

connect the dots...  
see the bigger picture...



connect the dots...  
see the bigger picture...

## IT TAKES A VILLAGE:

An investigation into the decentralization of Neurodiverse & Psychiatric care within a small Dutch locality.

AR3AD110 | Kimberly Grovu | 5201772

L. Oorschoot | K. Macco | L. van Deudekom

P5 Presentation

connect the dots...

see the bigger picture...

connect the dots...



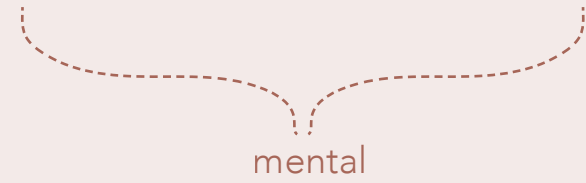
### neurotypical (adj.)

describes someone who thinks & processes information in ways that are **typical** within their culture.

### neurodivergent (adj.)

describes the **wide range of neurological functioning** that exists among humans and the many ways human brains differ from each other.

- Autism (ASD)
- ADHD
- Down Syndrome
- Dyslexia
- Dyspraxia
- Tourette's
- etc.



mental

connect the dots...

see the bigger picture...

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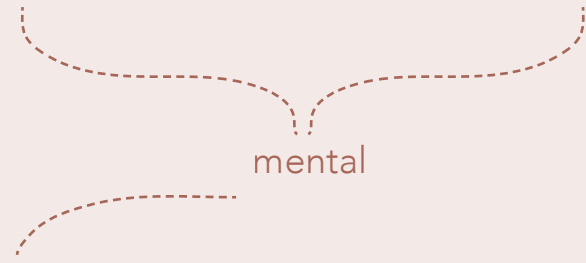
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mental

... condition (n.)

a **clinically significant disturbance** in an individual's cognition, emotional regulation, or behaviour.

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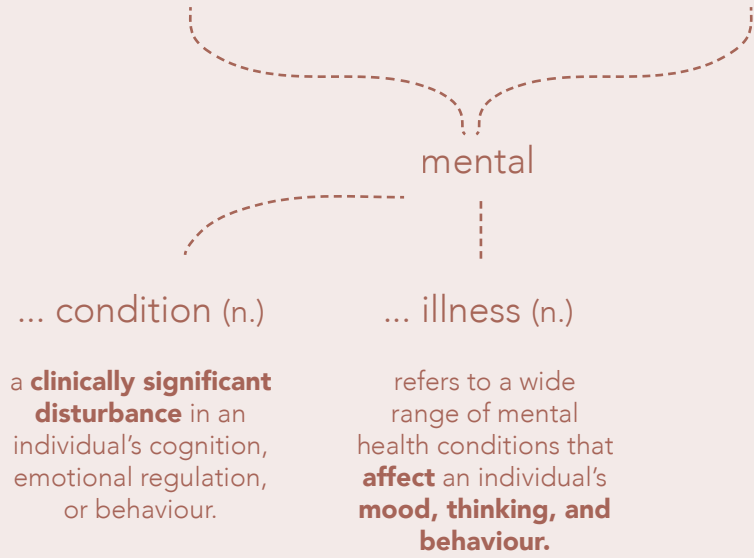
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refers to a wide range of mental health conditions that **affect** an individual's **mood, thinking, and behaviour.**

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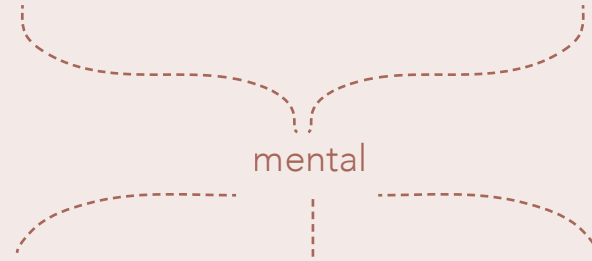
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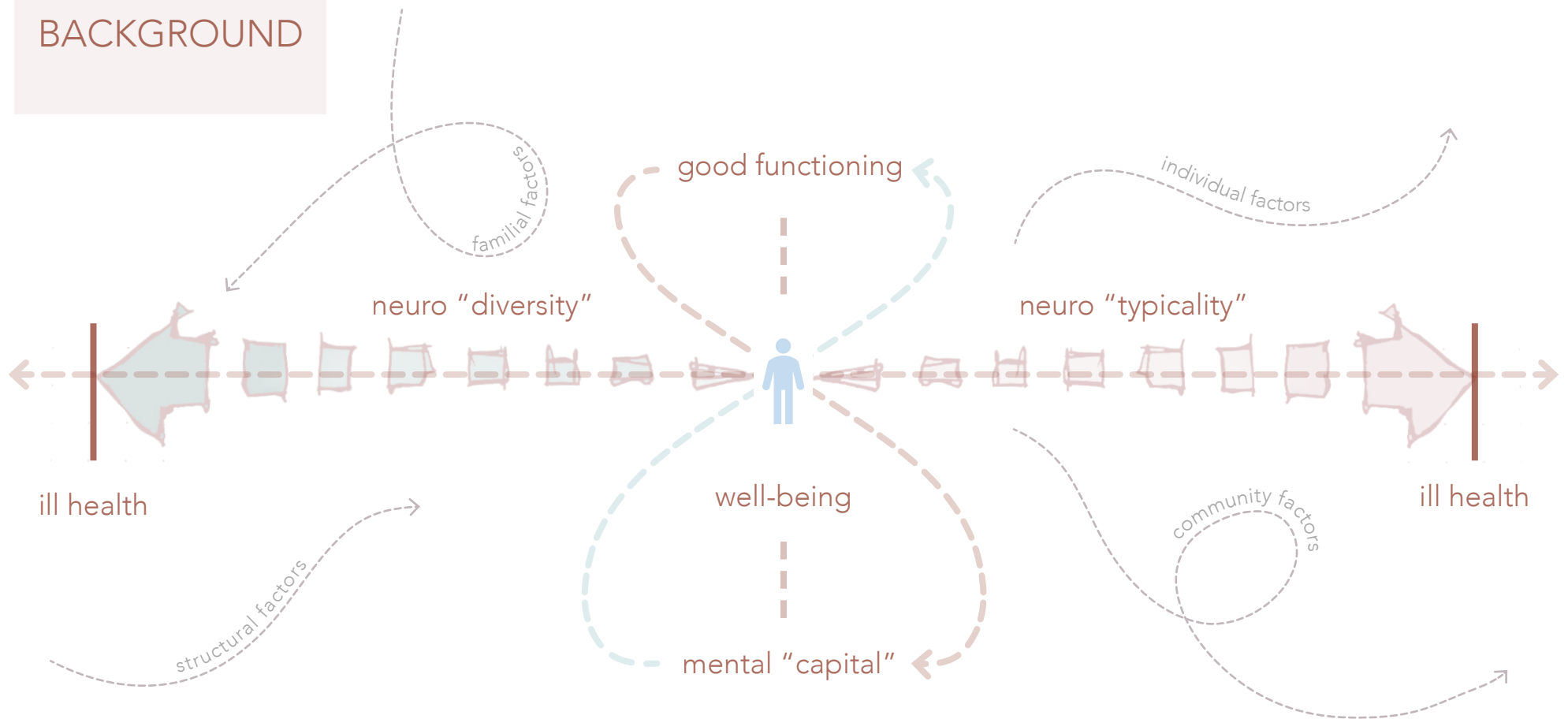
... disability (n.)

a temporary or permanent condition likely to **arise at any point** in one's life.



mental health (n):

*"the way you relate to yourself and to others, and how you deal with the challenges of everyday life."*  
(von Ban-Martens, 2022, para.4)



*"we are experiencing a global mental health crisis!!"*

80,000  
(mild issues)

11,000  
(complex issues)



80,000 + people facing an average of 4+ months to access  
mental health care (yearly)...

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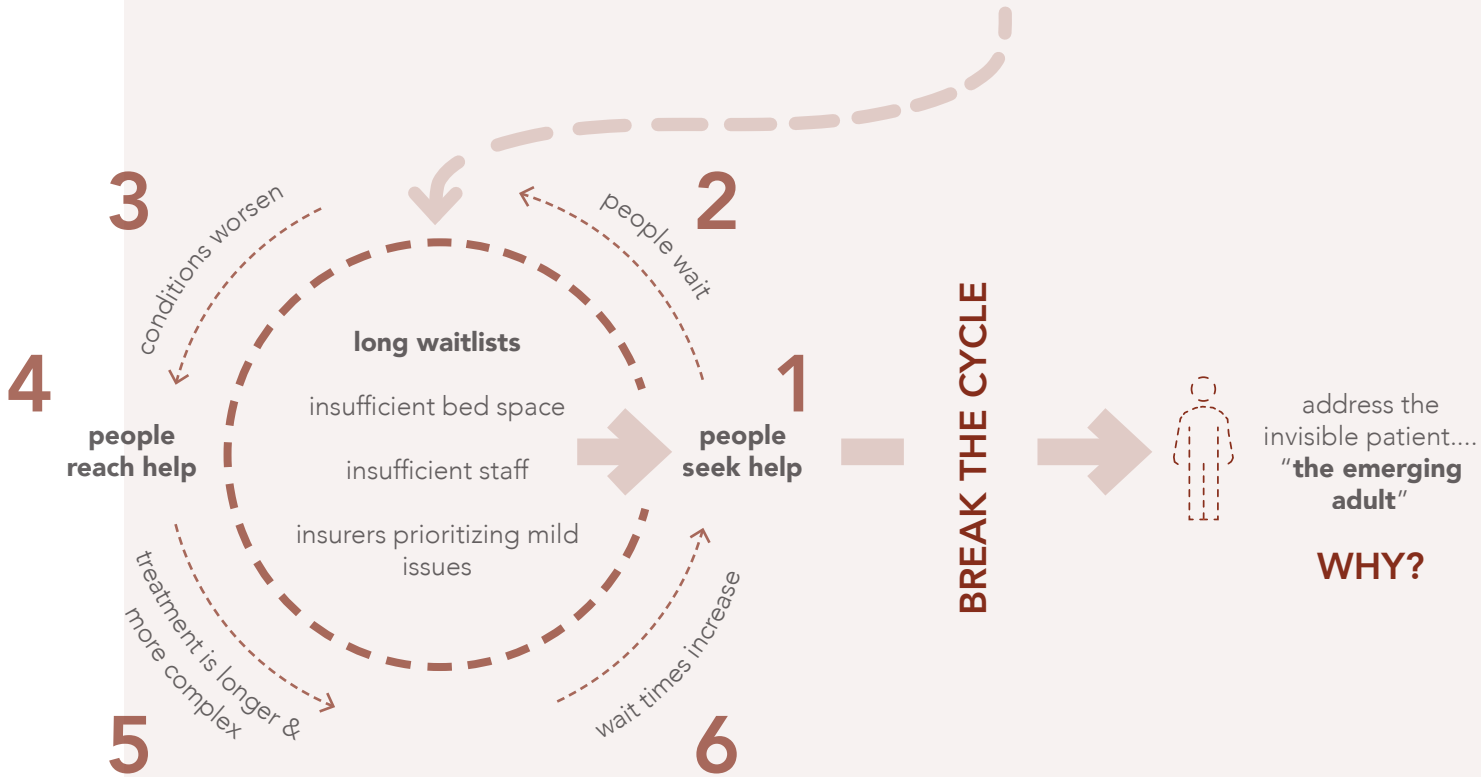
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80,000 + people facing an average of 4+ months to access mental health care (yearly)...



50% of men



67% of women

3

conditions worsen

2

people wait

1

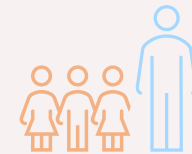
people seek help

**BREAK THE CYCLE**



address the invisible patient...  
**"the emerging adult"**

**WHY?**



75% of all psychiatric complaints are made before age 24 yrs.

4

people reach help

**long waitlists**

insufficient bed space

insufficient staff

insurers prioritizing mild issues

treatment is longer & more complex

5

6

wait times increase

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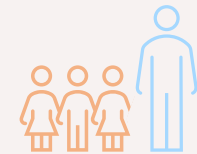


**BREAK THE CYCLE**



address the invisible patient...  
**"the emerging adult"**

**WHY?**



75% of all psychiatric complaints are made before age 24 yrs.



*"...shorter, lighter, more accessible approaches..."*



RESEARCH  
- AIM -

How can architecture facilitate the integration of psychiatric care within neighbourhood infrastructure to:

i.  
"Capture and reduce the period of illness" and "prevent recurrence" in young neurodivergent people (16-30 yrs) entering adulthood (Centre for Mental Health, 2016), and

ii.  
Decentralize and destigmatize mental health care?



WHO?

who can we serve?



WHAT?

what are their needs?



HOW?

how do we design to meet them?



## RESEARCH - GATHERED -

- literature review
- fieldwork observations
- professional interviews
- case studies
- target-based questionnaires

How can architecture facilitate the integration of psychiatric care within neighbourhood infrastructure to:

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RESEARCH  
- FINDINGS -

WHO?

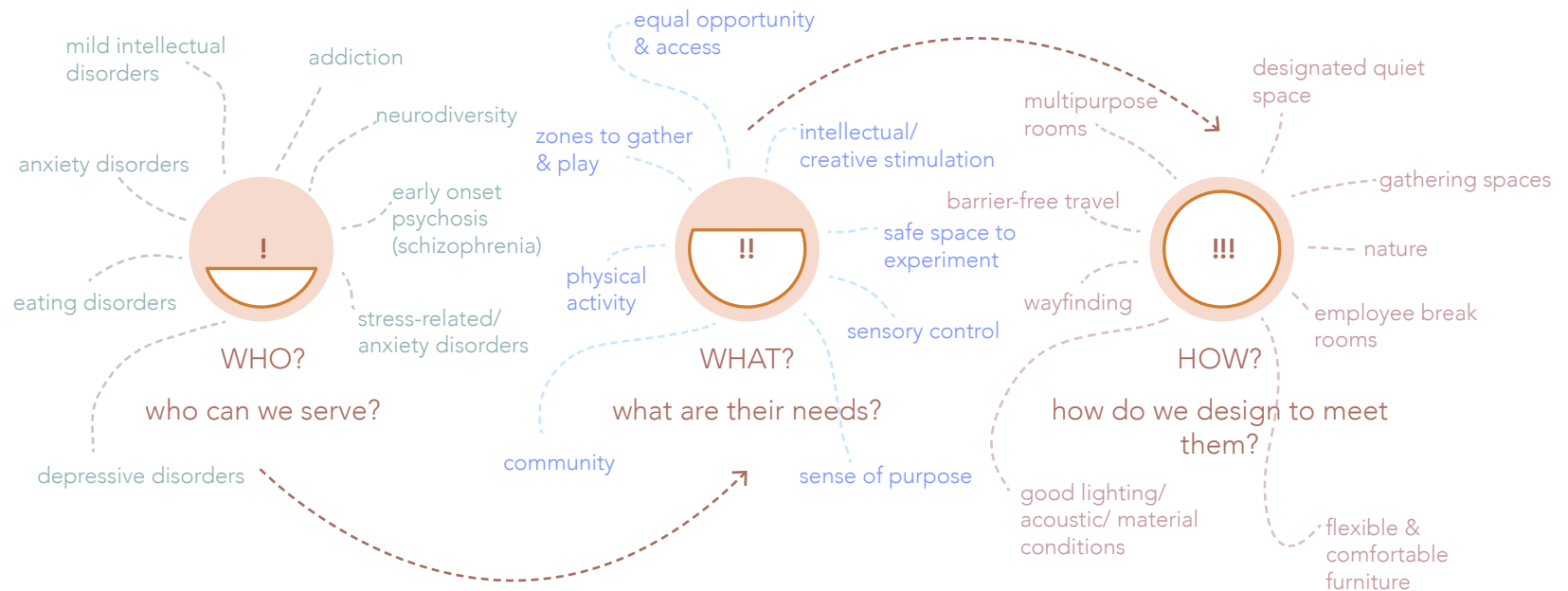
young people, aged 16-30  
at risk of decline

WHAT?

health and wellness through  
equal opportunity access to an  
activity-based  
effort driven reward cycle

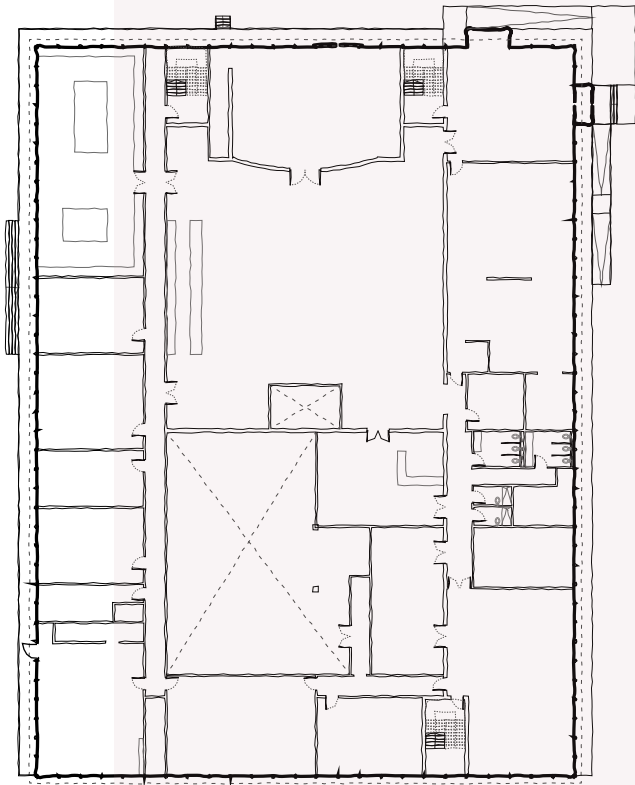
HOW?

decentralizing support & care  
through the implementation of  
**community-integrated public**  
'living rooms'



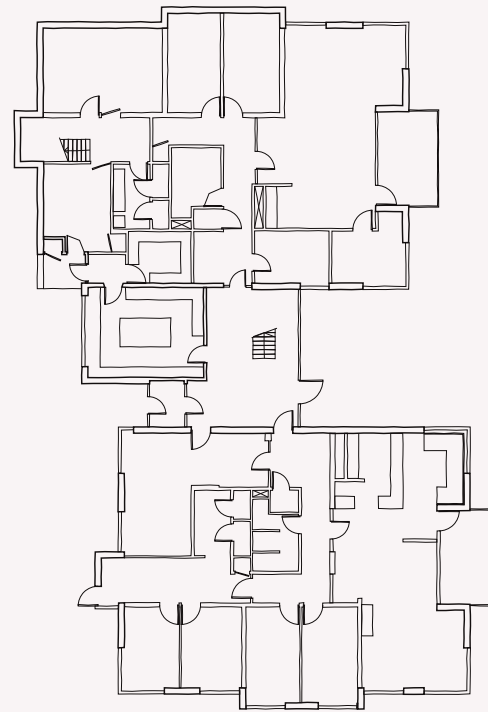


## learning from case studies...



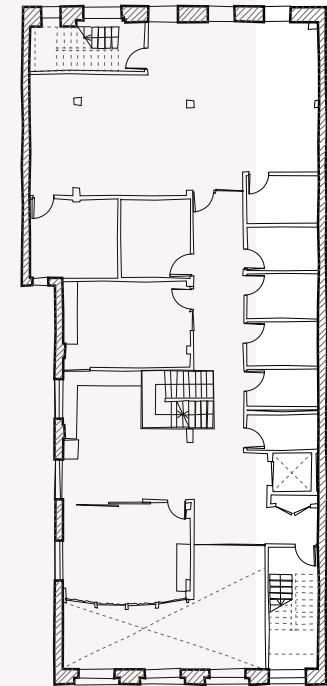
De Ruimte Dagactiviteitencentrum, Delft, NL

(Ipse de Bruggen sheltered work center for persons with mild intellectual disabilities)



Taste! Cafe, Delft, NL

(Shared Christian community residence with weekly public programming)

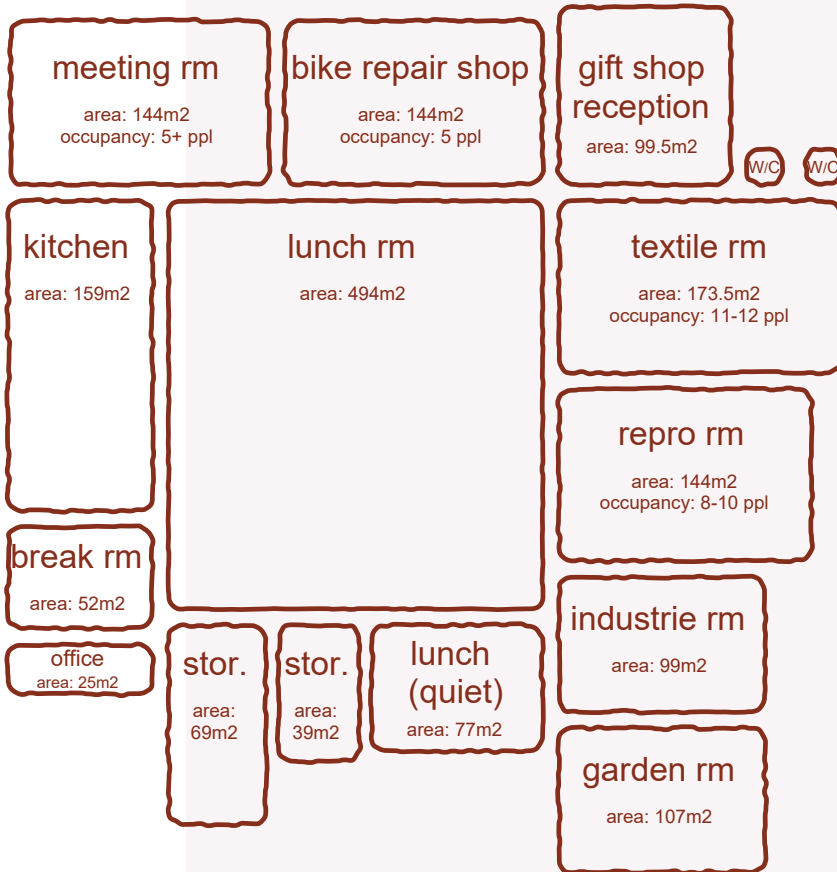


Stella's Place, Toronto, Canada

(Charity-based urban mental health center)

## learning from case studies...

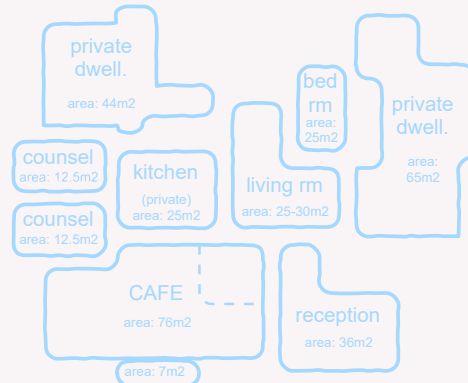
min 91cm clearances for all hallways



zones & spaces differentiated through own unique characters.

paths & routes designed at a slope of no moe than 1:22

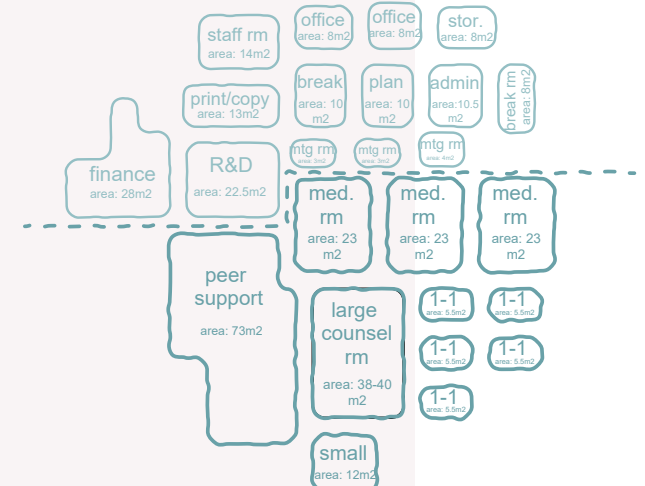
all controls, outlets, switches at accessible heights for all.



paths & routes designed at a slope of no more than 1:22

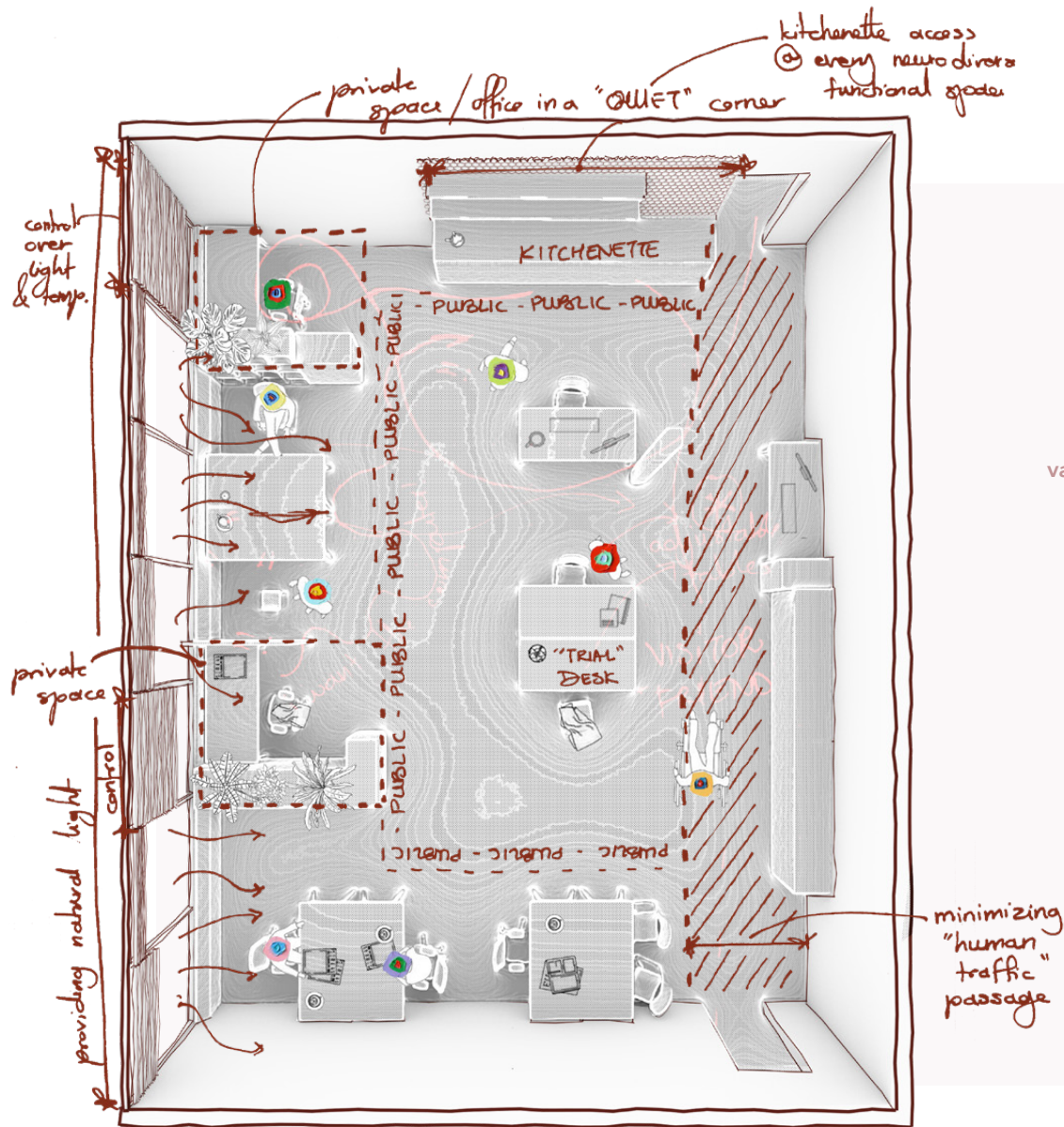
consistent stairs (riser: 10-18cm, tread: 30-36")

paths of travel to consist of interior/exterior interchangeable conditions



use of paving/ flooring to indicate functional boundaries & wayfinding

handrails provided along all routes



# ALTERNATIVES TO OPEN PLAN CONFIGURATIONS

learning from case studies...



kitchen access at all times

furniture as architecture

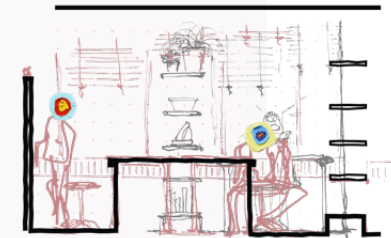
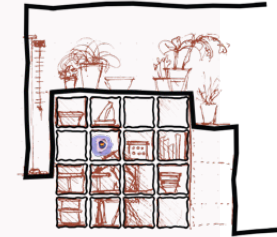
variety in comfortable seating

choice of private & public workspace

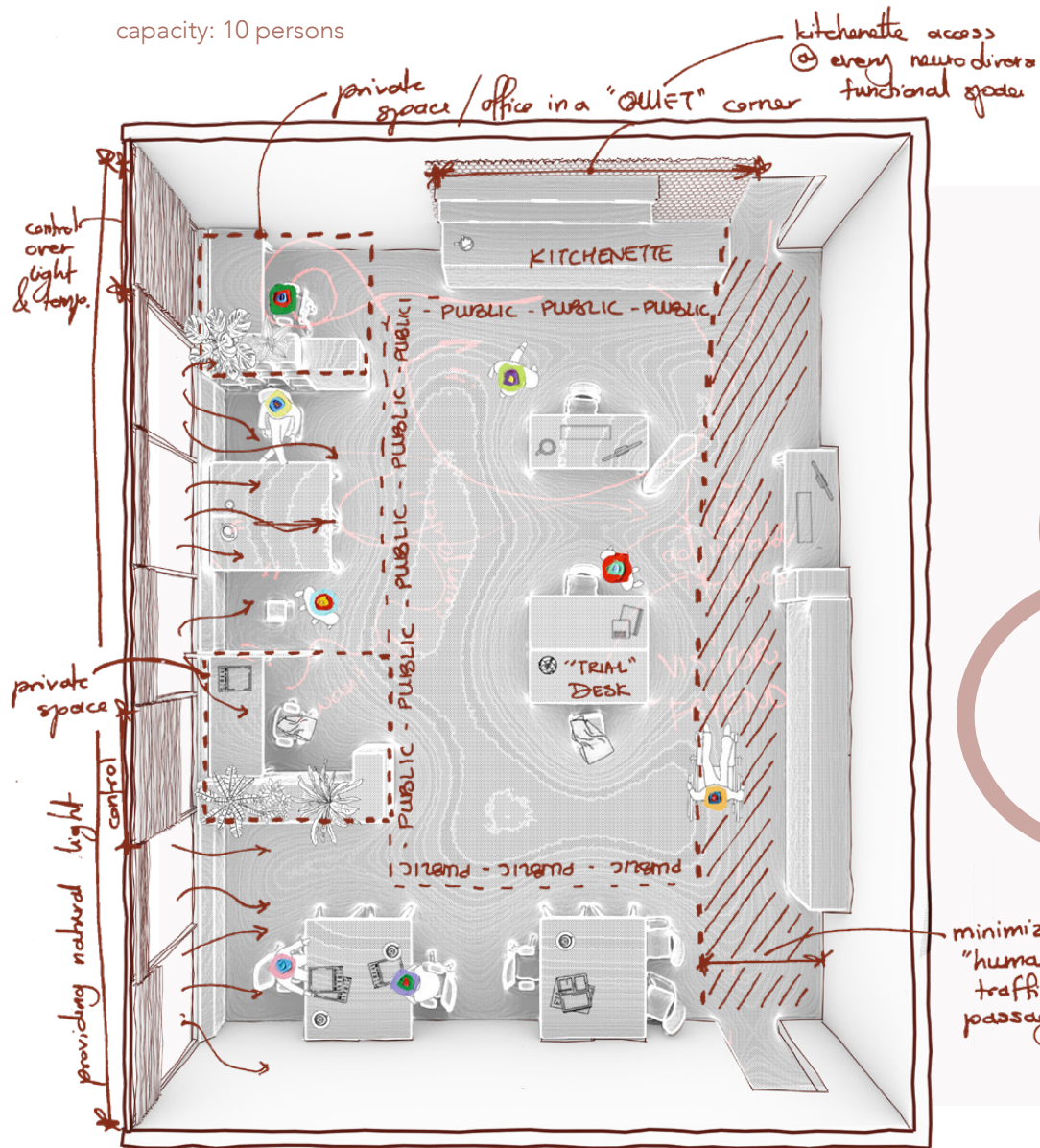
designated storage

generous pathways

clear & flexible spatial arrangement



capacity: 10 persons



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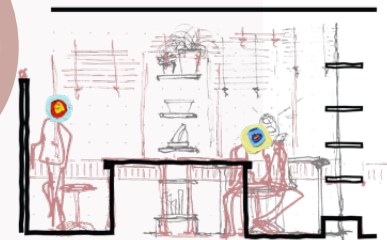
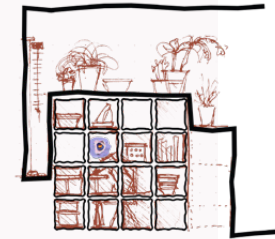
design of storage

generous pathways

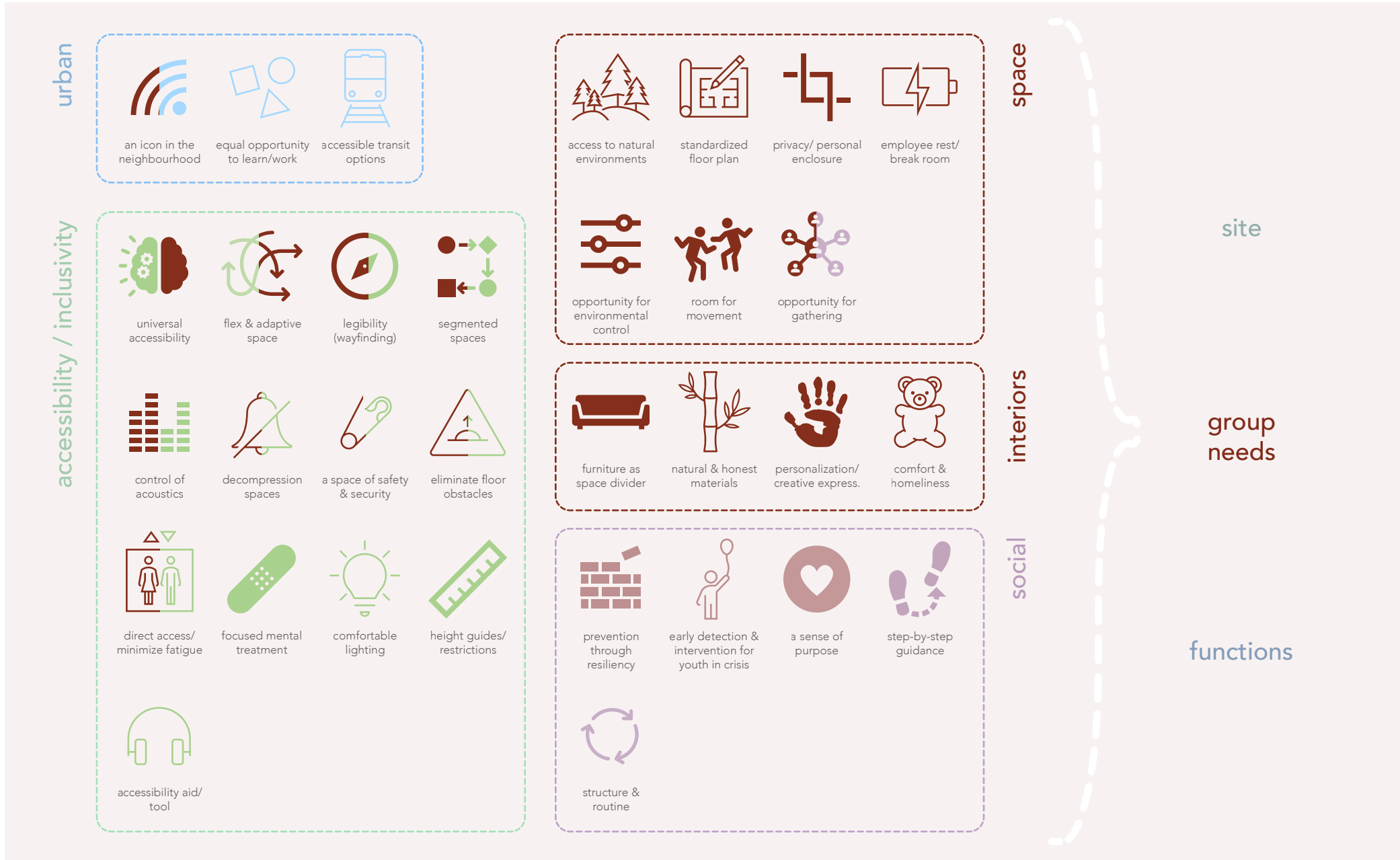
clear & flexible spatial

arrangement

insufficient space for all bodies & abilities



connect the dots...  
see the bigger picture...



defining guidelines...

see the bigger picture...

connect the dots...

urban

- an icon in the neighbourhood
- equal opportunity to learn/work
- accessible transit options

accessibility / inclusivity

- universal accessibility
- flex & adaptive space
- legibility (wayfinding)
- segmented spaces
- control of acoustics
- decompression spaces
- a space of safety & security
- eliminate floor obstacles
- direct access/ minimize fatigue
- focused mental treatment
- comfortable lighting
- height guides/ restrictions
- accessibility aid/ tool

space

- access to natural environments
- standardized floor plan
- privacy/ personal enclosure
- employee rest/ break room
- opportunity for environmental control
- room for movement
- opportunity for gathering

interiors

- furniture as space divider
- natural & honest materials
- personalization/ creative express.
- comfort & homeliness

social

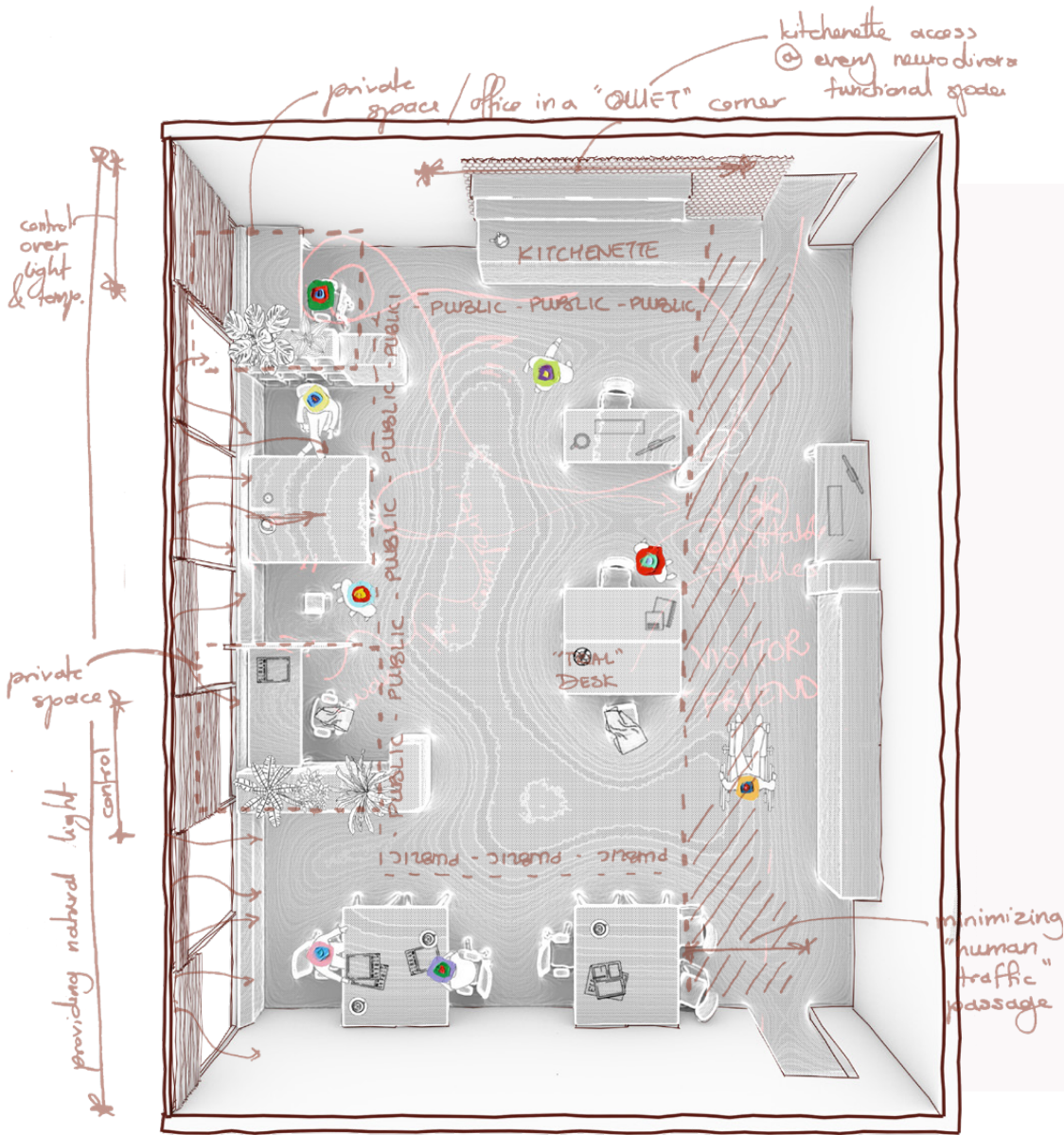
- prevention through resiliency
- early detection & intervention for youth in crisis
- a sense of purpose
- step-by-step guidance
- structure & routine

site

group needs

functions

see the bigger picture... connect the dots...



ALTERNATIVES TO OPEN PLAN CONFIGURATIONS

distilling the basic necessities

"the self-containing unit"



proposed activity studio - prototype (approx. area: +/- 200 m<sup>2</sup>)



natural & honest materials



decompression spaces



access to natural environments



standardized floor plan



furniture as space divider



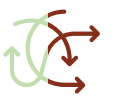
comfort & homeliness



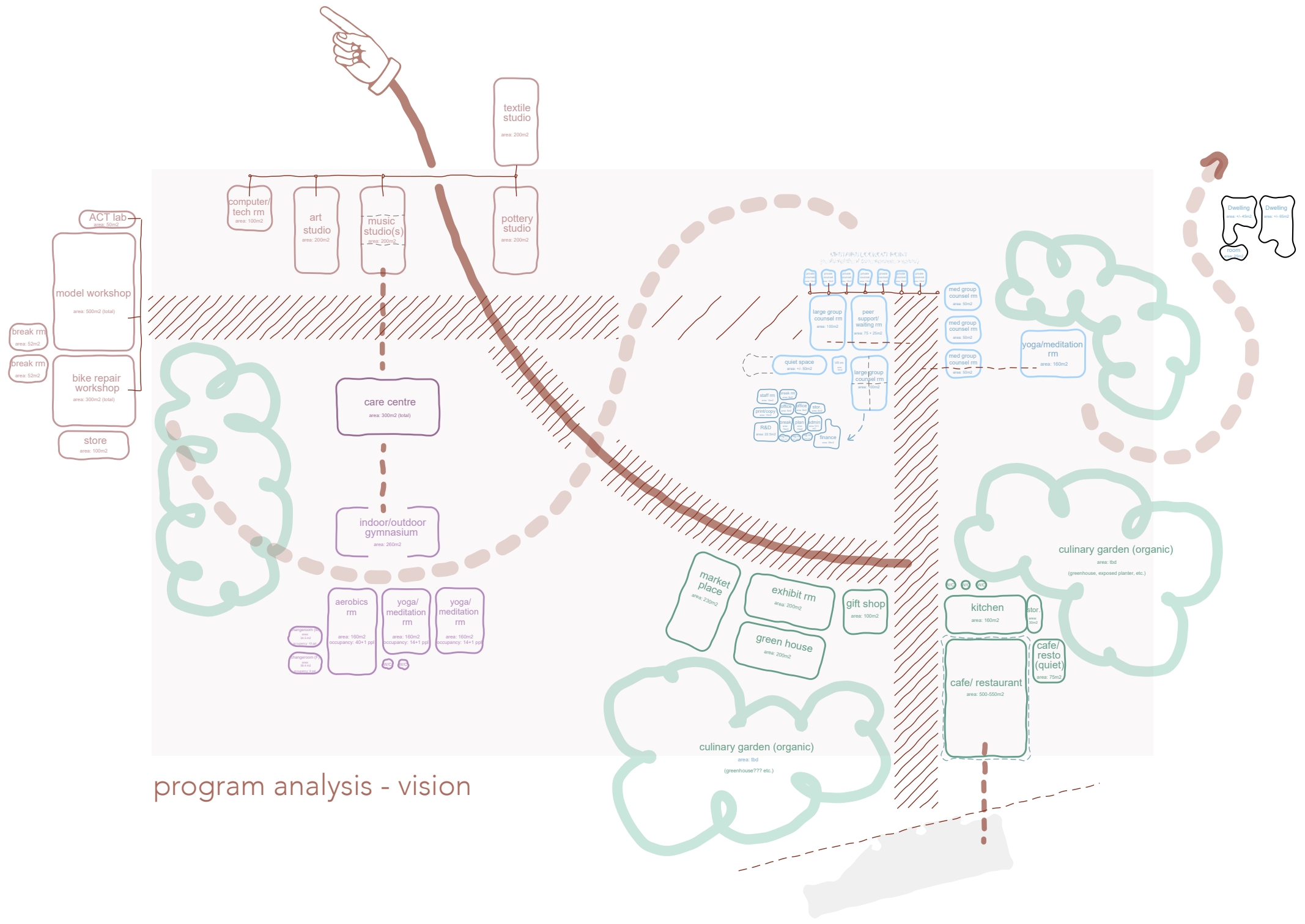
room for movement



universal accessibility

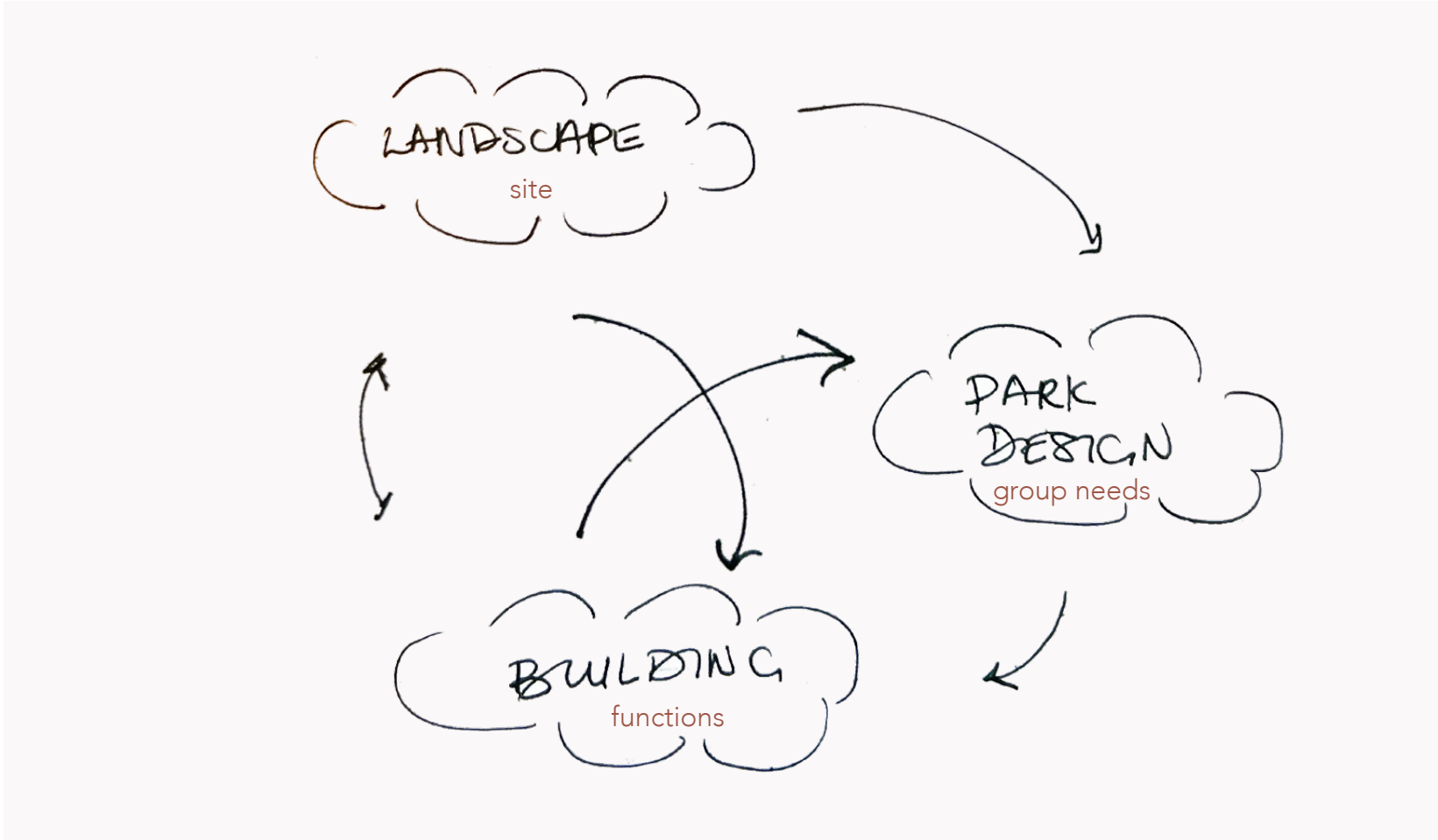


flex & adaptive space

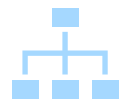


program analysis - vision





program analysis - practicalities



management



health & wellbeing



energy



transport



water



resources



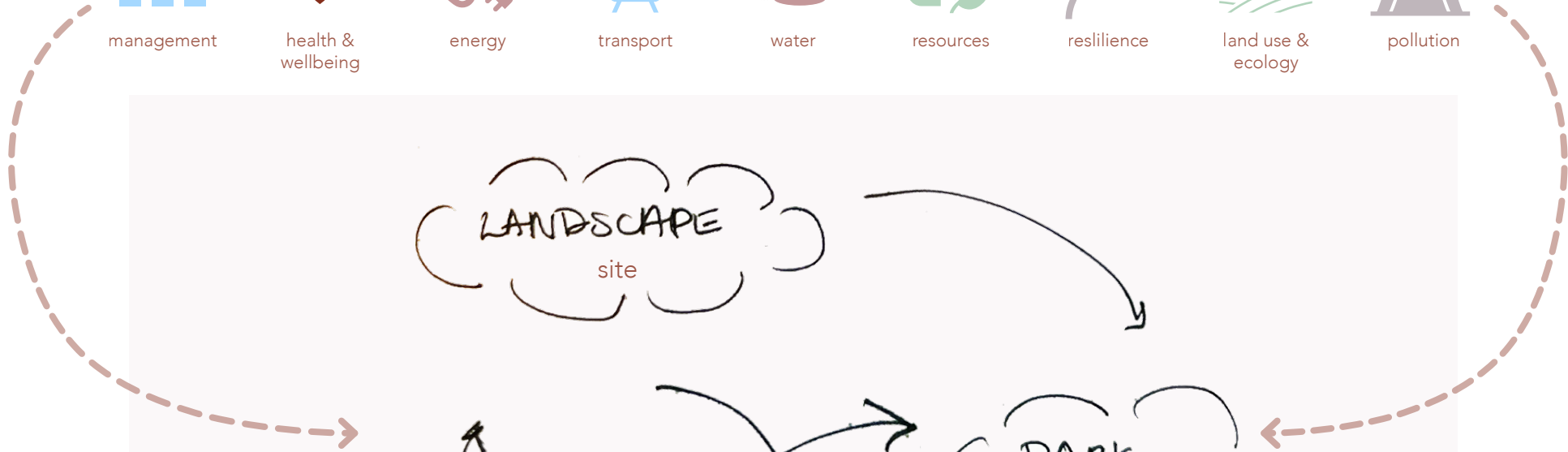
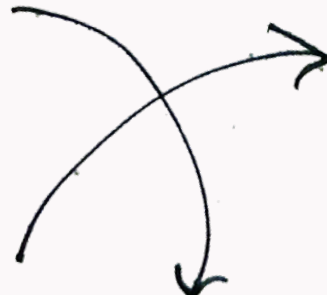
resilience



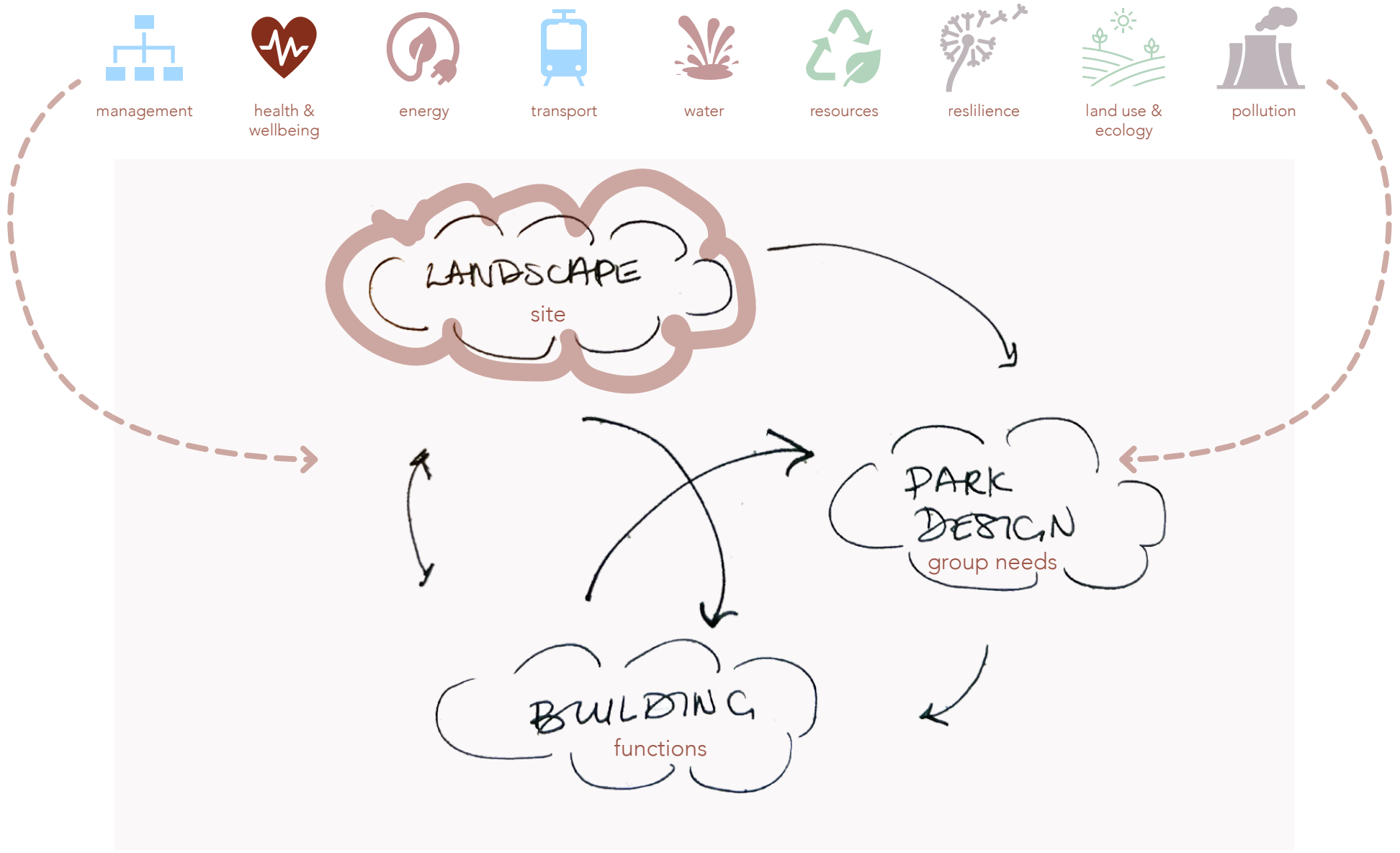
land use & ecology



pollution



program analysis - practicalities



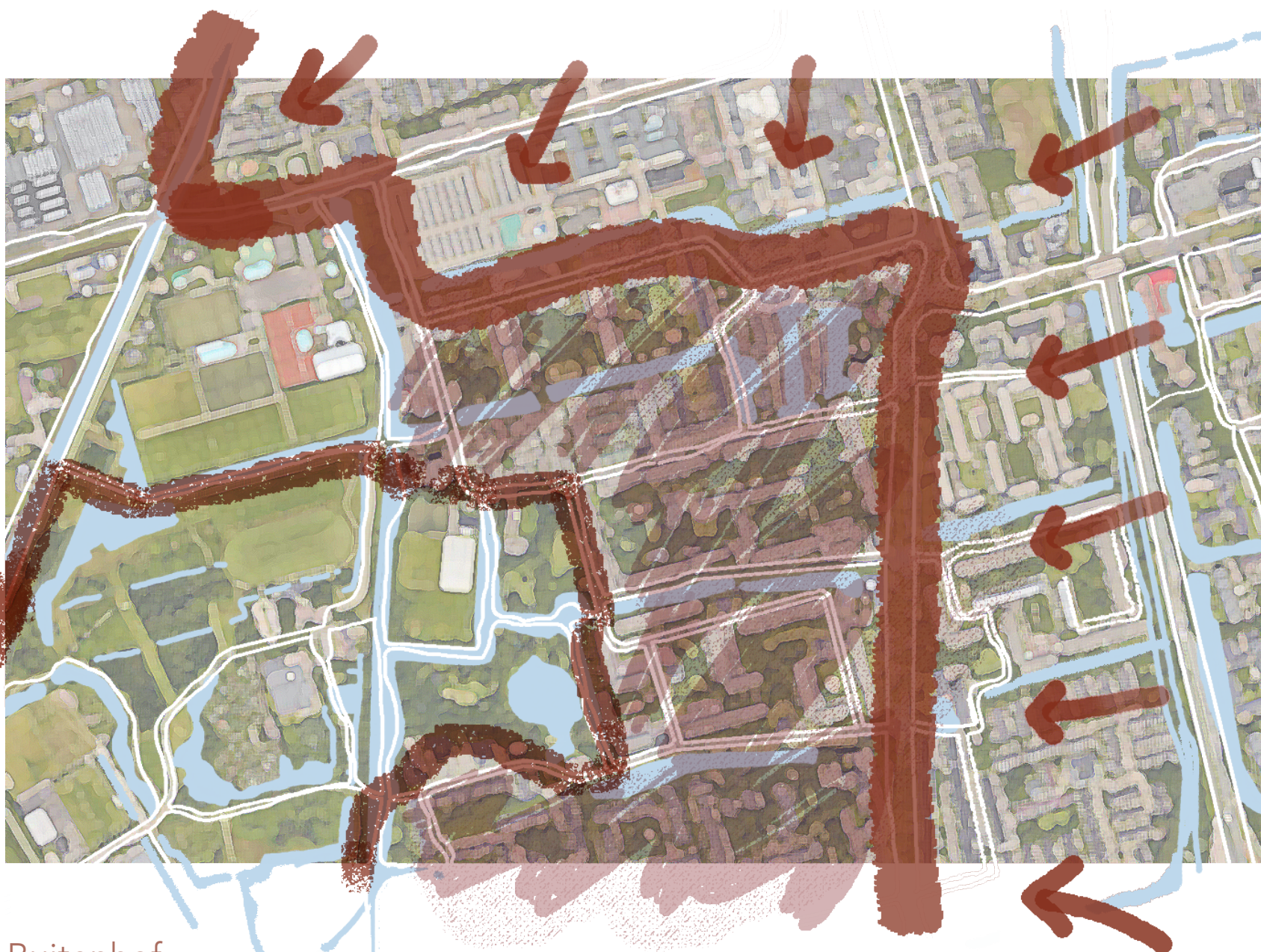
program analysis - practicalities



site selection



▲ Buitenhof-Voorhof



## Site Criteria:


Low income communities present a higher risk of mental health issues

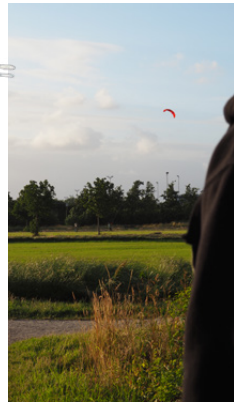
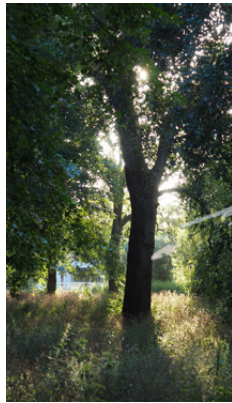
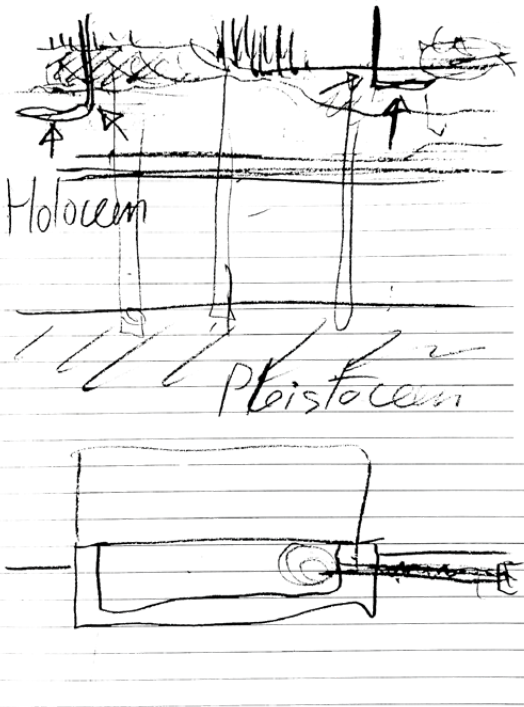
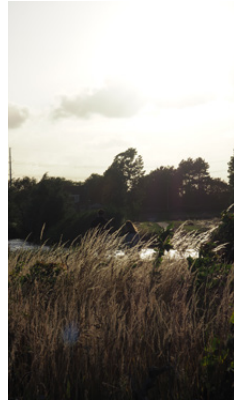
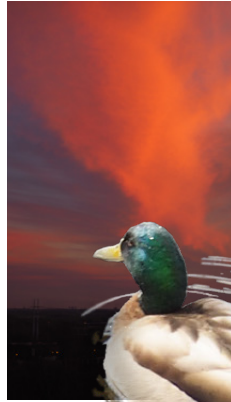
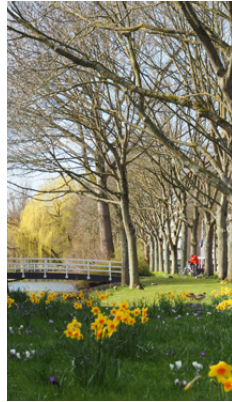
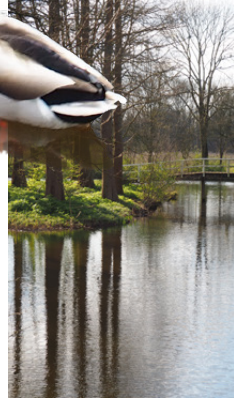
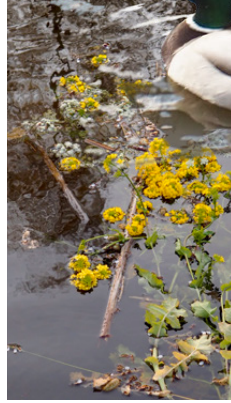
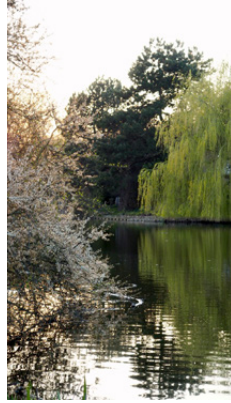
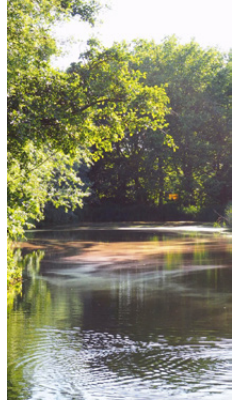
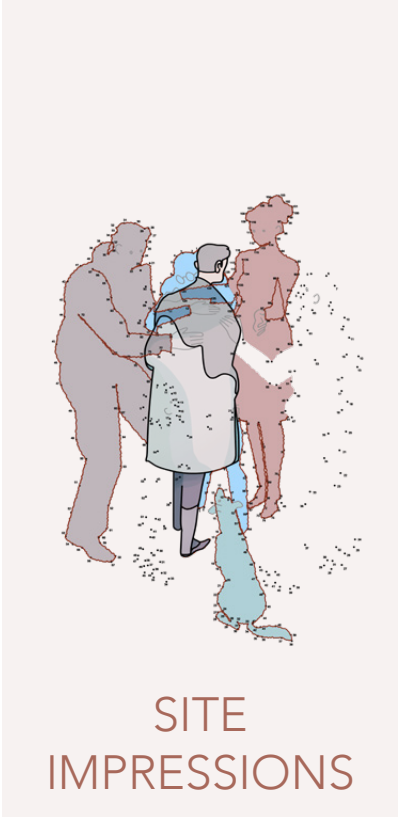
Communities with high populations of high-vulnerability persons.

Areas facing a lack of access to social and welfare support services.

Access to and/or direct views of nature.

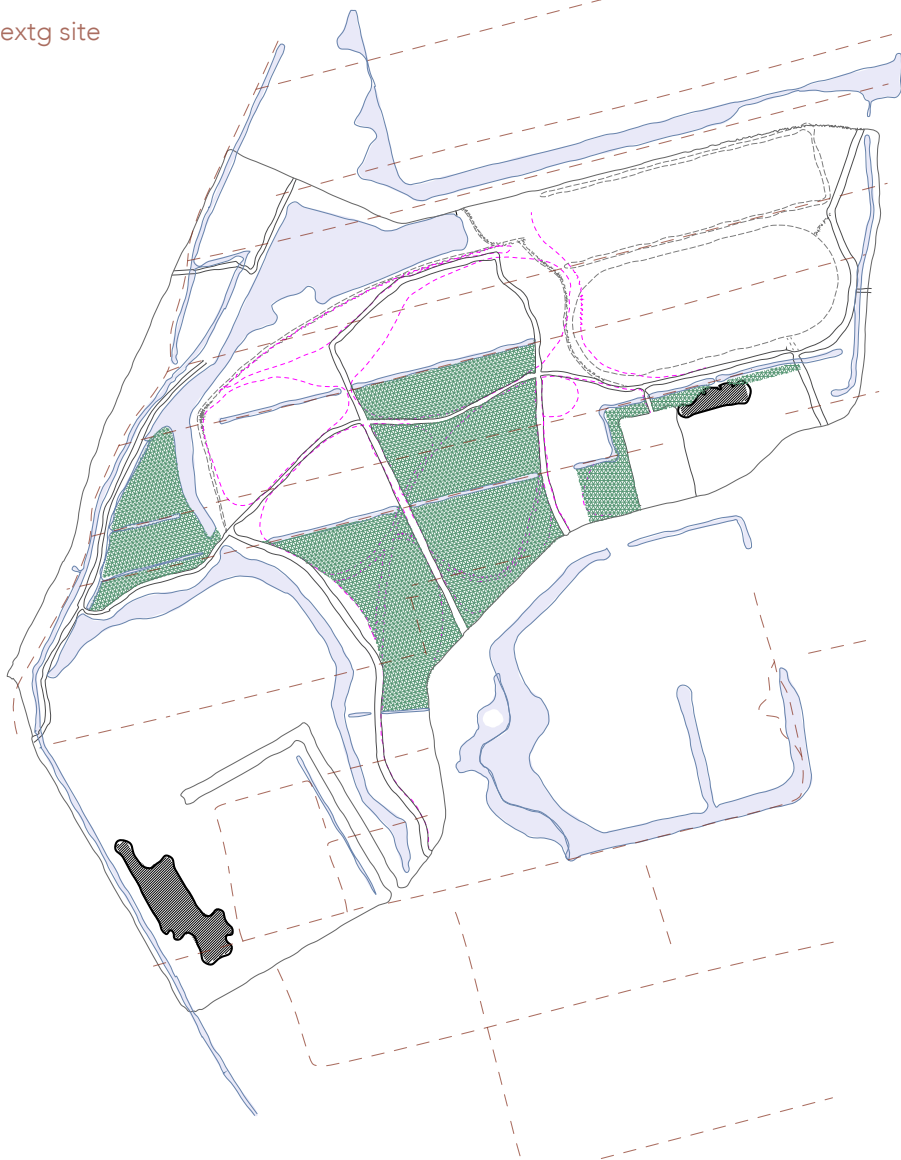
Areas that are accessible but isolated enough to avoid over-stimulation

 **Buitenhof**  
Buitenhof Parkje (114,236 m<sup>2</sup> = 28.22 acres = 11.42 hectares)  
(54,873 m<sup>2</sup> = 13.56 acres = 5.487 hectares)

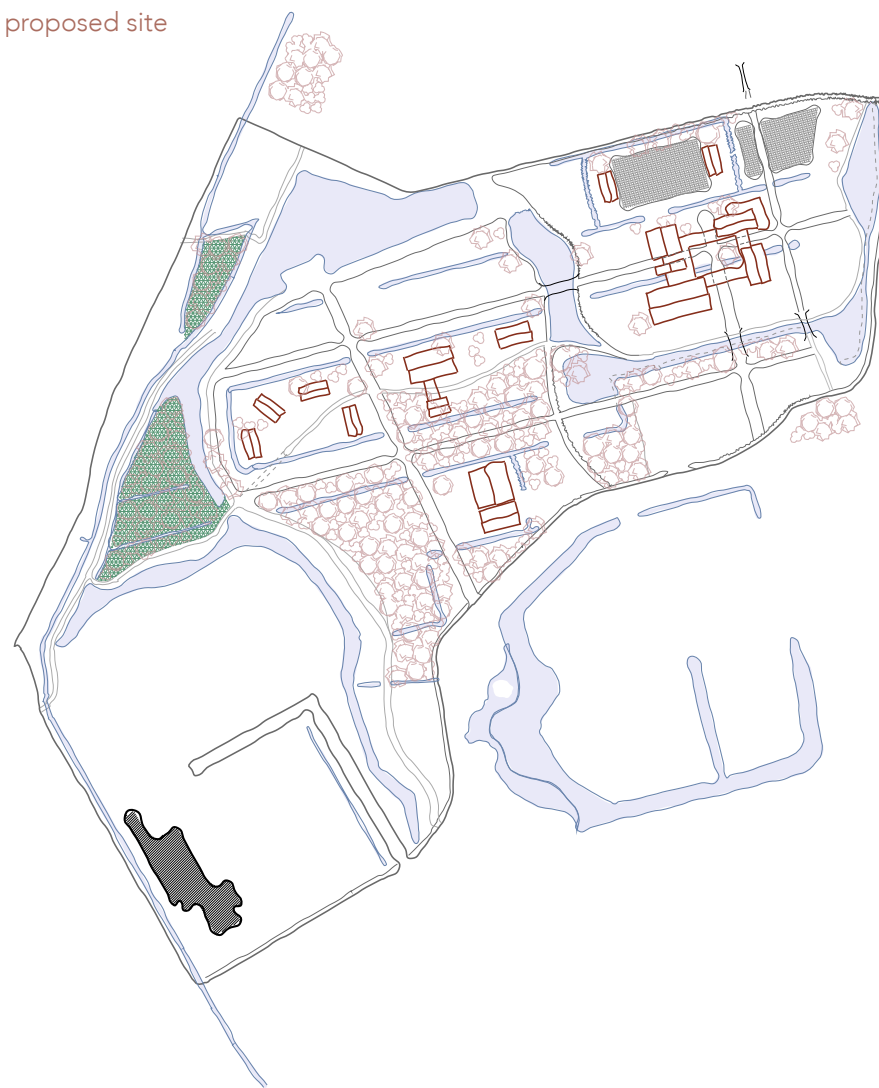




extg site



proposed site



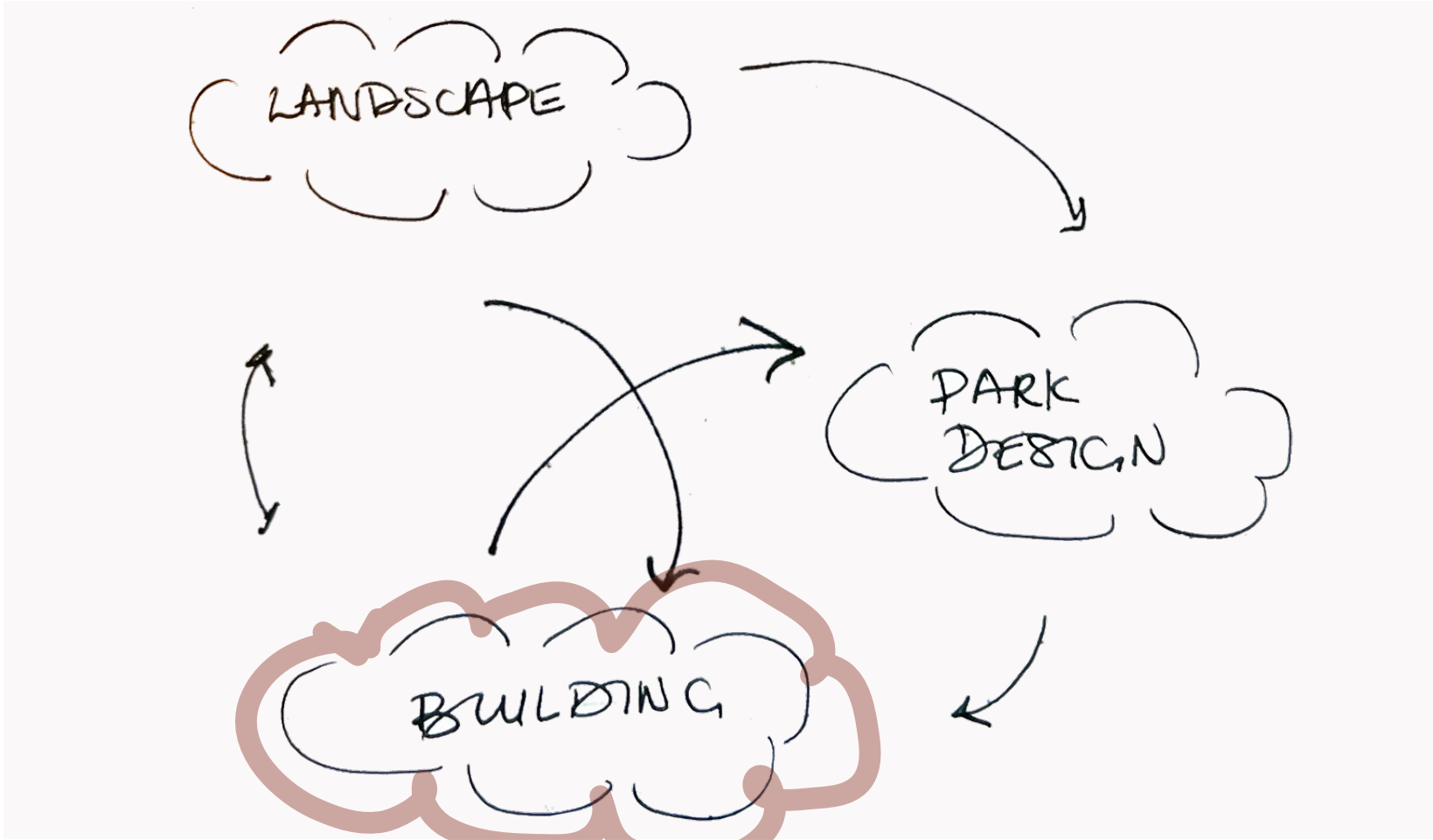
## ↑ Intervention | opt 3

Buitenhof Parkje (114,236 m<sup>2</sup> = 28.22 acres = 11.42 hectares)  
(54,873 m<sup>2</sup> = 13.56 acres = 5.487 hectares)



Intervention | opt 3 - Schematic Design

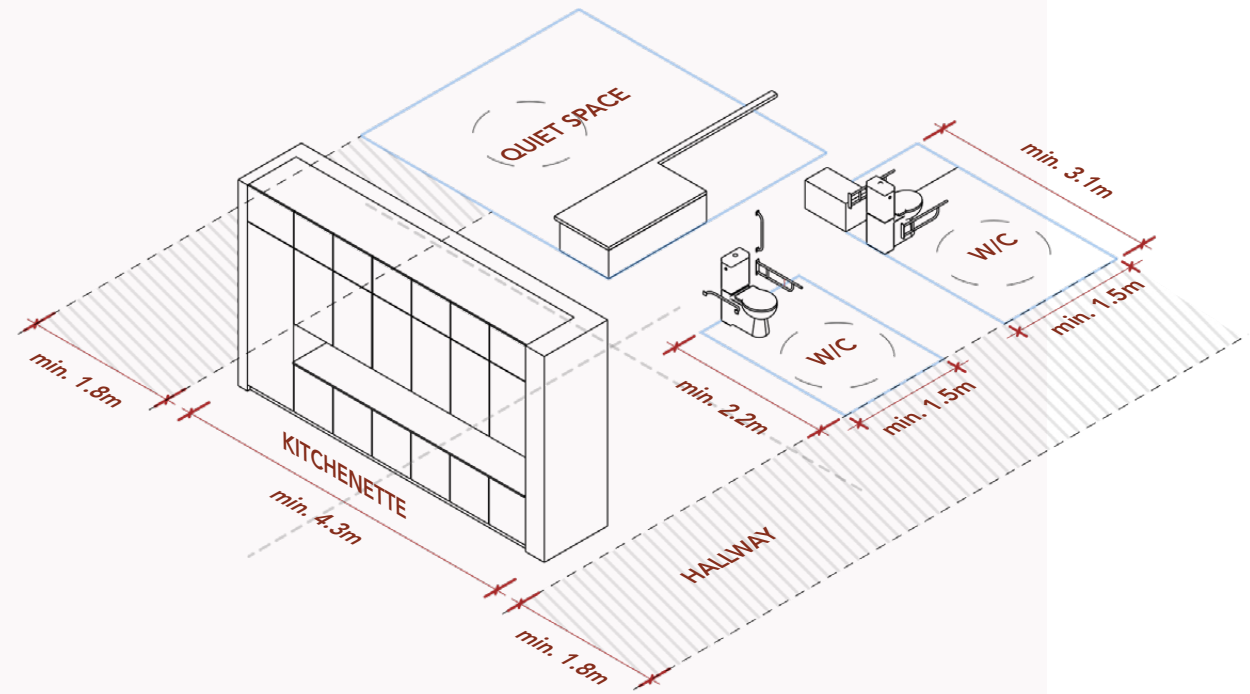
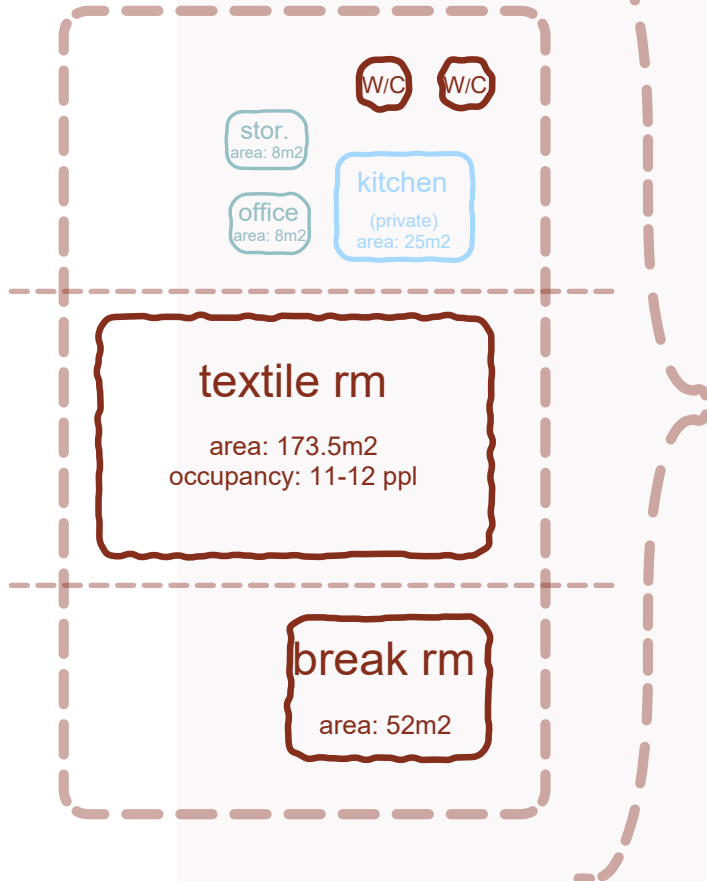




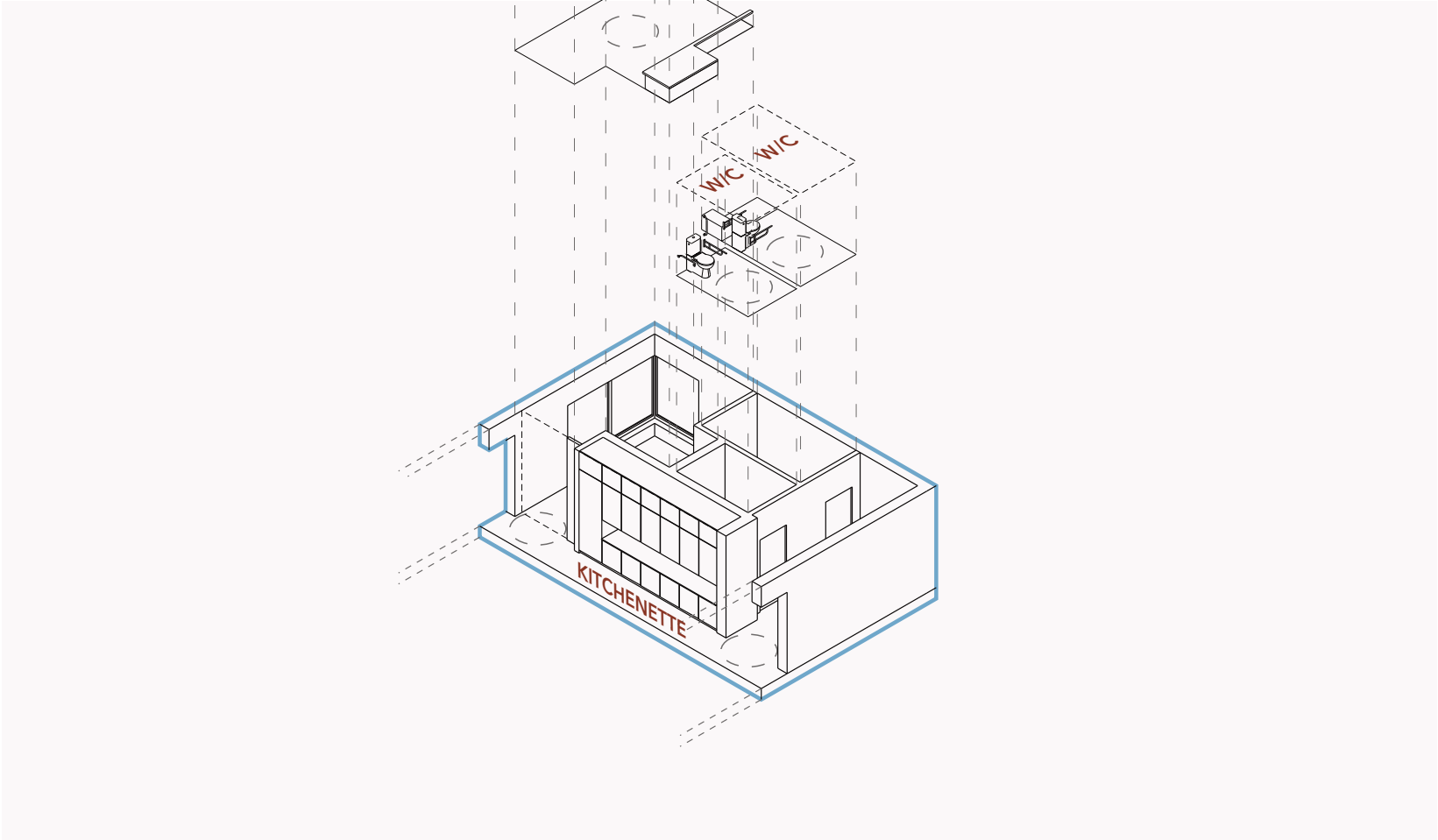
program to plan

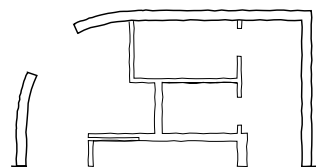
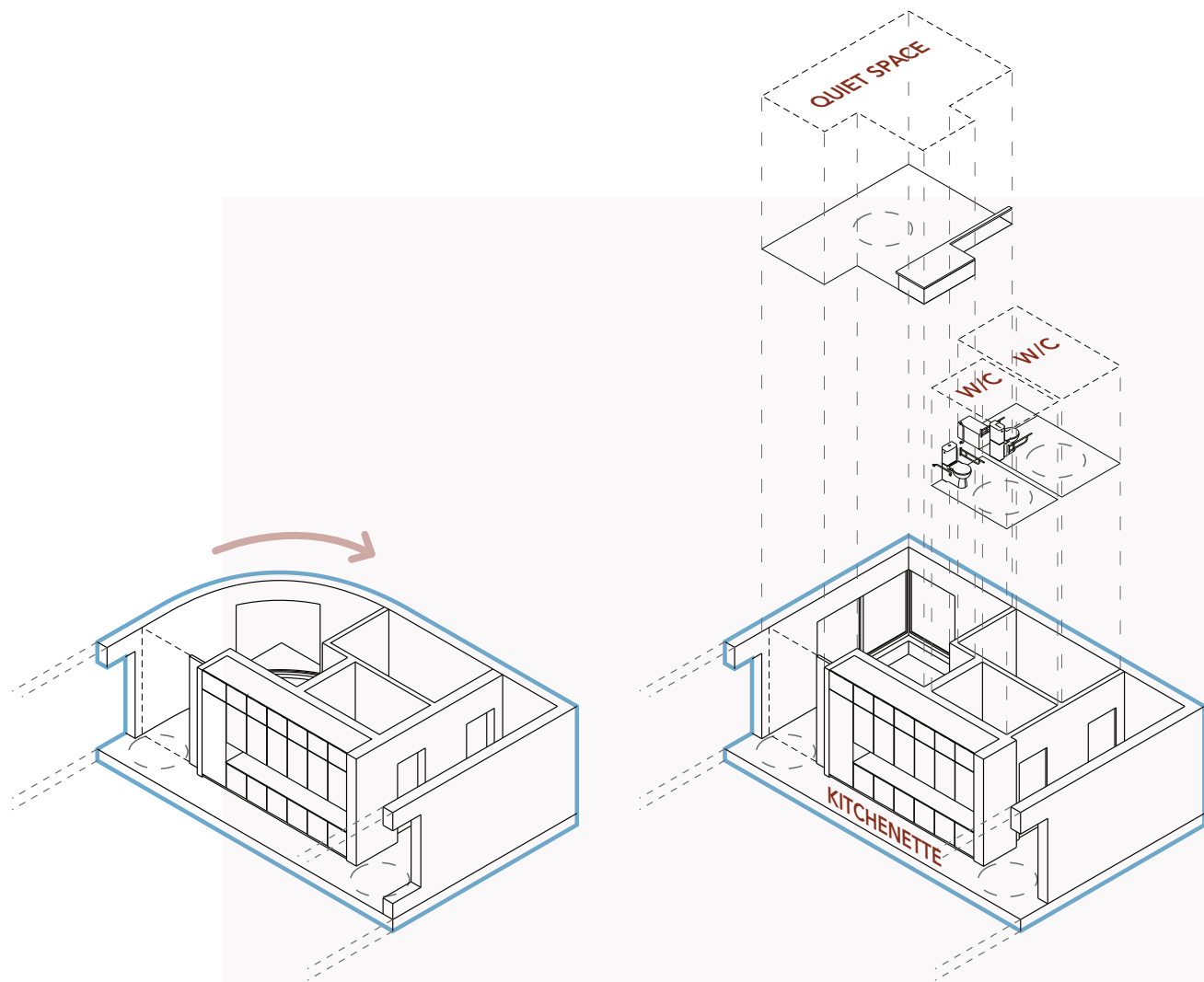


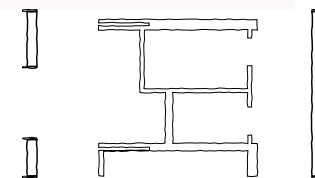
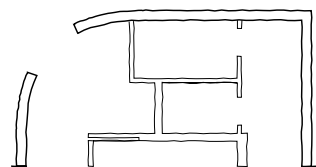
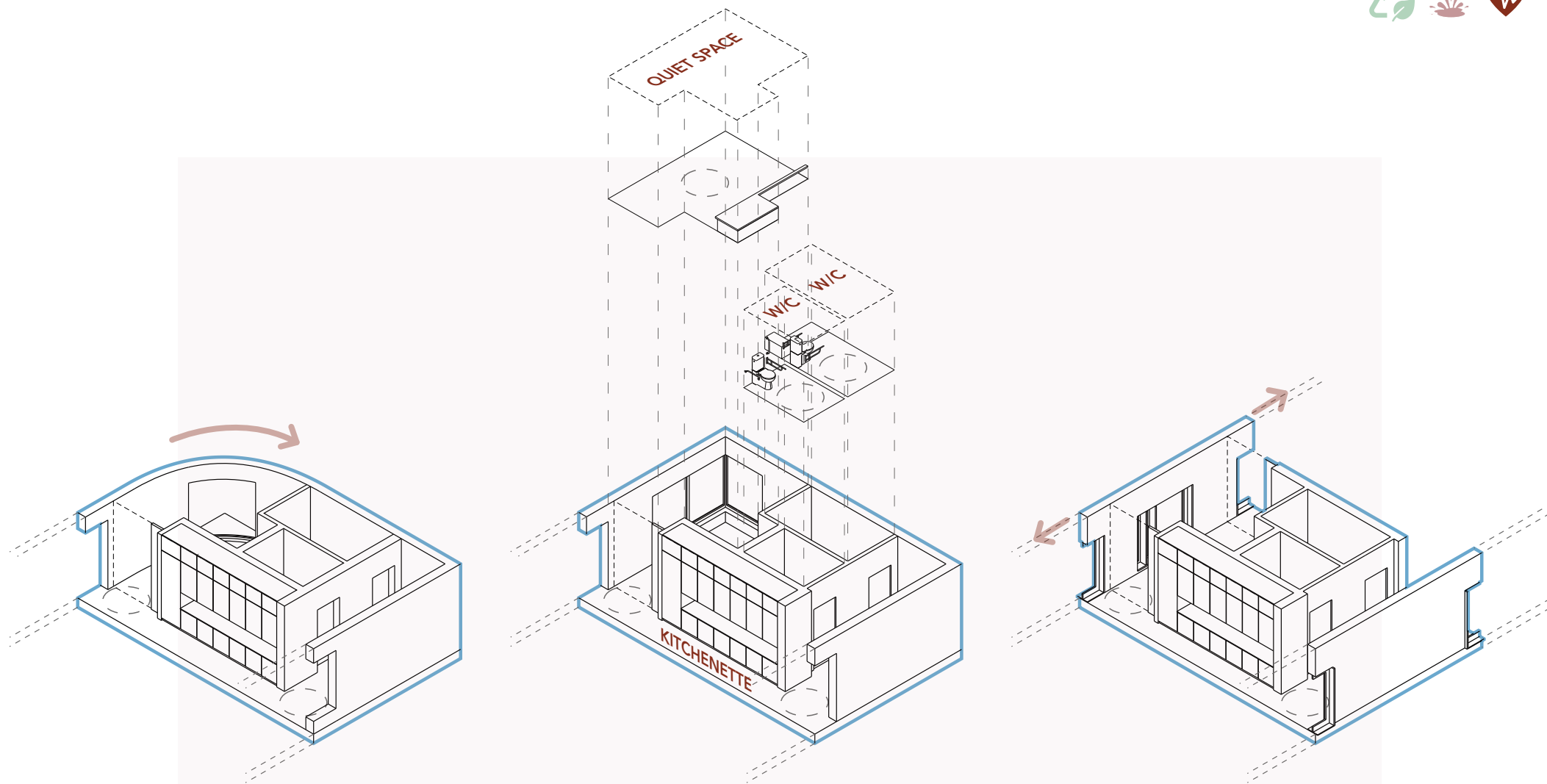
proposed activity studio - prototype  
(approx. area: +/- 200 m<sup>2</sup>)

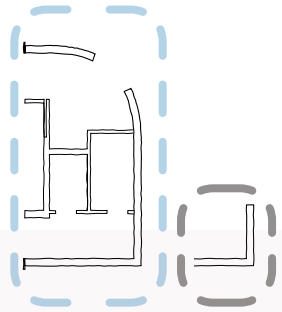


program to plan

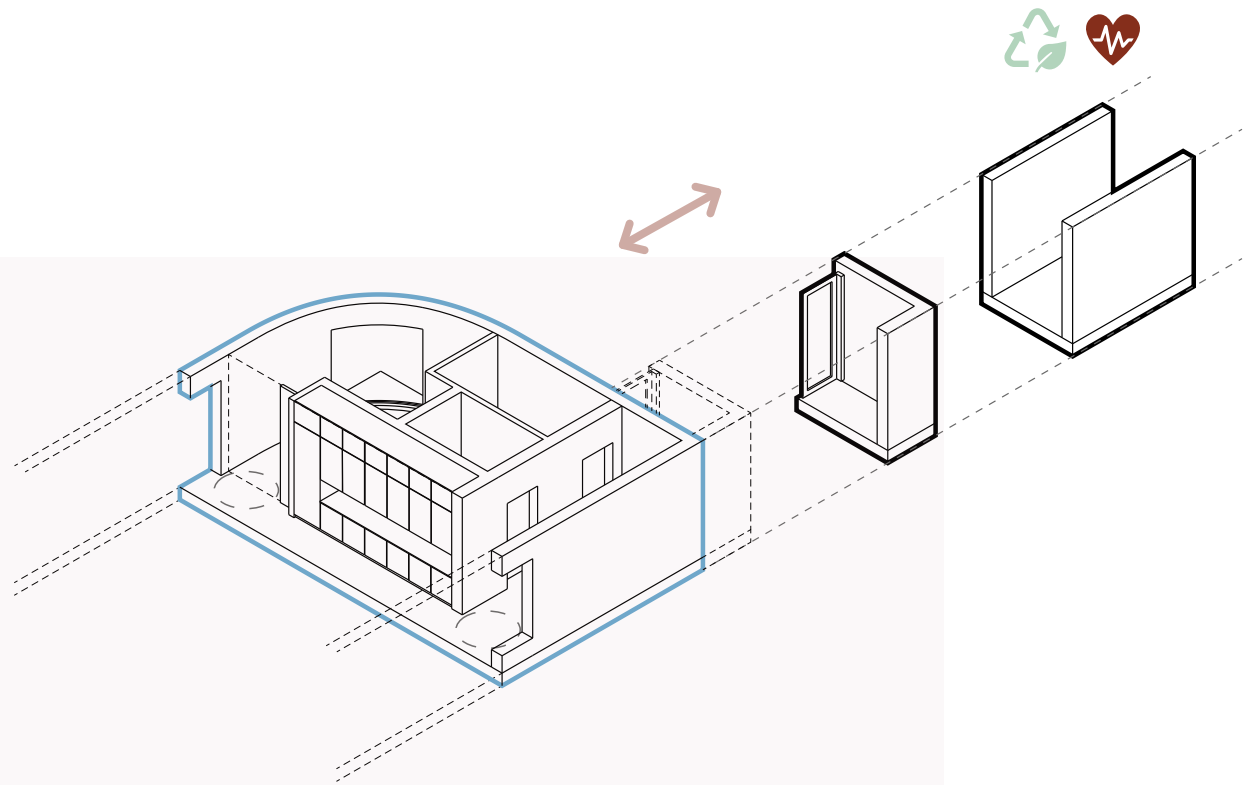


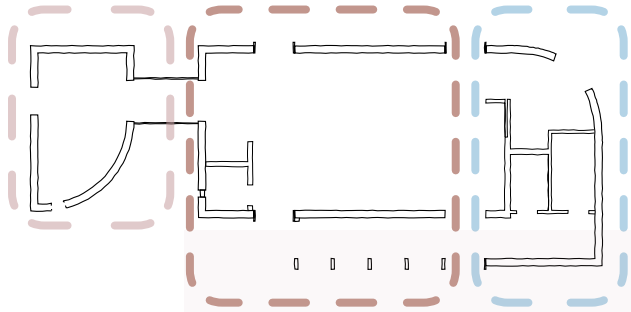






i



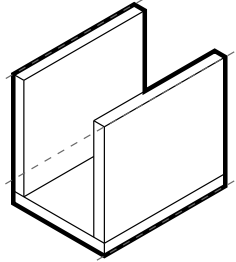


iii

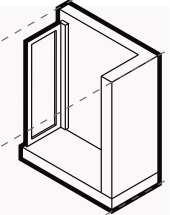
ii

i

studio | art



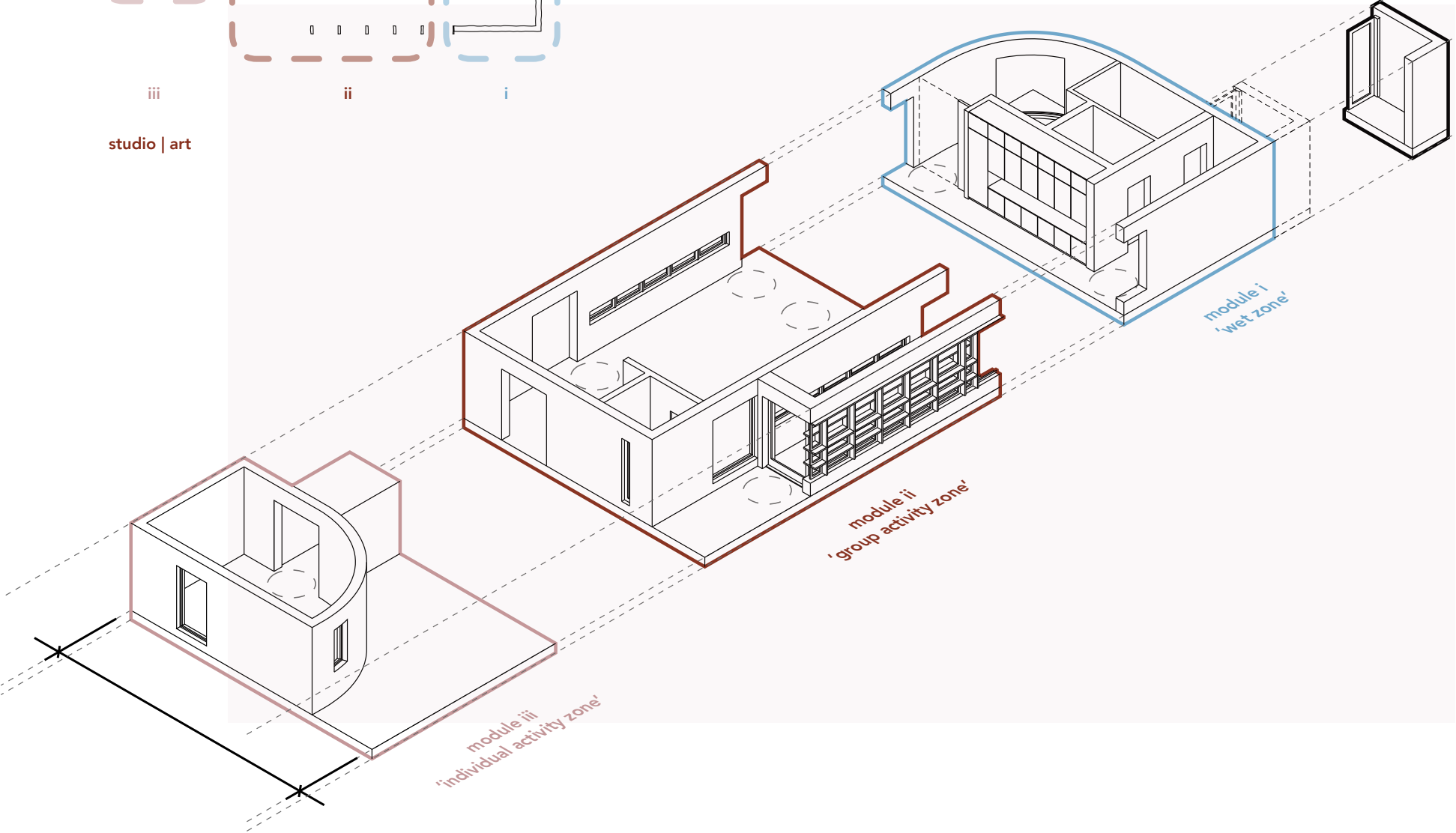
module x  
'optional extensions'

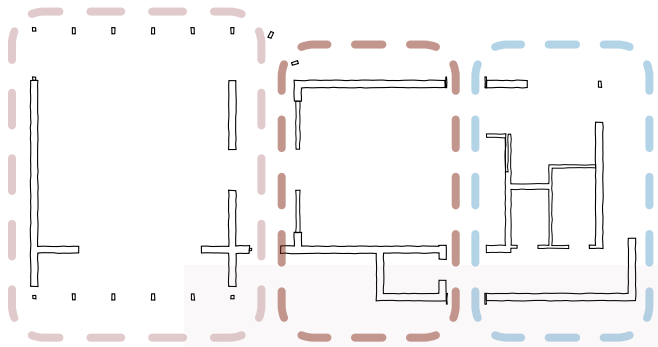


module i  
'wet zone'

module ii  
'group activity zone'

module iii  
'individual activity zone'



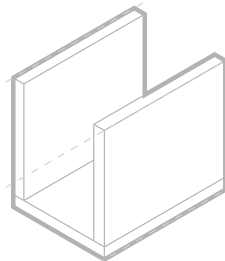


iii

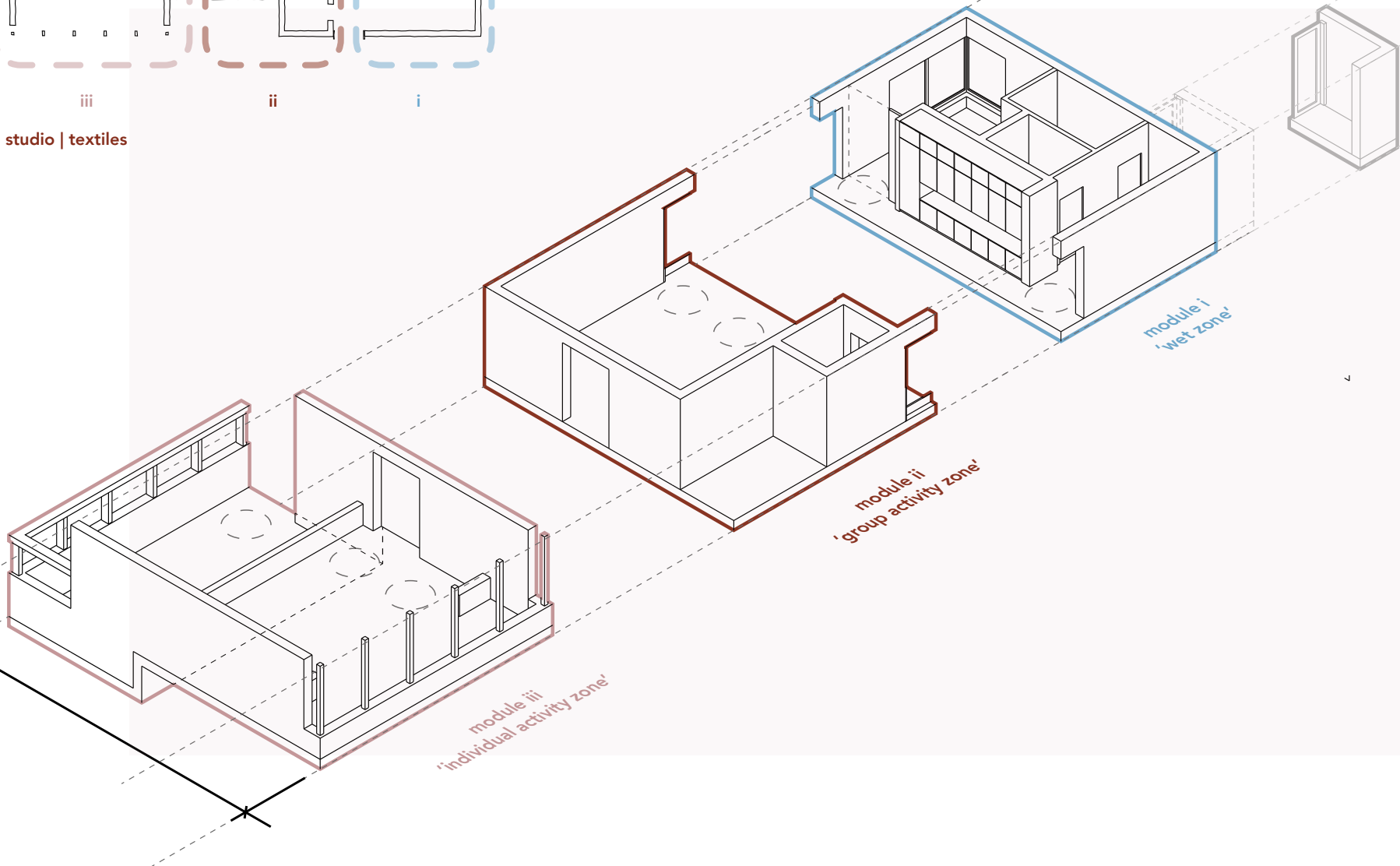
ii

i

studio | textiles



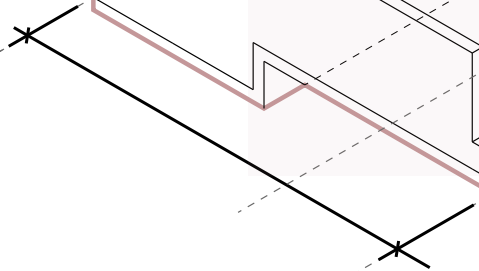
module x  
'optional extensions'



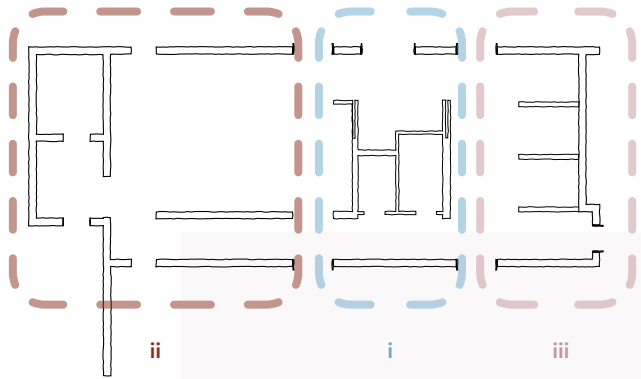
module iii  
'individual activity zone'

module ii  
'group activity zone'

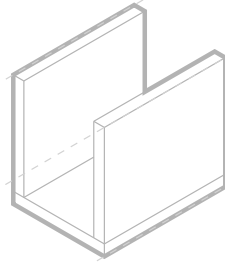
module i  
'wet zone'



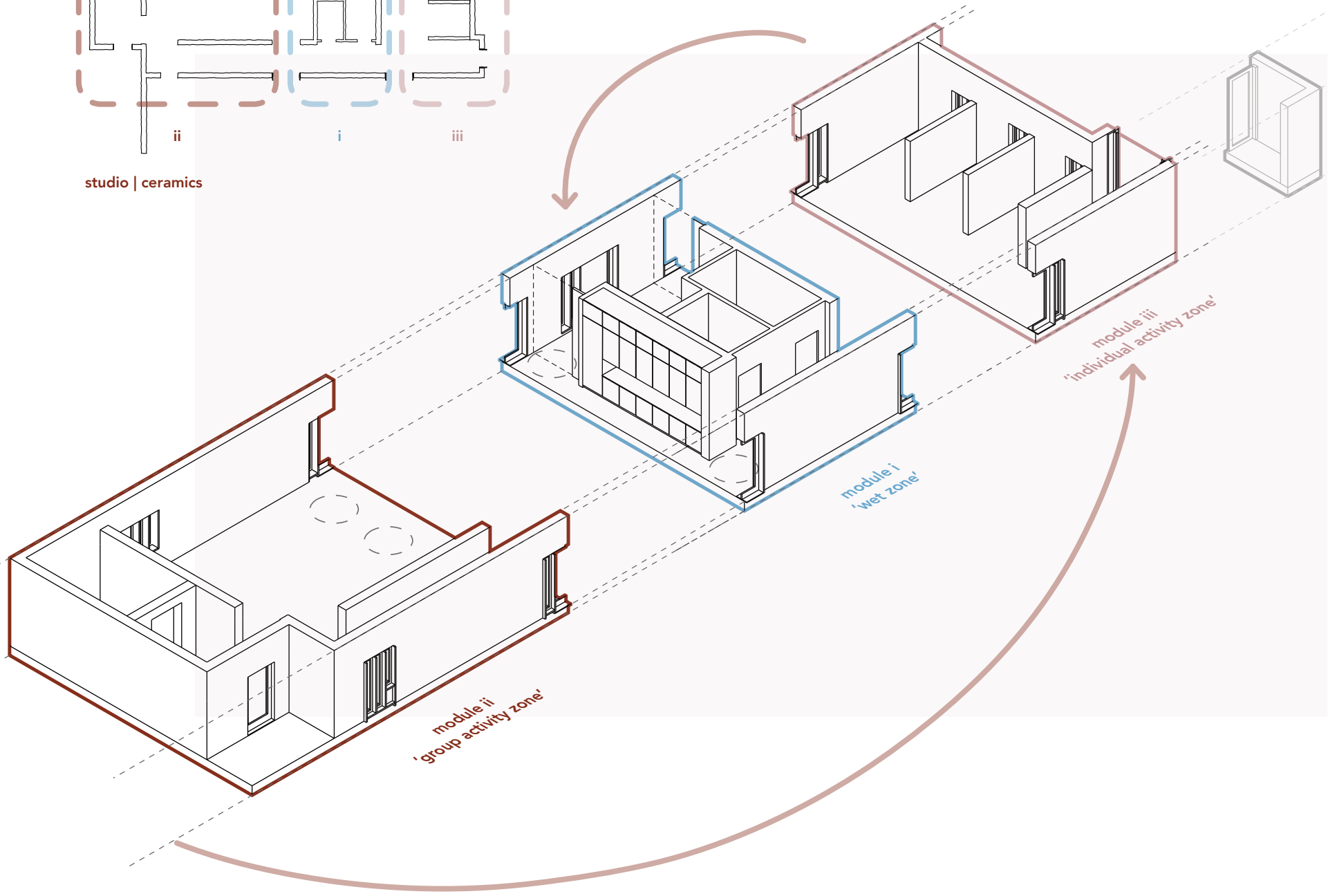




studio | ceramics



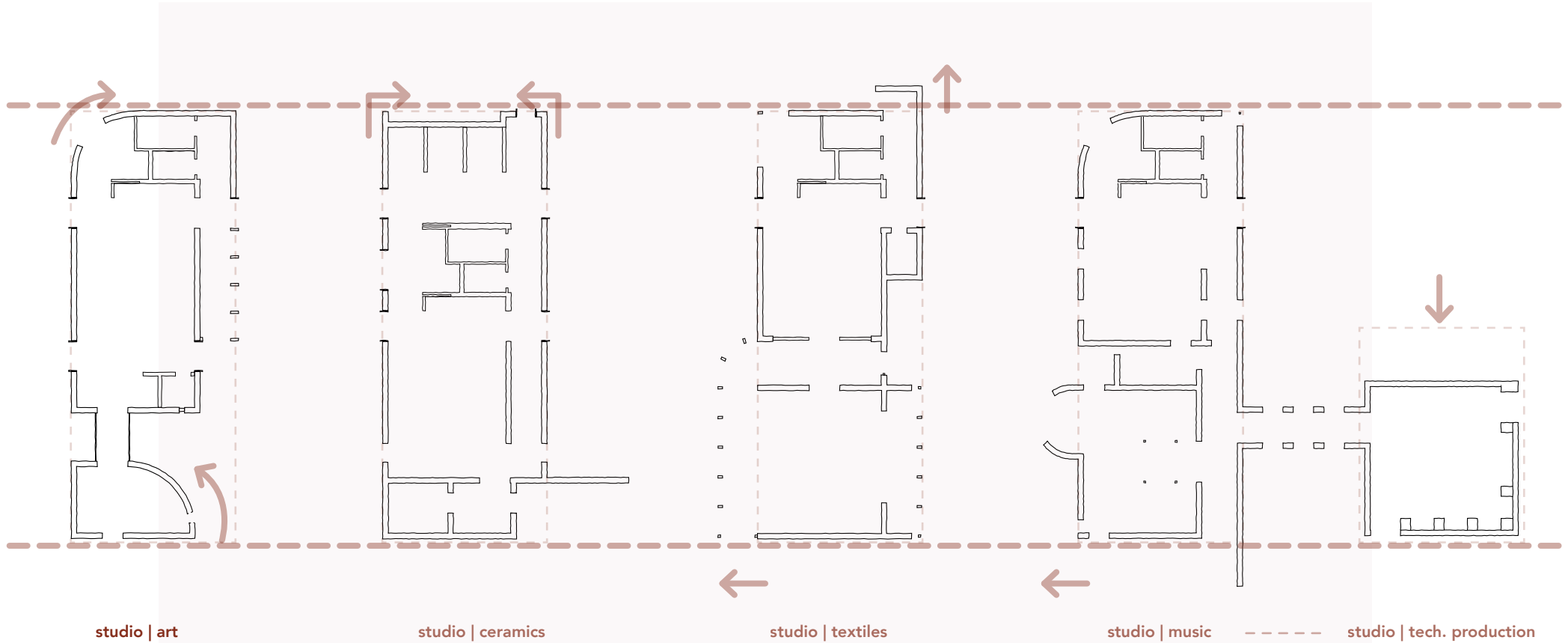
module x  
'optional extensions'



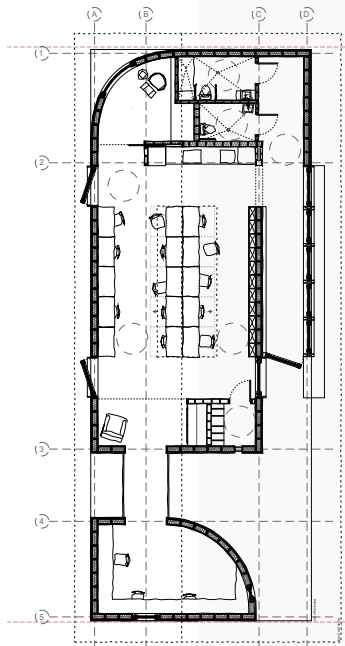
module ii  
'group activity zone'

module i  
'wet zone'

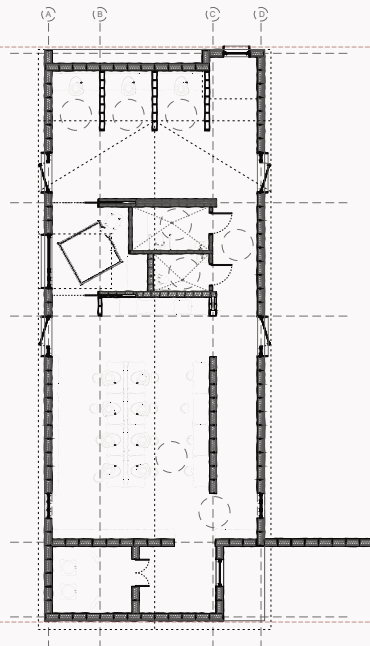
module iii  
'individual activity zone'



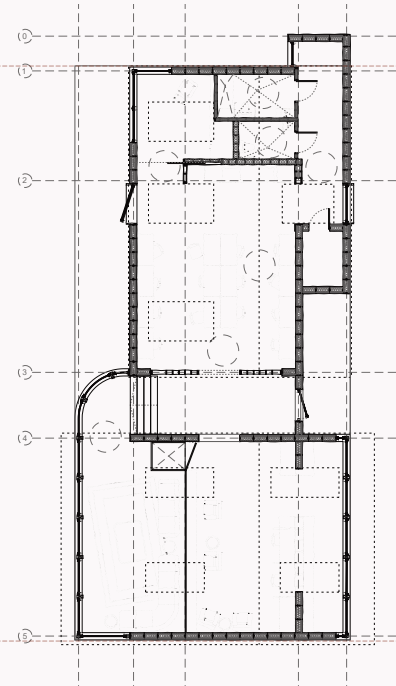
plans | variations within the rules



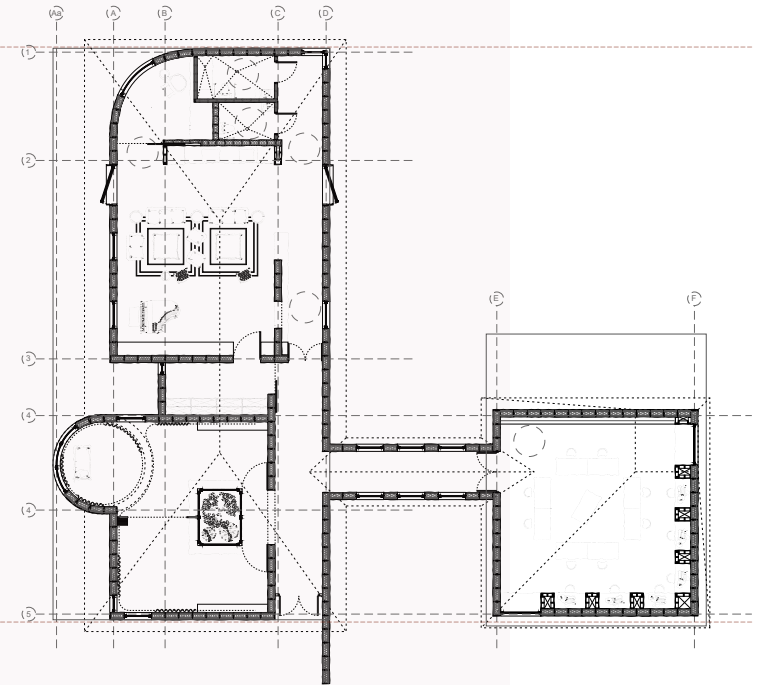
studio | art



studio | ceramics



studio | textiles



studio | music

----- studio | tech. production



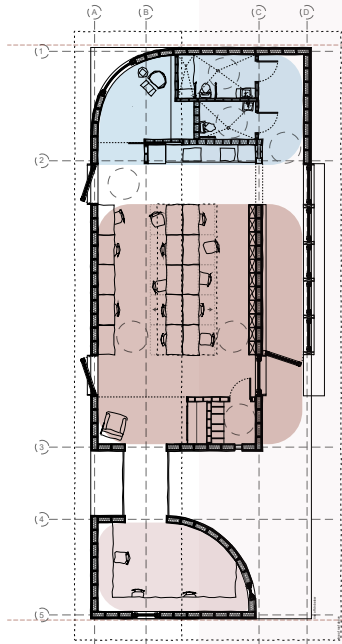
module i | 'wet zone'



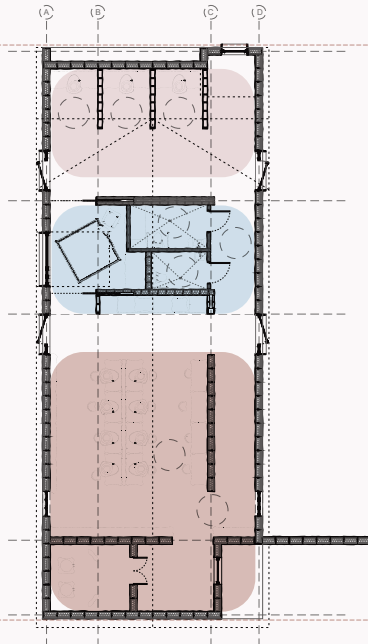
module iii | 'group activity'



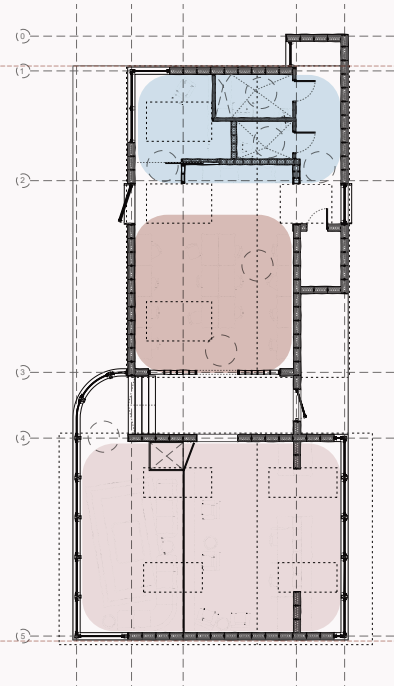
module ii | 'individual activity'



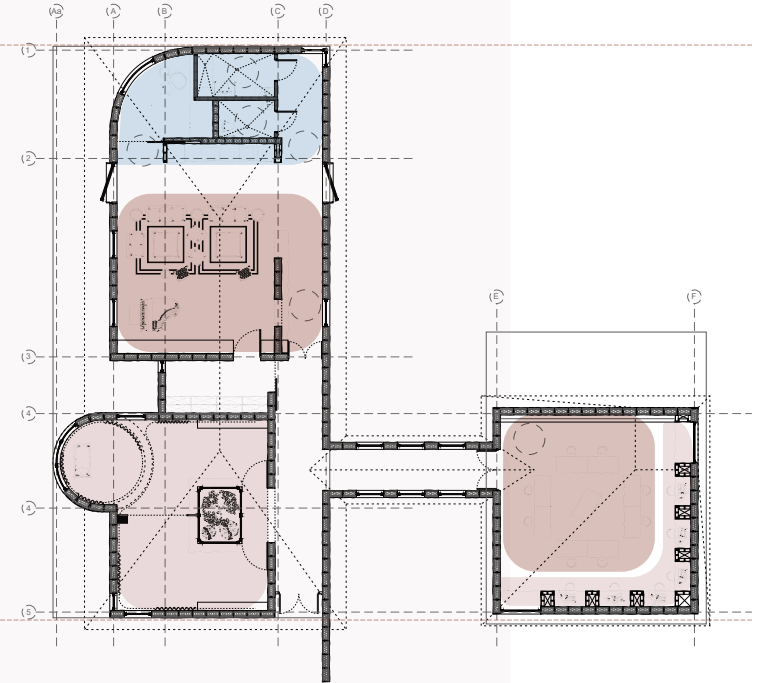
studio | art



studio | ceramics






studio | textiles

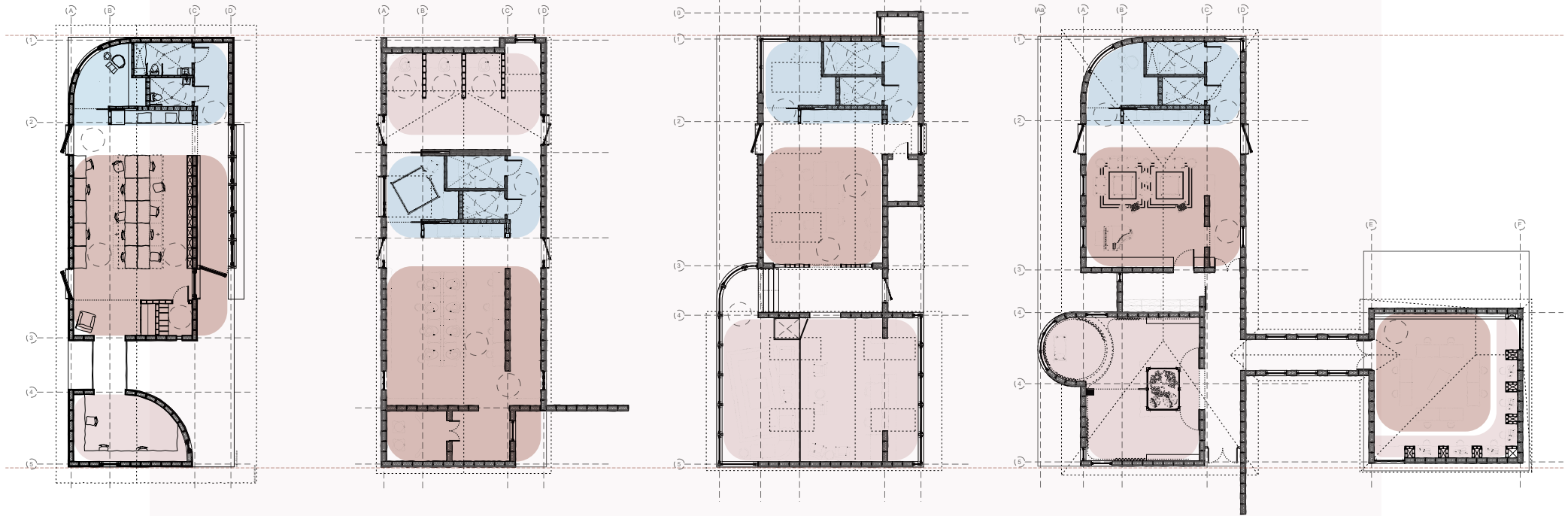


studio | music

studio | tech. production



-  module i | 'wet zone'
-  module iii | 'group activity'
-  module ii | 'individual activity'



studio | art

studio | ceramics

studio | textiles

studio | music

studio | tech. production



barrier-free widths



railings & supports



lift accessories



bench seating



built-in seating



level paths of travel



comfortable slopes



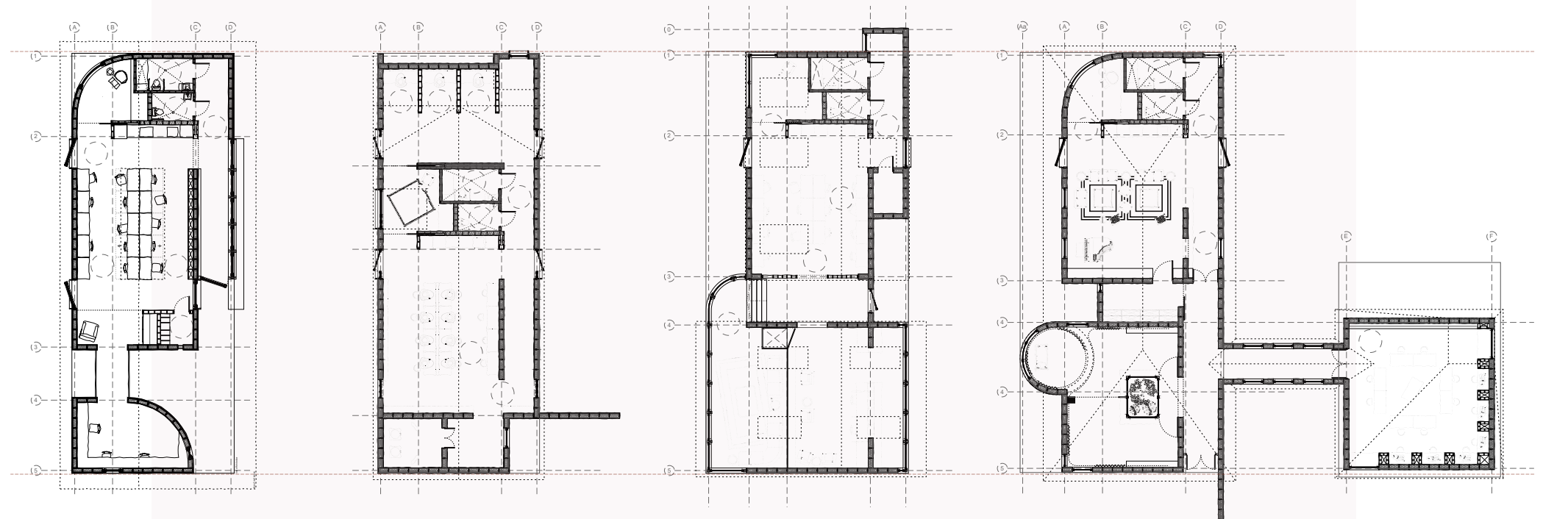
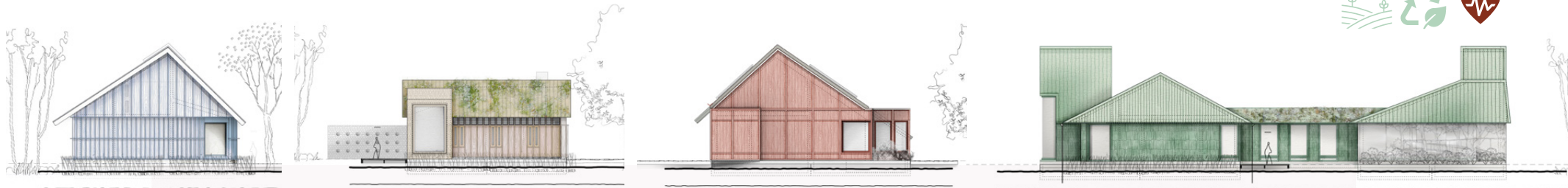
wayfinding



personalized storage



comfort accessories



studio | art

studio | ceramics

studio | textiles

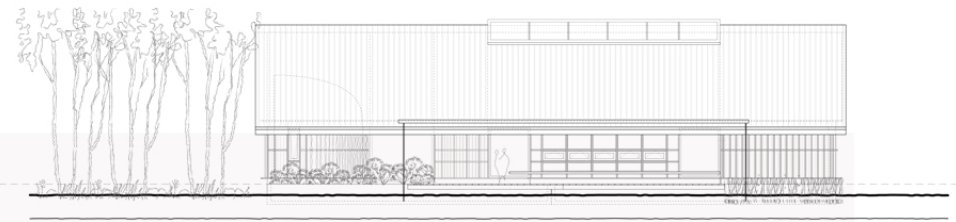
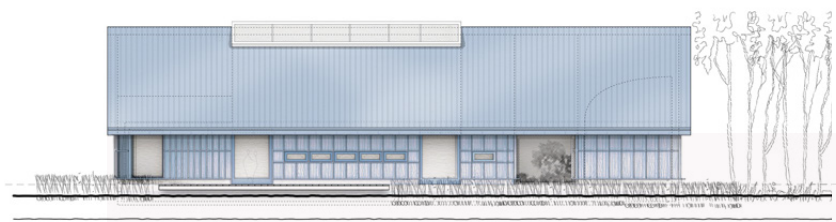
studio | music

studio | tech. production

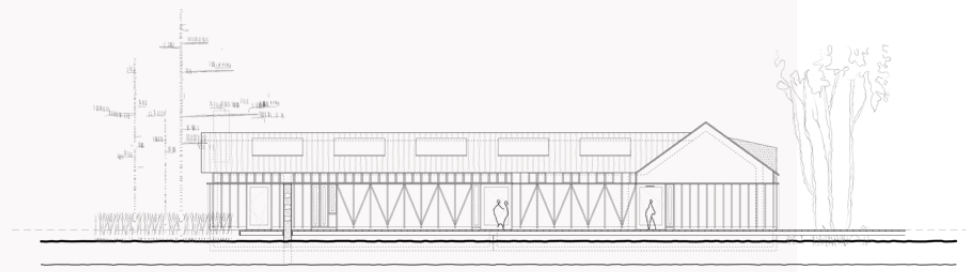




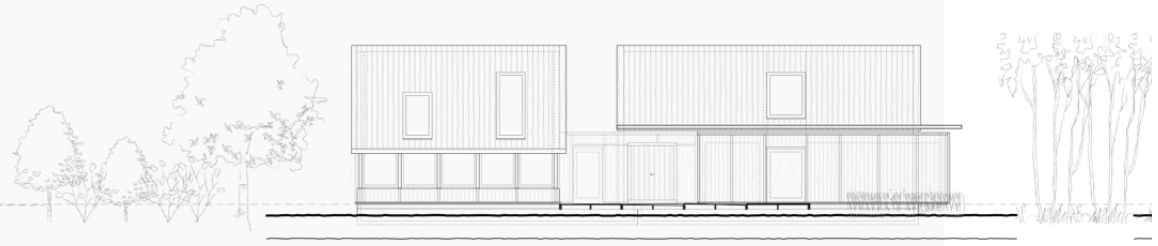
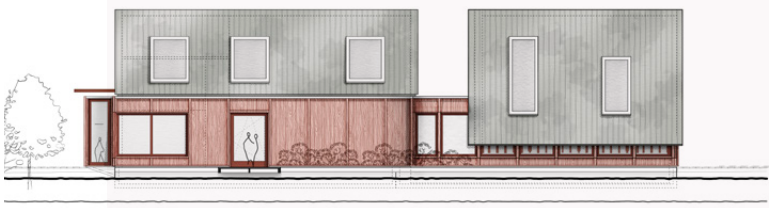
studio | art



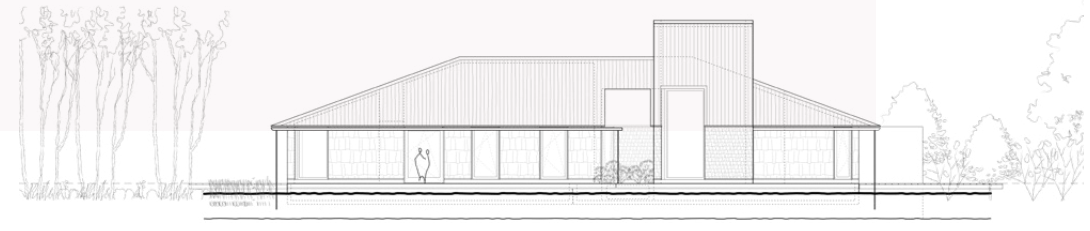
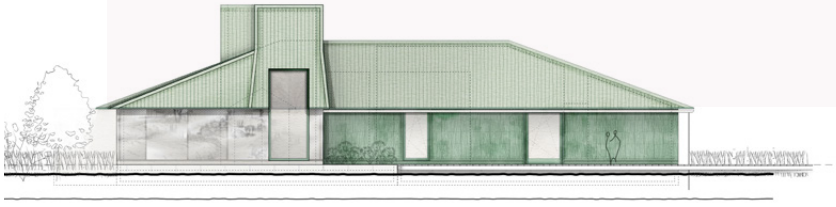
studio | ceramics

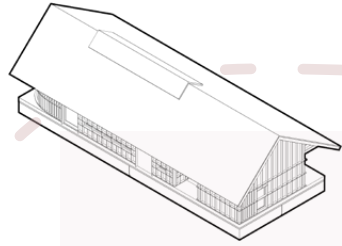


studio | textiles

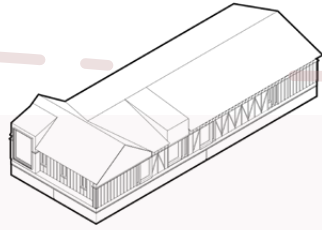


studio | music & production

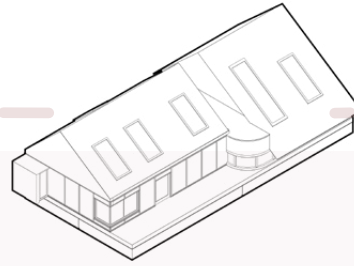




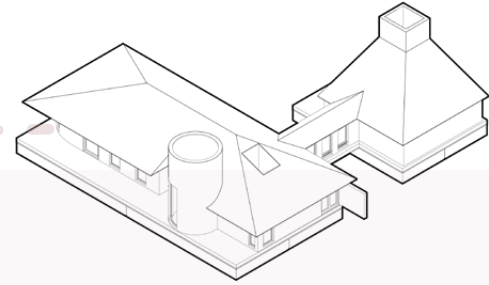
studio | art



studio | ceramics

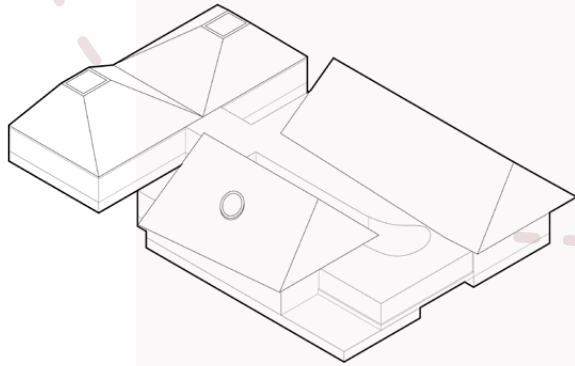


studio | textiles

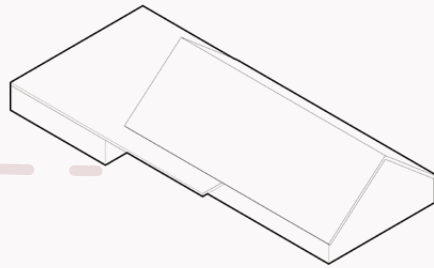


studio | music

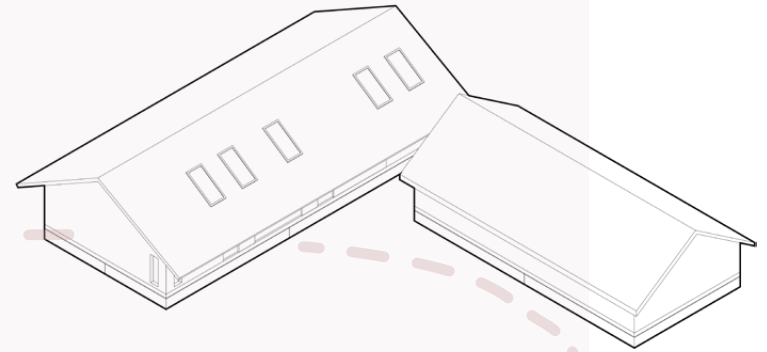
studio | tech. production



studio complex | yoga/ exercise

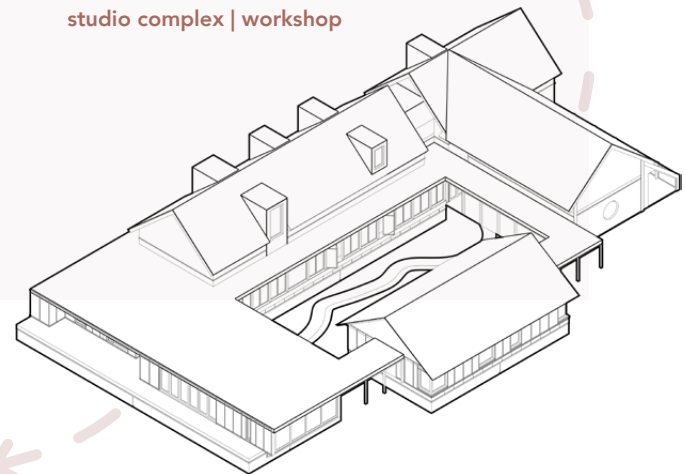


studio | teaching kitchen



studio complex | workshop

proposal | pavilions realized



studio complex | therapy

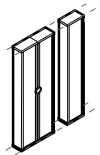




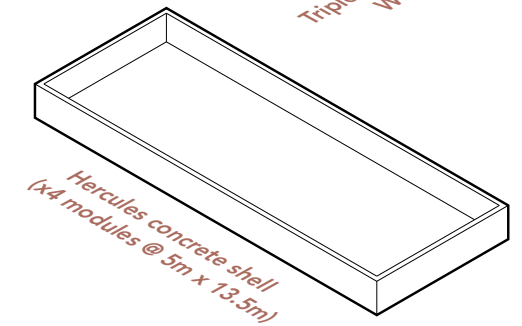
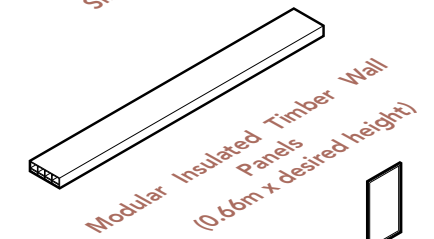
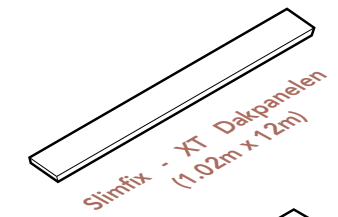
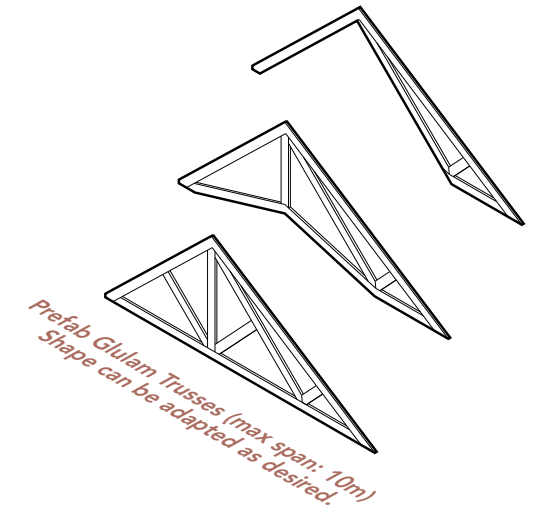
## KIT OF PARTS

material selection criteria:

- modular units
- prefabricated units
- demountable & dry connections
- recyclable materials
- circular materials
- aligned to passive standards
- manageable sizes for rapid construction & delivery



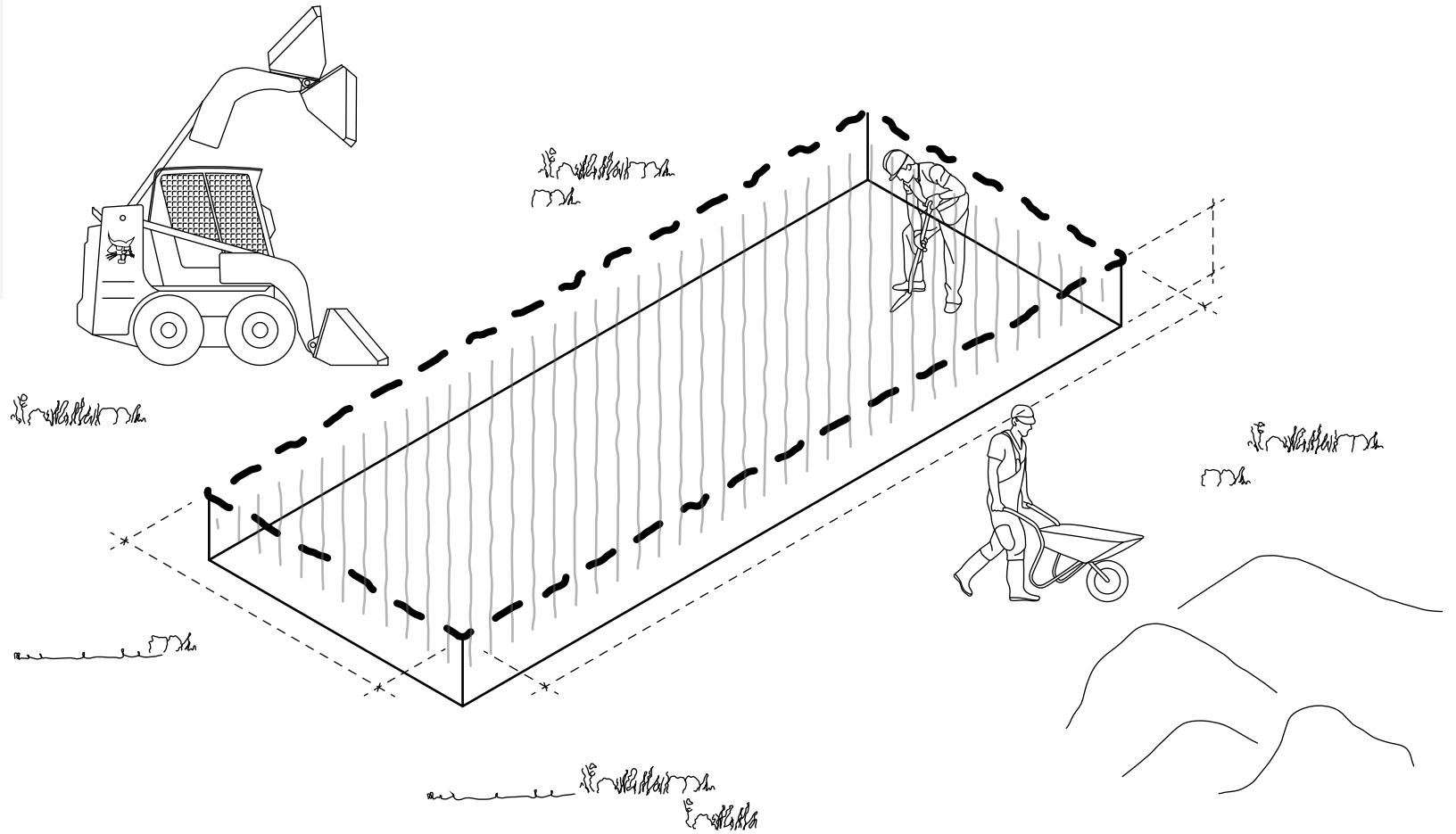
Modular Insulated Timber  
Wall Panels  
(0.66m x desired height)

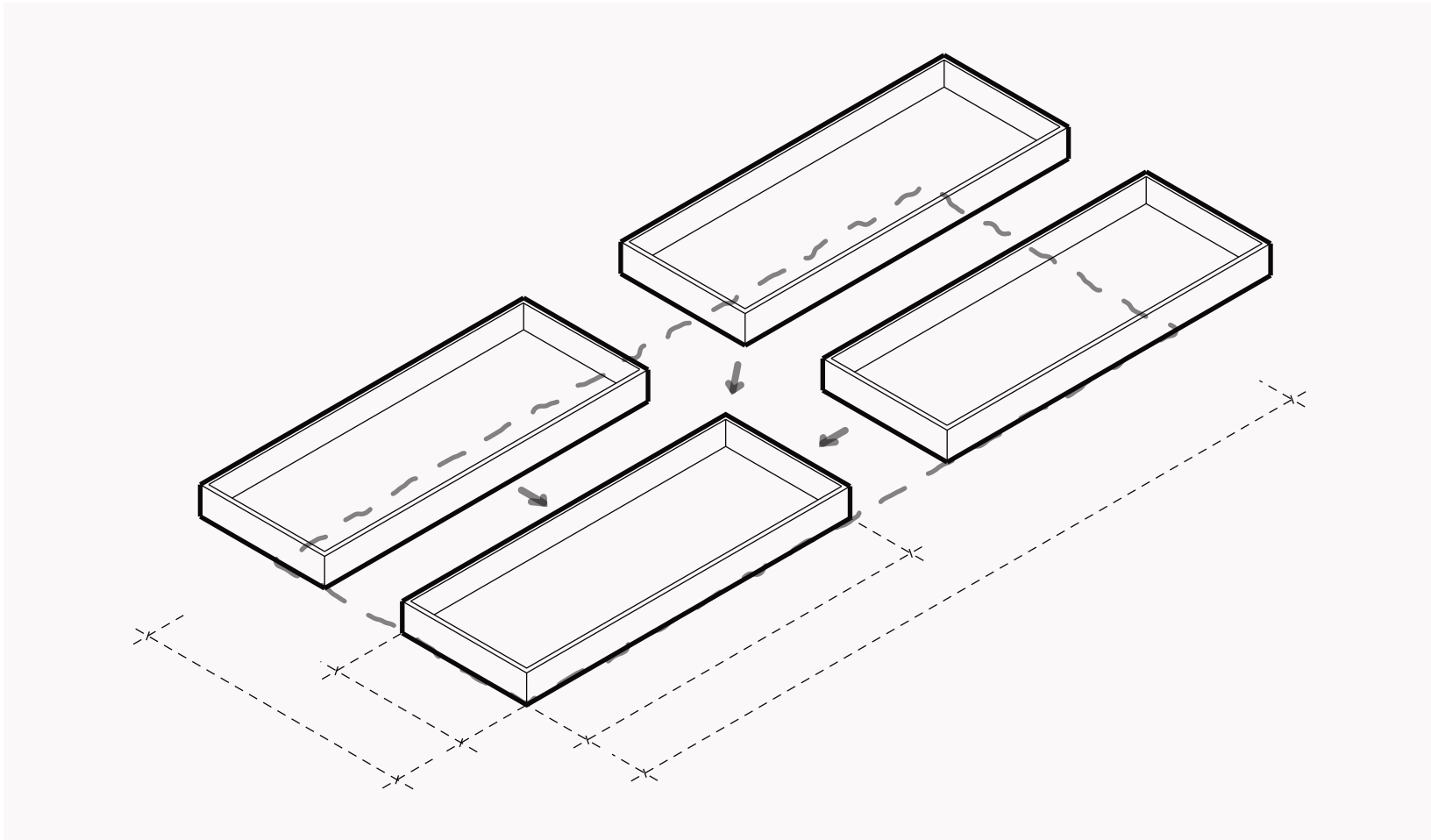




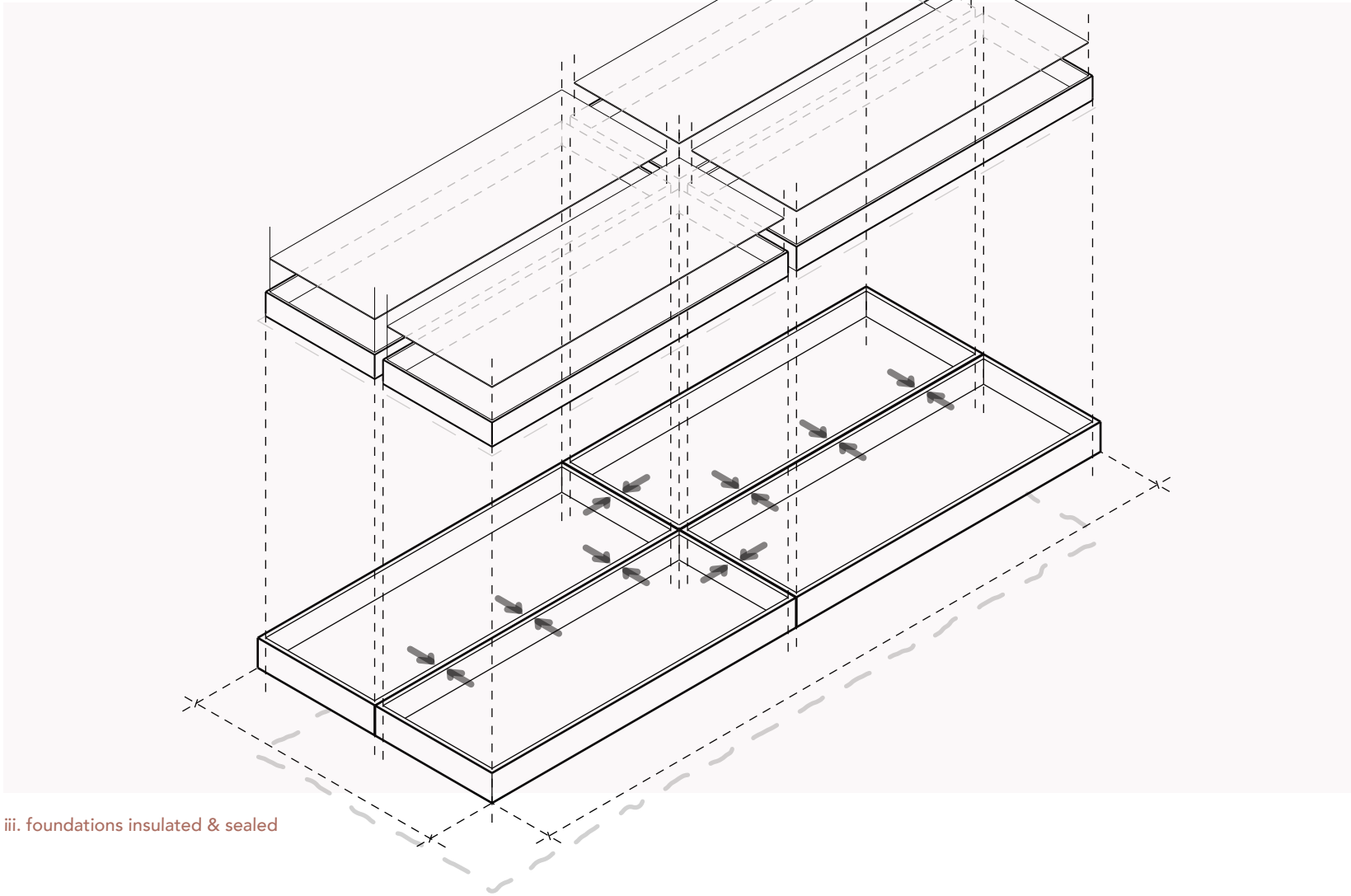
# ASSEMBLY OF PARTS

i. localized site excavation

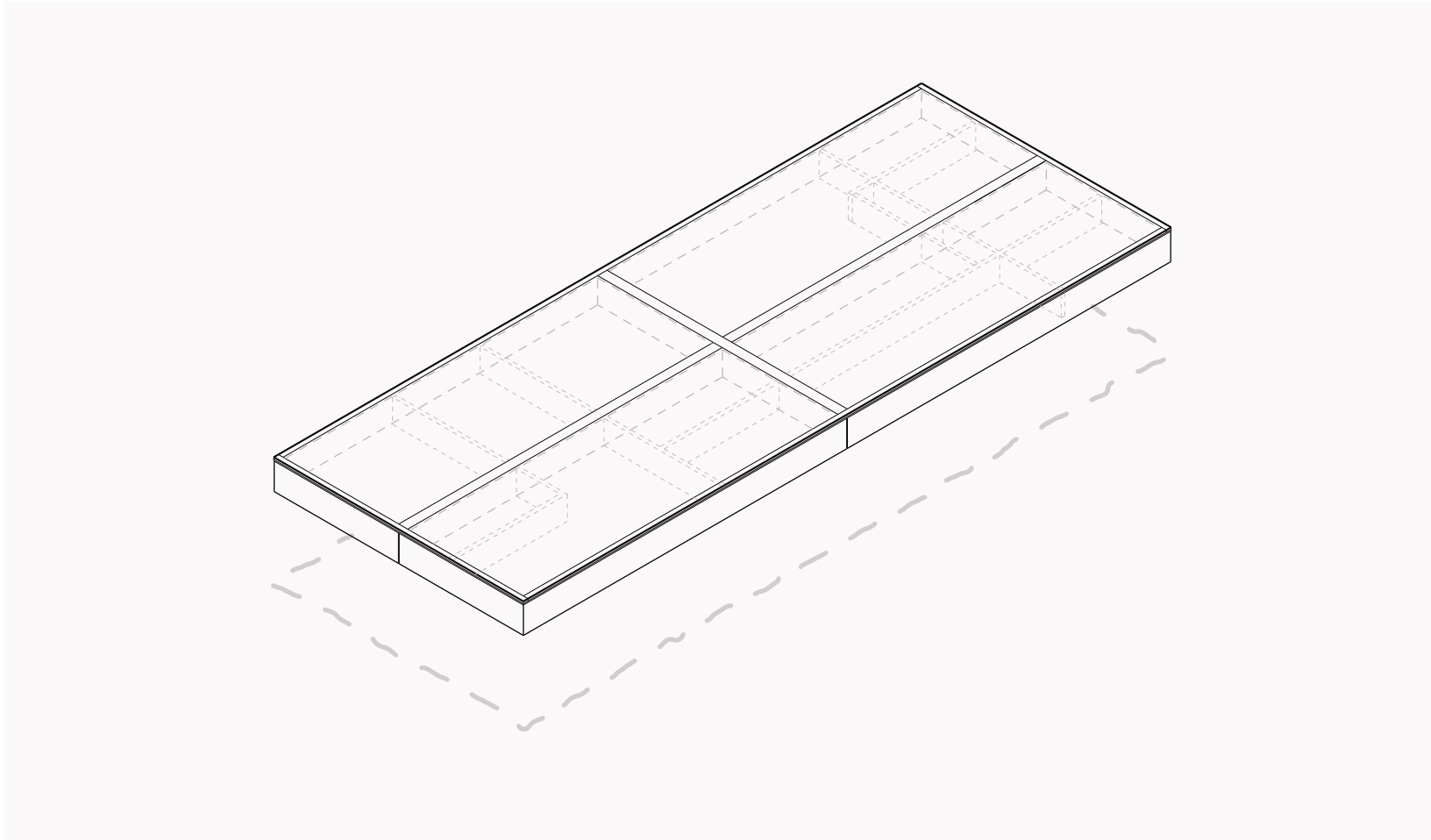




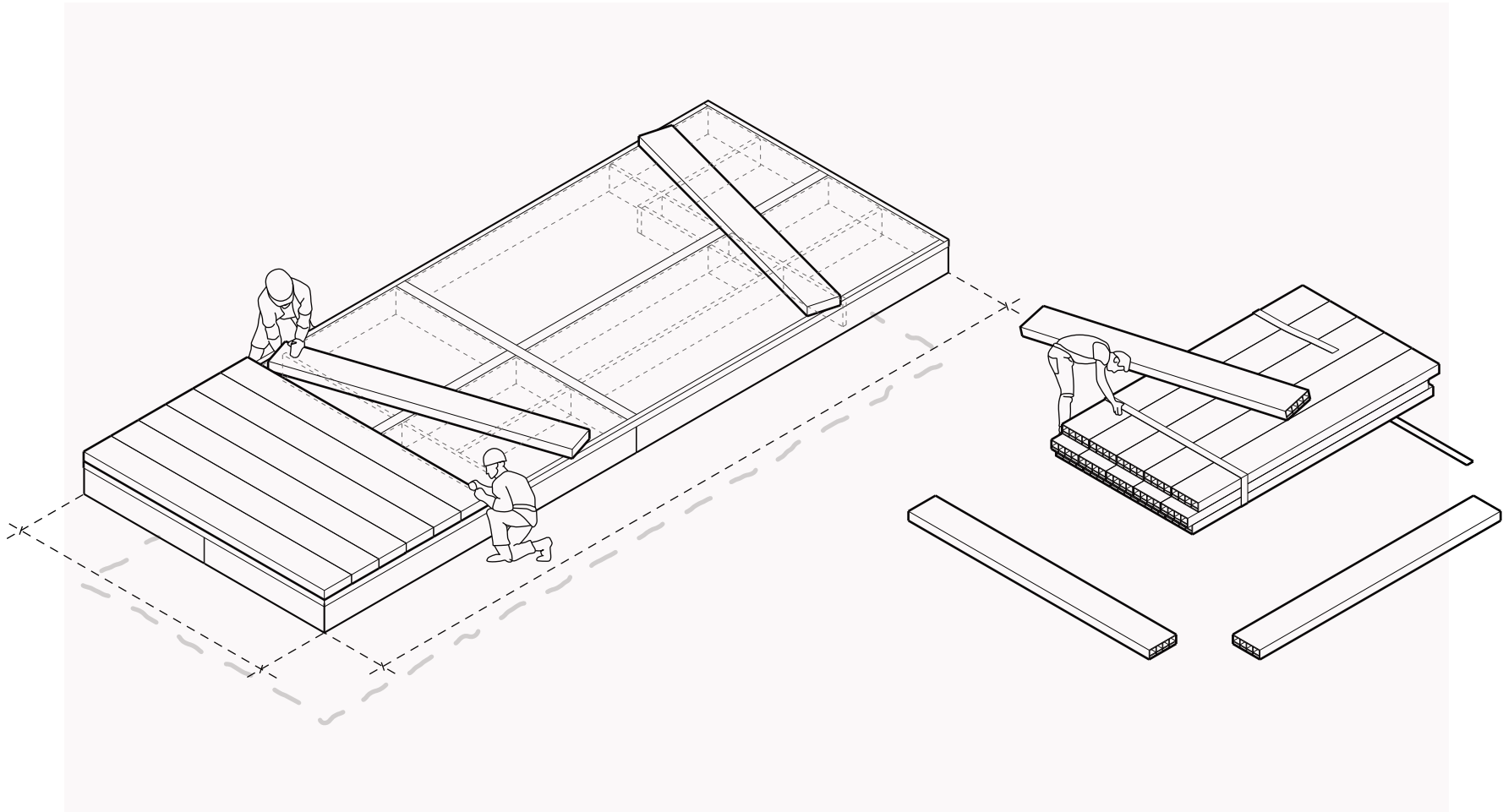
ii. joining of modular prefab foundation 'boats'



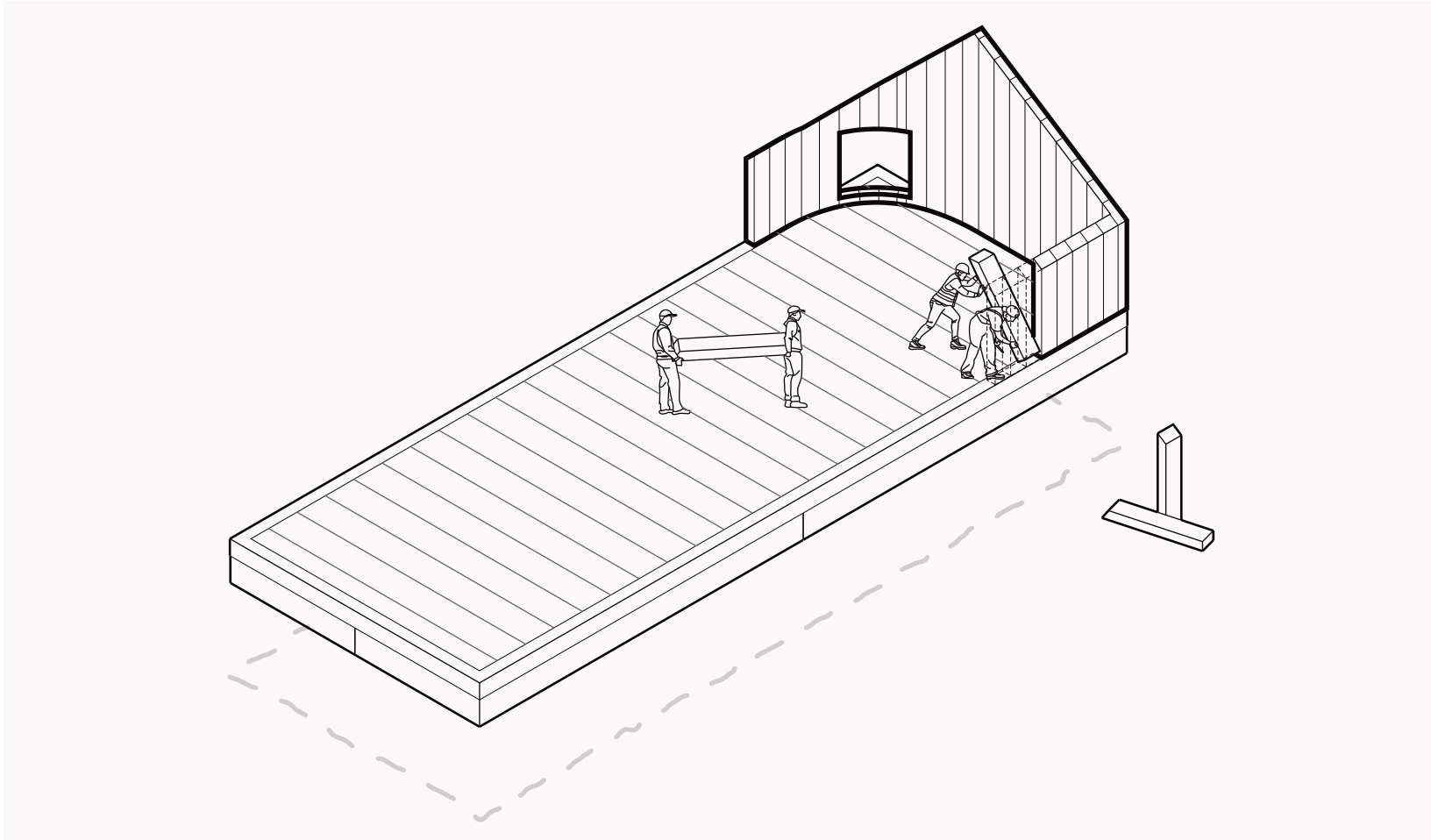
iii. foundations insulated & sealed



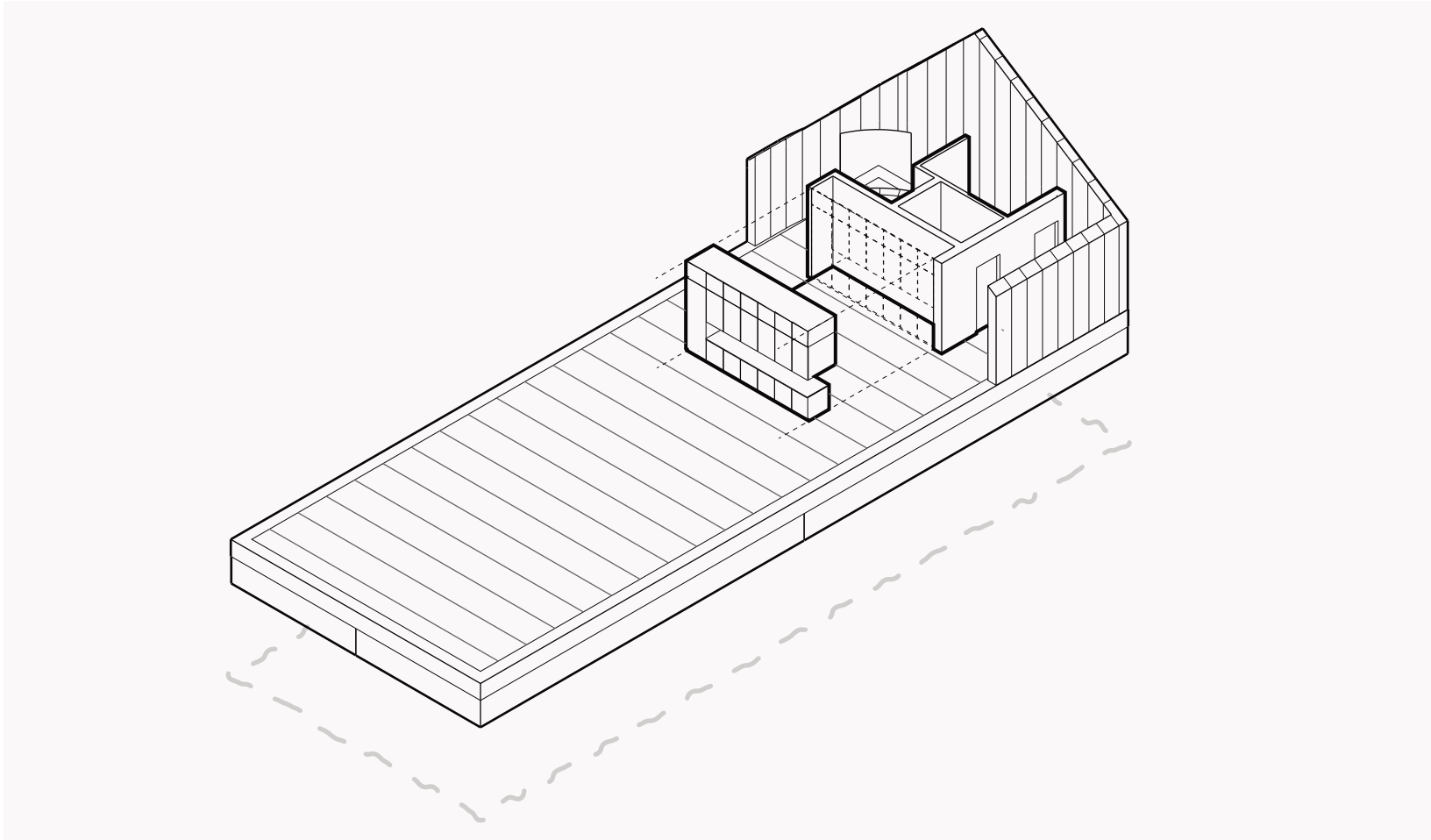
iv. supporting walls arranged within as needed per plan



v. installation of structural & insulated floor modules

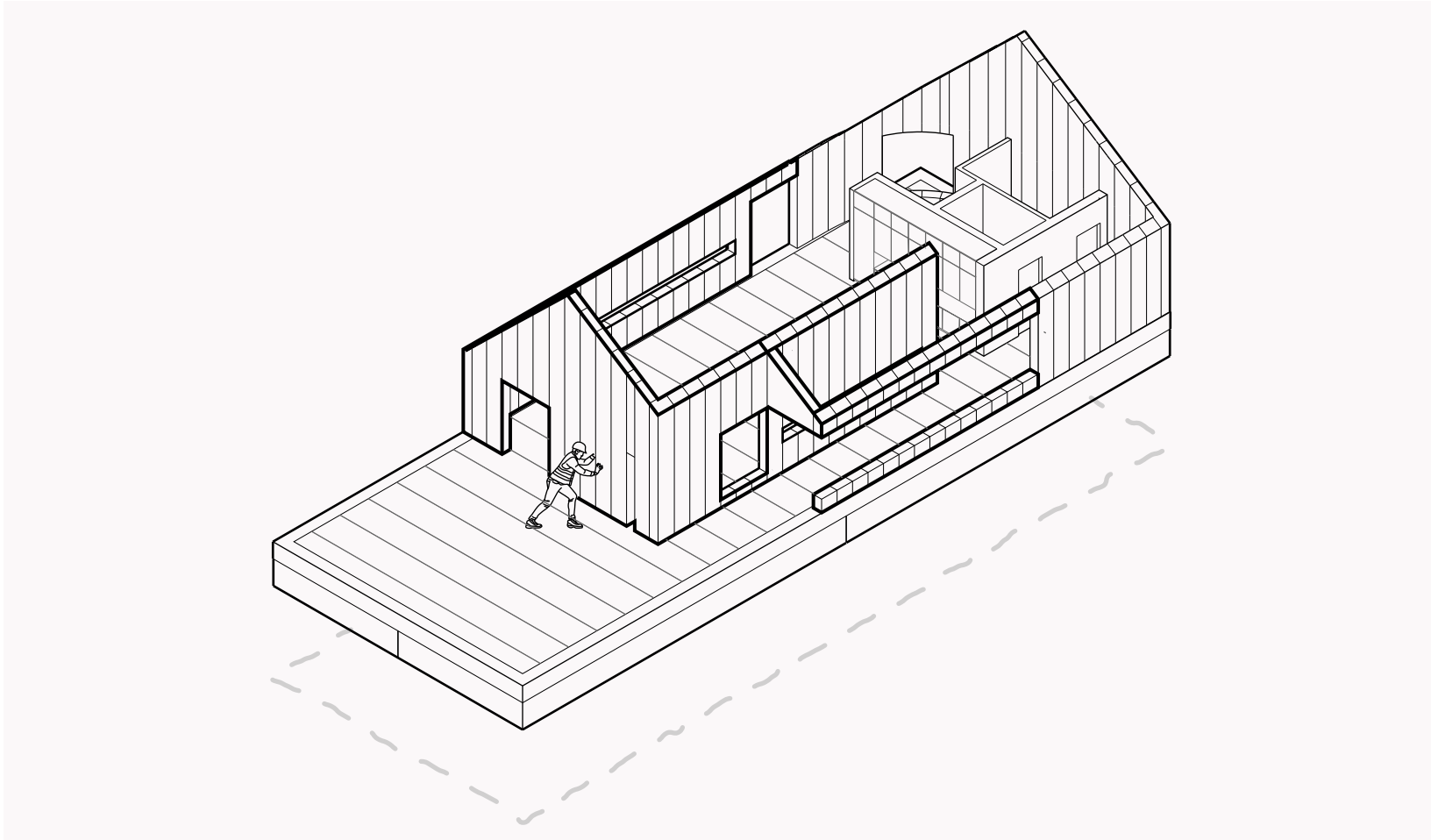


vi. installation of modular, insulated & load-bearing wall system

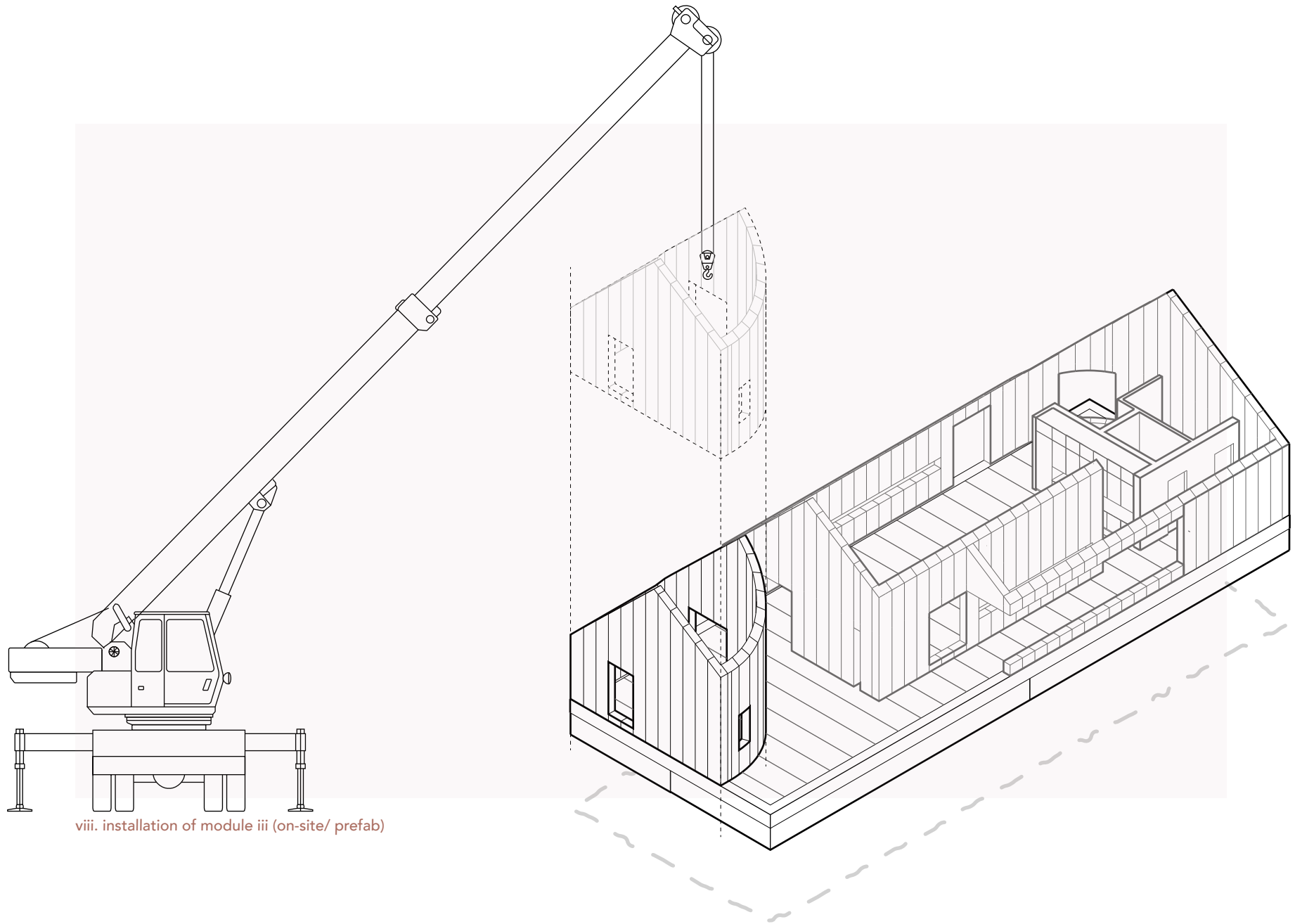


vii. modular 'wet components' of module i

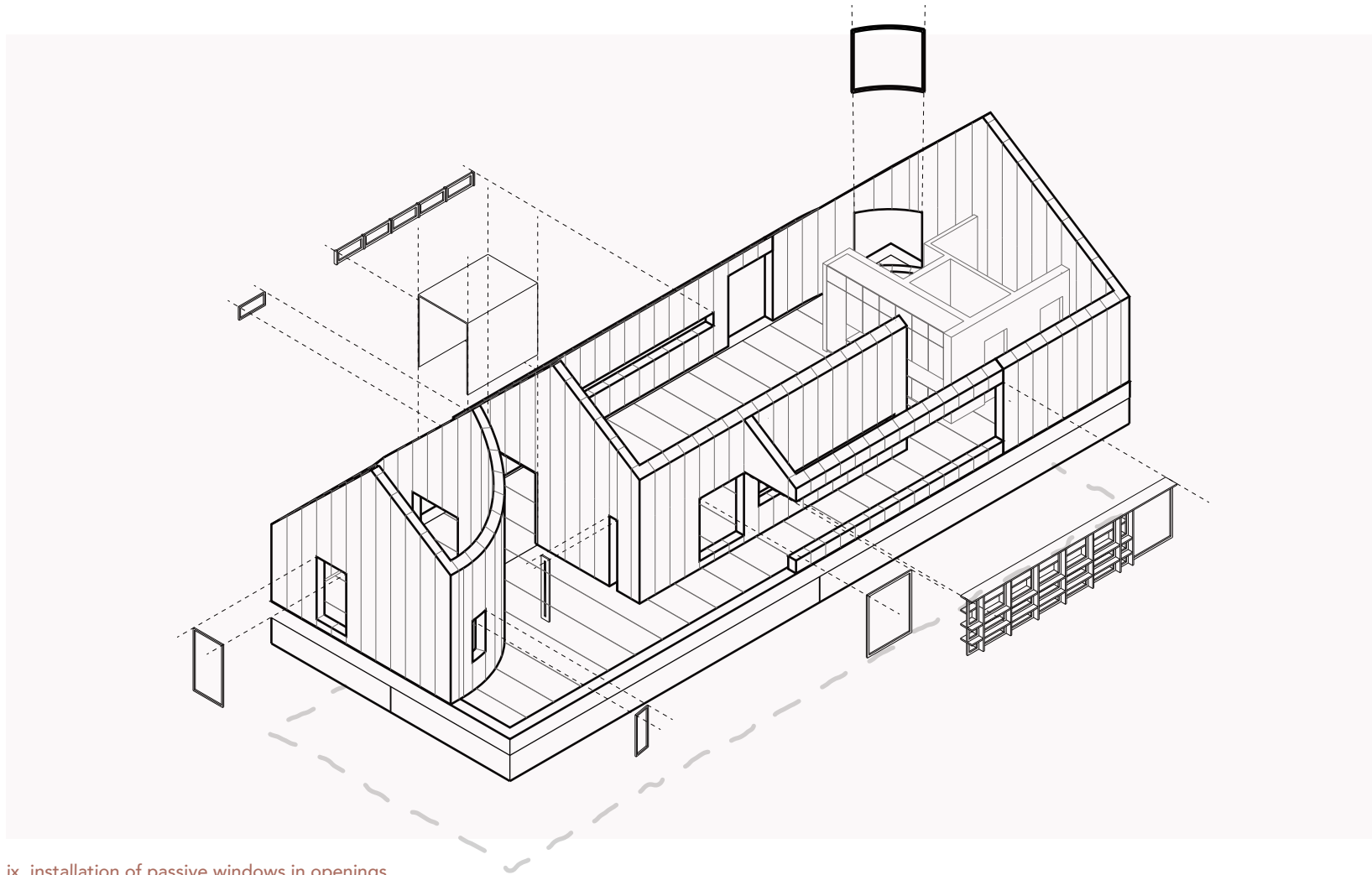




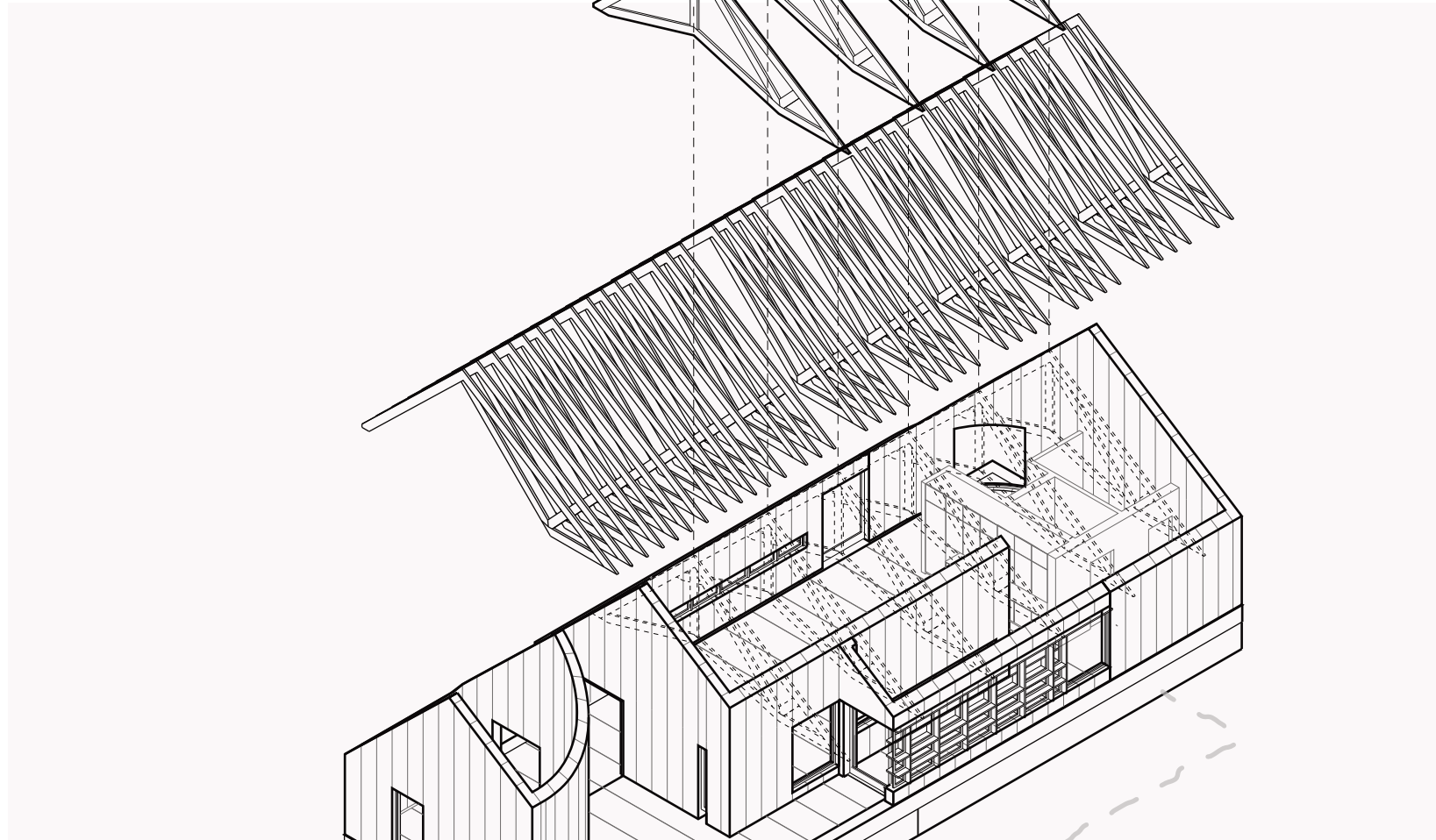
vii. installation of module ii (on-site or prefab)



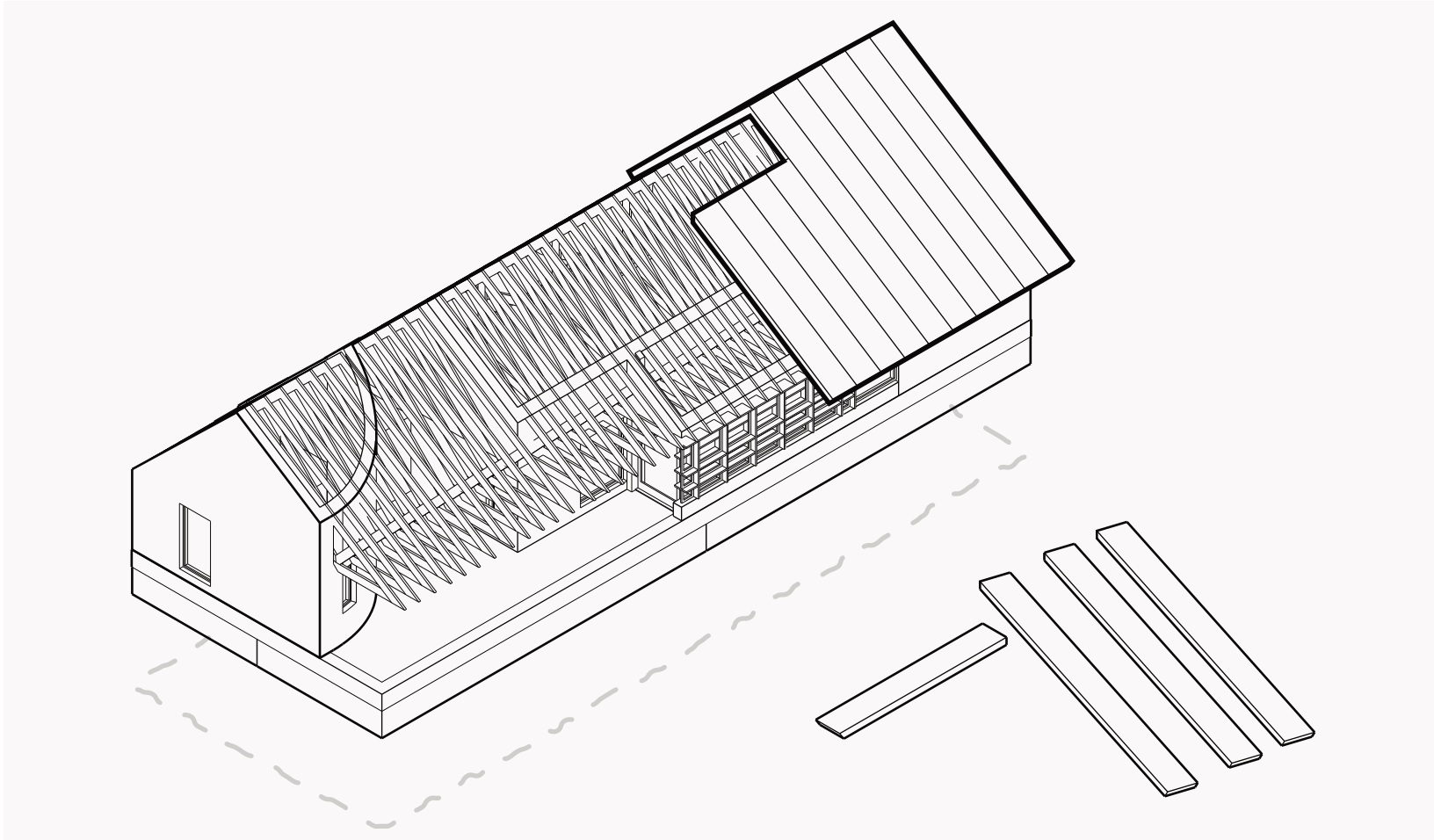
viii. installation of module iii (on-site/ prefab)



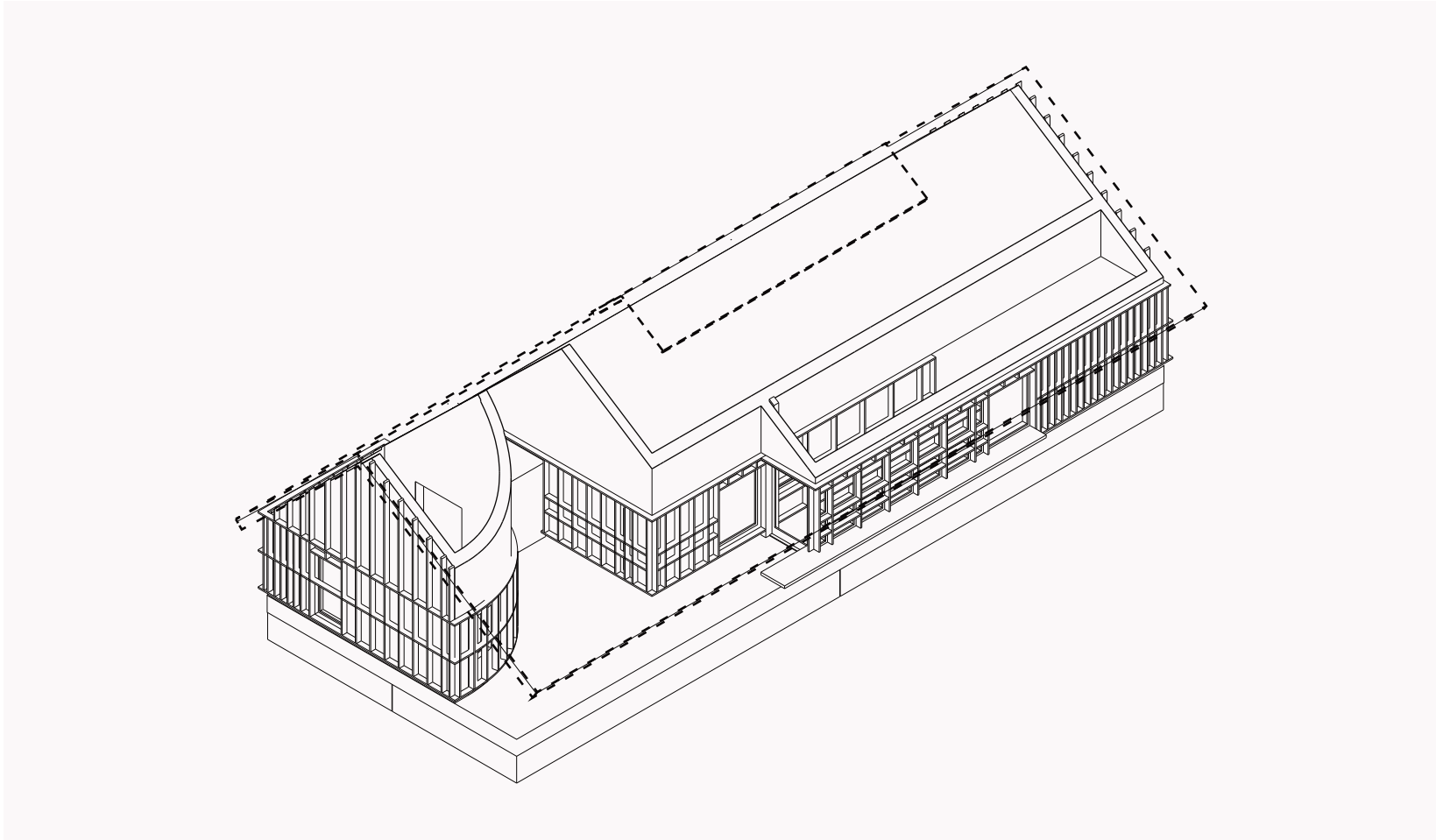
ix. installation of passive windows in openings



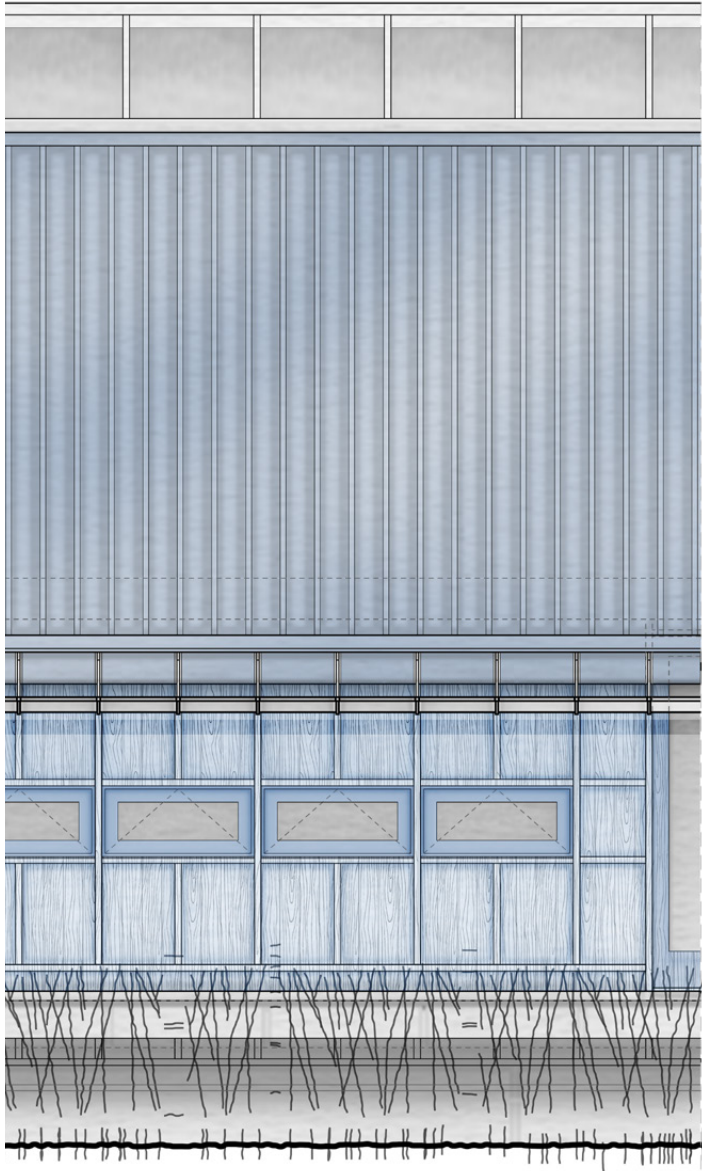
x. installation of prefab roof trusses



xi. installation of modular passive standard roof panels



xii. finished building



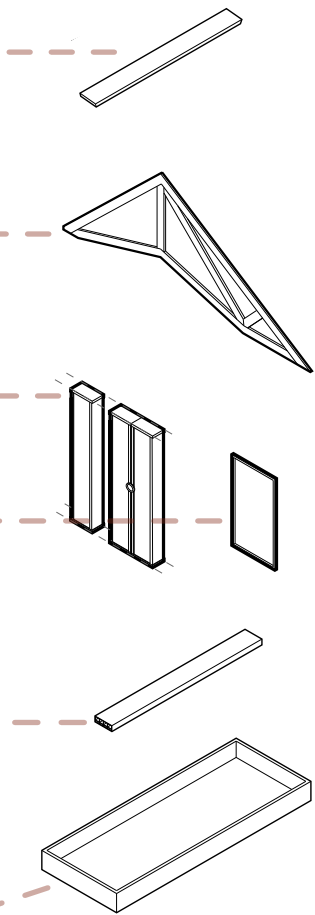
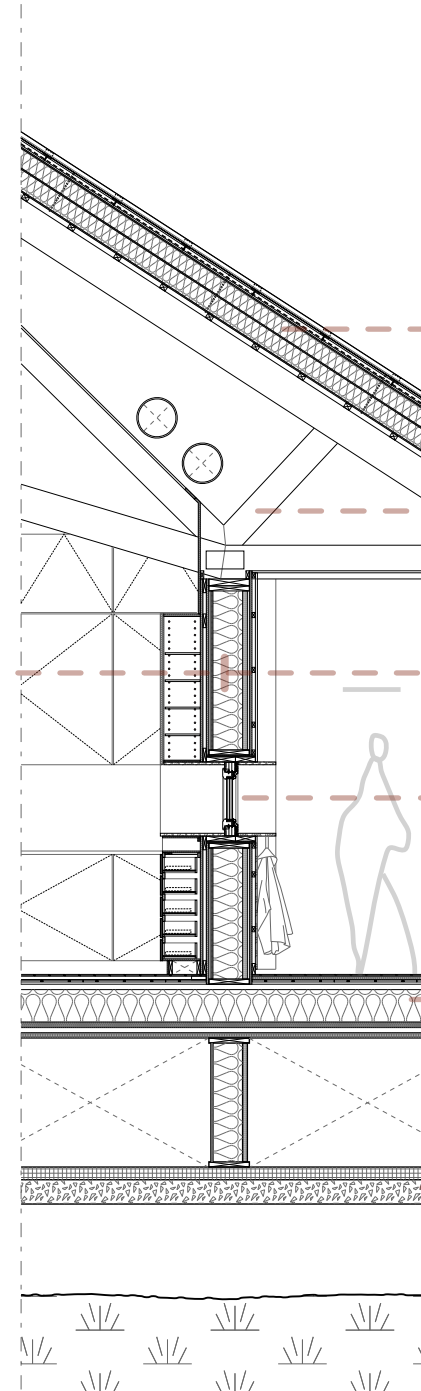
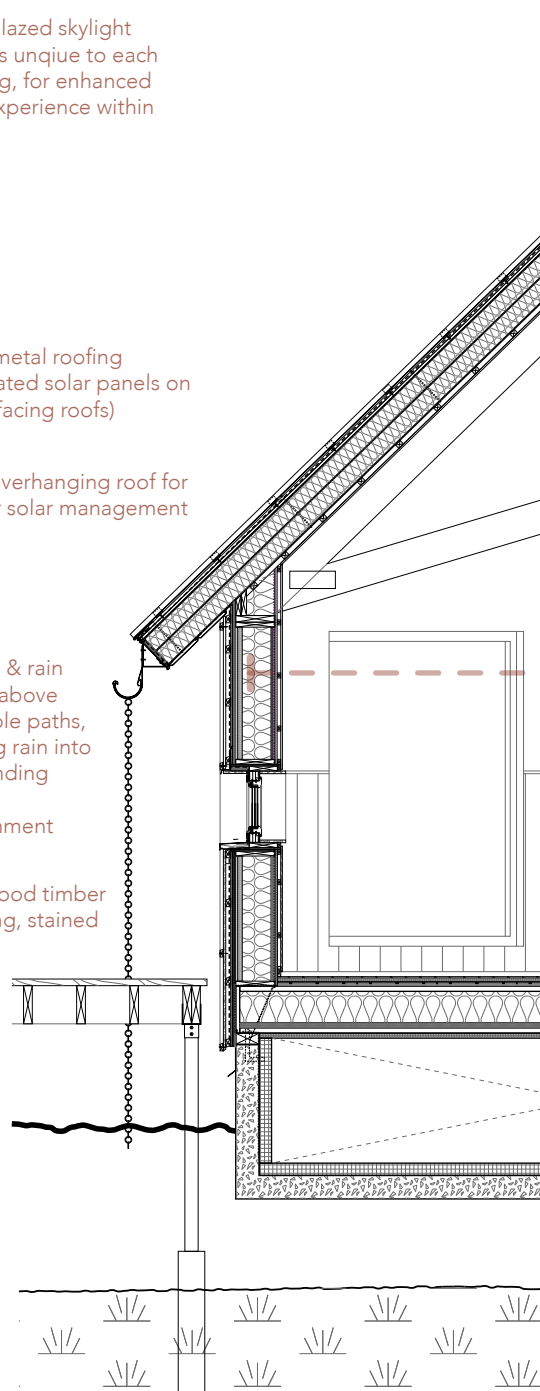
triple glazed skylight systems unique to each building, for enhanced solar experience within

kalzip metal roofing (integrated solar panels on South-facing roofs)

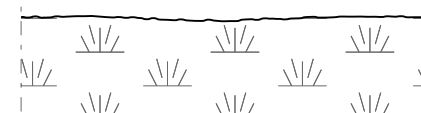
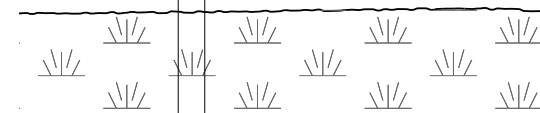
deep overhanging roof for interior solar management

gutters & rain chains above accesible paths, guiding rain into surrounding natural environment

platowood timber cladding, stained

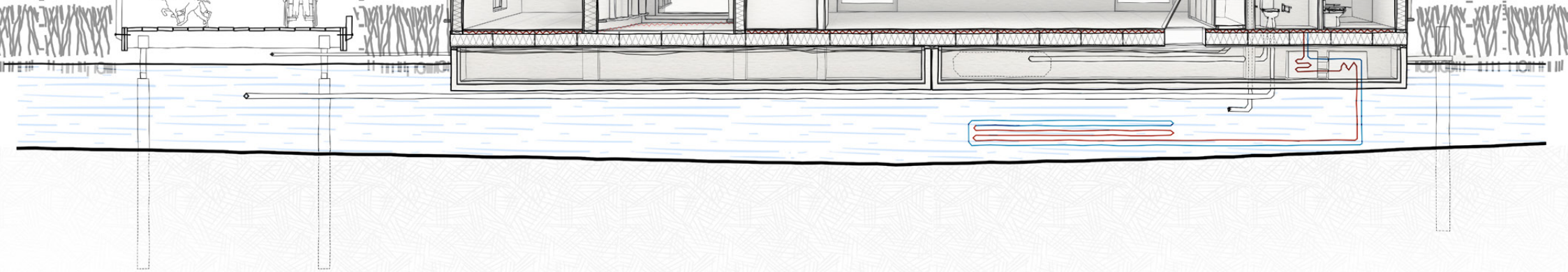
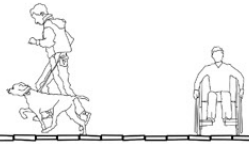
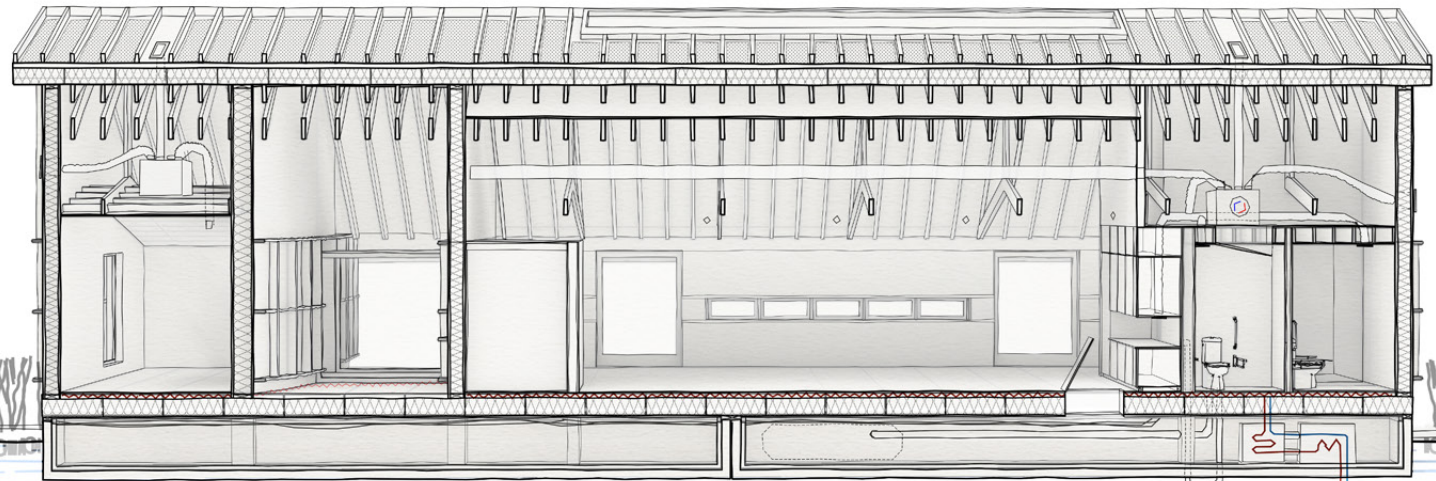


proposal | pavilions realized

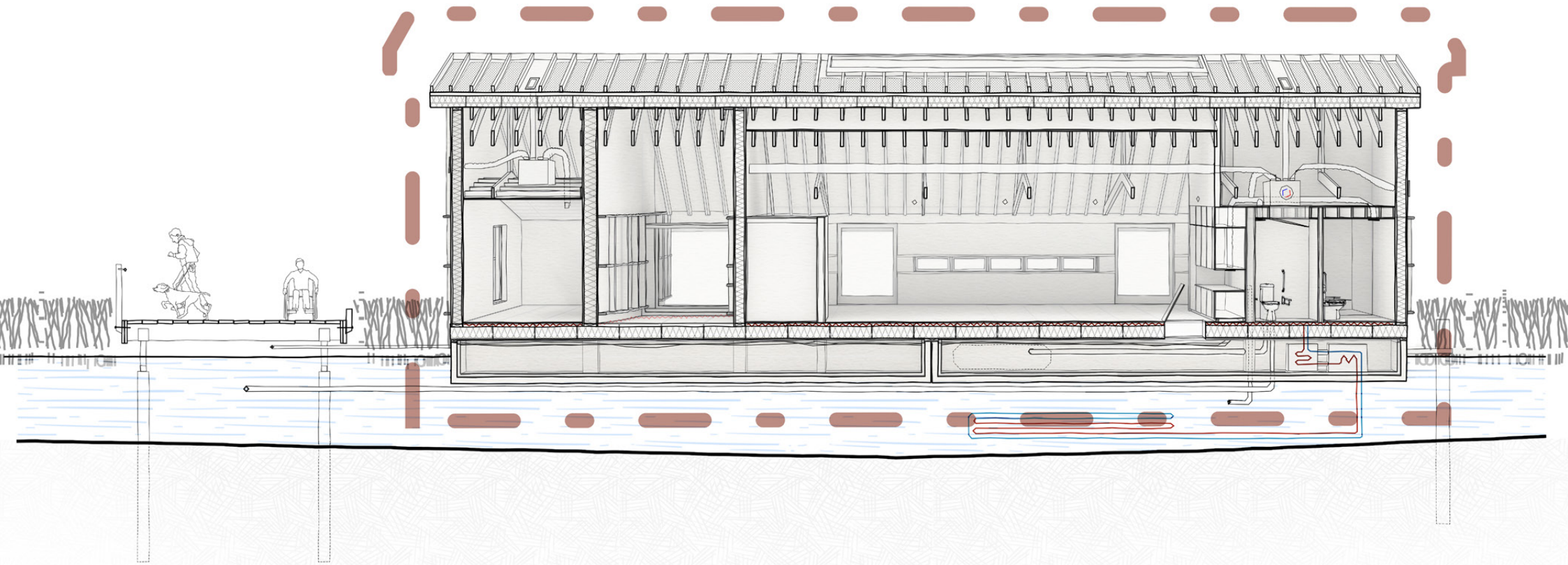




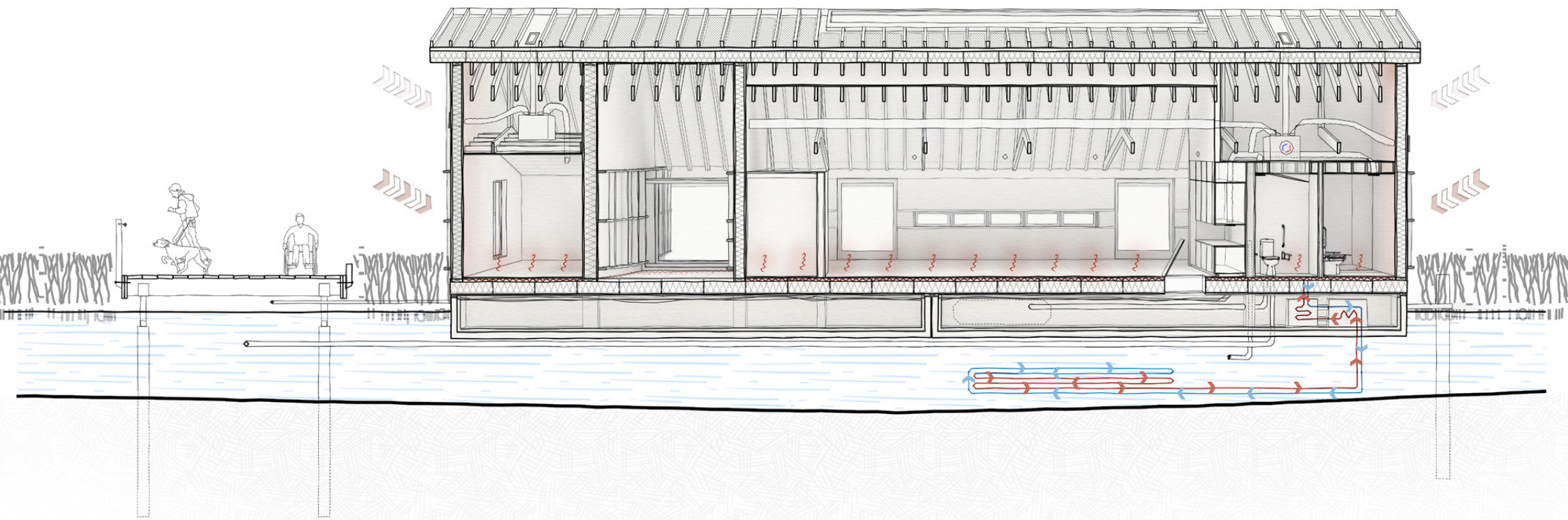
# CLIMATE CONCEPT



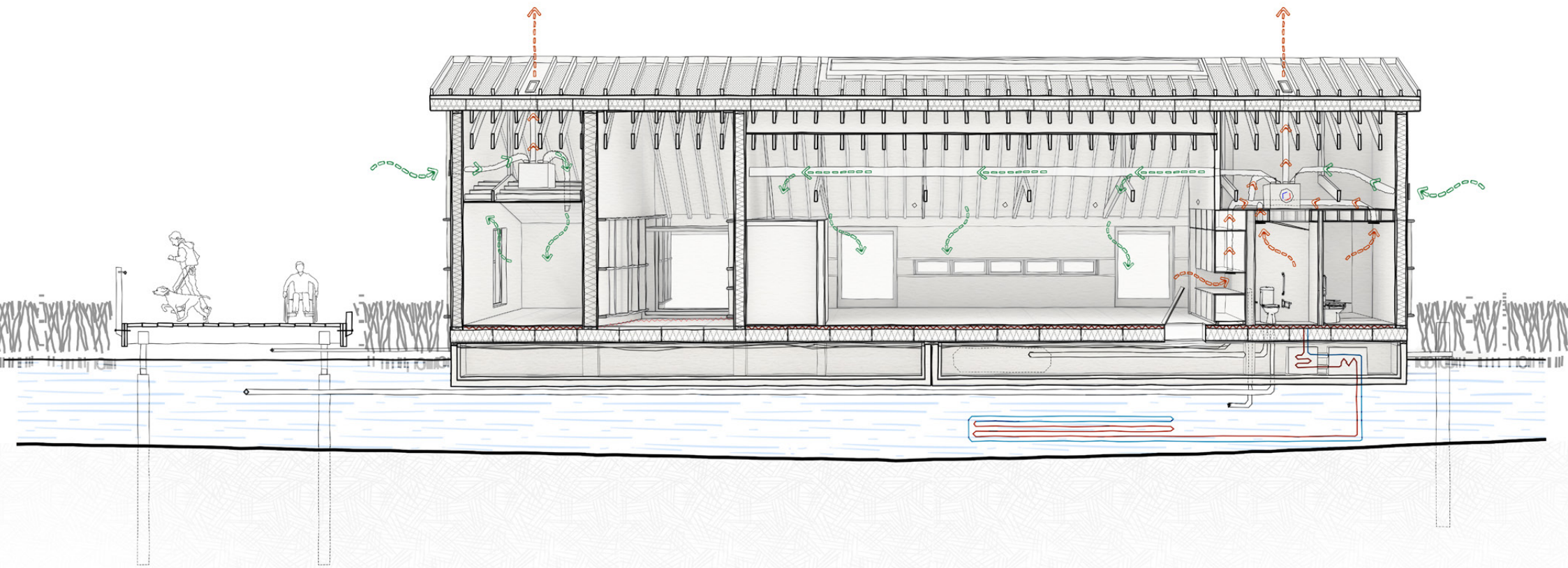




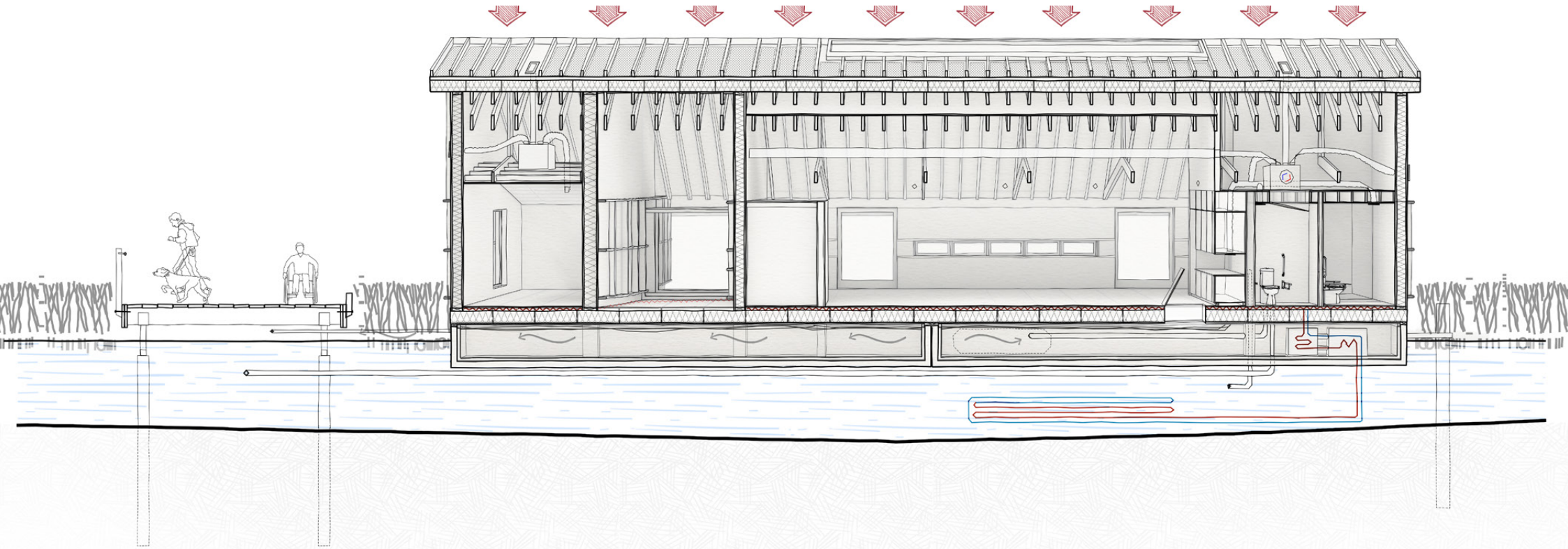
i. airtight passive house construction



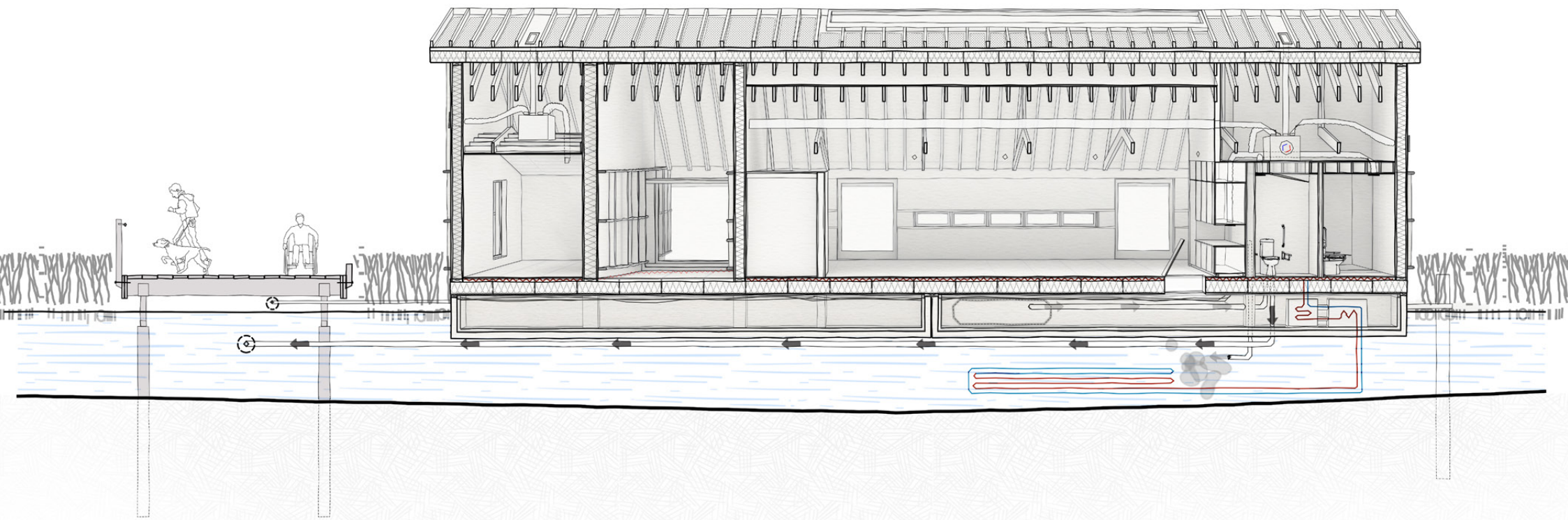
ii. water-to-water hydronic low-temp in floor heating



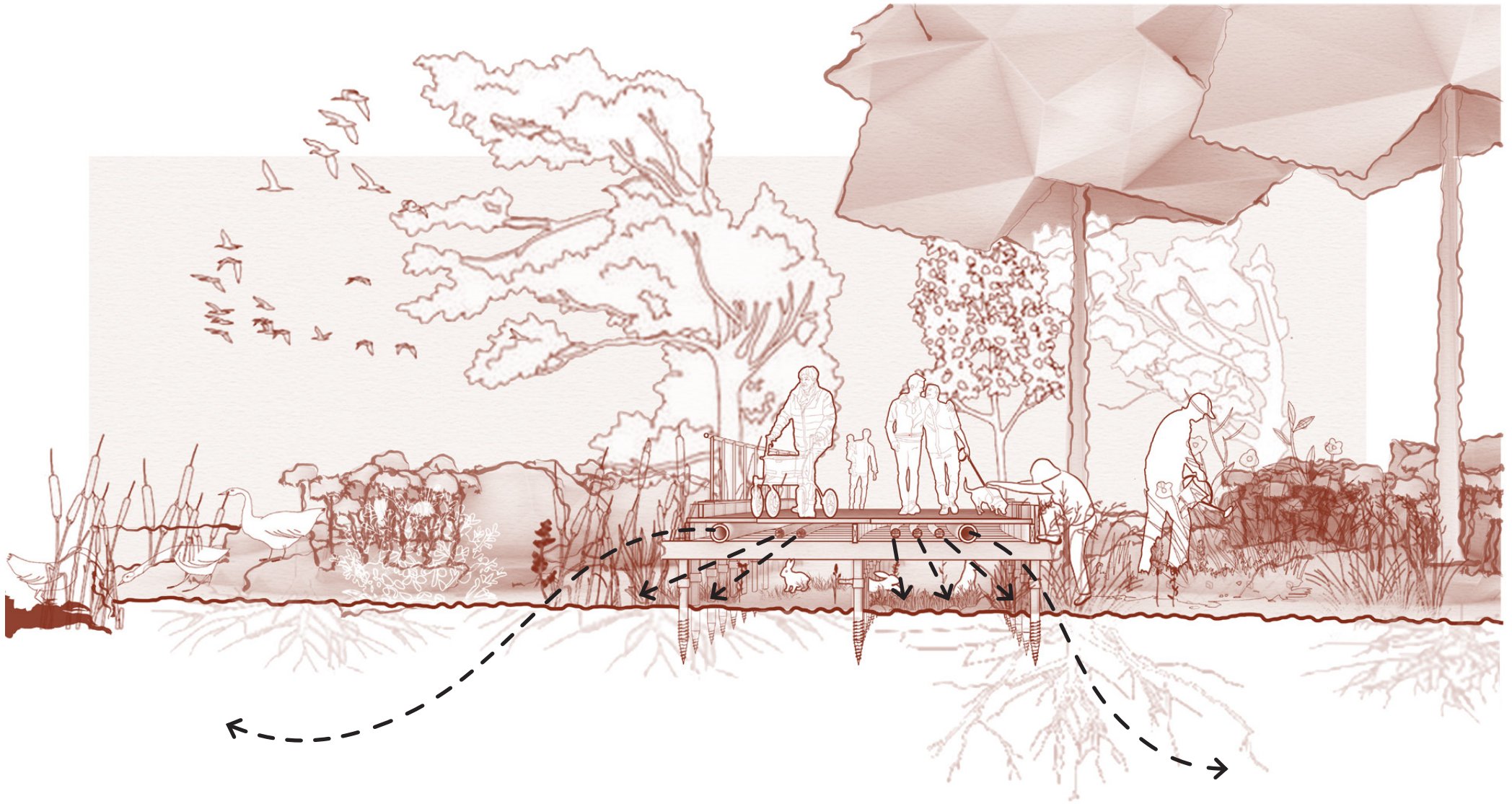
iii. air-to-air 'Type D' (MVHR) ventilation system



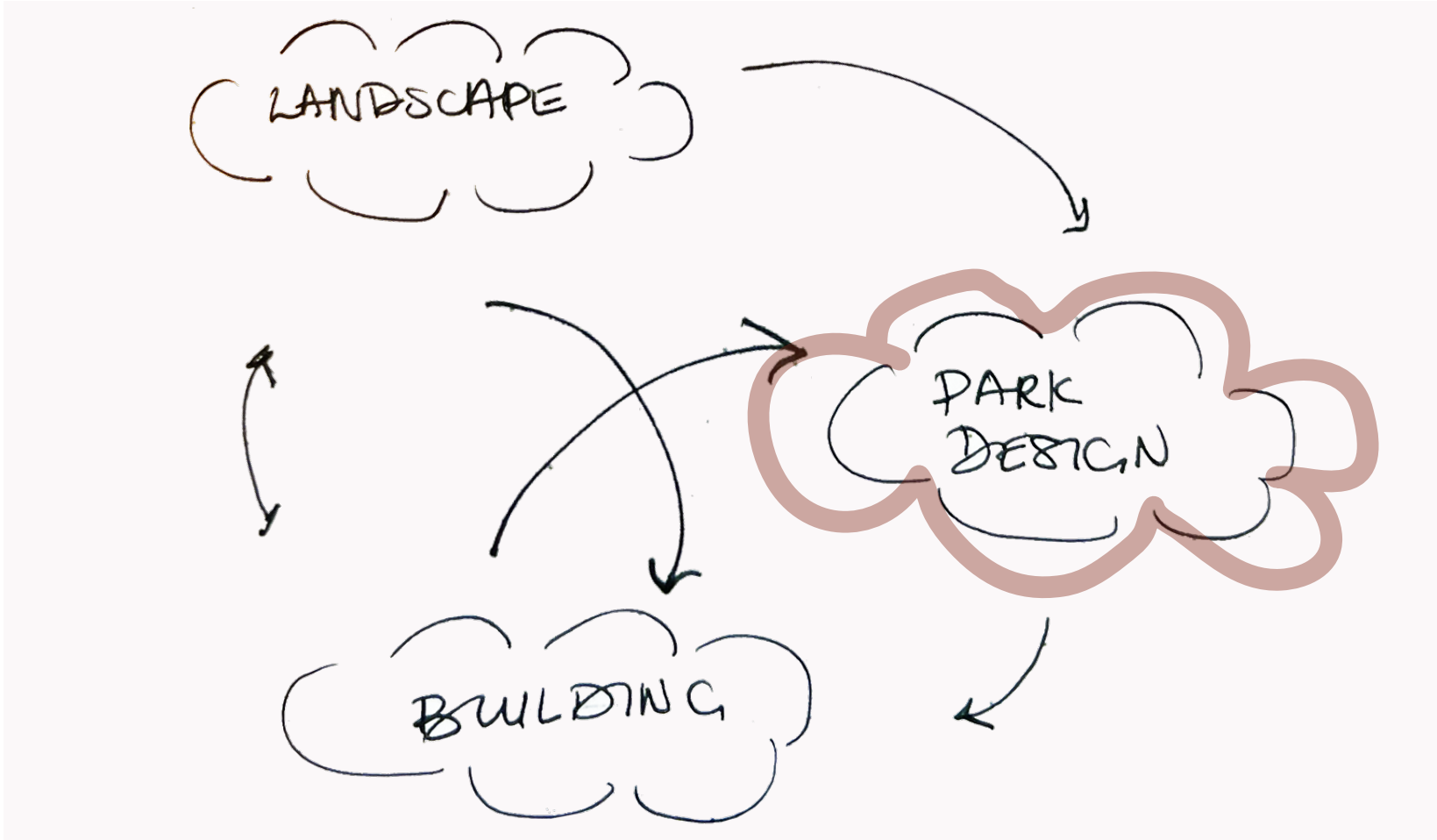
iv. integrated solar panel roofing for energy production



v. centralized waste & electrical grid connection



v. centralized waste & electrical grid connection



the bigger picture



## Buitenhof

Buitenhof Parkje (114,236 m<sup>2</sup> = 28.22 acres = 11.42 hectares)  
(54,873 m<sup>2</sup> = 13.56 acres = 5.487 hectares)

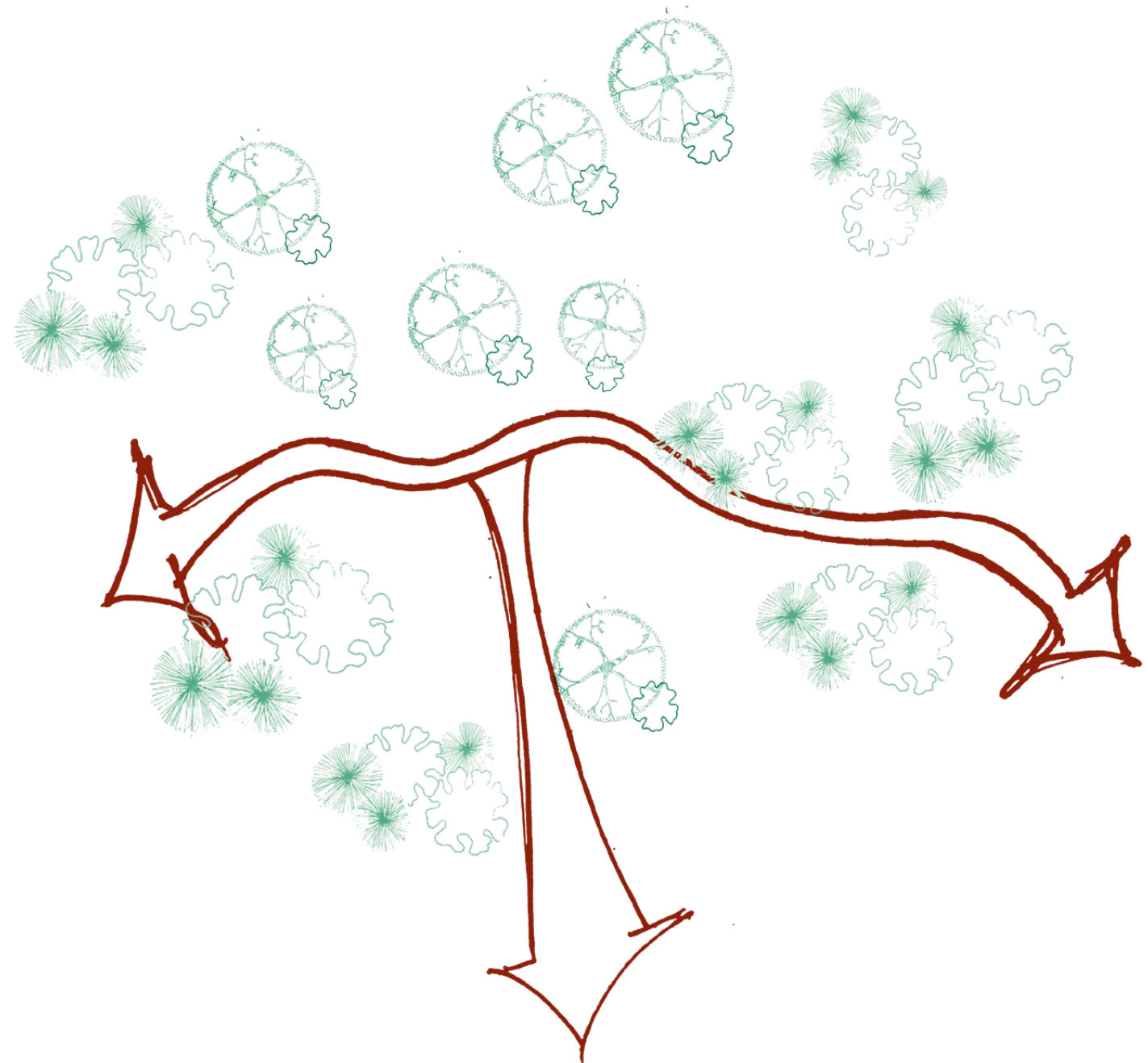


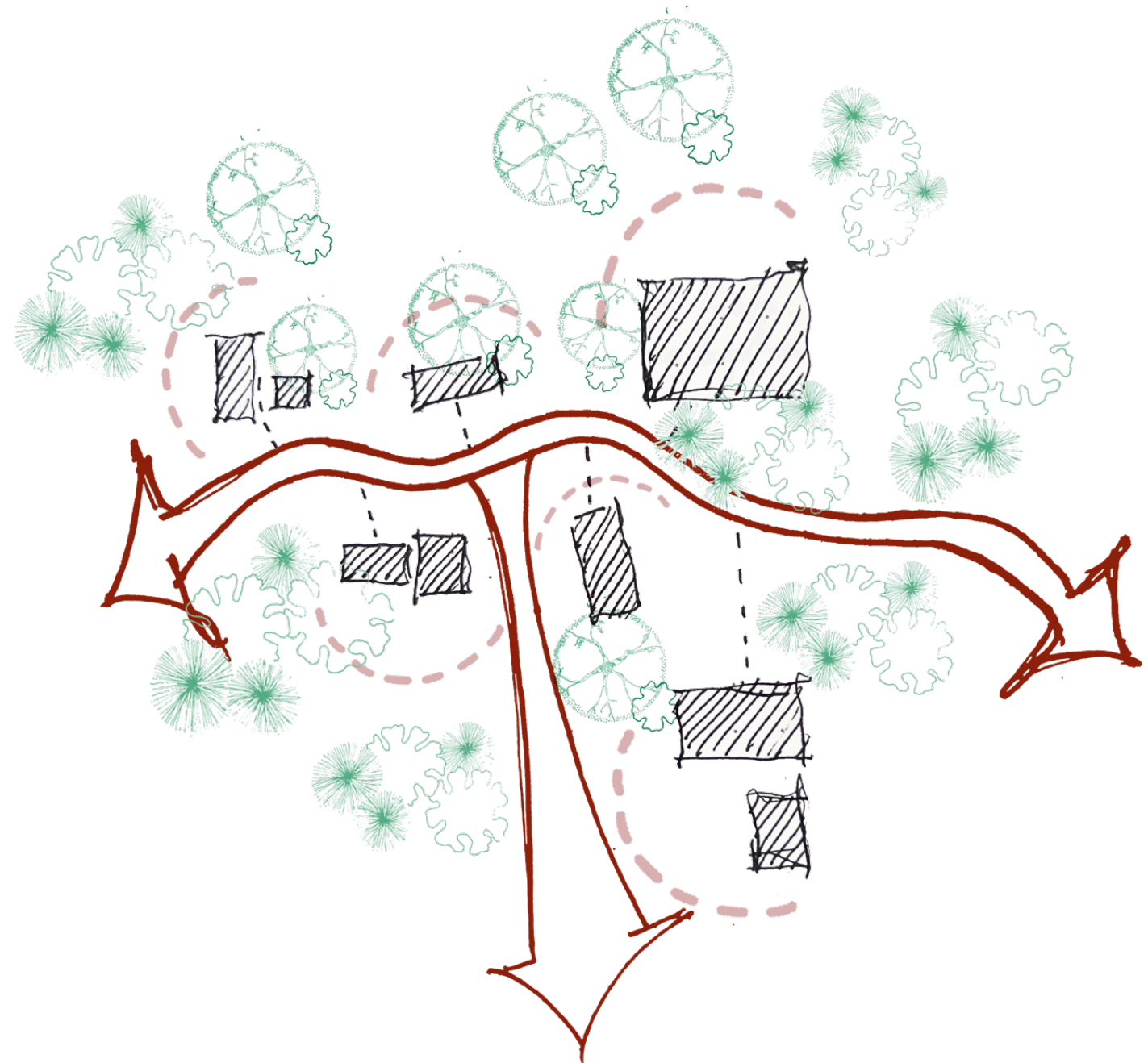


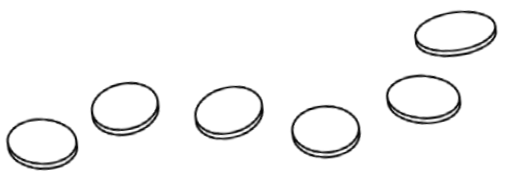
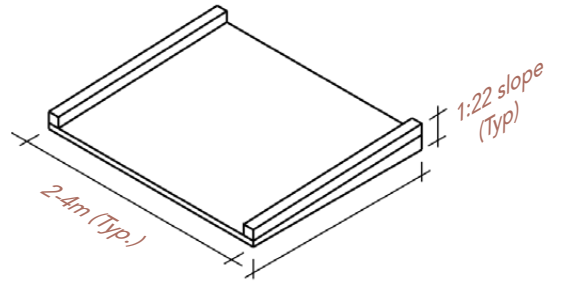
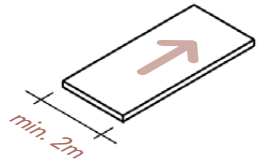
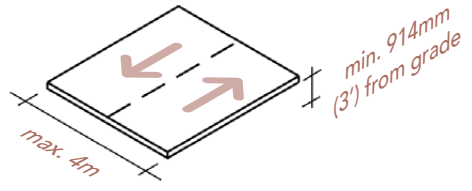


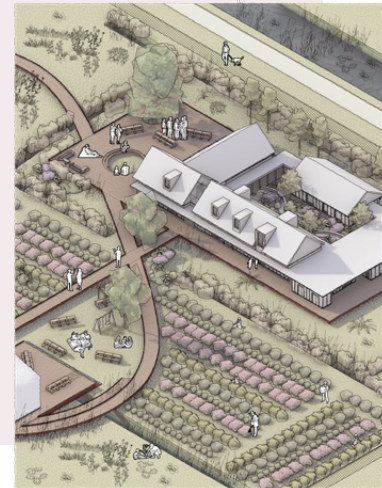
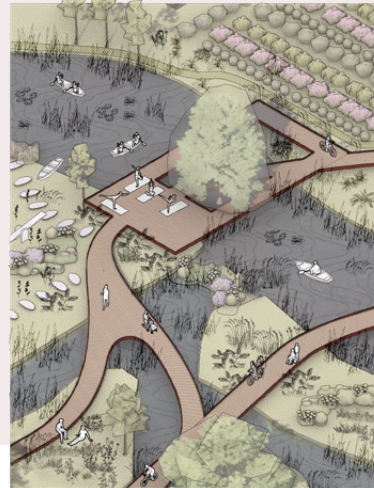
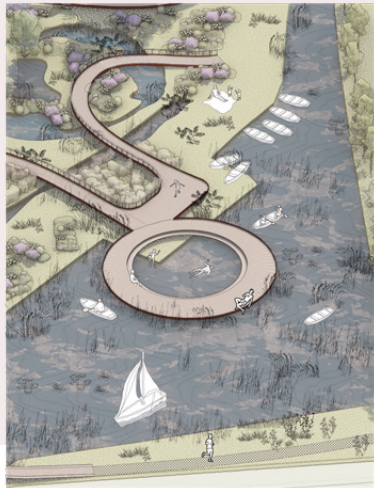
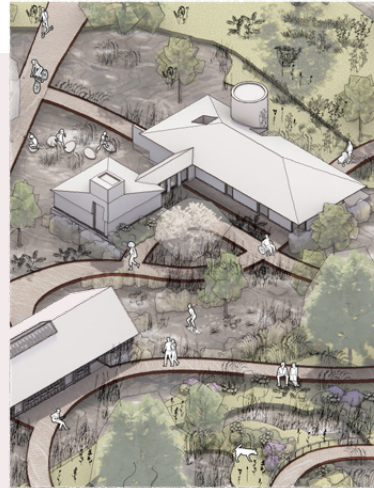
SITE  
DEVELOPMENT











the bigger picture | re-activating the site



arctic tern



black-headed gull



blue throat



canada goose



carion crow



common buzzard



common chaffinch



common chiffchaff



common cuckoo



common moorhen



brown argus



common blue



common brimstone



common emerald



european comma



wild boar



hedgehog



carex pendular



carex flacca



calamagrostis brachytricha



schizachyrium scoparium



nerium 'oleander'



brown hare



european frog



sedum 'sunkissed'



stachys officinalis 'rosea'



aster amellus



aster macrophyllus



dracaena fragrans 'corn plant'



the bigger picture | re-activating biodiversity



bighead carp



big-scale sand smelt



common dace



common nase



crucian carp



european brook lamprey



european seabass



european smelt



freshwater bream



golden grey mullet



the bigger picture | decentralized community care... for all

## site selection criteria



proximity to residential neighbourhoods  
non-touristic



proximity to schools & youth facilities



accessible transit options



access to natural environments  
- forest  
- bodies of water



early detection & intervention for youth in crisis  
- areas in need of support



room for movement



natural & honest materials



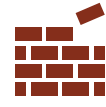
universal accessibility



flex & adaptive space



flex & adaptive space



max. 2 storey height

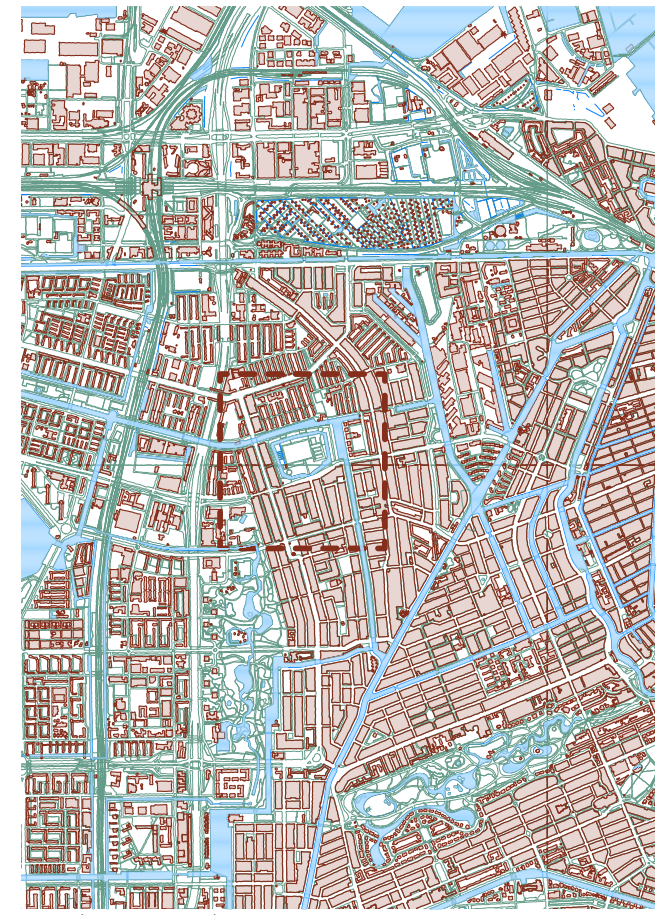
## design criteria



rotterdam - kralingse bos



den haag - kleinehout



amsterdam - erasmuspark



connect the dots...

see the bigger picture...



connect the dots...

see the bigger picture...

thank you!

*“people are meant to be burdens”*

*“.... as in, humans rely on and support one another and it's not a bother, it's our purpose; to love and be loved in return.”*

- author unknown

(Image of a Tumblr comment, n.d.)

# ..... BREEAM | Designing through Integral Sustainability .....

## ENERGY

- ✓ - energy efficiency of building envelope
- ✓ - energy efficiency of installed services systems
- ✓ - renewable energy generation capacity
- ✓ - energy monitoring and management capabilities
- ✓ - energy efficiency of external lighting & elevators
- ✓ - reduction of carbon emissions



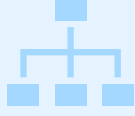
## HEALTH & WELLBEING

- ✓ - thermal comfort
- ✓ - indoor air quality management
- ✓ - acoustic conditions
- ✓ - ventilation & indoor air quality monitoring
- ✓ - provision of rest areas & access to indoor/ outdoor space
- ✓ - inclusive design



## MANAGEMENT

- ✓ - building and/or home user guide
- ✓ - engagement & feedback
- ✓ - maintenance policies & procedures
- ✓ - environmental policies & procedures
- ✓ - green lease



## TRANSPORT

- ✓ - alternative modes of transport
- ✓ - proximity to public transport
- ✓ - proximity to amenities
- ✓ - pedestrian and cyclist safety



## WATER

- ✓ - water monitoring
- ✓ - water efficient equipment: toilets, urinals, taps, showers, baths, appliances
- ✓ - leak detection & prevention
- ✓ - use of alternative sources of water
- ✓ - water consumption
- ✓ - water recycling



## RESOURCES

- ✓ - condition survey
- ✓ - reuse & recycling facilities
- ✓ - resource inventory
- ✓ - future adaptation
- ✓ - sustainable procurement
- ✓ - optimising resource use, reuse, and recycling



## POLLUTION

- ✓ - minimising watercourse pollution
- ✓ - local air quality
- global warming potential of refrigerants
- reduction of night-time light pollution
- ✓ - contamination from invasive plant species



## LAND USE & ECOLOGY

- ✓ - planted area
- ✓ - ecological features of planted area
- ✓ - ecology report
- ✓ - biodiversity management plan



## RESILIENCE

- ✓ - flood risk assessment
- ✓ - surface water run-off impact management
- natural hazards risk assessment
- ✓ - durable & resilient features
- ✓ - climate-related transition risks & opportunities
- ✓ - social risks & opportunities

