#### Under the Common Roof

a neighbourhood marketplace and elderly residential complex



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houthaven spaarndammer

## the objective

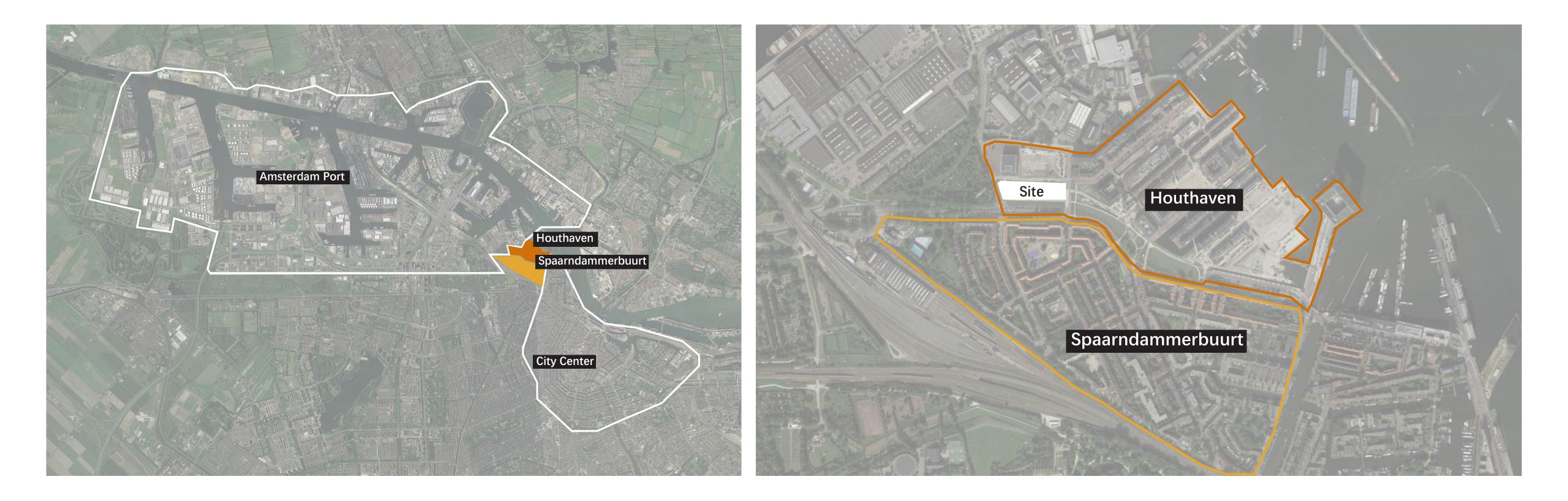
urban strategy design strategy programme

## the design

site & context material & structure architecture & construction

## the life

space fragments



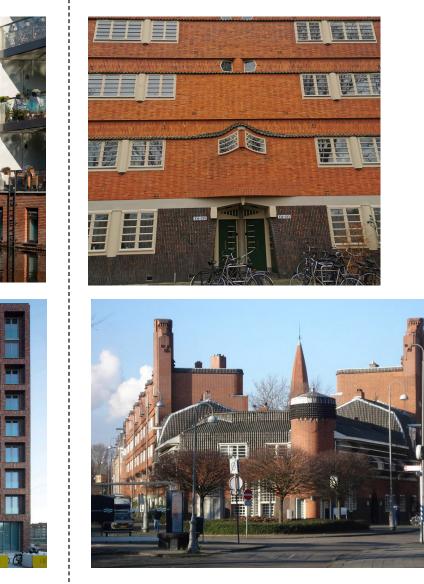
### position of the site

different background of the two neighbourhood



Houthaven modern high-end community





#### Spaarndammer Amsterdam school social housing

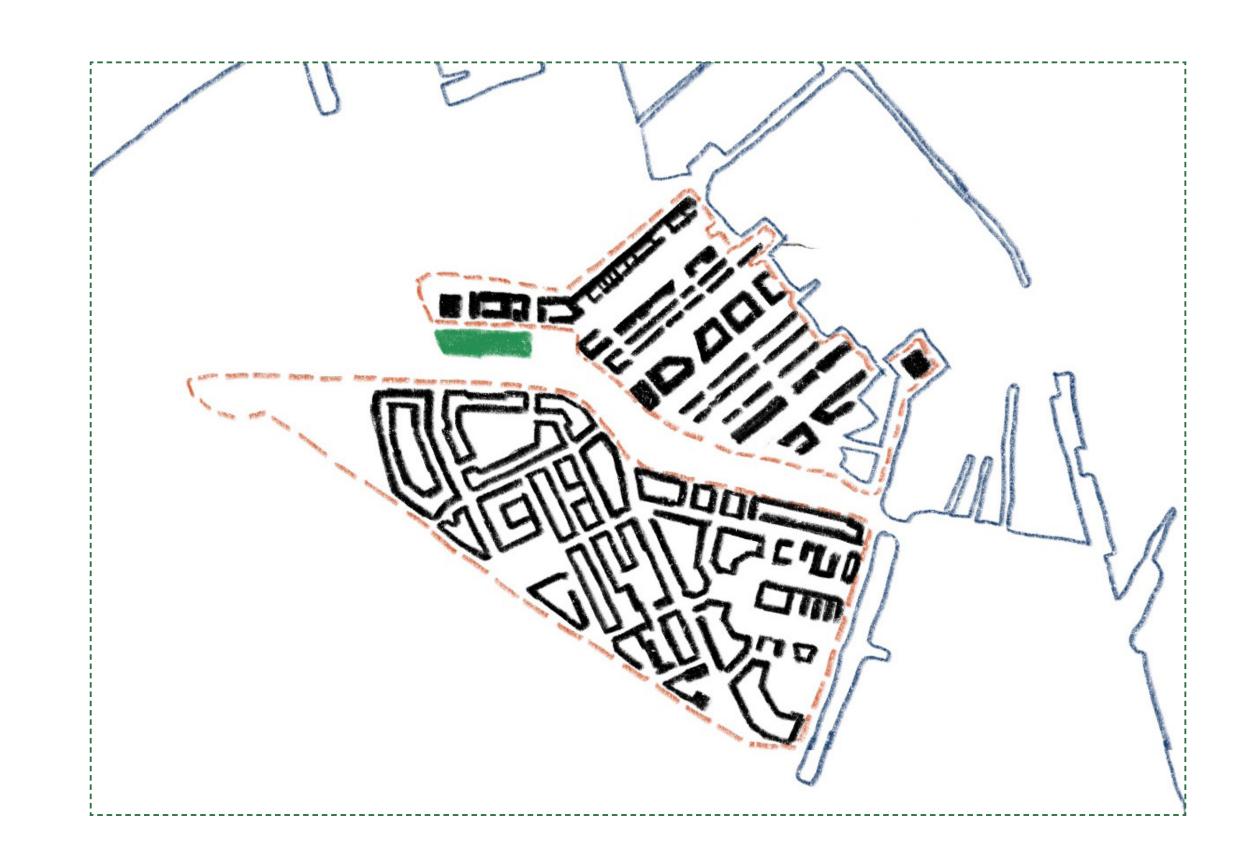
### two distinctive neighbourhood

#### public space community activities

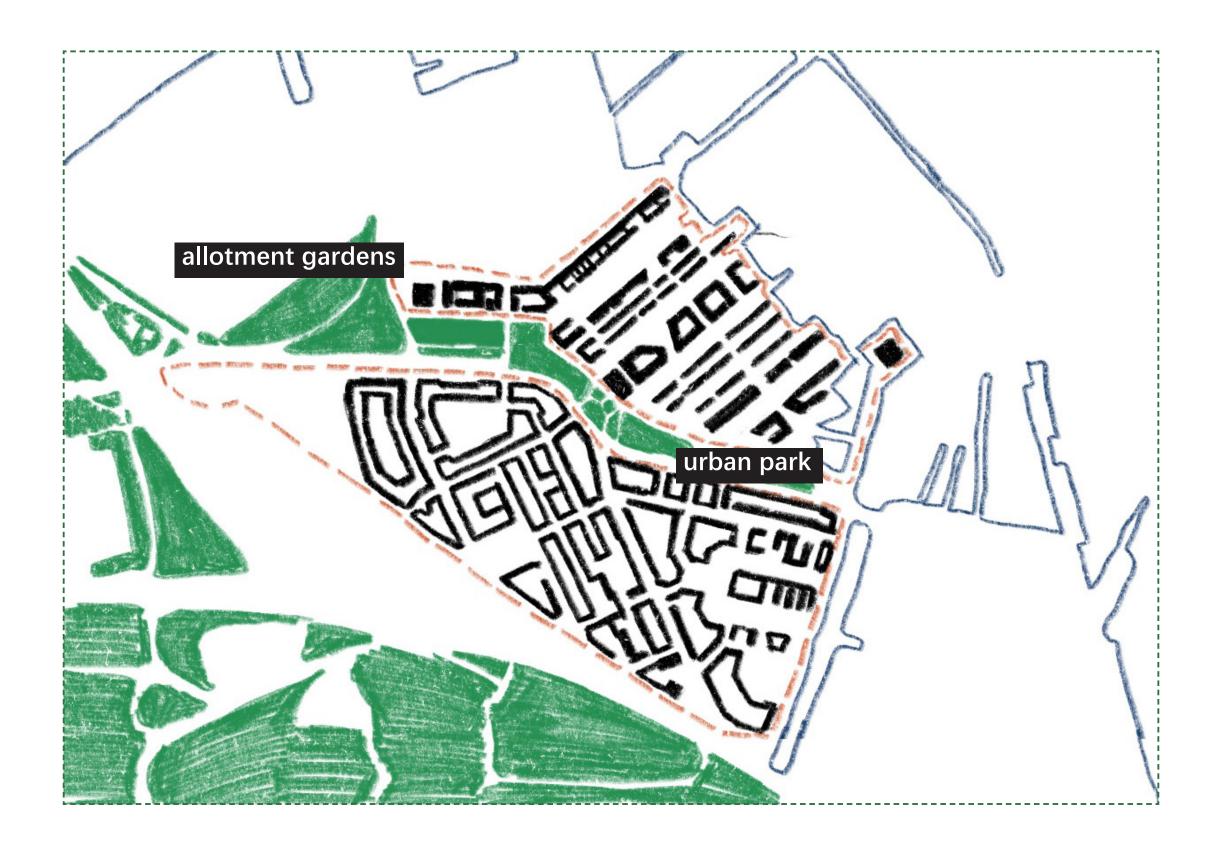


### different need in one project

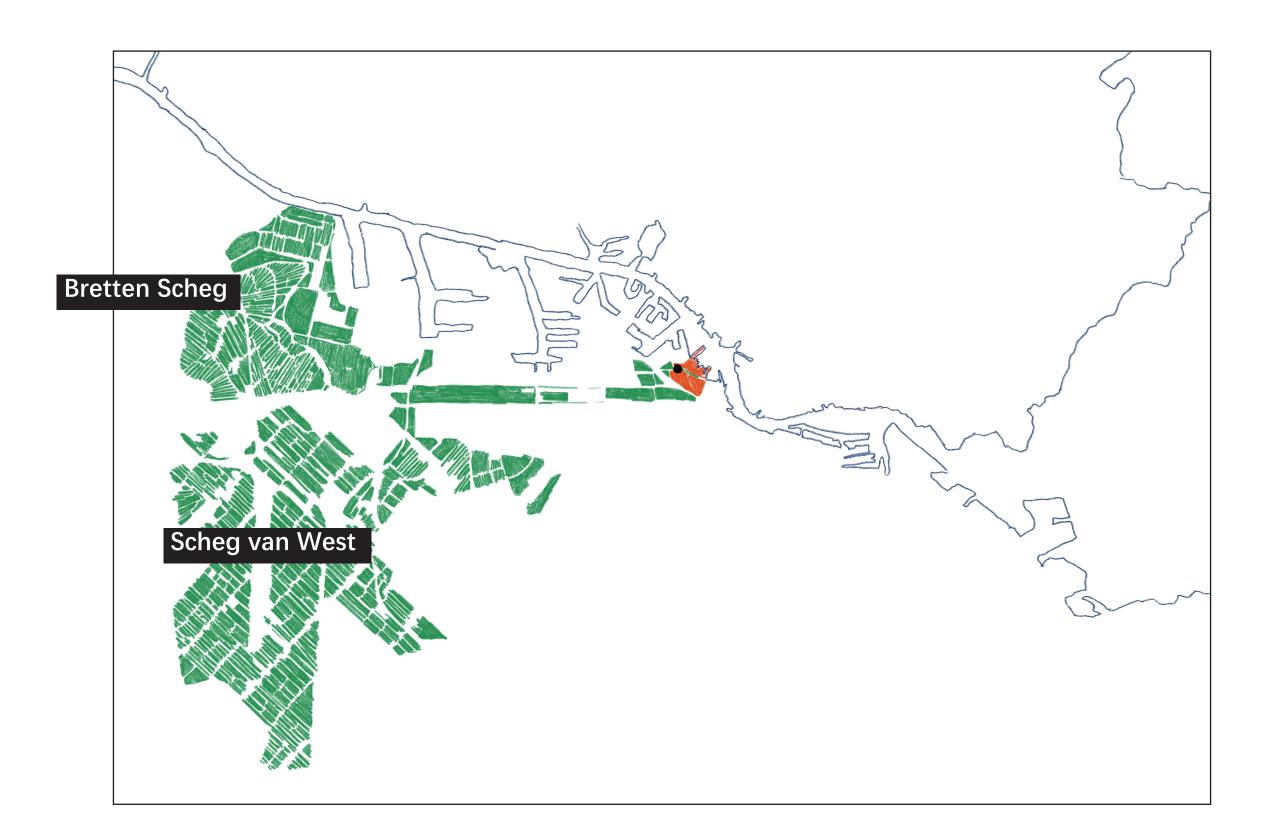
declining social housing insufficient elderly facility



what architectual feature, and programme, could be used not only to meet the needs of the neighbourhood, but also promote the interaction between the two of them?



what feature could be the connection btween the two neighbourhood? urban greenery

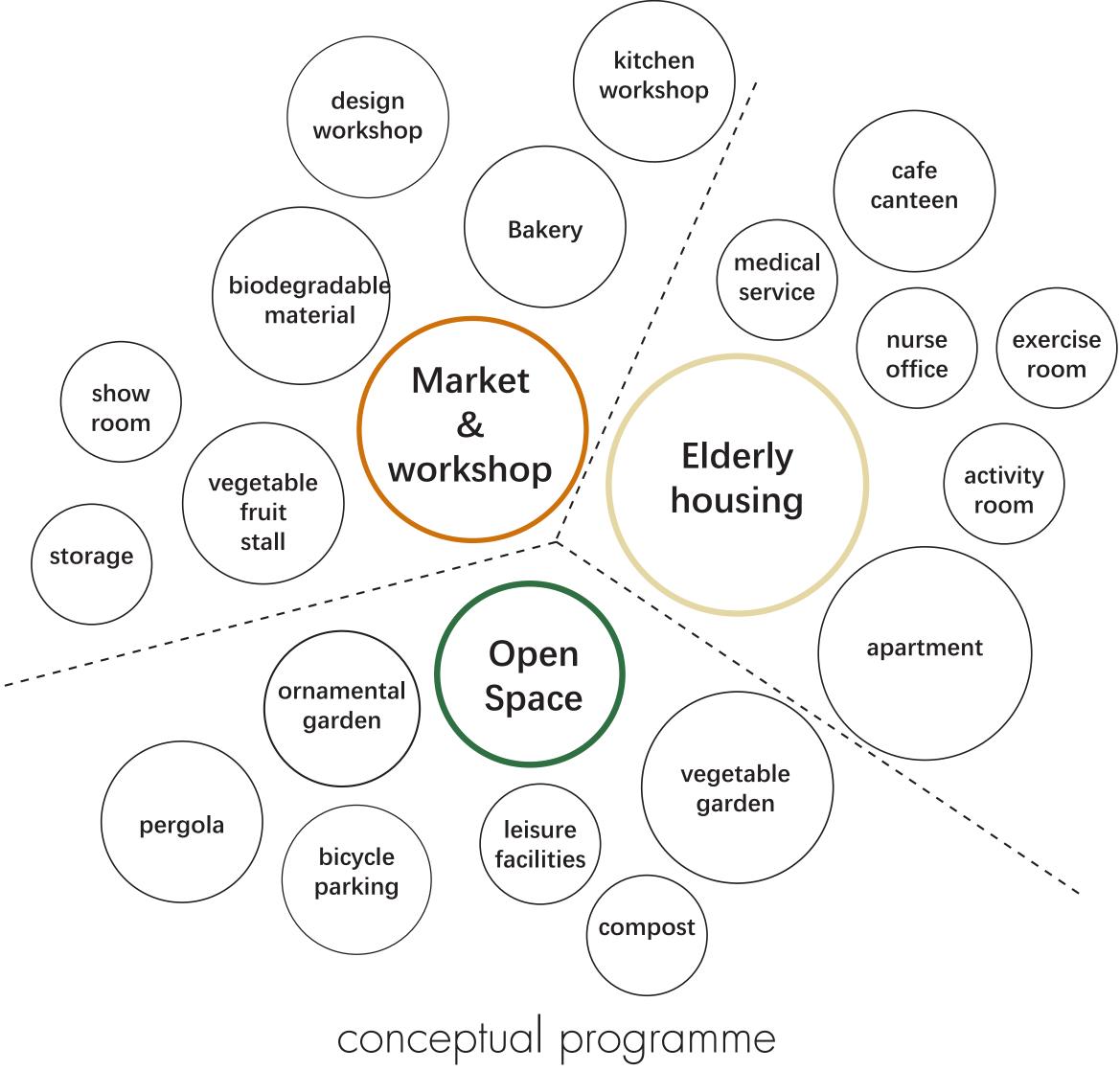


what feature could be the connection btween the two neighbourhood? local hinterland

the urban plan seeks to create an intervention that <u>promotes the interaction</u> between the two neighbourhood by strengthening their sheared relation with the <u>urban greenery</u>, as well as the <u>local hinterland</u>.

architectural design: Through architecture and programme, the design aims to add <u>a new feature</u> to the exisitng neighbourhood through <u>local natural material</u> that brings people under the common roof.

urban strategy:



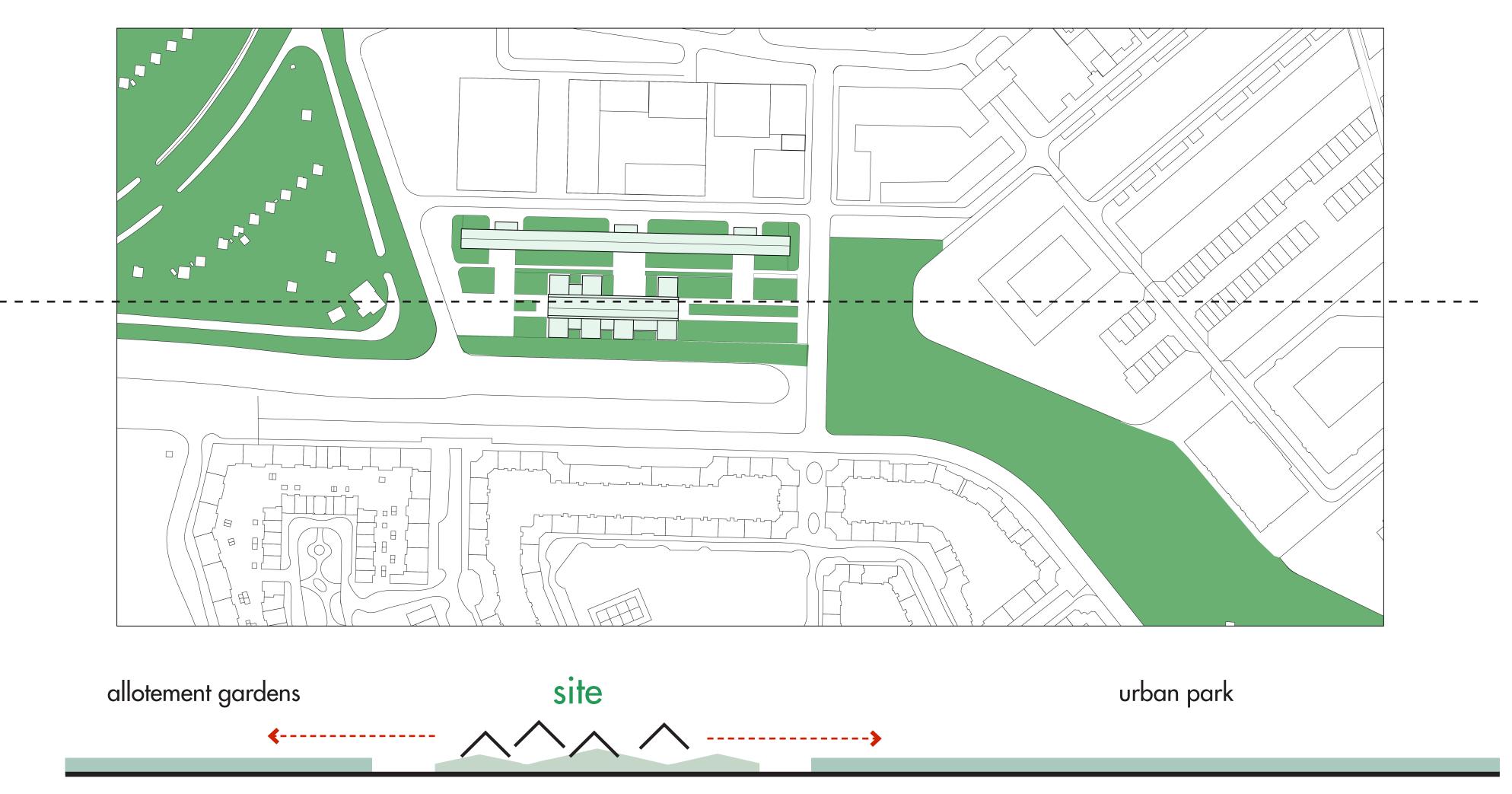
live, learn and enjoy the local resource

#### the design site & context

#### material & structure architecture & construction

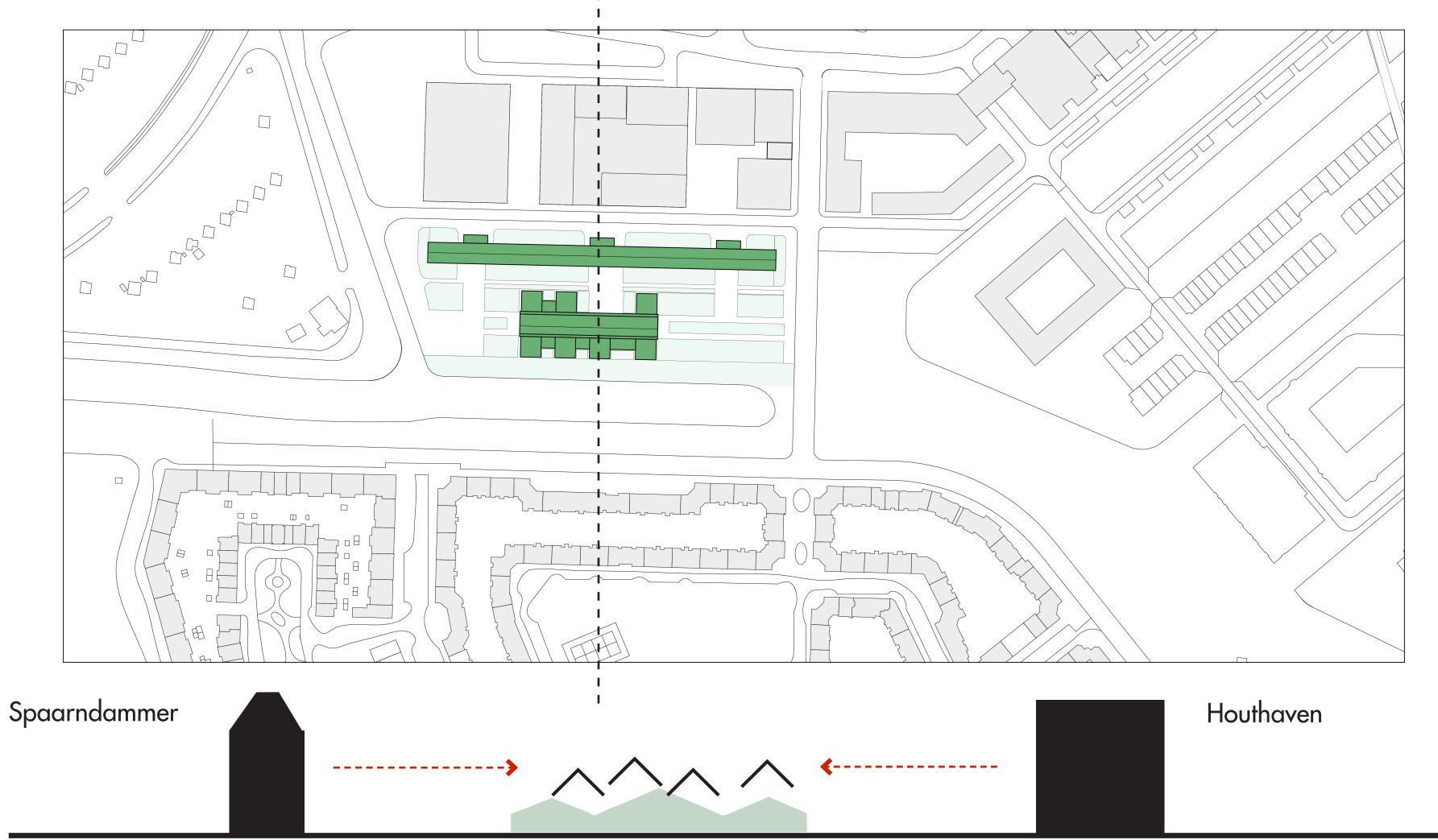


#### the design site & context



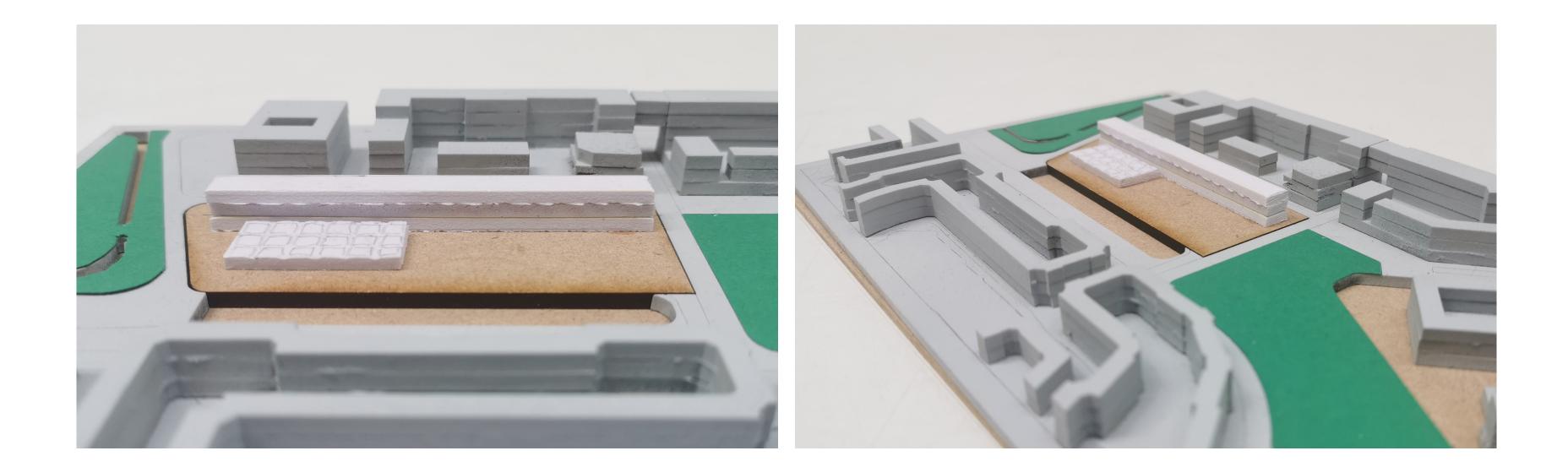
elderly housing is place on the side of the site as a multifloored building to remain the site open as public space

## the design site & context



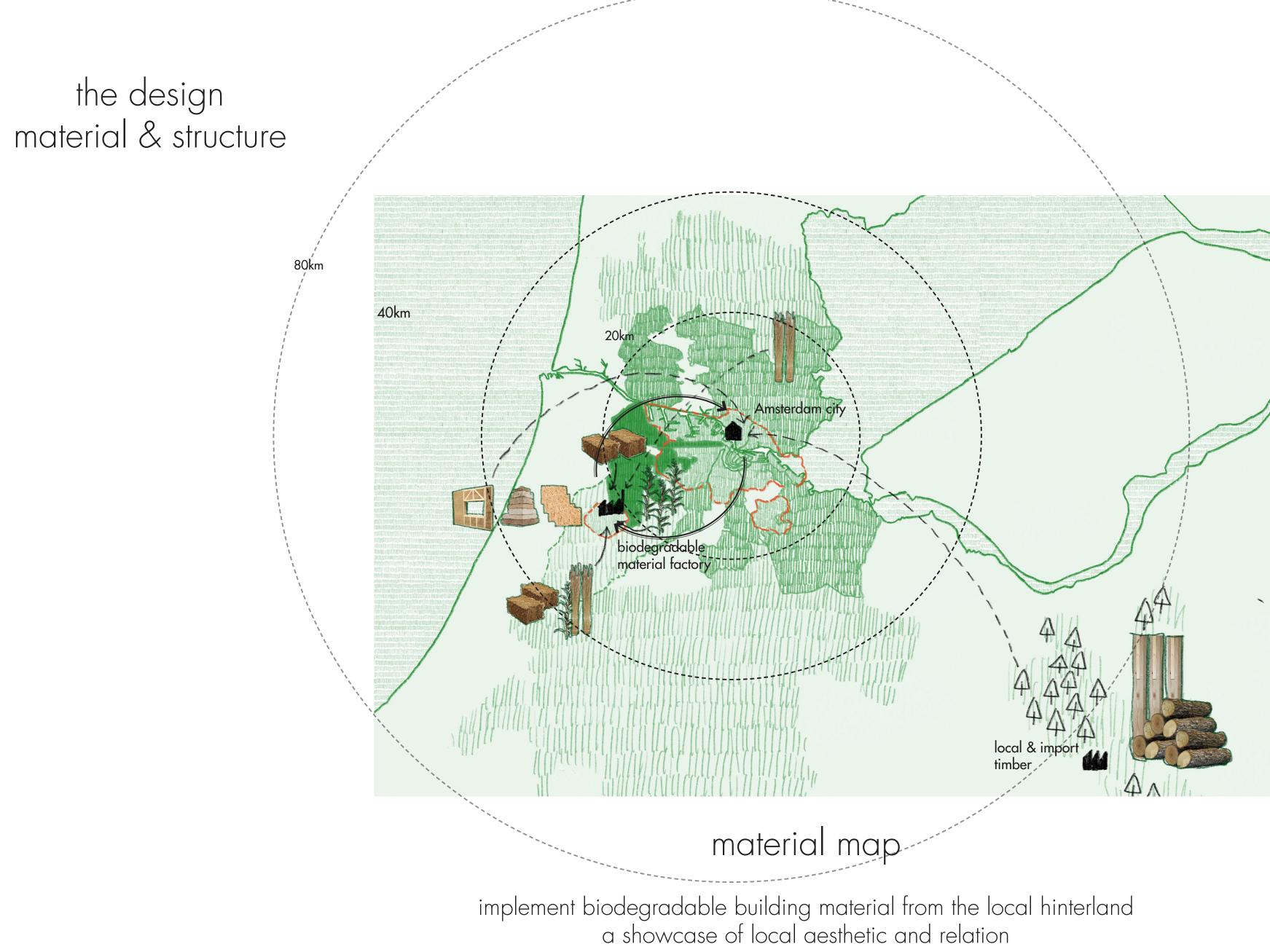
market and workshop are designed as a part of the public gardens to promote the interaction between two neighbourhood

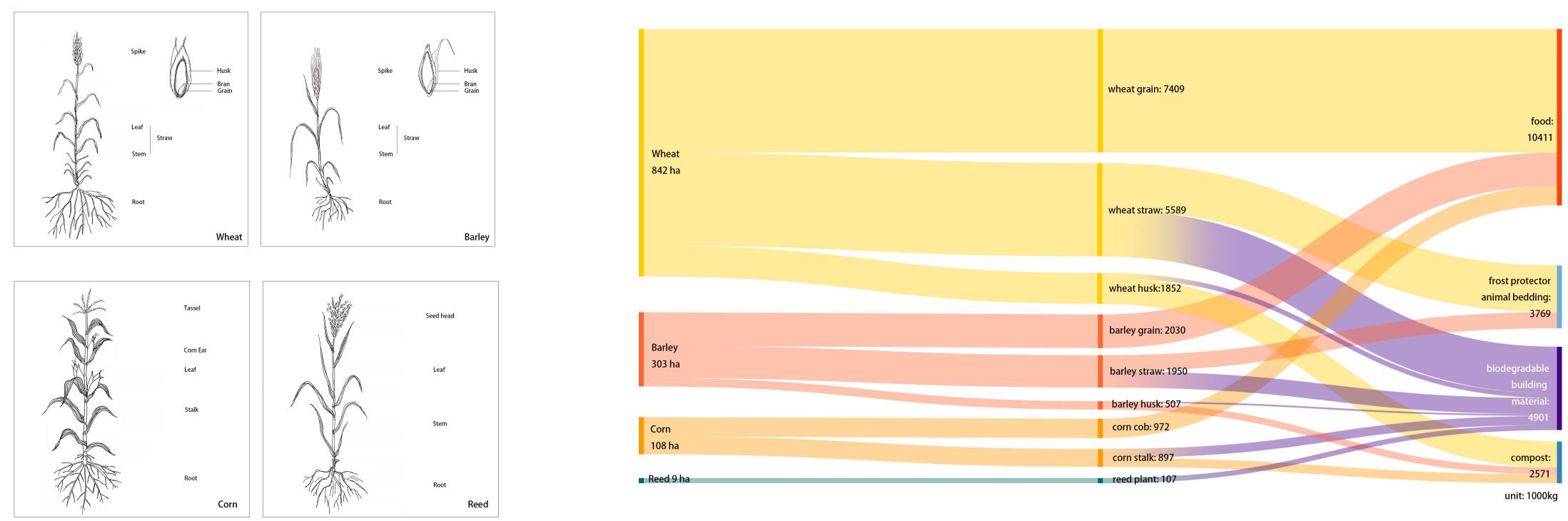
# the design site & context



the contradiction between the shape of the market and housing both construct their impact on the landscape.

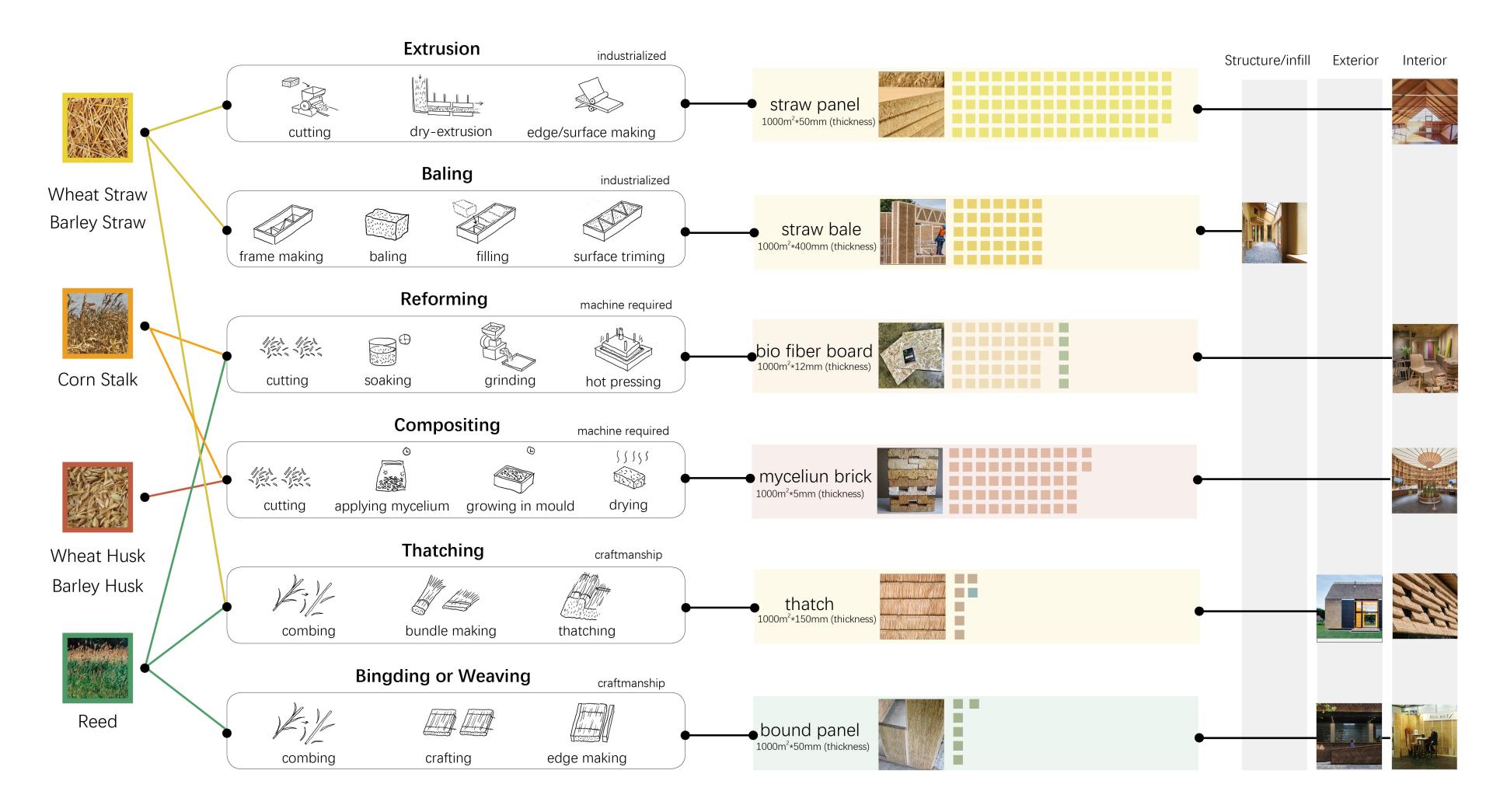
#### site model



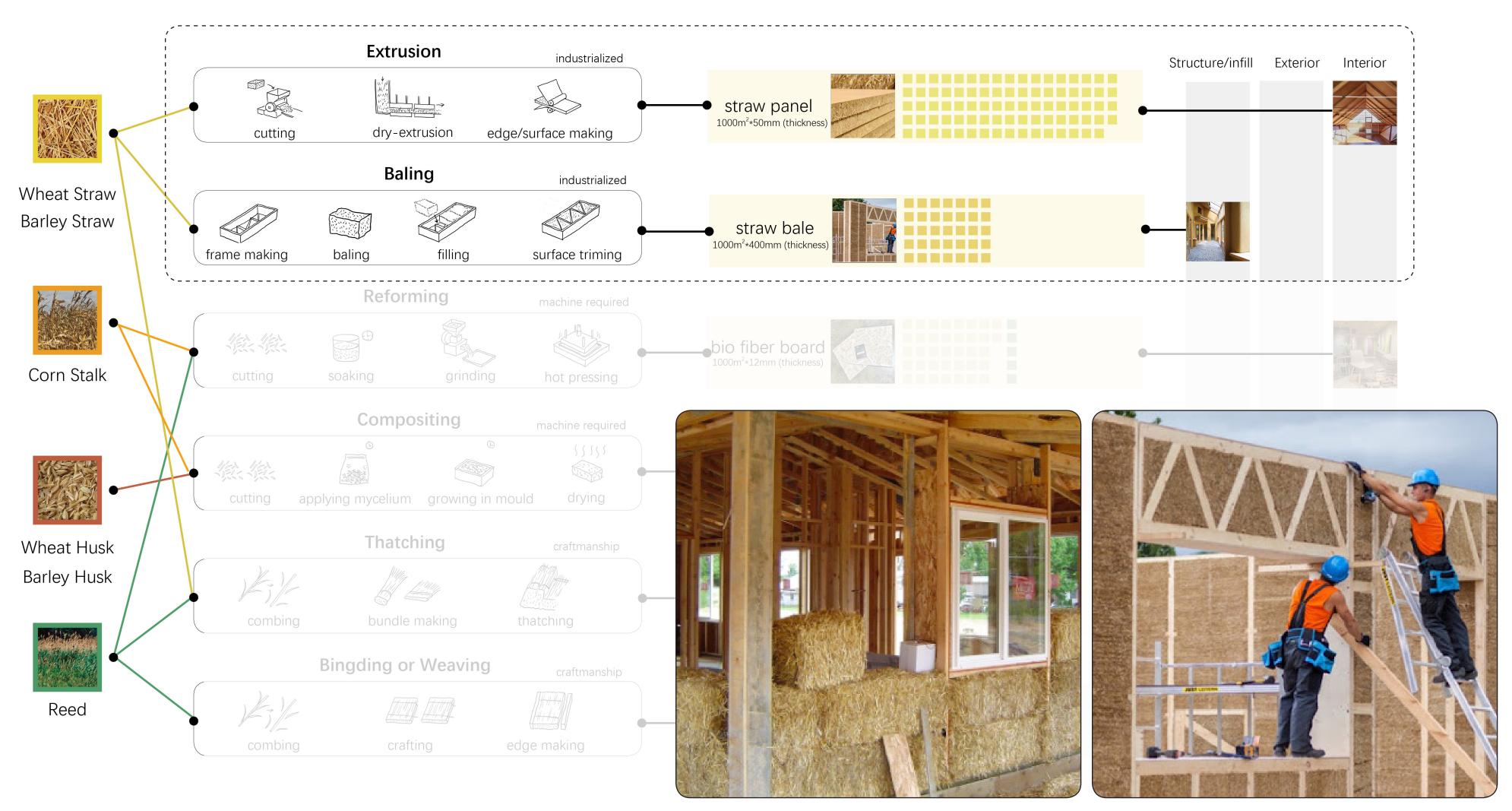


### biodegradable building material from agricultural waste

emphasizes the connection between urban residences and local hinterland through building materials.

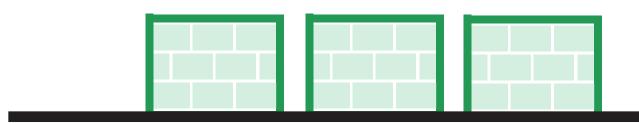


material catalog



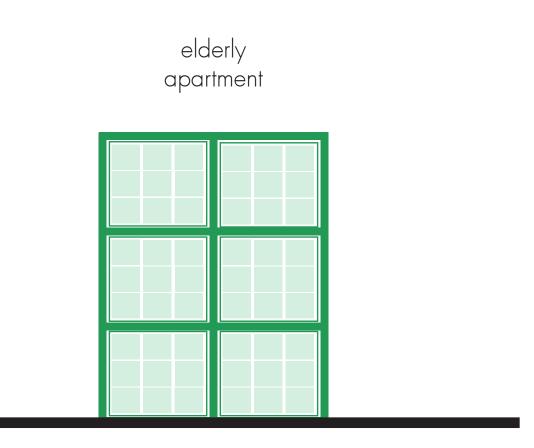
straw bale structure

market & workshop

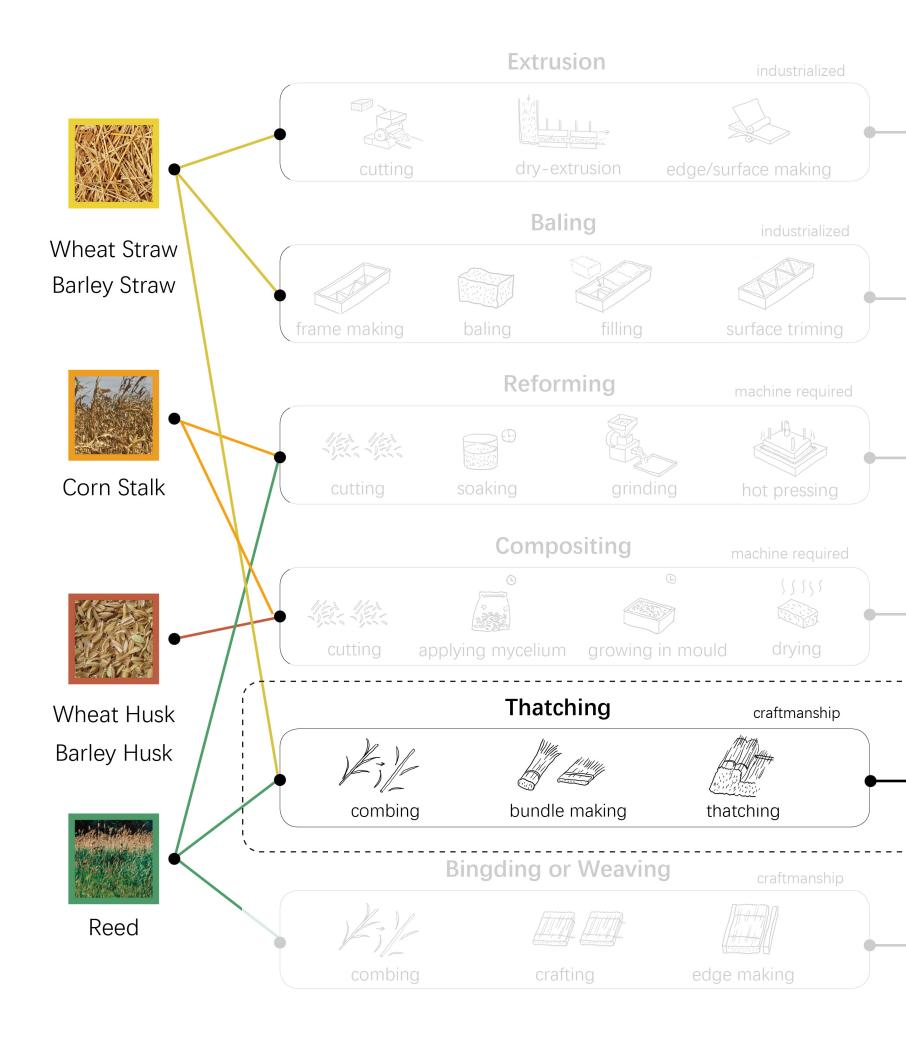




traditional straw wall



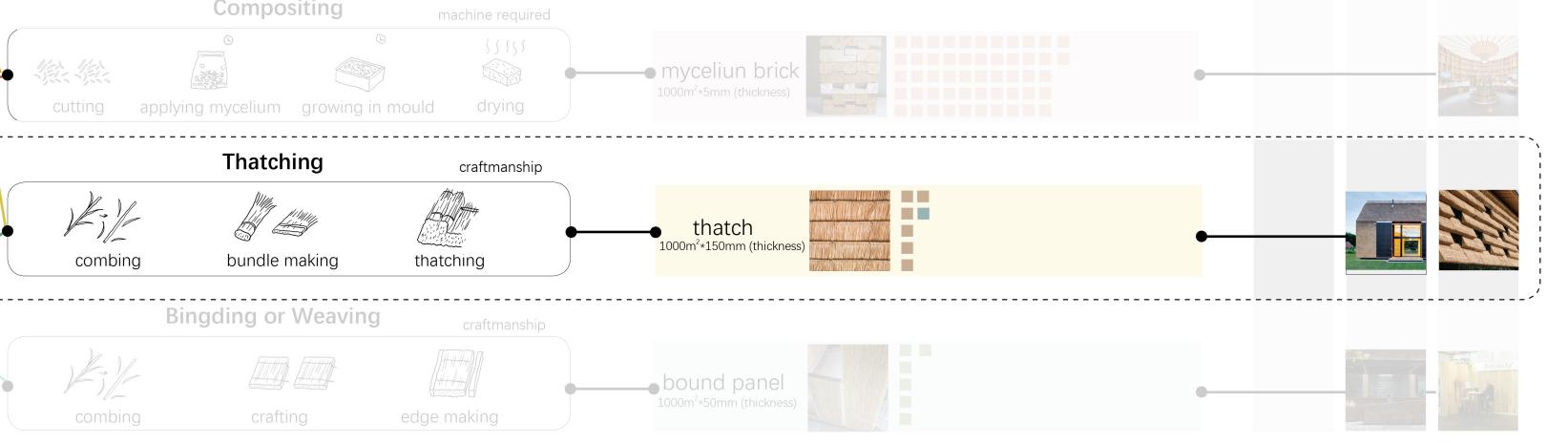








craftsmanship: thatch

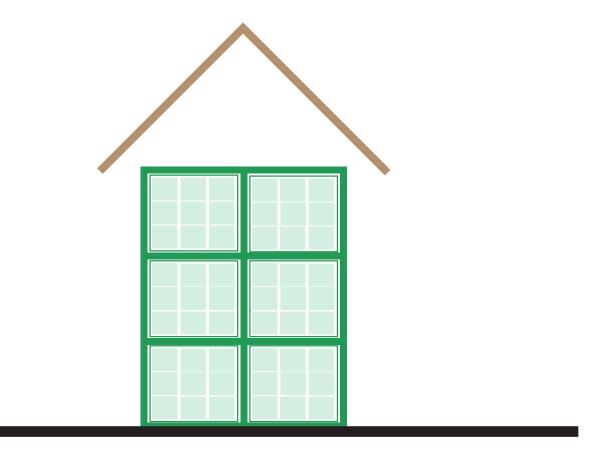






### thatch roof and green roof

natural roof scape illustrates the contrudicton with the two neighbourhood and the connection with the urban greenery. exterior and interior





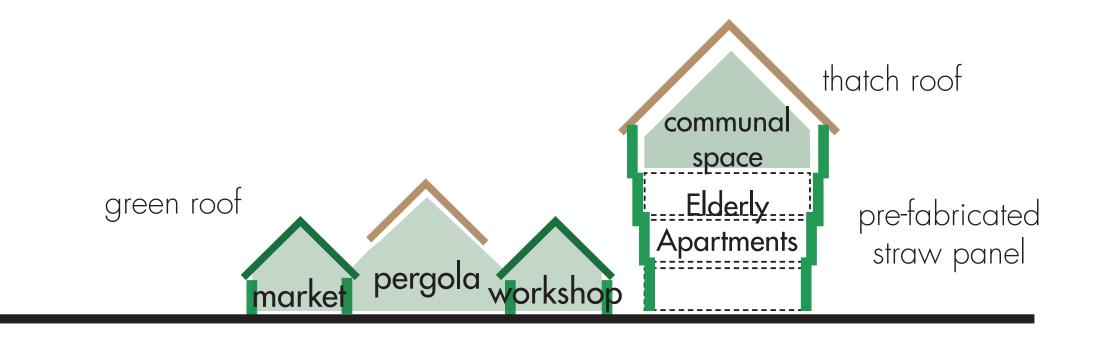


### facade as the transition between the roof and the wall structure

the offset character creates a subtle feature while protecting rain water

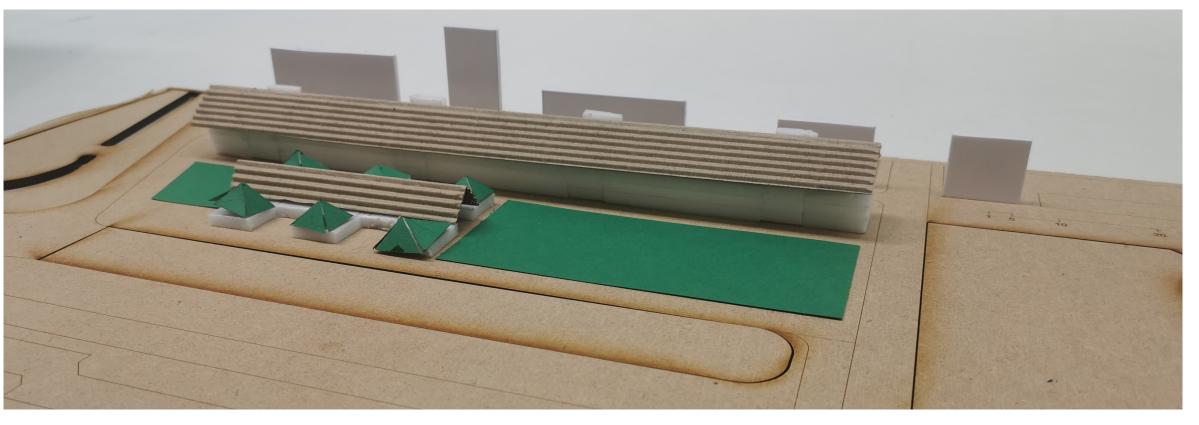






introduce a new feature between the two neighbourhood, strenghening the connection with the urban greenery a sustainable symbol of impelmenting local natural material in the urban context unique interior space for people to gather

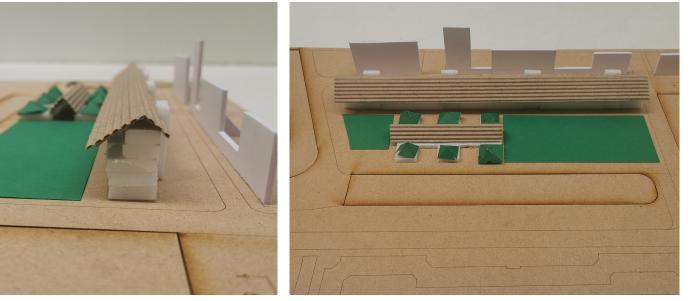
### conceptual section



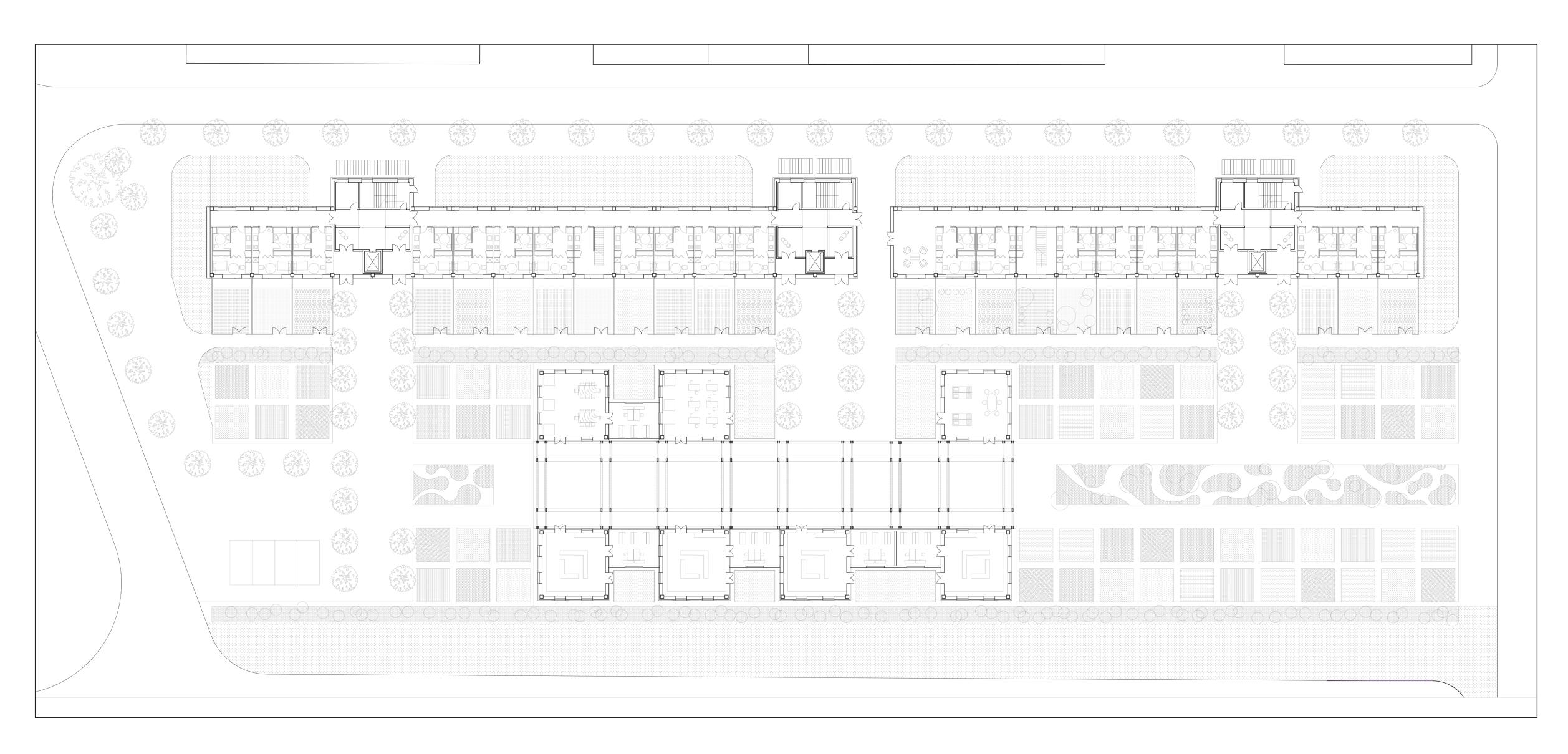


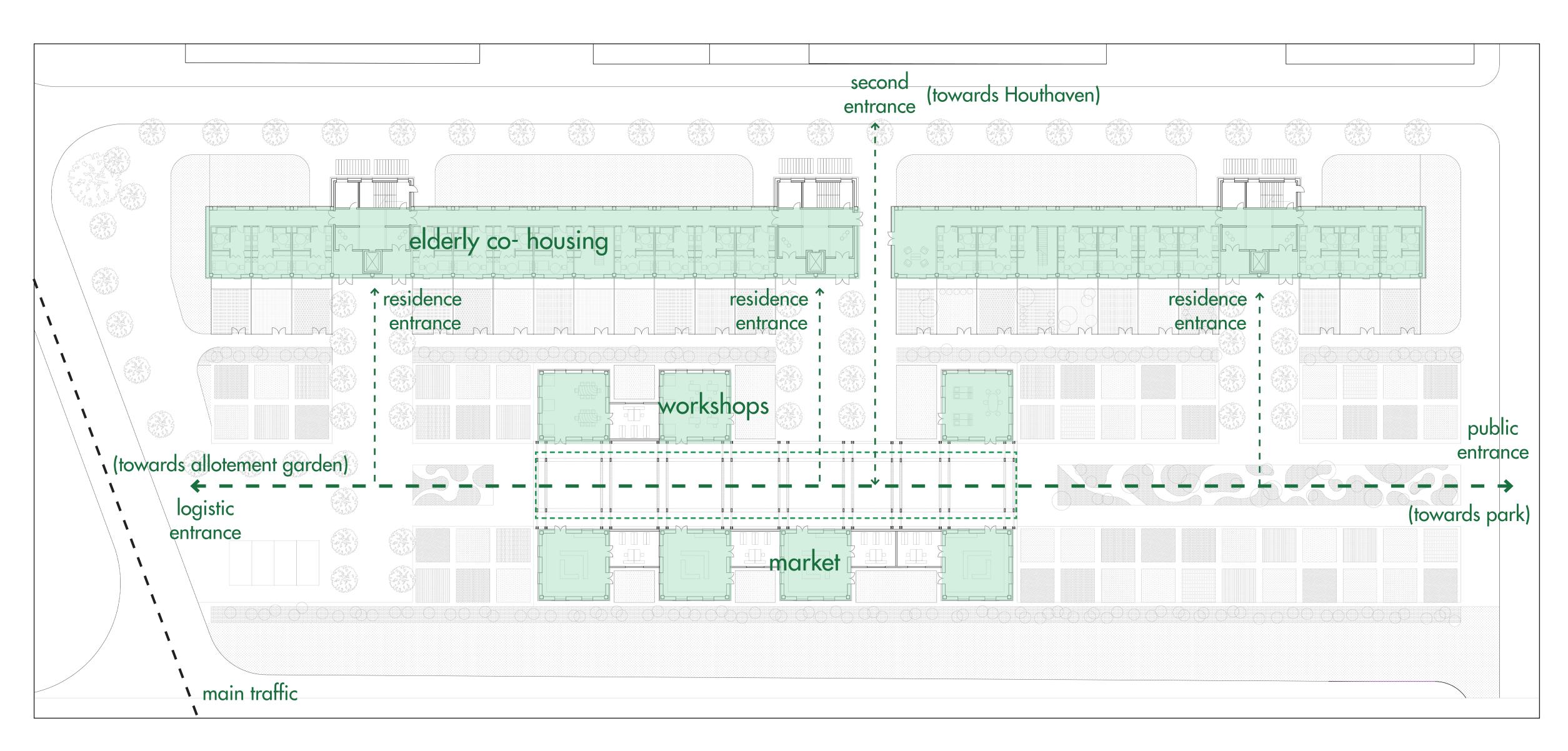


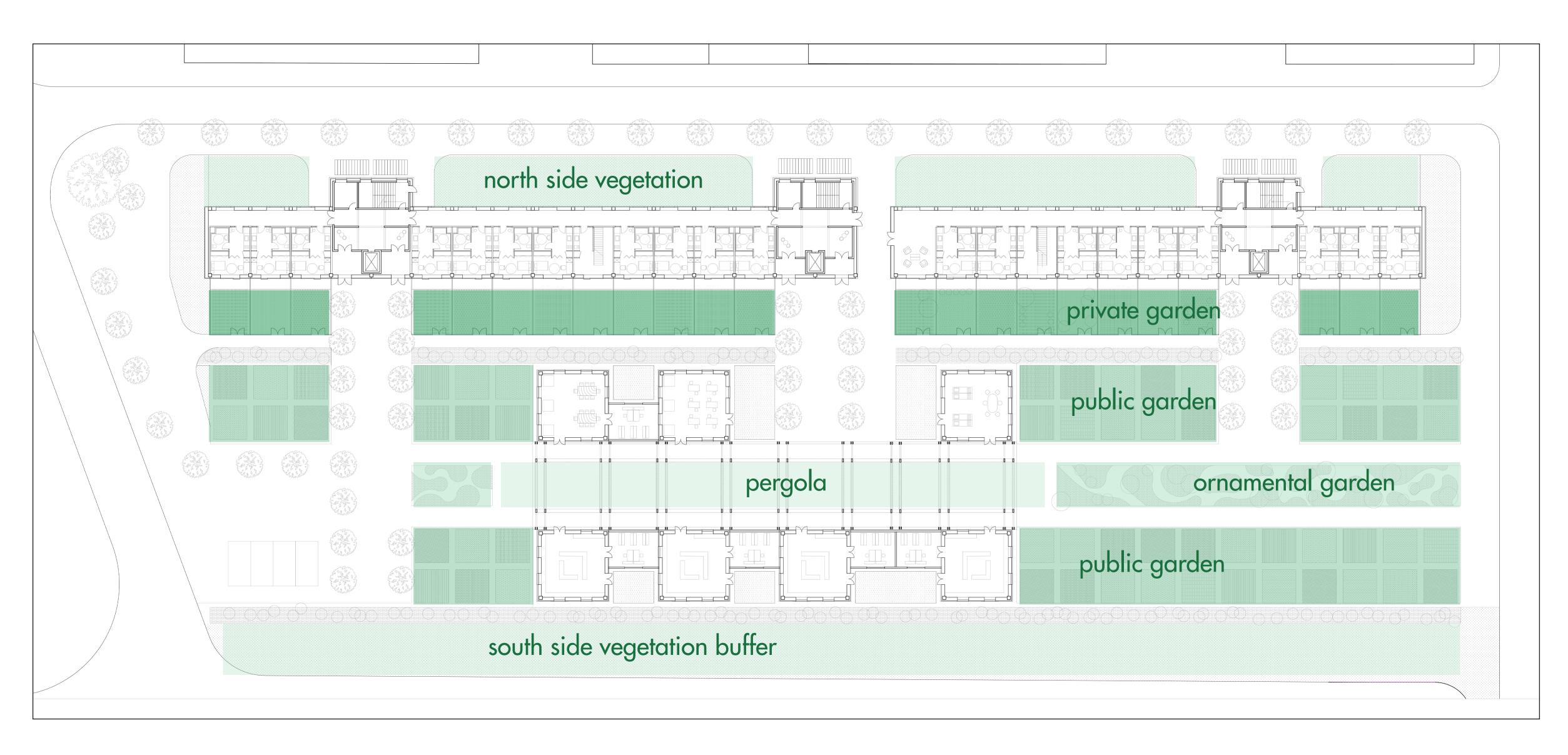
from roof space to roof place

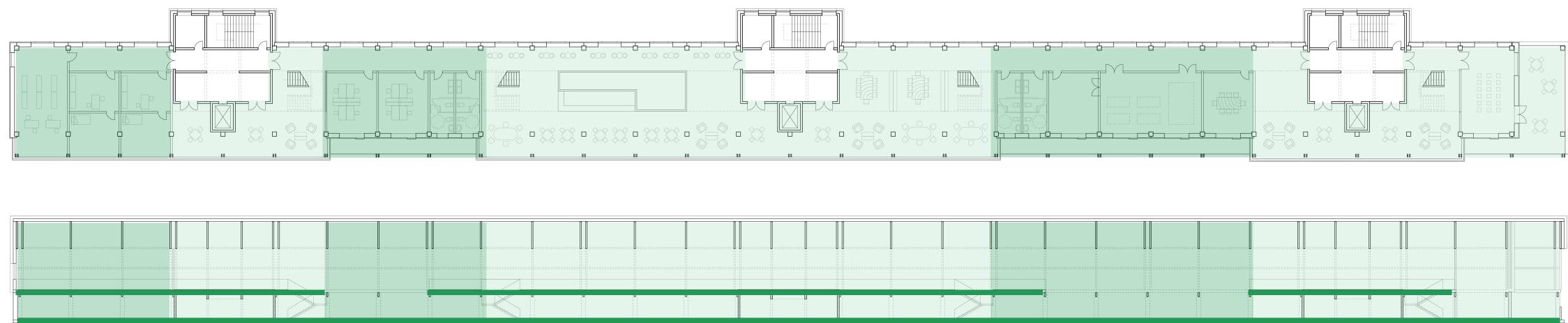


#### 'common roof'

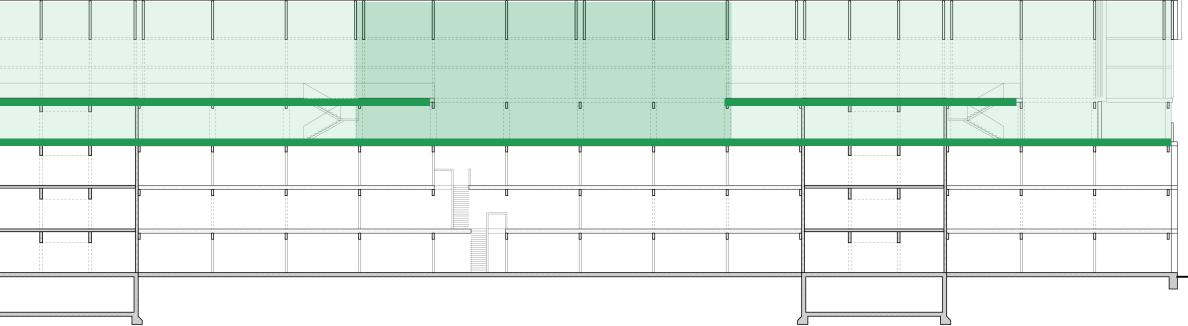




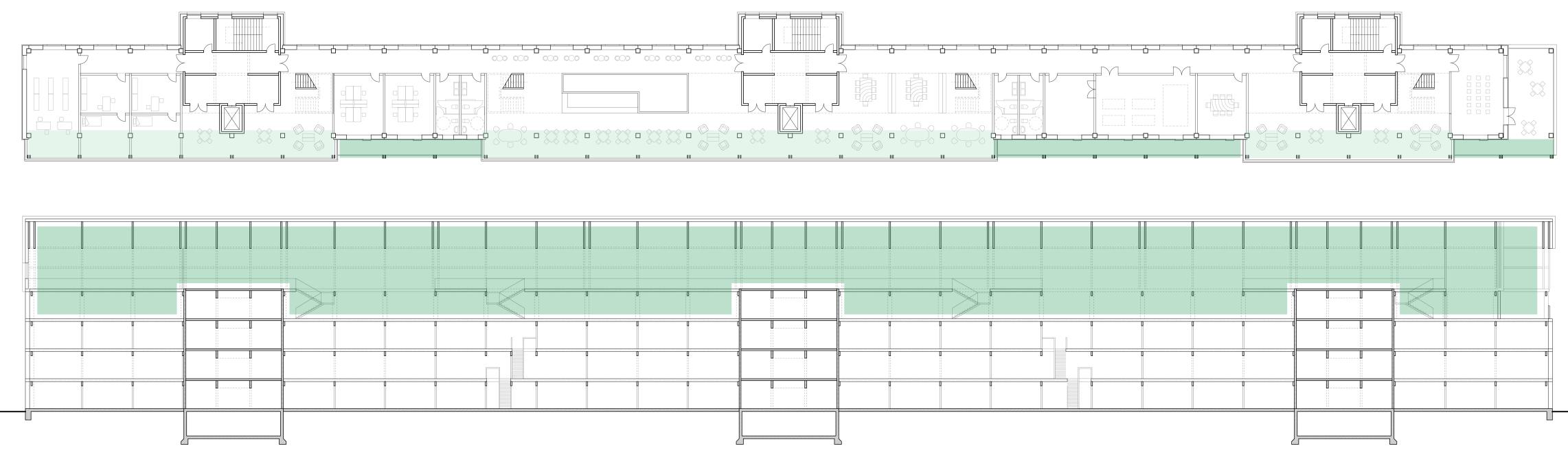




a quiet space for elderly entrance space as a living room

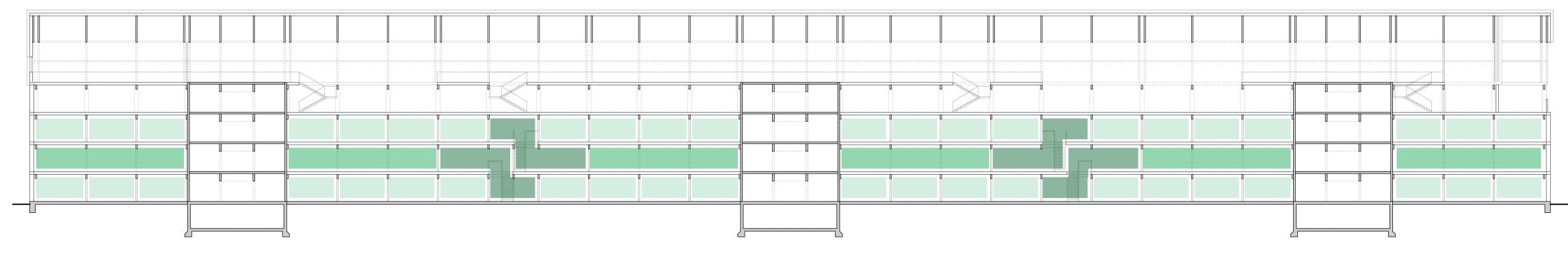


## roof communal space



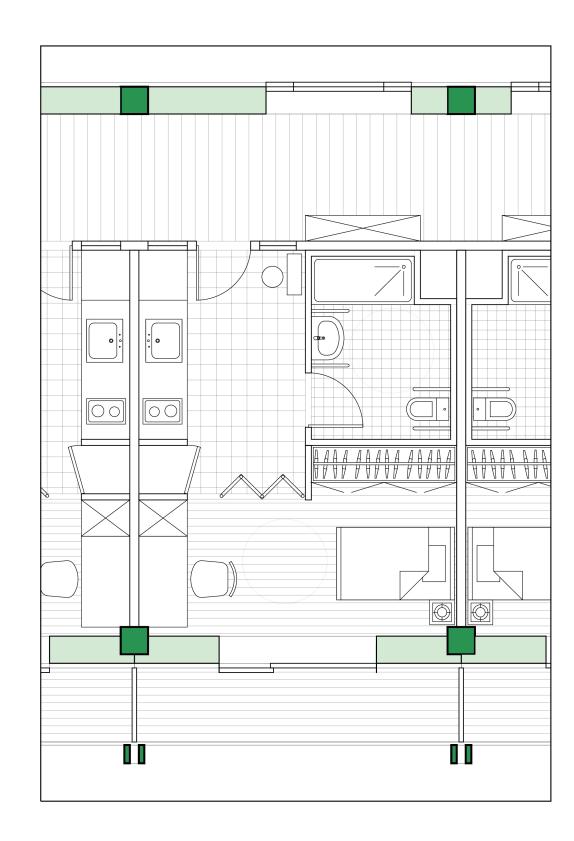
green house & balcony as respond and interaction with the public gardens

## roof communal space

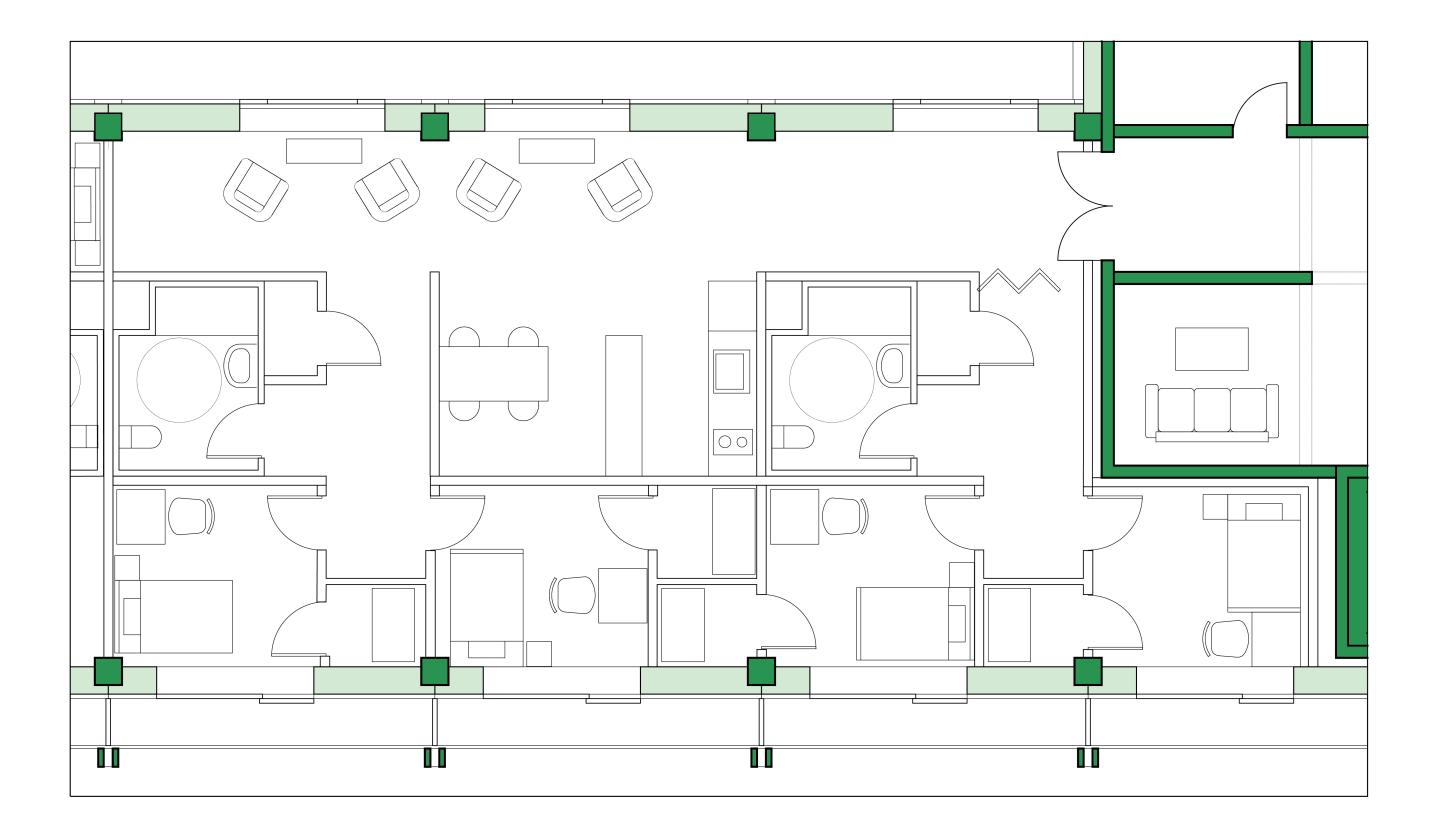


### private apartment for independent elderly

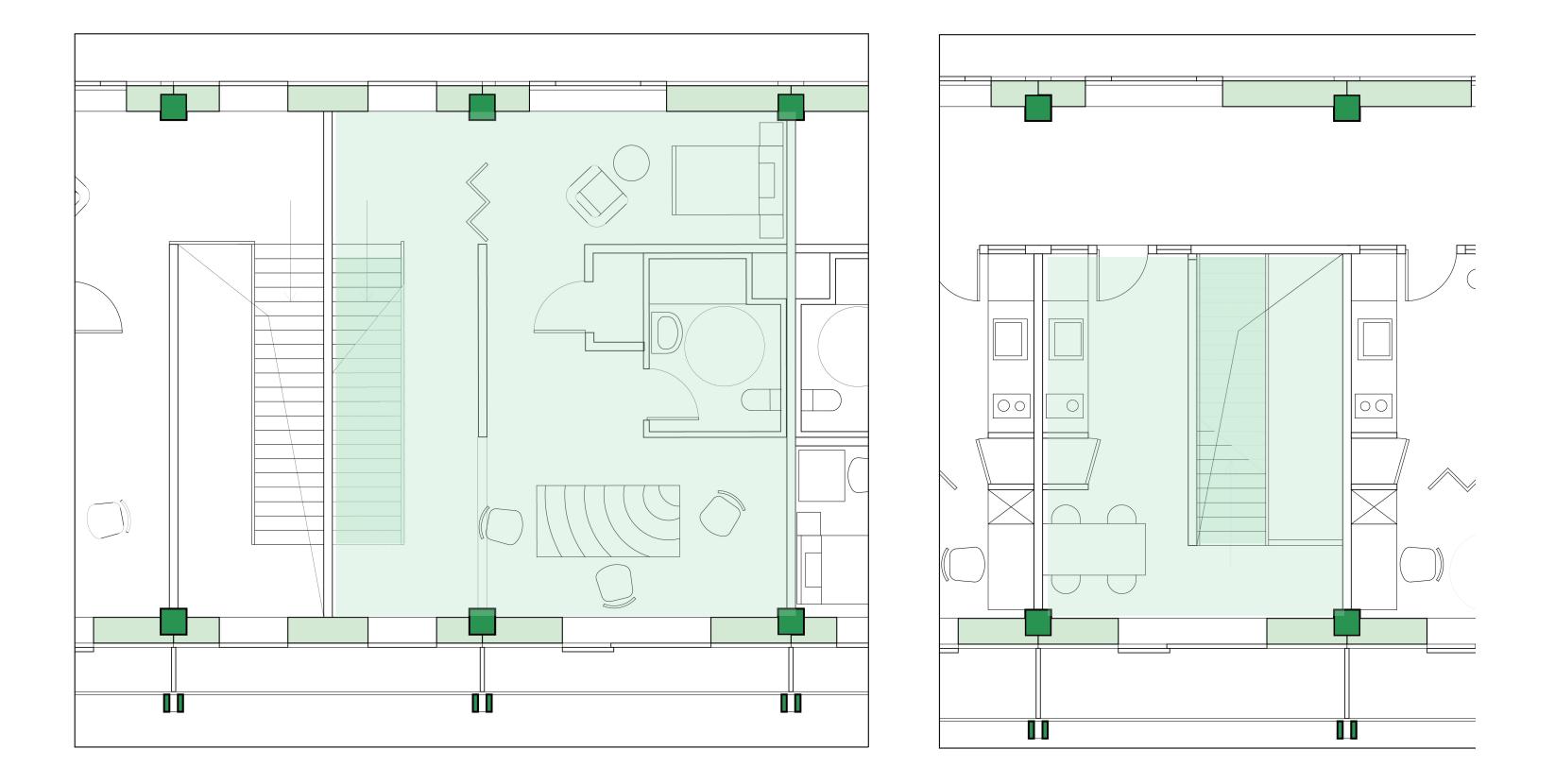
fixed structure different lifestyle



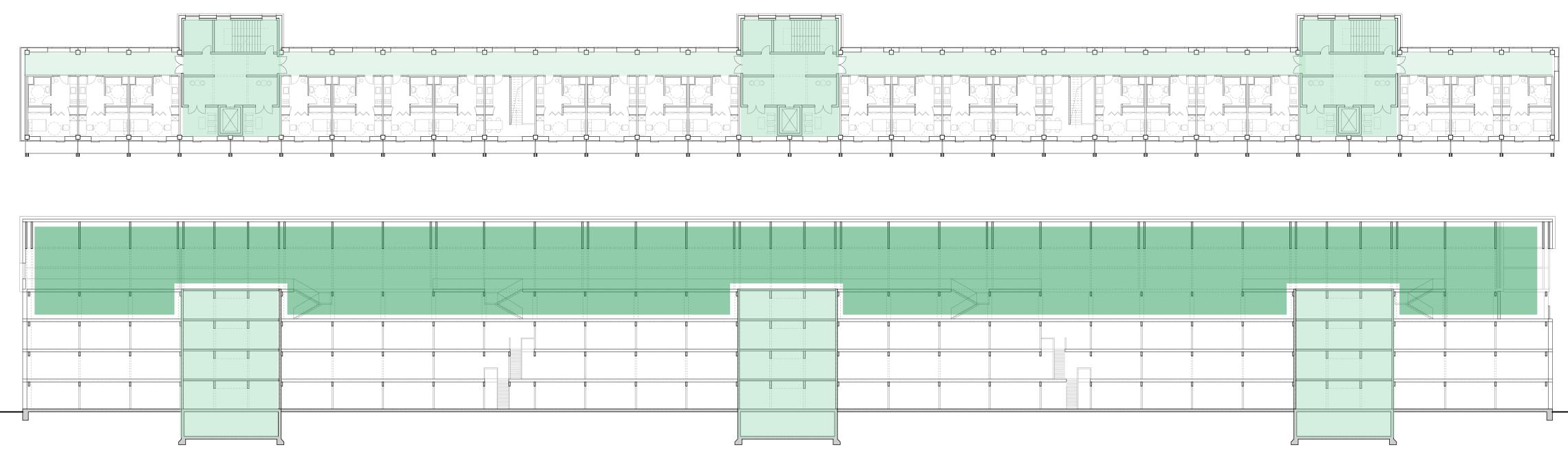
# 44 single person apartment 33 m<sup>2</sup>



### co - living apartment (4 person) 150 m<sup>2</sup>

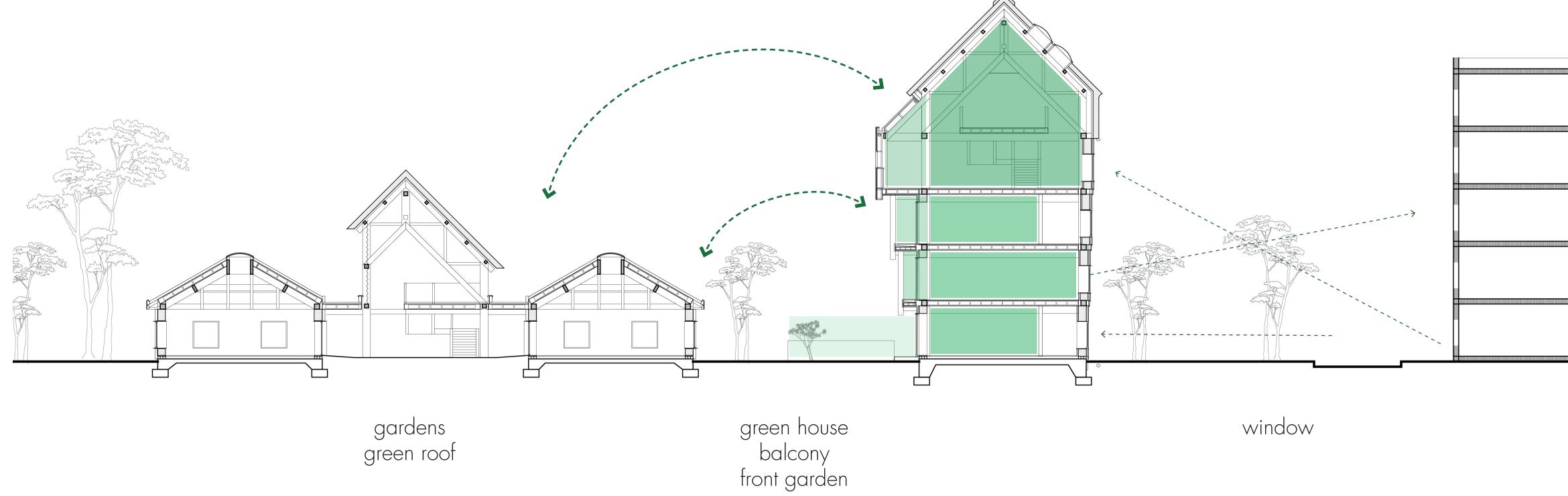


loft apartment (1-2 person) 75 m<sup>2</sup>



co-living atmosphere space for encounter

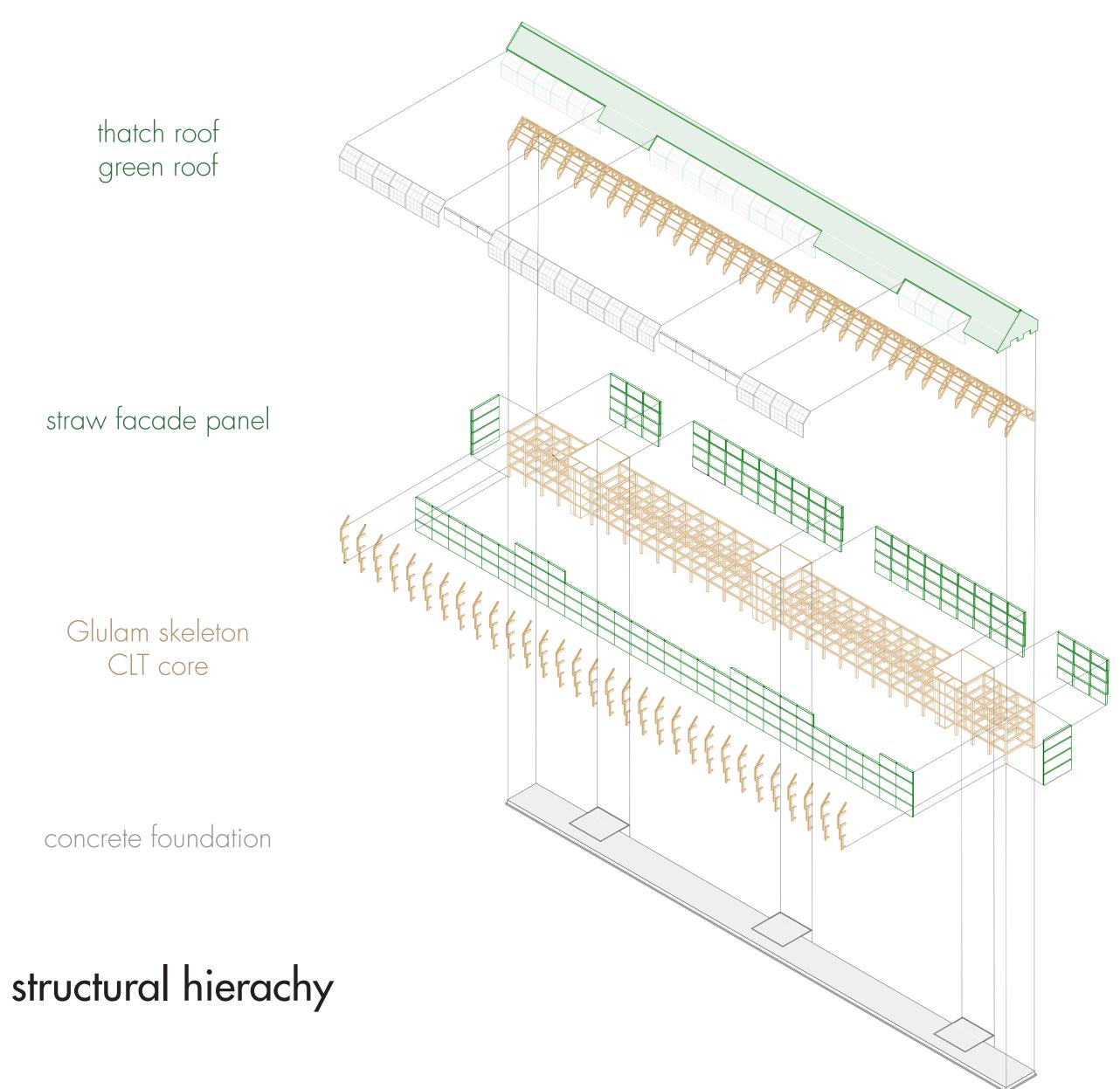
spacious core & corridor

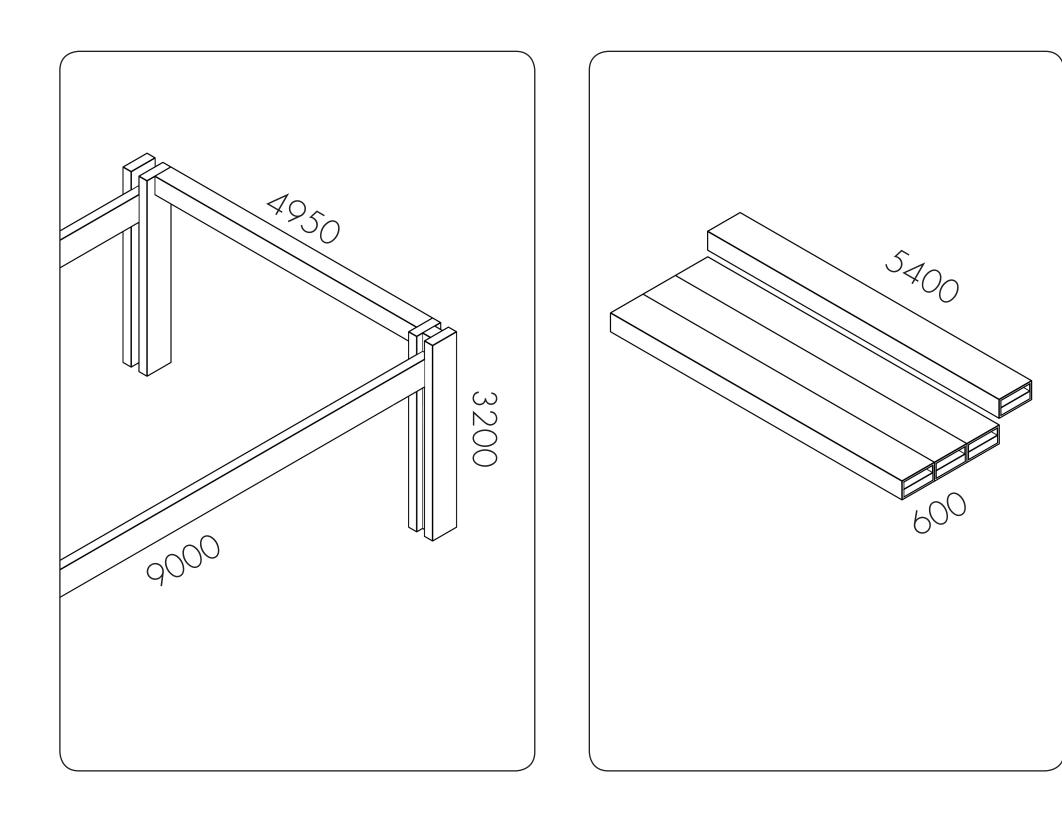


the closed corridor and open balconies create two different facade that react with the site situation.

conversation

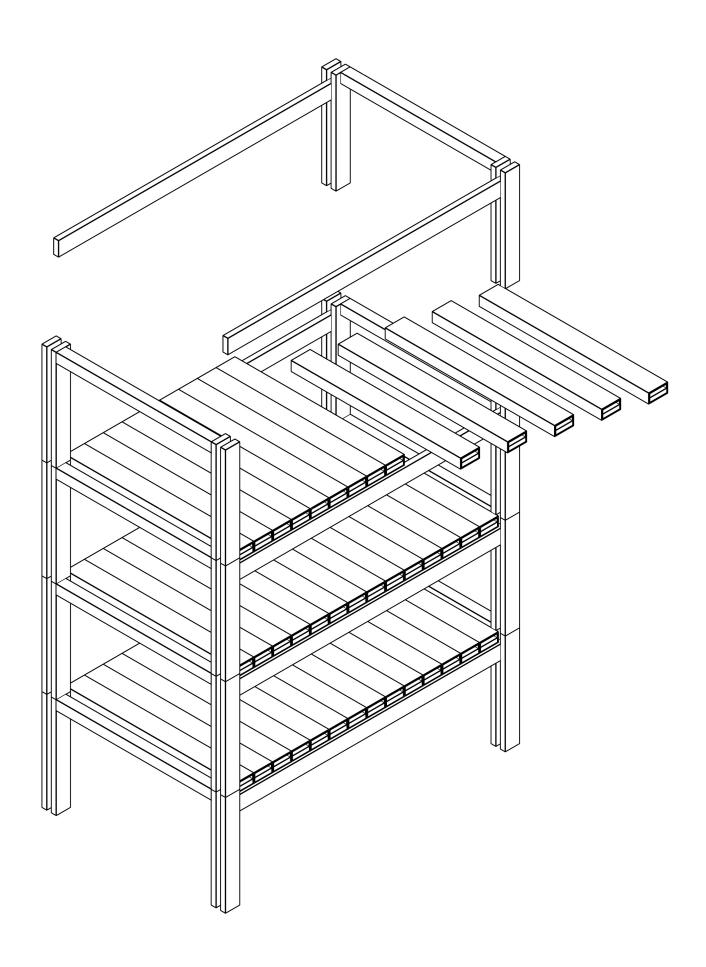


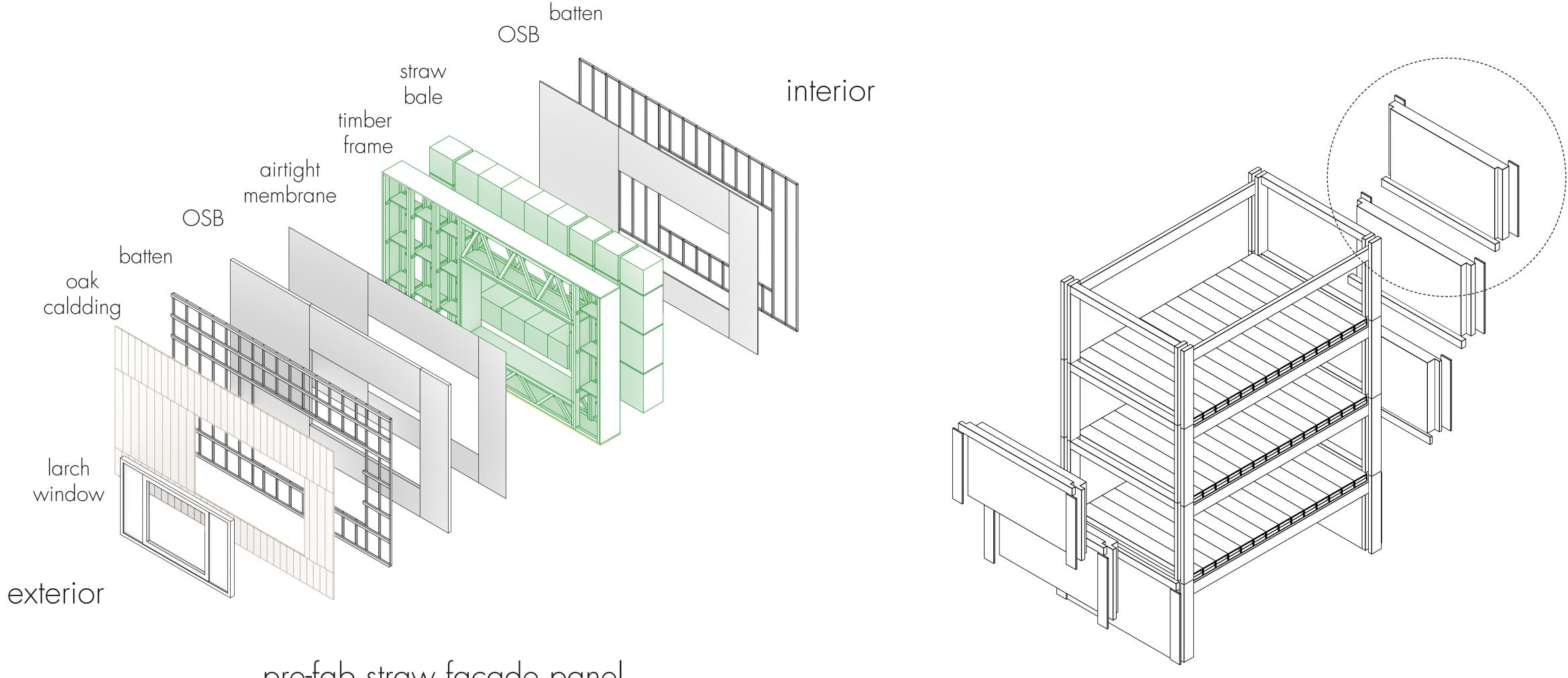




glulam frame

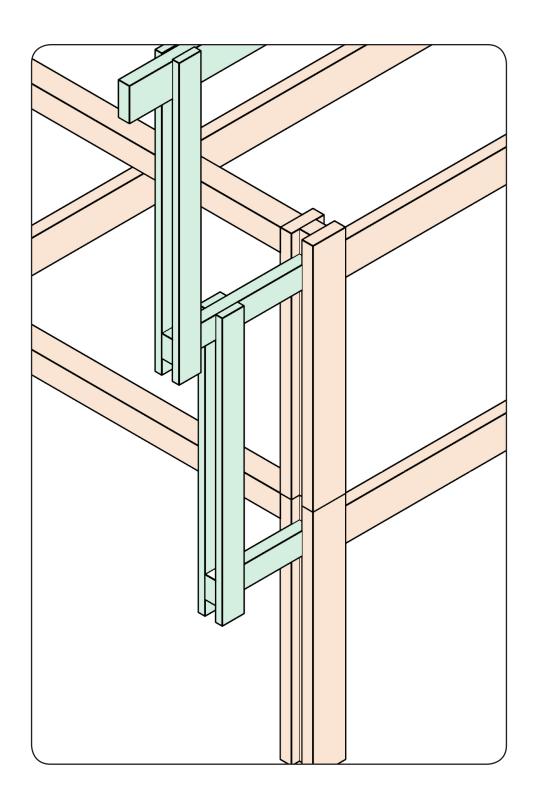
timber box floor panel mycelium/straw loam insulation



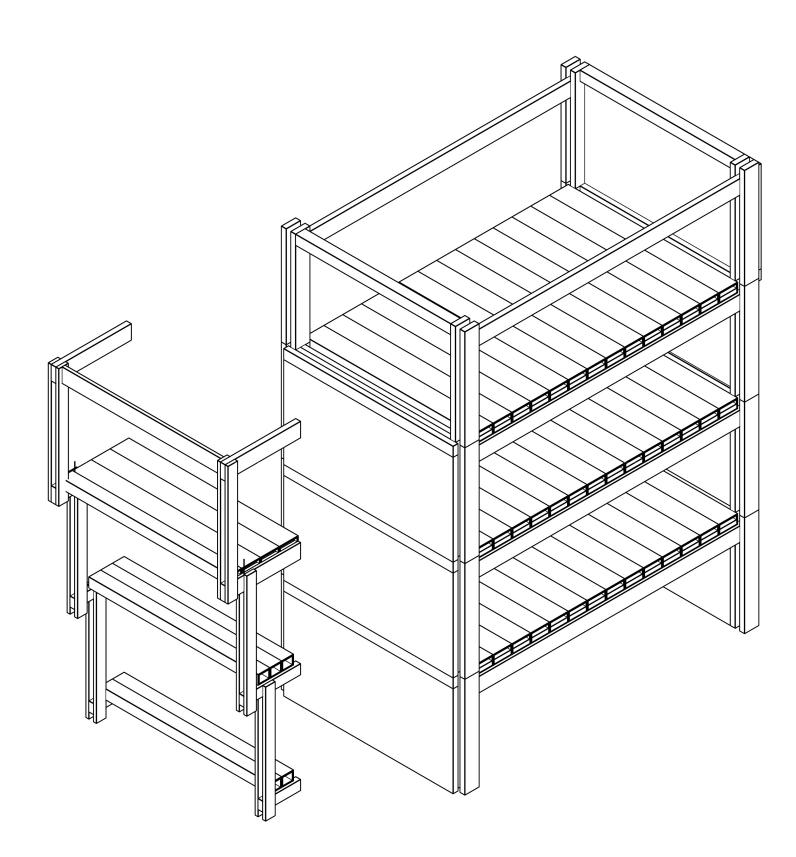


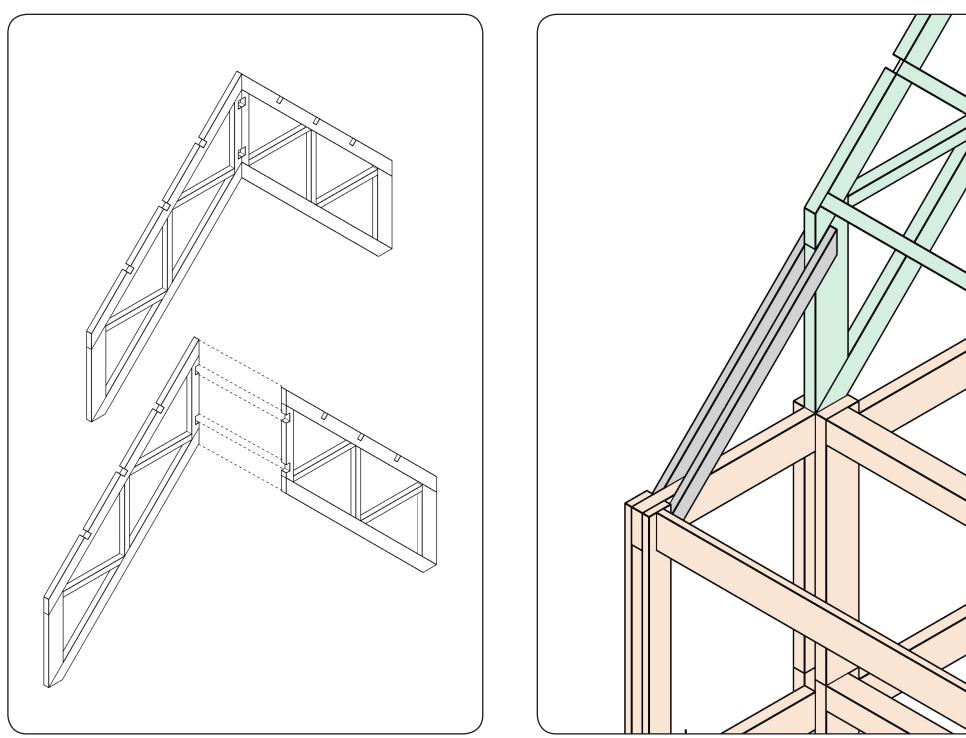
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pre-fab straw facade panel interlock connections with structure



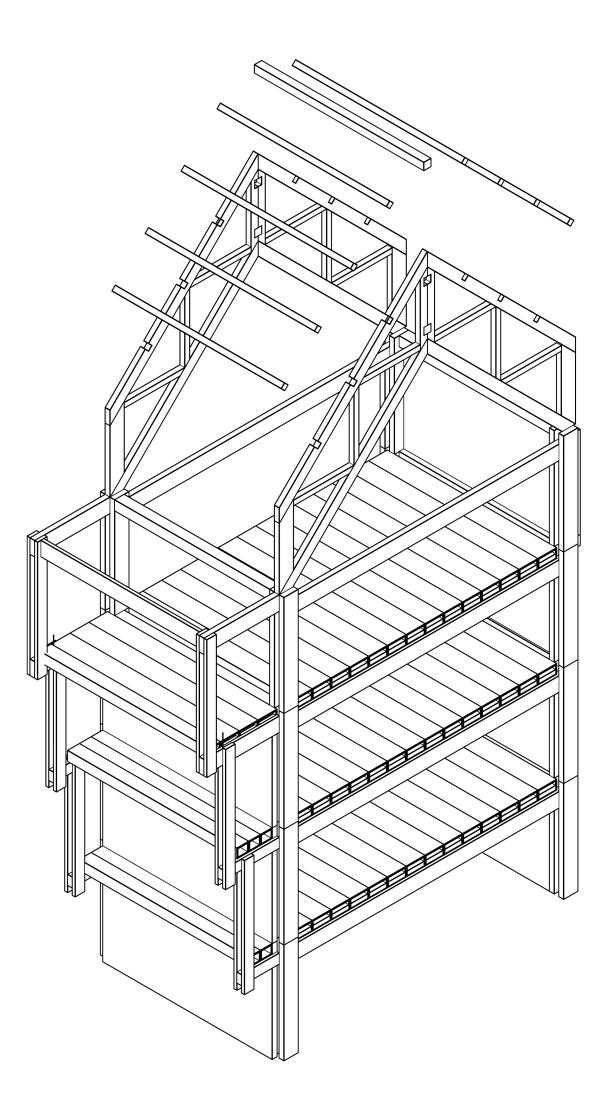
balcony frame fixed to the main structure



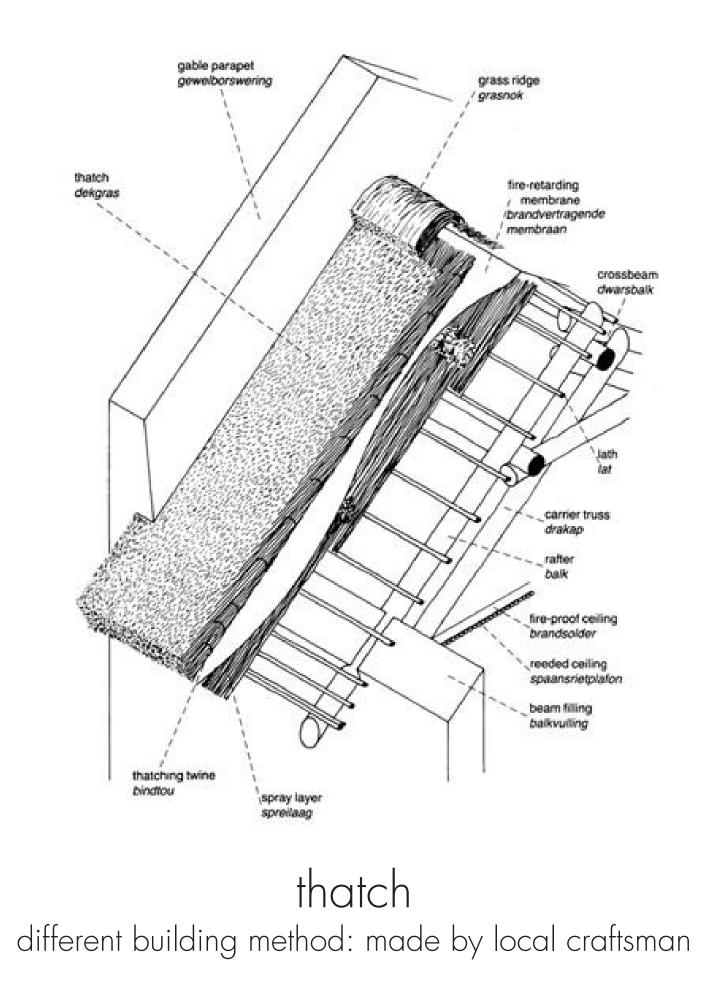


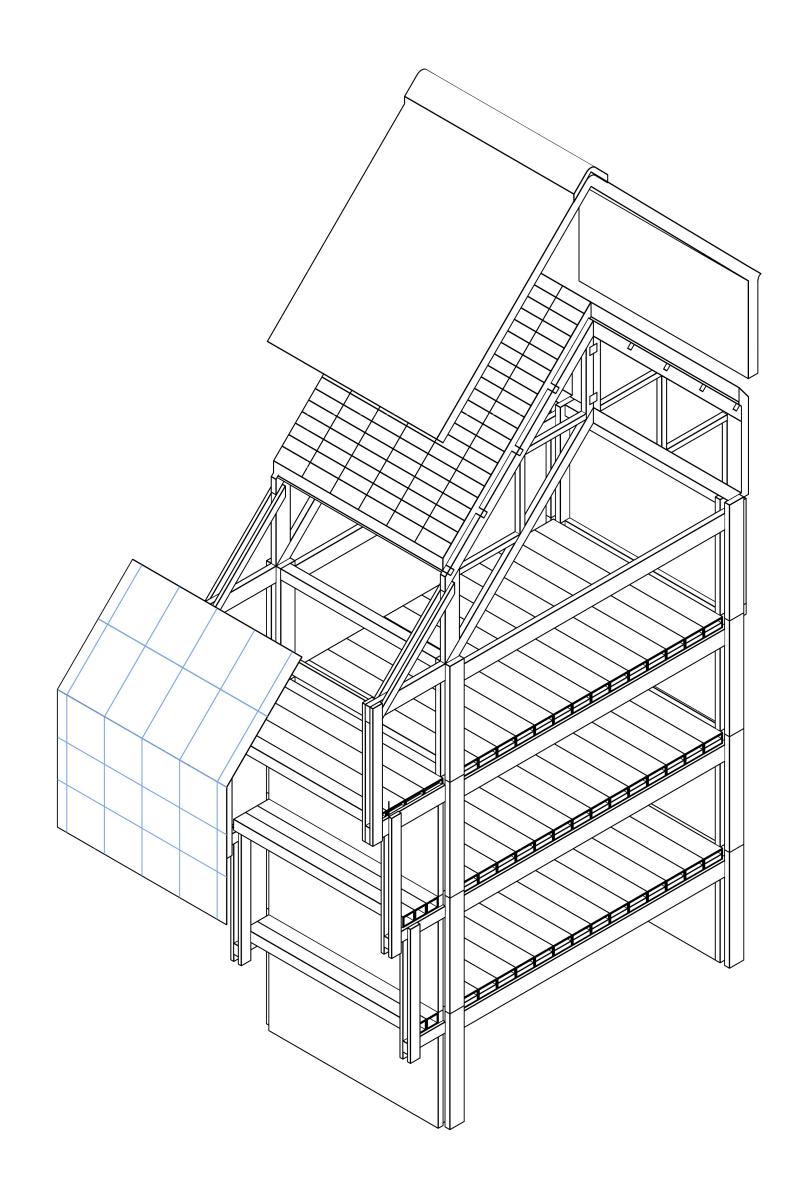
#### roof truss structure

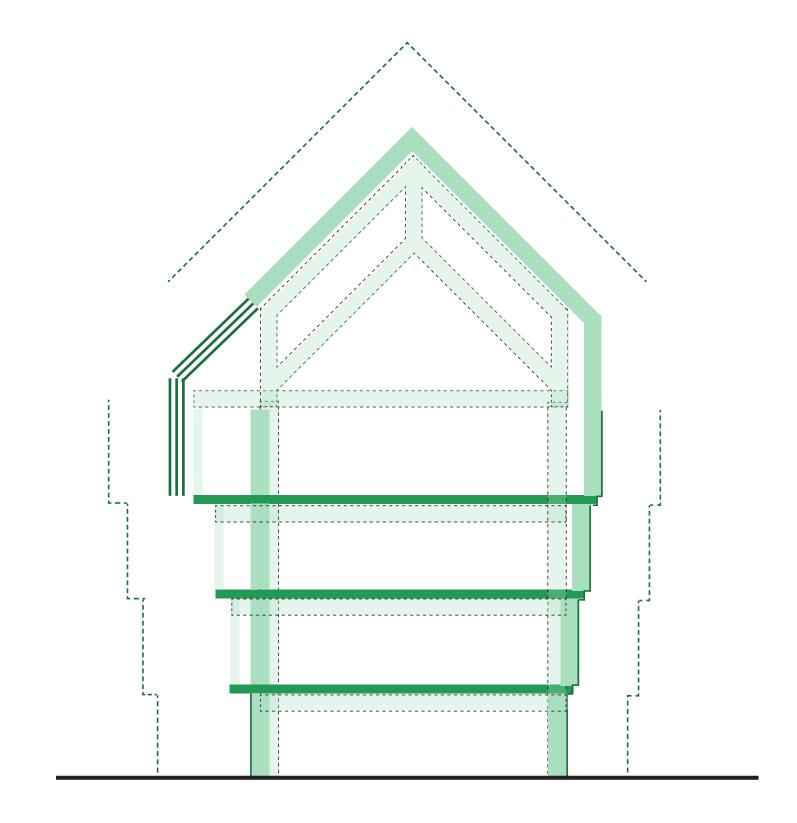
connection







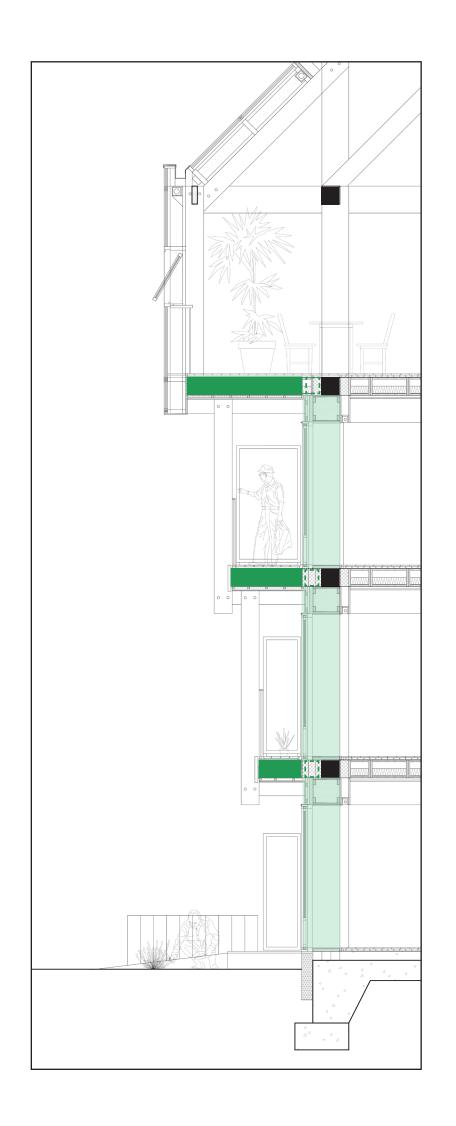


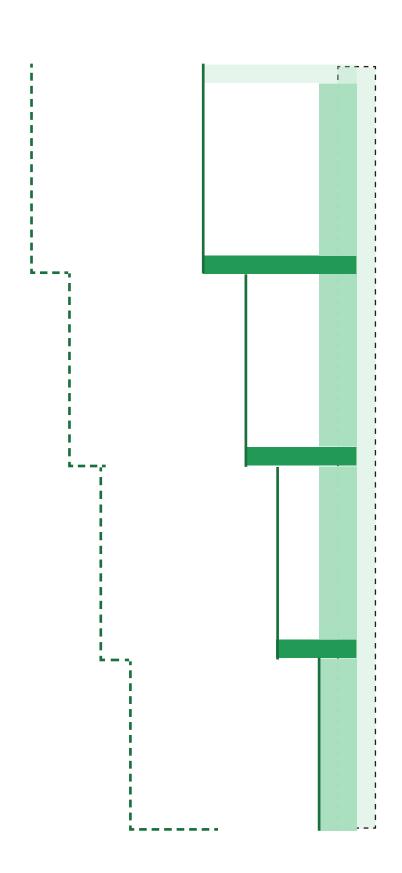


#### roof as the intersection of the two facade

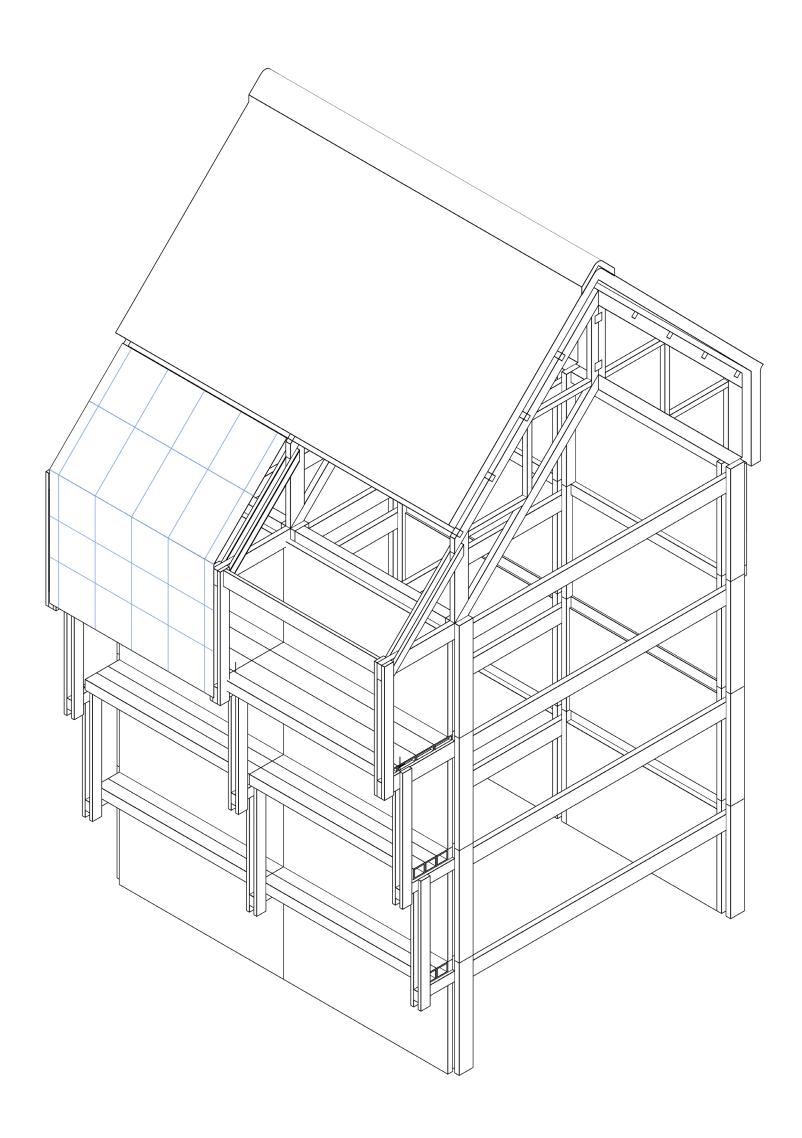
the roof truss acts as a transition structure, which confirming the openness on the south and the closeness on the north.

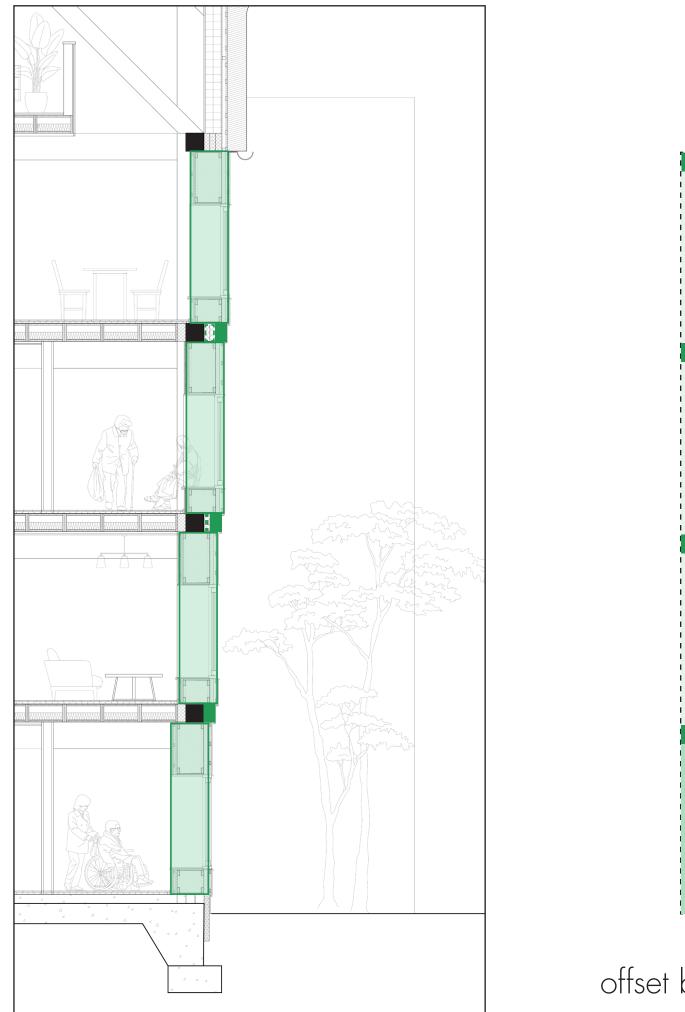


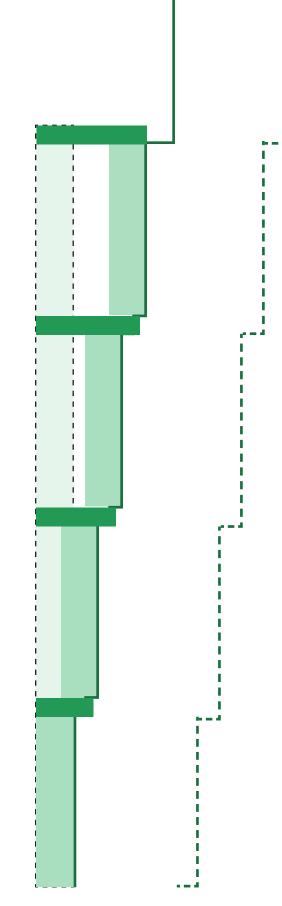




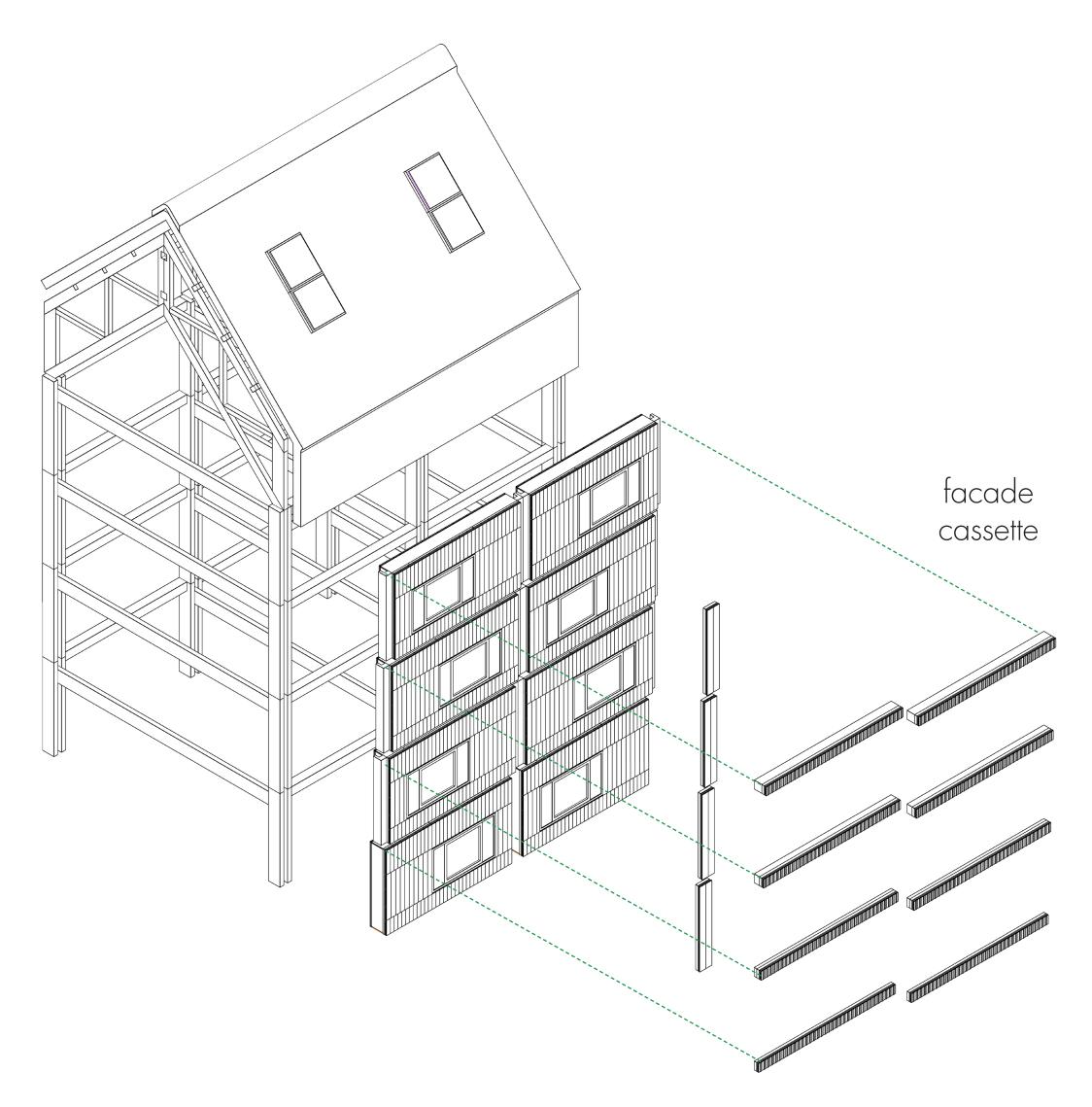
offset by balconies

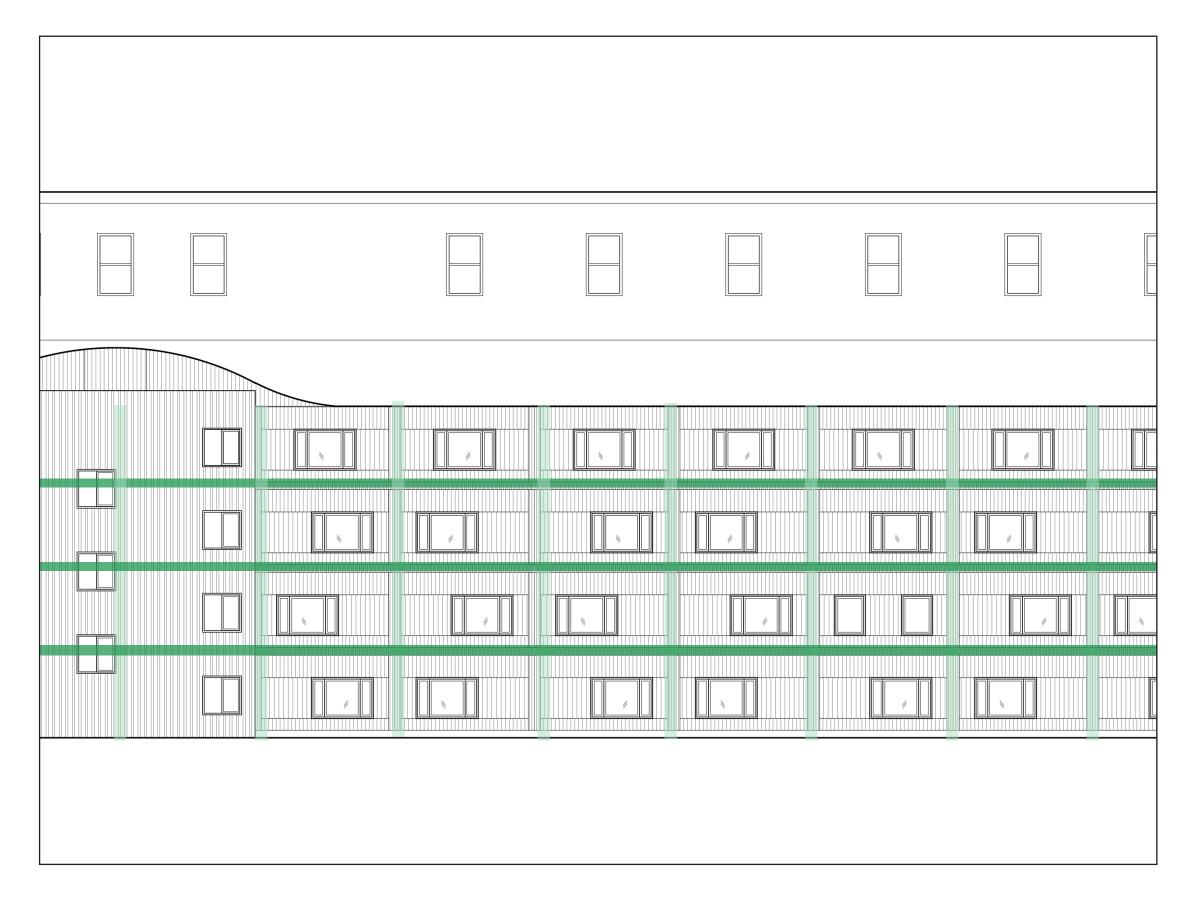




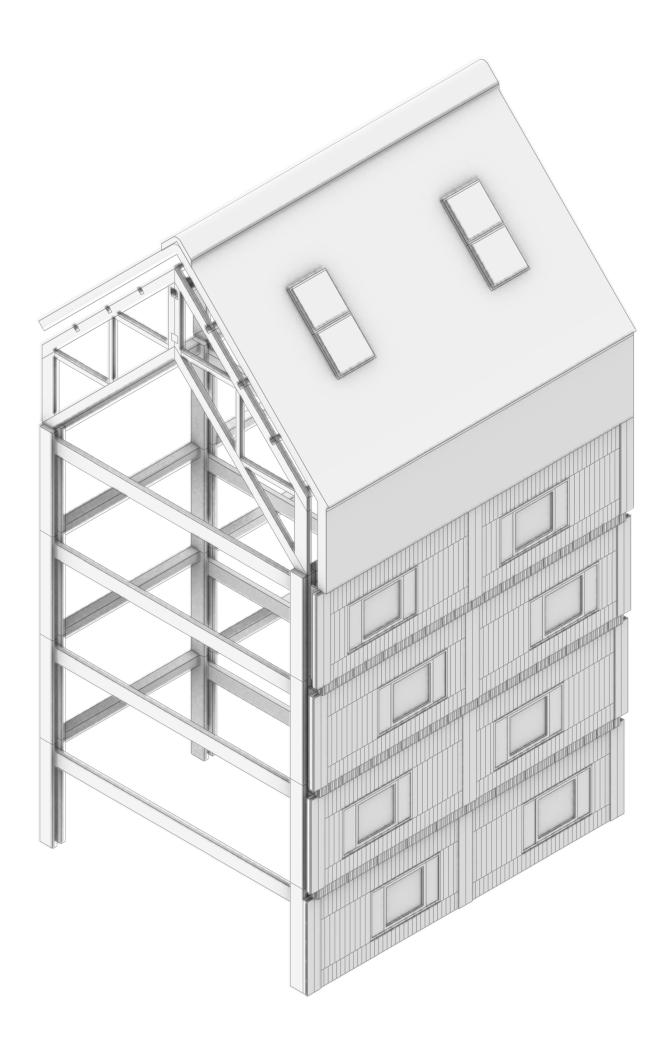


offset by facade panel





elevation - construction the offset and the subtle difference between claddings strengthen the parallel floors, also implies the construction method and structure.

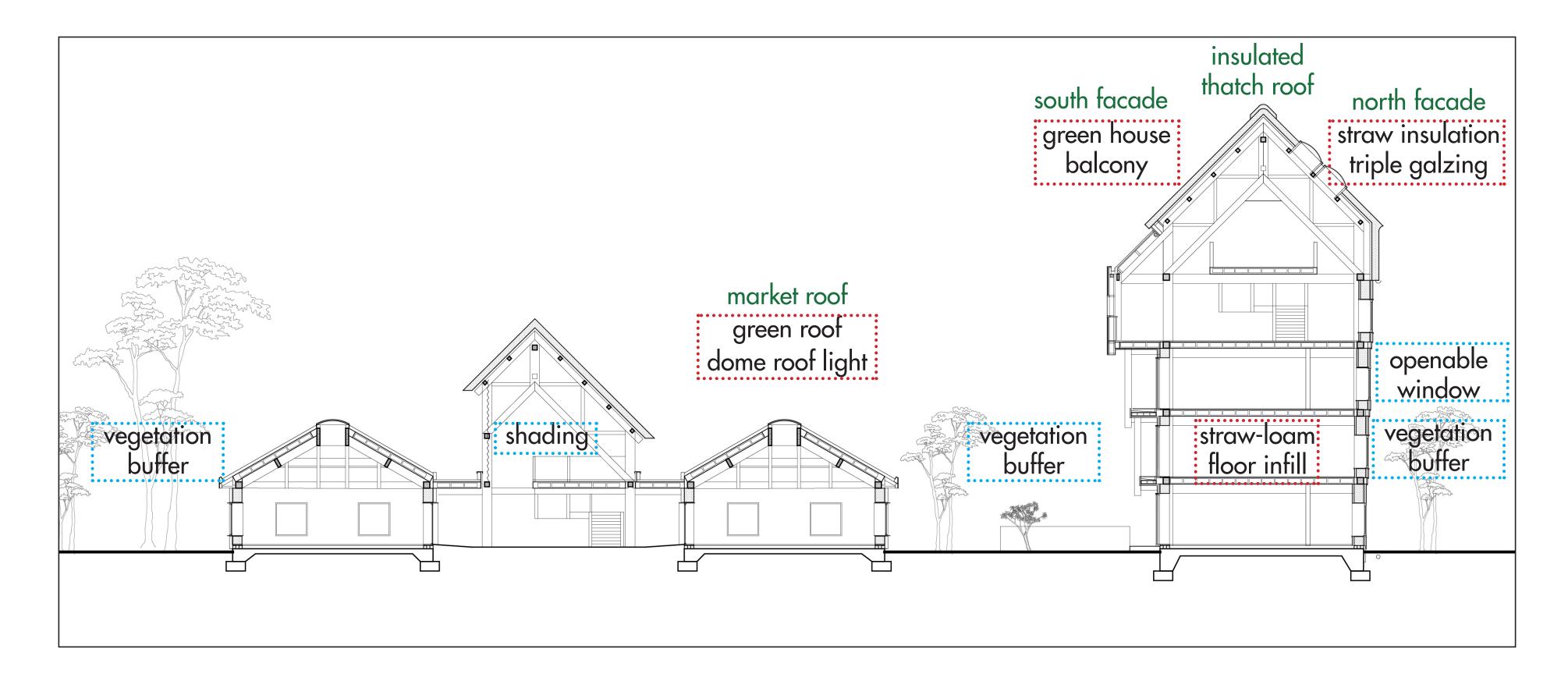




a construct with the existing brick facade neighbourhood building

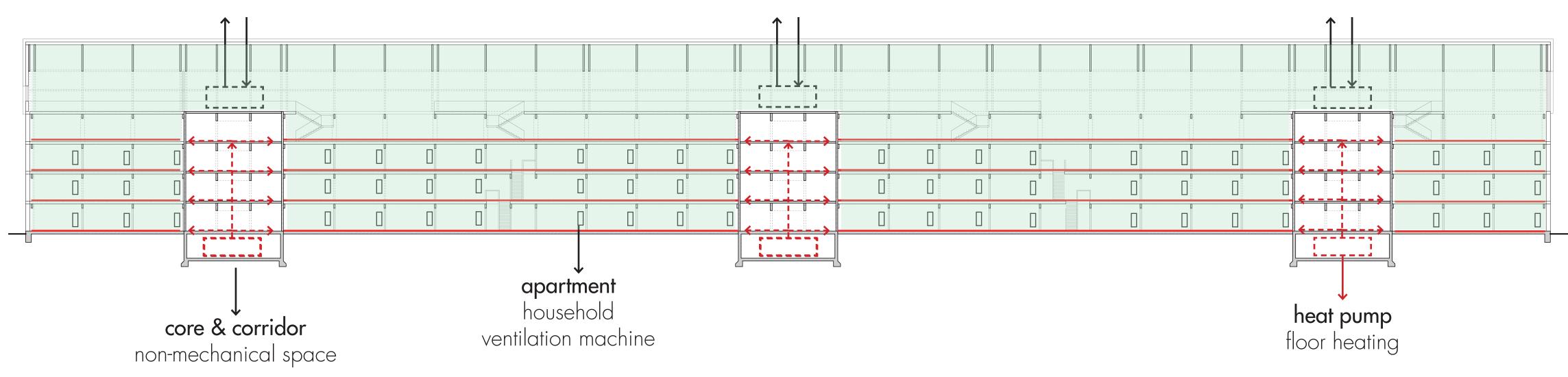
#### . . . elevation - material



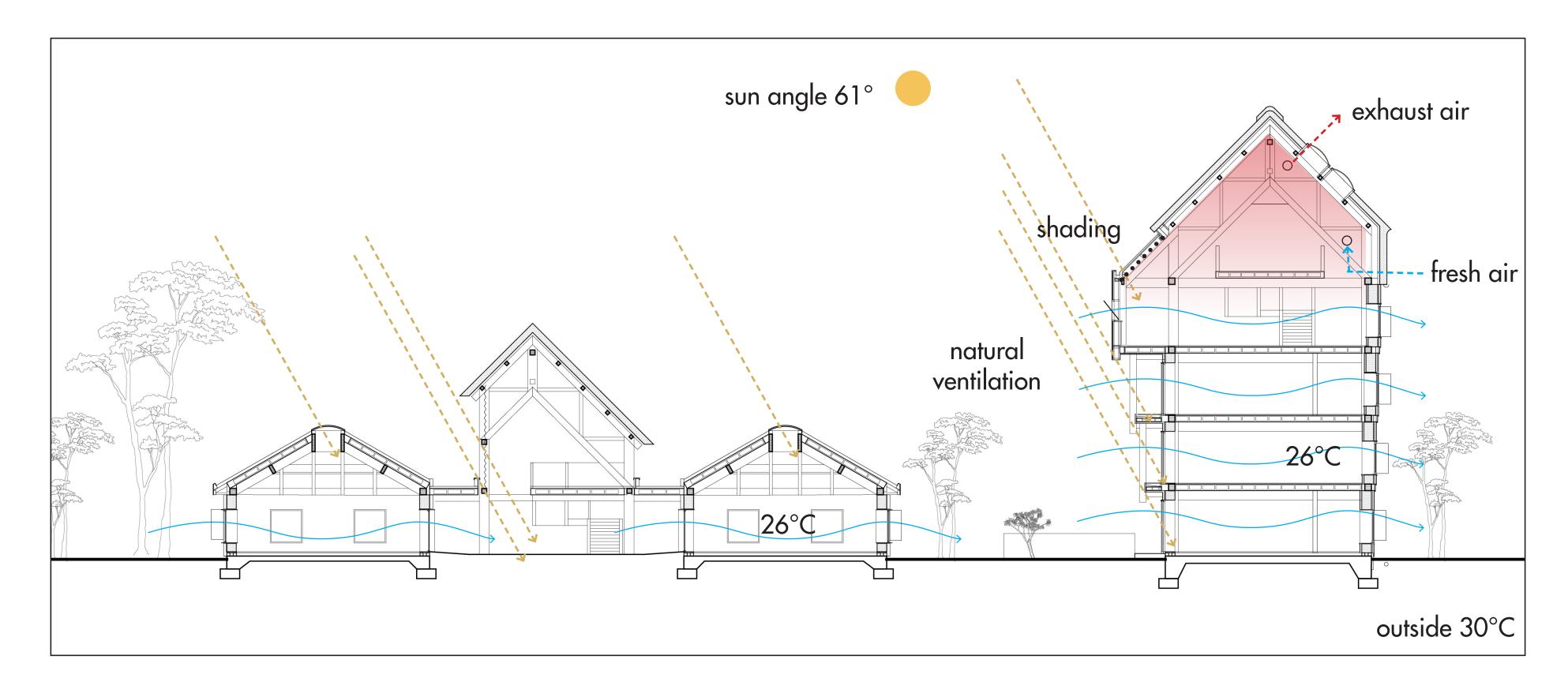


climate - passive strategy wall and roof insulation

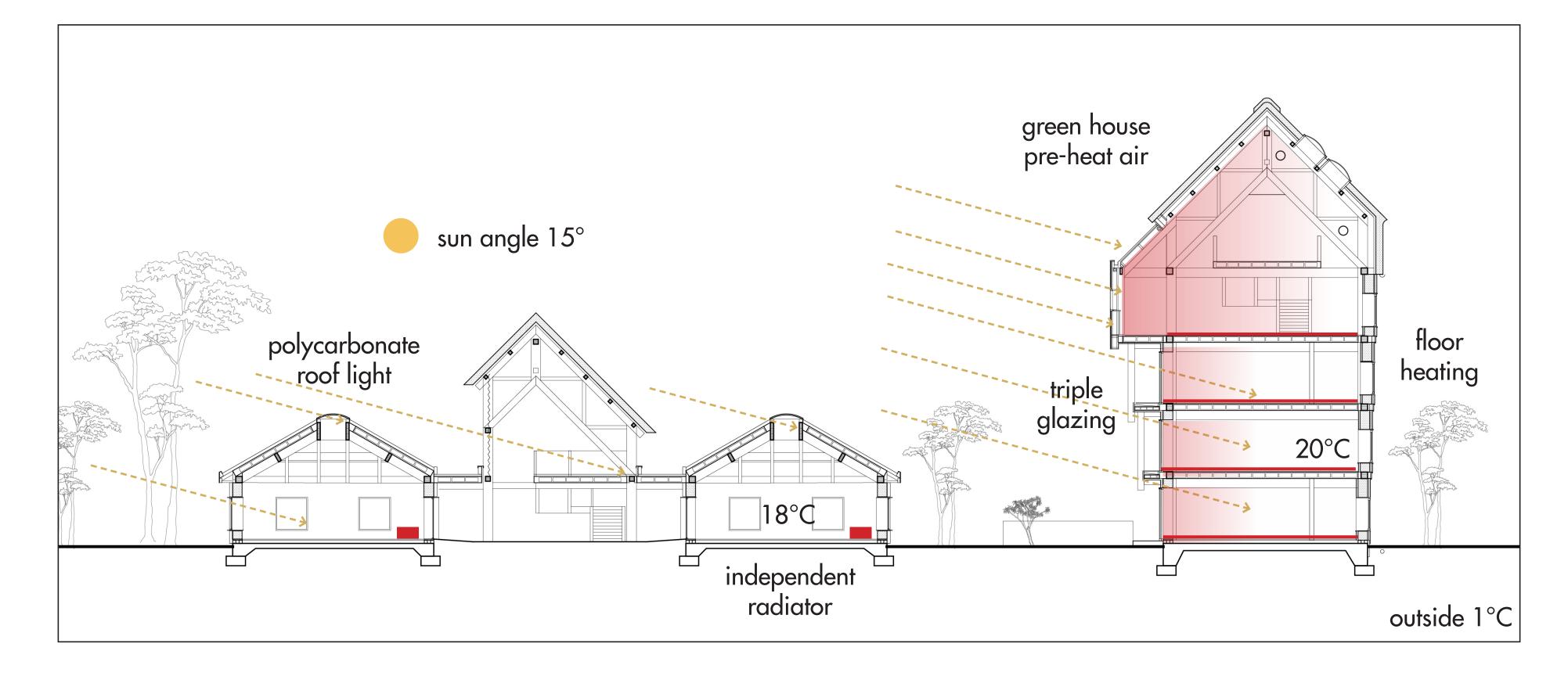




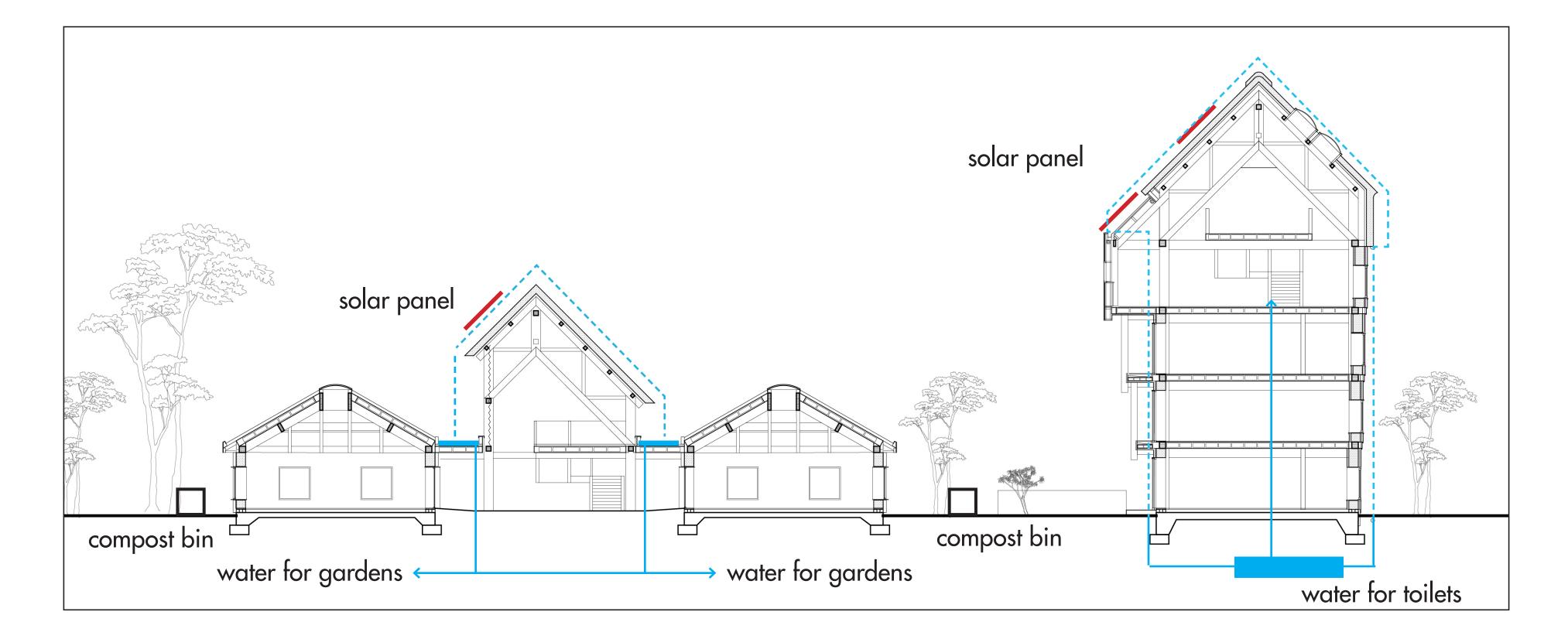
core as non-mechanical space



climate summer 21<sup>st</sup> June



climate winter 21<sup>st</sup> December



sustainable strategy rain water collection - 1/5 of required toilet water per year solar panel - 127500 kWh > 80% of apartment electricity use

#### **« – – – –** allotement garden

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### south elevation - respond to the site variation of the roof floor space & solar panels

#### the life space & fragement

.st to move into the pav . in 1976. She happily er our talk with her "we one else. So here we go:

ve in organising things for the wrongly. Sh ne would drive a bus to a theme respond sw ghbourhood (and a bit beyond), ied with the maintenance and She walke ood. She organised to have the rs not park and the speedbumps pality maintaines it). Never. or the kids (two were hit by cars really often used by neighbour.

emphasi. (although definitely n on vehicles p

DISI

contributions nom meror

### A Day in the Life of Lucy

" ihe . the pine free ne claims that the e from outside of the nk that it might be true

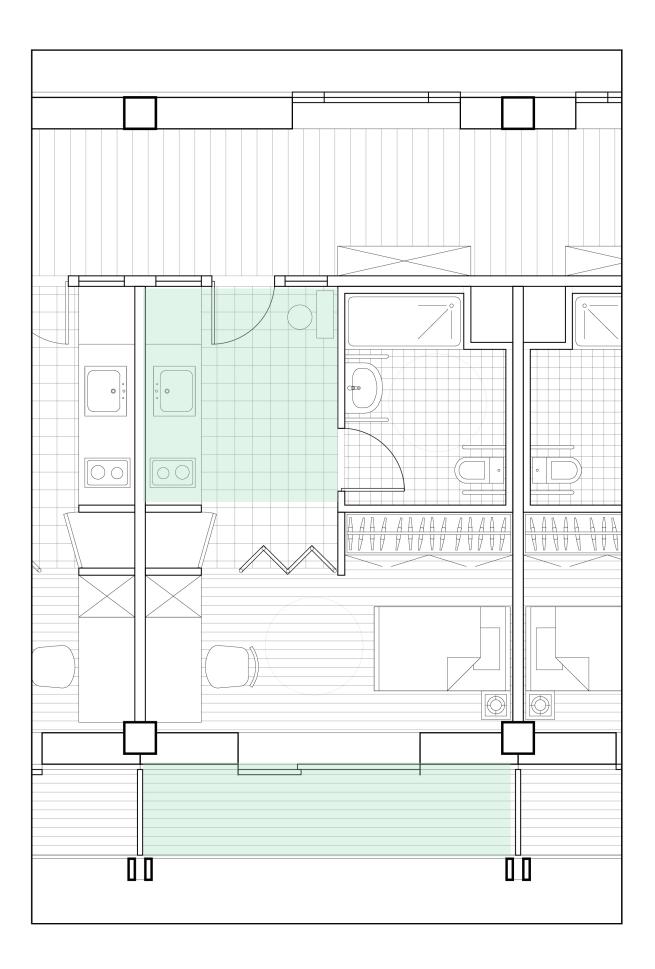
Center where she seems ople can eat a dinner here e also organised community ppens no more. She points at e neighbourhood if inhabitants

e lady who now take. face any problems.

She also told us a bit of her personal history: she has a sister living nearby (one who has a big buddha statue in front of her

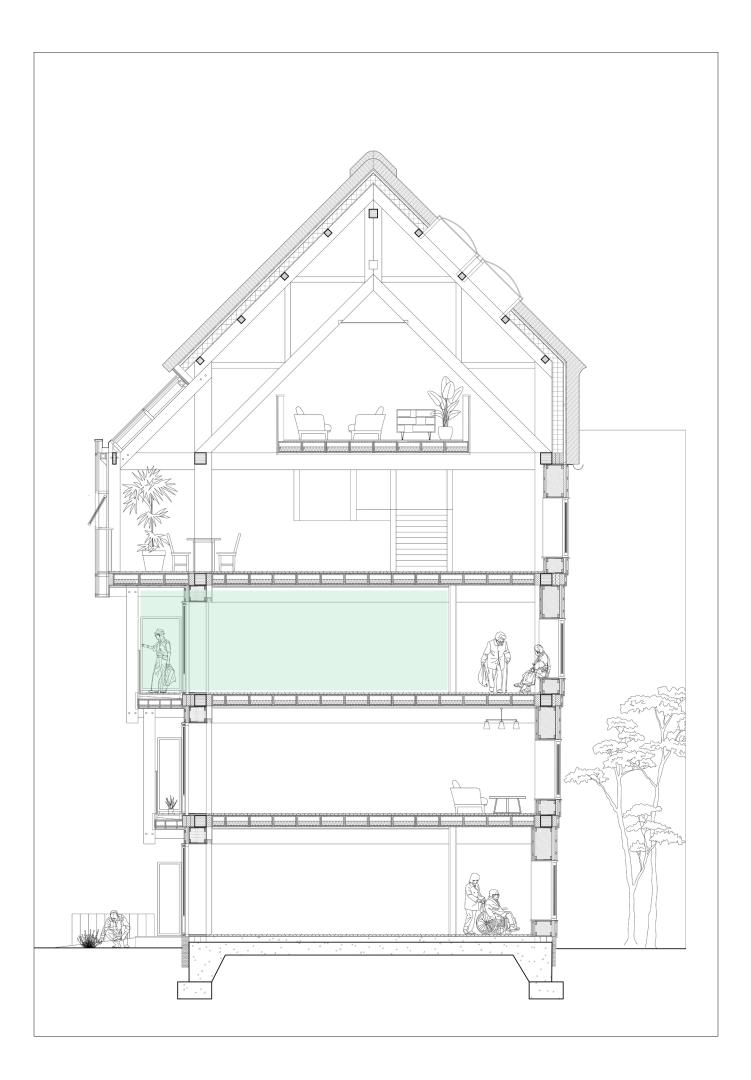


#### the life moning - apartment



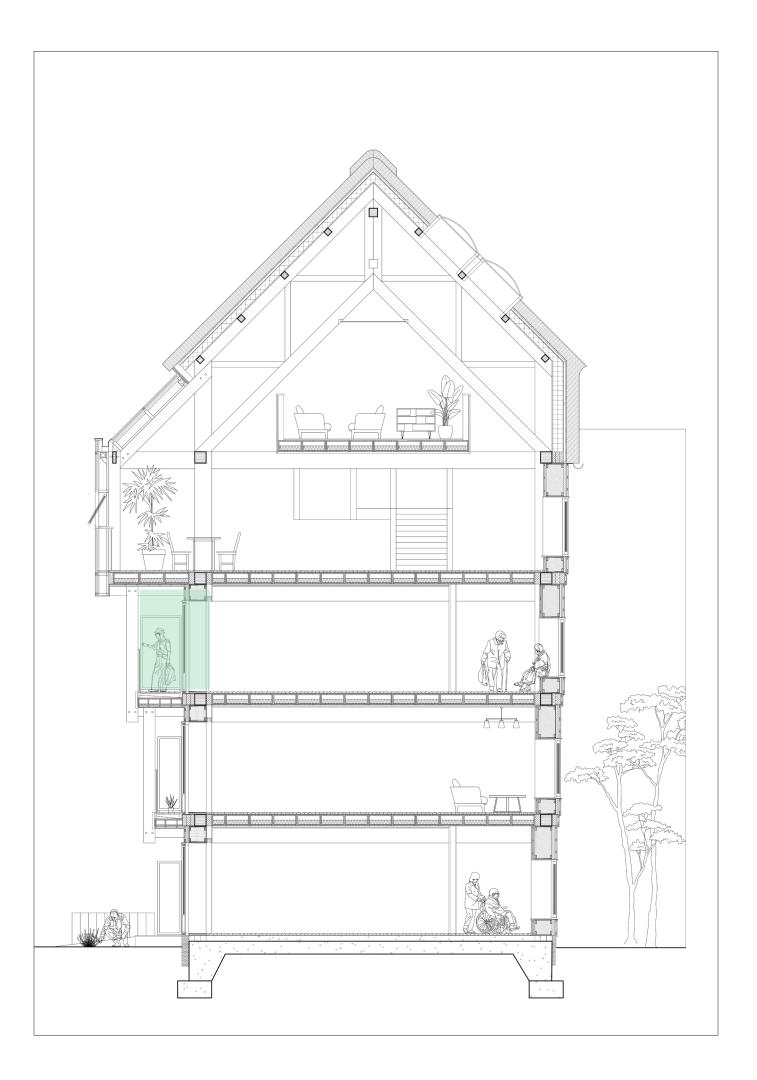


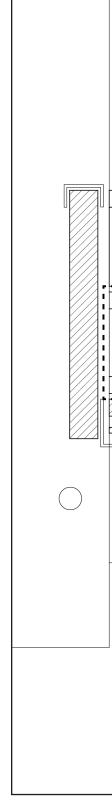
#### the life moning - apartment

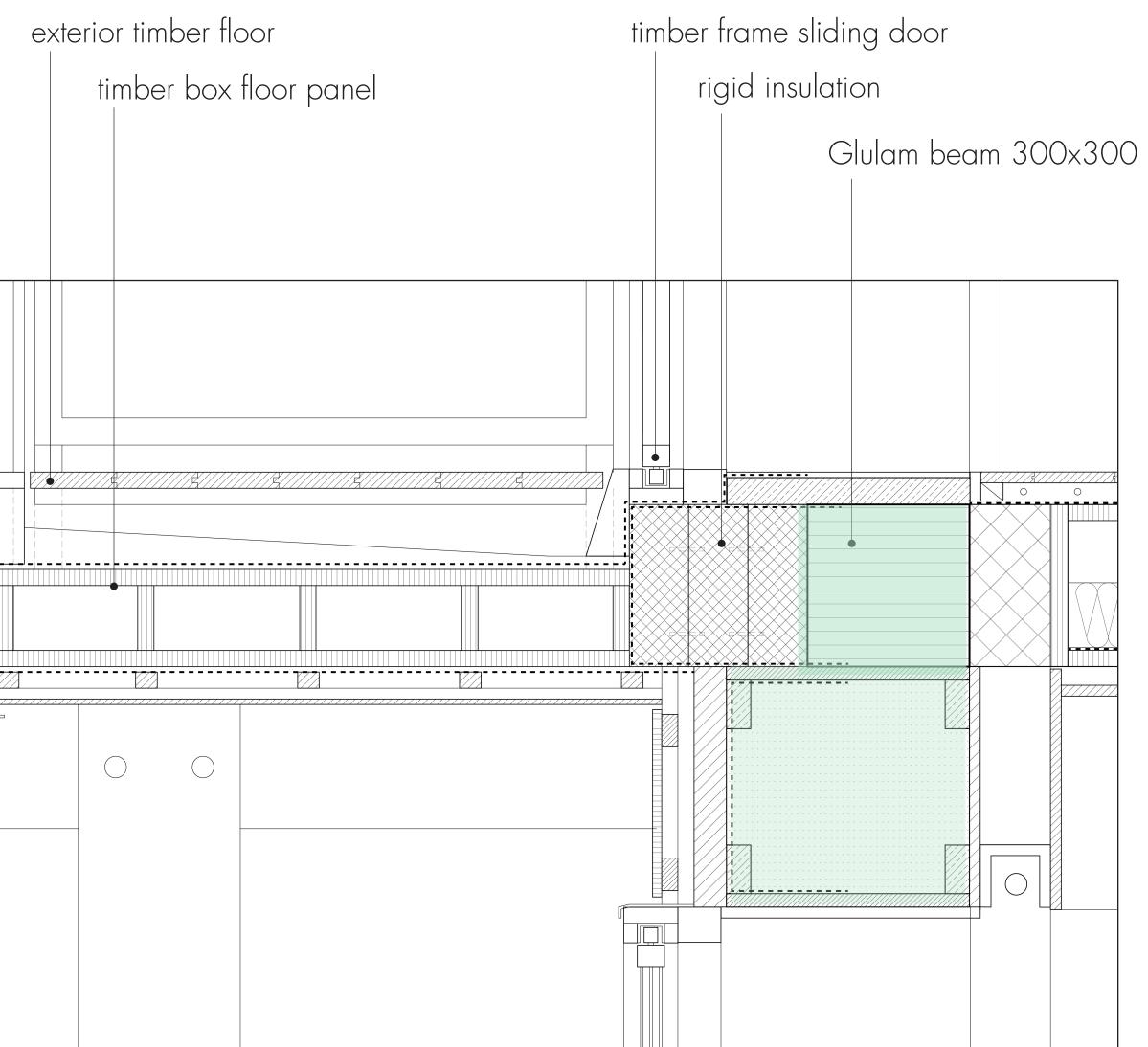




#### the life morning - apartment

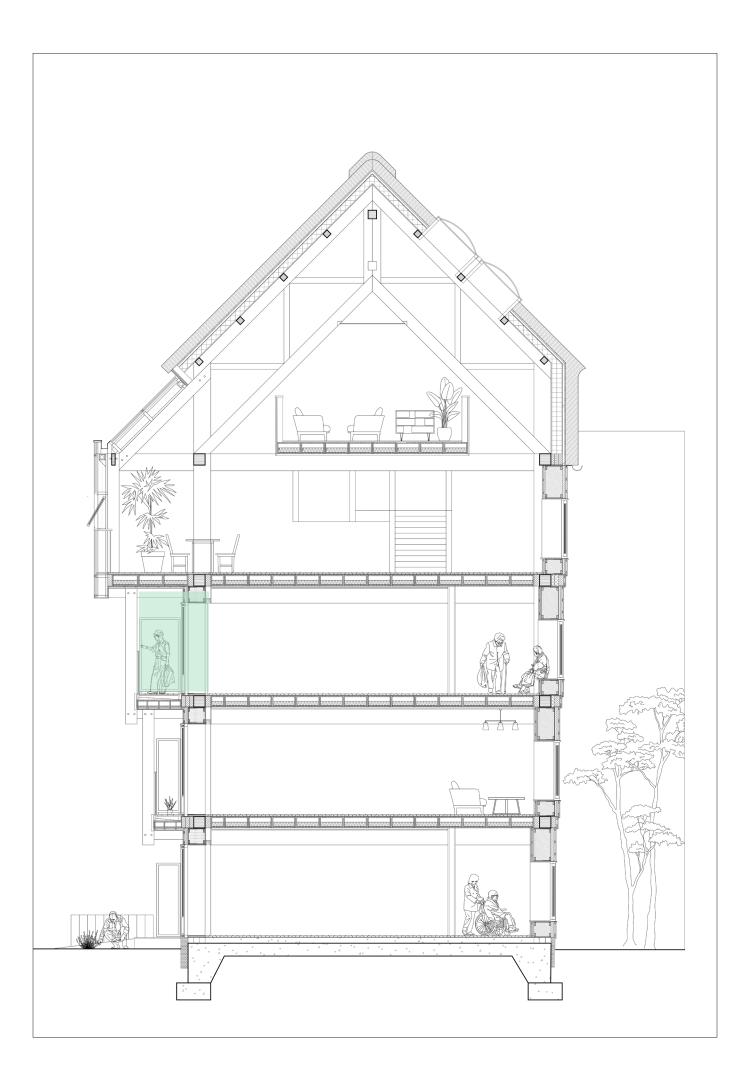


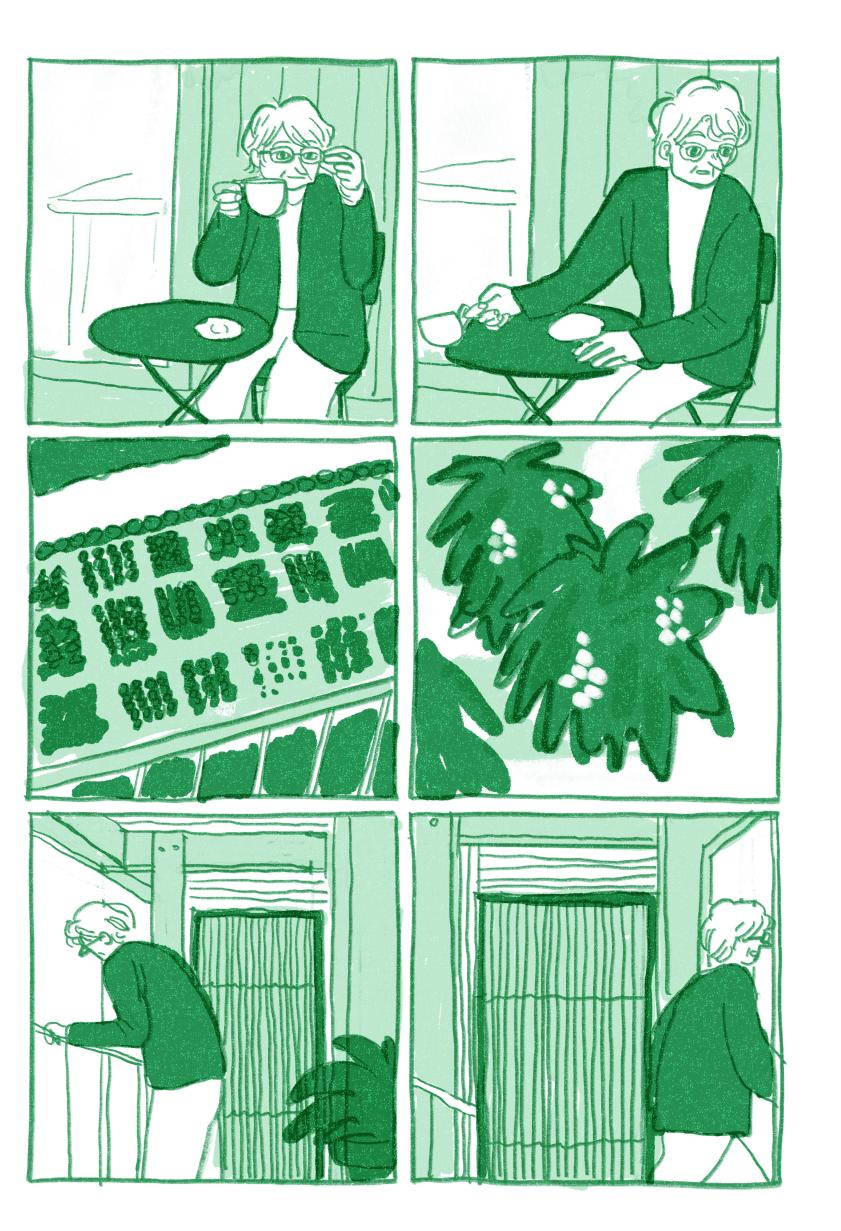




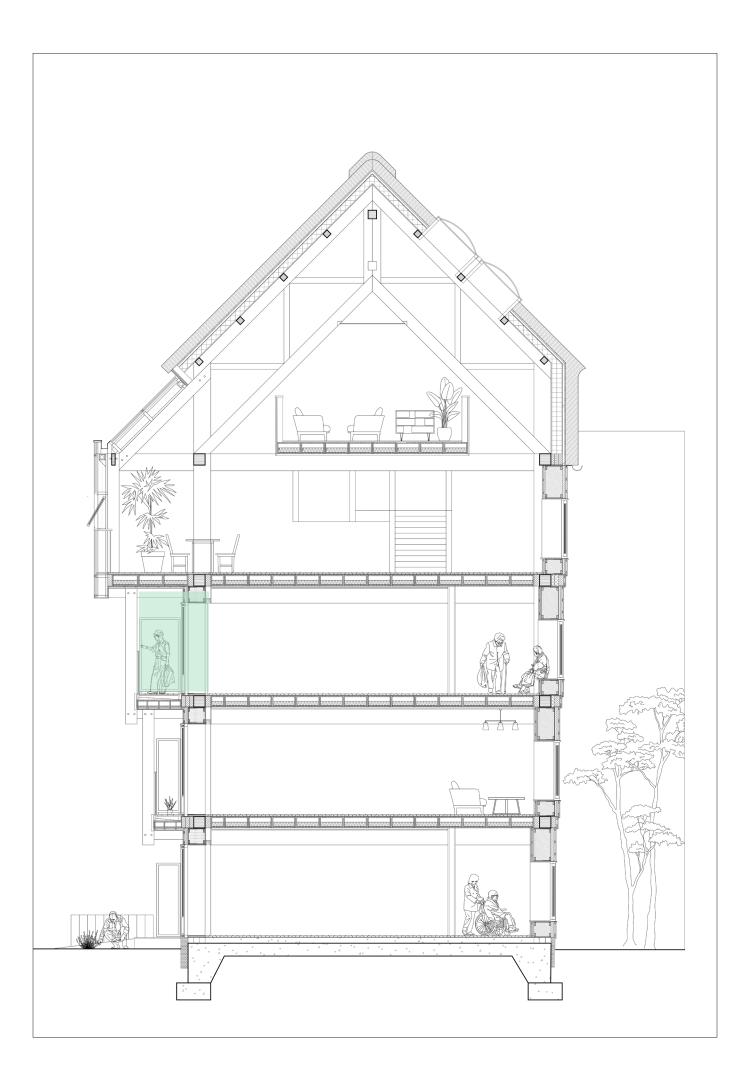
south facade balcony detail 1:5

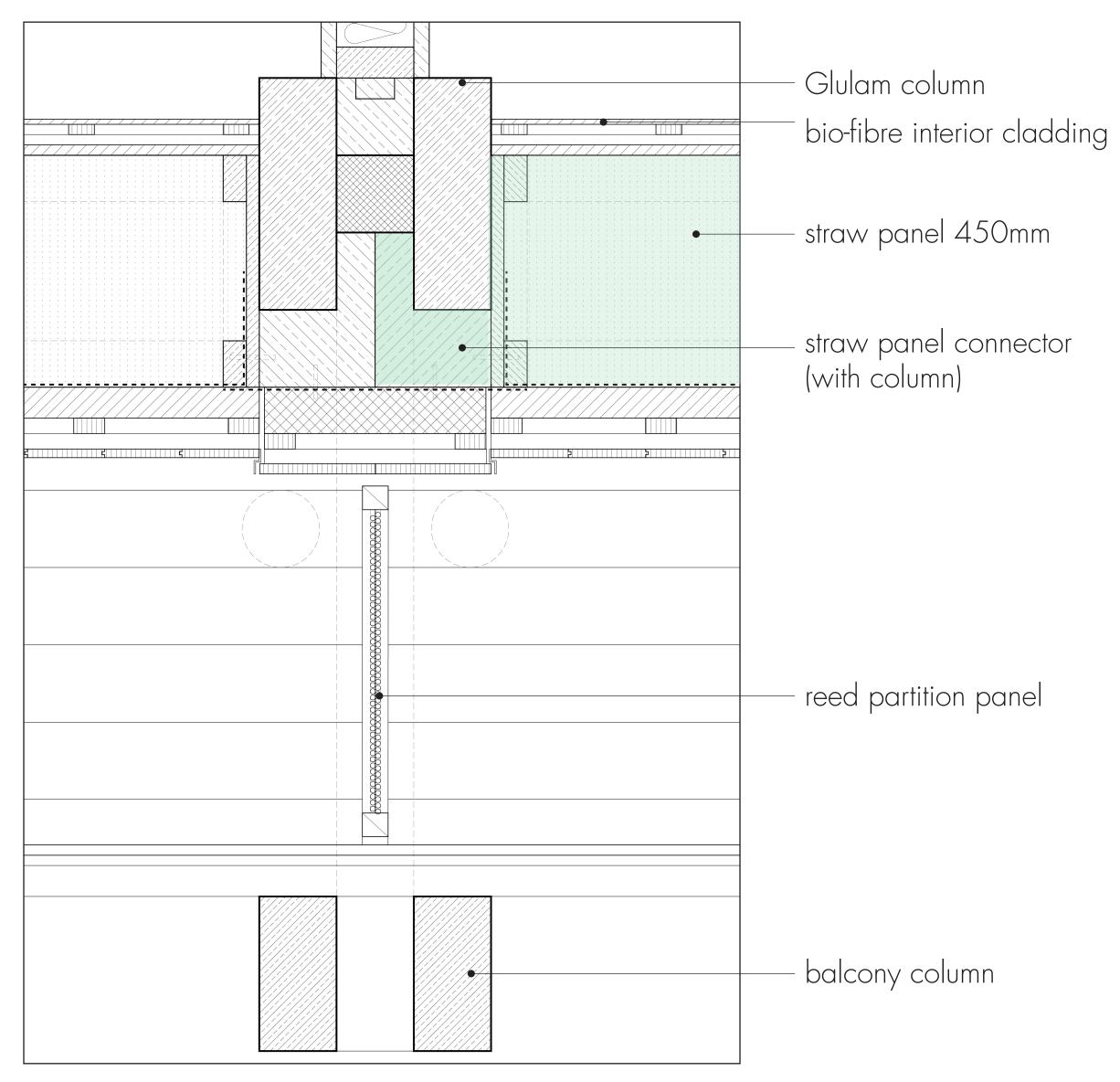
#### the life morning - apartment





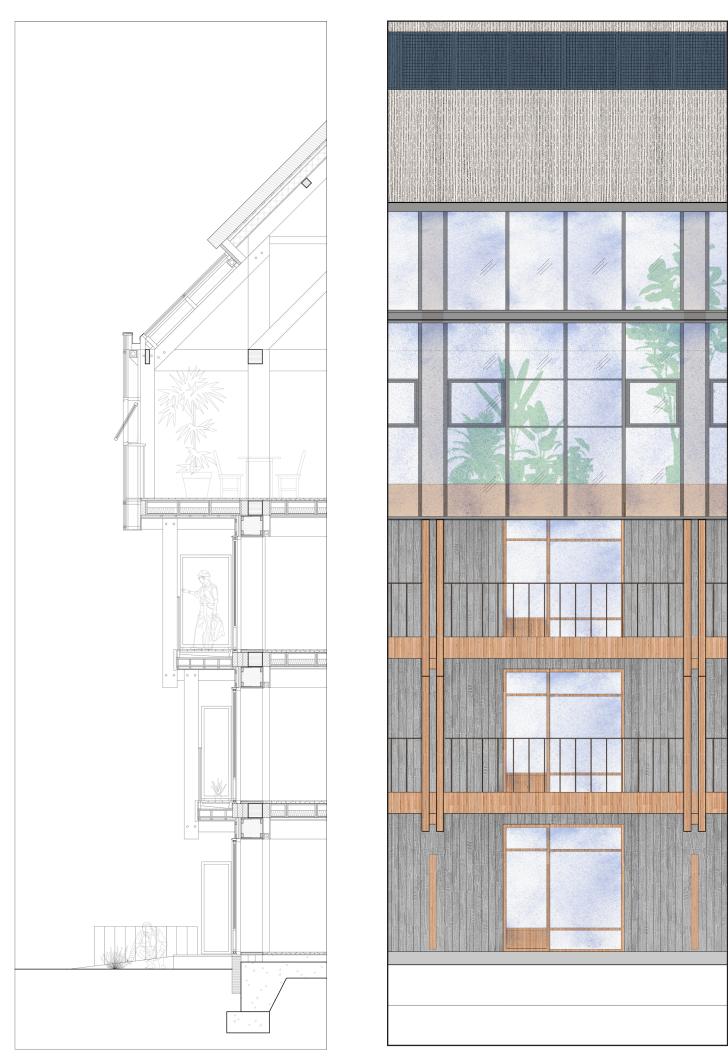
#### the life morning - apartment





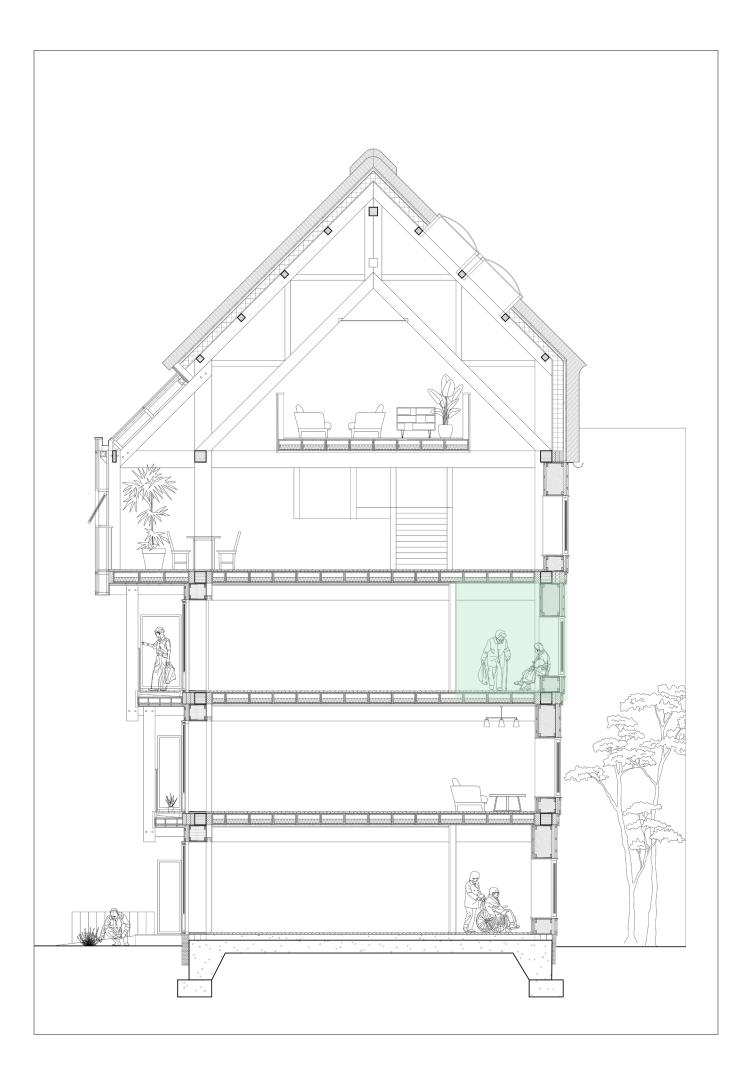
south facade balcony detail 1:5

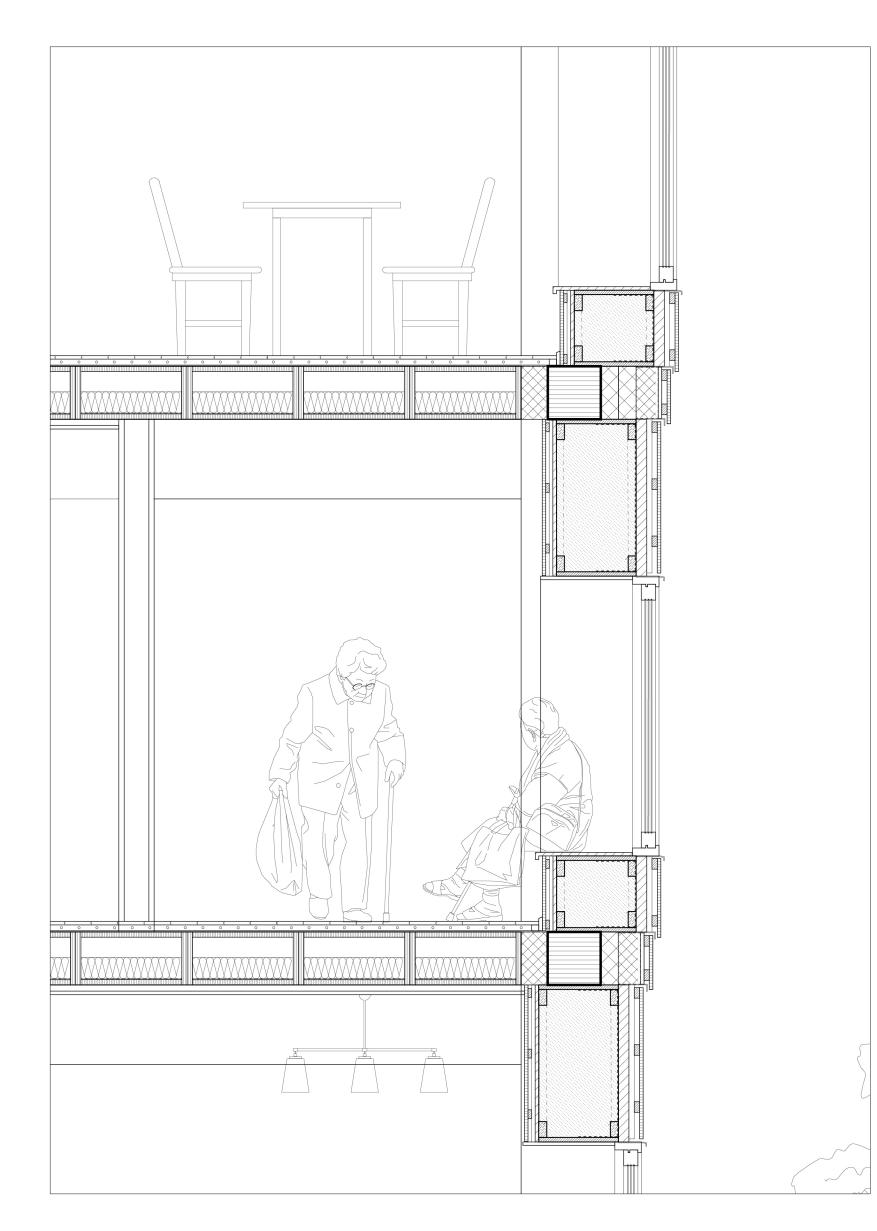
### the life morning - garden



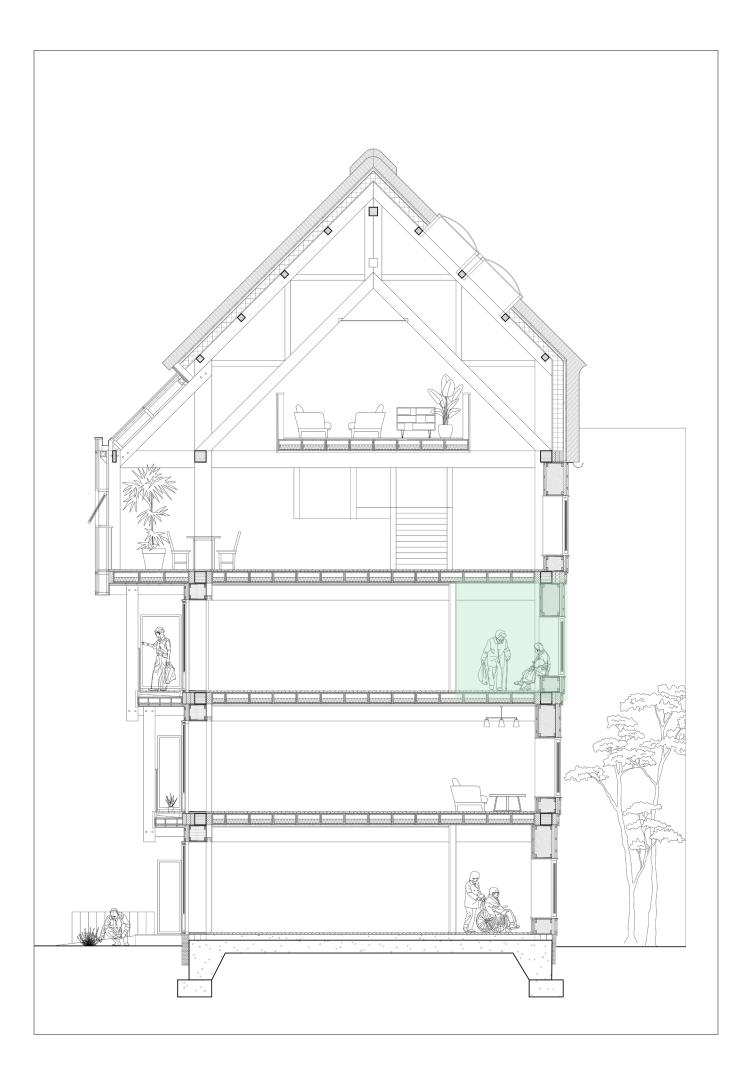
south faacade



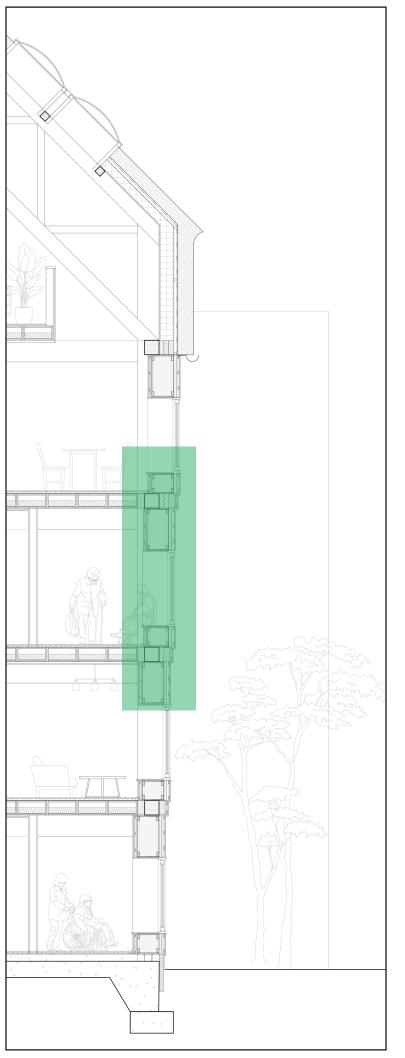




corridor as encounter place







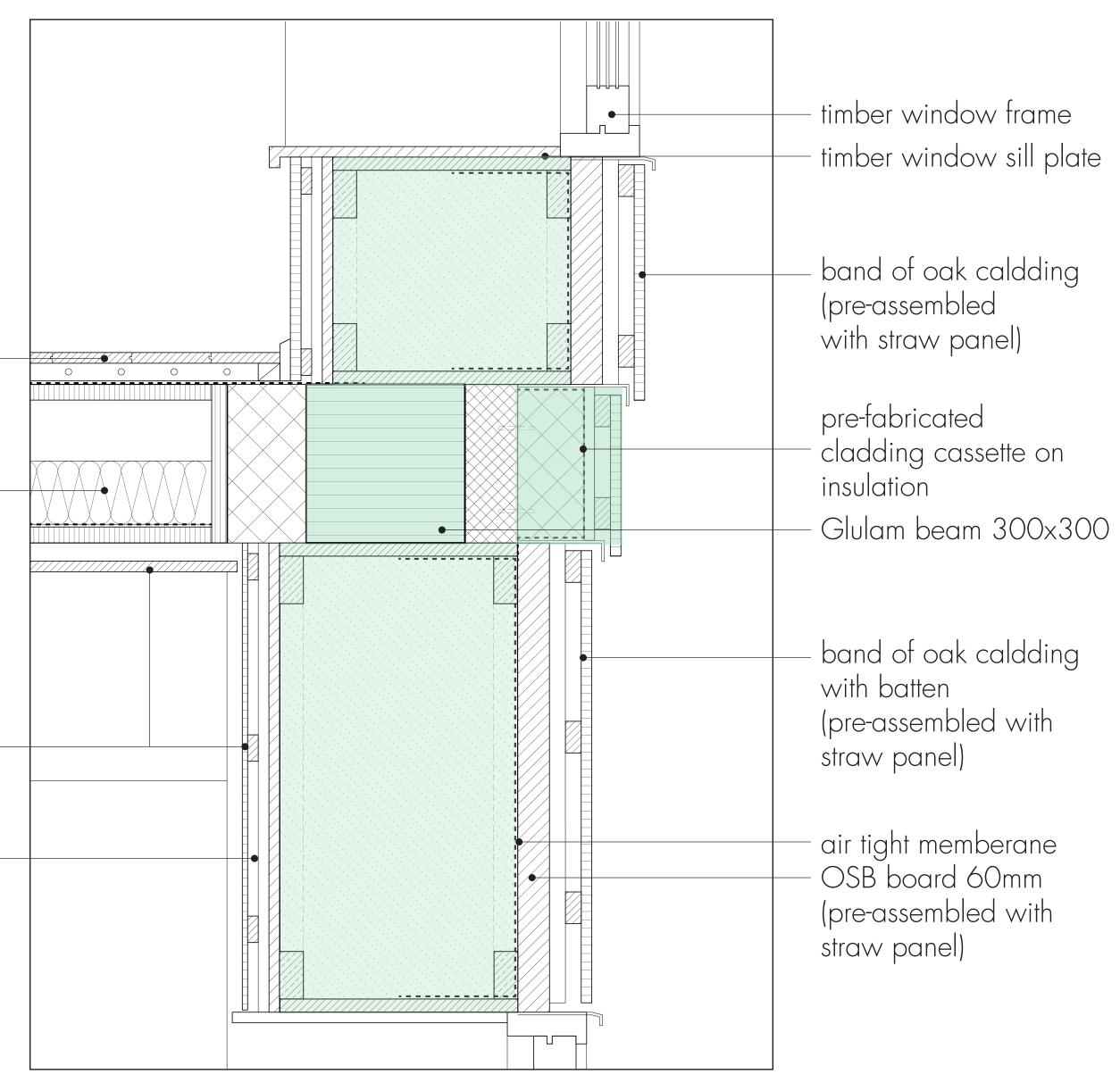
north faacade

wood interior floor

timber box floor panel with mycelium/straw loam insulation

bio - fibre interior finishing (fixed on site)

> batten (pre-assembled with straw panel)



north facade detail 1:5



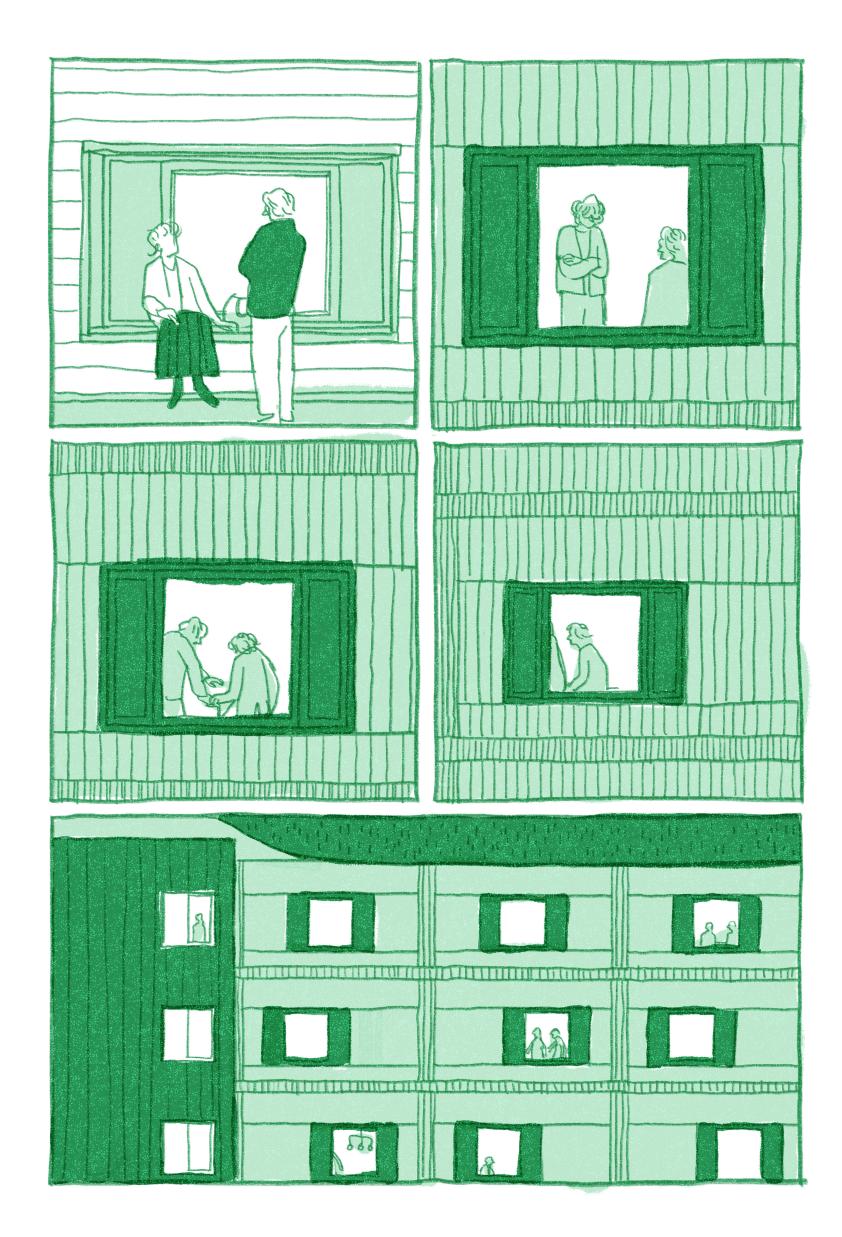
north faacade



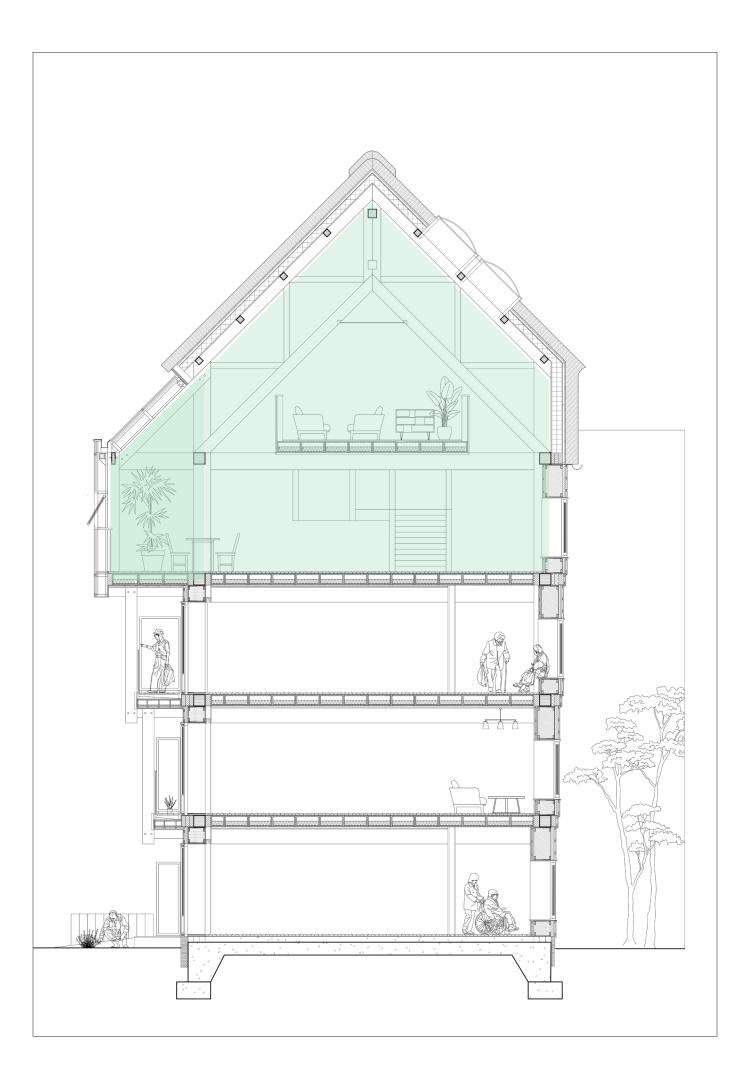
window frame - framing daily life



north faacade

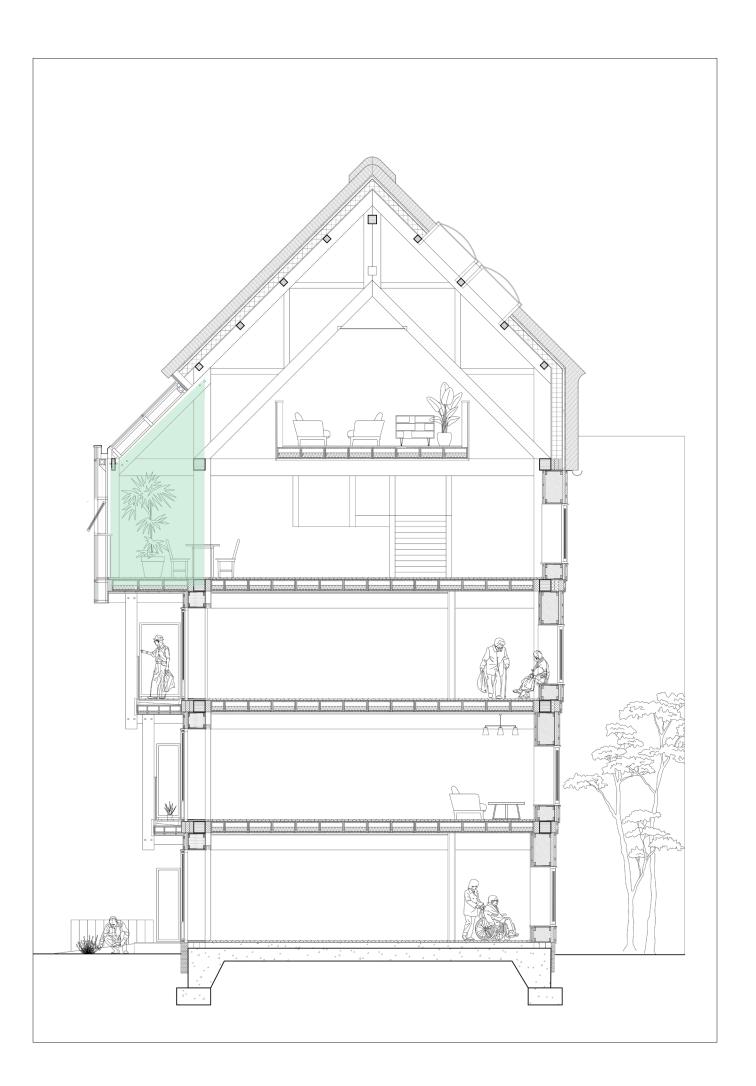


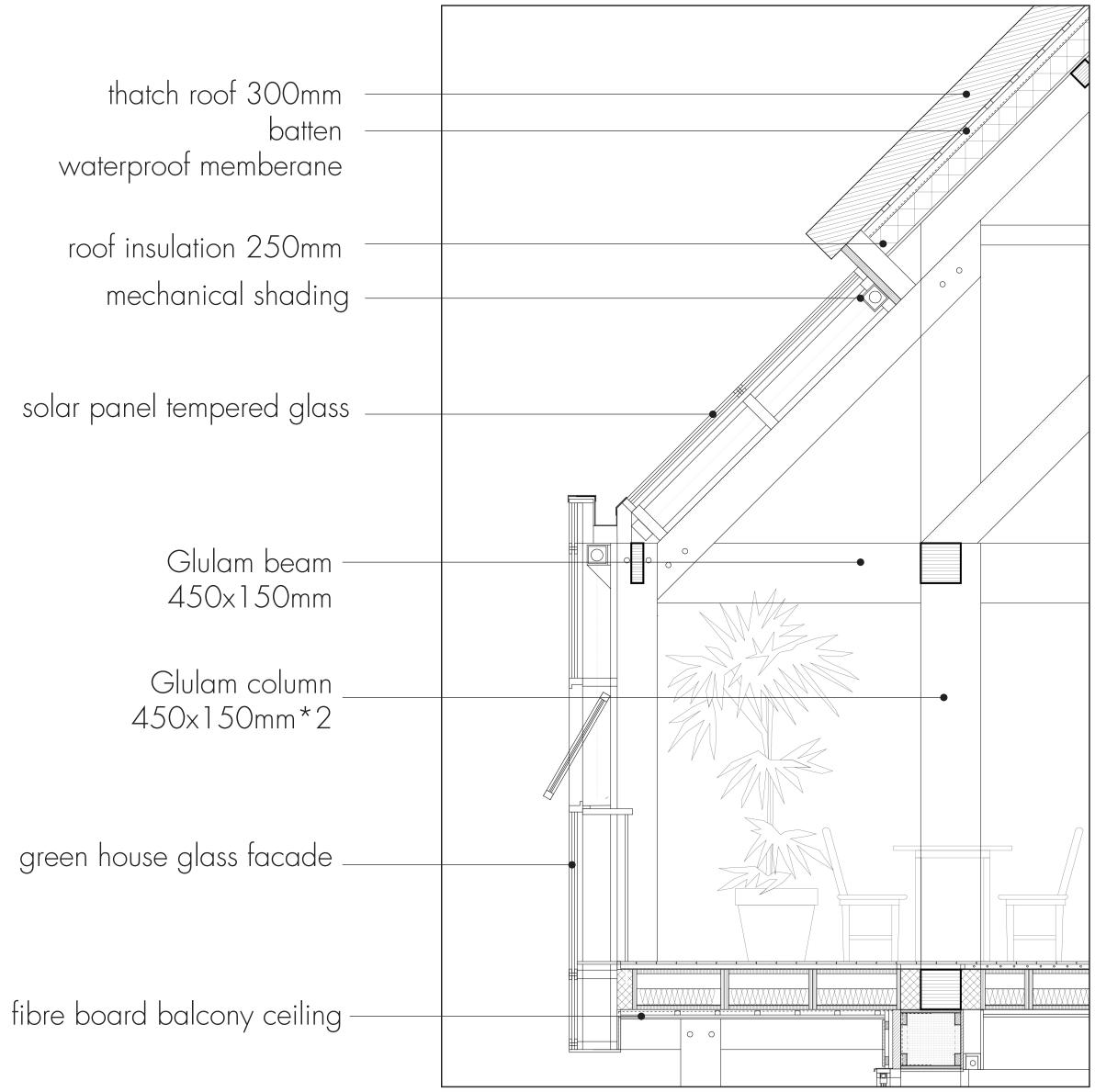
#### the life noon - roof space





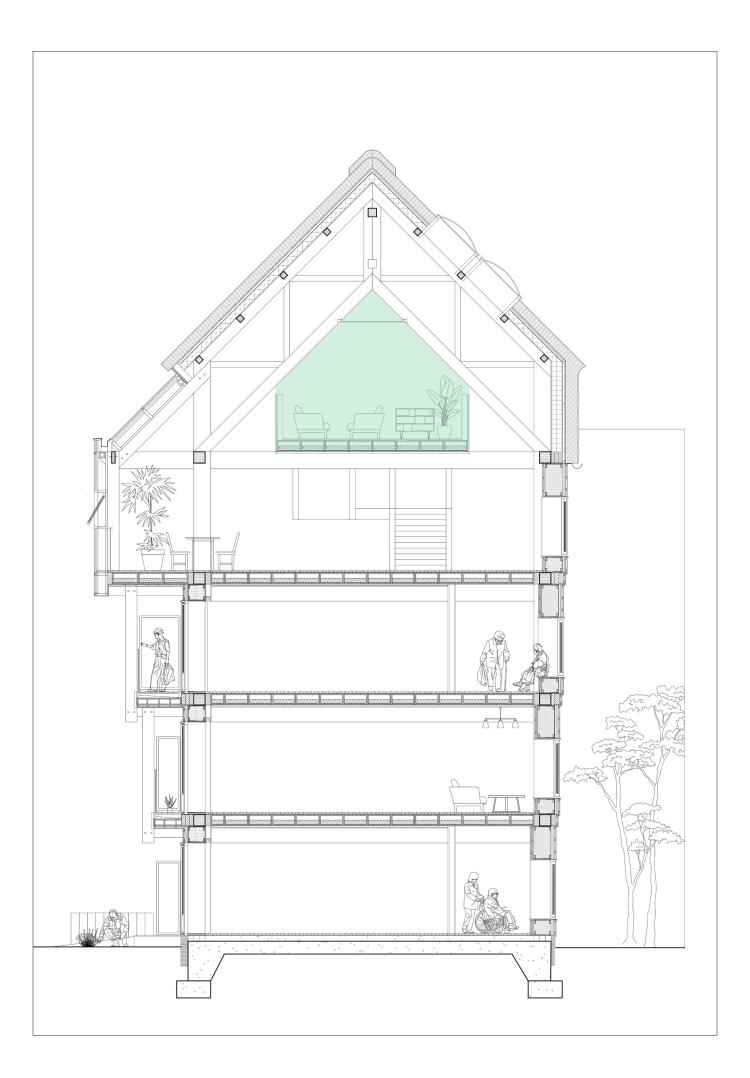
#### the life noon - roof space





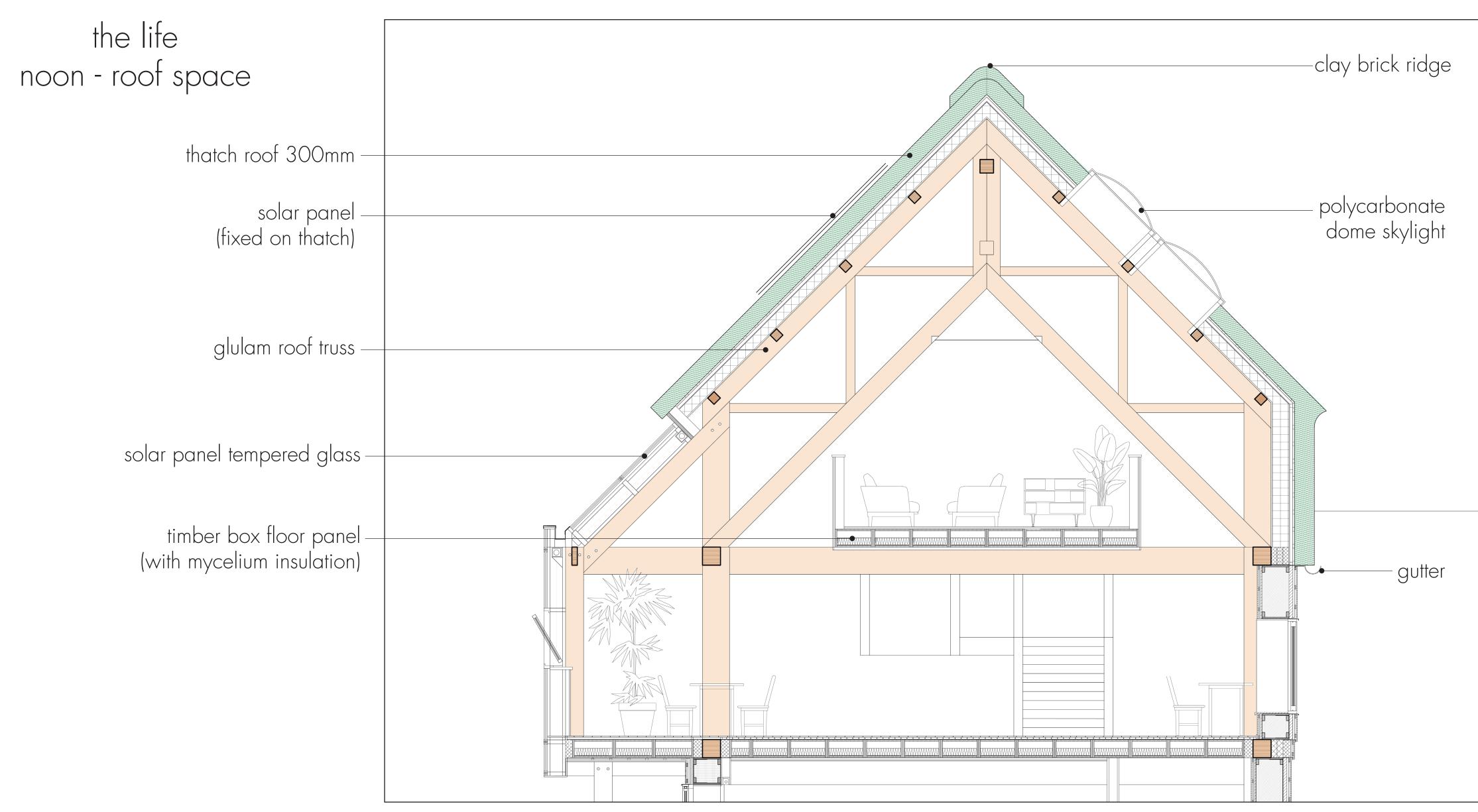
green house as a respond to the public gardens

### the life noon - roof space





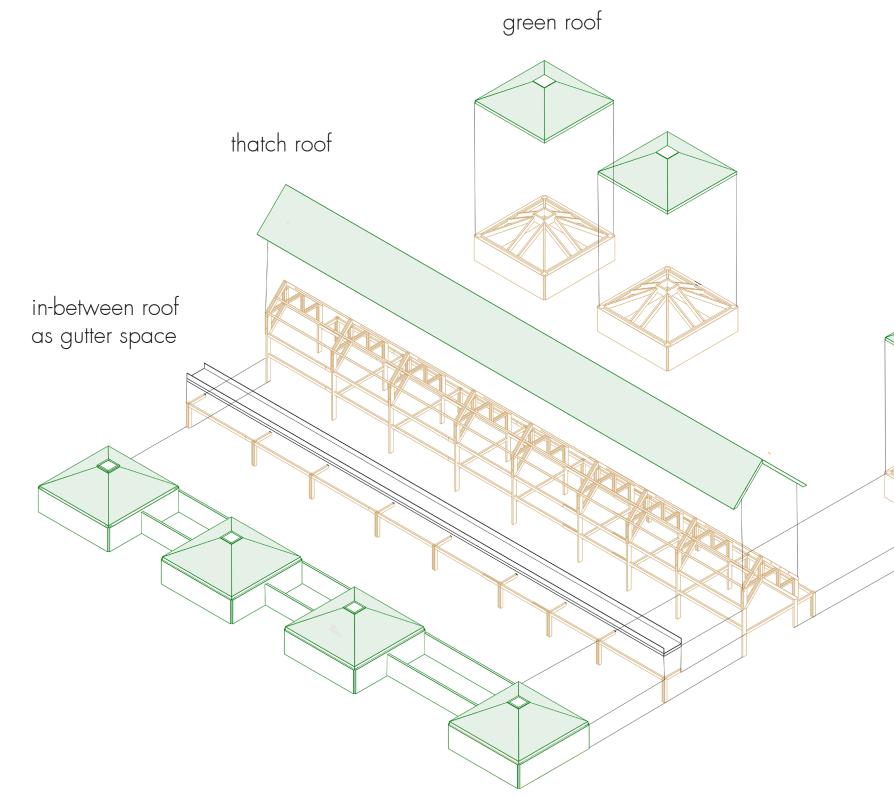




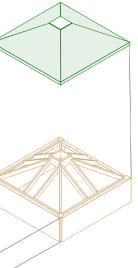
open attic as leisure space



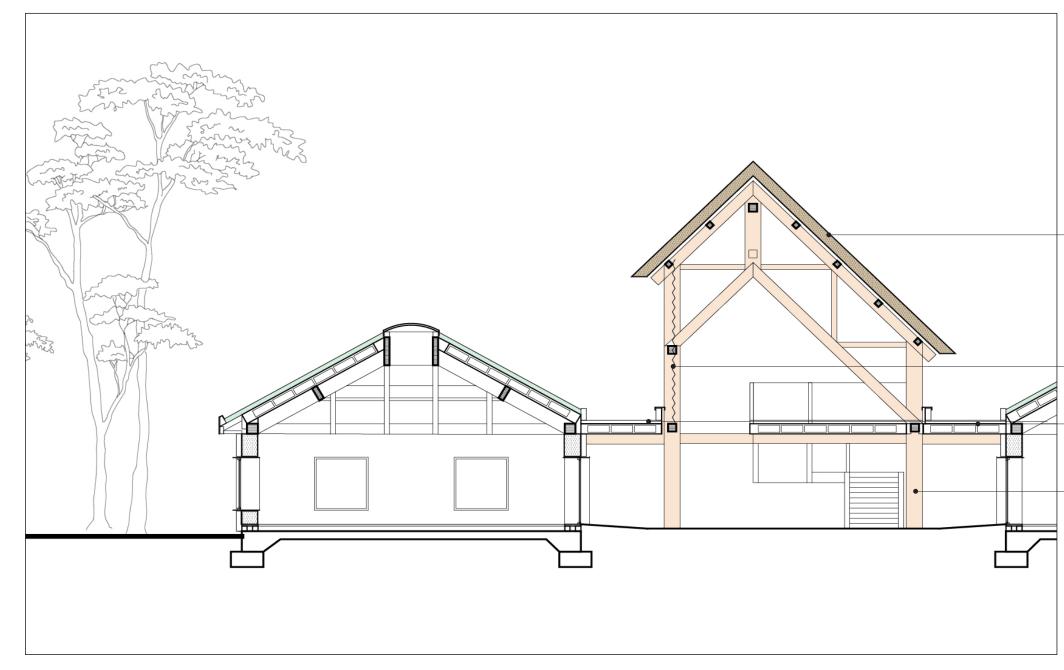
#### the life afternoon - market



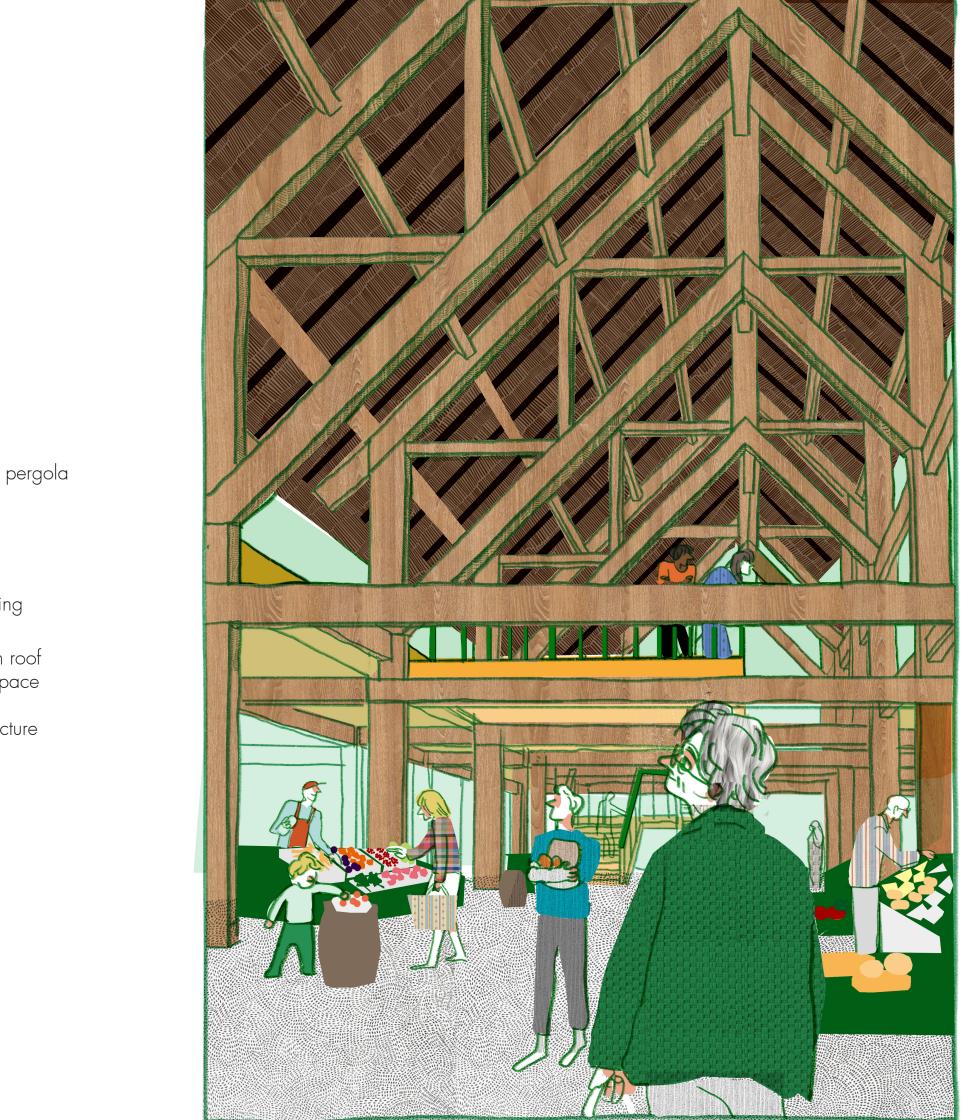




#### the life afternoon - market



pergola as a sheltered connection space



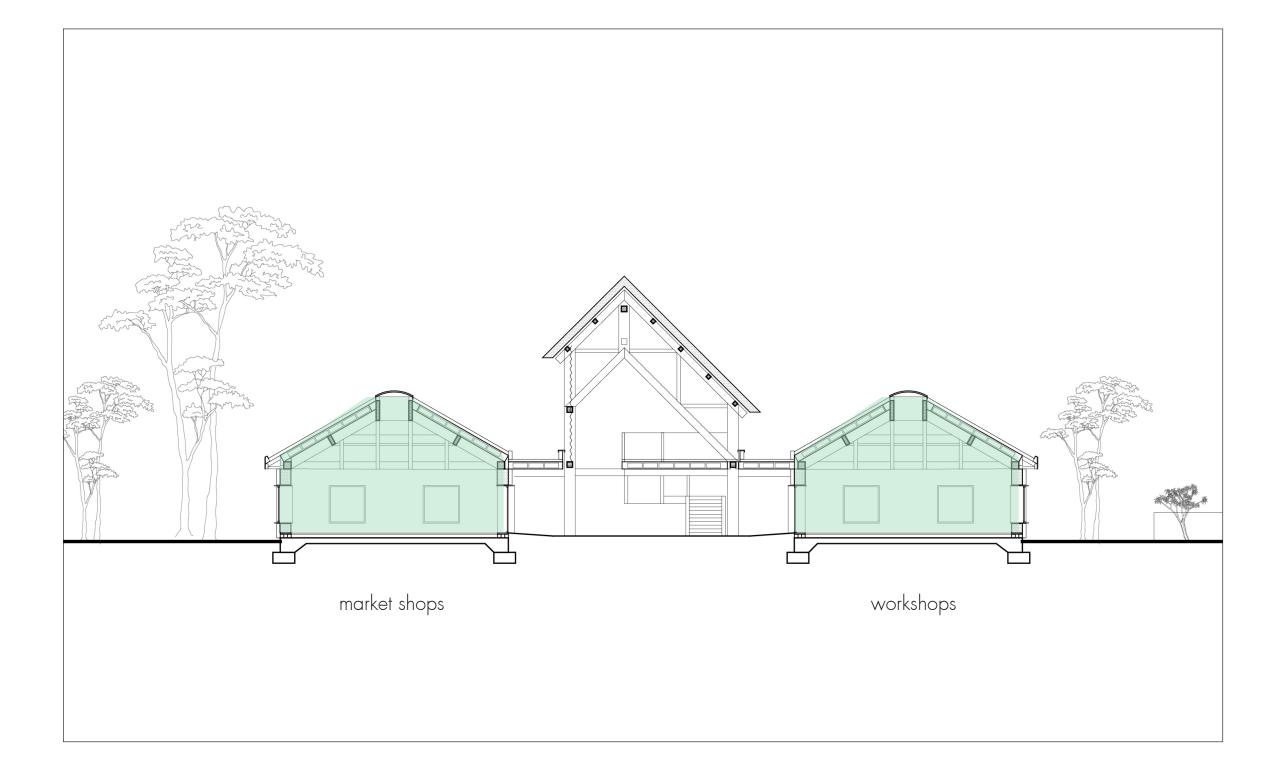
— thatch roof pergola

reed shading

in-between roof as gutter space

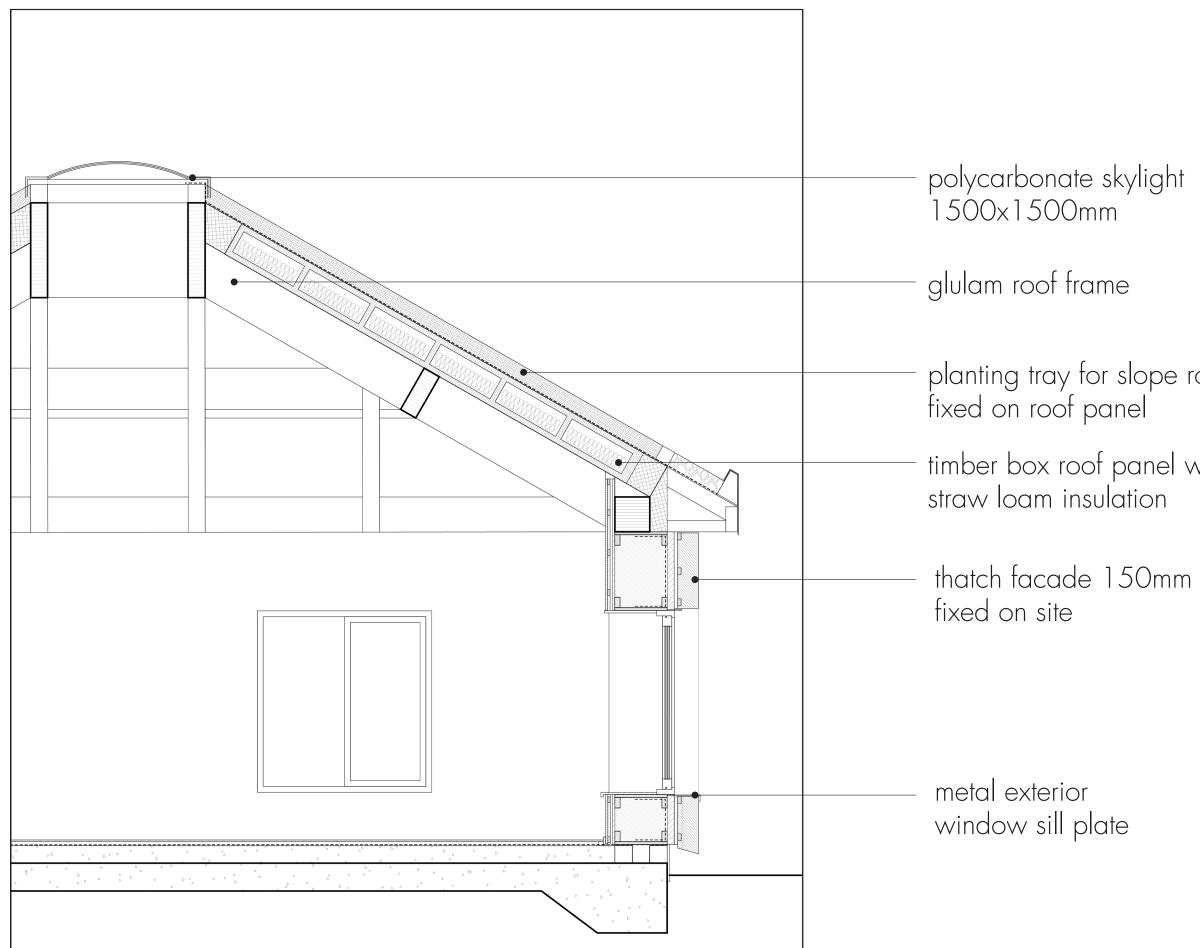
- glulam structure

### the life afternoon - bakery





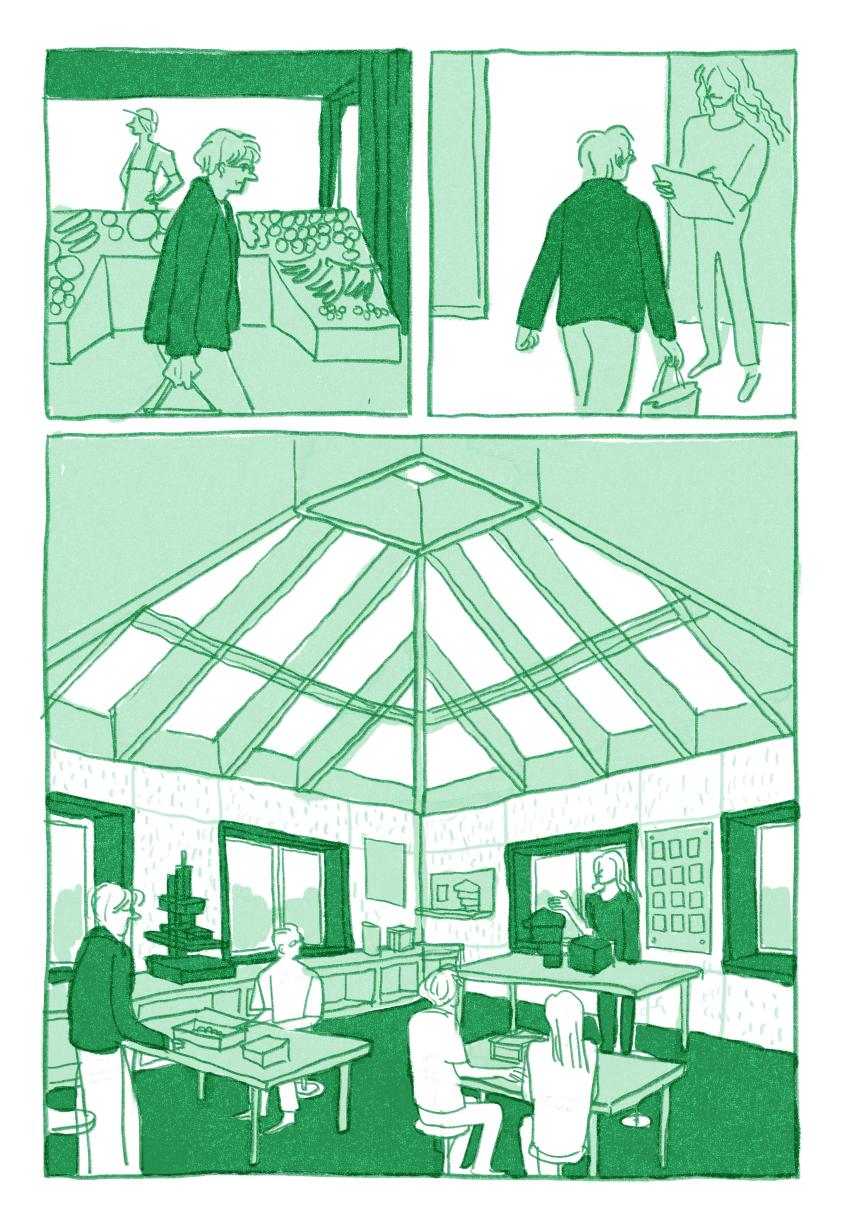
#### the life afternoon - workshop



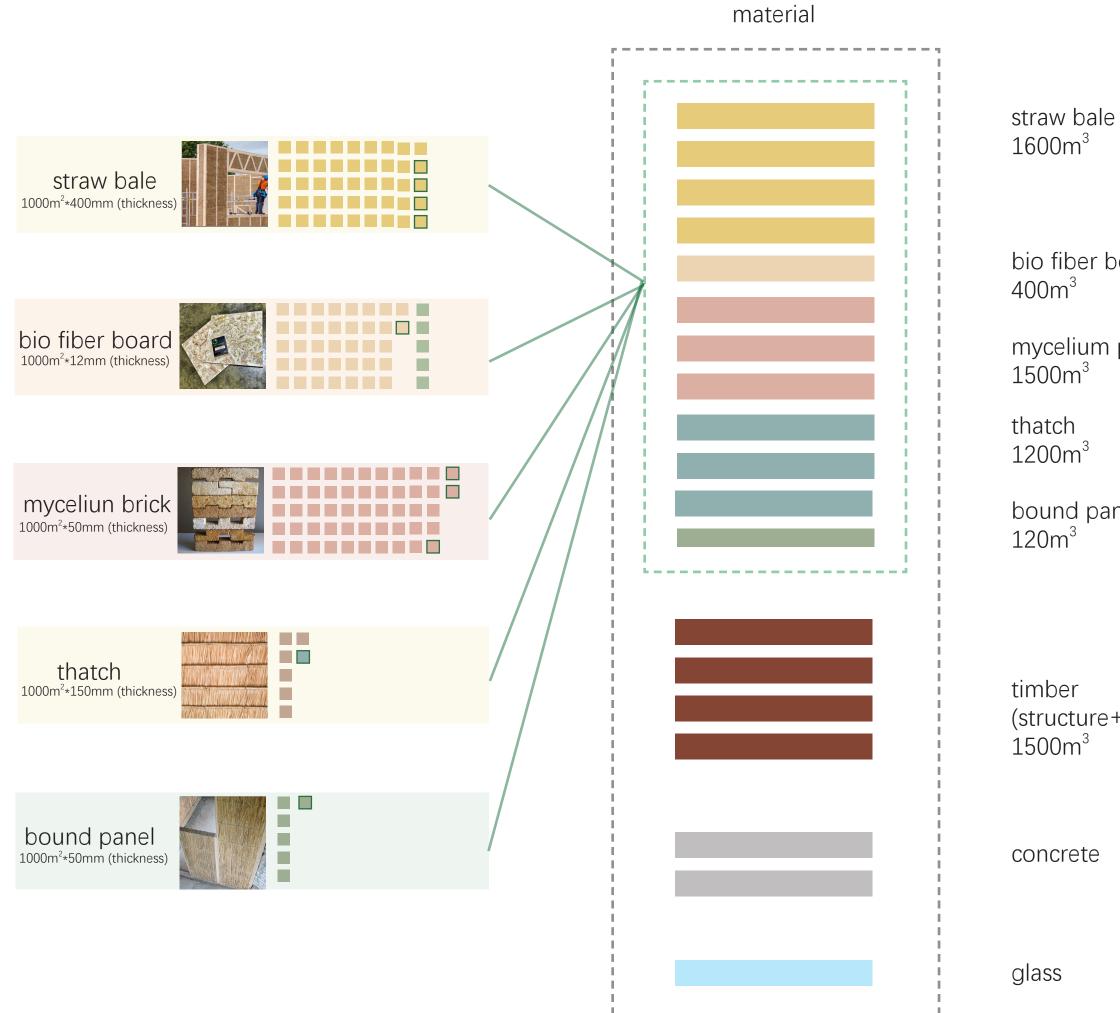
independent workshop/market space surrounded by gardens skylight and windows invite the outside in

planting tray for slope roof fixed on roof panel

timber box roof panel with straw loam insulation



#### the life afternoon - workshop

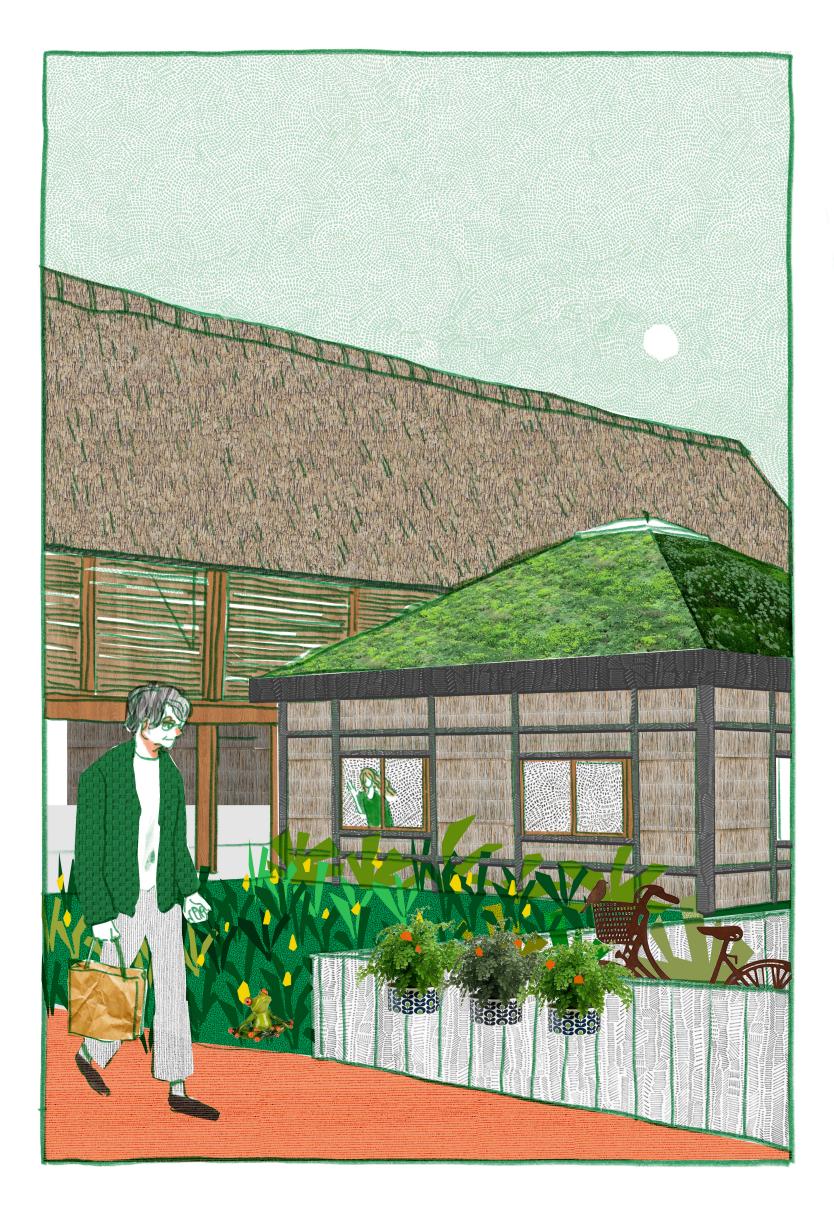


(structure+cladding) 1500m<sup>3</sup>

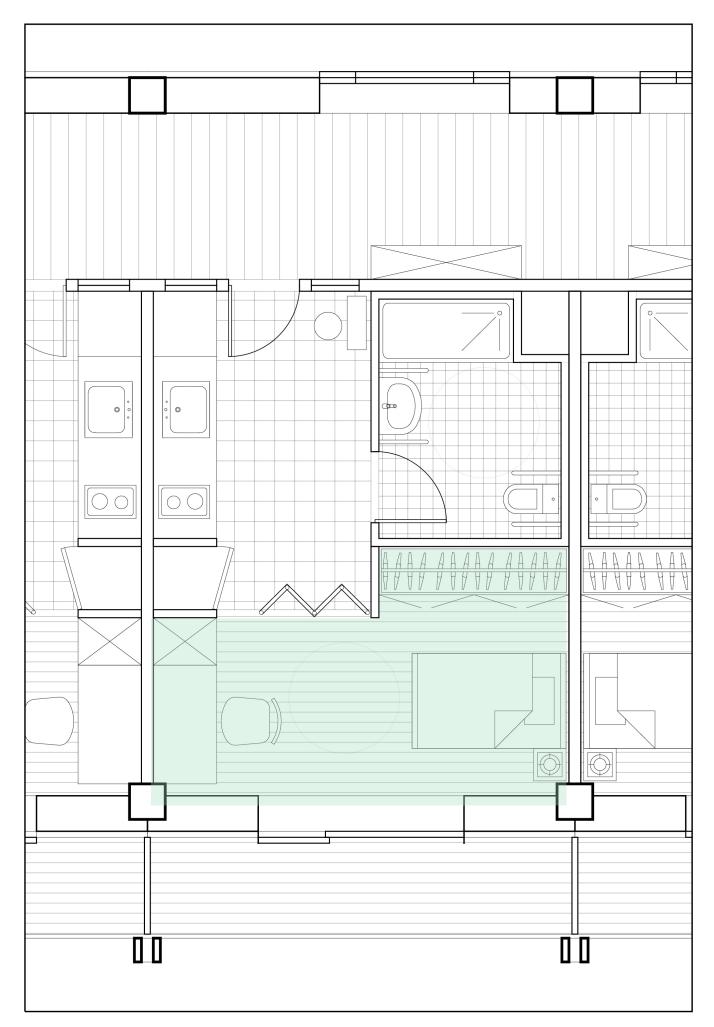
bound panel

mycelium panel 1500m³

bio fiber board



### the life evening - apartment



personal-furnished bedroom interior

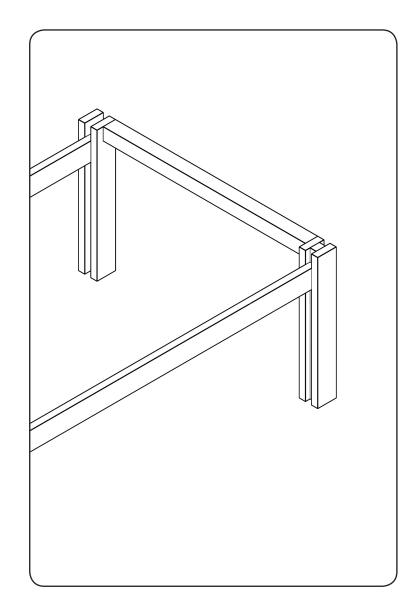


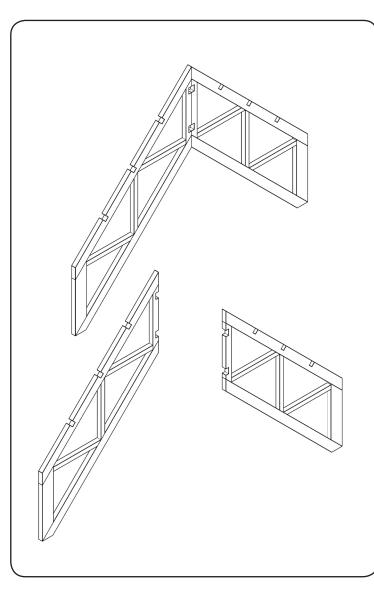


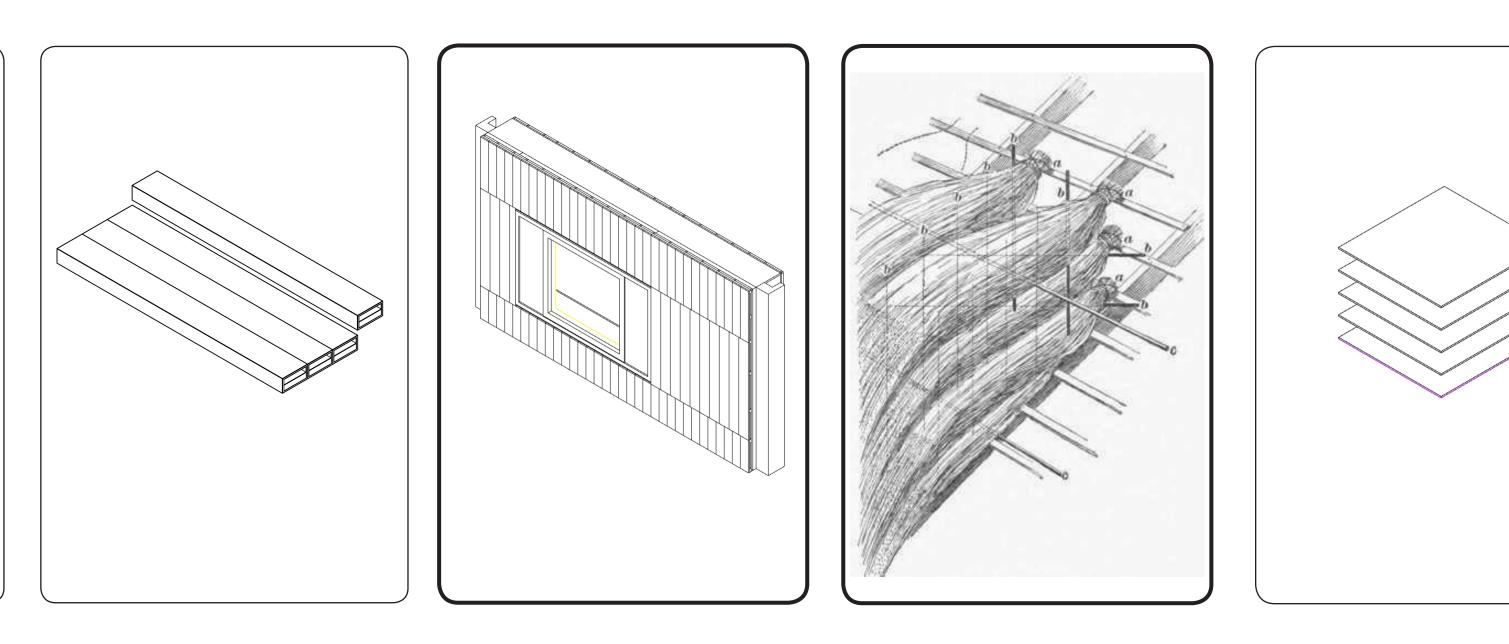


a co-living space for elderly a meeting place for two neighbourhood

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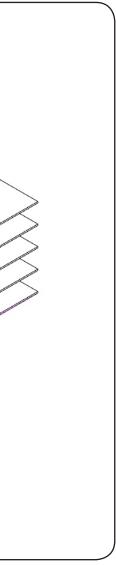


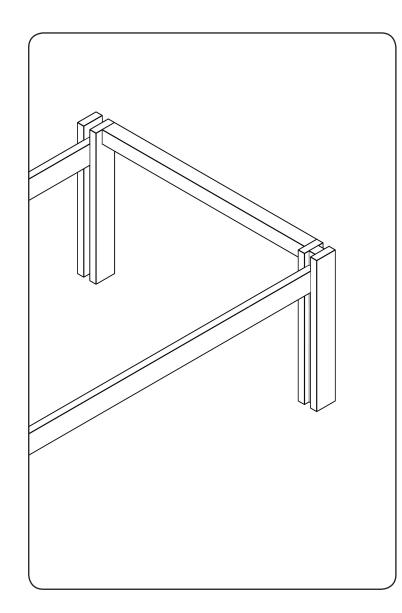


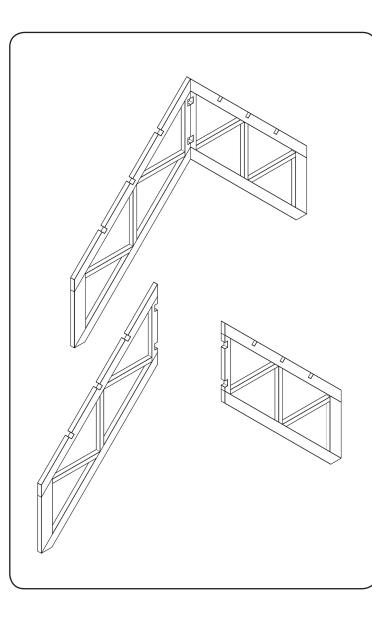


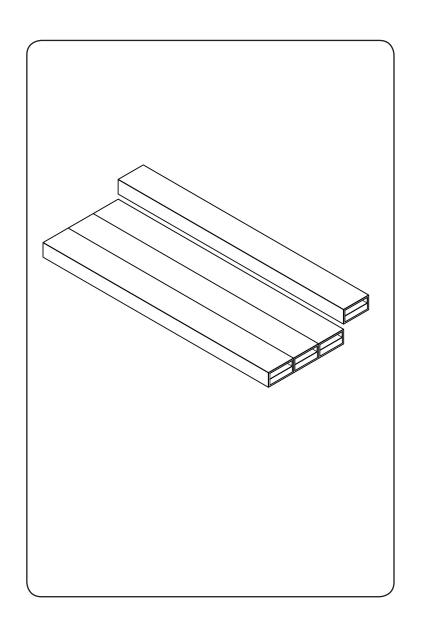
interior cladding - 5 years thatch roof and facade cladding - 10 years straw and mycelium panels - 25-50 years timber structure 50 years

### lifespan









glulam structure & clt core

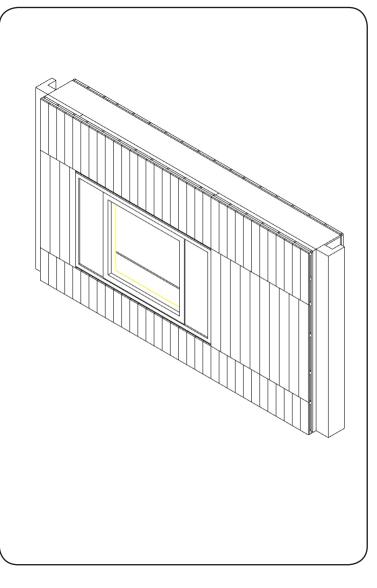
### glulam truss

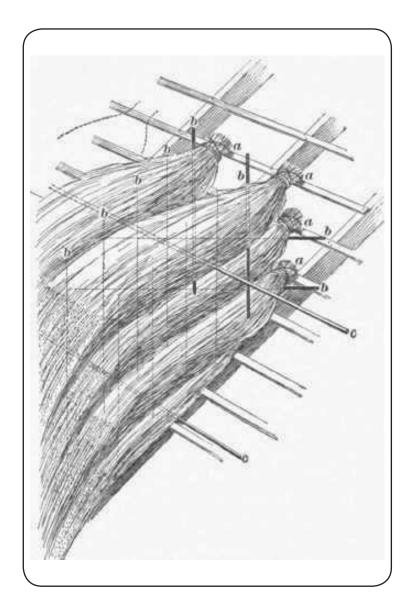
timber floor mycelium infill

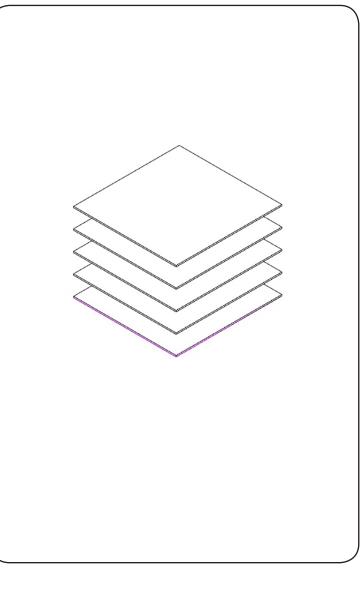
400t timber

60t timber

50t mycelium







facade panel 270 set

thatch surface 3400m2

200t straw

200t thatch

bio fibre cladding

10t straw

15 building totak





