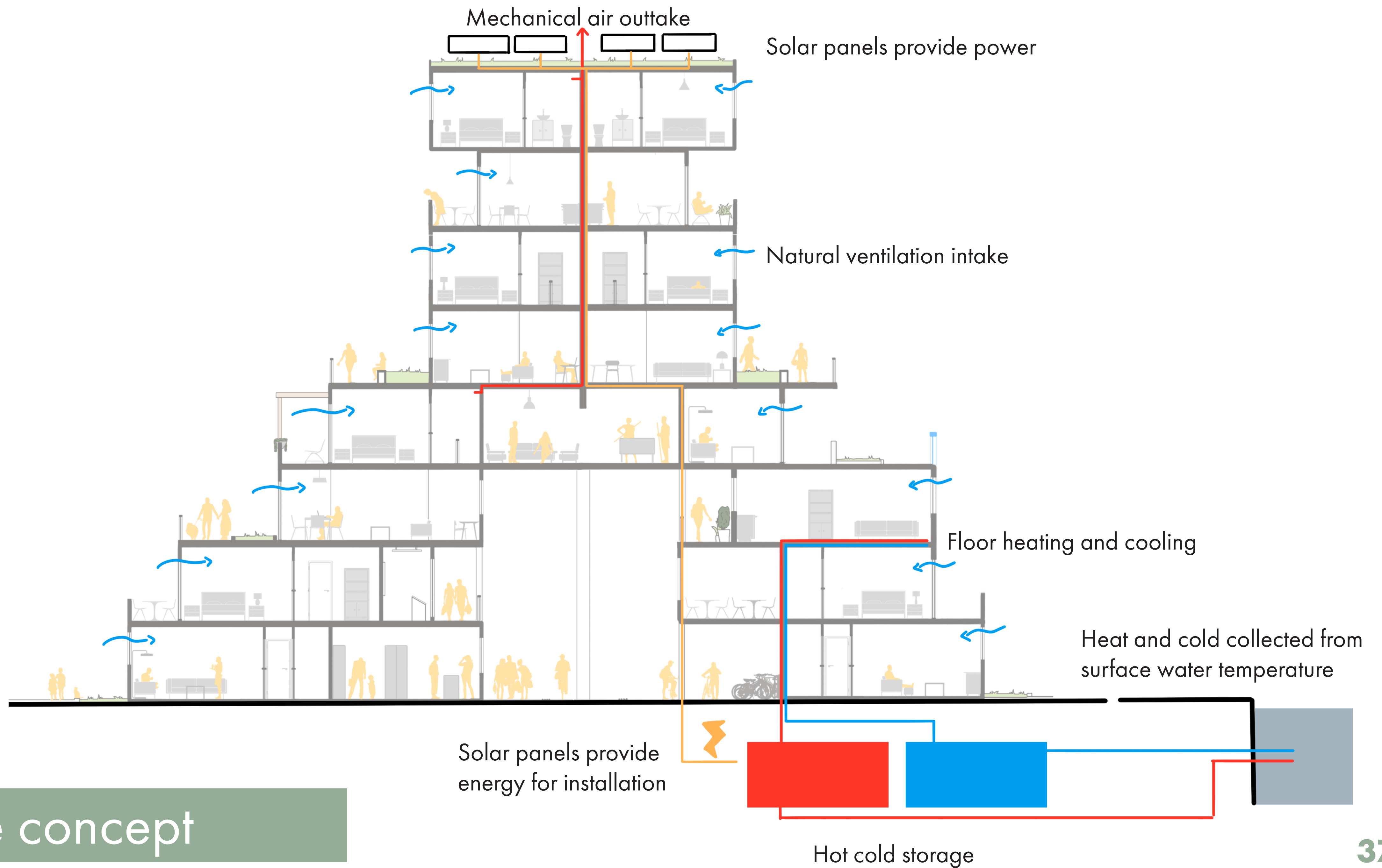
Rockpanel



Used on balcony balustrades

Facade system





Climate concept

ROUTING

- Public route
- Vertical stairs
- Elevators
- Main axes



Ground floorplan

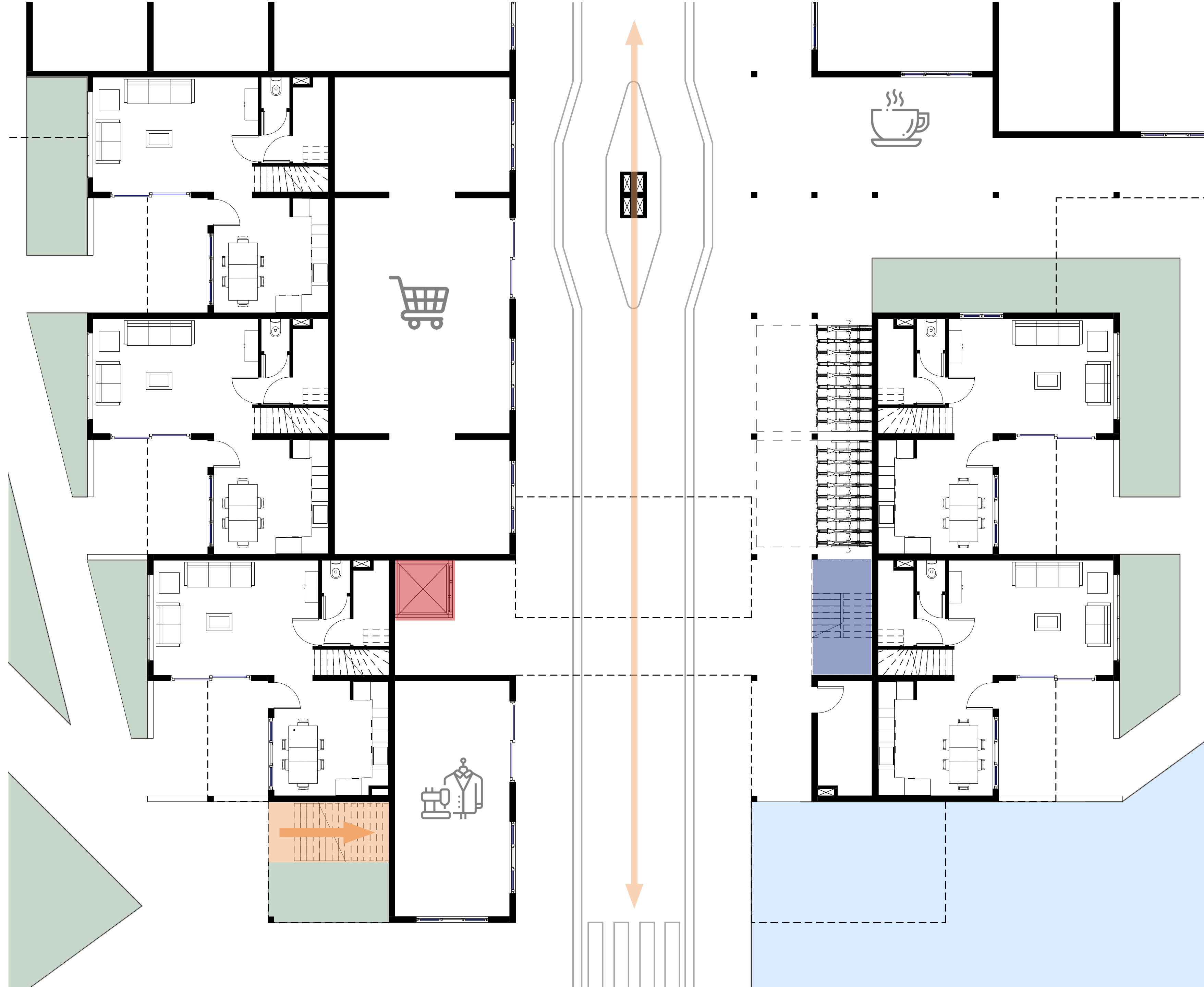


Central cycling route



Start of public route upwards

Groundfloor routing





"Street" on second floor



Continuation of public route upwards

2nd floor routing



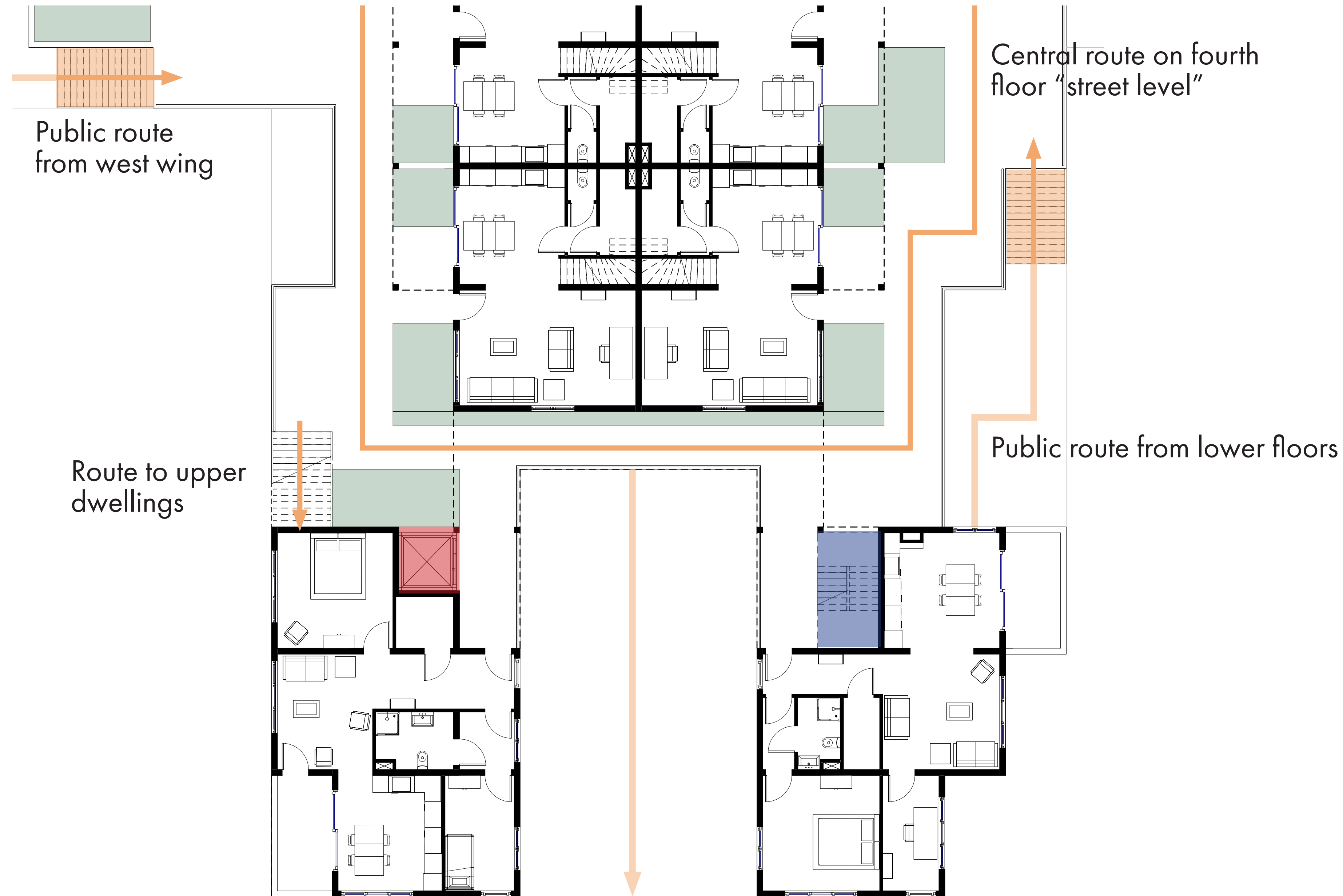


Route from westwing
&
Route to upper dwellings



Gallery over main axes

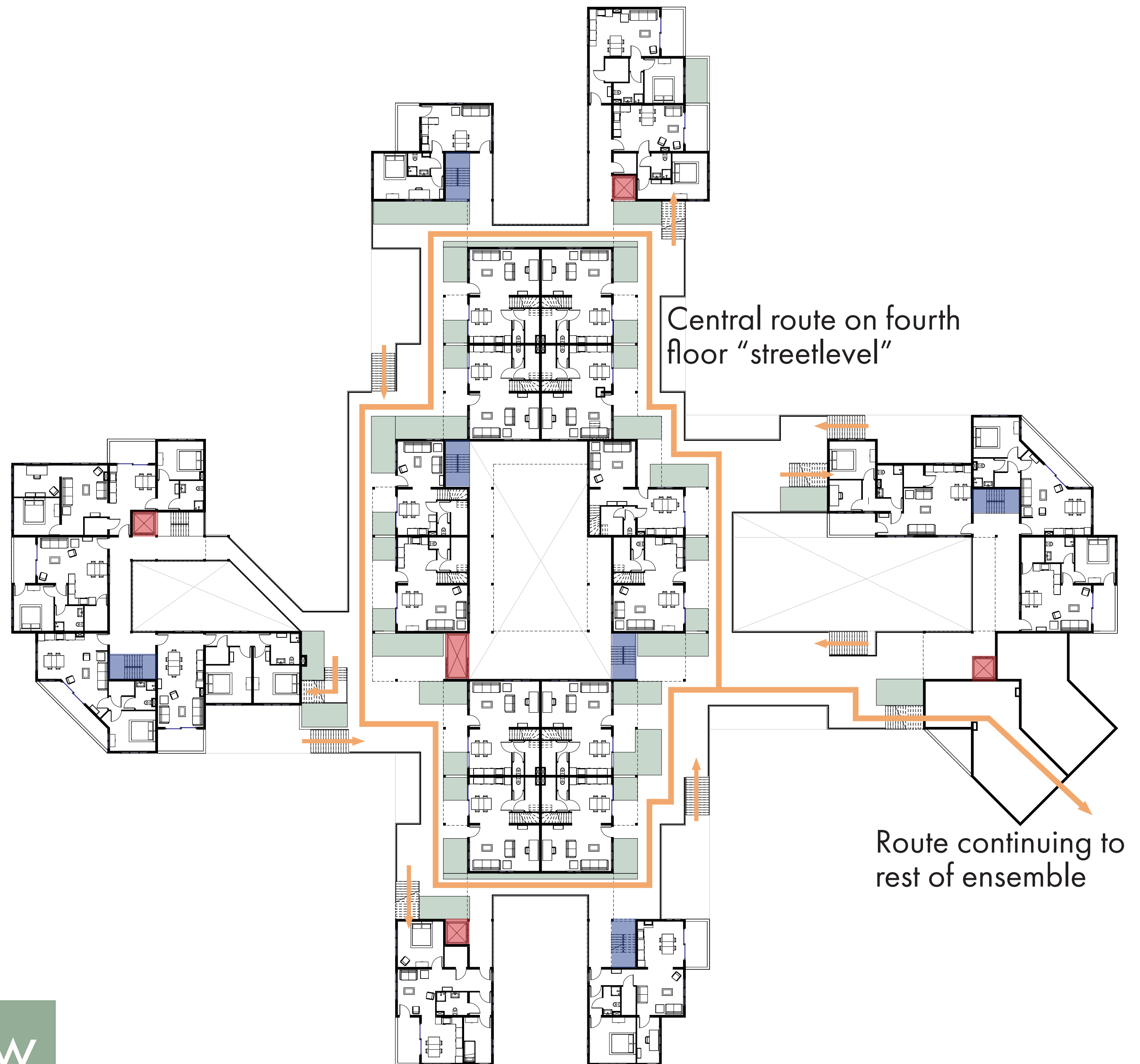
4th floor routing





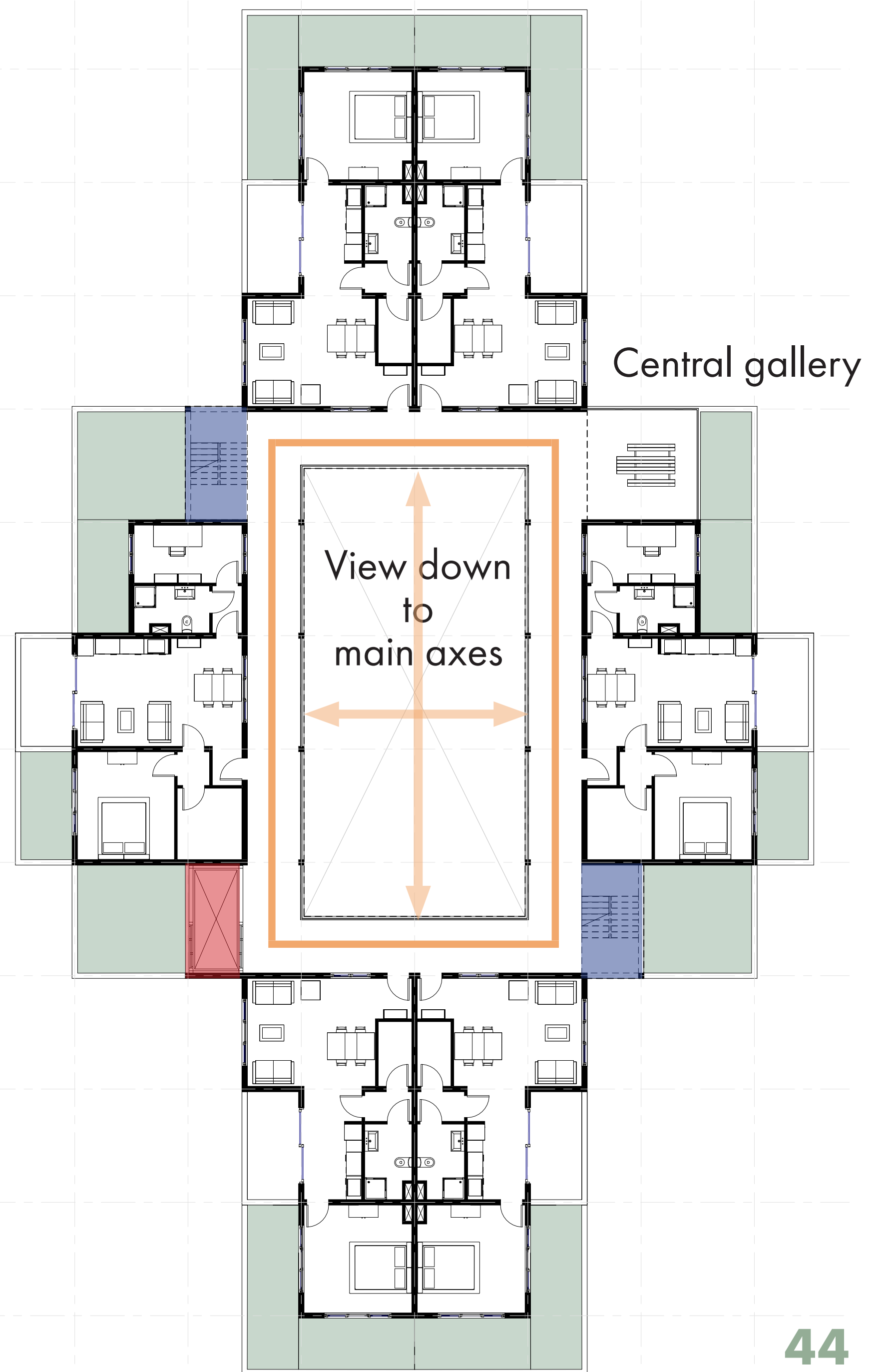
Public ring on 4th floor

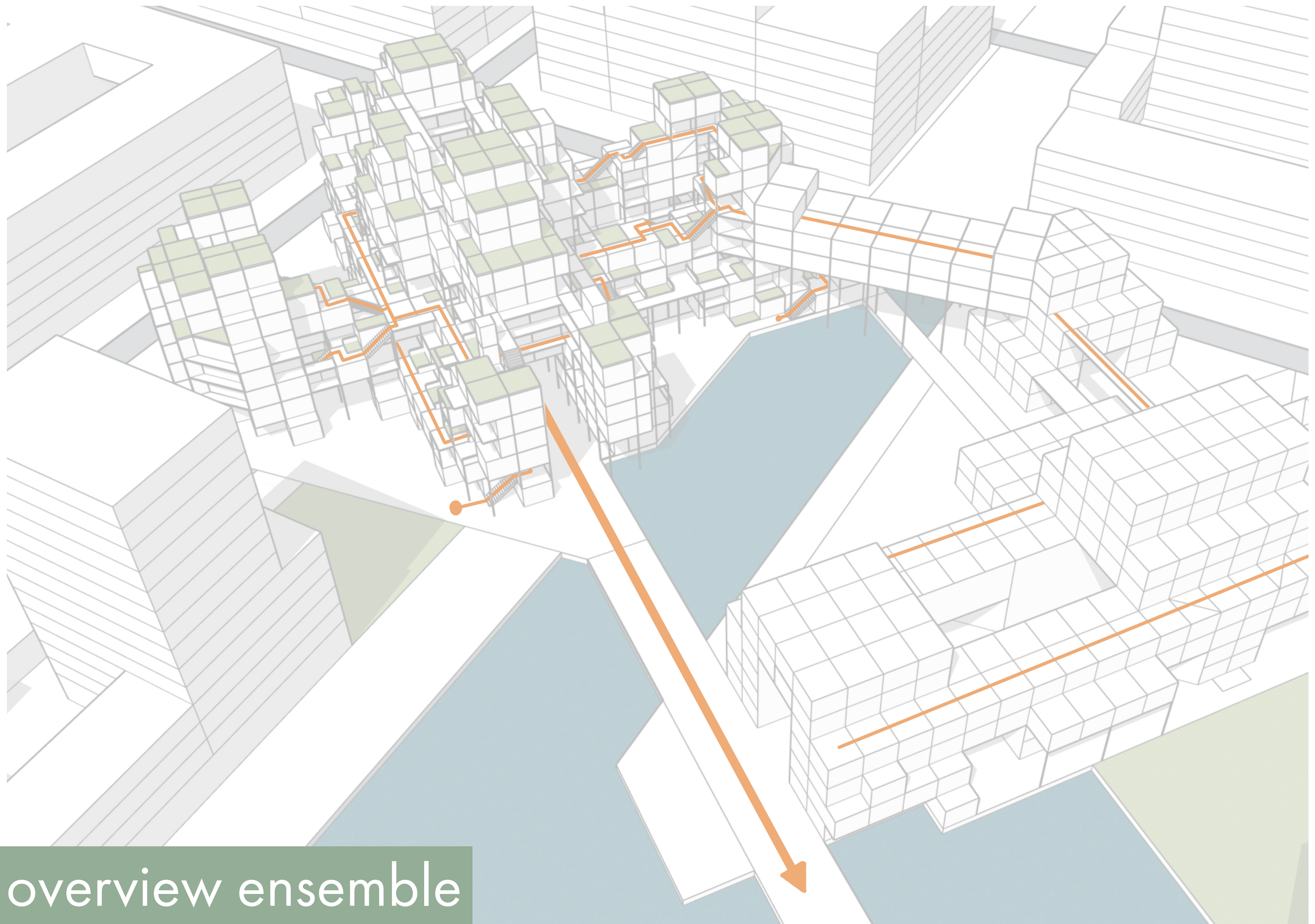
4th floor routing overview





8th floor routing

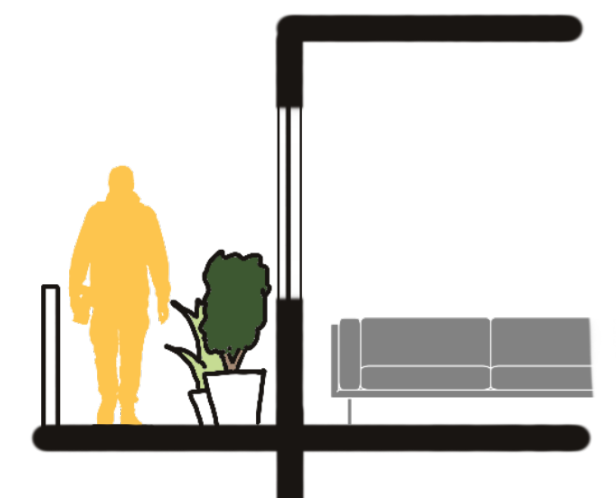
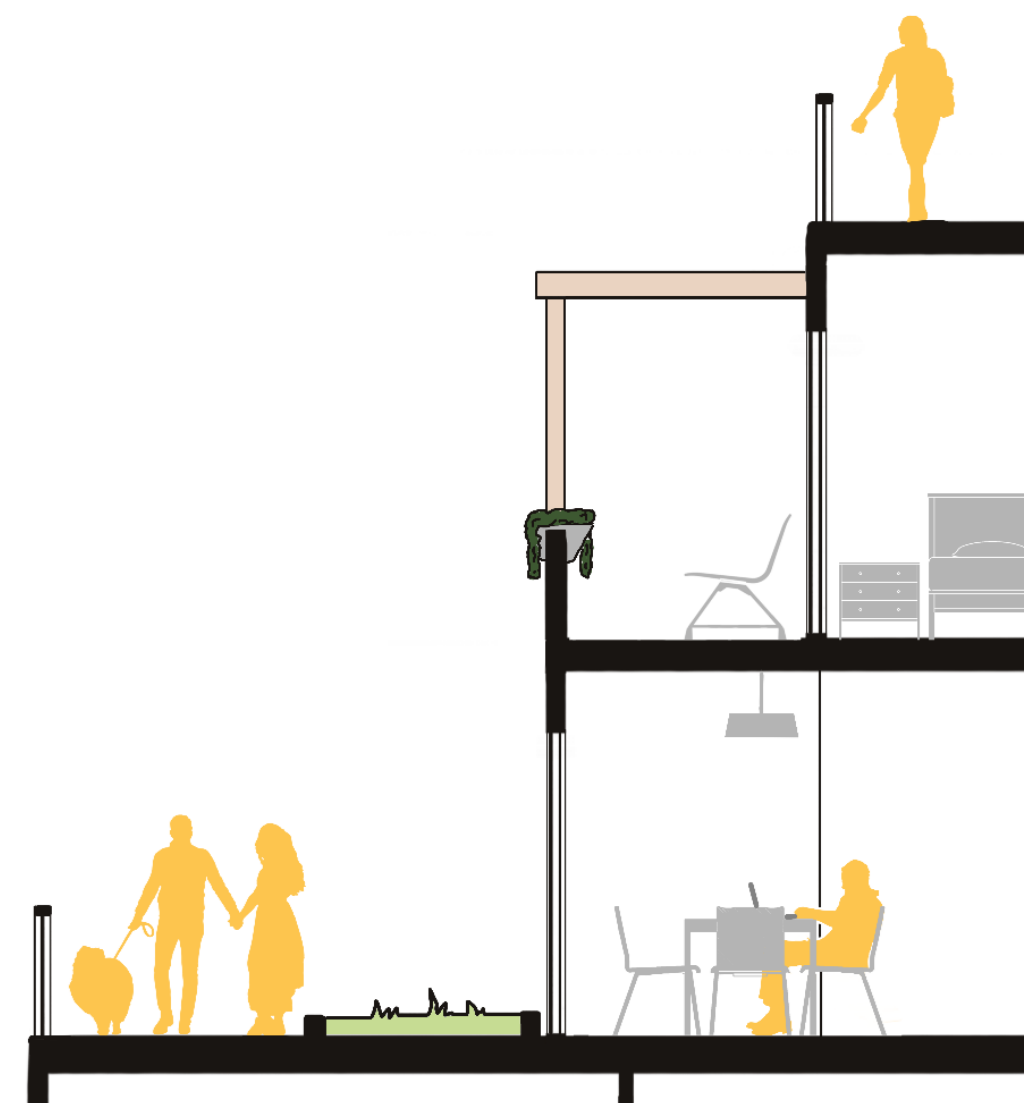
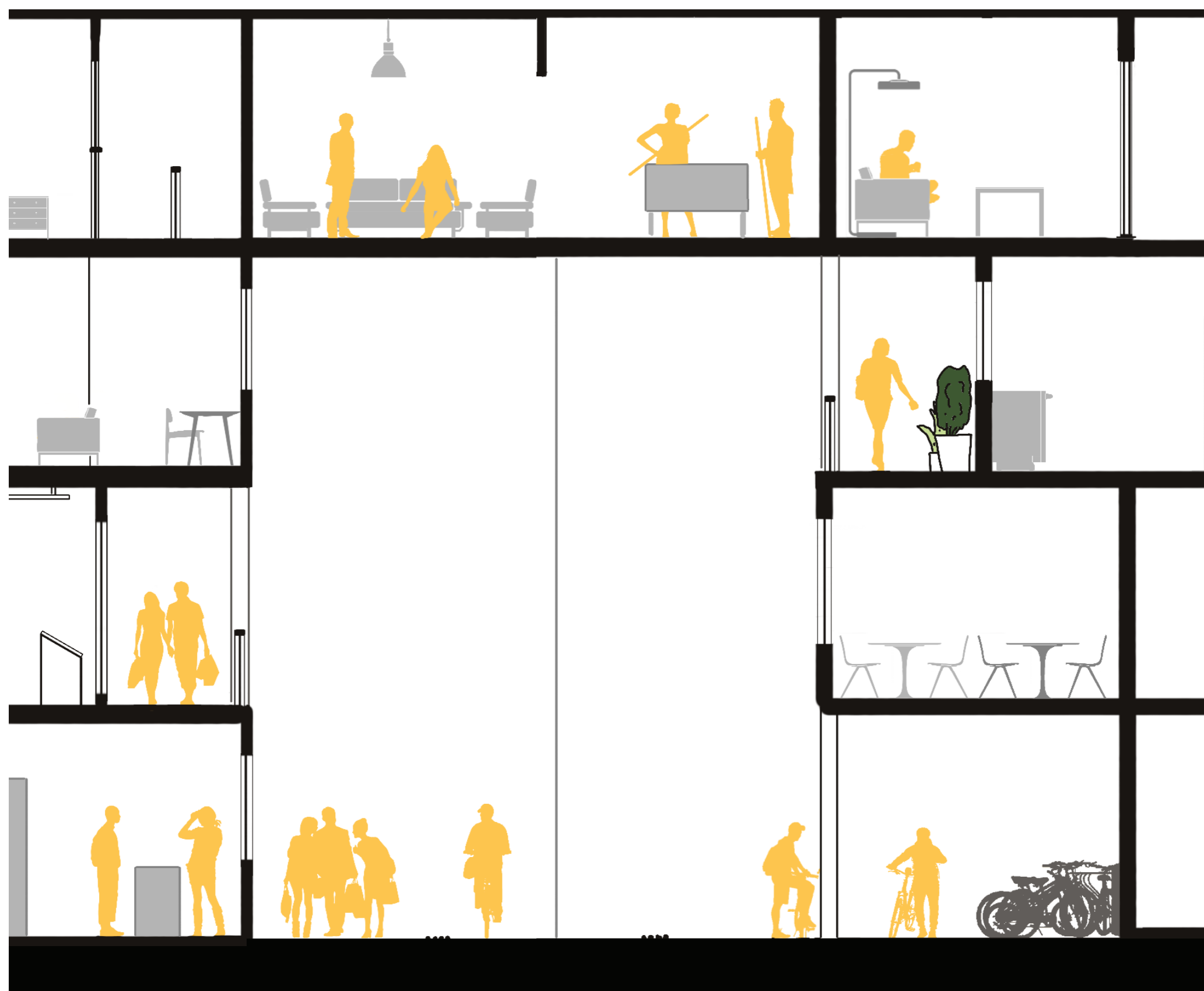




Routing overview ensemble

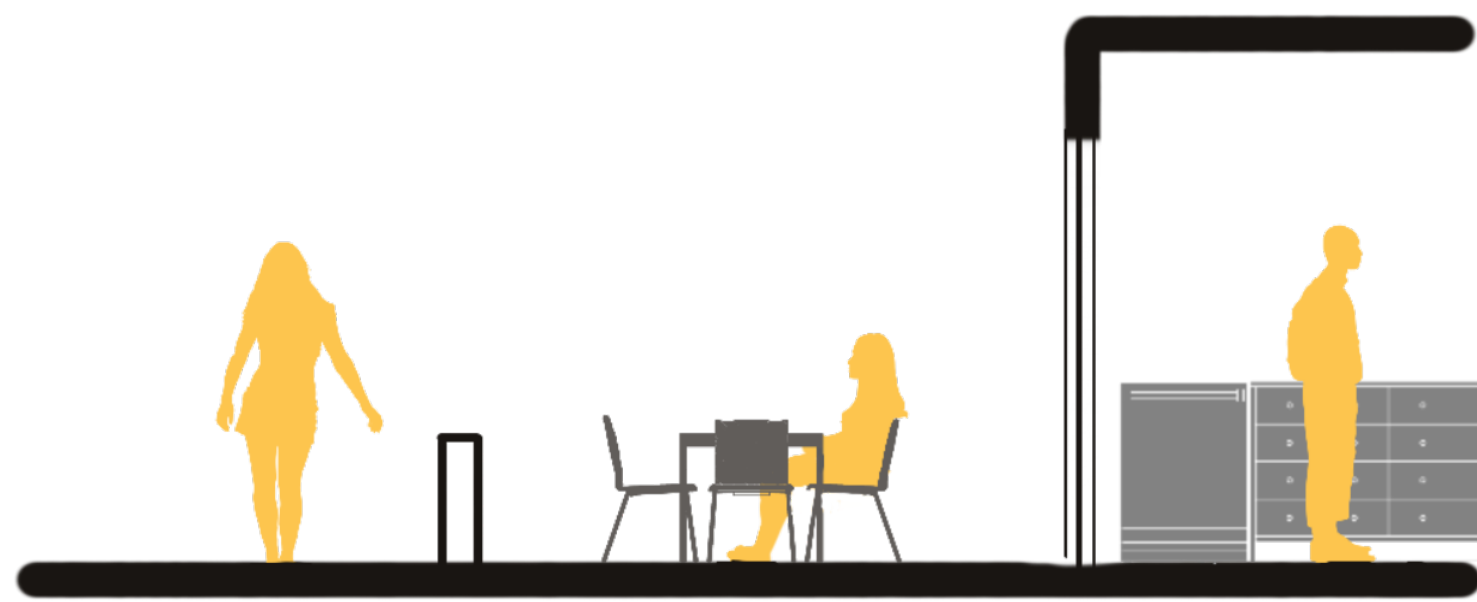
Routing section





Routing scale

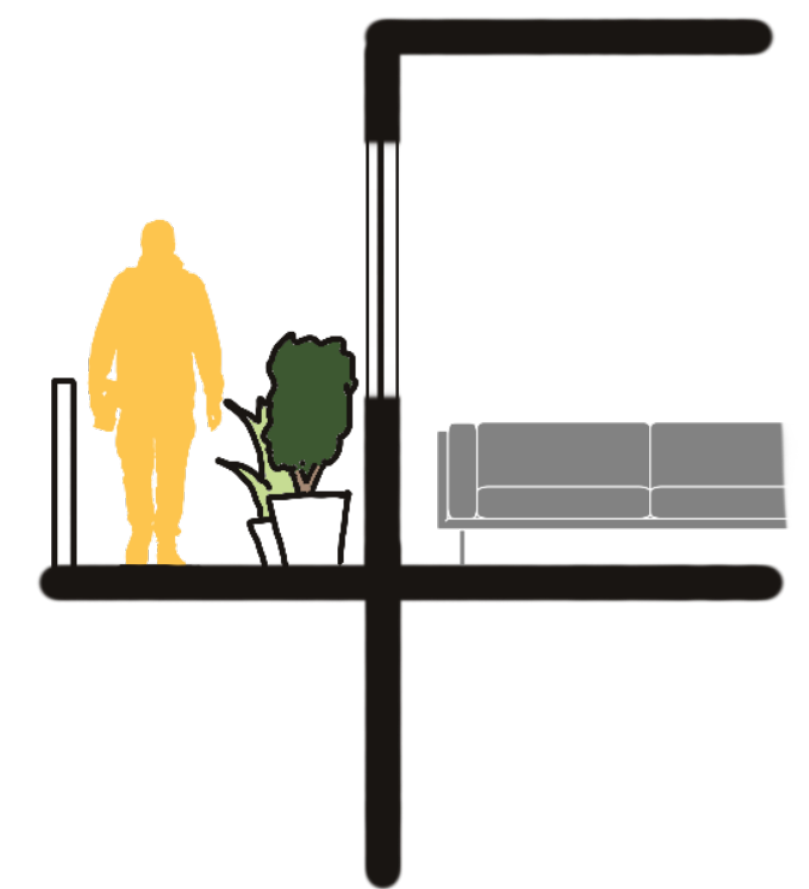
Decreasing scale into the building



Patio / terrace / garden buffer



Green / garden buffer

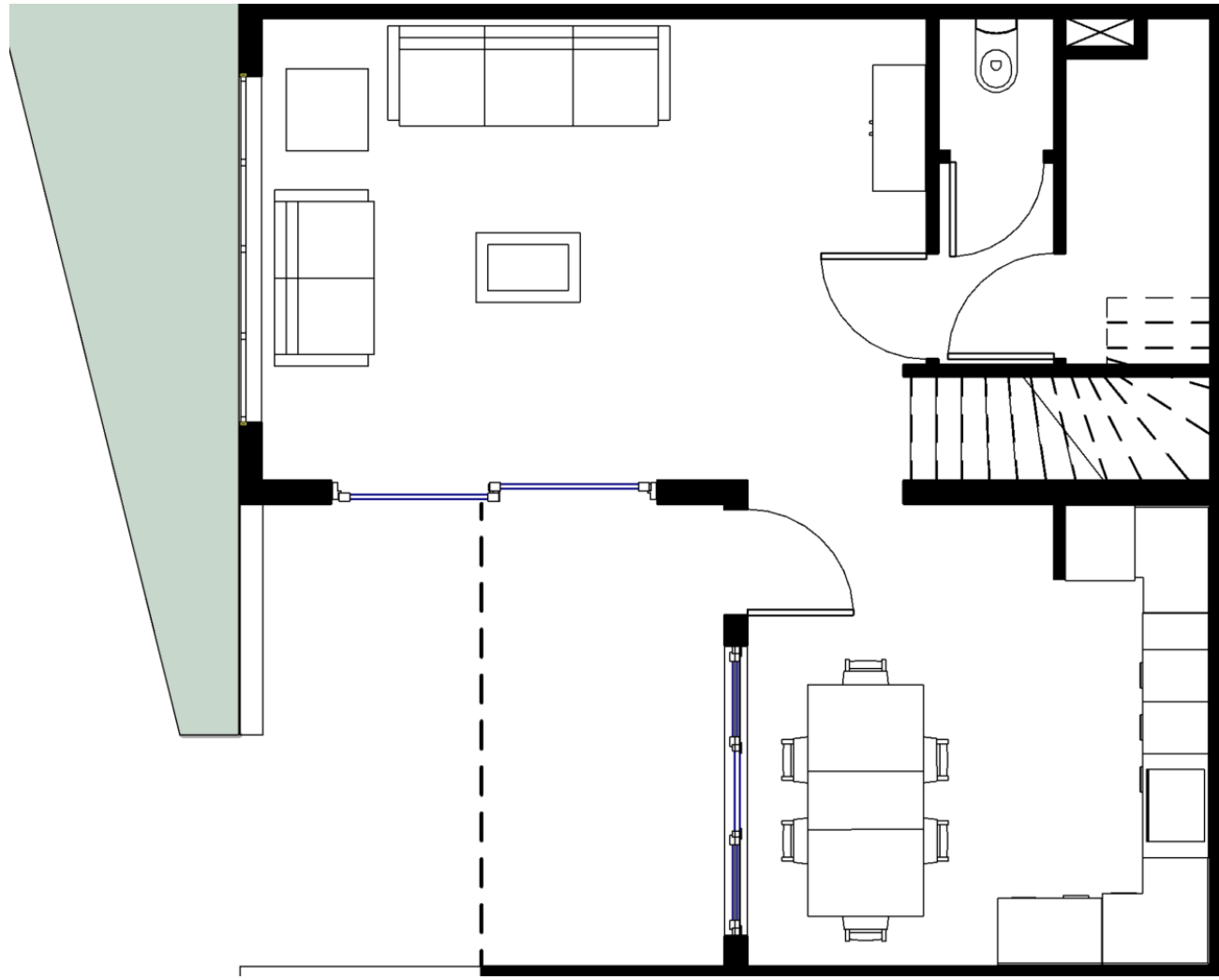


Planter buffers

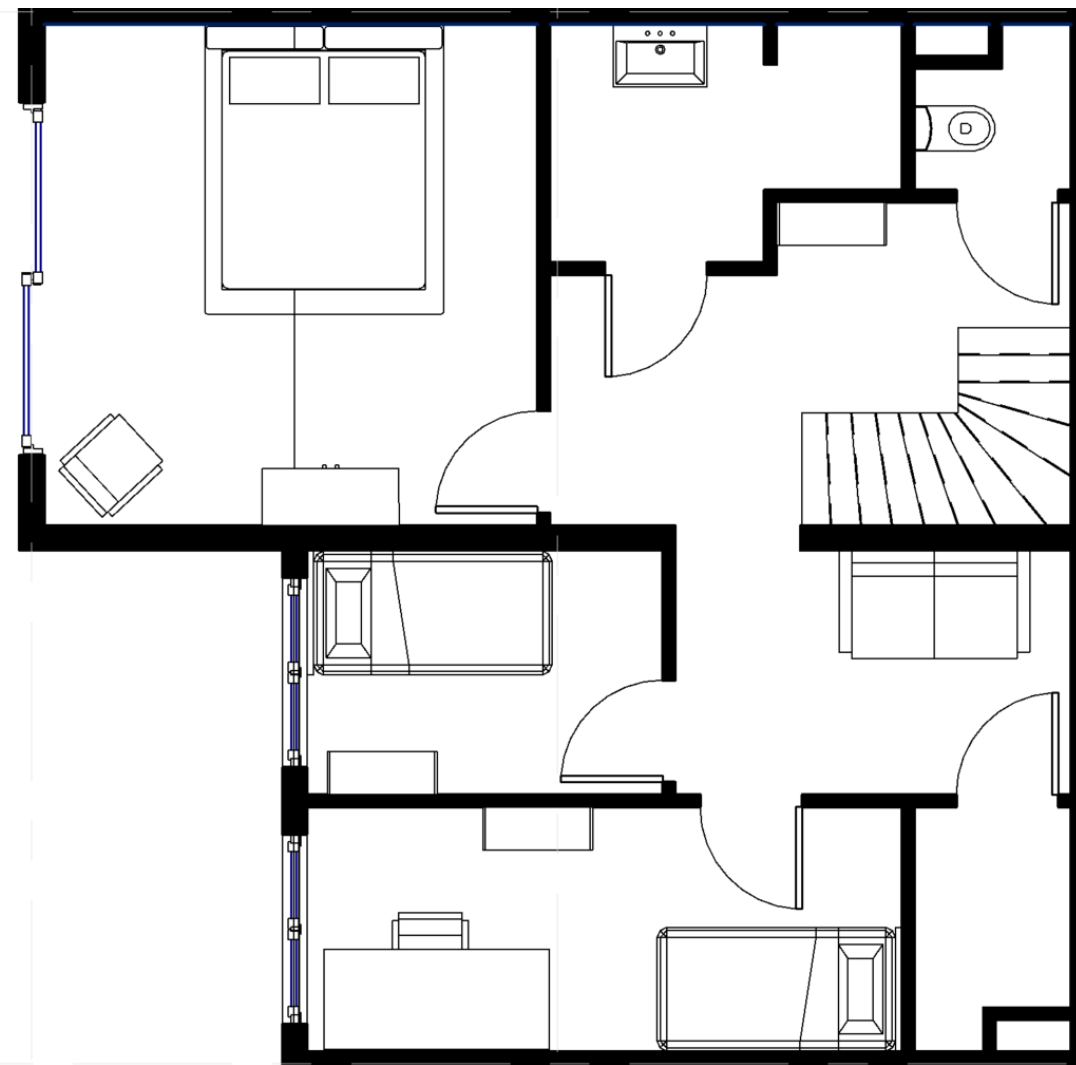


Buffer scale

Decreasing scale into the building



Ground floor



First floor

Patio dwelling





Ground floor

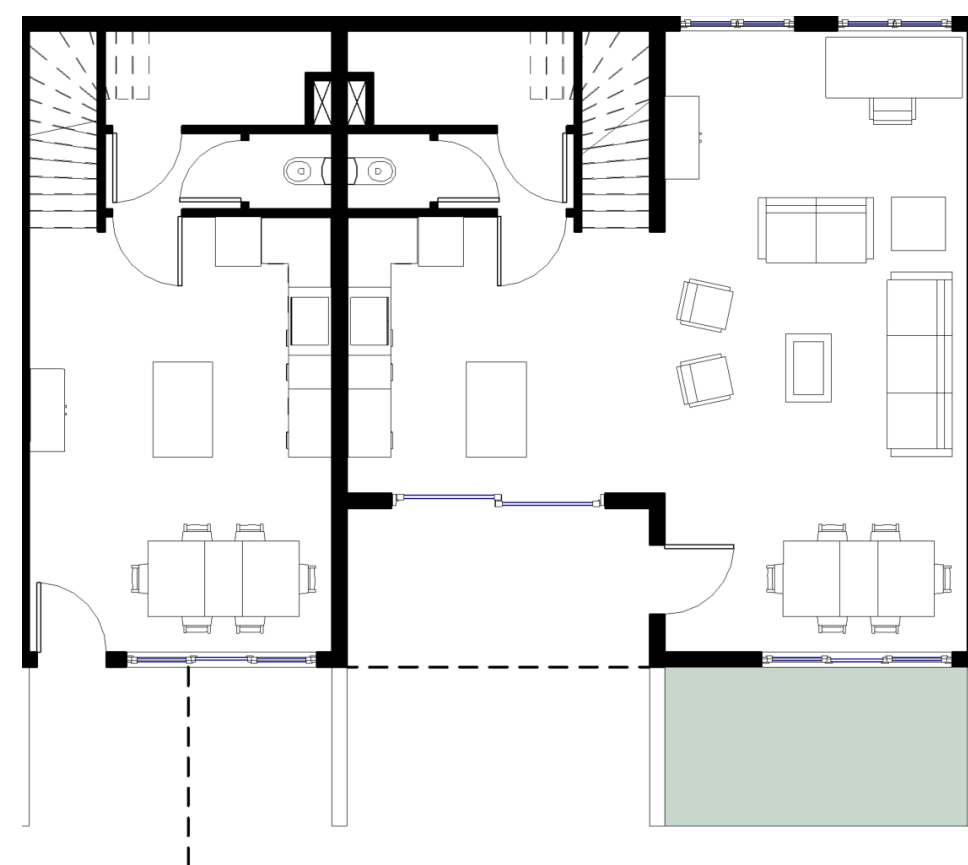


First floor

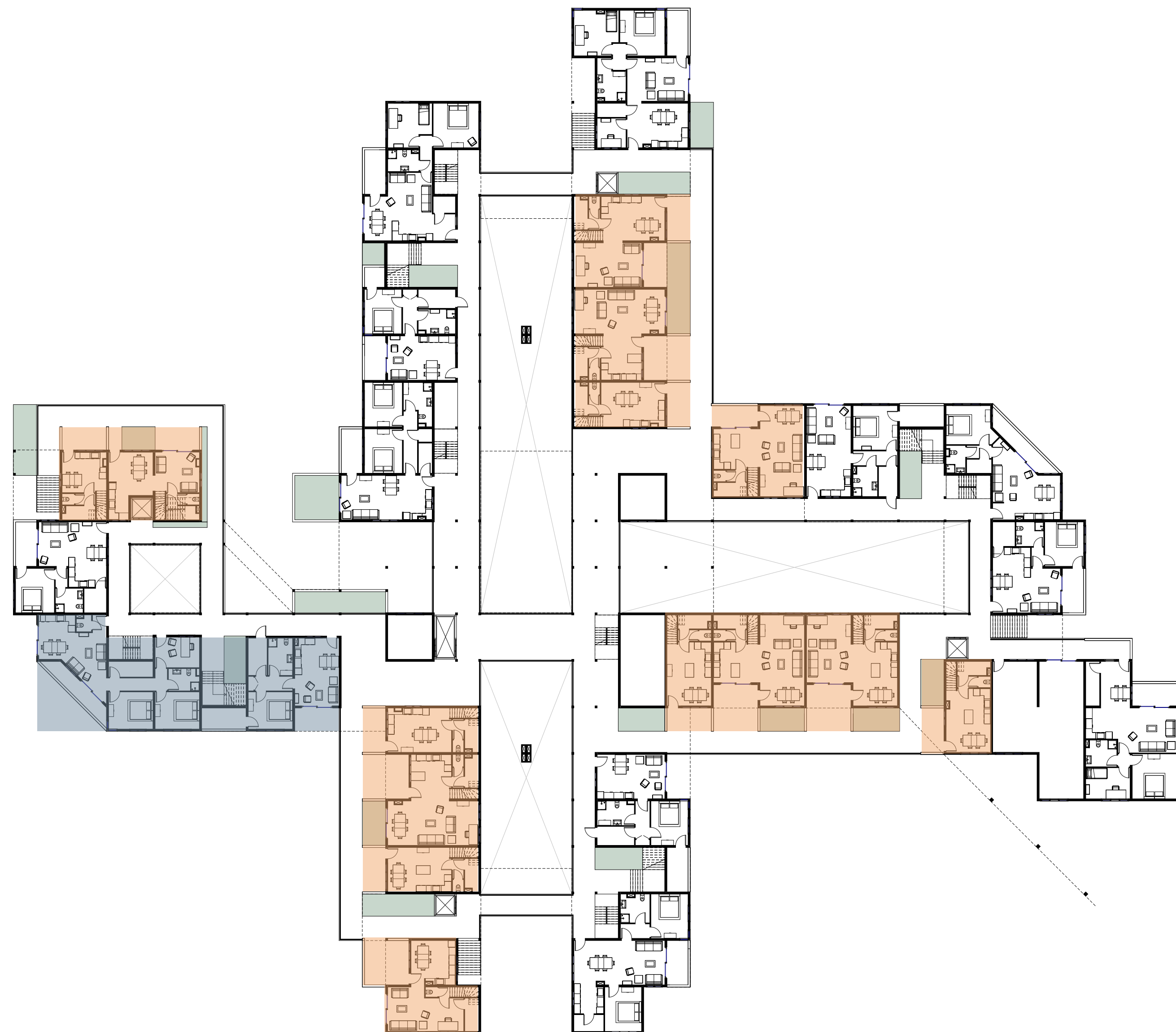
Patio dwelling impression



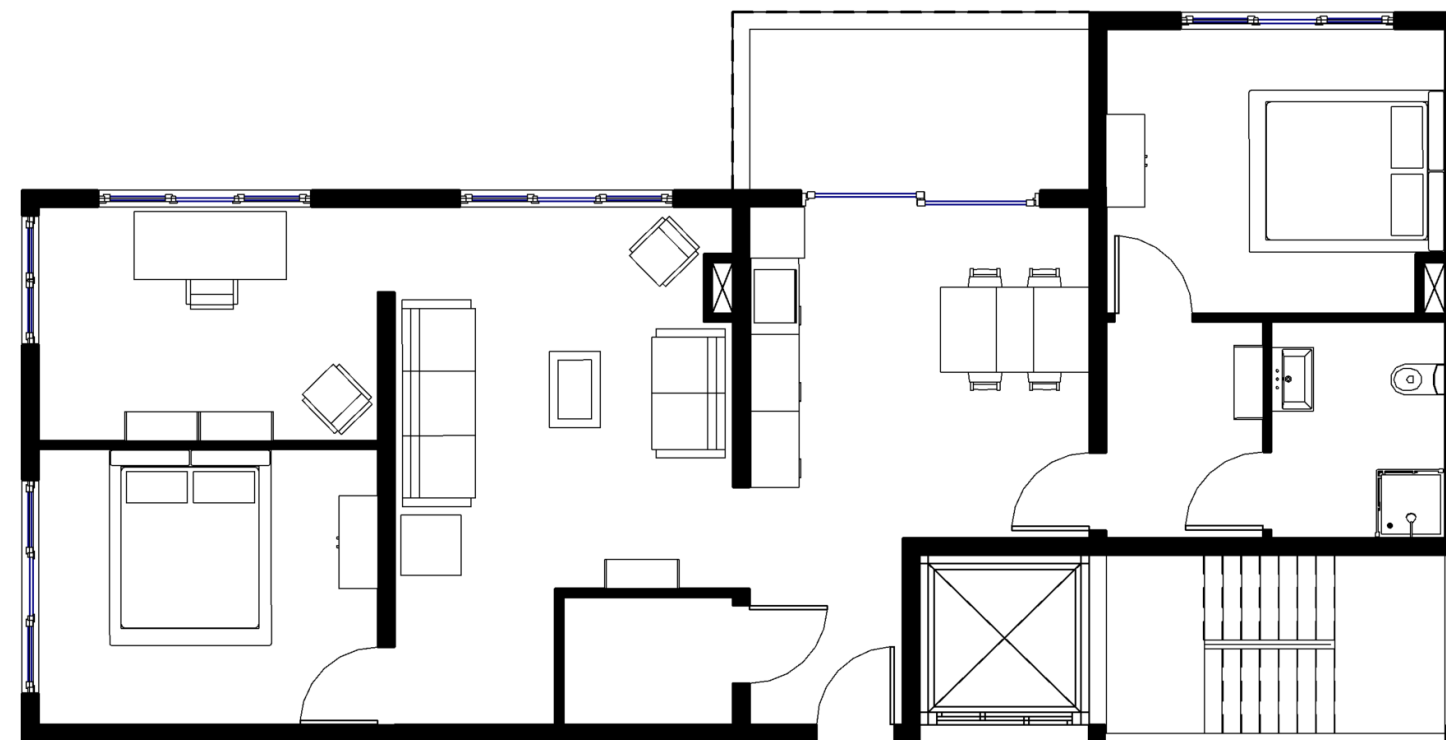
1 bedroom & 2 bedroom apartment



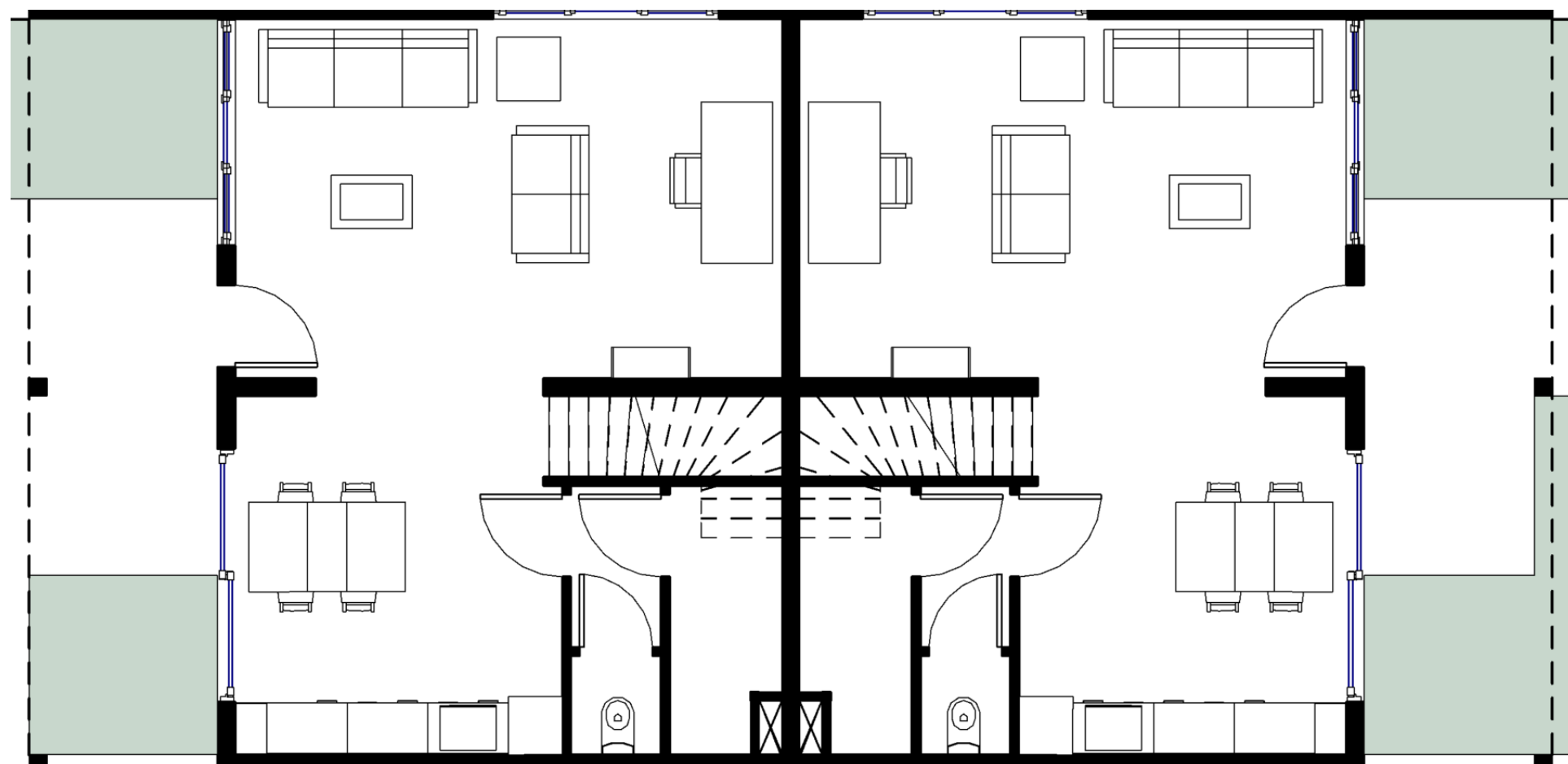
Family dwellings on public "street" route



2nd floor dwellings

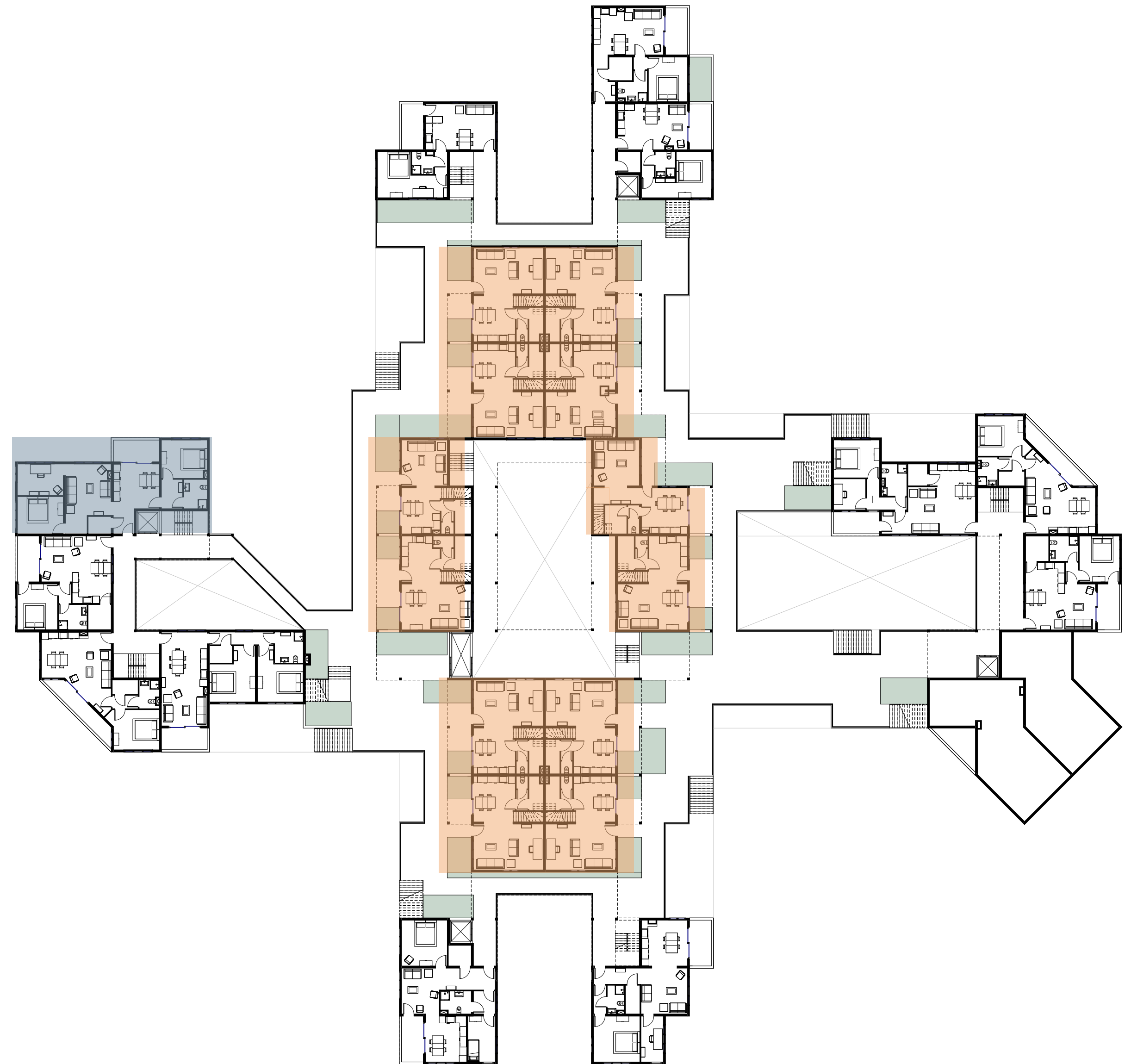


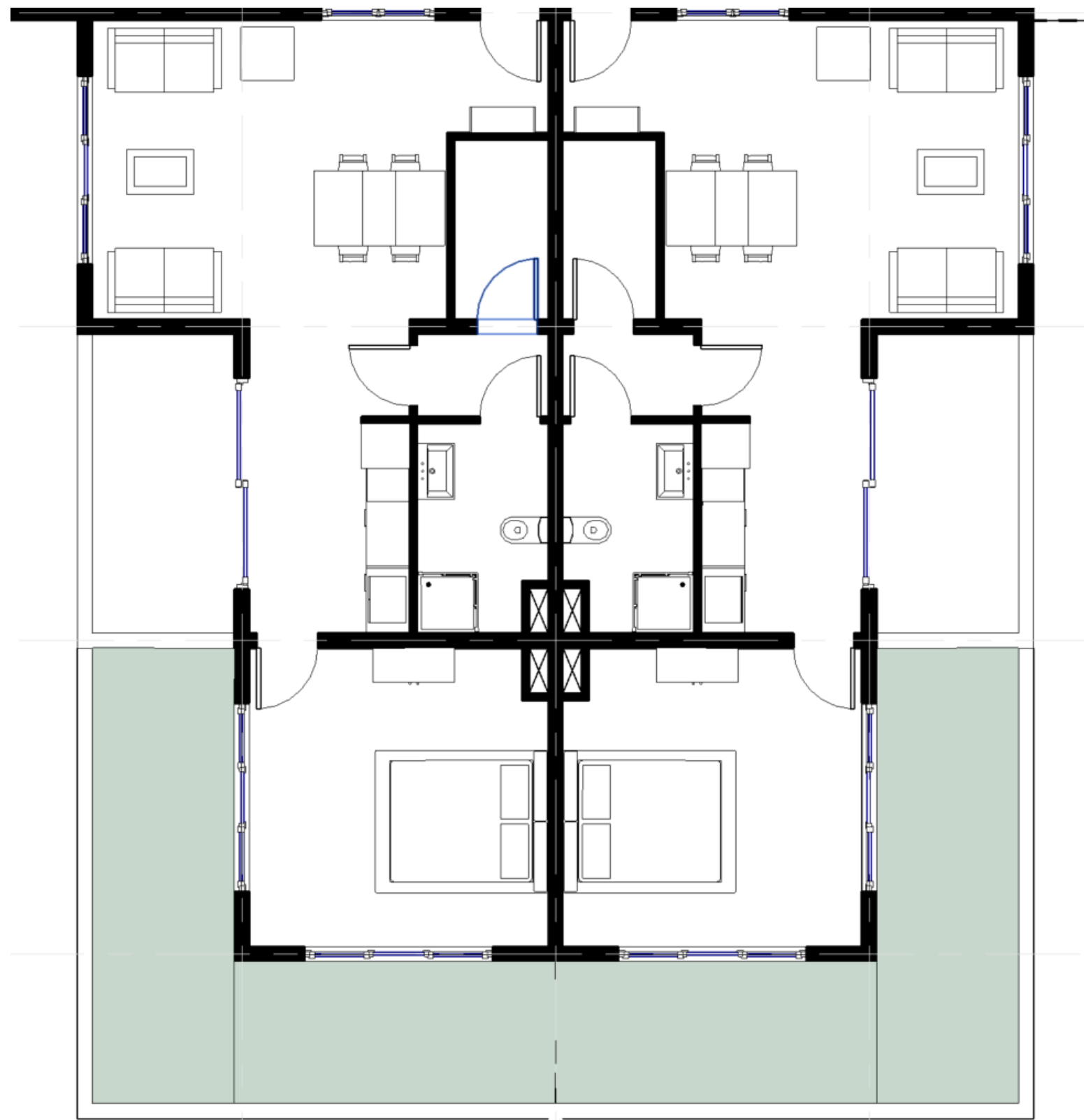
2-3 bedroom apartment



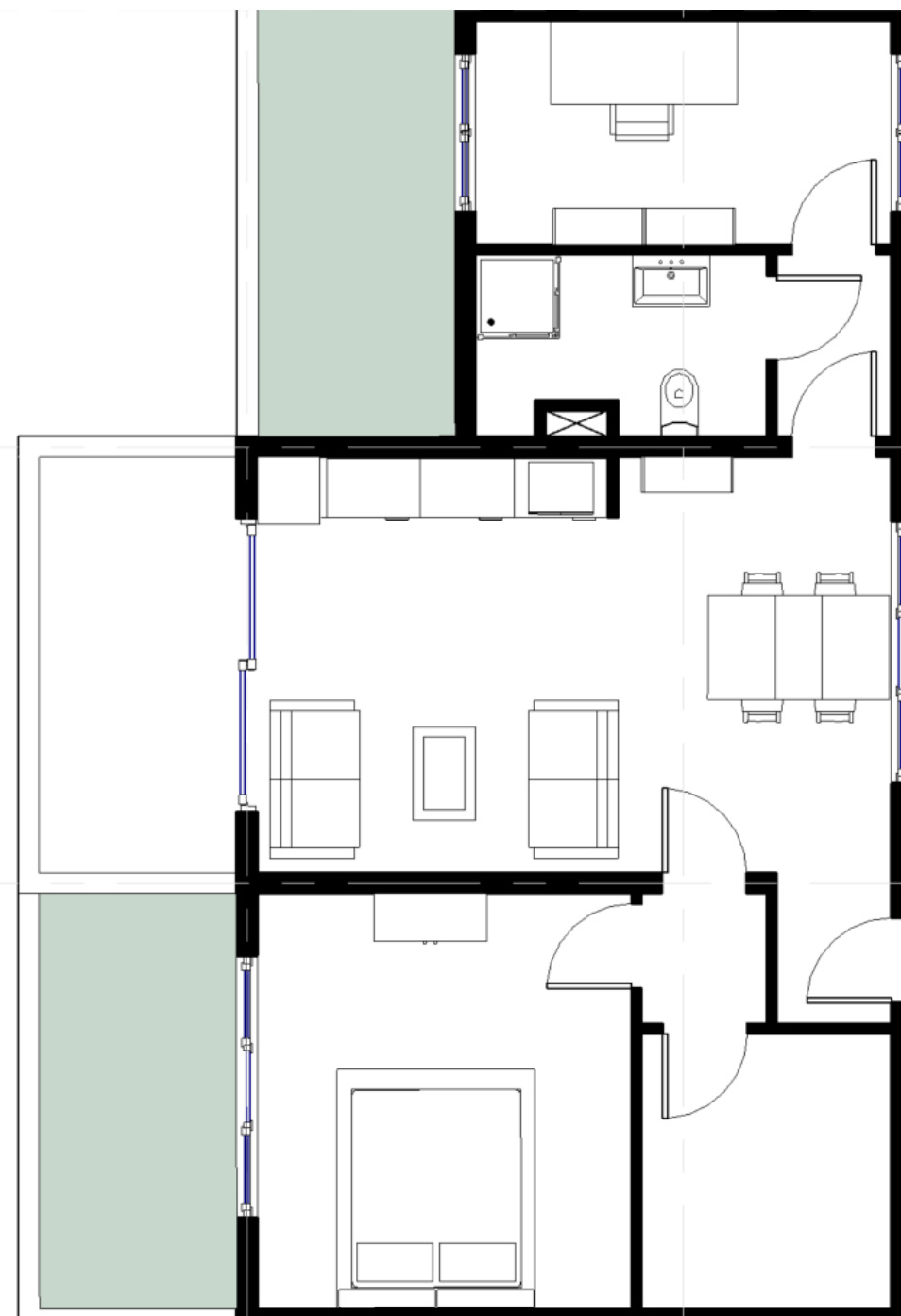
Family dwellings on public "street" route

4th floor dwellings

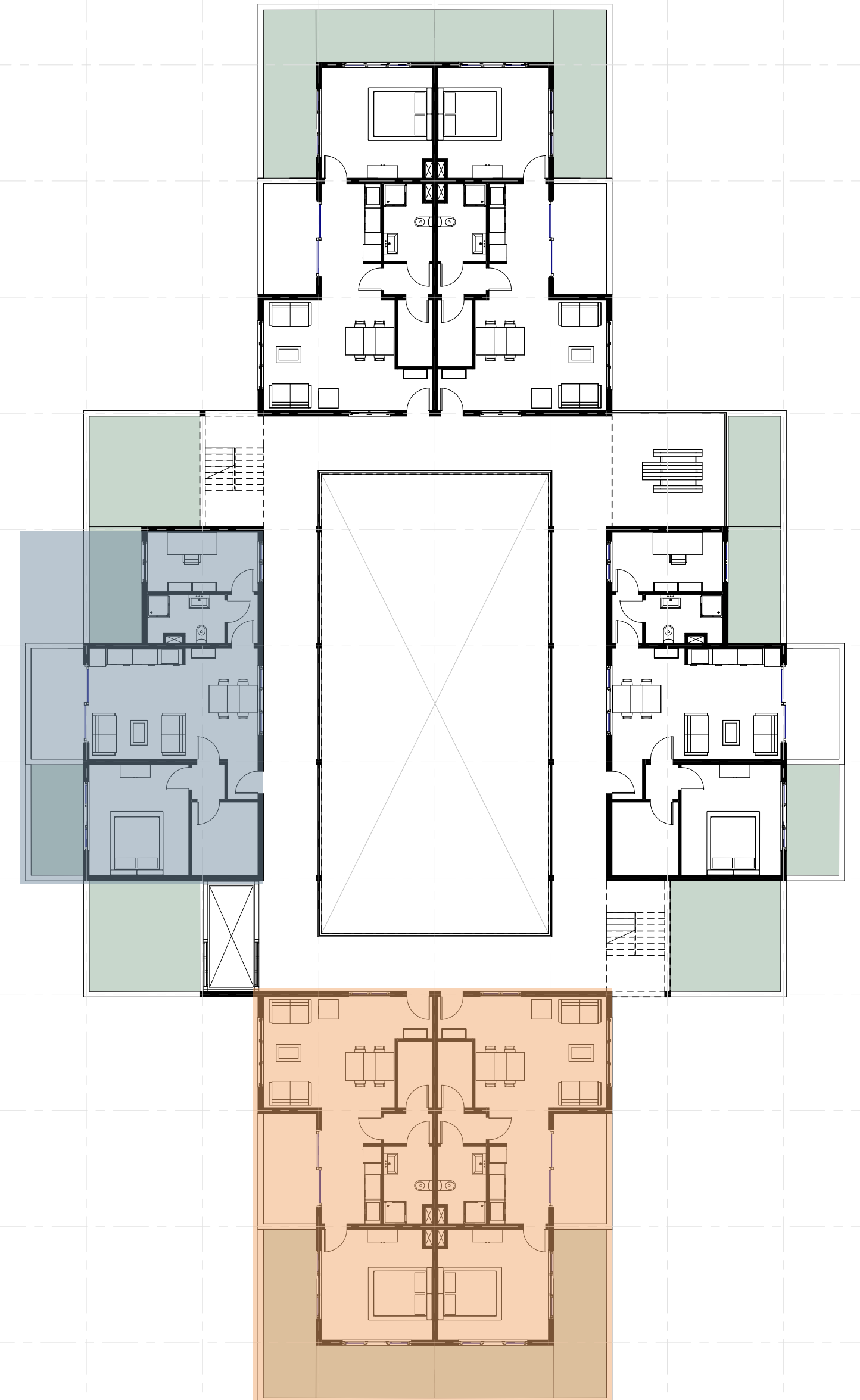




1 bedroom apartment



1-2 bedroom apartment



8th floor dwellings



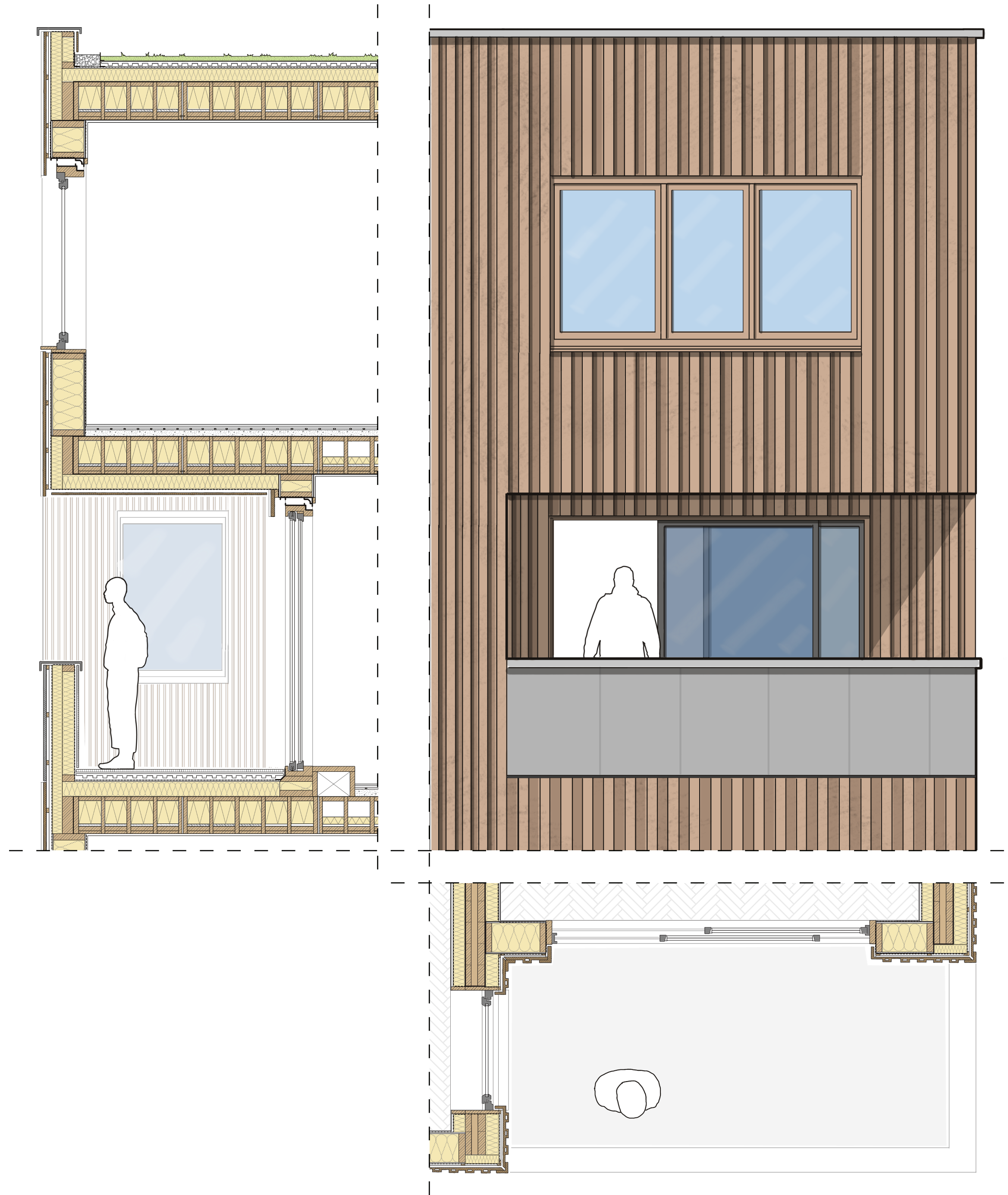
Facade overview



Facade overview

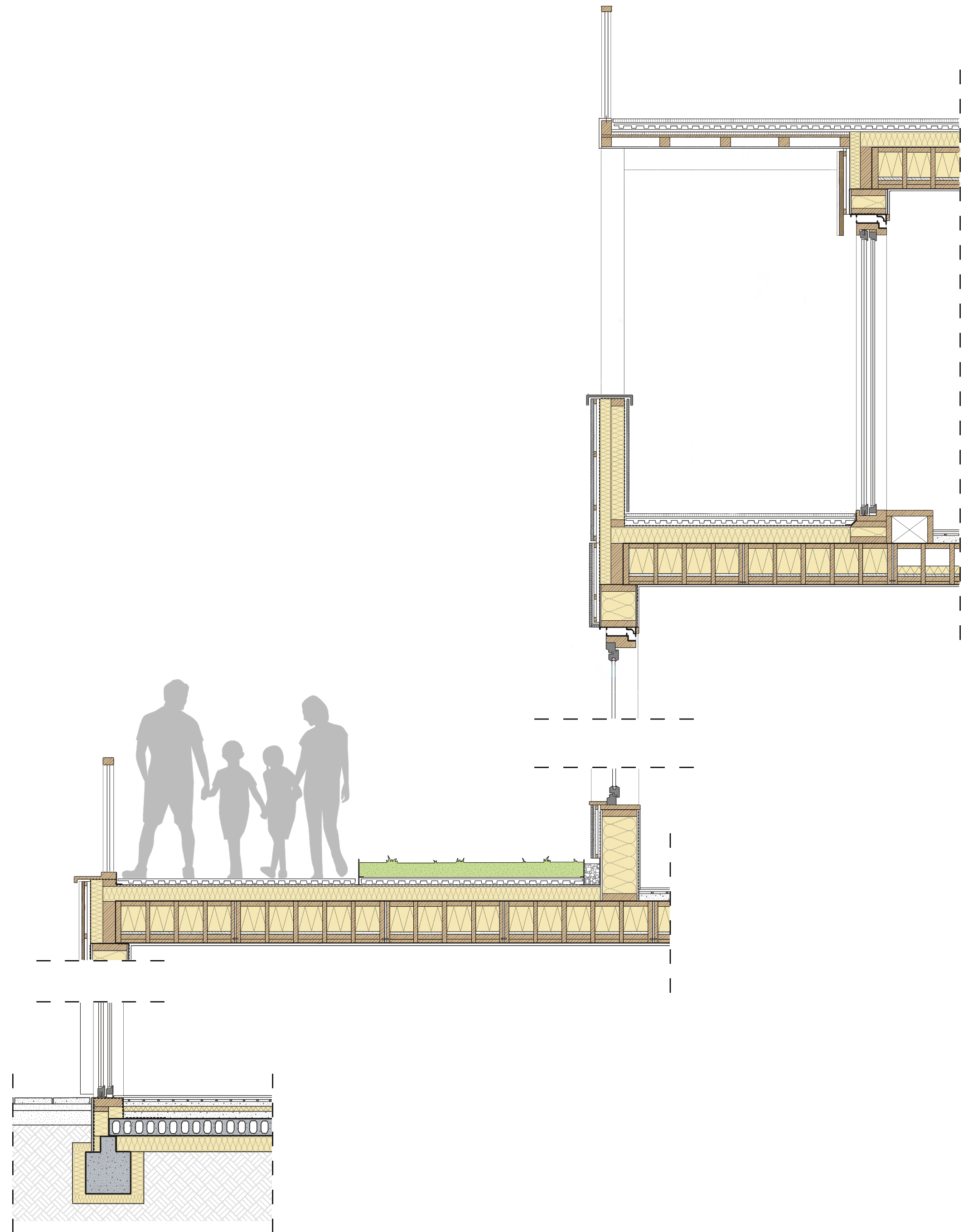


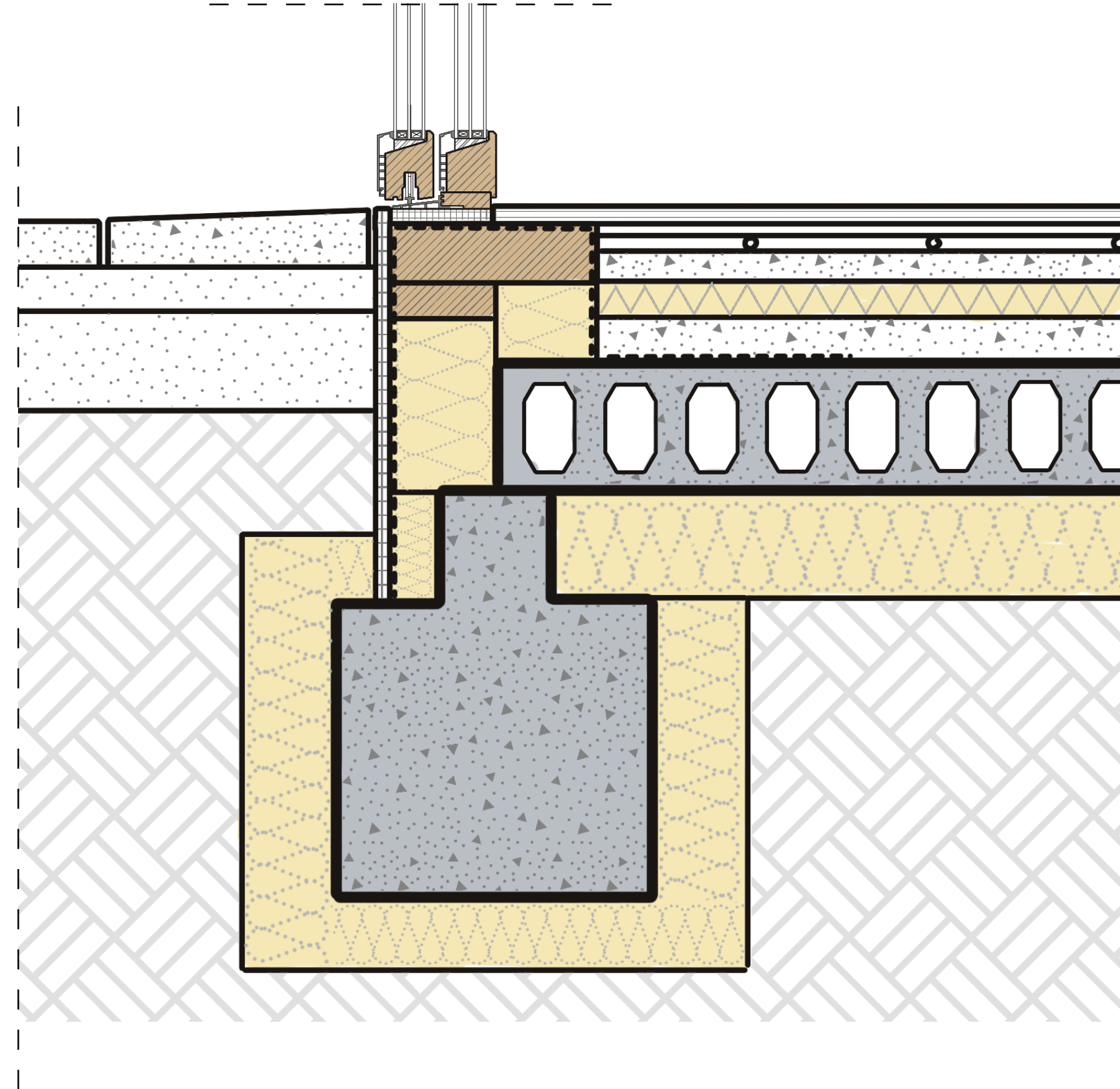
Section & Facade





Section: Walkway

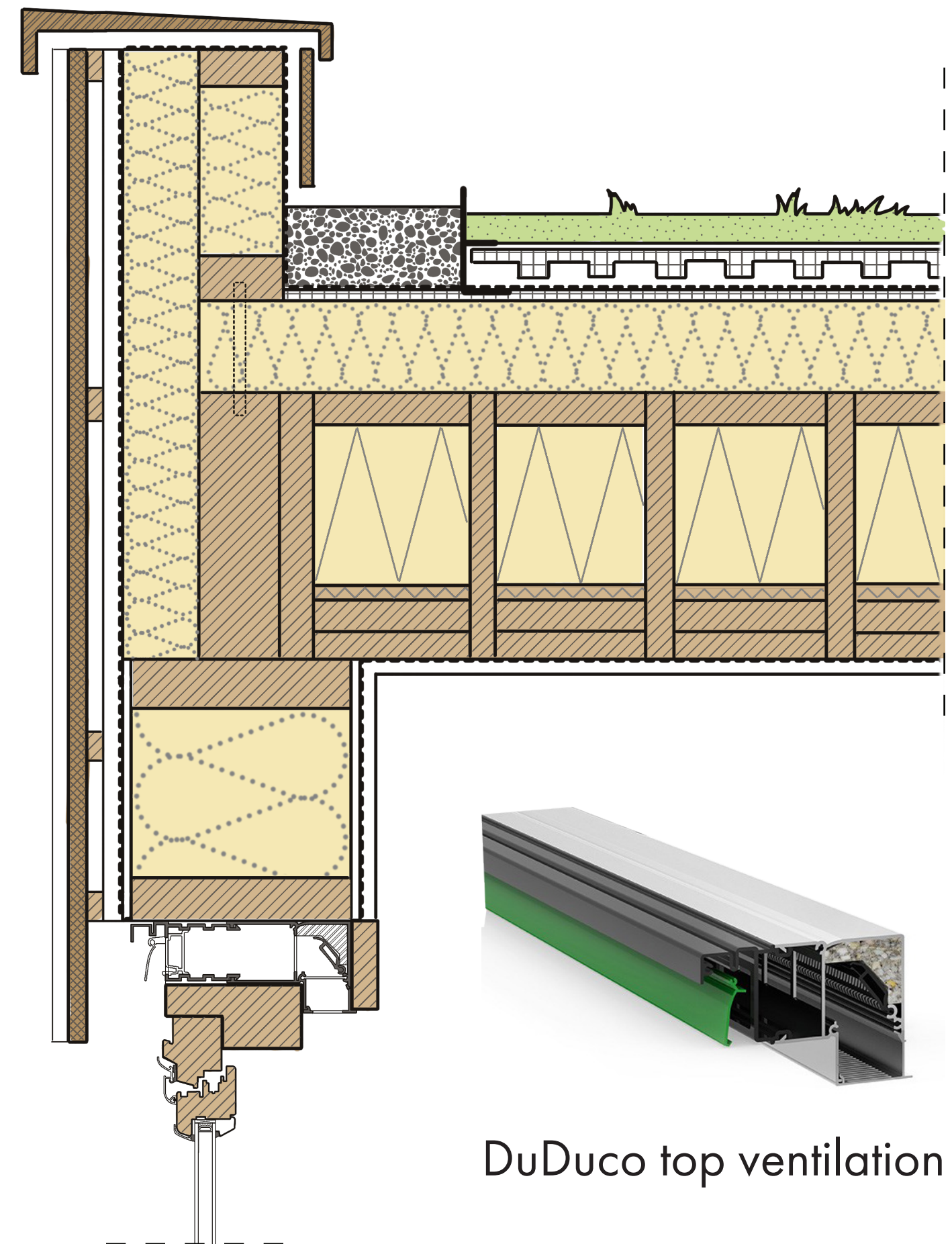




Detail: ground level



Detail: green roof





Improving biodiversity with “green routes”



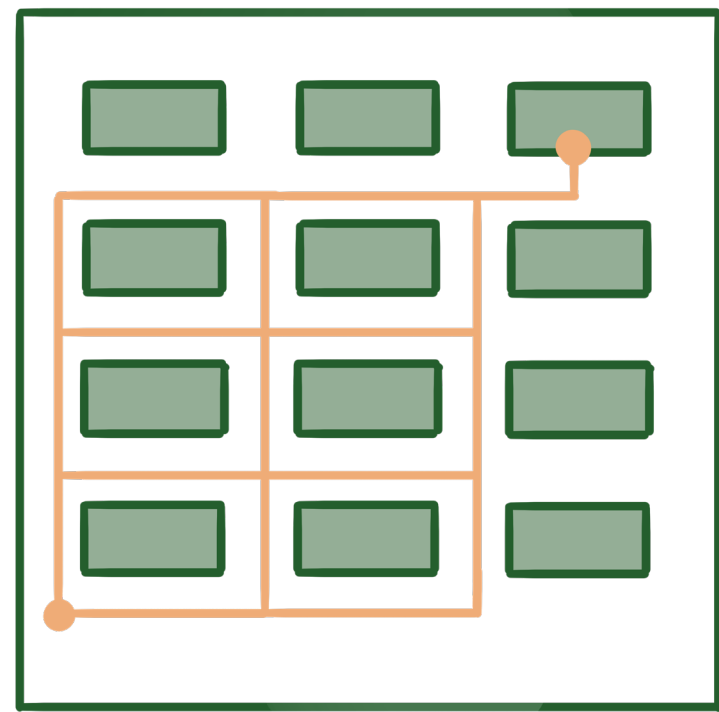
Insect hotels



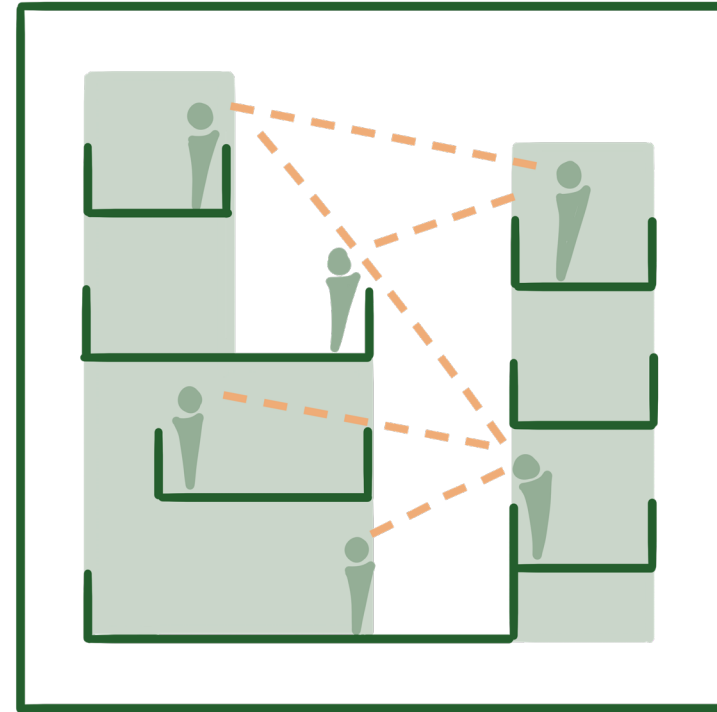
Bat housing



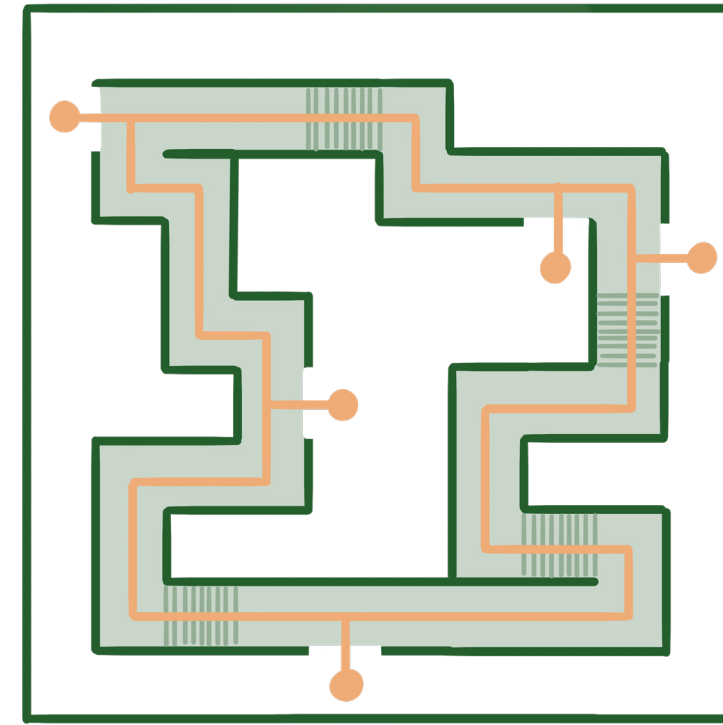
Vegetable gardens



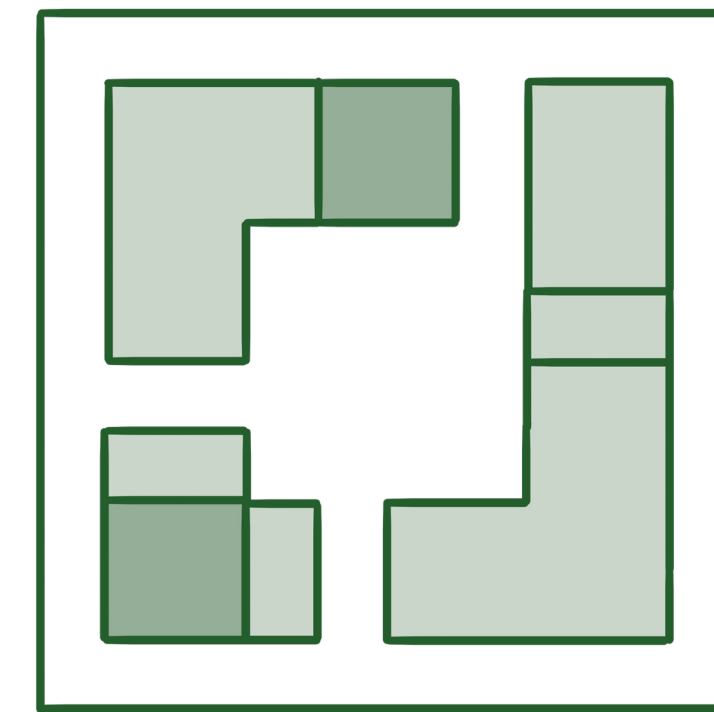
Small blocks



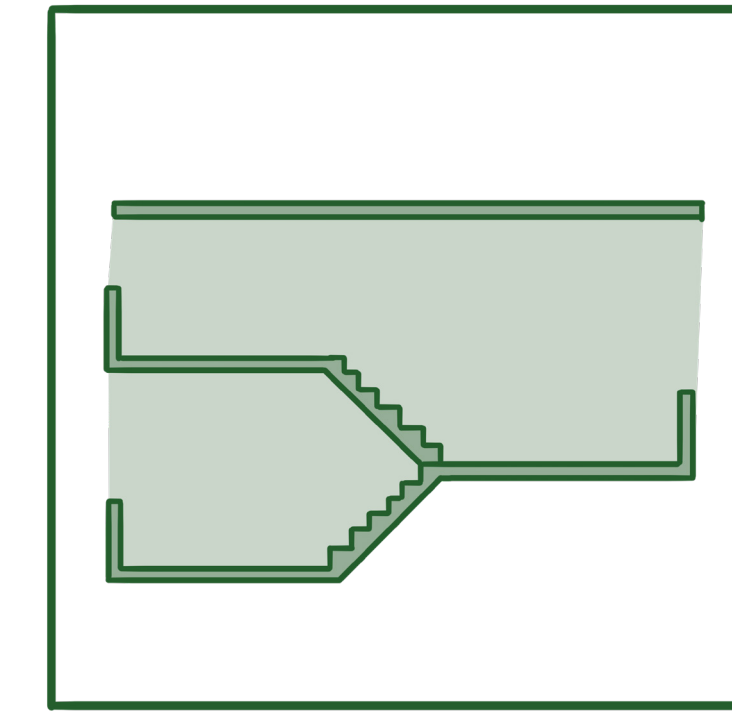
Interaction:



Central route:



Different dwelling types:

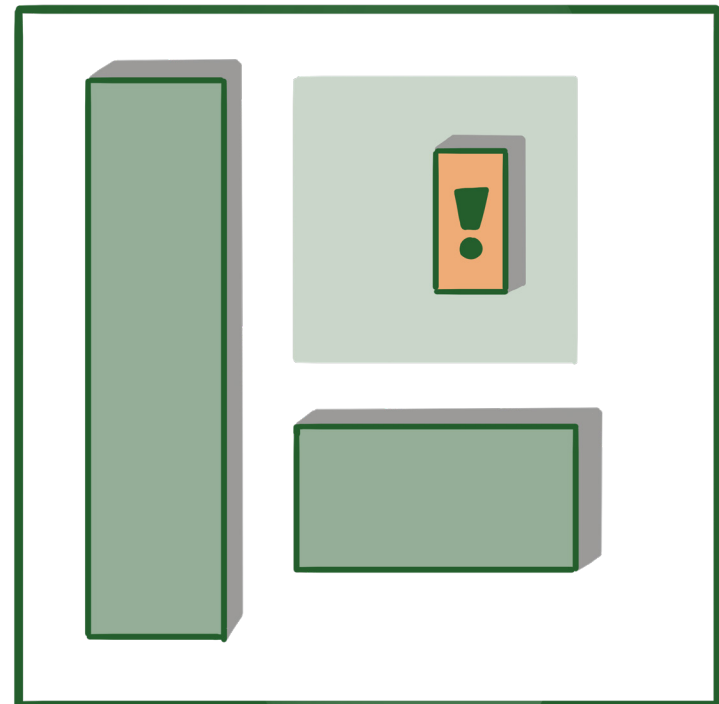


Staggered housing layout:

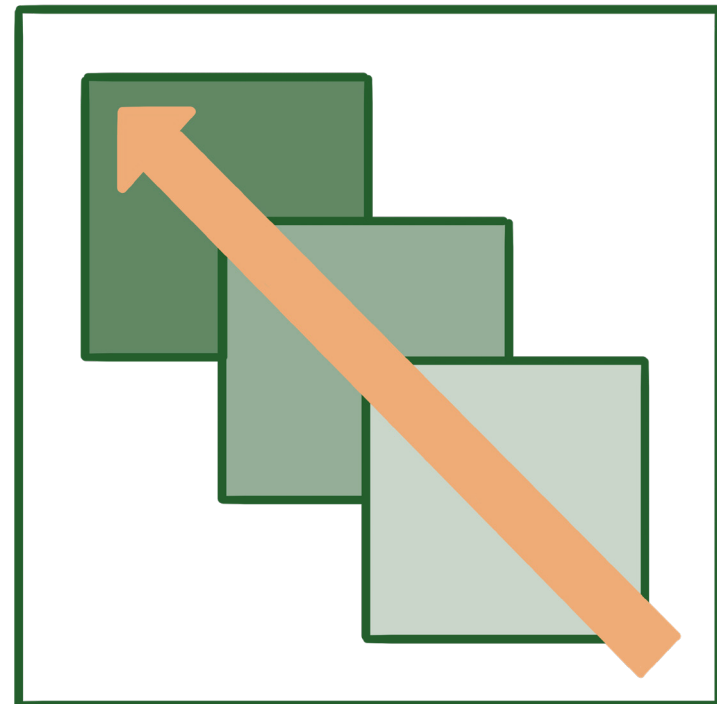
City

Building block

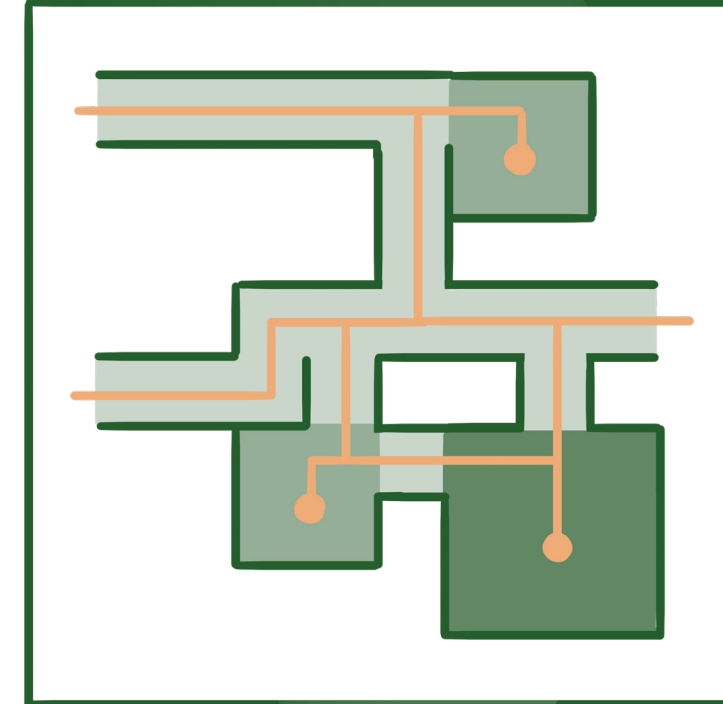
Dwelling



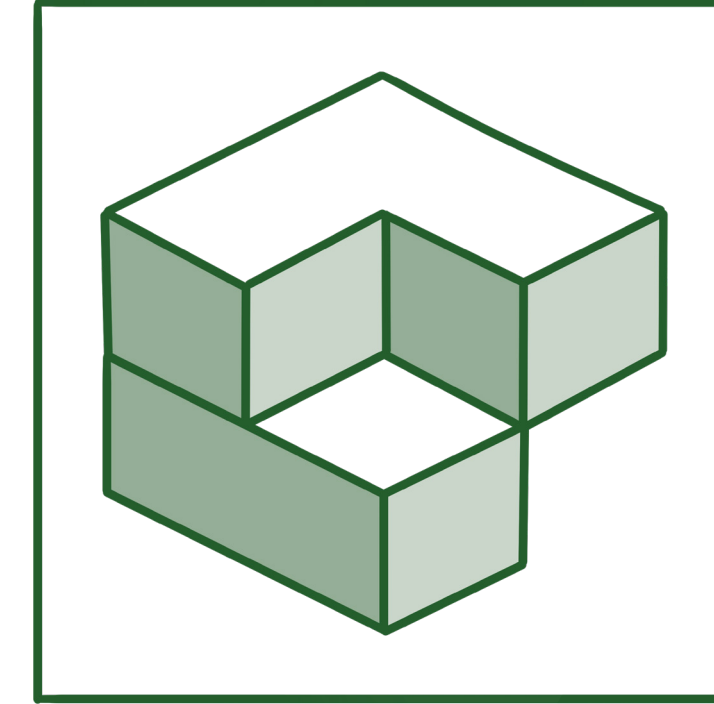
Function in public space:



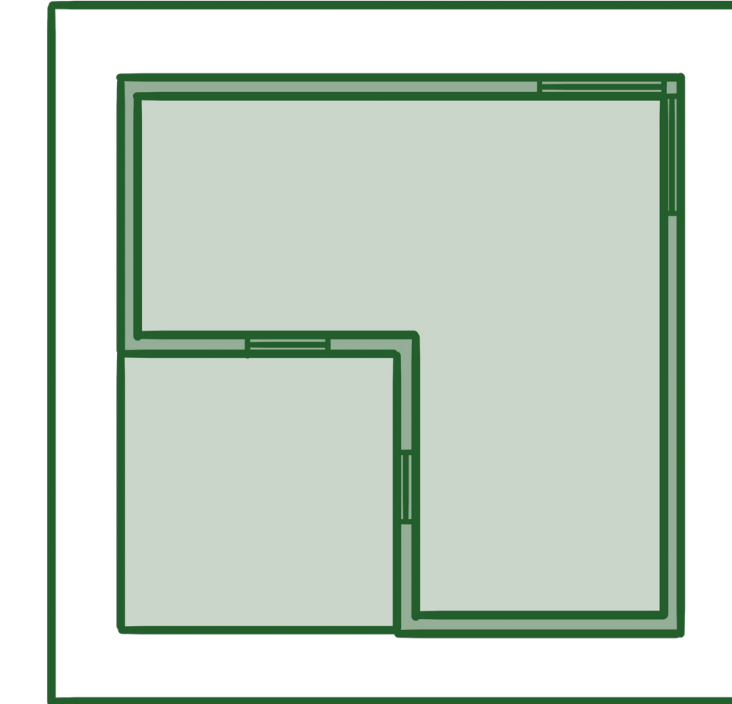
Public - collective - private:



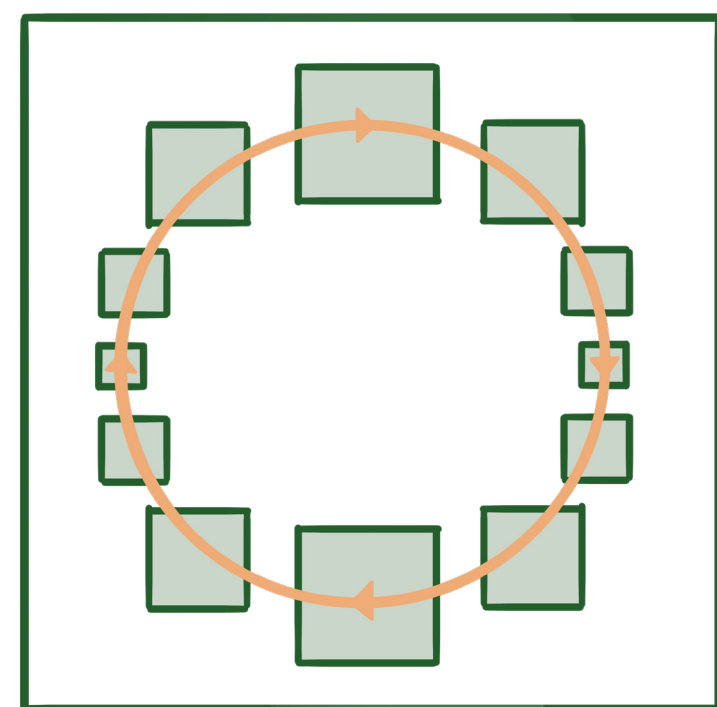
Variation in space:



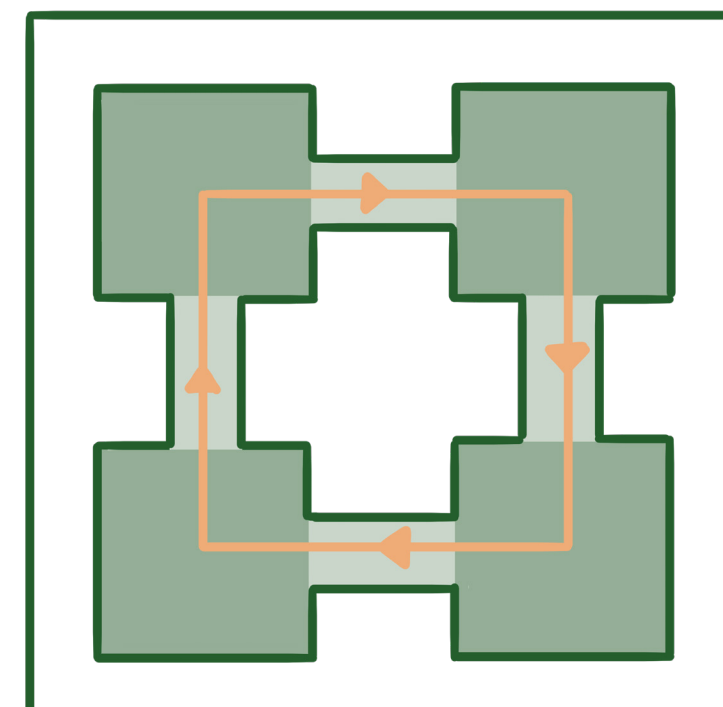
Stacking prefab modules:



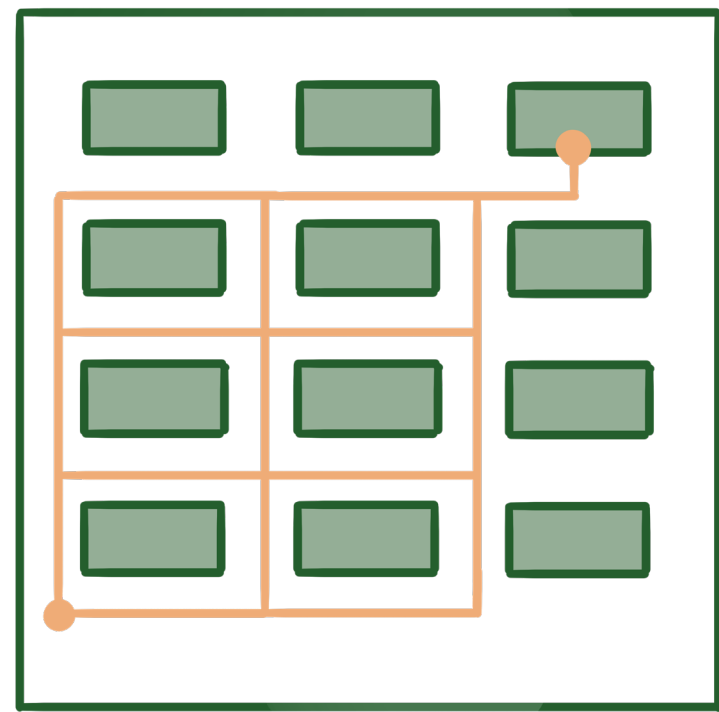
L-shaped dwellings:



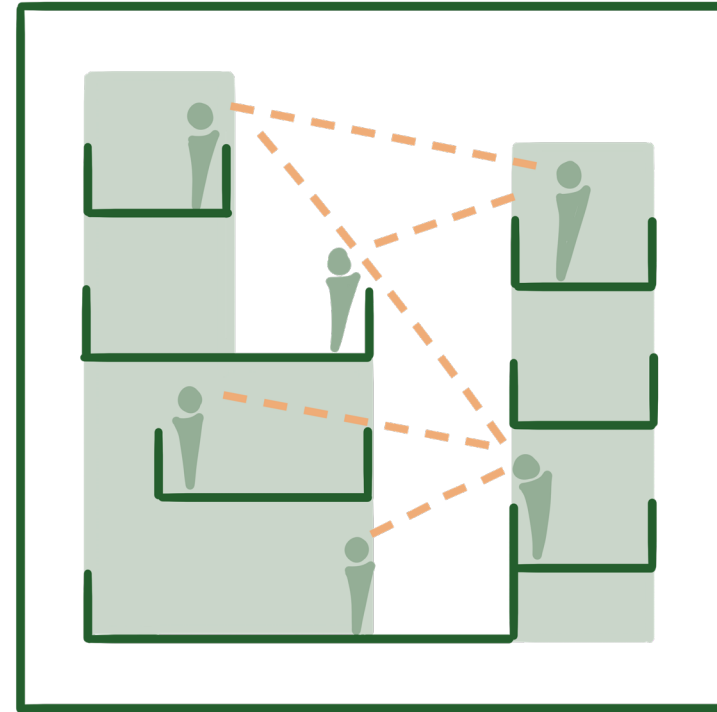
Continuation of scale



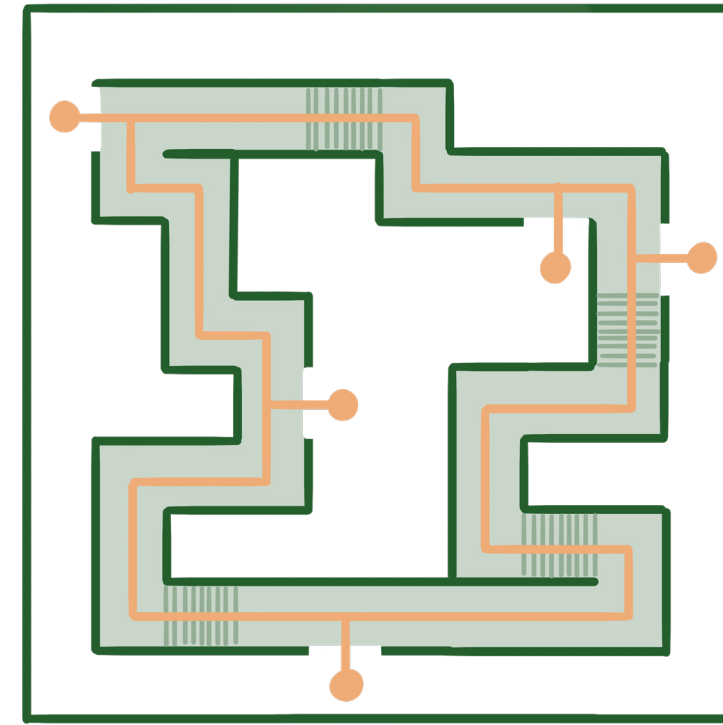
Continuation of space:



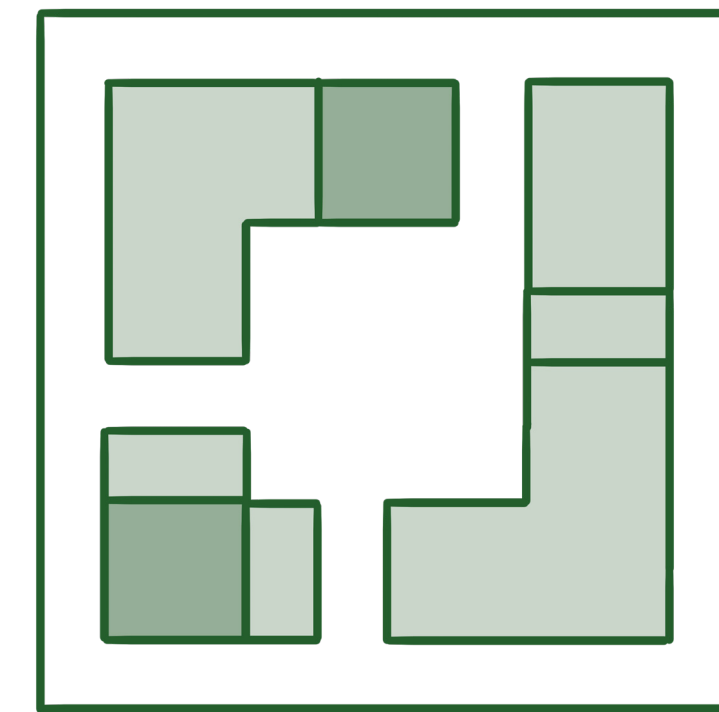
Small blocks



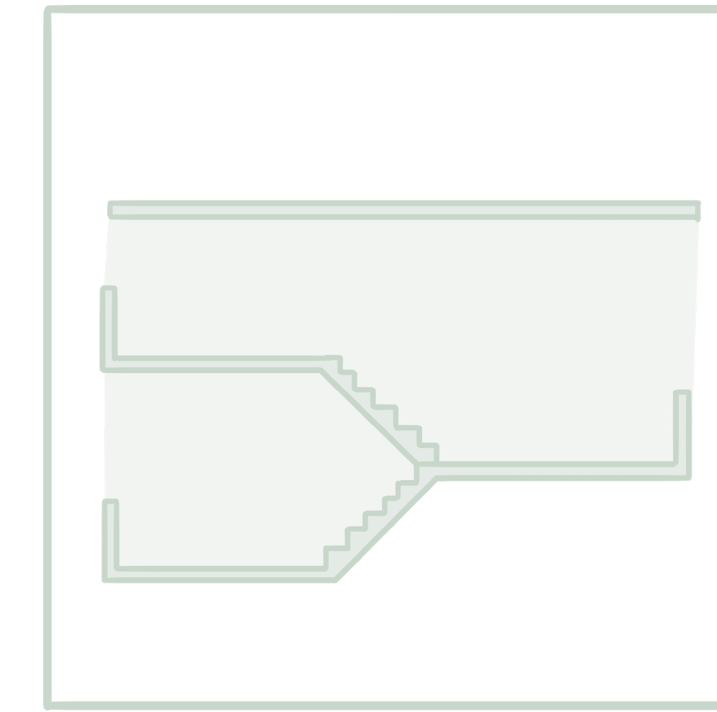
Interaction:



Central route:



Different dwelling types:

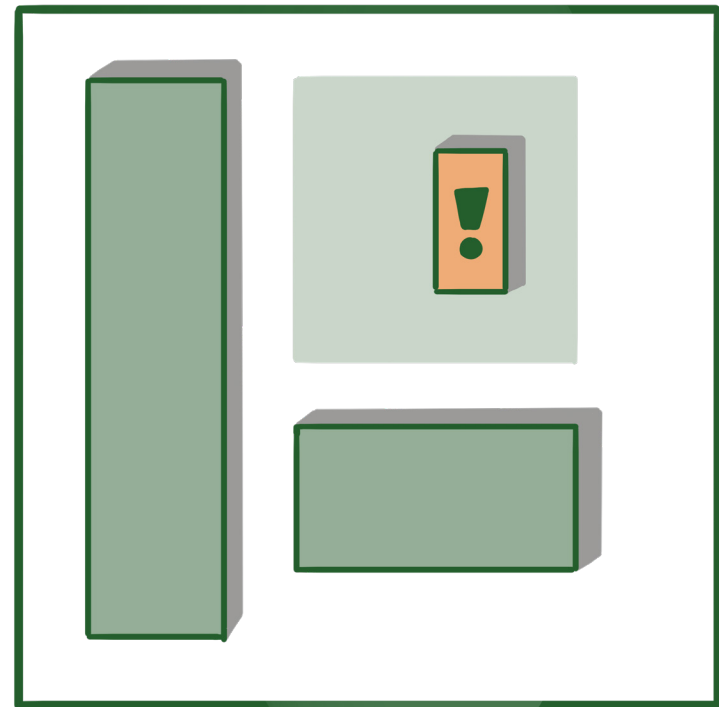


Staggered housing layout:

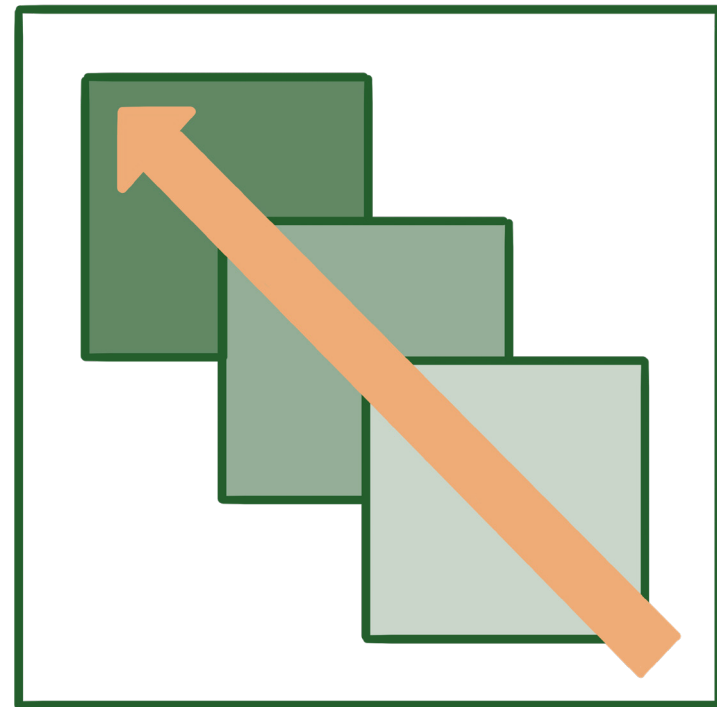
City

Building block

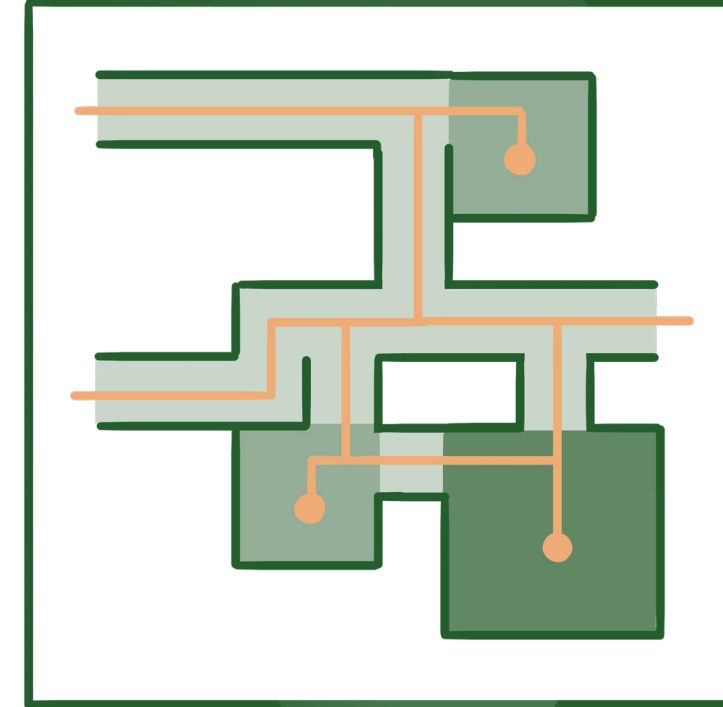
Dwelling



Function in public space:



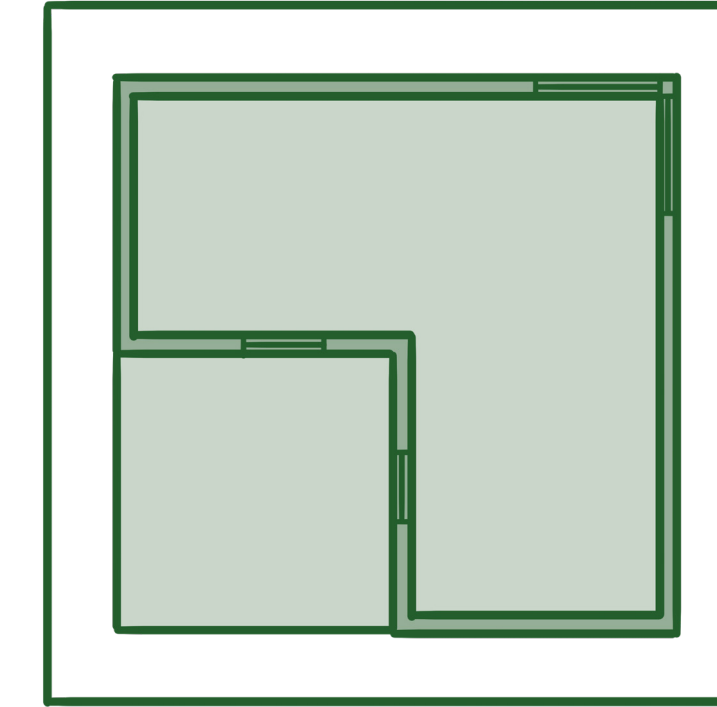
Public - collective - private:



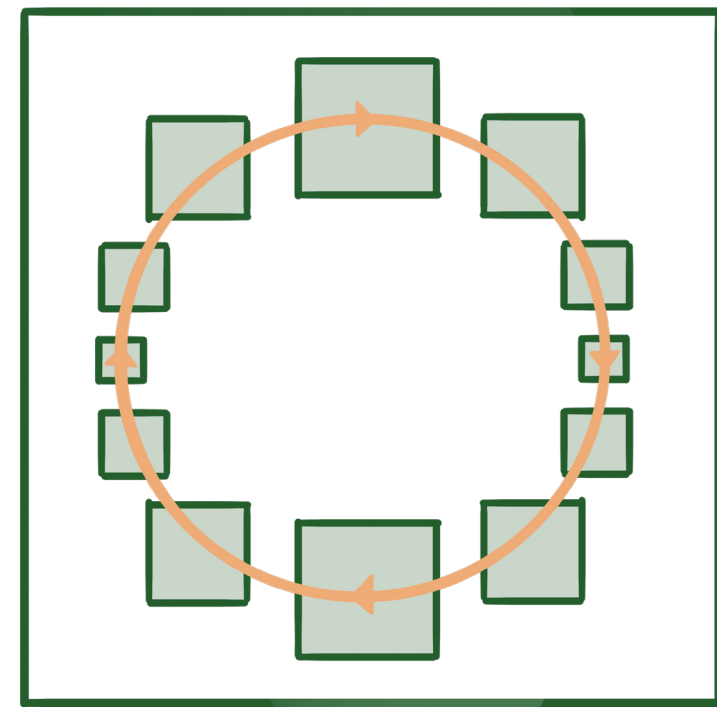
Variation in space:



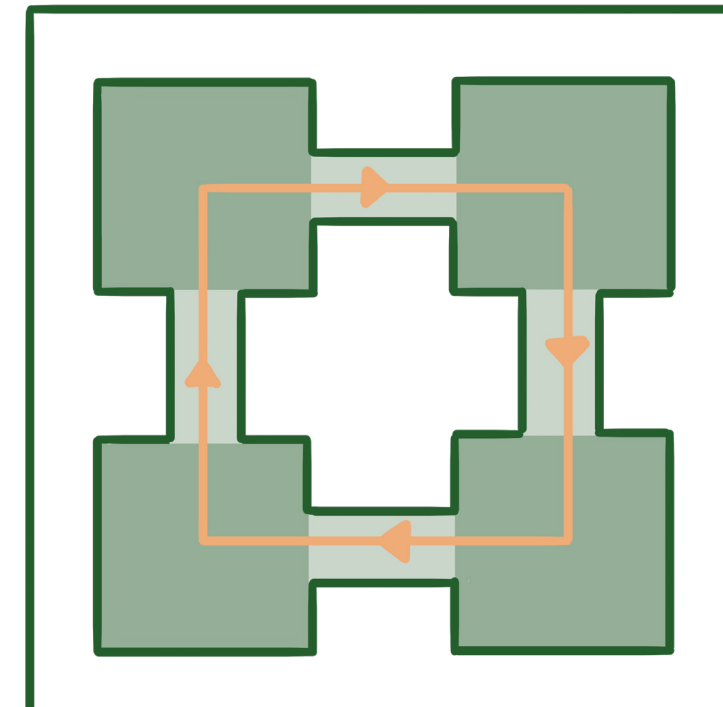
Stacking prefab modules:



L-shaped dwellings:



Continuation of scale



Continuation of space:





