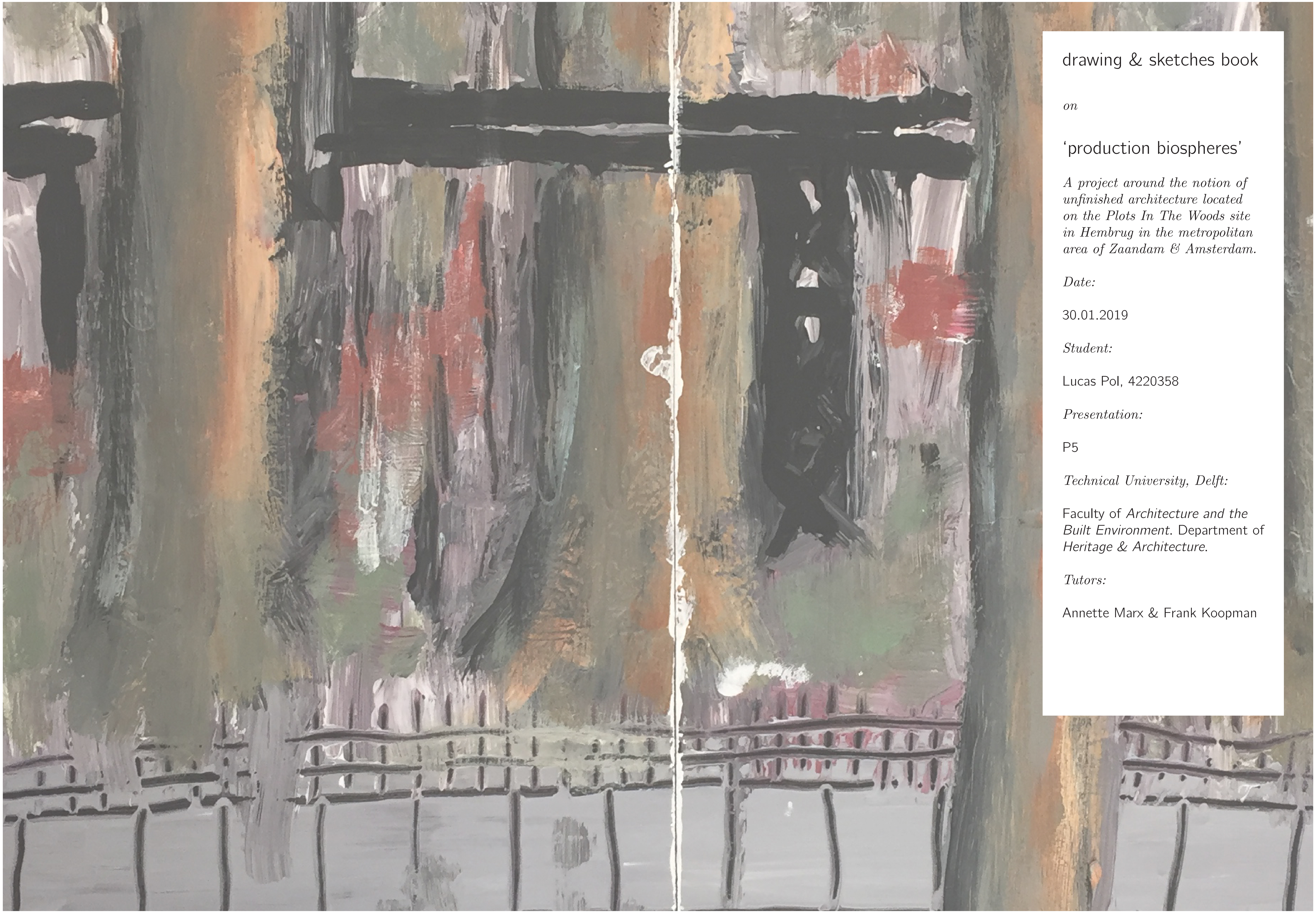


drawing & sketches book

on

‘production biospheres’

A project around the notion of unfinished architecture located on the Plots In The Woods site in Hembrug in the metropolitan area of Zaandam & Amsterdam.

Date:

30.01.2019

Student:

Lucas Pol, 4220358

Presentation:

P5

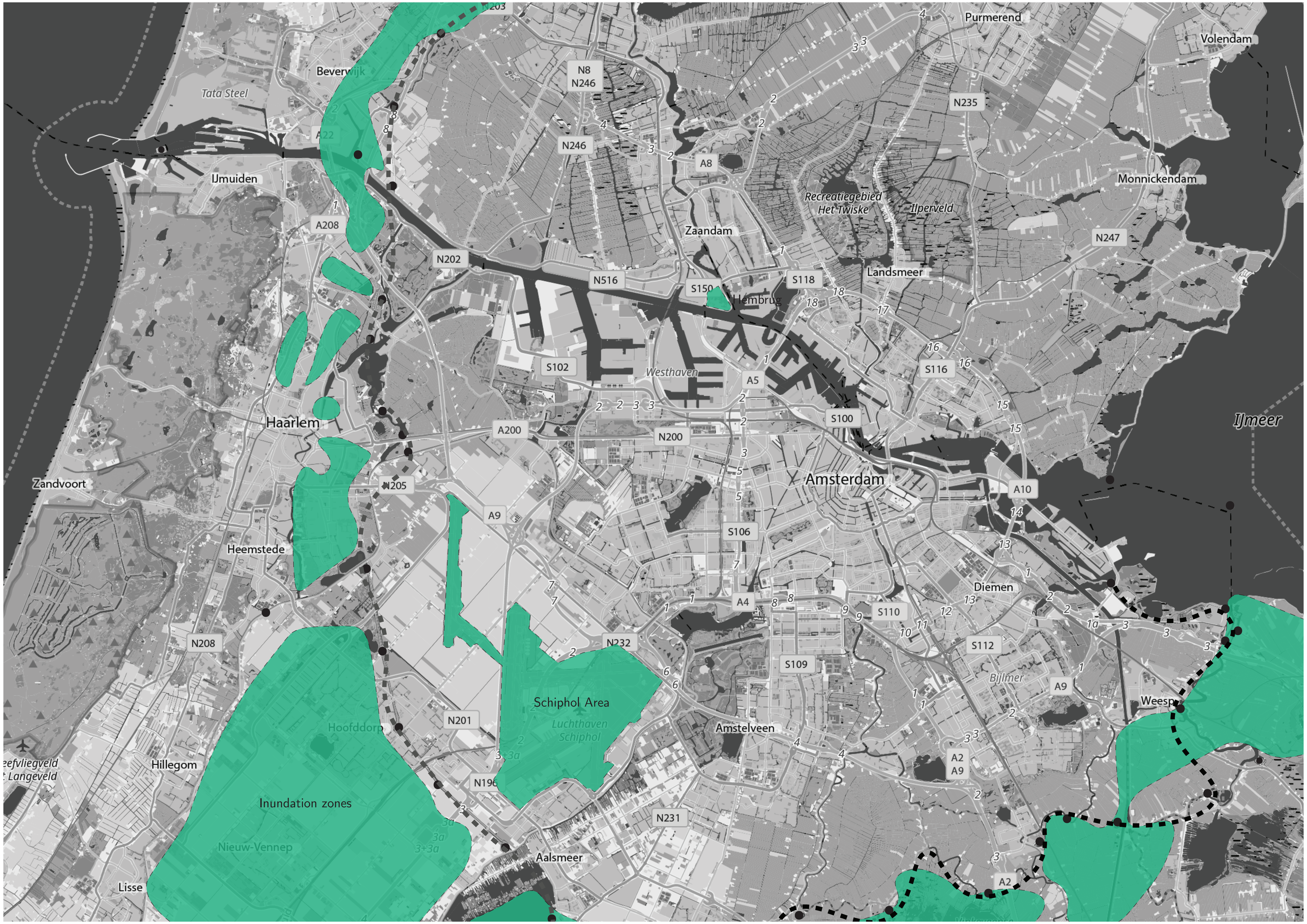
Technical University, Delft:

Faculty of *Architecture and the Built Environment*. Department of *Heritage & Architecture*.

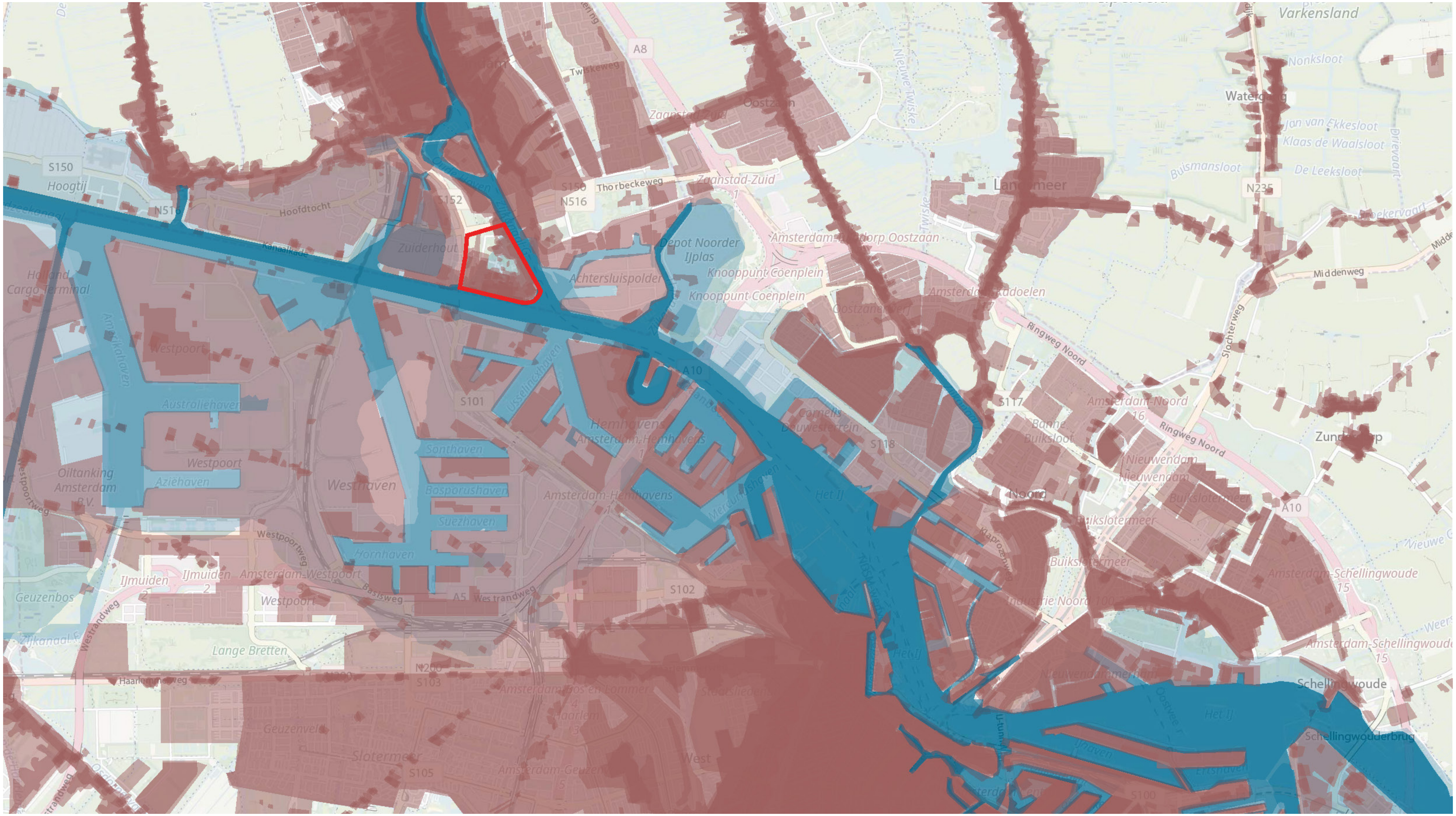
Tutors:

Annette Marx & Frank Koopman

aerial photograph of the Hembrug terrain, view towards Zaandam contents

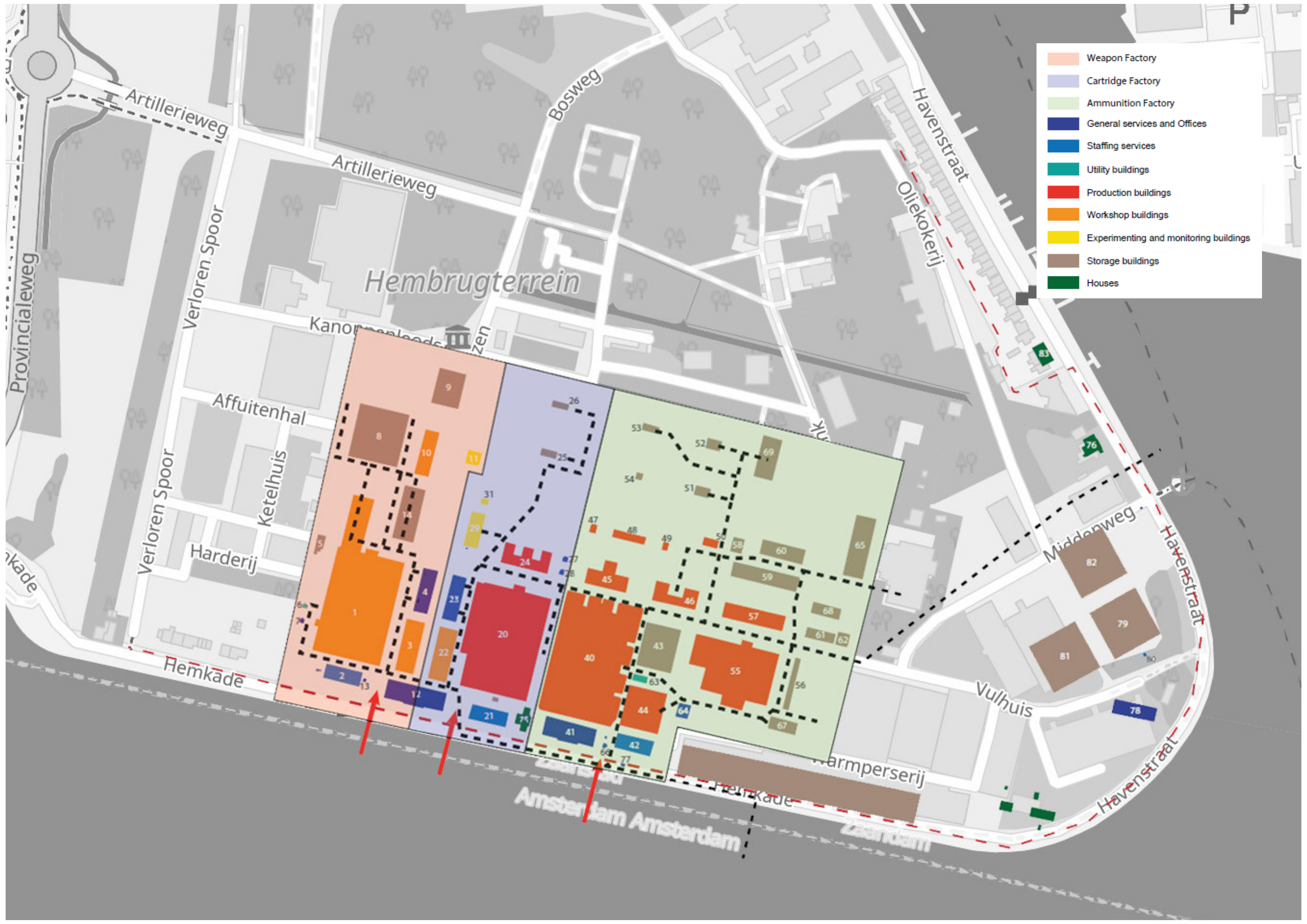


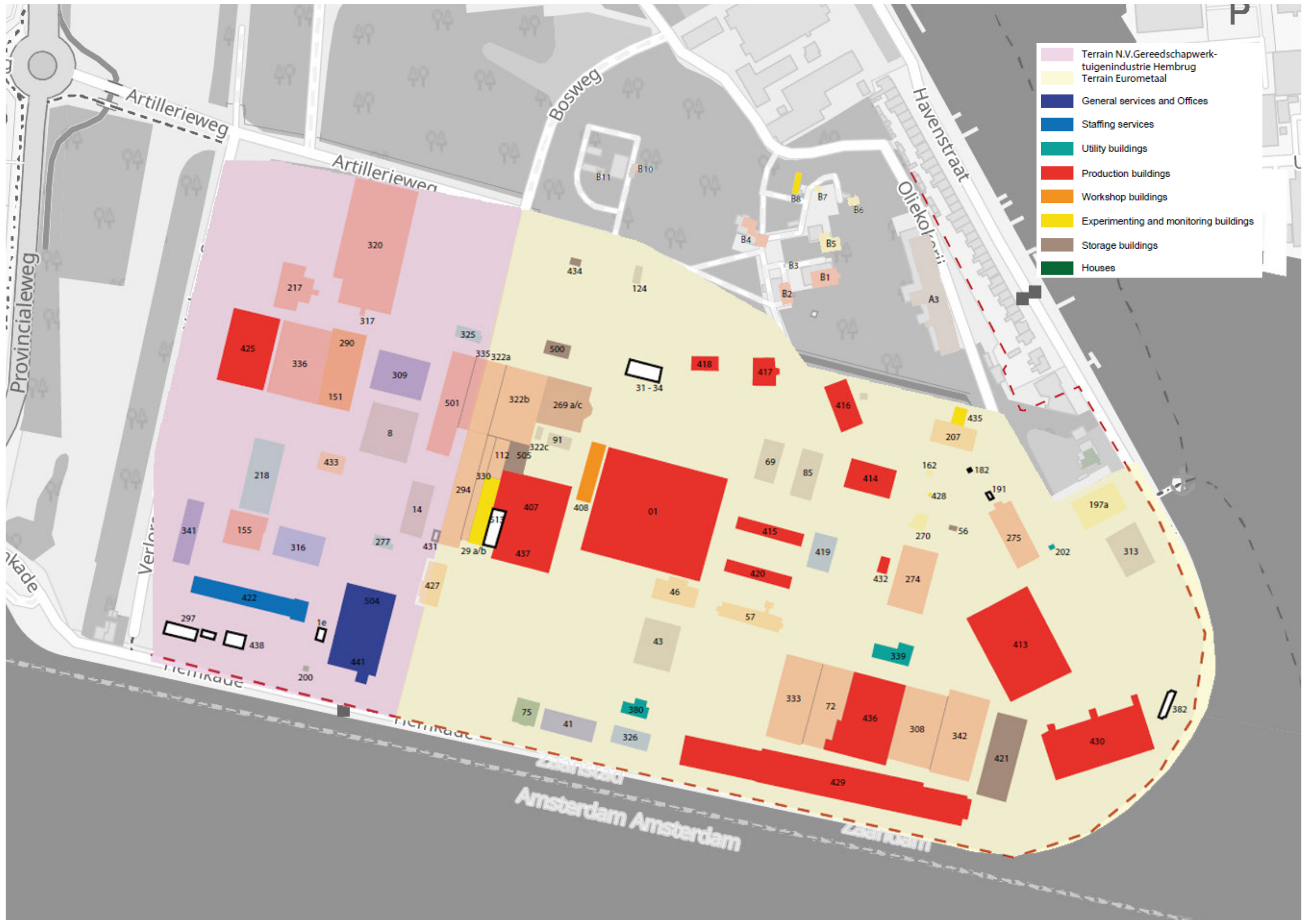
Hembrug, a former military industrial site with the *Stelling van Amsterdam*



Source: Image by Kilian Mol

over the past one hundred years the green in the area of
Amsterdam and Zaandam has been slowly disappearing





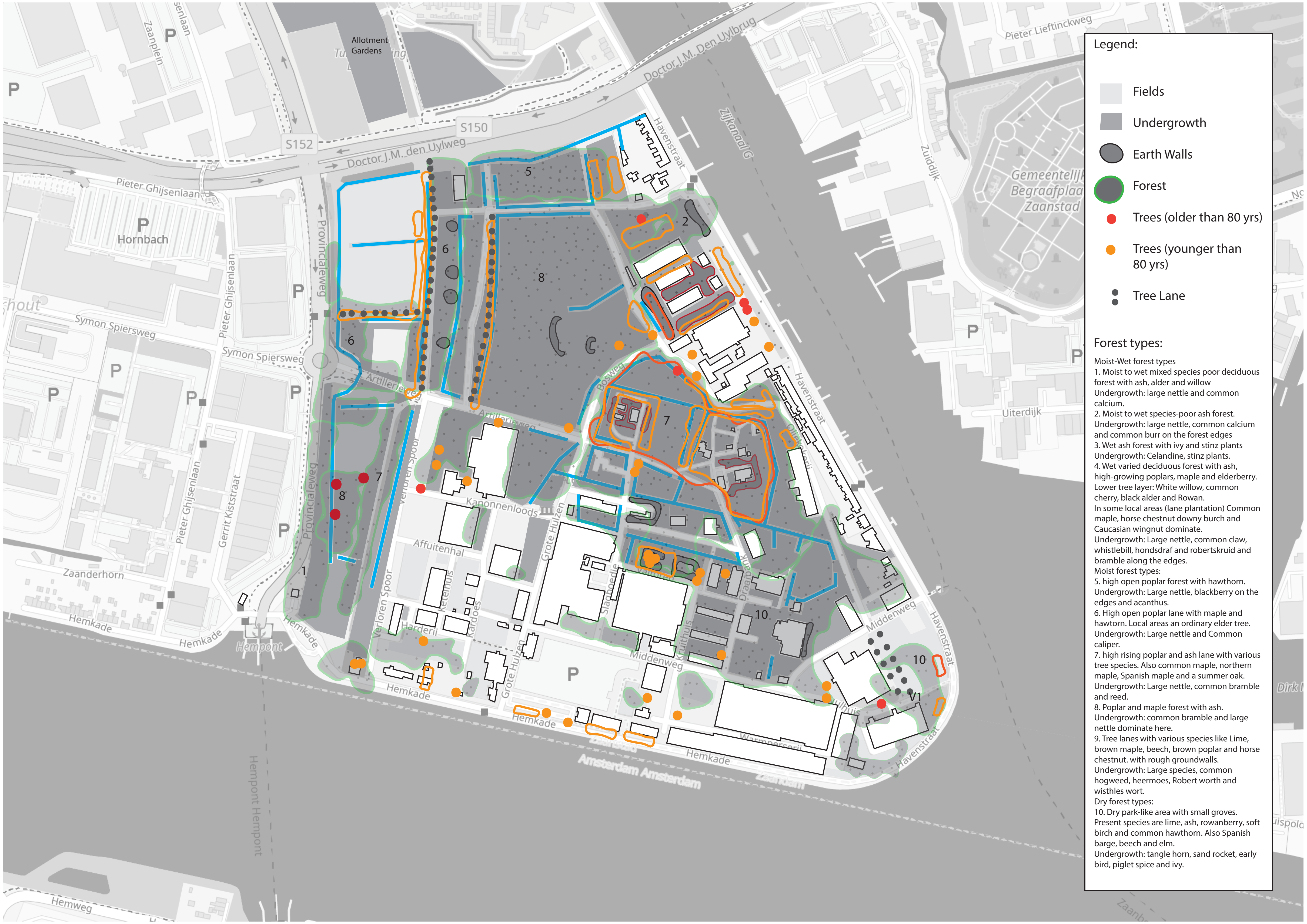
Source: Orignal image by Neel Sarkar, edit by Lucas Pol.

setup of the site: production of weapons, cartridges and ammunition, later the two state companies

Source: Image taken from https://artillerieinrichtingenhembrug.wordpress.com/tag/militair-complex-hembrug/

Source: Photo by Palmbout Urban Landscapes

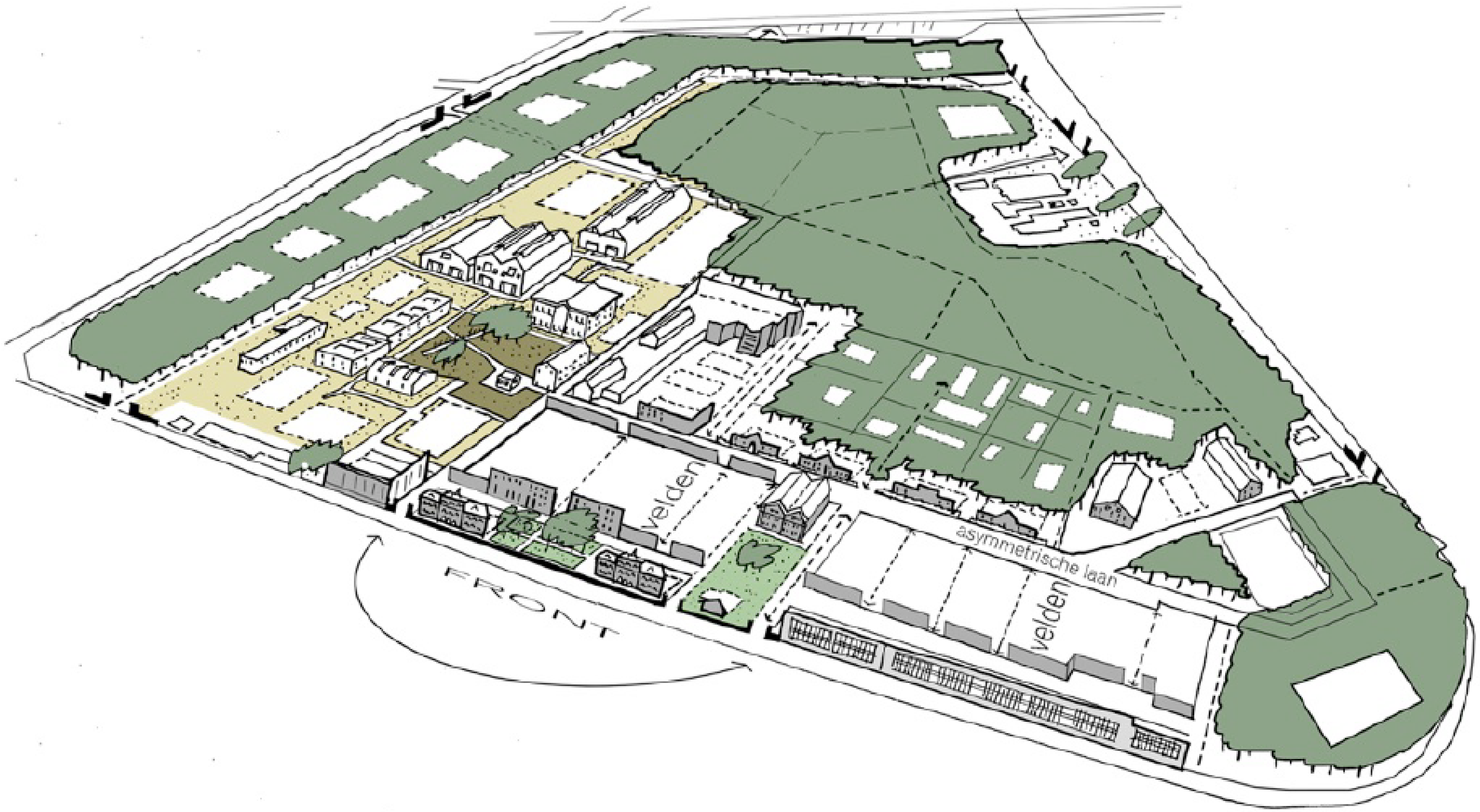
increasing of vegetation over the past one hundred years, changing with program changes and expansion, until 2010 after 7 years of inactivity



current situation, a lot of the layers and artifacts are still present

Source: Photo by Palmbout Urban Landscapes

a "green enclave"

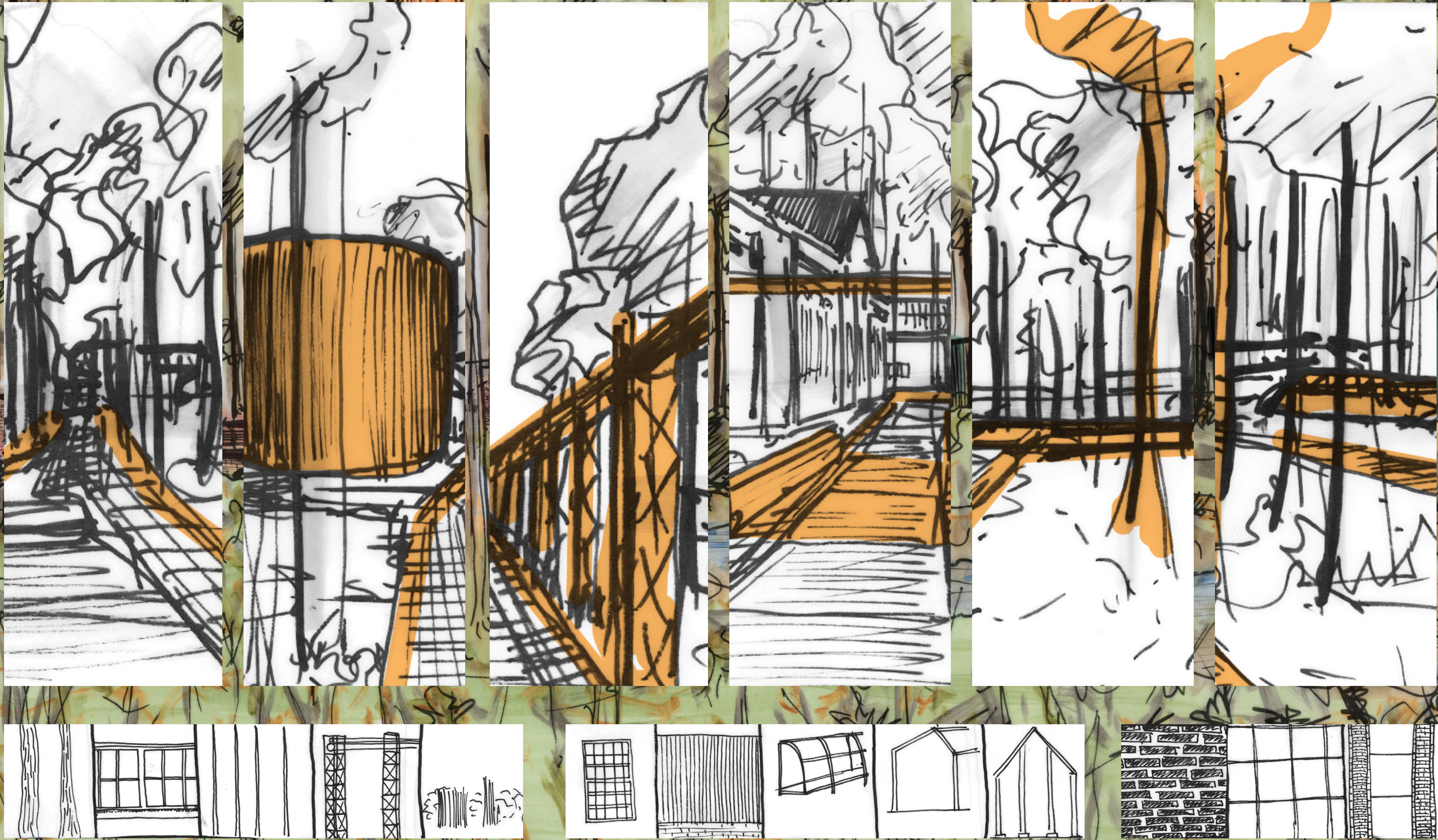


Source: Photo by Palmbout Urban Landscapes

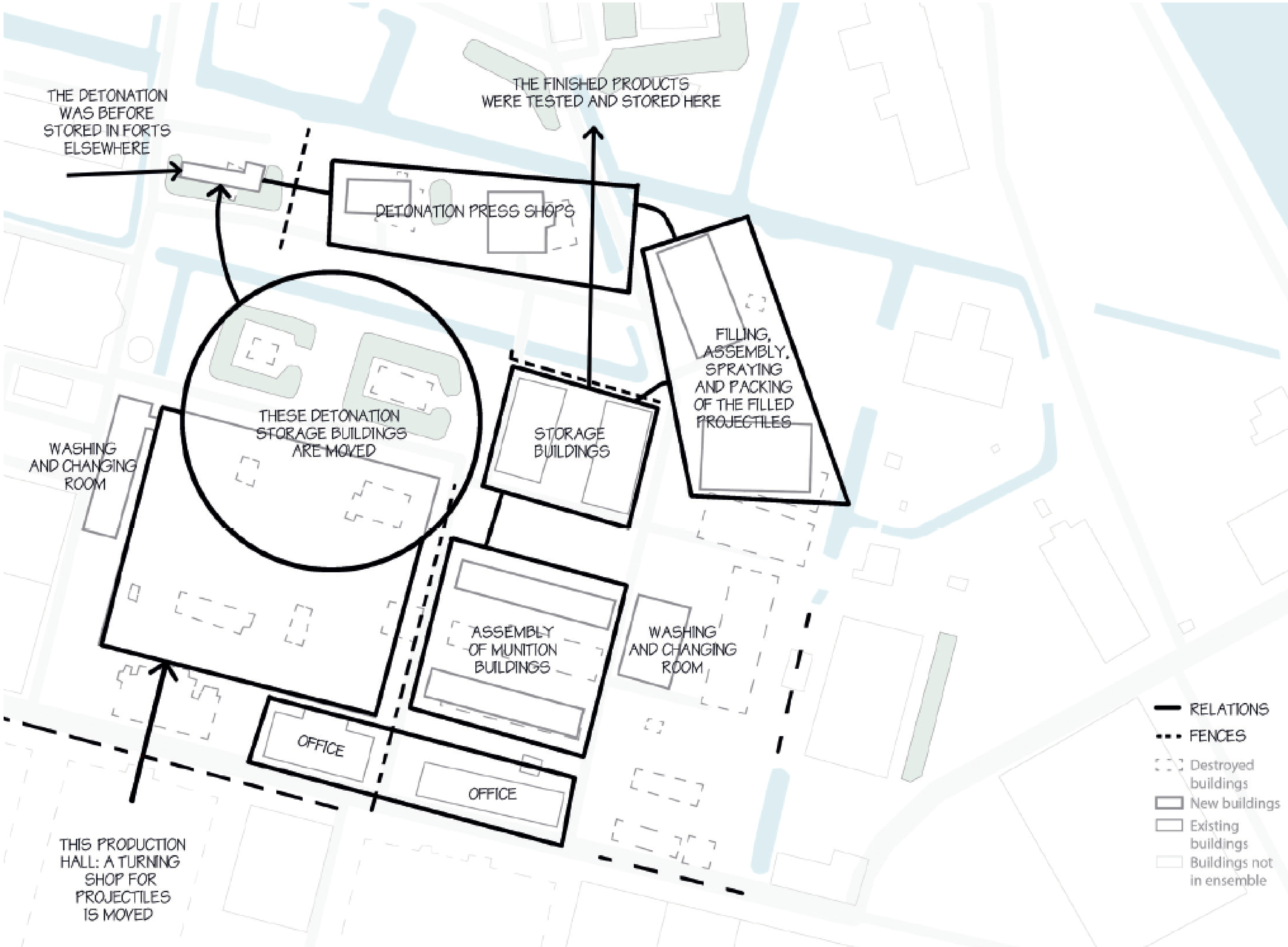
"pavilions in the wood"

Plots in the Wood as we found it in February 2019

Plots in the Wood as we found it in February 2019

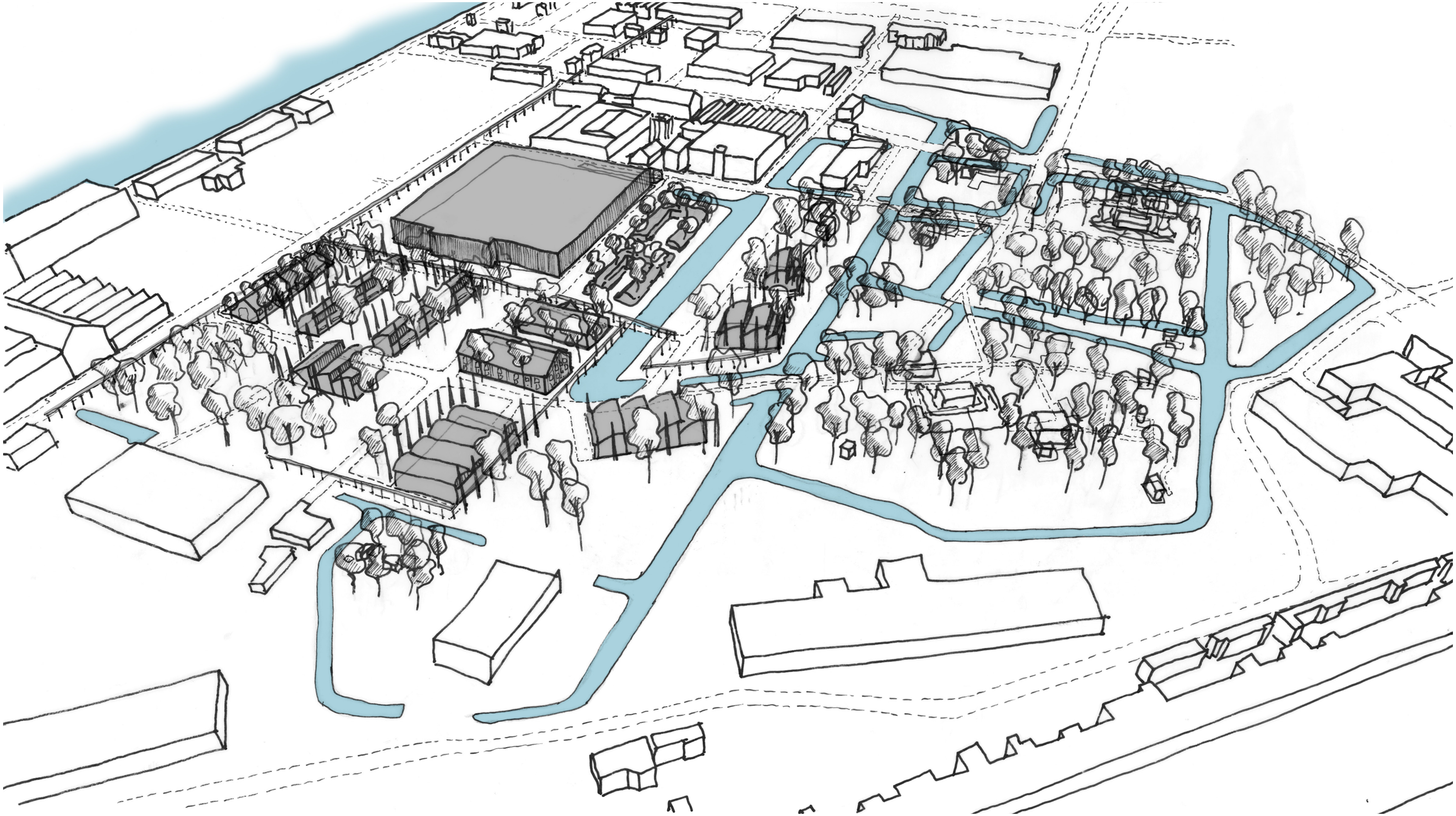


the different elements designed with the landscape and the buildings

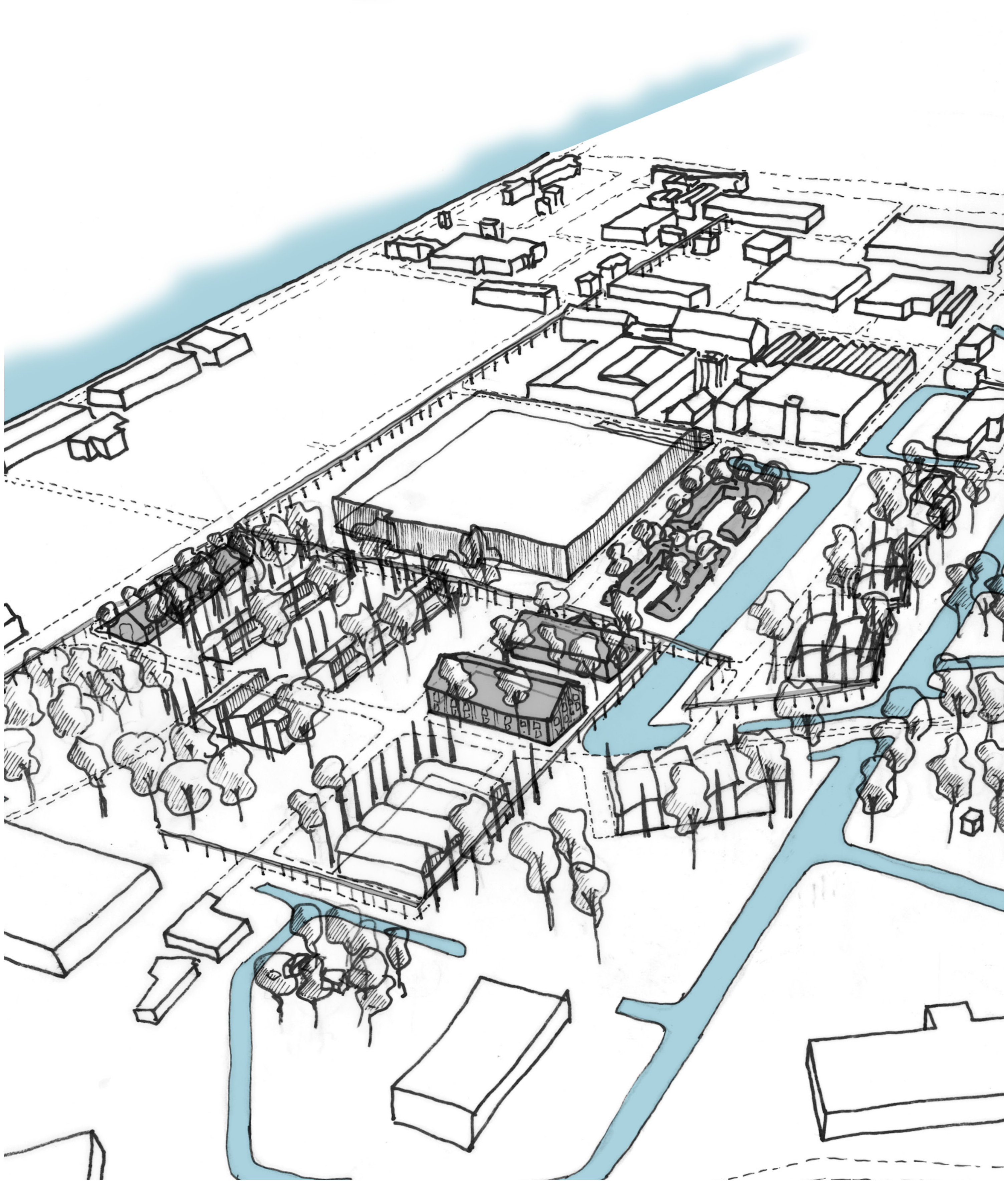


Source: Image by Valerie Artnz

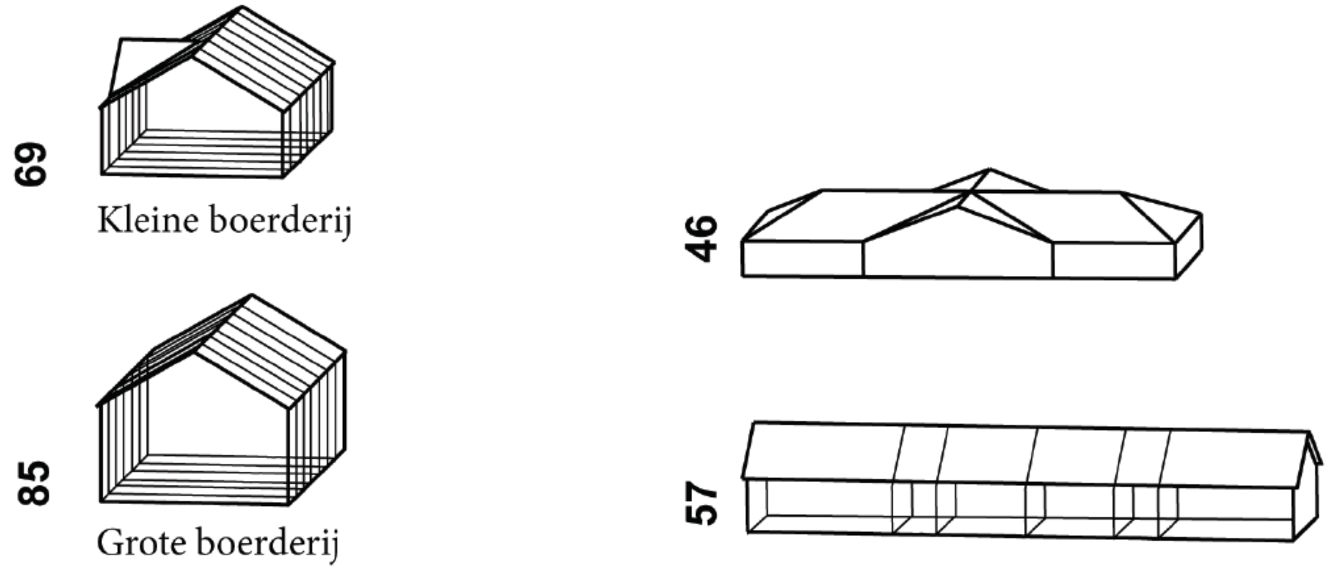
relations between the different buildings on *plots in the wood*



the buildings in the *plots in the wood*

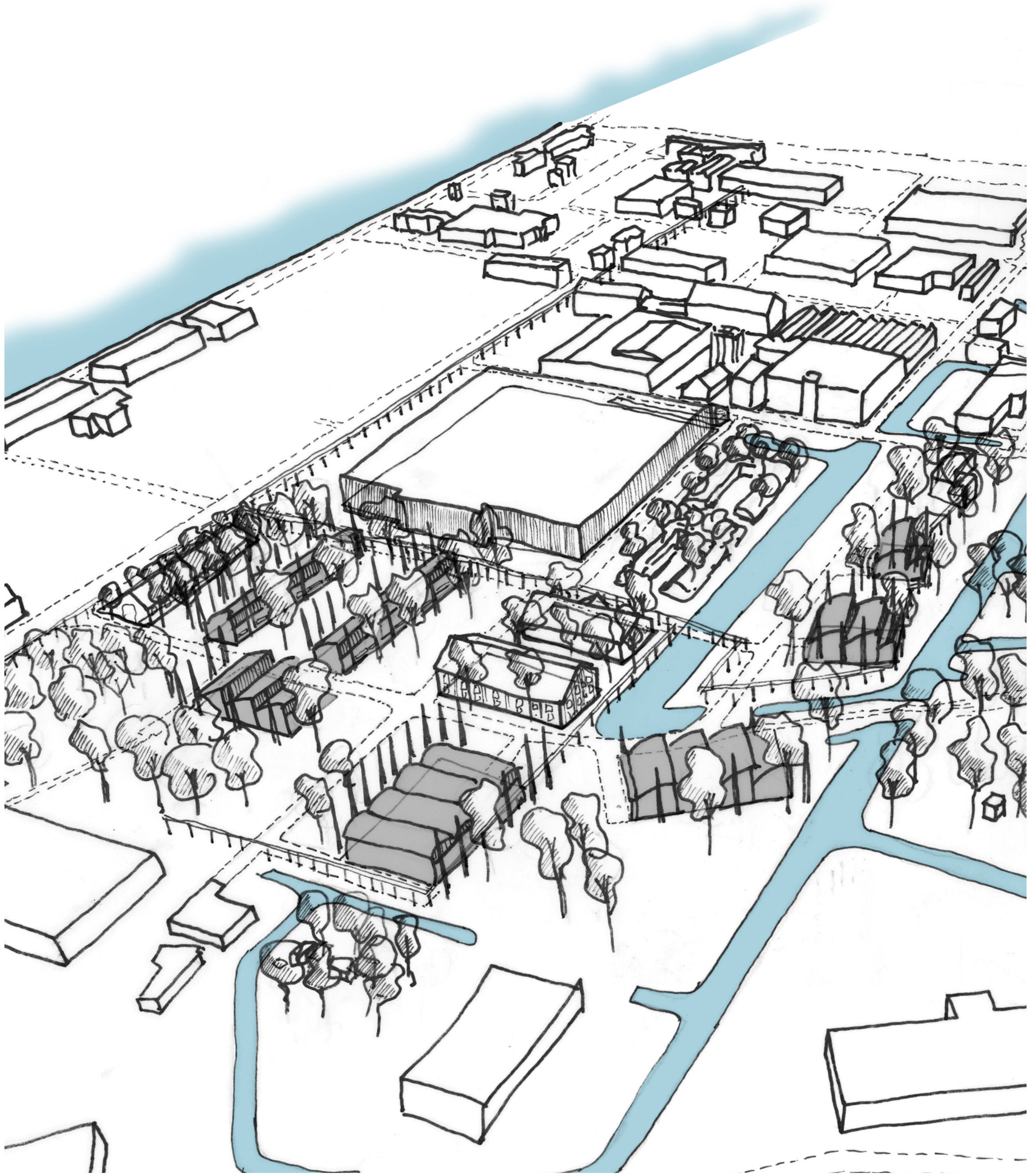


Source: Photo by Amanda Verschuur

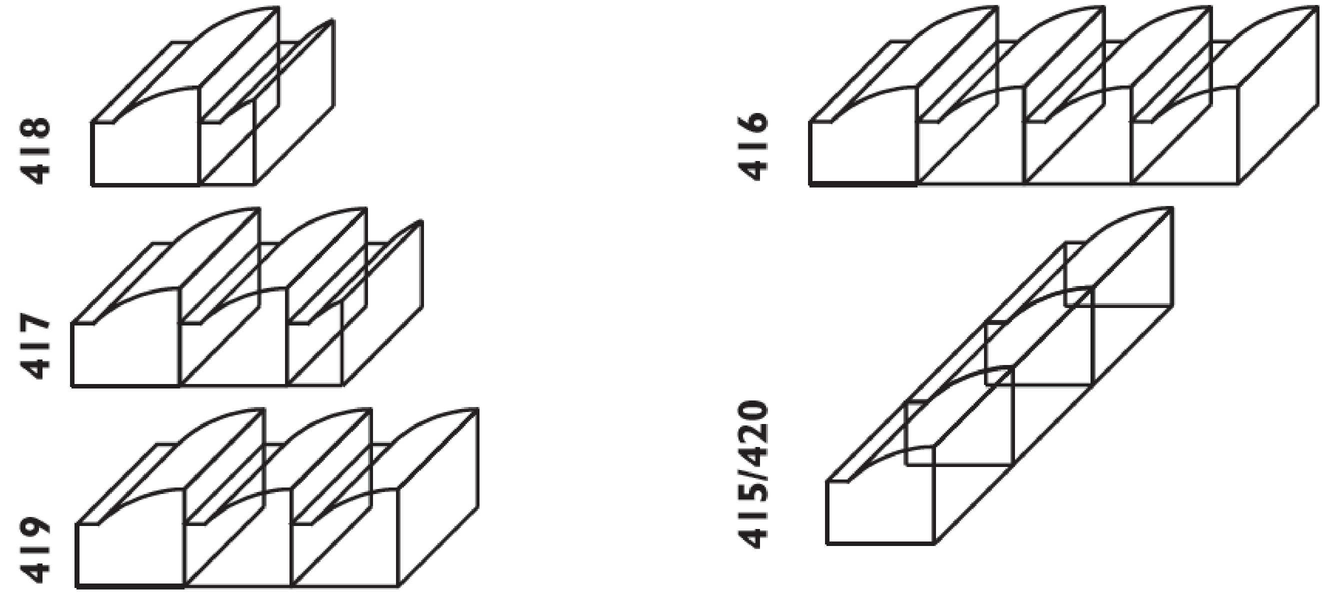


Source: Images by Amanda Verschuur

the gabled roof buildings or *farms* (1895-1905)

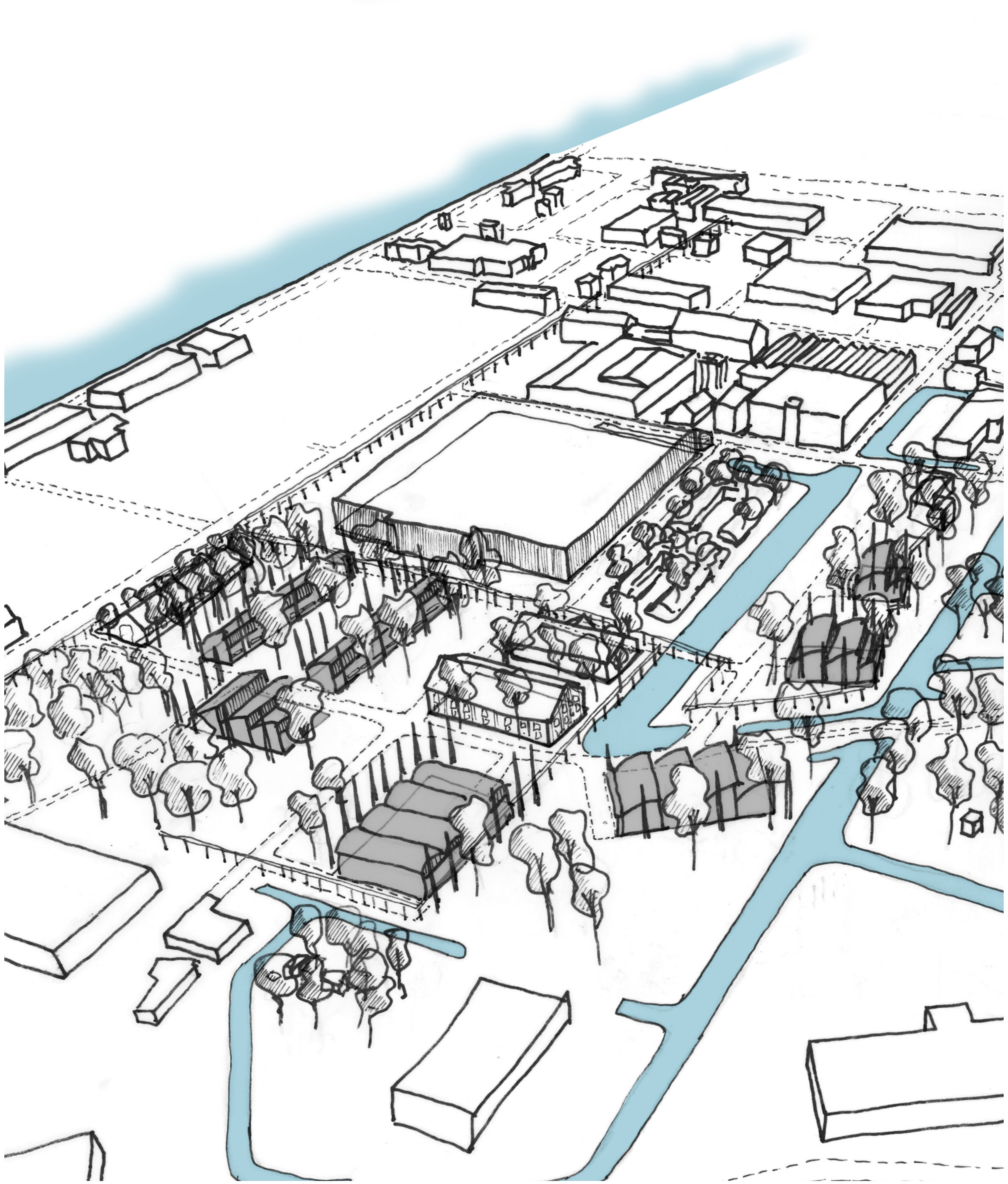


Source: Photo by Google Maps

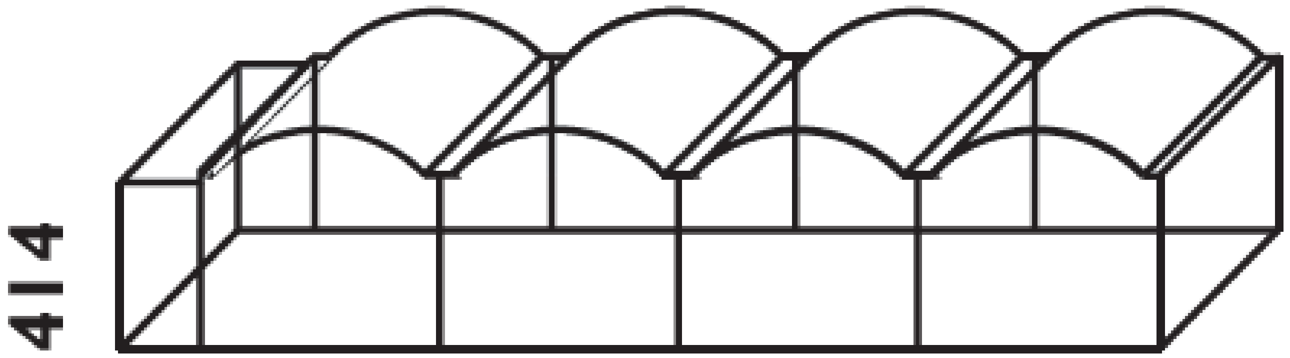


Source: Images by Barbara de Groot

the shell roof buildings (1952)

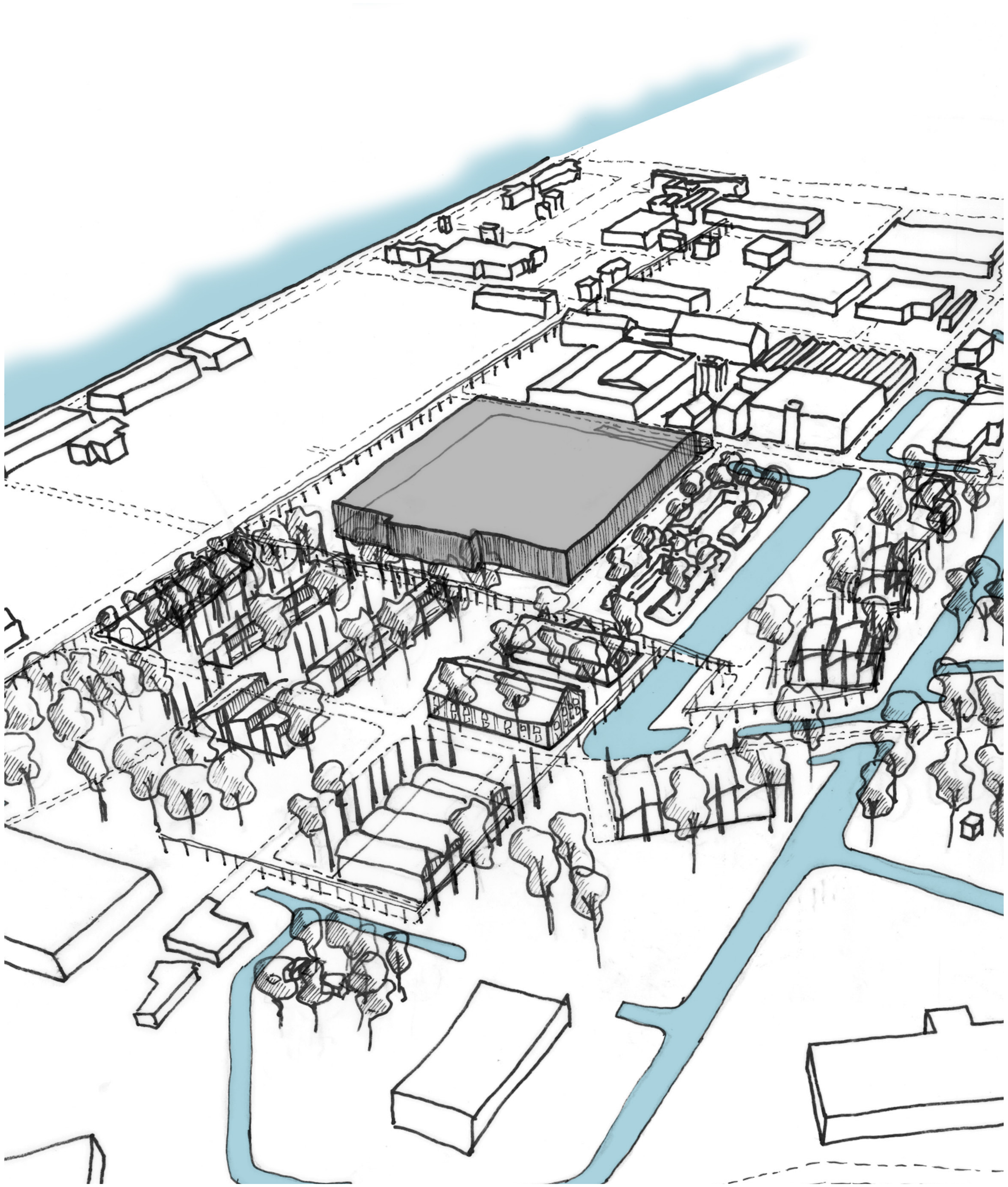


Source: Photo by Google Maps



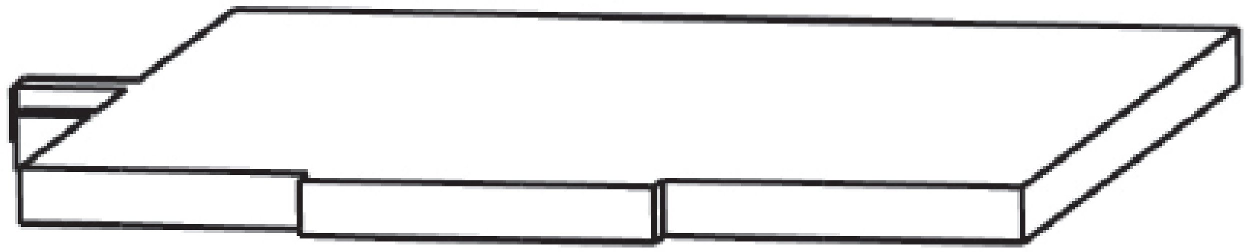
Source: Images by Barbara de Groot

the circular roof building (1952)



Source: Photo taken from www.hembrugterrein.com

01



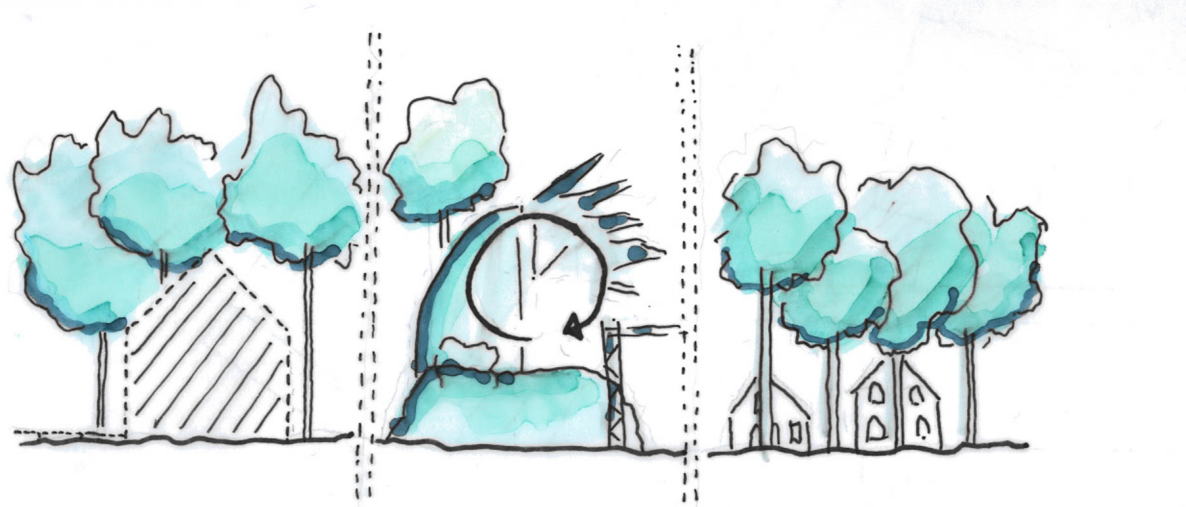
Source: Images by Amanda Verschuur

the low-sloped roof building (1991)

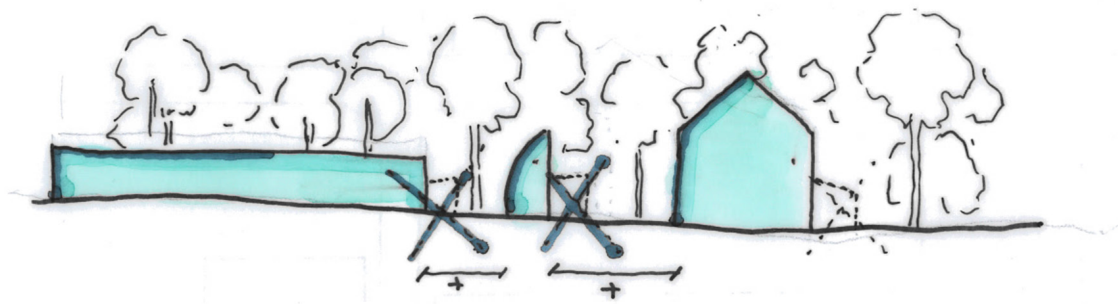
How to create a ***new production space***, based on the already present creative businesses and makers and resilient to change, in the ***Plots in the Wood***?

The site and different buildings are to be approached as a ***temporality***, because of the uncertain phase it is currently in. The main goal is to create a space that should function as a production landscape. The context itself is a slower changing entity compared to the different buildings so an adjusted approach was necessary for the interventions and approaches on the scale level of architecture.

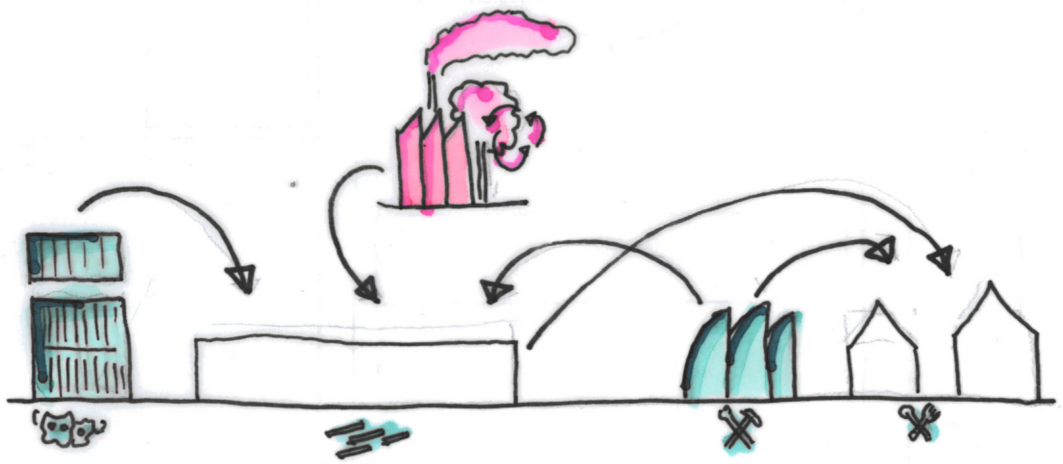
The focus of the design, as described by Corner (2004, p. 4) similar to a landscape architect or ecologist is focused on what to ***cultivate***, ***stage*** and to ***set-up***, open-ended rather than just designing for a completely finished end-result.



designing from different values from different periods

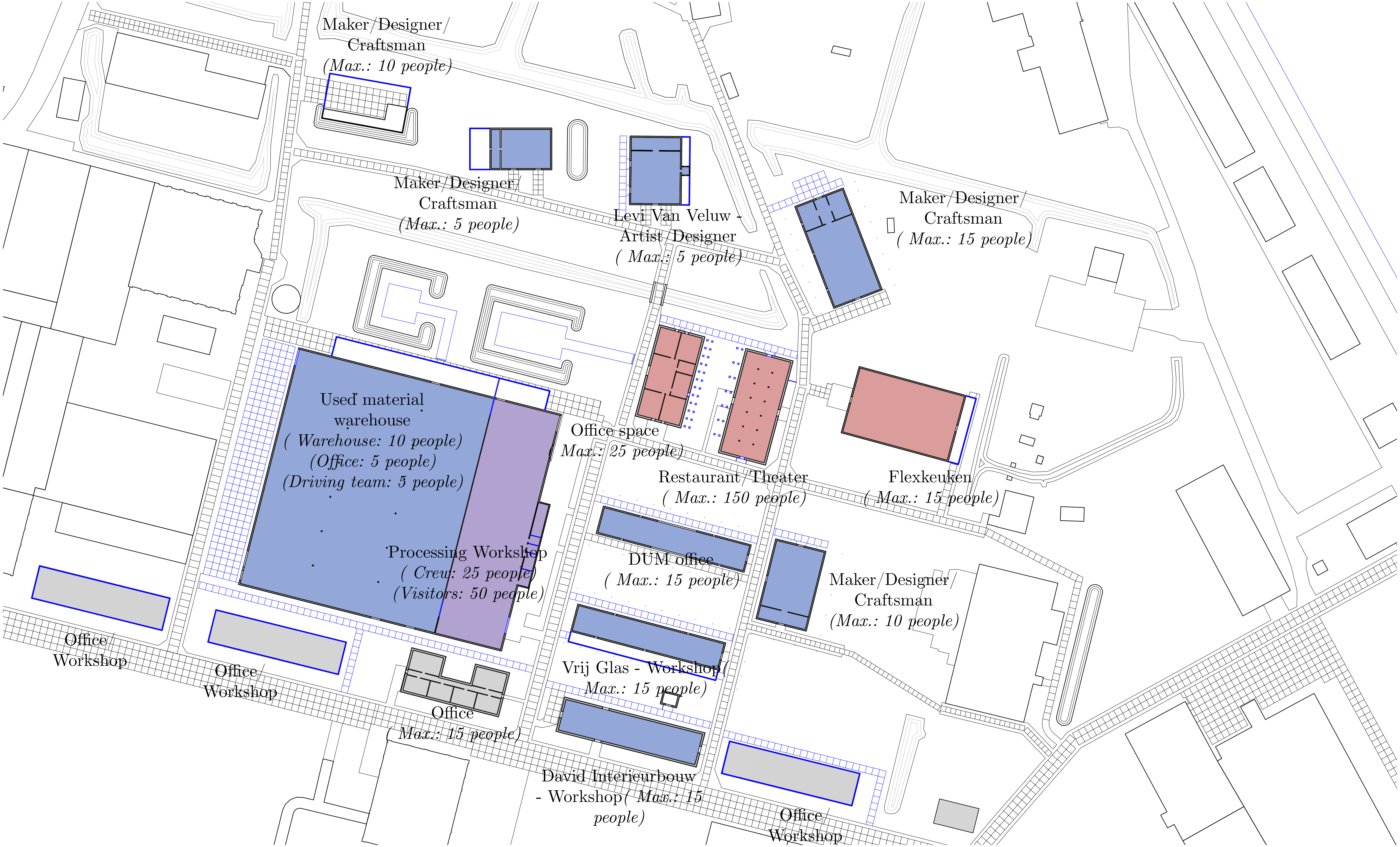


remove some of the extra buildings to create space and clarity

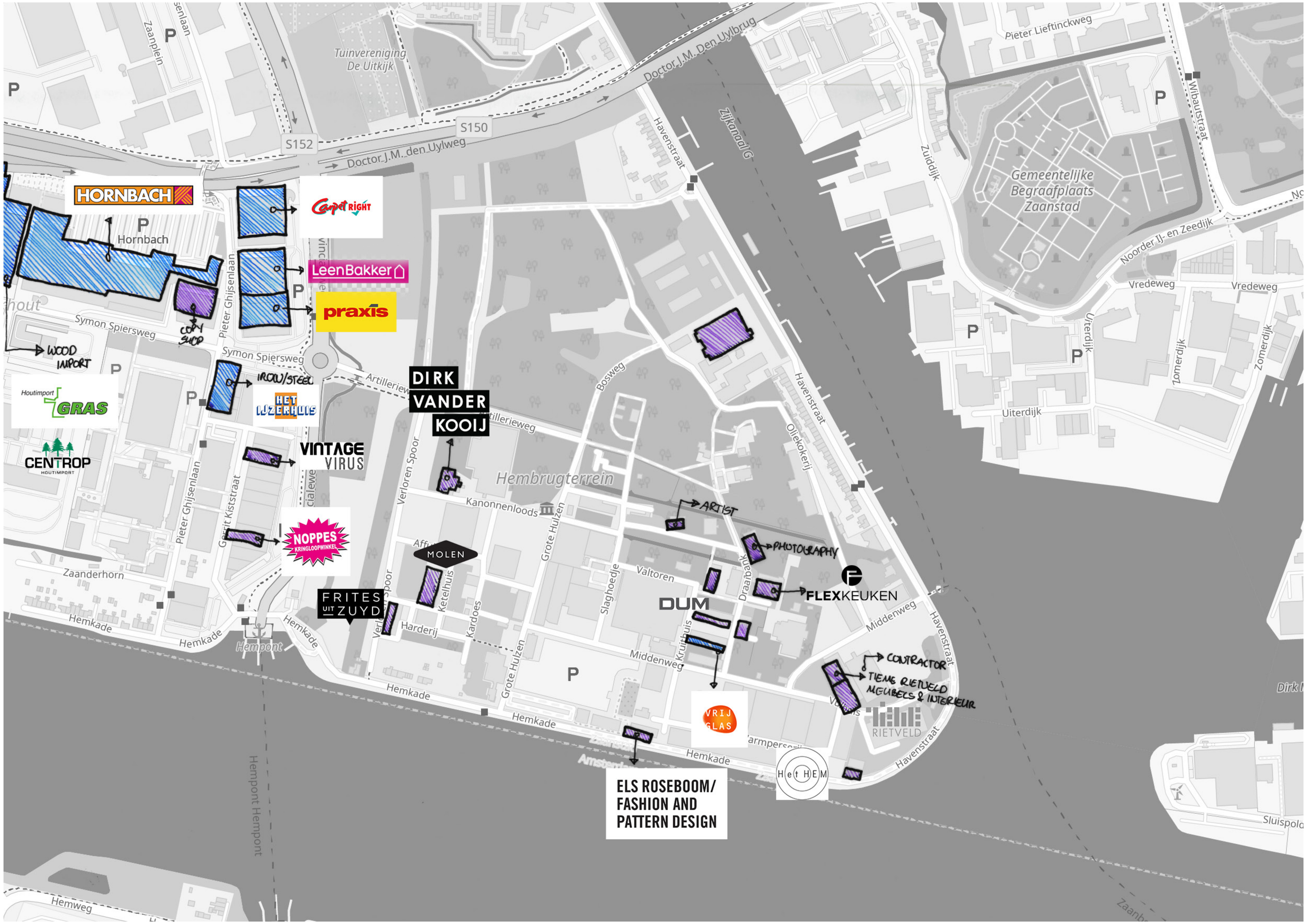


the area is serving for its surroundings with new industries

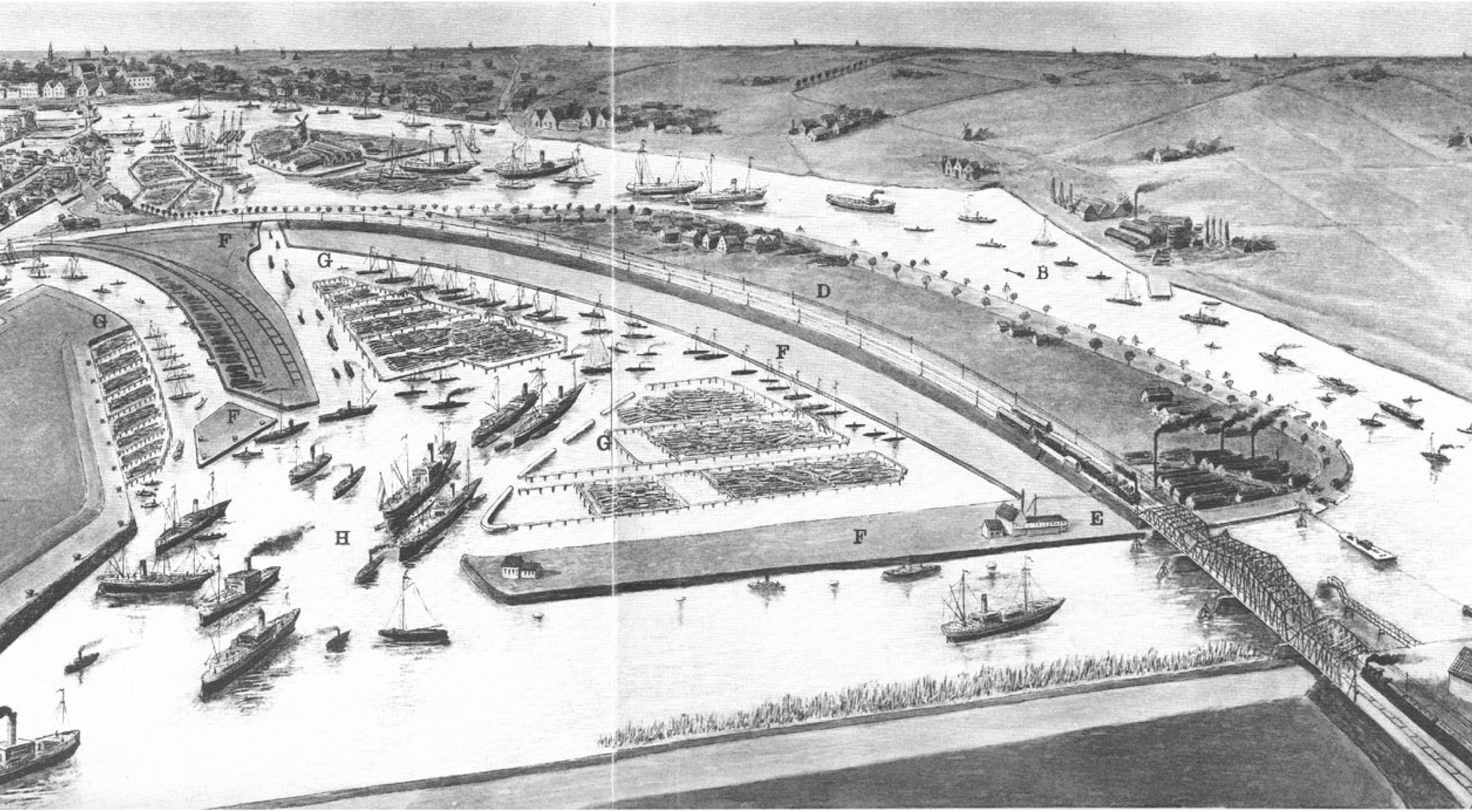
main urban concepts



urban program *Plots in the Wood*



industry & maker businesses, workshops, warehouses in and around Hembrug



Source: https://www.zaans-industrieel-erfgoed.nl/index.html?pages_4/maritieme_gesch_haven.html&main_frame

New harbour around 1911. A: *Zaandam*, B: *Side Channel G*, D: *Railway*, E: *Telegraaf kantoor*, F: *Trade terrain* G: *Wood Harbour*, H: *Harbour basin*.

creating space, clarity and space for additions

organogram en het bewegen van mensen over de locatie.

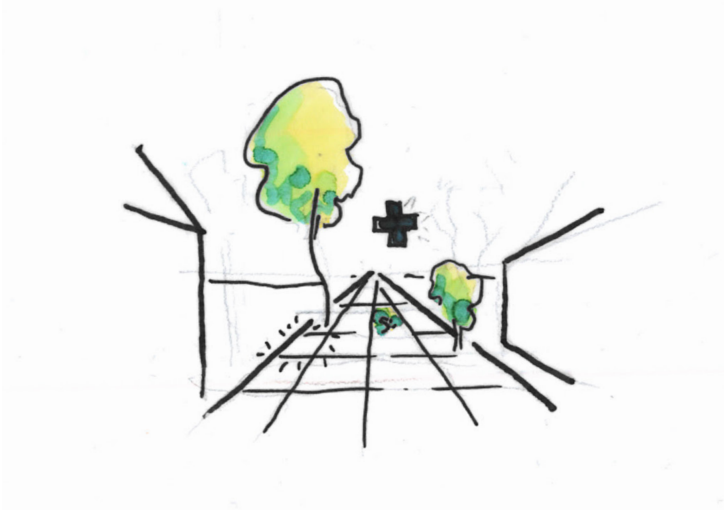
a new production space in the green center of Hembrug,
Plots in the Wood

landscape architectural design plan for the *Plots in the Wood*

protected forest

several applications of different vegetation plans for different areas playing into the existing

artifacts

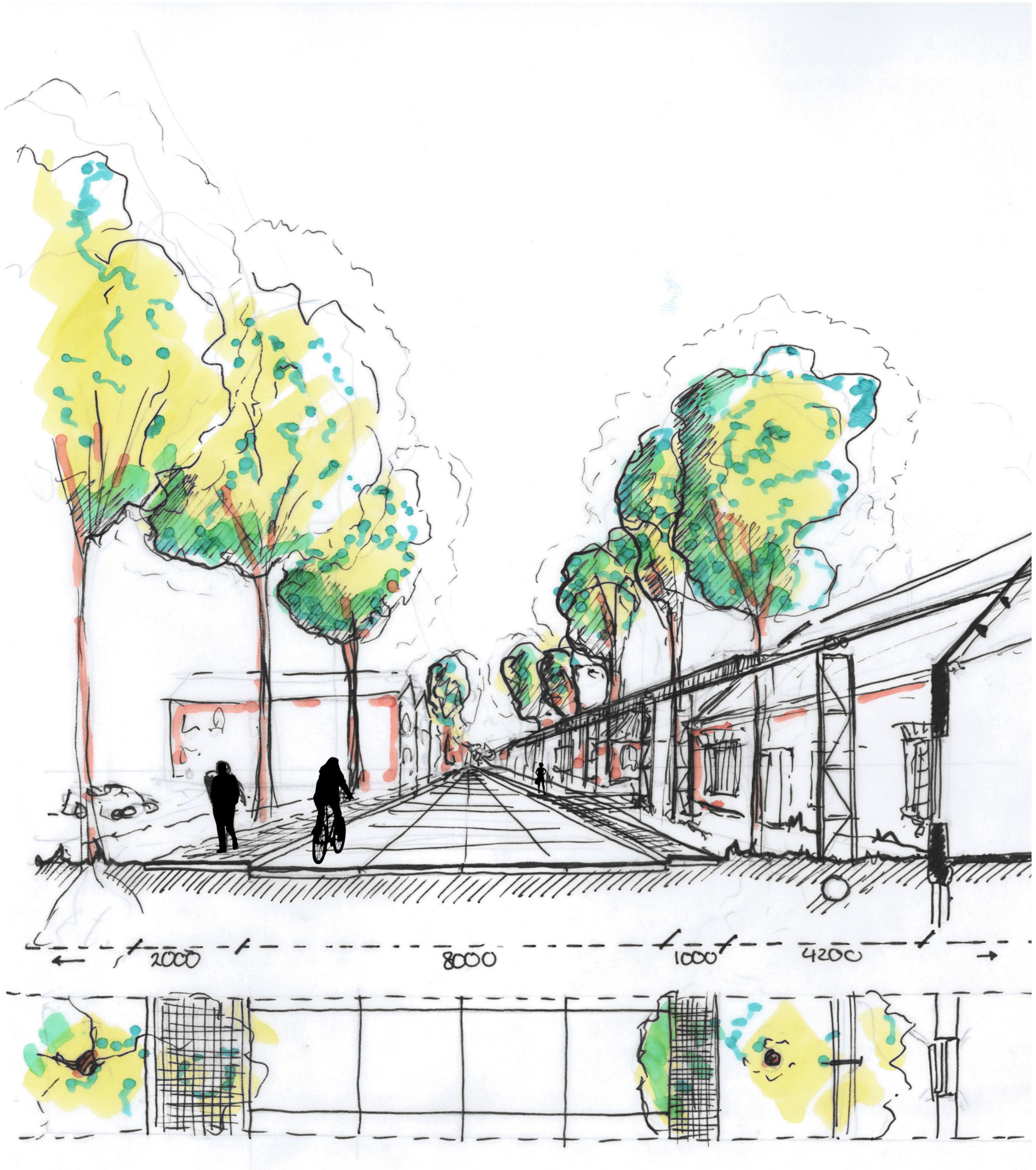


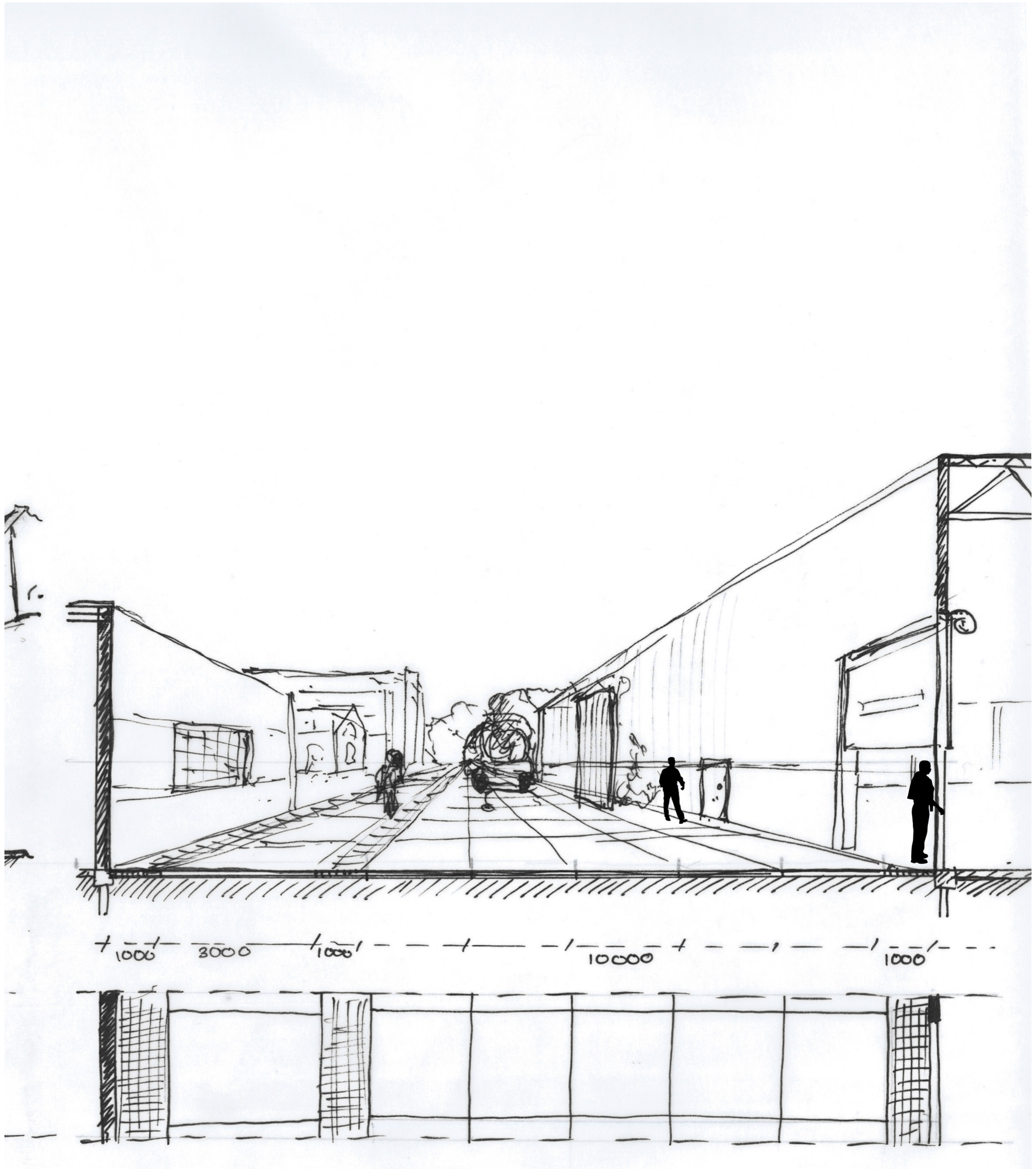
street profile upgrade

do not cut down any trees

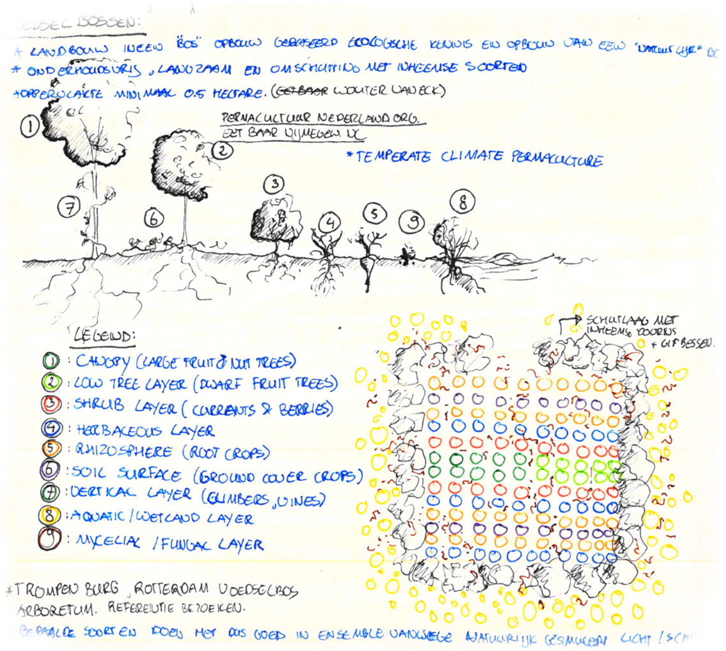
less maintenance

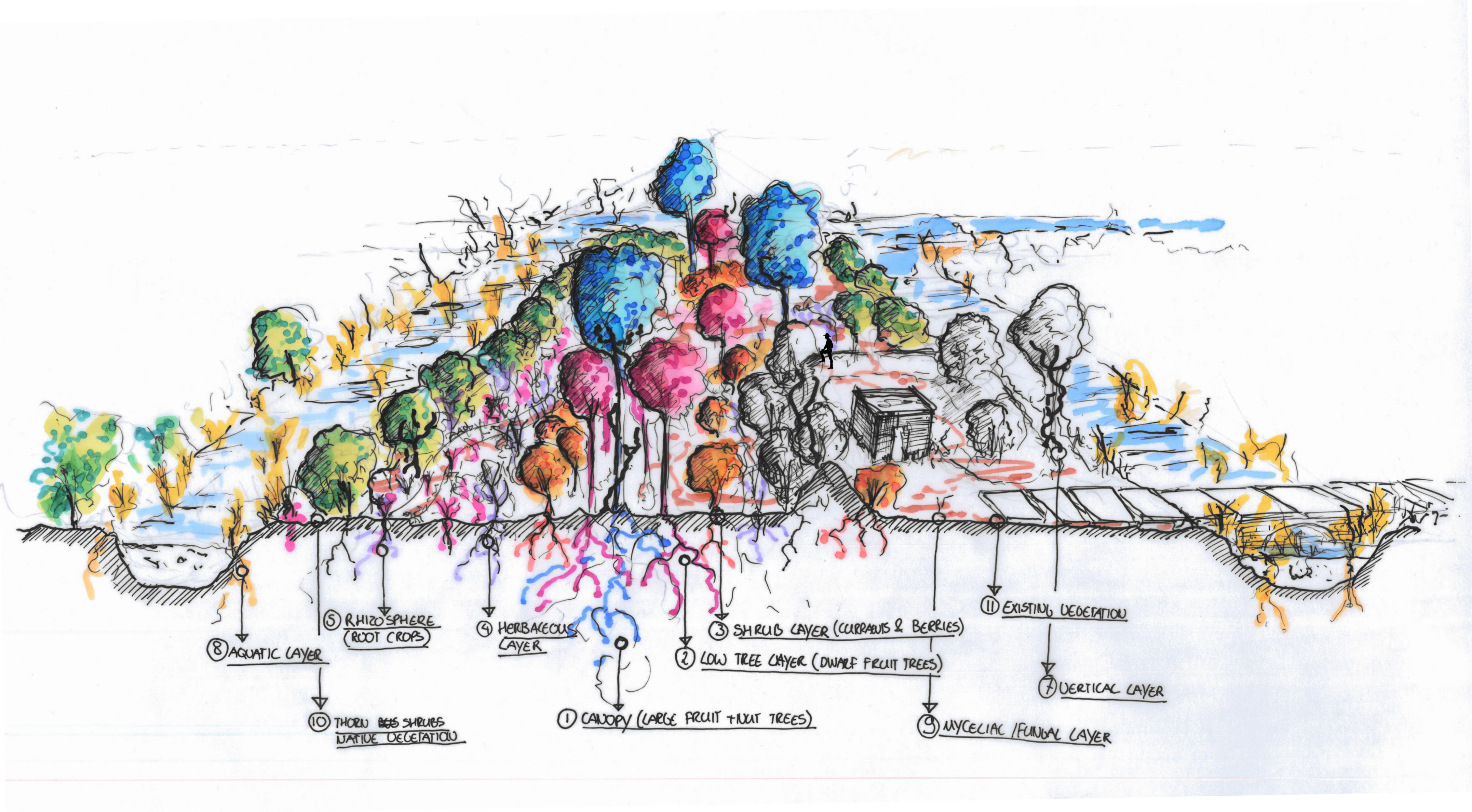
landscape architectural values & concepts



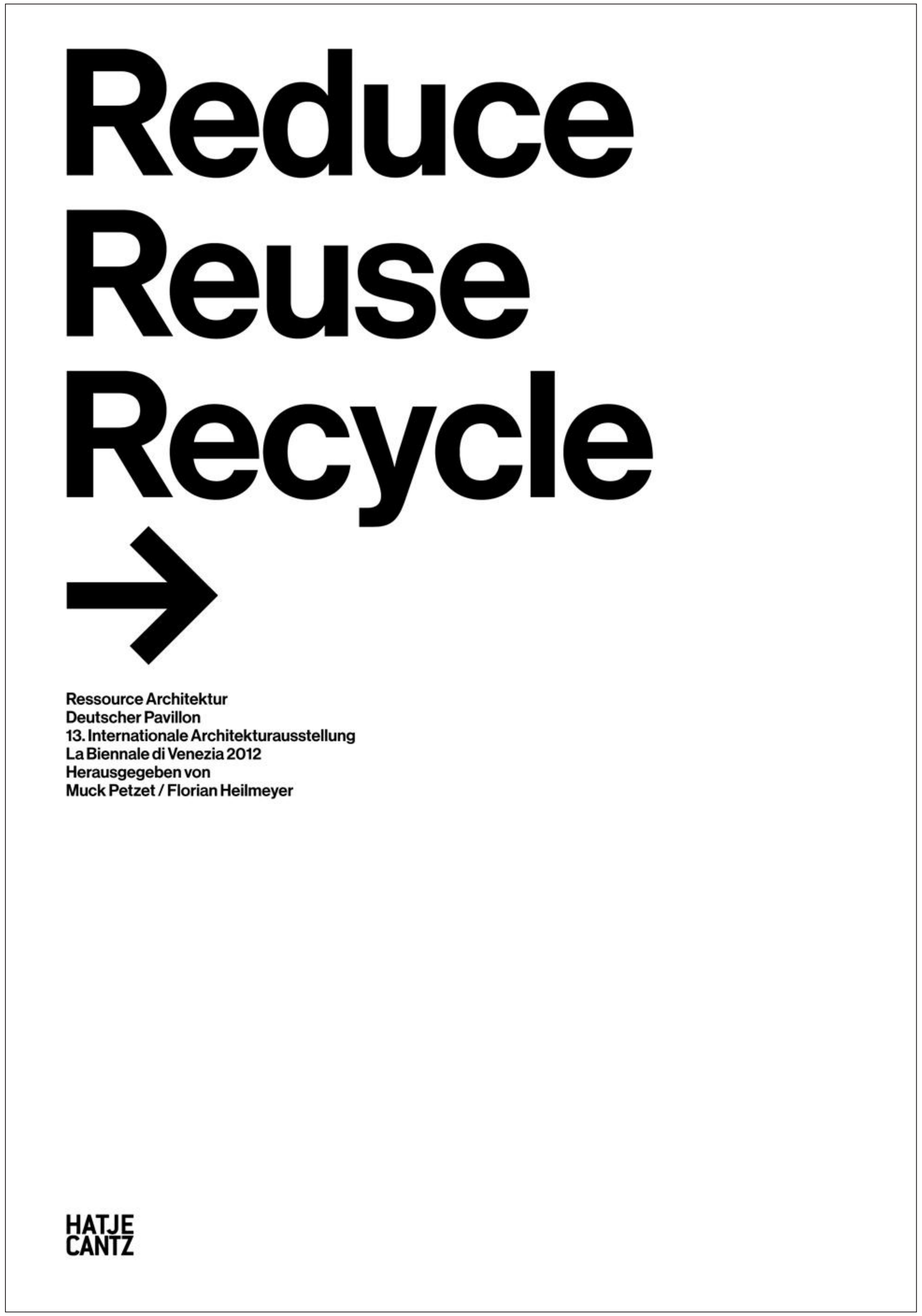


upgrade street profiles from the existing, plant Platan trees
fitting to urban settings





forest renovation based on ecological knowledge in combination with native species and existing vegetation



Source: Heilmeyer, F. & Petzet, M. (2012) *Reduce Reuse Recycle.* Ostfildern, Germany: Hatje Cantz Verlag.

Strategies:

> Perception

> Maintenance

> Behavior

> Renovation

> Conversion

> Infill

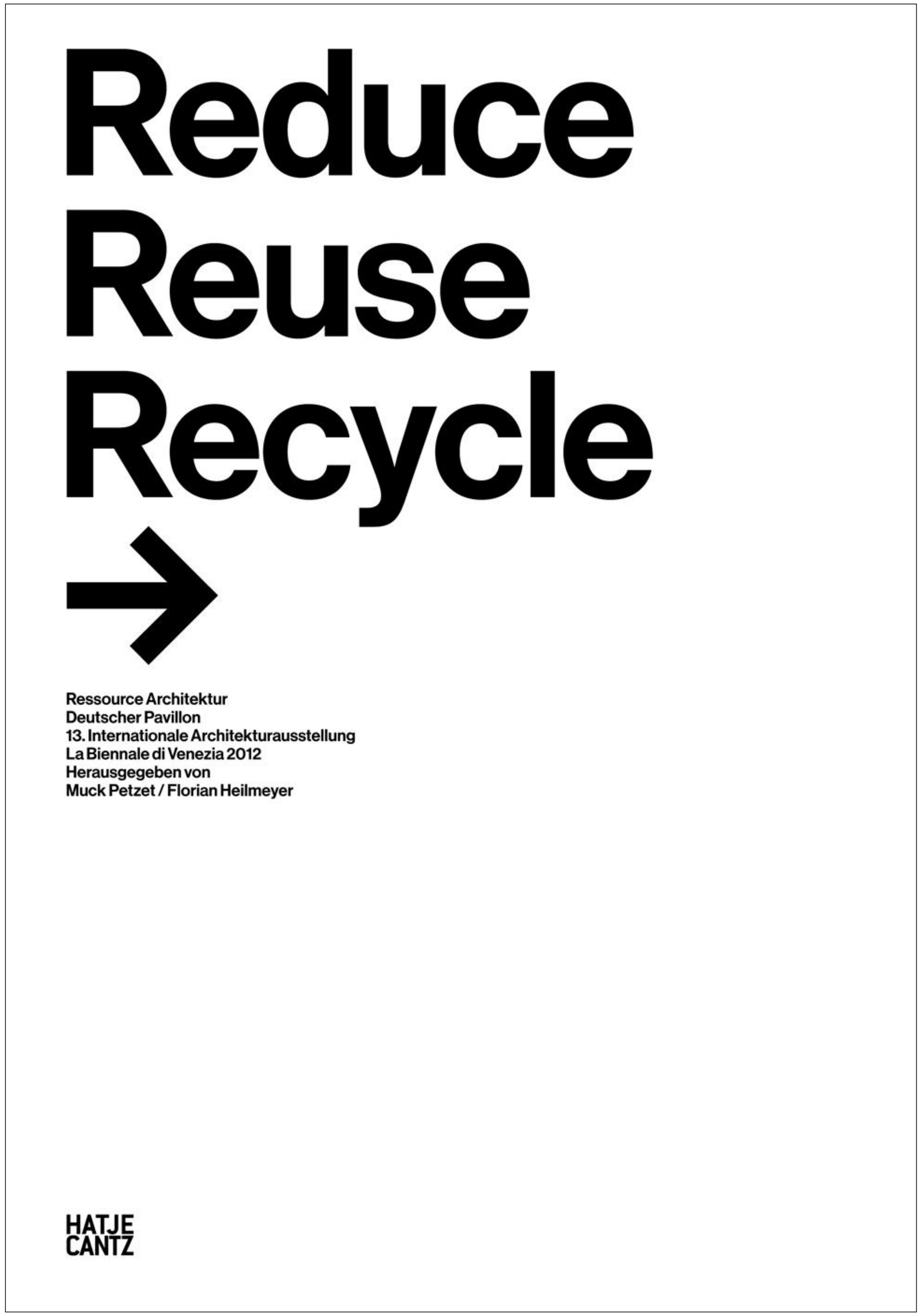
> Redesign

> Subtraction

> Addition

> Material Recycling

> Gestalt Recycling



Source: Heilmeyer, F. & Petzet, M. (2012) *Reduce Reuse Recycle*. Ostfildern, Germany: Hatje Cantz Verlag.

Strategies:

> ***Perception***

> ***Maintenance***

> (***Behavior)*** (part of the overall goal of the design)

> Renovation

> ***Conversion***

> ***Infill***

> Redesign

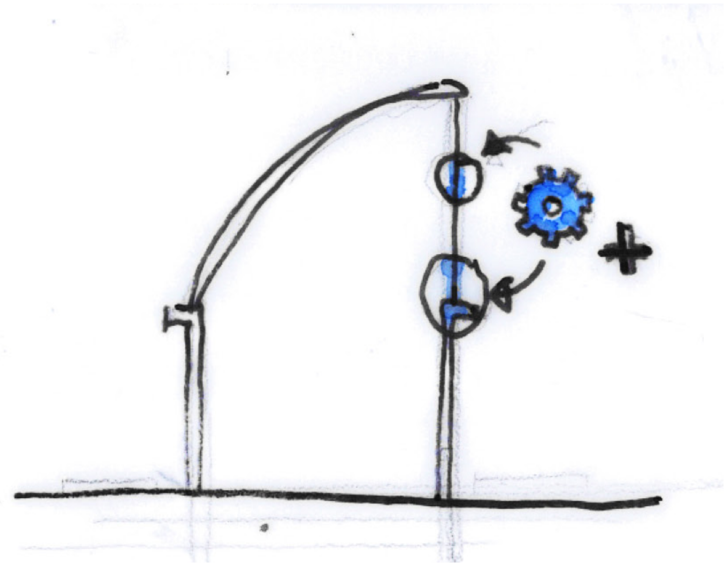
> Subtraction

> ***Addition*** (the main spaces should be the basis of the design)

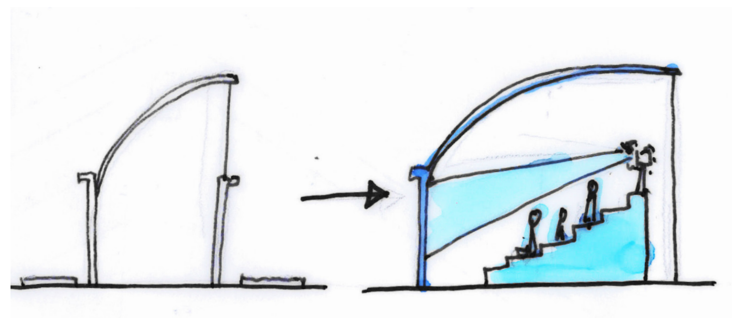
> ***Material Recycling***

> Gestalt Recycling

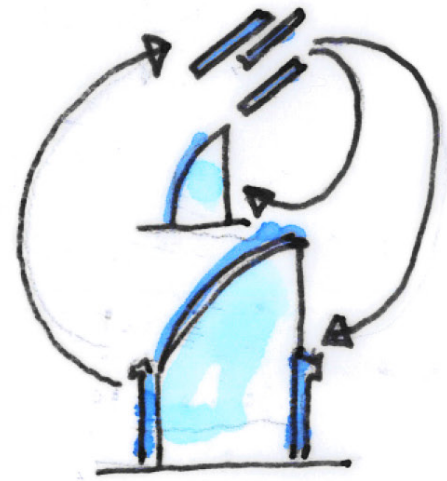
> Perception: *"perceive, recognize, appreciate, represent, document, analyze, explore, compare, collect, discuss, inform, publish, sensitize, reevaluate"*



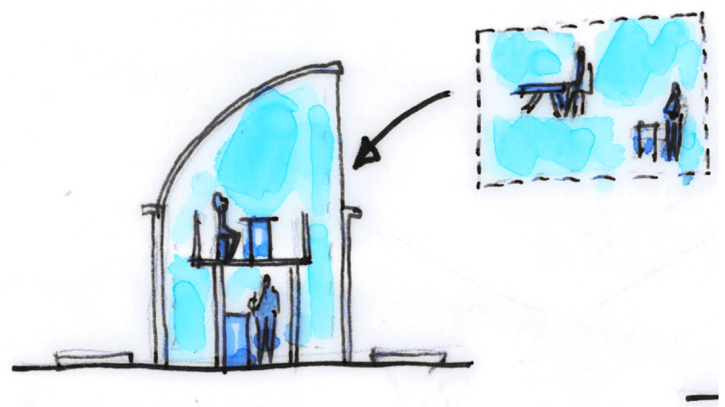
> Maintenance: *"clean, care, improve, patch, seal, cure, prepare, repair"*



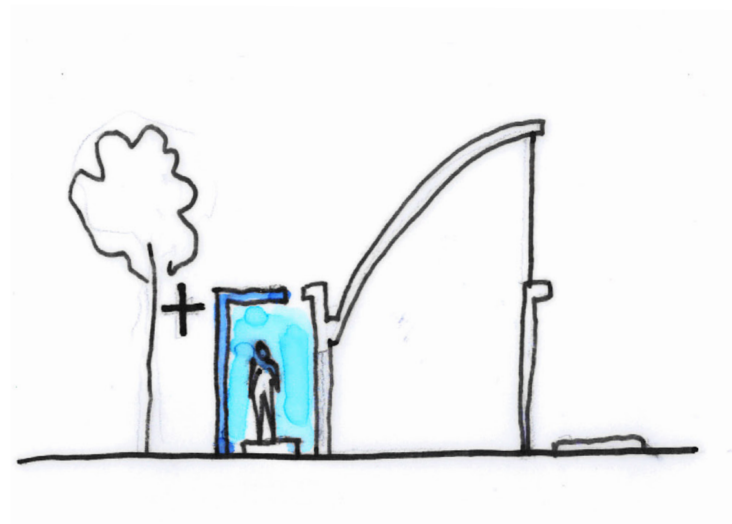
> Conversion: *"reprogram, convert, reorganize, rededicate, transform, remodel"*



> Material Recycling: *"transform, use of spolia, recycle, reprocess, transplant, reassemble"*



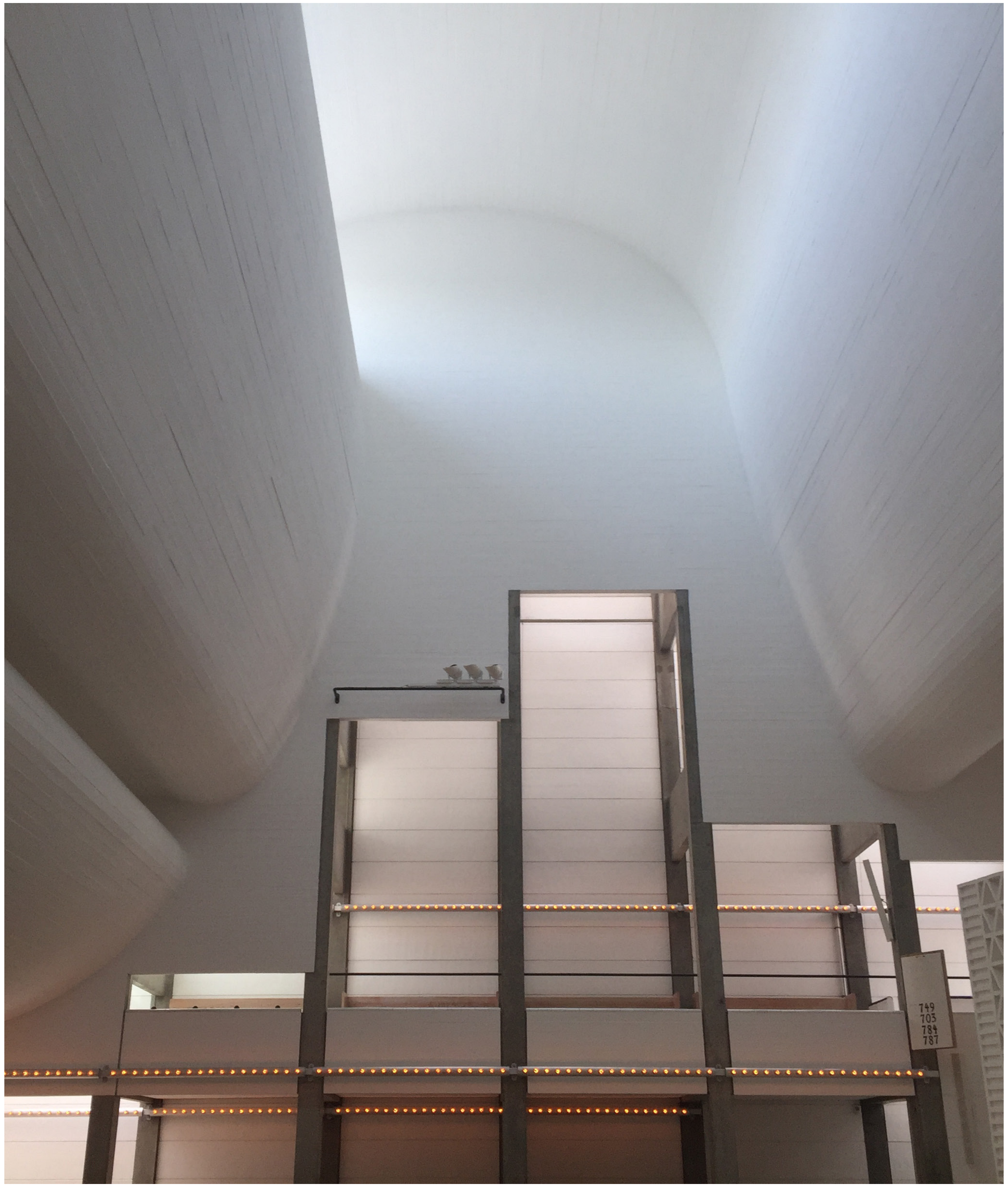
> Infill: *"fill, insert, embed, install, connect, close, implant"*



> Addition: *"raise, lengthen, complement, attach, expand, continue, enlarge, append"*

Source: Heilmeyer, F. & Petzet, M. (2012) *Reduce Reuse Recycle.* Ostfildern, Germany: Hatje Cantz Verlag.

phase 1 phase 2 phase 3 programming & detailing



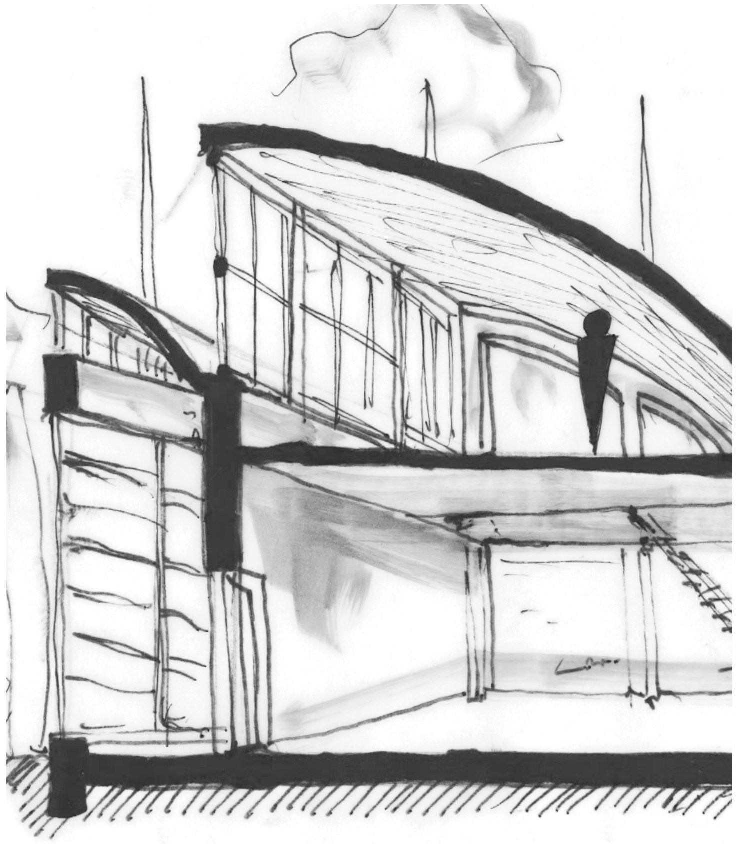
Source: Picture taken last summer of the Bagsværd Church by Jørn Utzon.

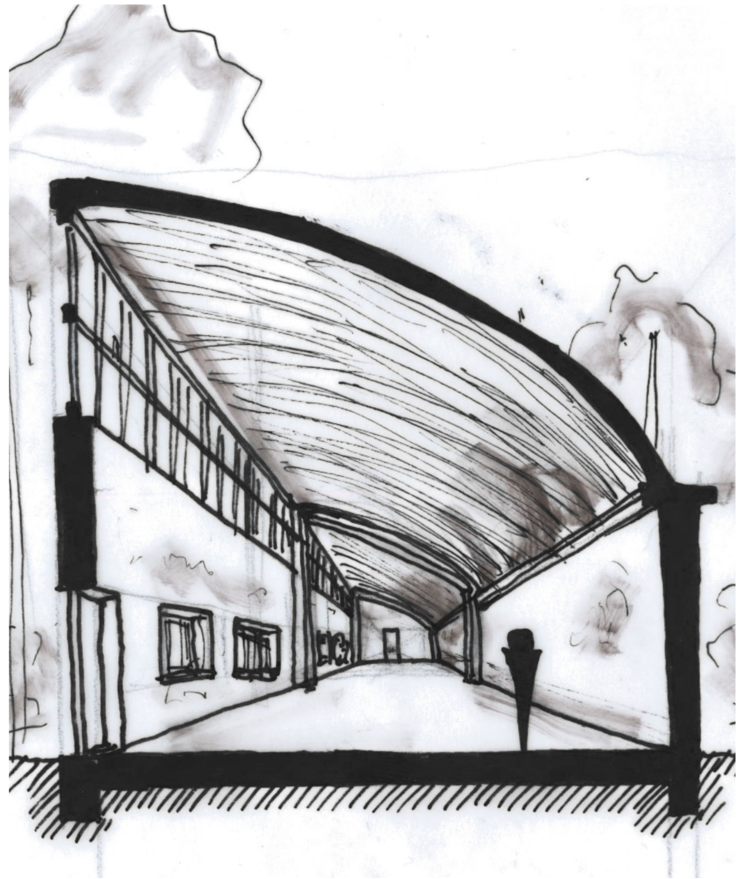
The notion of ***unfinished architecture*** is mentioned in Reduce, Reuse, Recycle. In the chapter of ***Addition***.

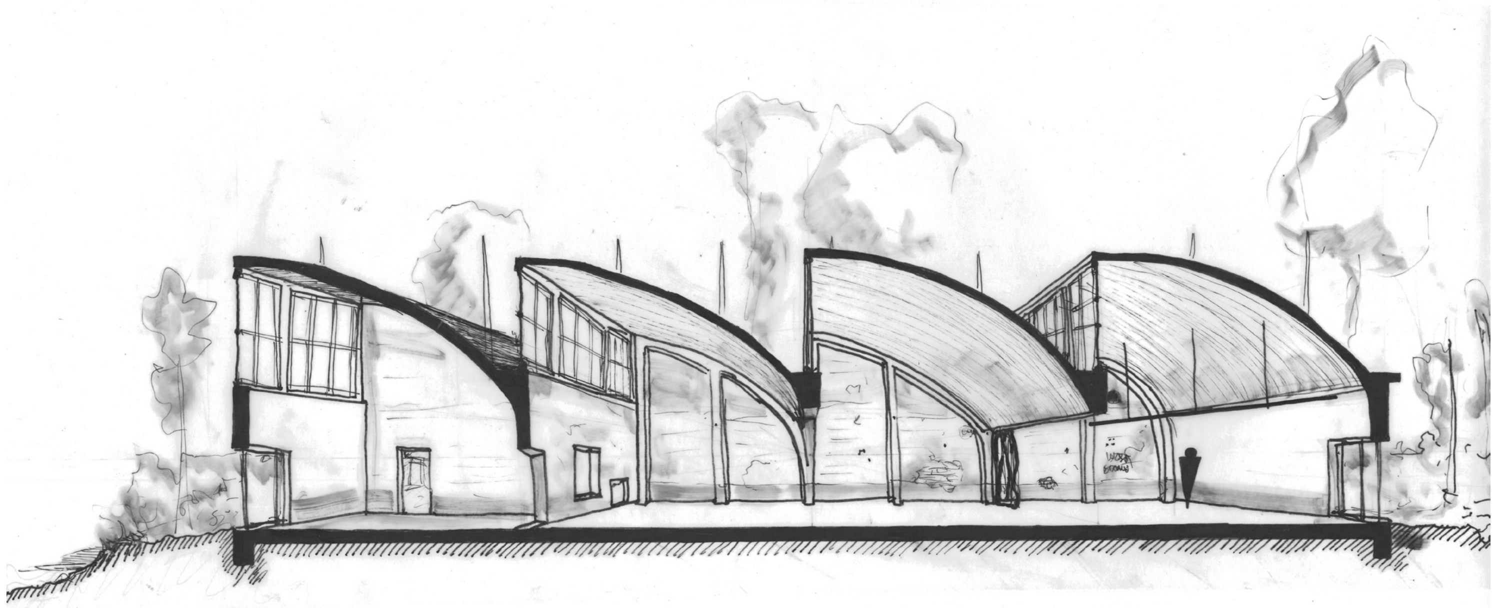
Architecture or buildings that are not finished could be considered more ***intelligible***, ***readable*** and more ***stimulating***. Newer buildings become more interesting as soon as they show signs of use, those could inspire the dweller to also take action.

The architecture should evoke users or dwellers to ***appropriate***, ***interact*** and ***discover*** with the space and its objects and surfaces, even if the result is temporary. Instead of architecture that is specially tailored to an and action, function or program.

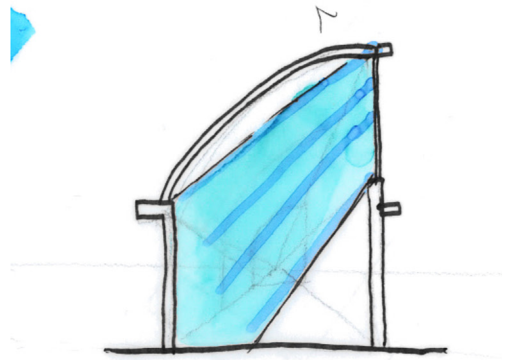
> Behavior: *"challenge standards, after conduct, adapt for comfort, flexible use, zone creation"*



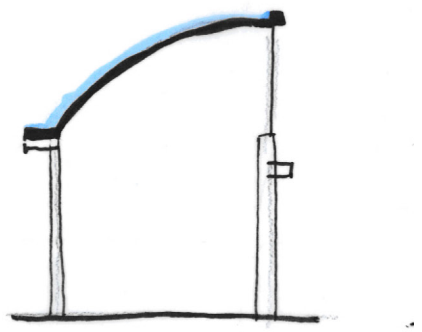




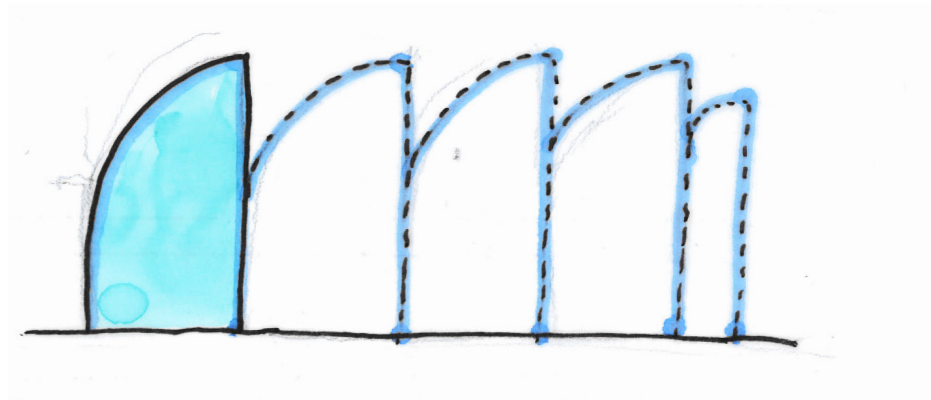
the shell roof buildings (1952)



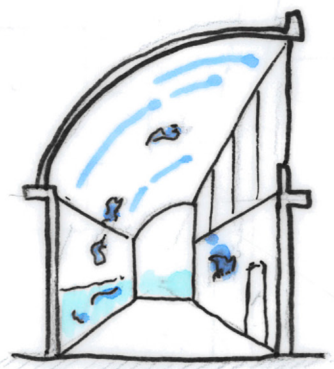
neutral northern daylight



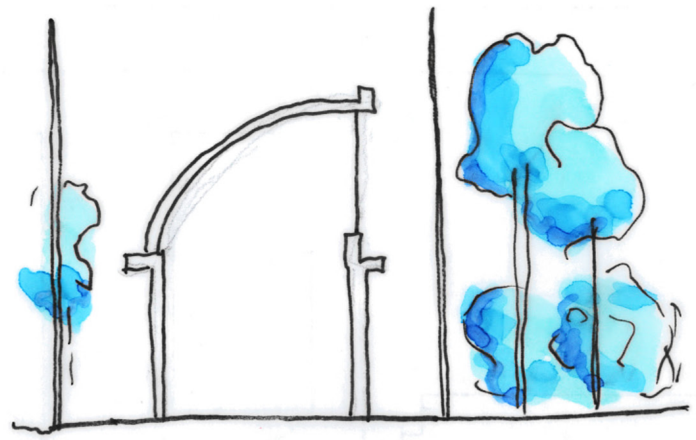
thin shell roof structure



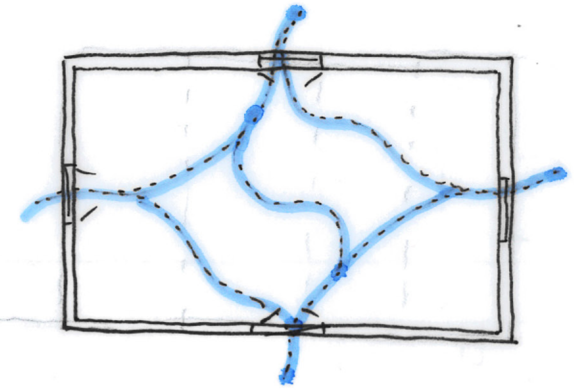
repetition of spatial elements



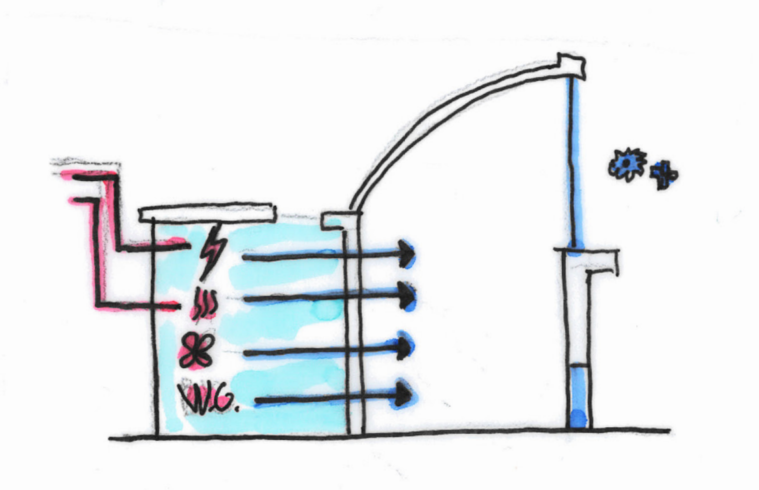
traces of the past use



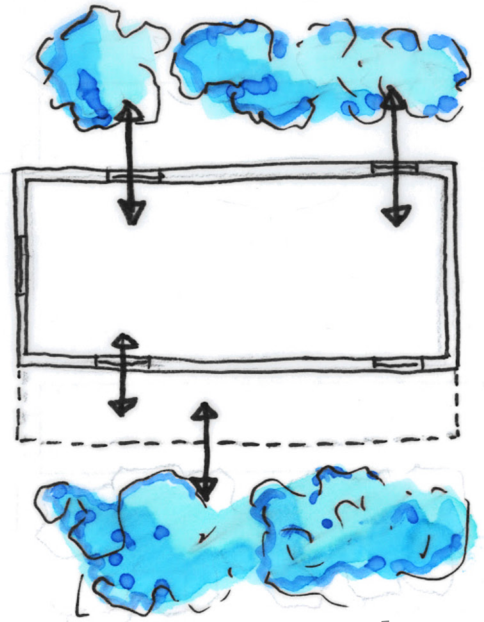
contrast inside outside



free open space with daylight



addition with all basic installations



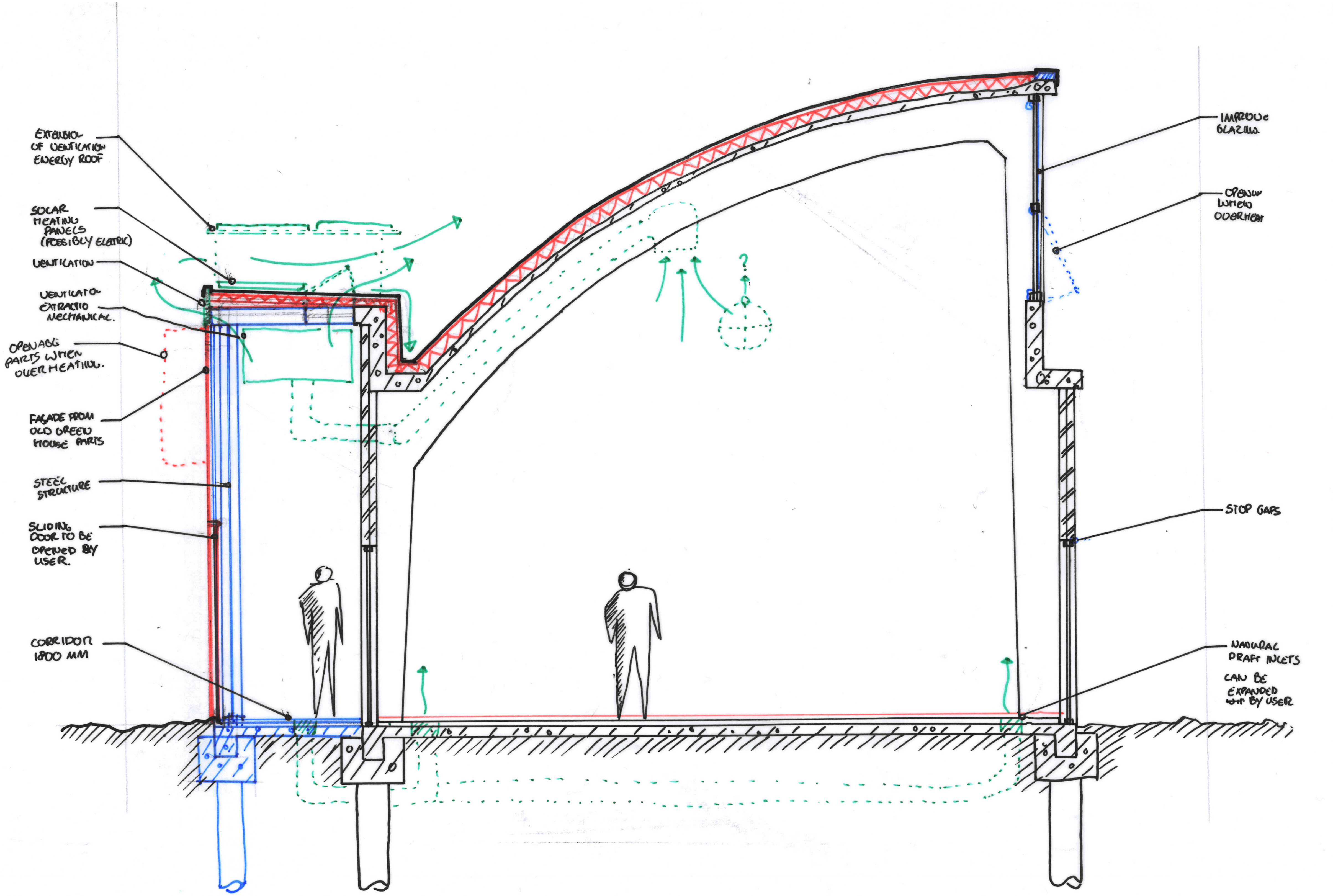
working spaces connected to vegetation

cultural values and main design diagrams

DUM

Source: Photographs by Studio M10, except for top left photograph.

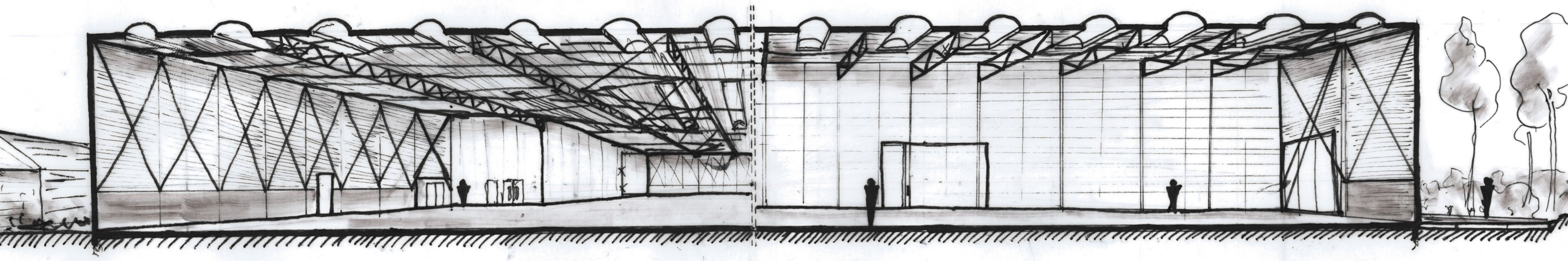
draaibank 10, DUM BV design furniture



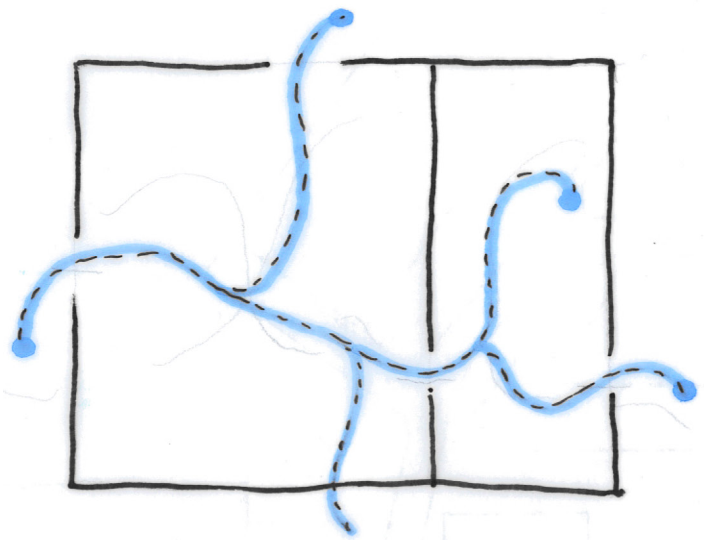
1:50 section shell roof proposal from the P3, inspired by principles used in the Van Nelle factory

Source: Original photograph by Amanda Verschuur.

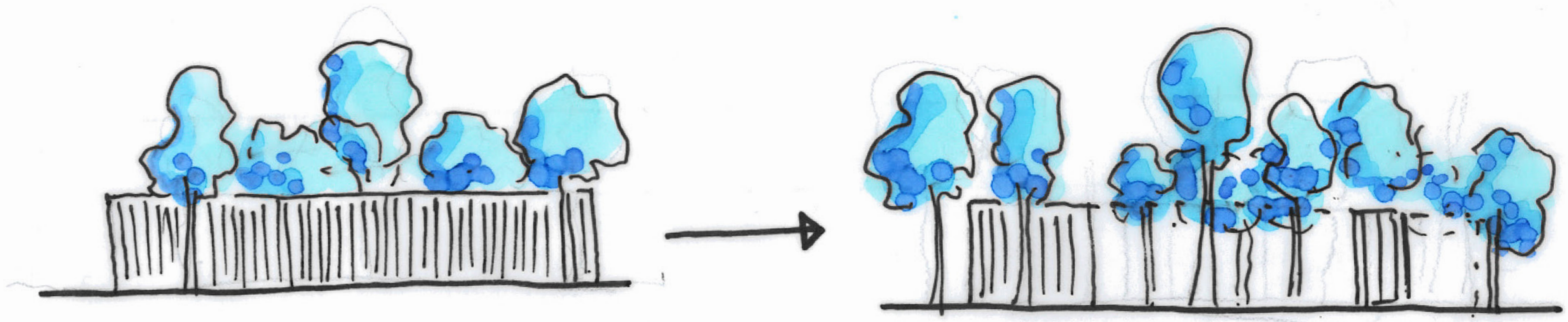
impressions of possible extensions by giving the dweller the possibilities of appropriating the surroundings



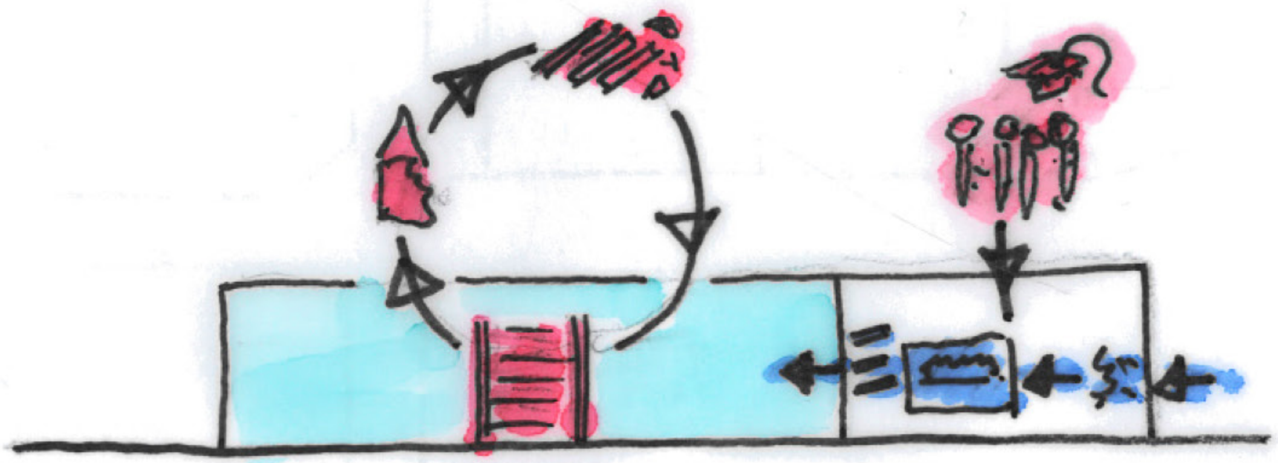
hal 01 (1991)



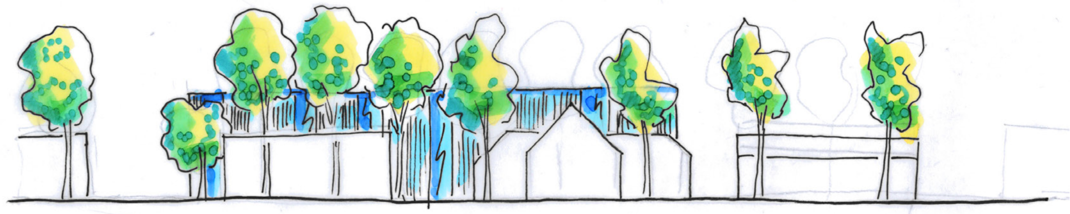
free open spaces



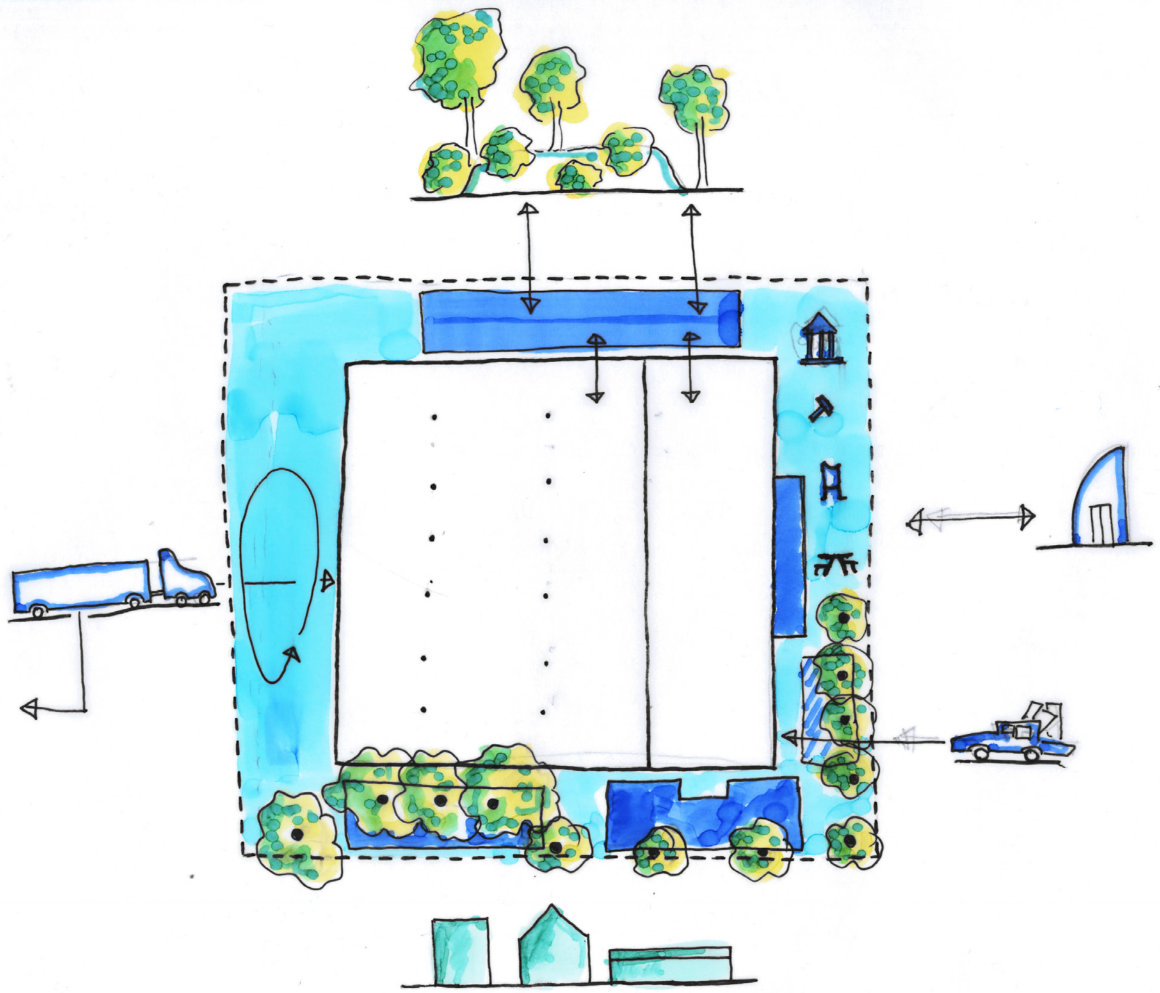
currently a closed facade blocking a view, now create a vaguer boundary, more transparency



program: used material warehouse & workshop

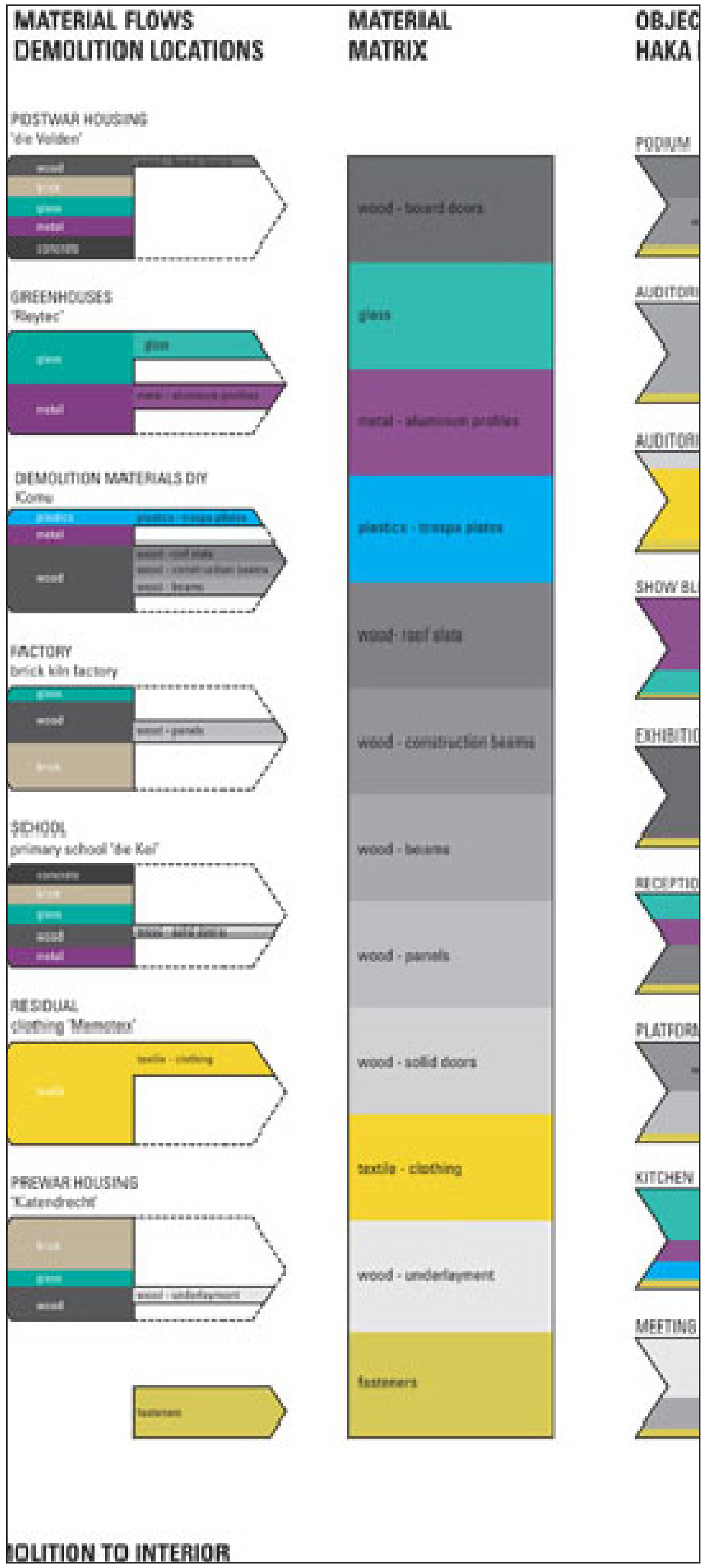


storefront and testing facade for reused building



create a vaguer, functional and architectural boundary

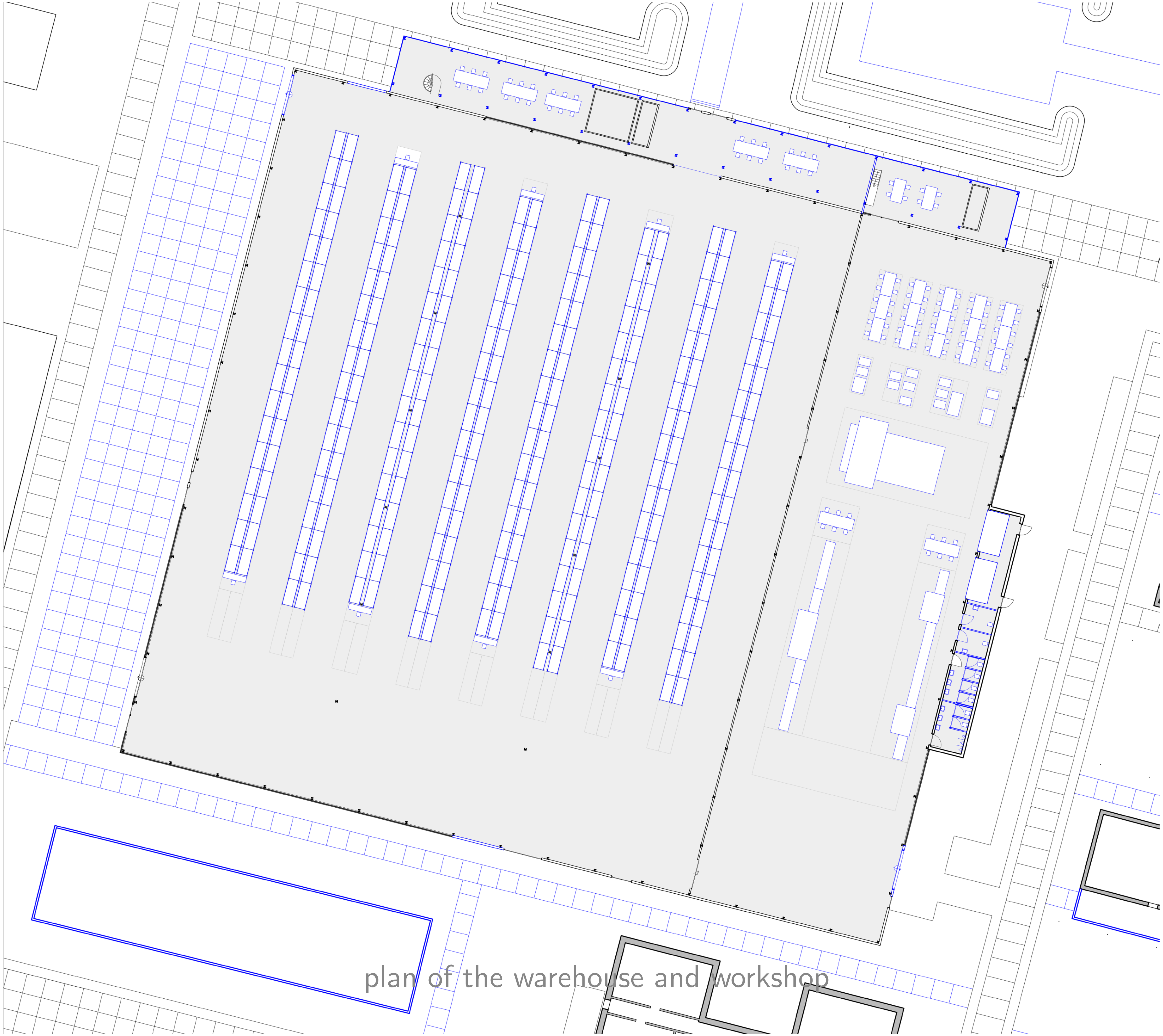
values & design concepts for hal 01



HAKA Recycle office, by Doepelstrijkers

Buurman Workshop

continuing by example: used material warehouse and workshop

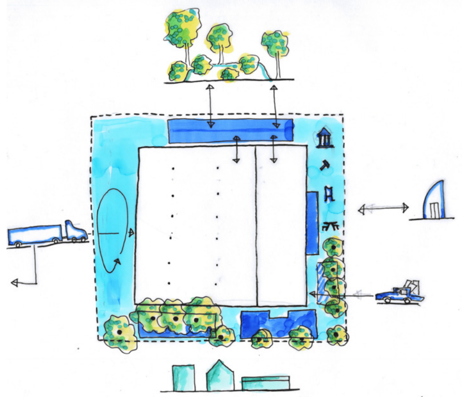


plan of the warehouse and workshop

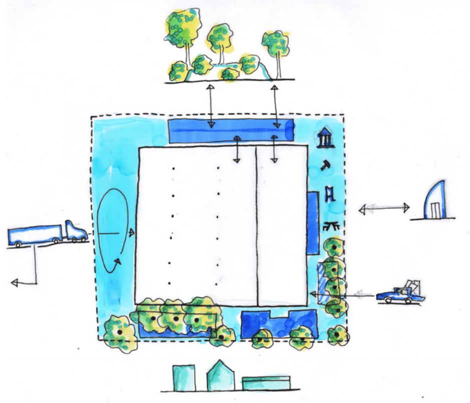
warehouse

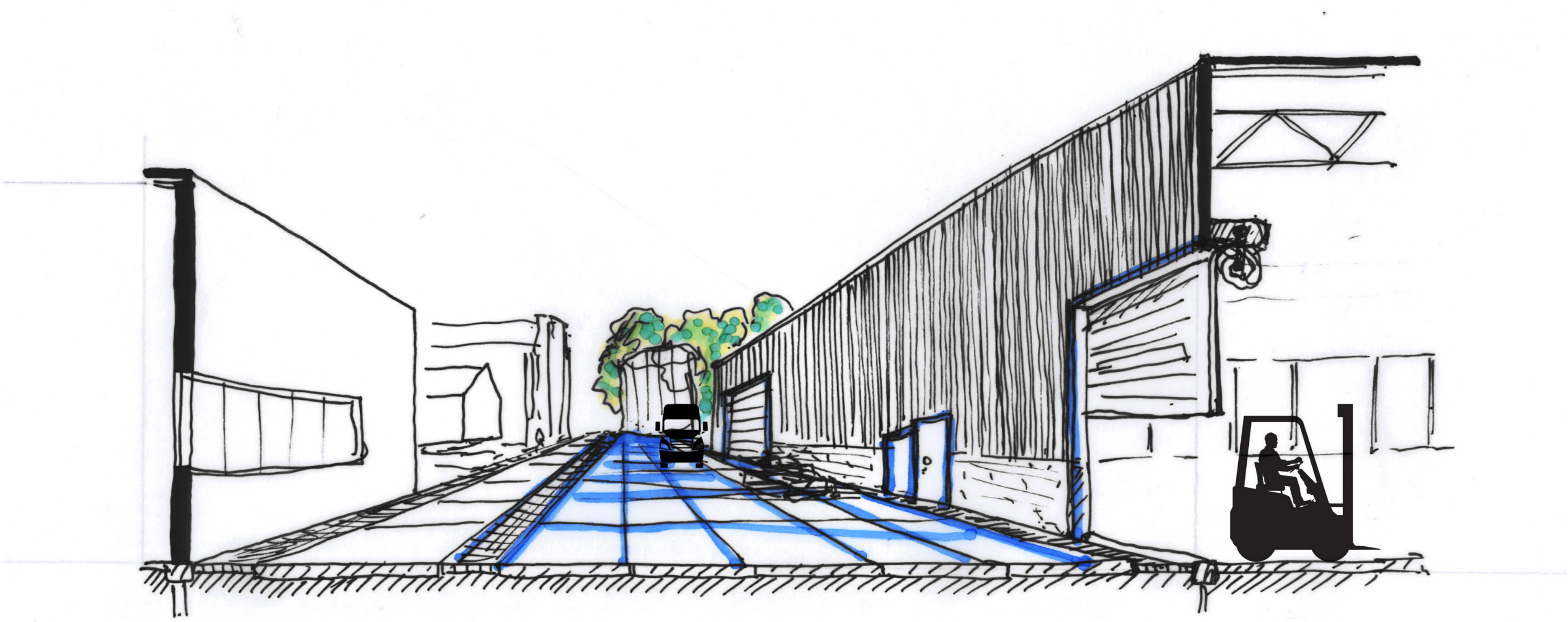
workshop

open workshop

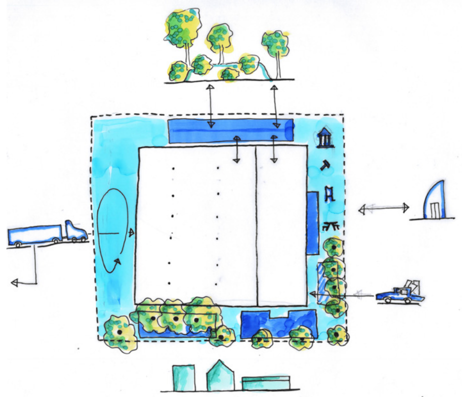


south facade decor for the buildings along the main street

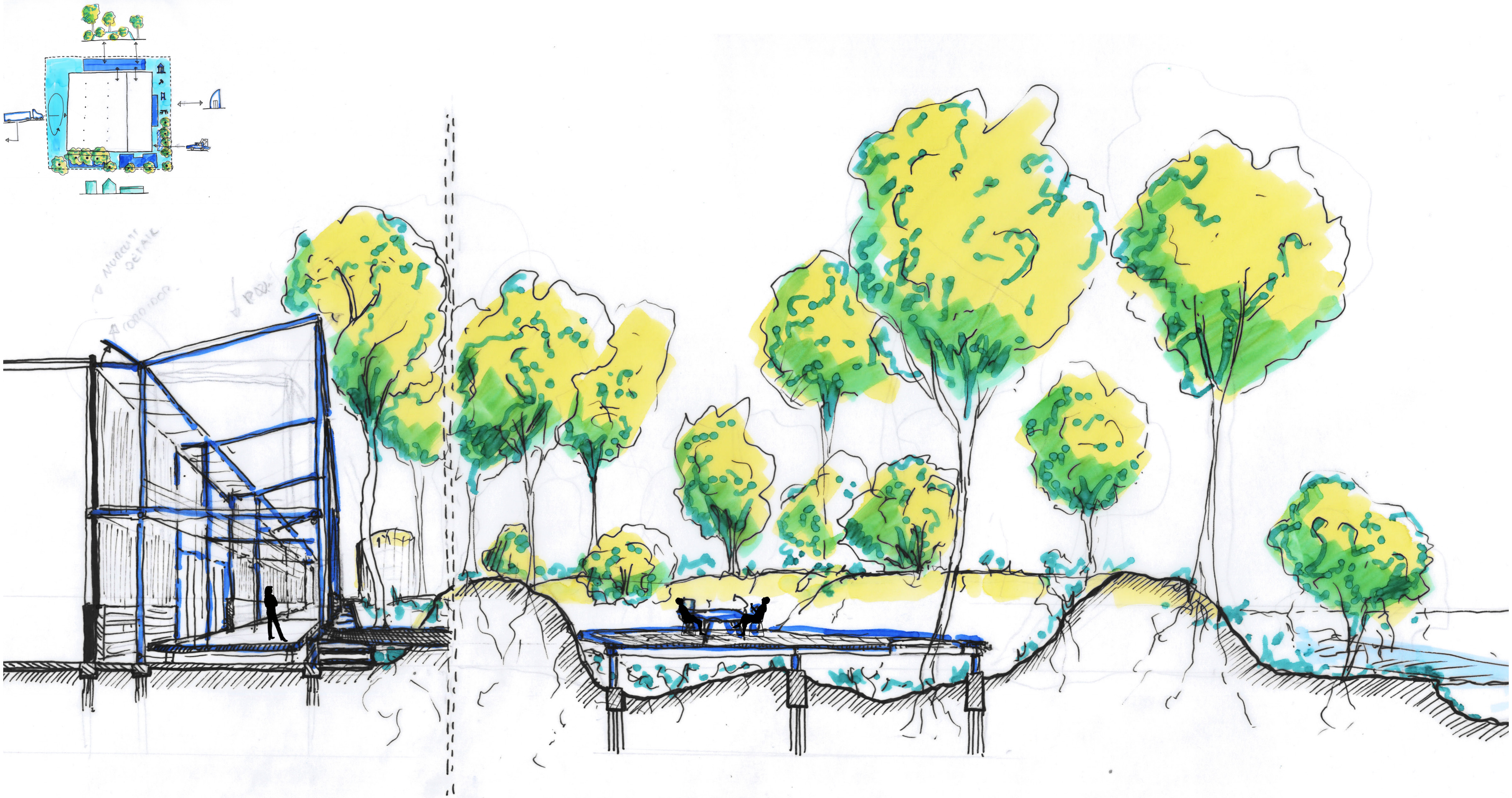




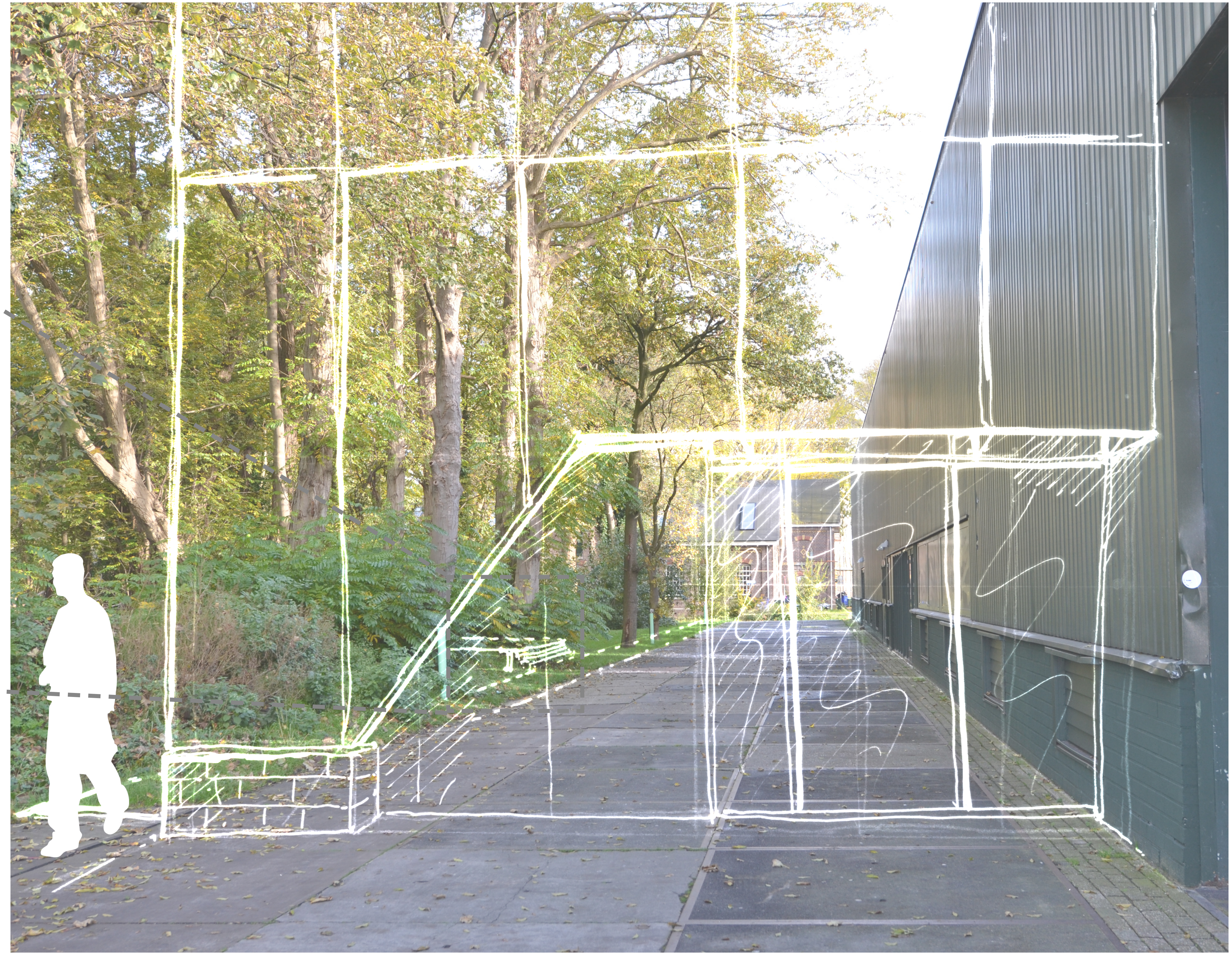
west facade, logistics street and extension of warehouse



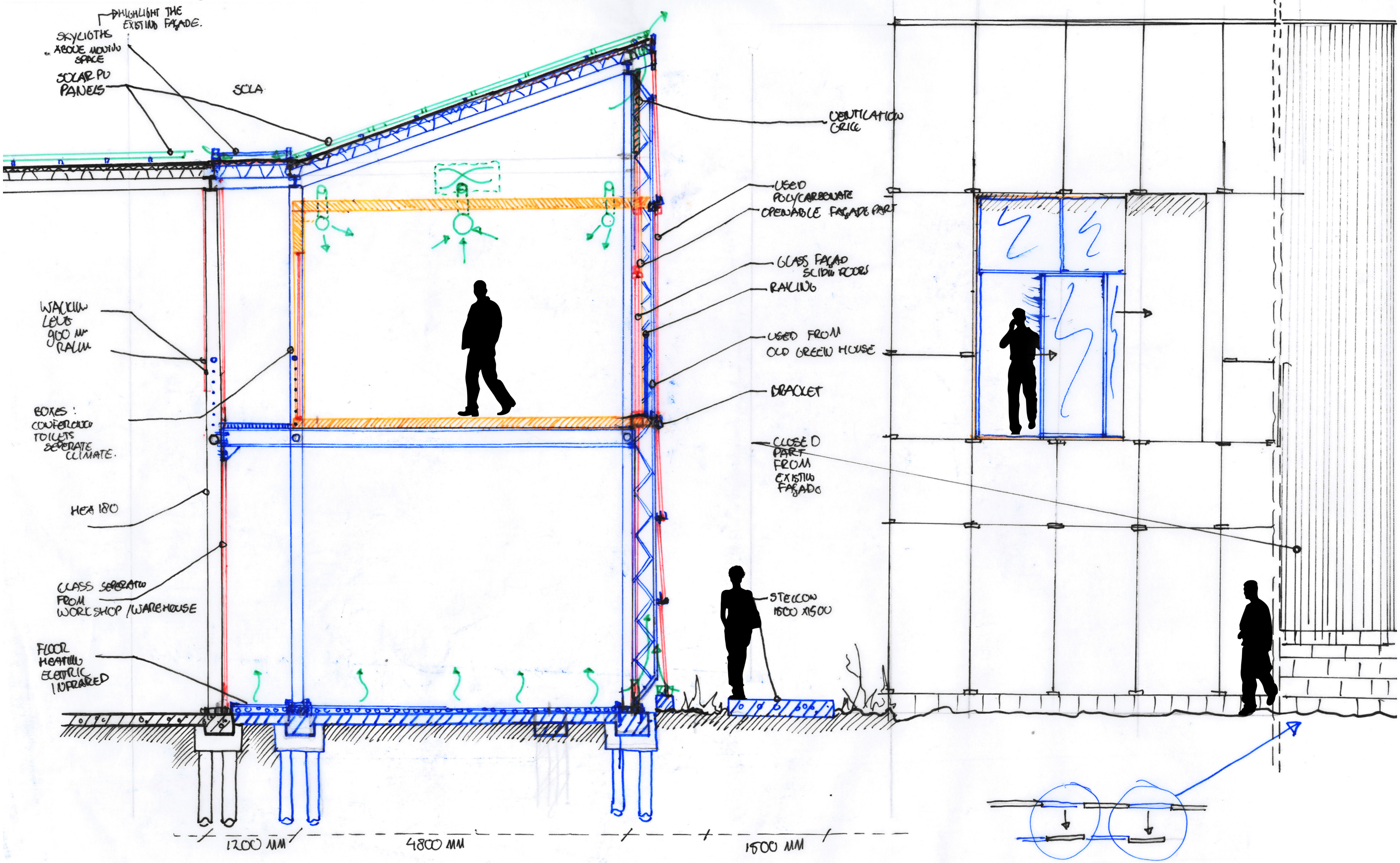
east facade, space to appropriate, display and the customer point



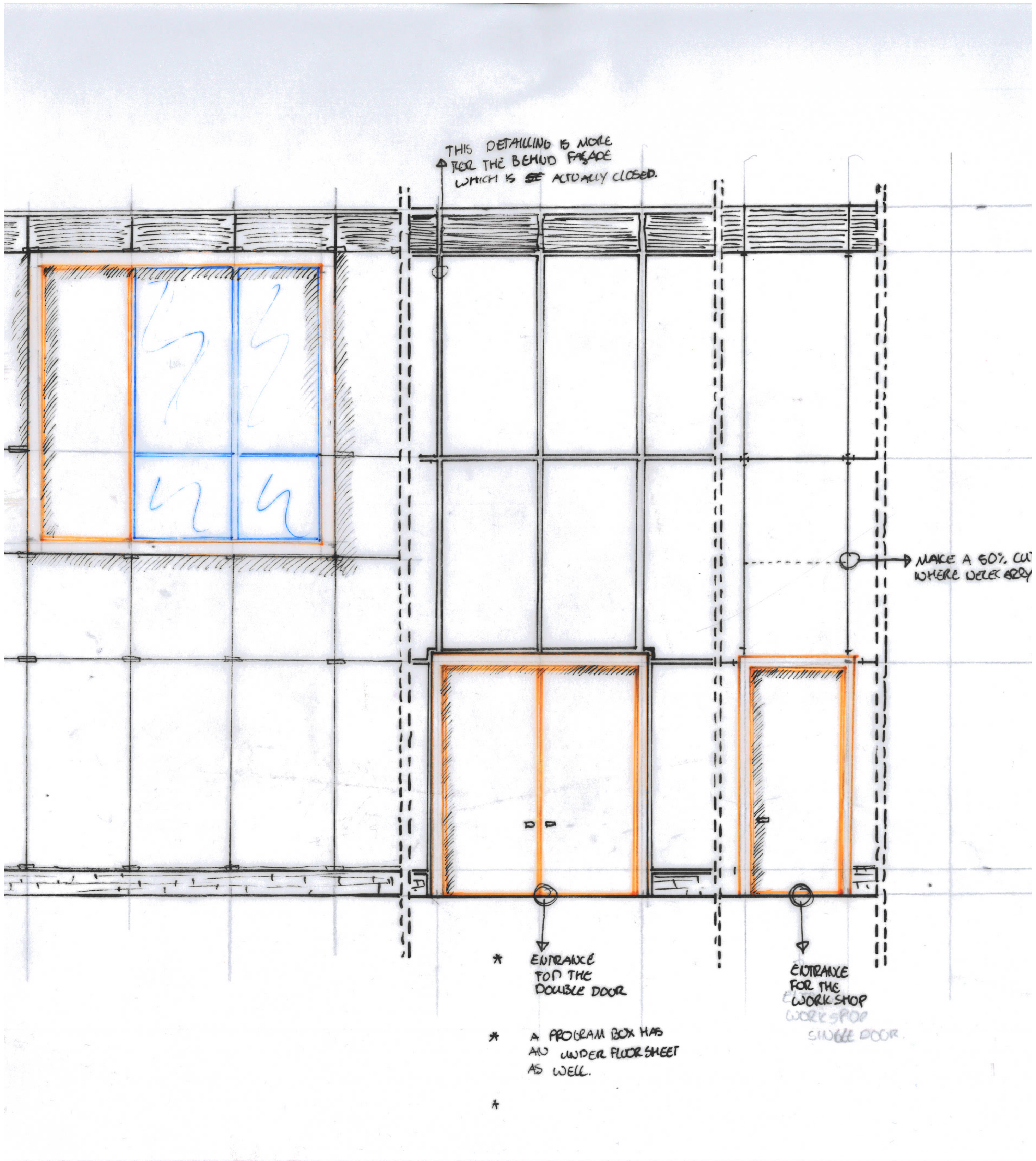
north facade, a quiet working place connected to the forest behind

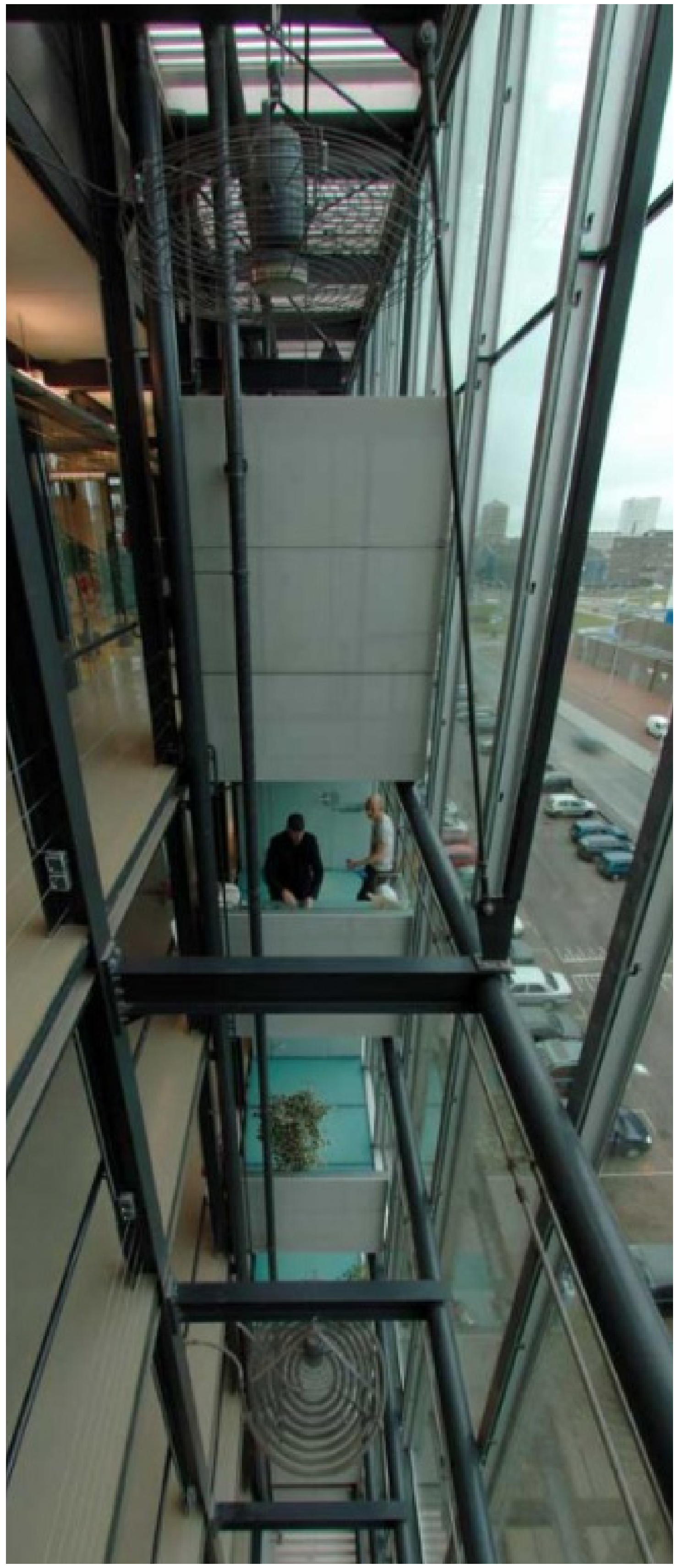


entrance of the warehouse side of the addition and access to the usable space between the earth walls

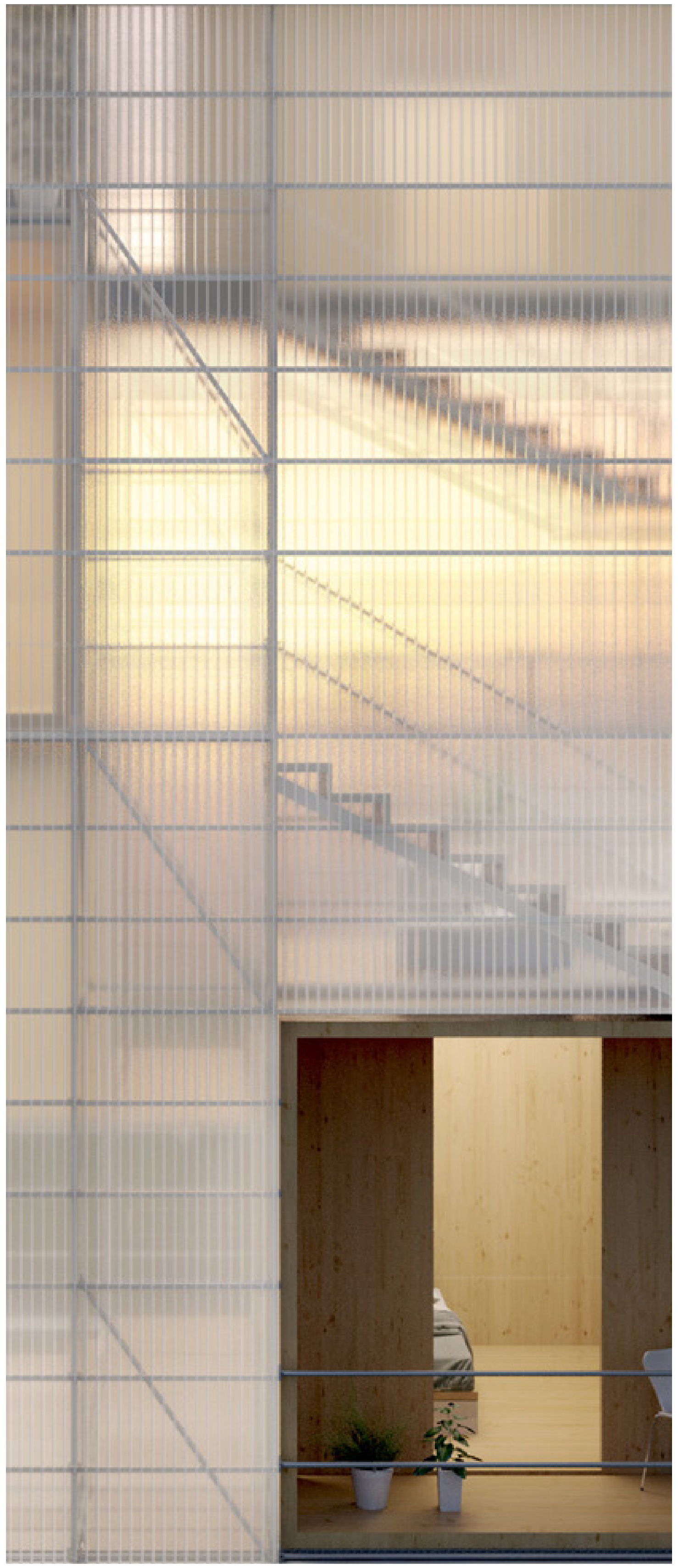


1:50 section of the north facade with the biggest addition

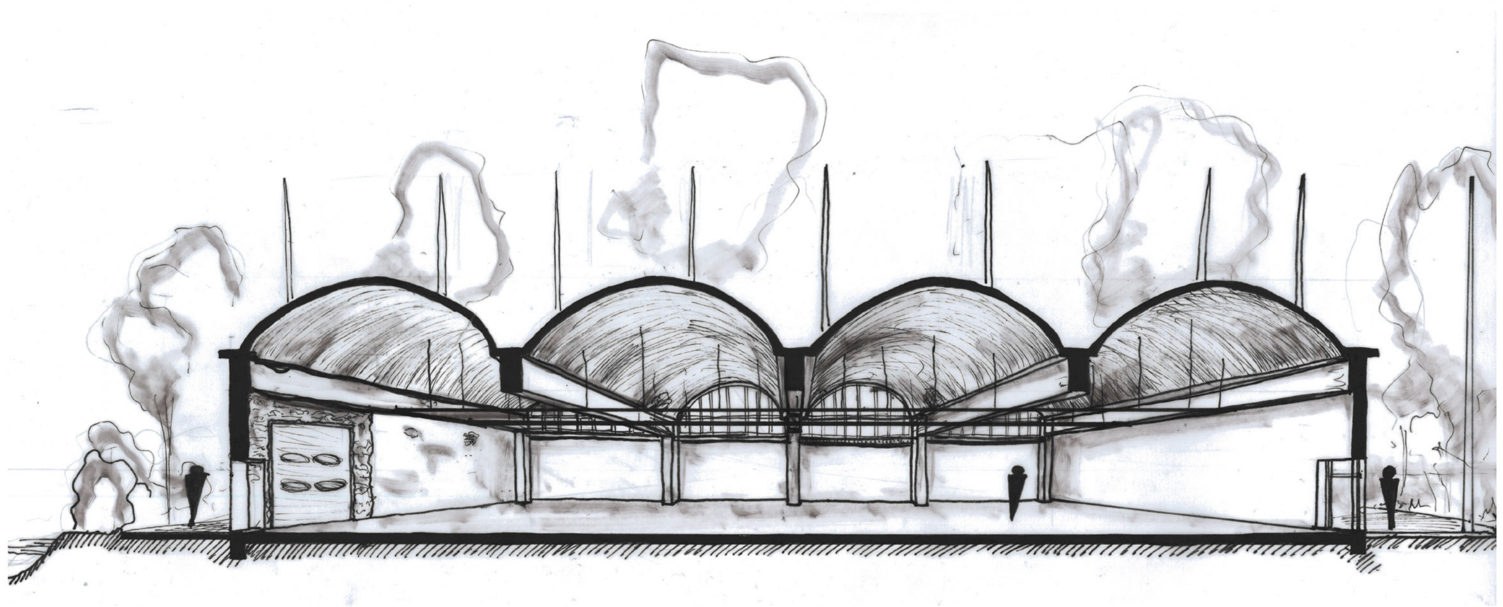




Source: 25 KV by Mei Architects

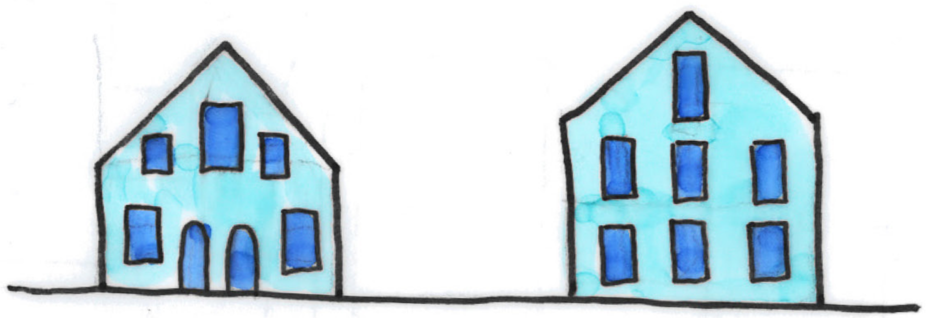


storefront facade, p3 slide

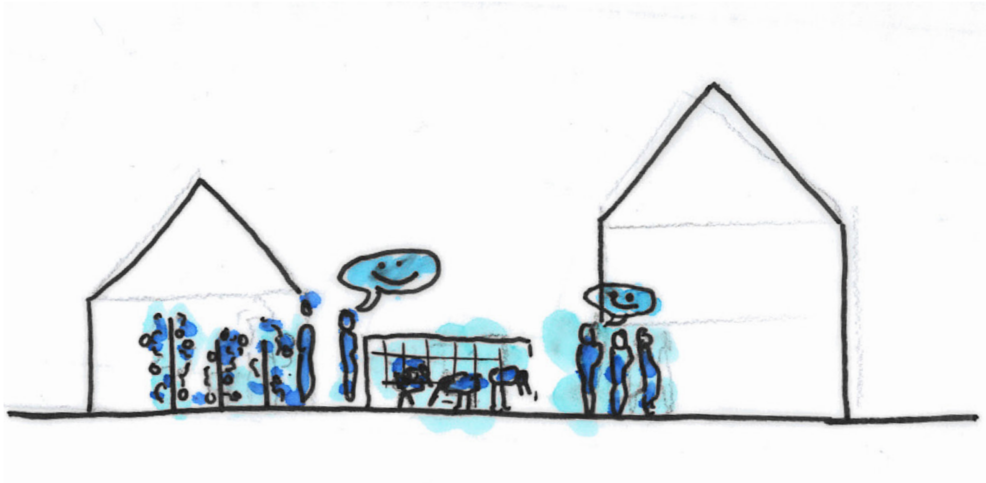


the gabled roof buildings or farms (1901-1905) and the circular roof building 9 (1952)

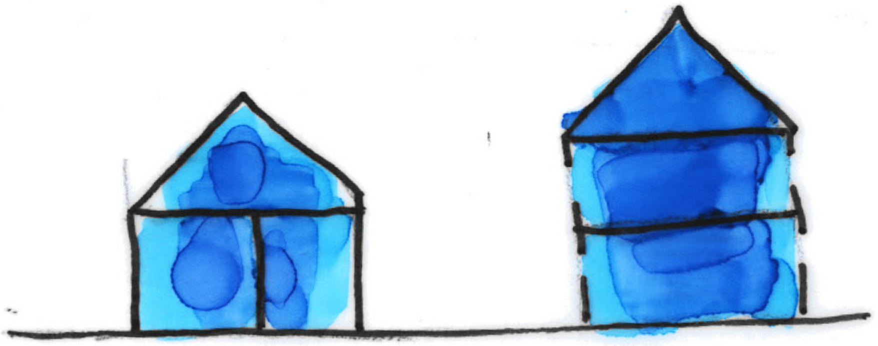
architectural details



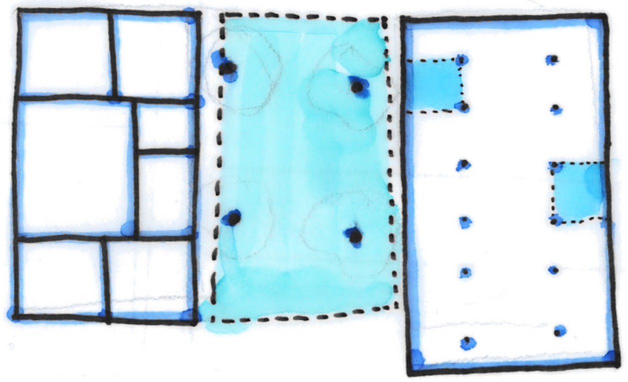
readability, representation of style



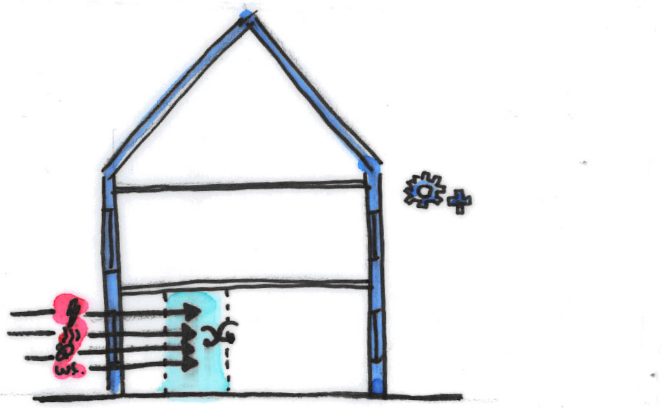
past social interactions



the inside spaces are dark

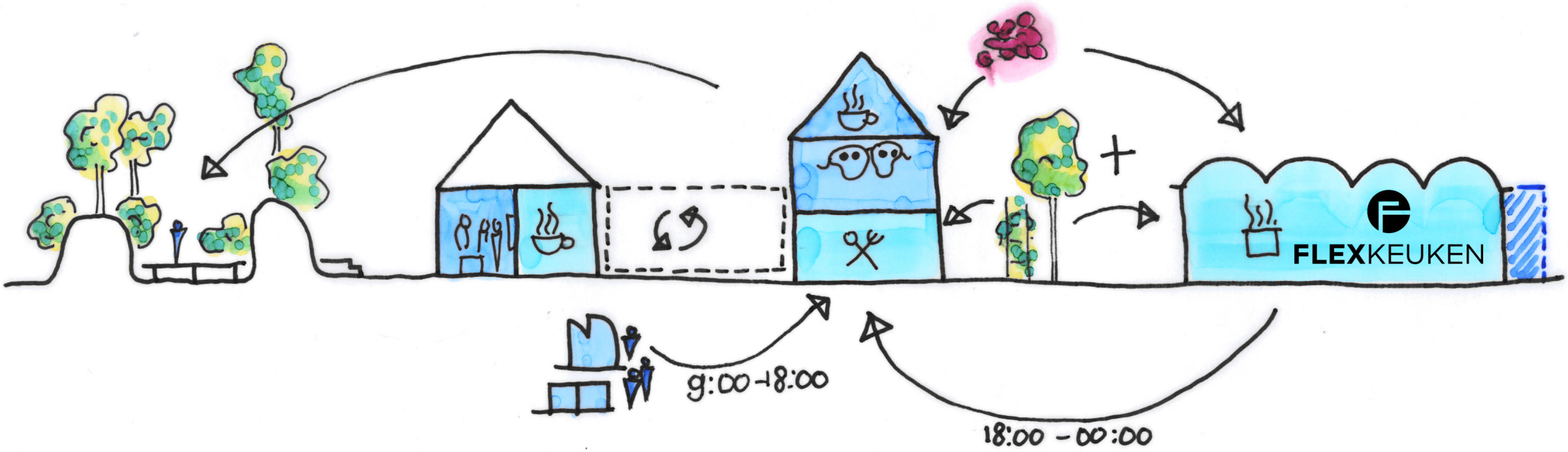


three different but specific spaces



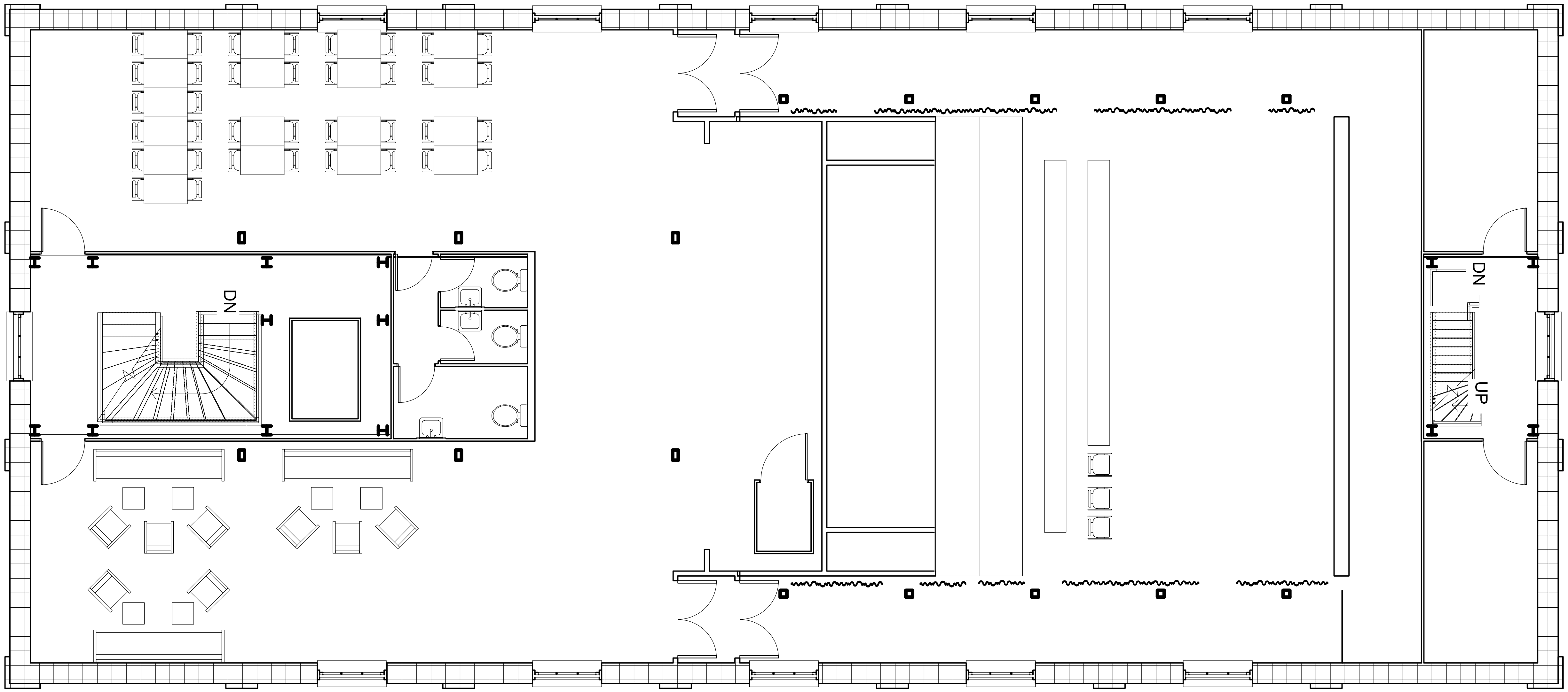
technical upgrade and installations

values and initial design concepts

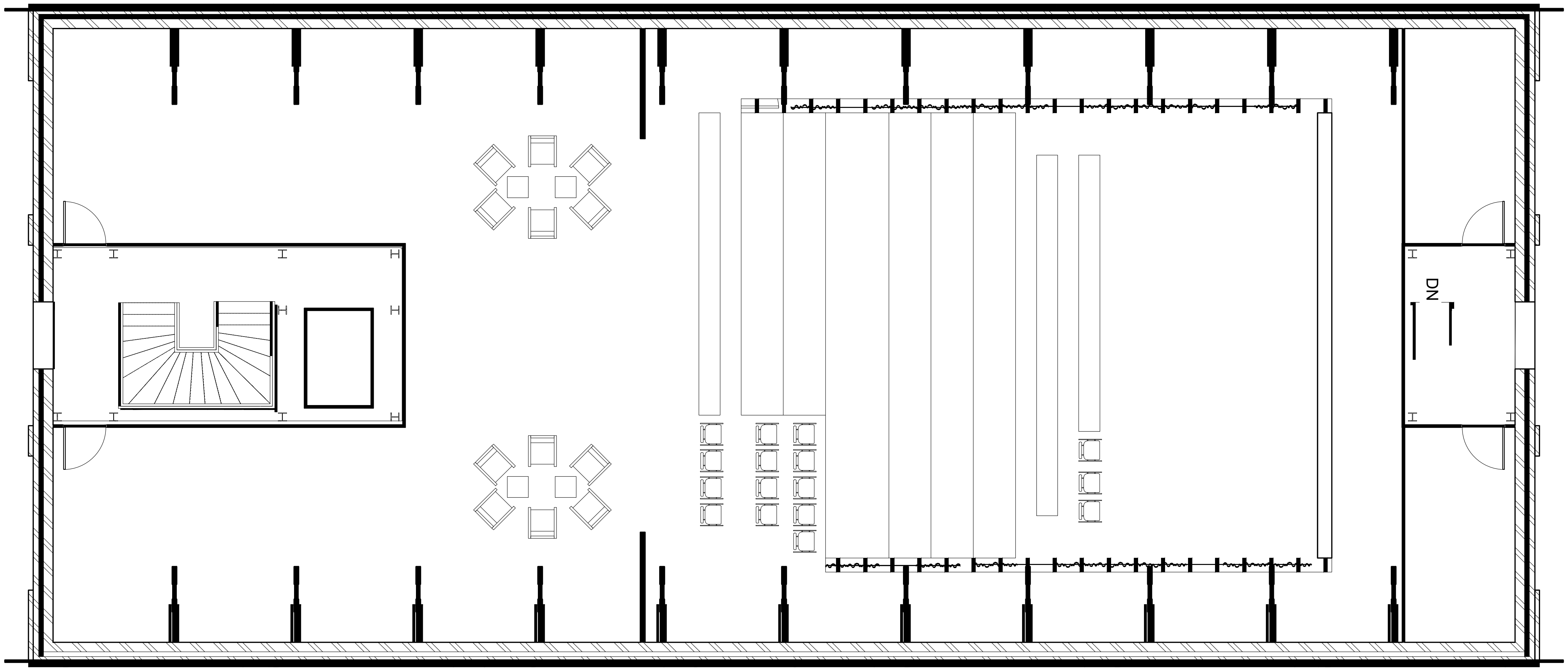


farms program and symbiotic program addition of the Flexkeuken

site plan farm buildings, public spaces, offices, a coffee corner & restaurant + theater (1:200)



1st floor: the theater, scale 1:100

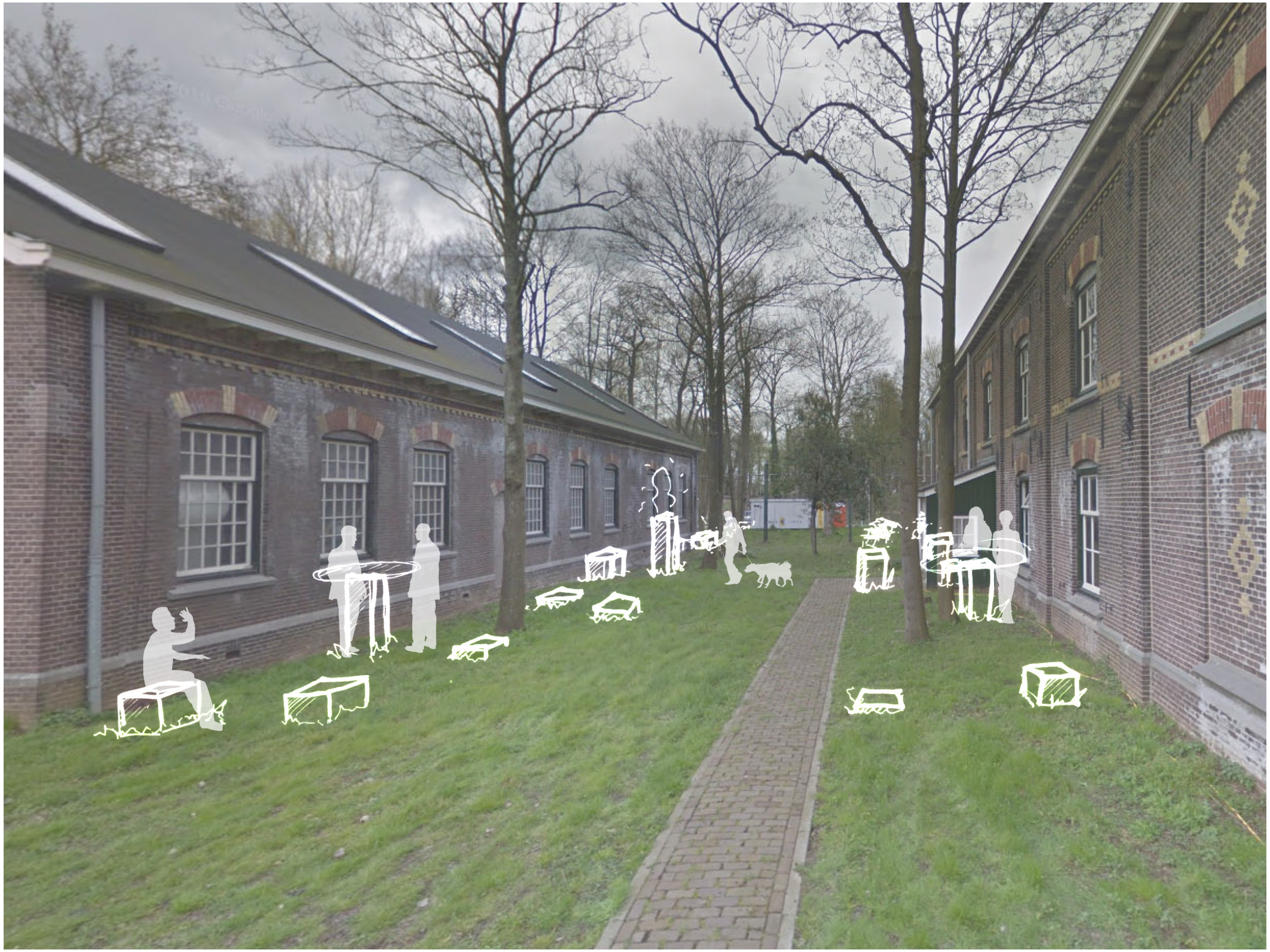


2nd floor of the theater, scale 1:100

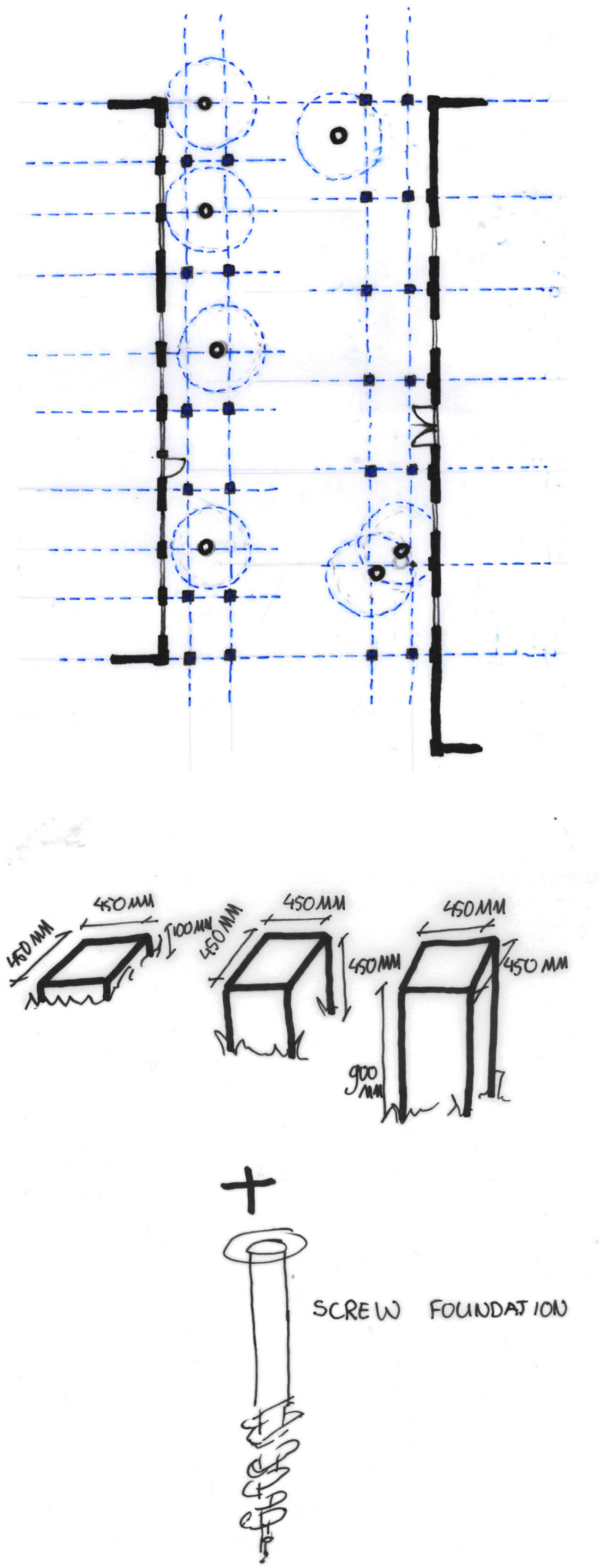
entrance to the space in between the earth walls, between
two large existing Platan trees

phase 1: the space in between adds value to the two buildings, future extensions should leave the trees untouched

path for the staff and backstage entrance



phase 2: foundation points will be added to make future physical structures possible, similar to the Swiss



rhythms and the parts

phase 3 a frame work will be added that makes different interpretations and additions possible

it should not distort the visual values of the existing

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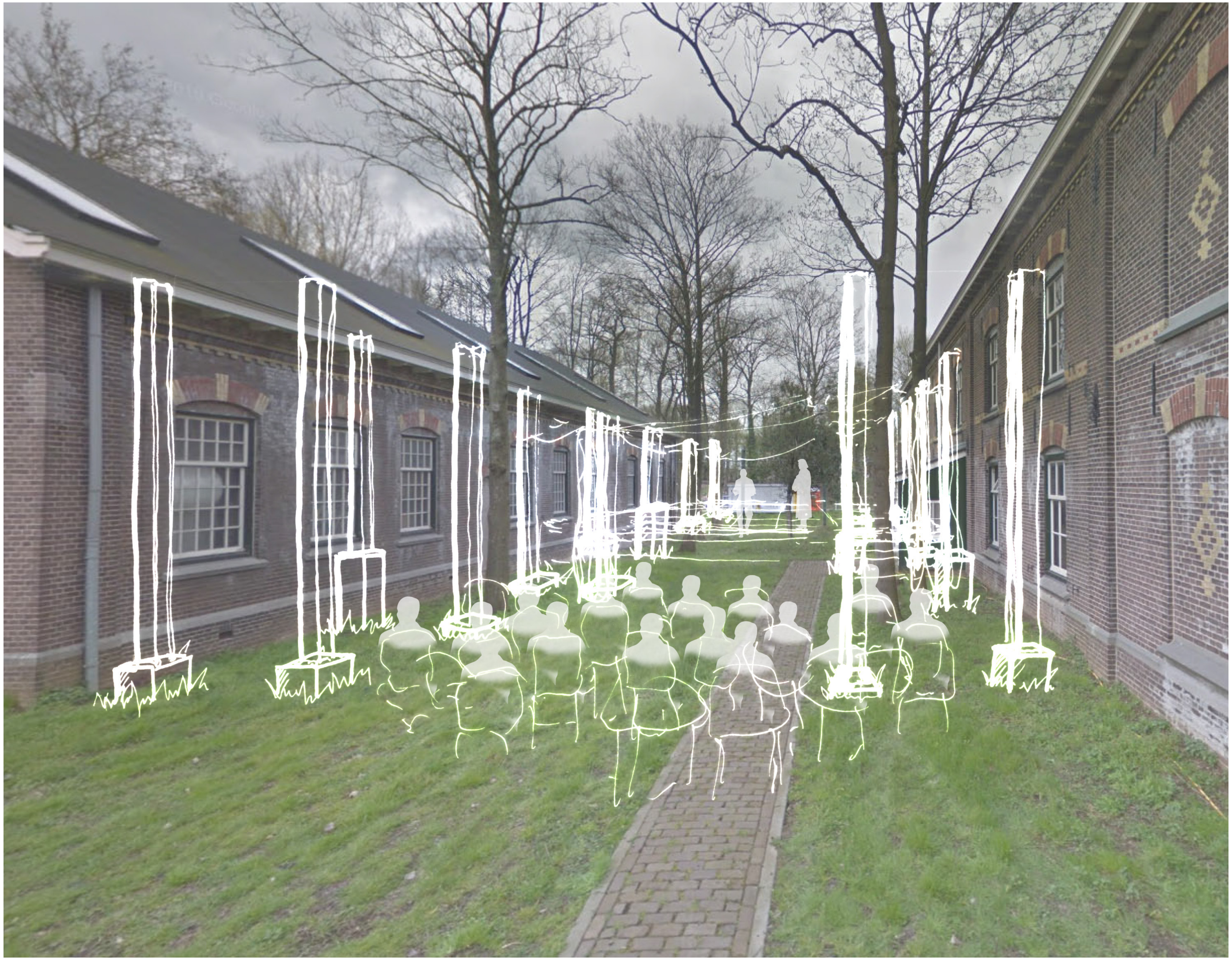
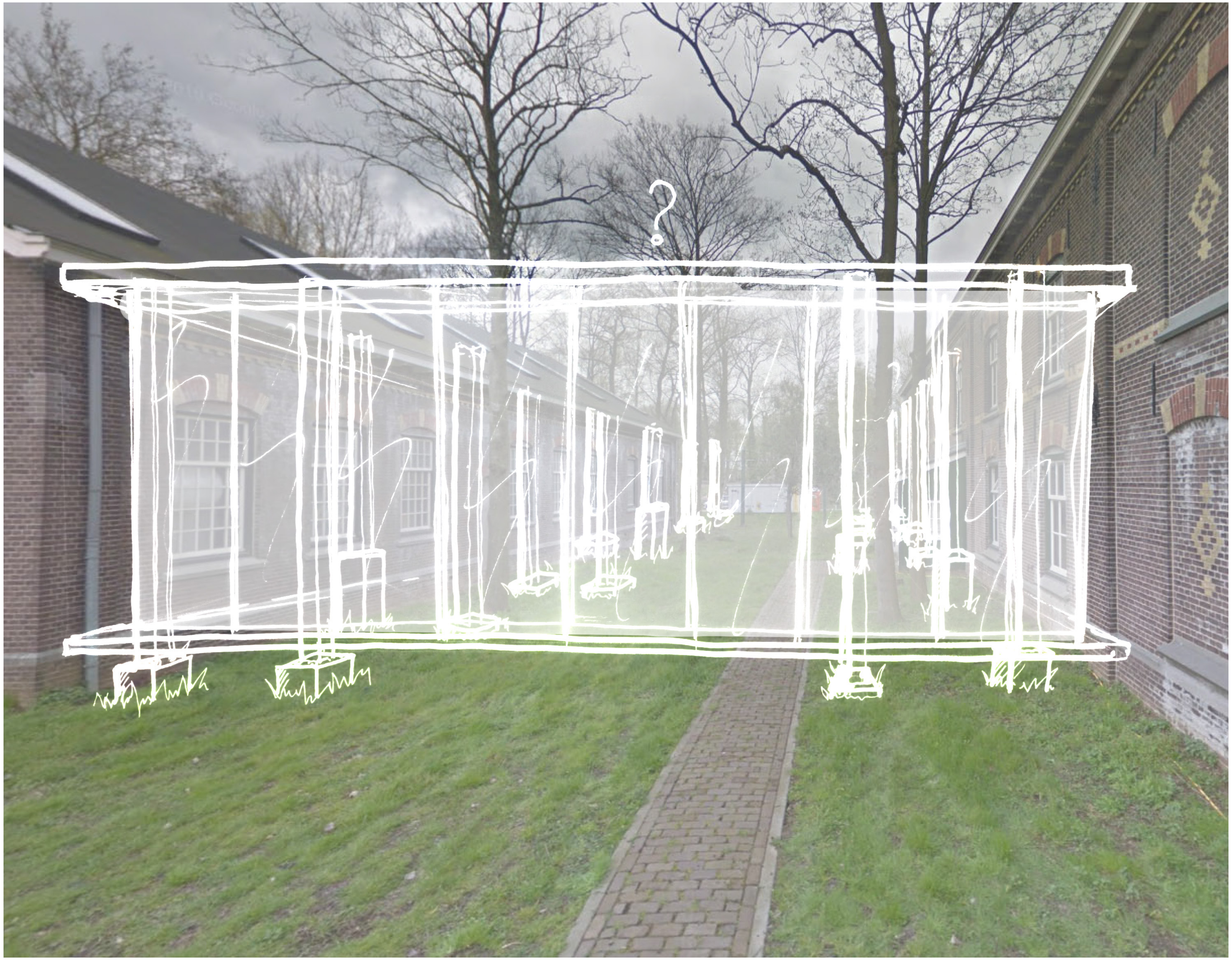
it should not distort the visual values of the existing



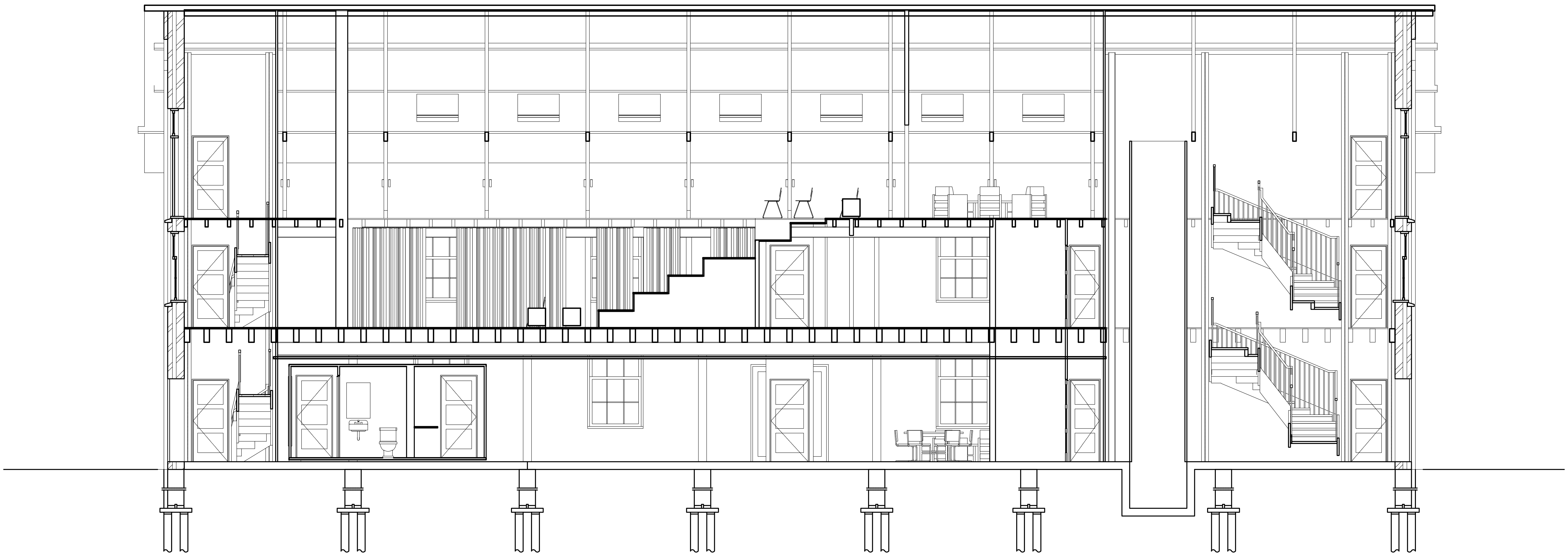
phase 3 a frame work will be added that makes different interpretations and additions possible

it should not distort the visual values of the existing

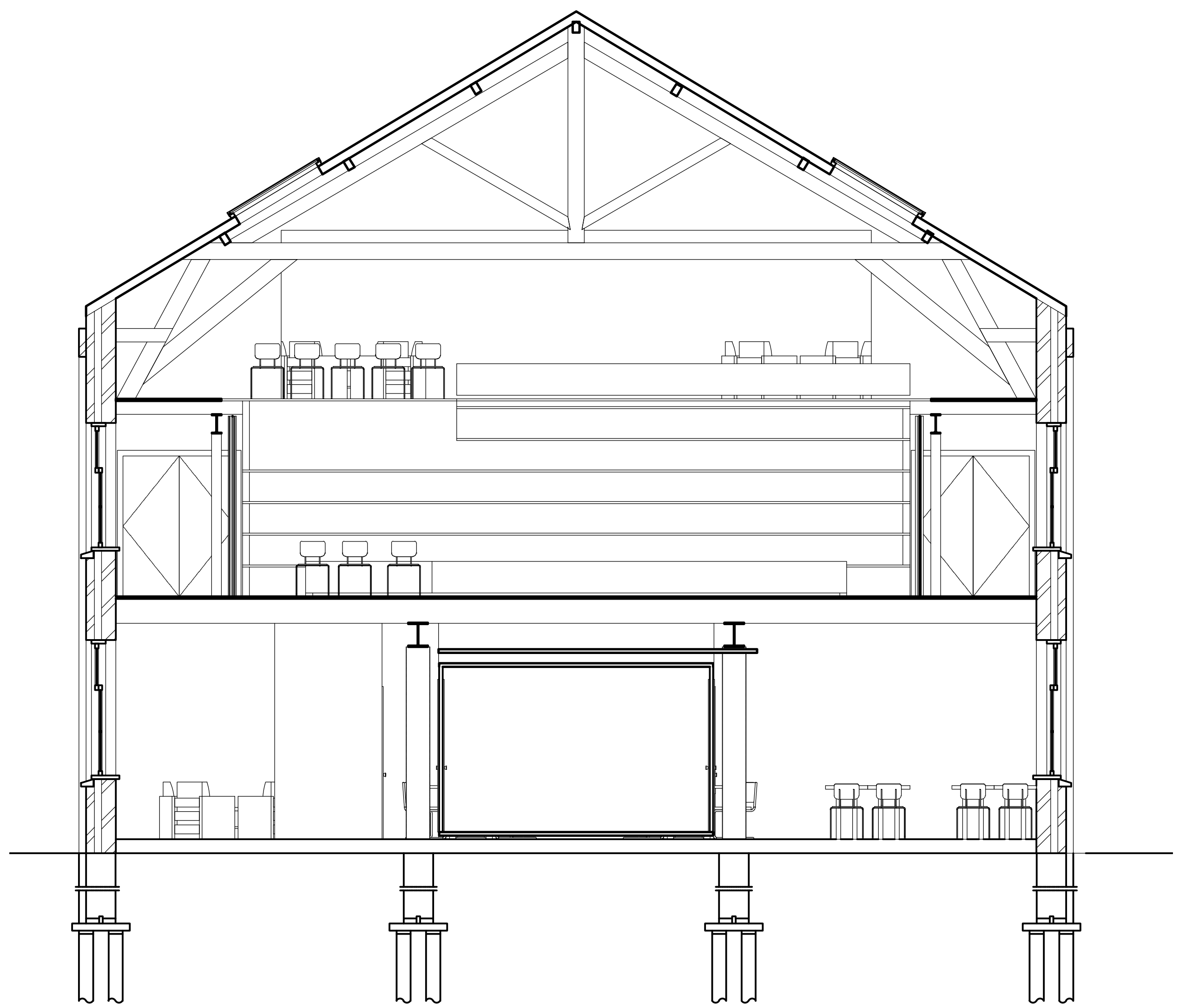


phase ? a frame work will be added that makes different interpretations and additions possible

it should not distort the visual values of the existing

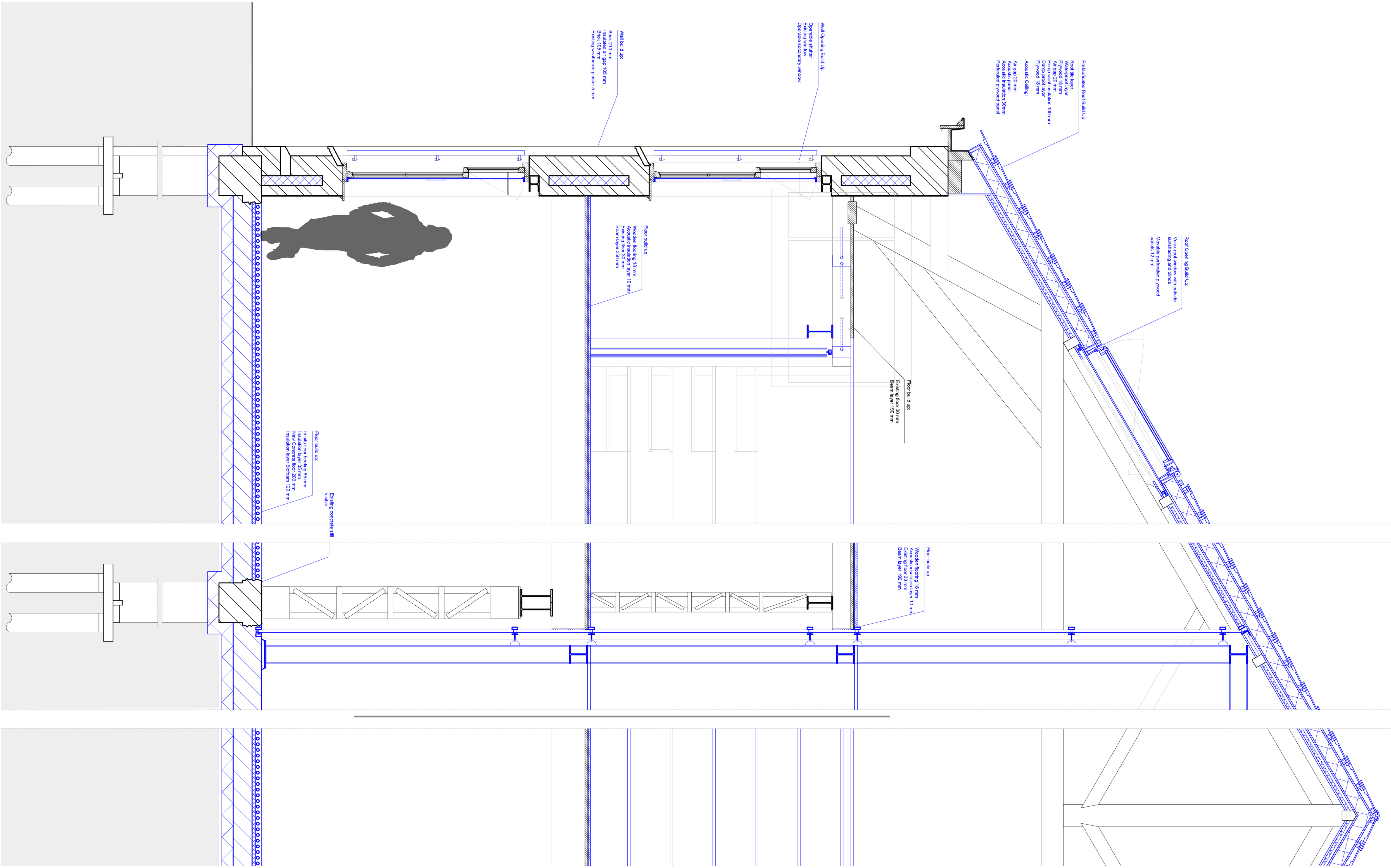


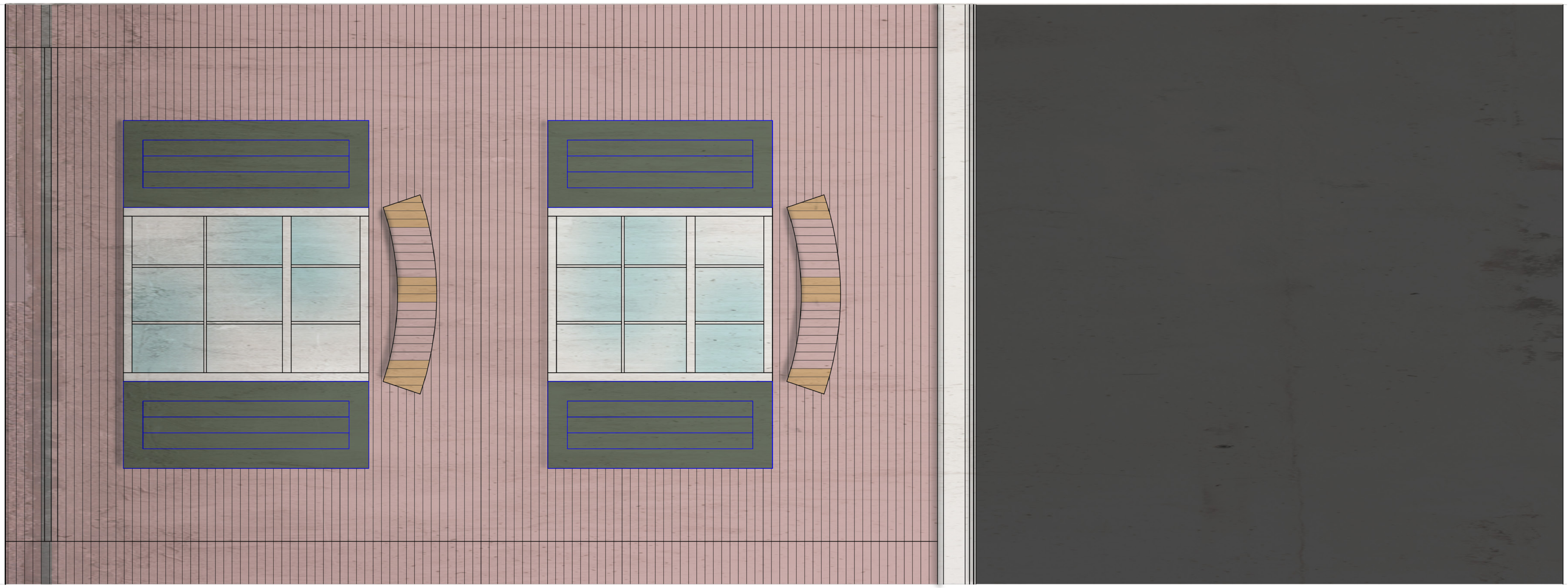
restaurant and theater section, scale 1:100



cross section of the theater, scale 1:100

ventilation and installation sketch

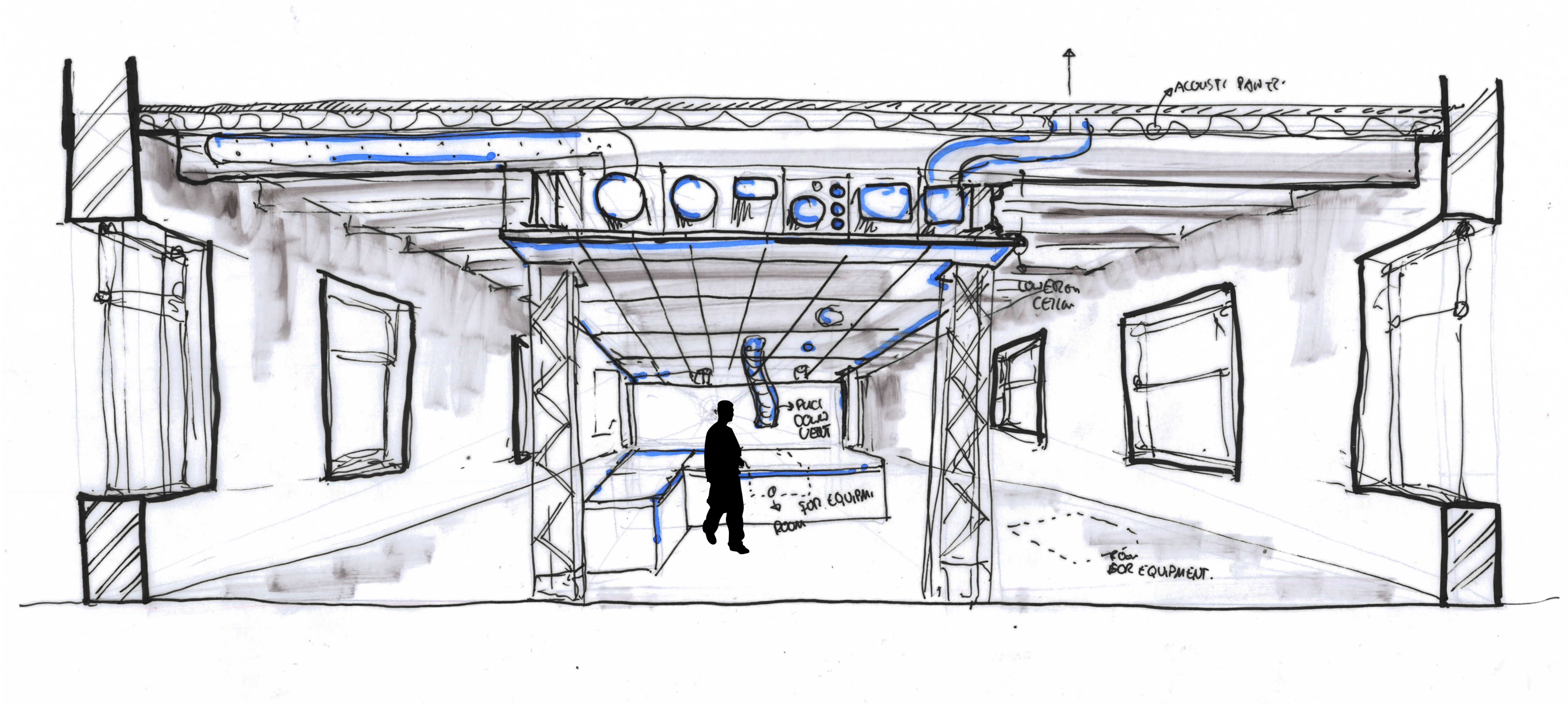

Roof Opening Build Up:
Velux roof window with outside sunshading and blinds
Movable perforated plywood panels 12 mm
Prefabricated Roof Build Up:
Roof tile layer
Waterproof layer
Plywood 18 mm
Air gap 20 mm
Hemp wool insulation 100 mm
Damp proof layer
Plywood 18 mm
Acoustic Ceiling:
Air gap 20 mm
Acoustic panel:
Acoustic insulation 30mm
Perforated plywood panel
Floor build up:
Existing floor 30 mm
Beam layer 190 mm
Floor build up:
Wooden flooring 18 mm
Acoustic insulation layer 10 mm
Existing floor 30 mm
Beam layer 190 mm
Wall Opening Build Up:
Operable shutter
Existing window
Operable secondary window
Floor build up:
Wooden flooring 18 mm
Acoustic insulation layer 10 mm
Existing floor 30 mm
Beam layer 350 mm
Wall build up:
Brick 210 mm
Insulated air gap 105 mm
Brick 105 mm
Existing weathered plaster 5 mm
Existing concrete still visible
Floor build up:
In situ floor heating 65 mm
Insulation layer 35 mm
New Concrete floor 200 mm
Insulation layer Biofoam 120 mm



overview of the details and materials through a 1:20 section
of the building

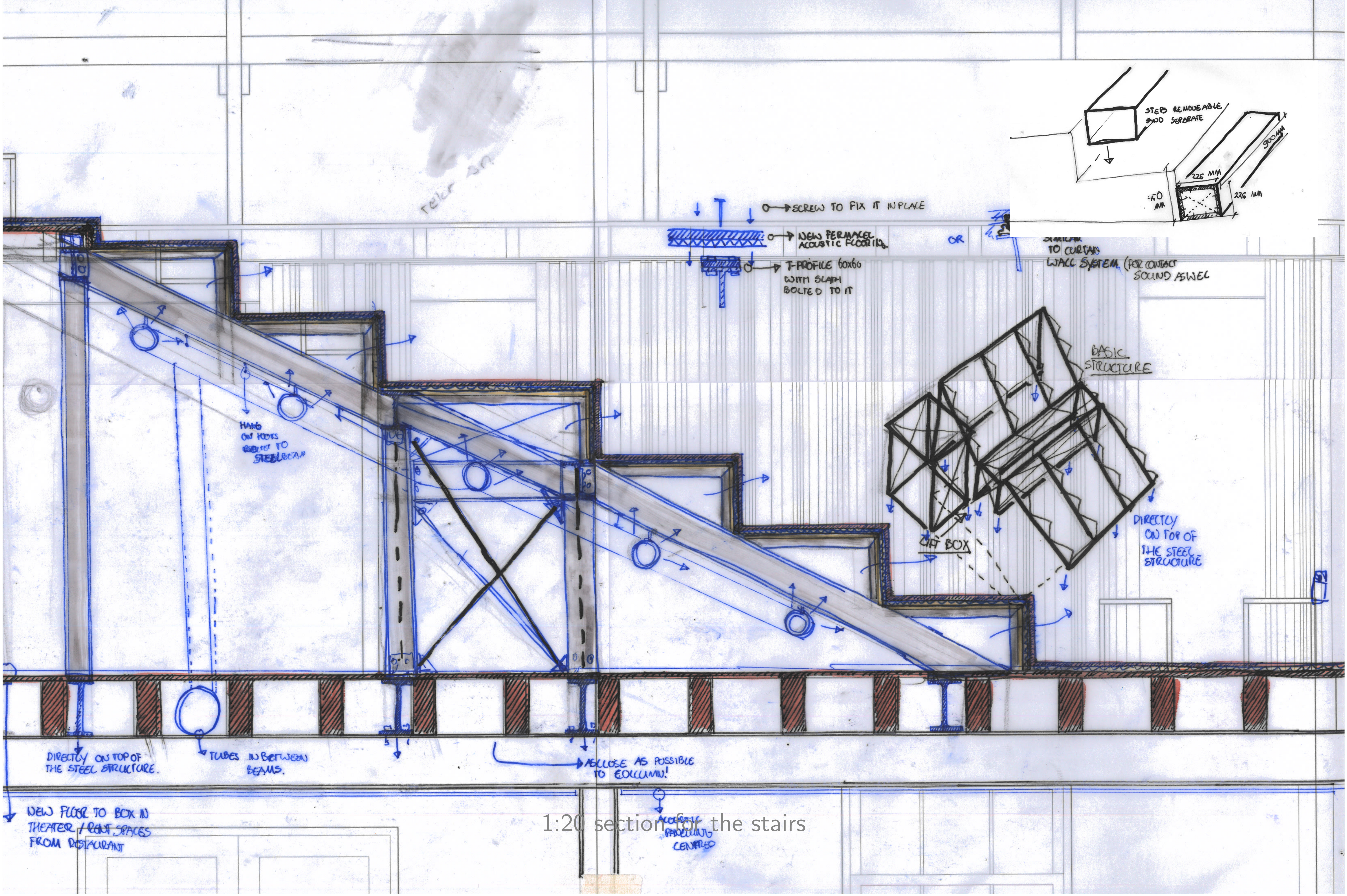
restaurant

restaurant

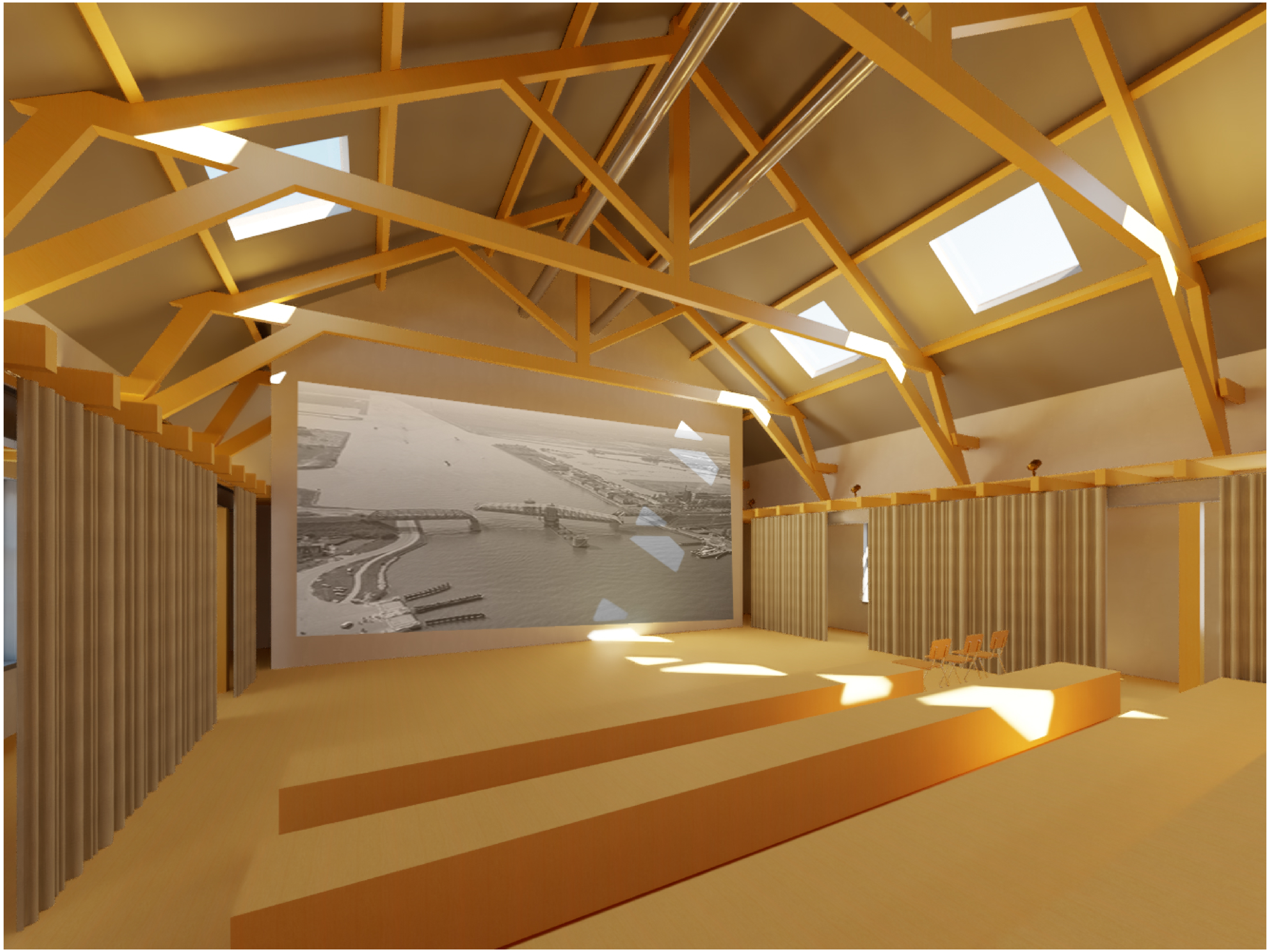


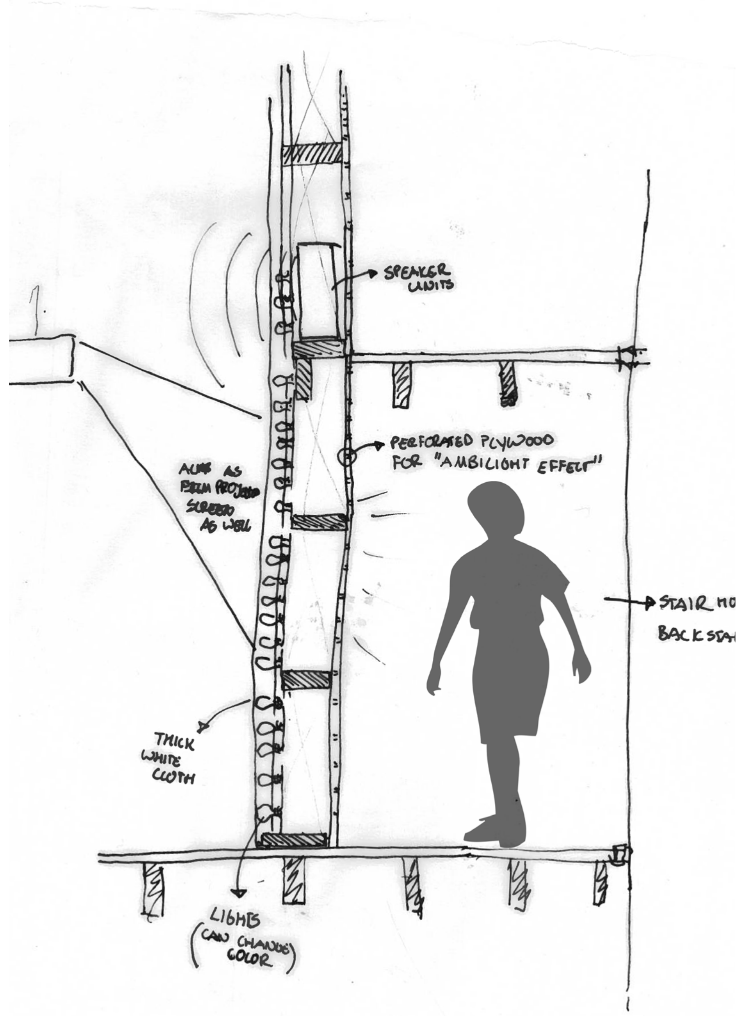
restaurant, the display of buildings systems and the building itself

model impression of the stairs

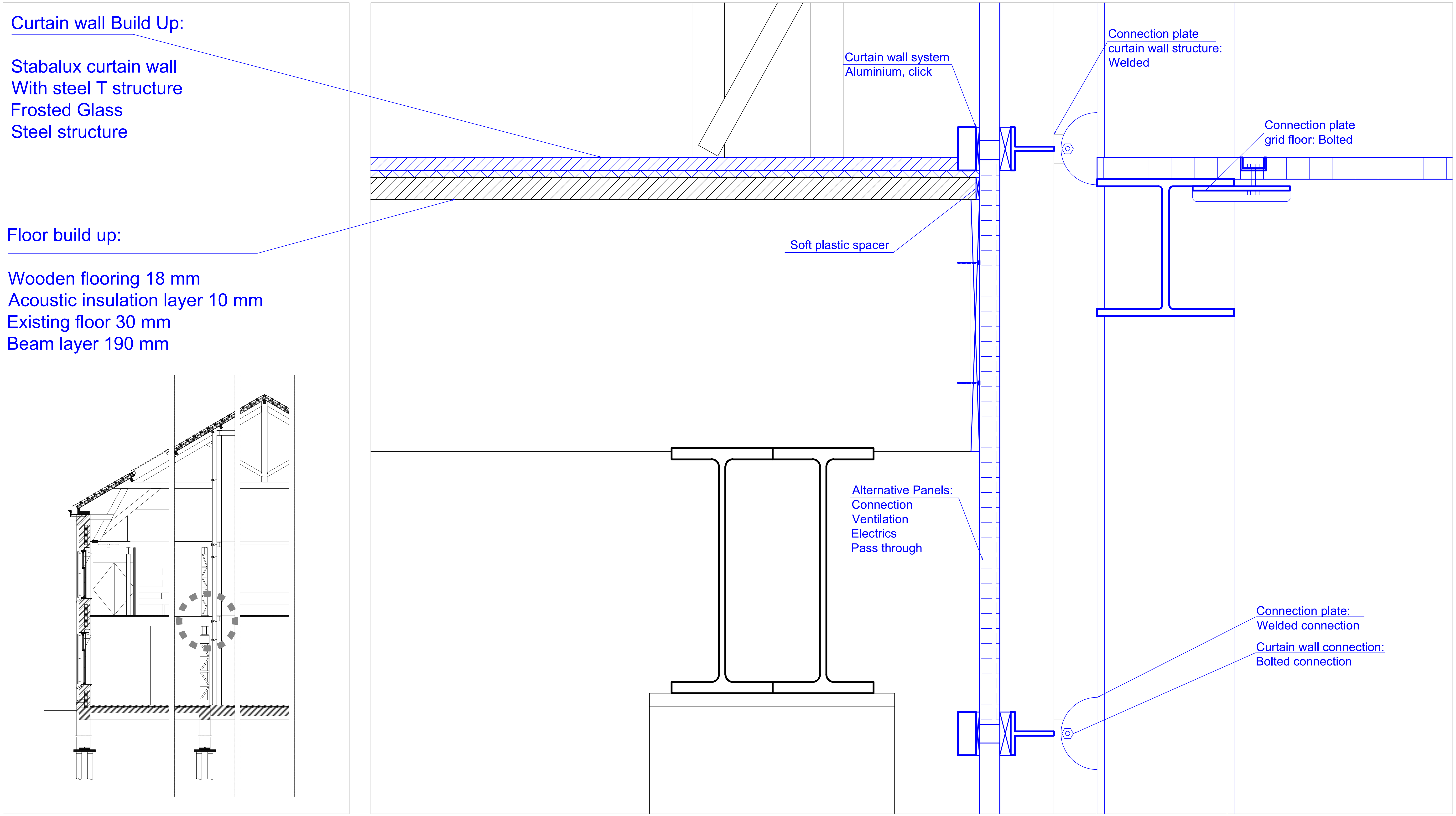


1:20 section for the stairs





the decor and light-wall



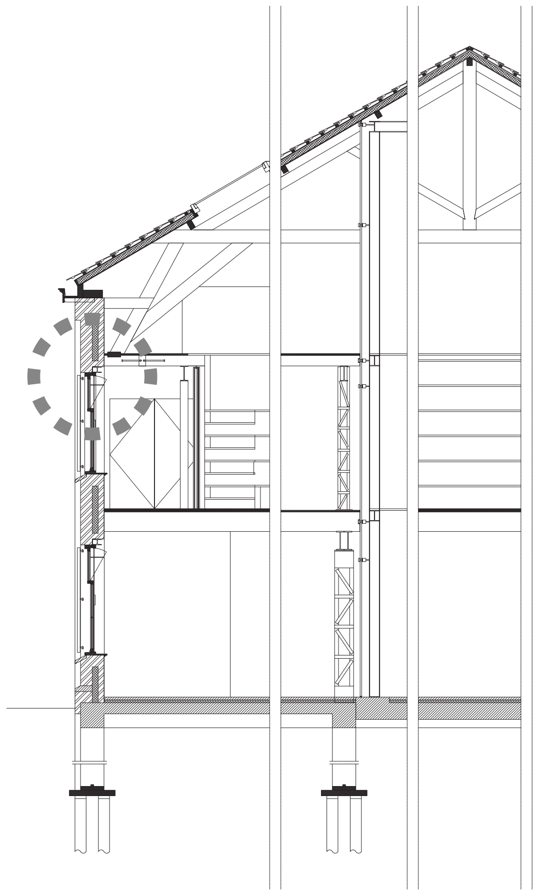
stair house detail 1:5, curtain wall

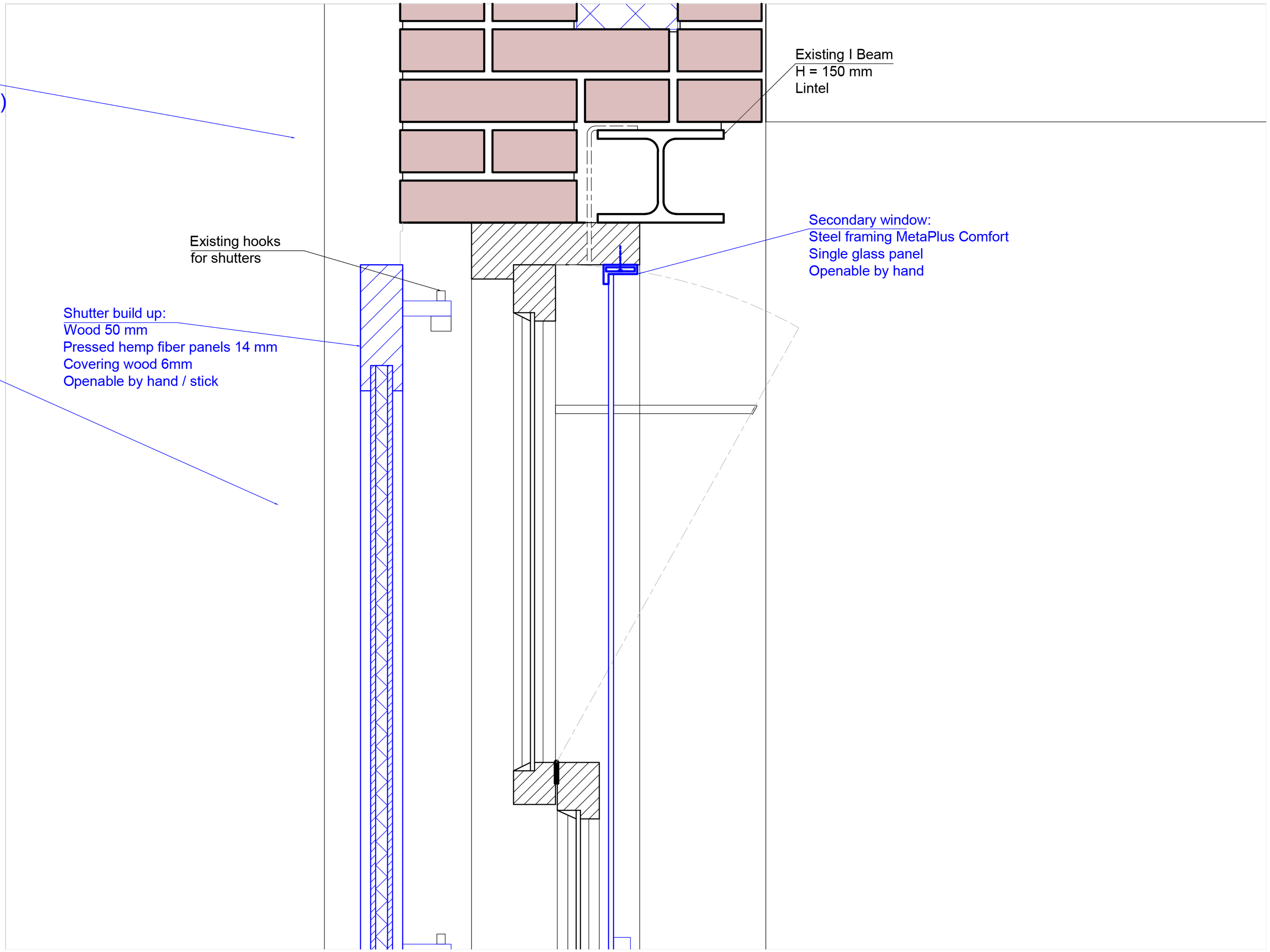
Wall build up:

Brick 210 mm
Insulated air gap 105 mm (BioFoam pearls)
Brick 105 mm
Existing weathered plaster 5 mm

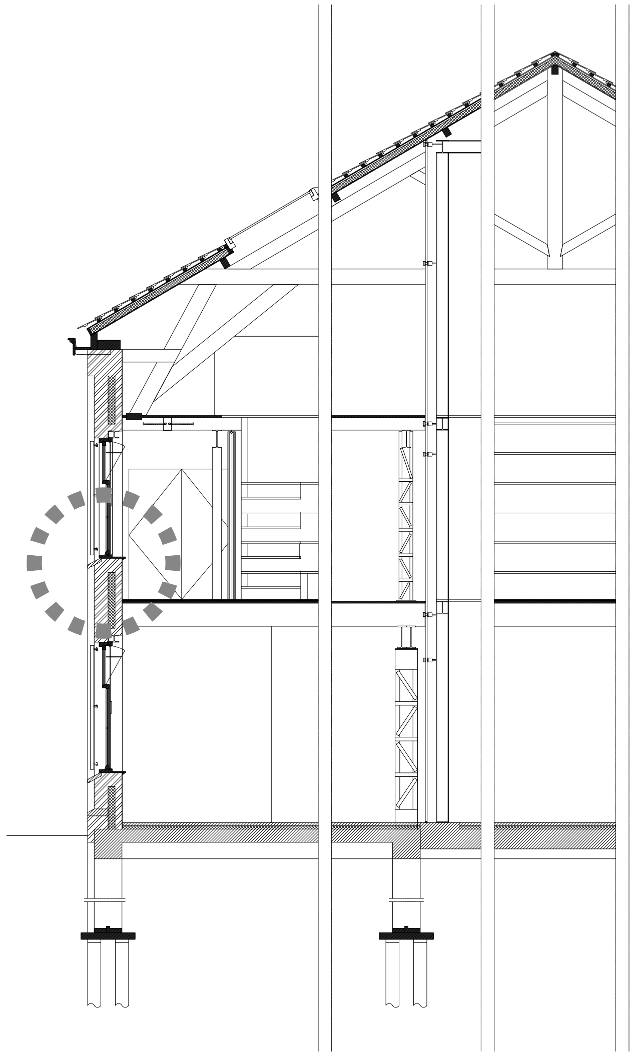
Wall Opening Build Up:

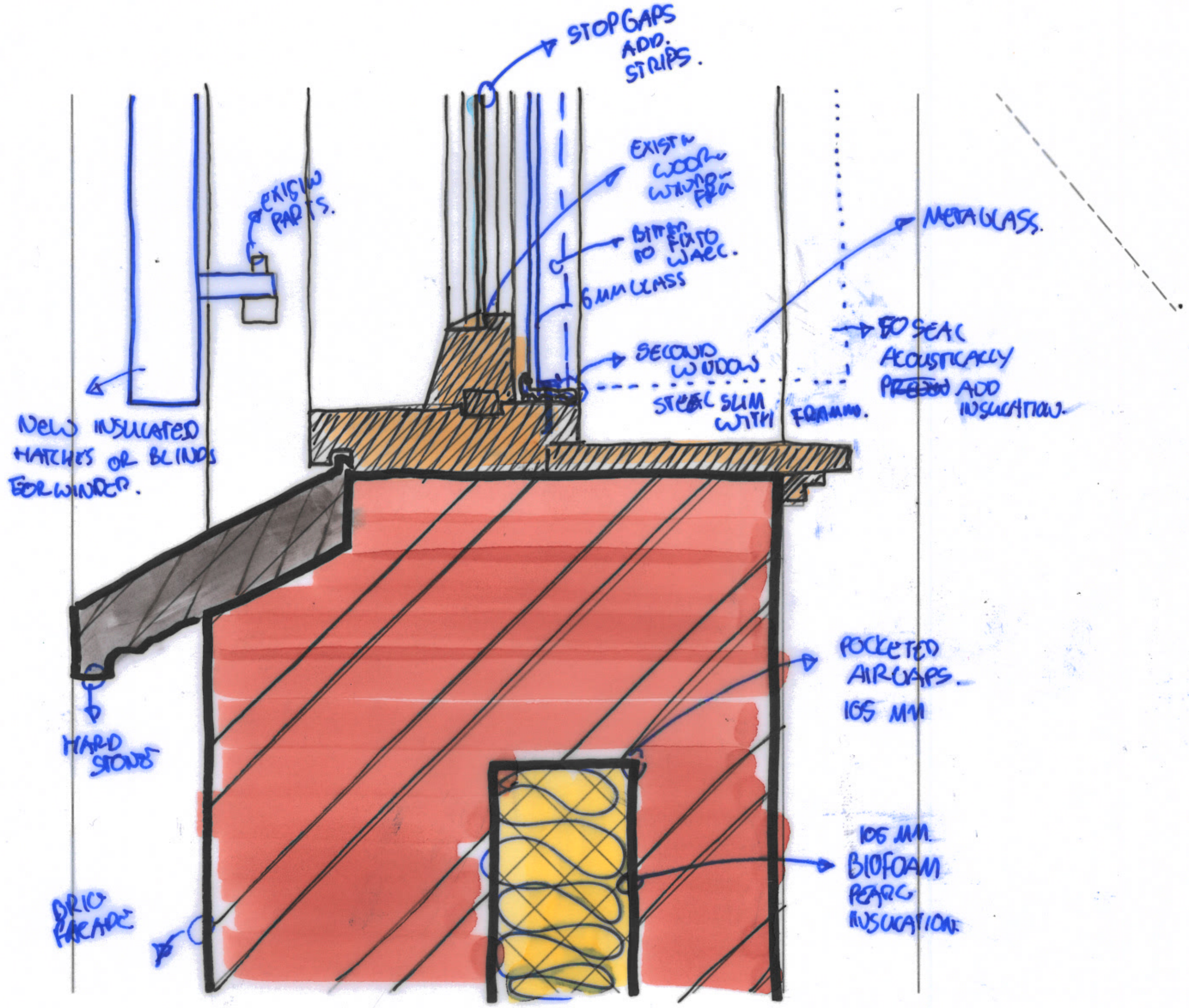
Operable shutter
Existing window
Operable secondary window



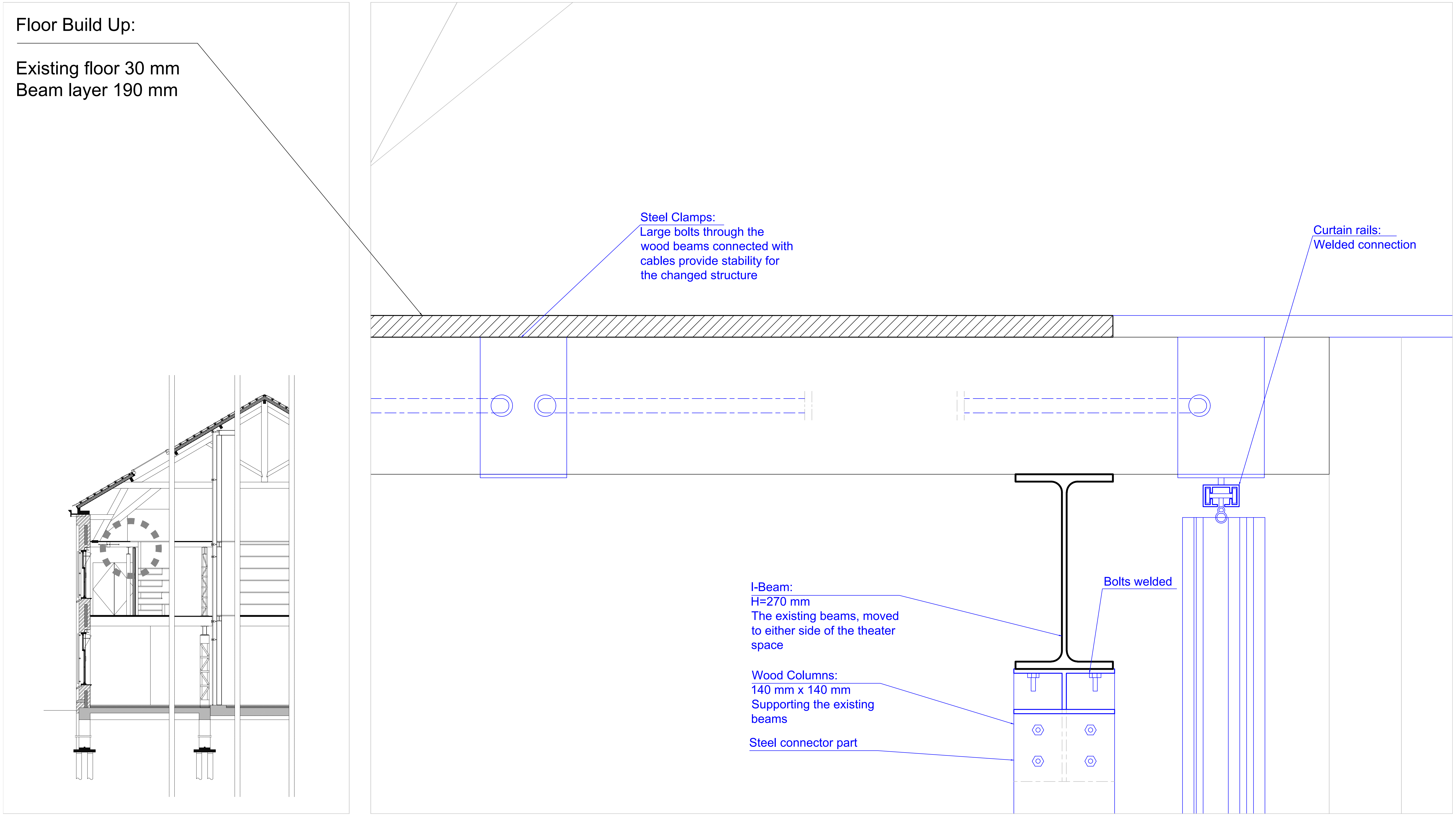


wall opening top detail 1:5





window bottom detail



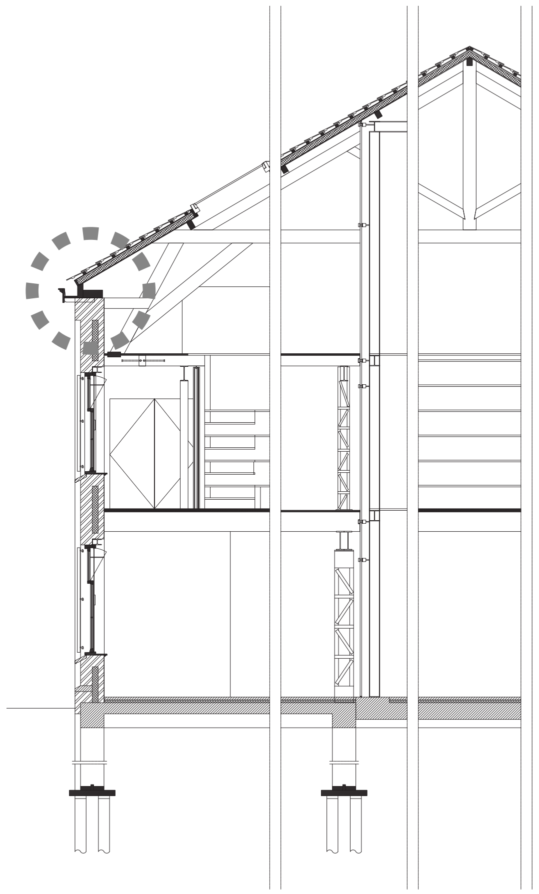
stabilizing elements and curtain attached to the existing beams, scale 1:5

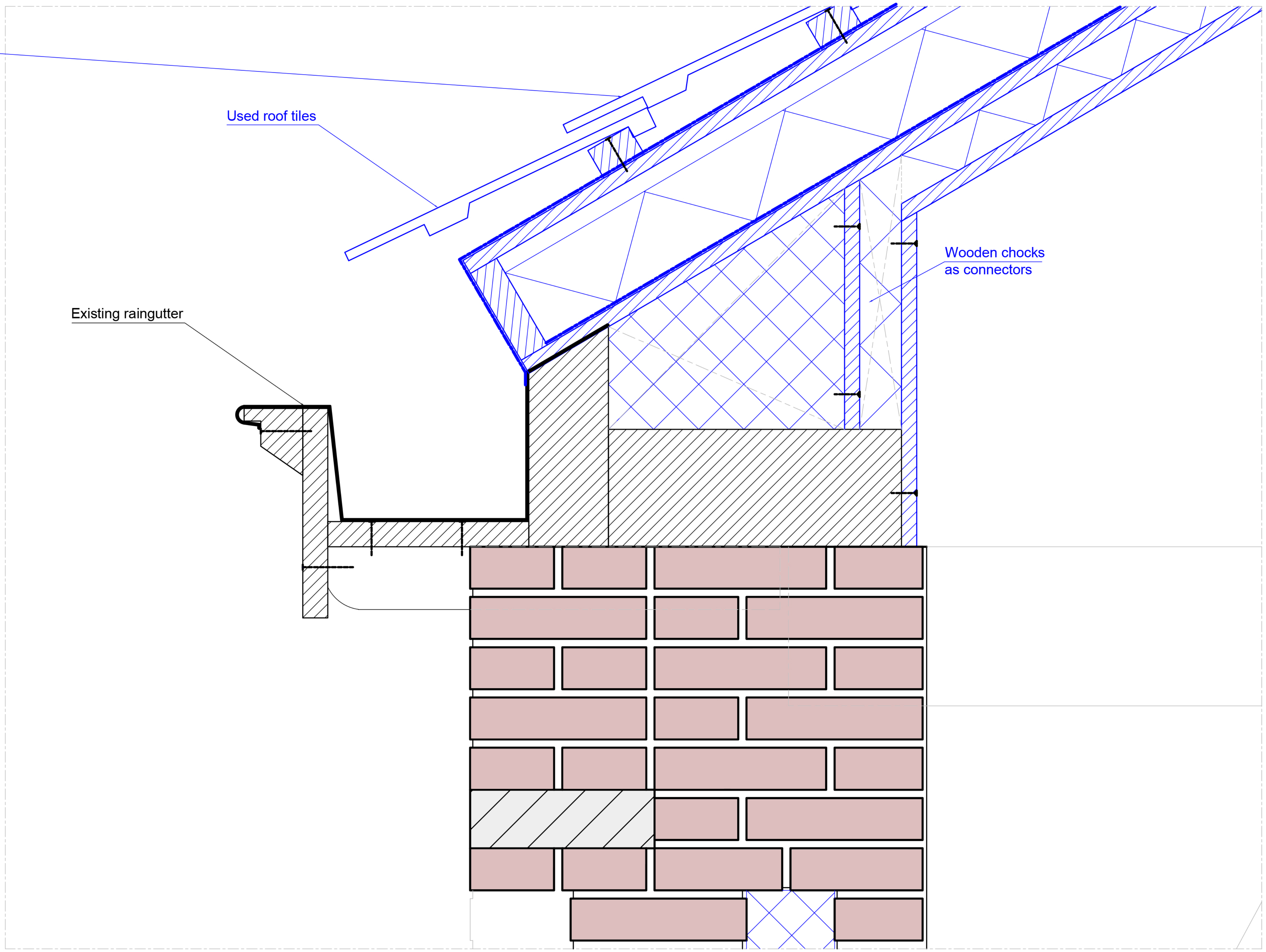
Prefabricated Roof Build Up:

Roof tile layer
Waterproof layer
Plywood 18 mm
Air gap 20 mm
Hemp wool insulation 100 mm
Damp proof layer
Plywood 18 mm

Acoustic Ceiling:

Air gap 20 mm
Acoustic panel:
Acoustic insulation 30mm
Perforated plywood panel





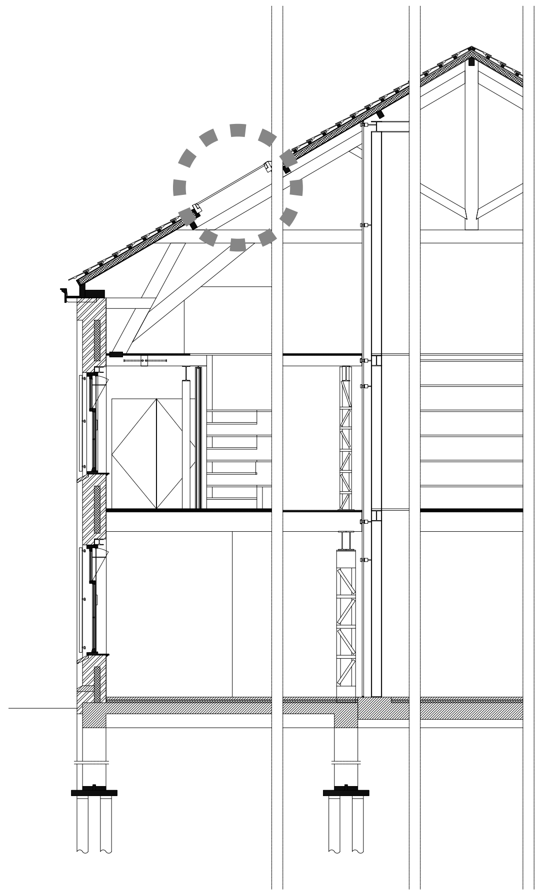
roof connection detail 1:5

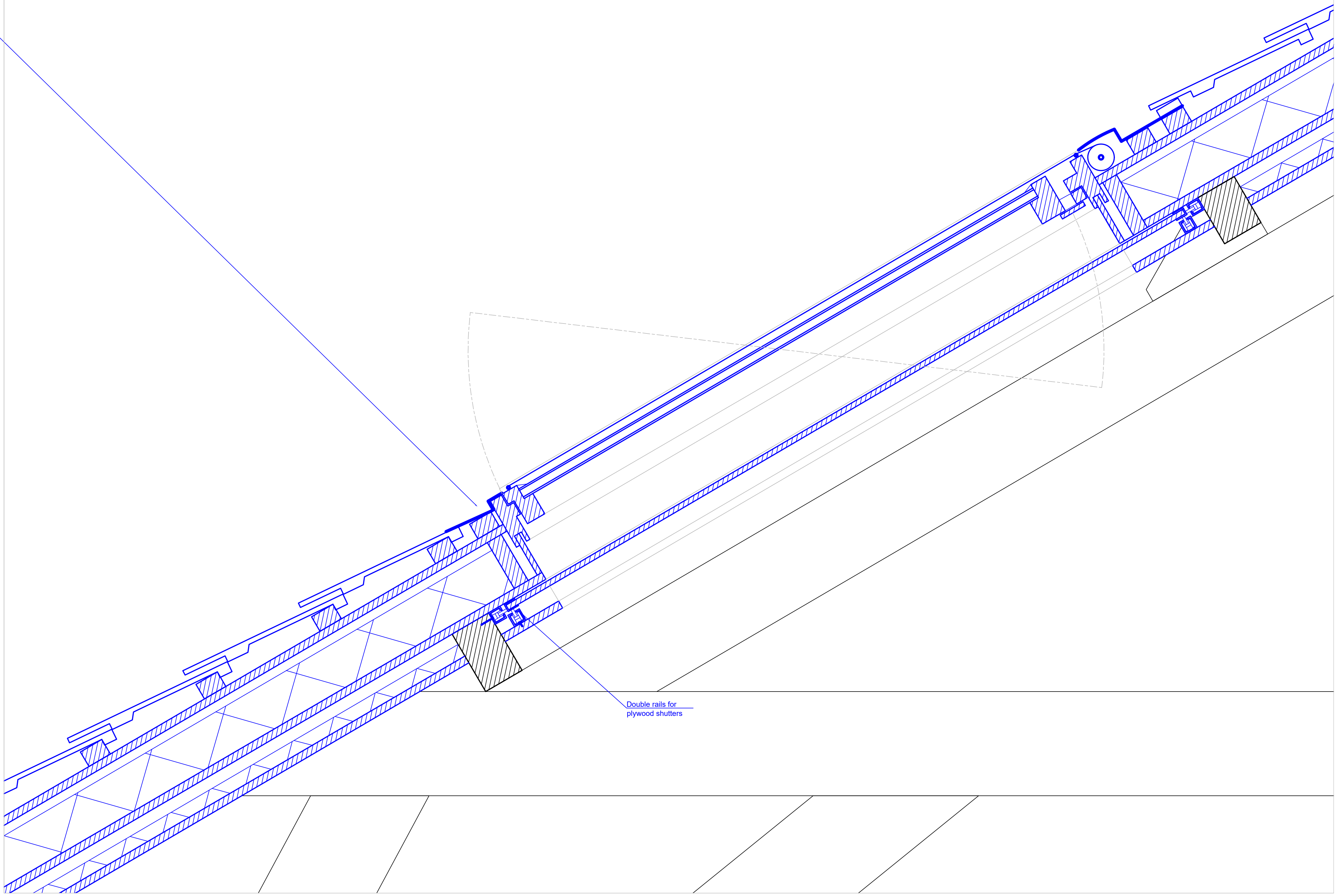
Roof Opening Build Up:

Velux roof window with outside sunshading and blinds. To let in light and to ventilate and get direct outside air when desired.

Movable perforated plywood panels 12 mm

Both the moving elements are opened and closed electrically



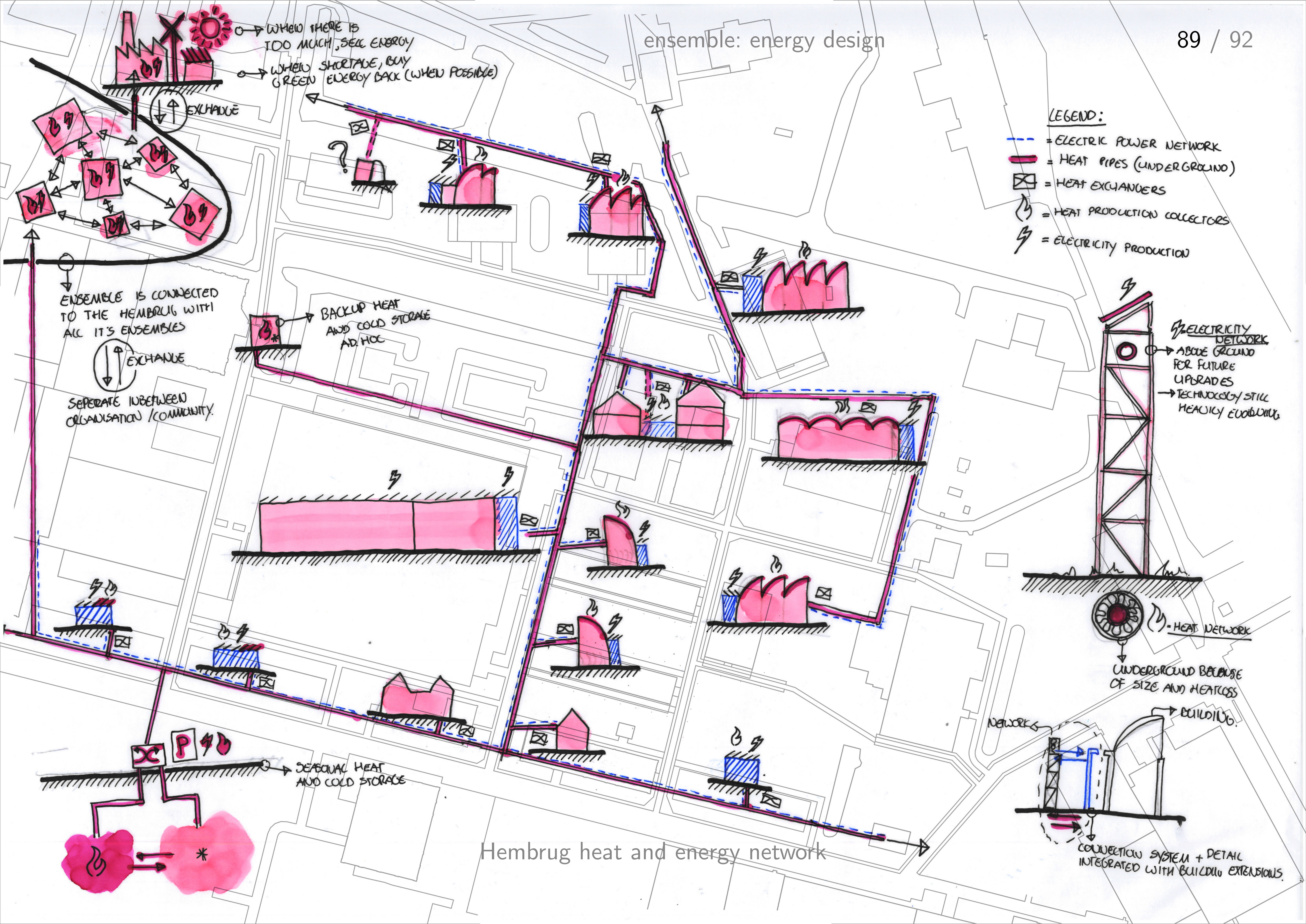


roof window detail, scale 1:10

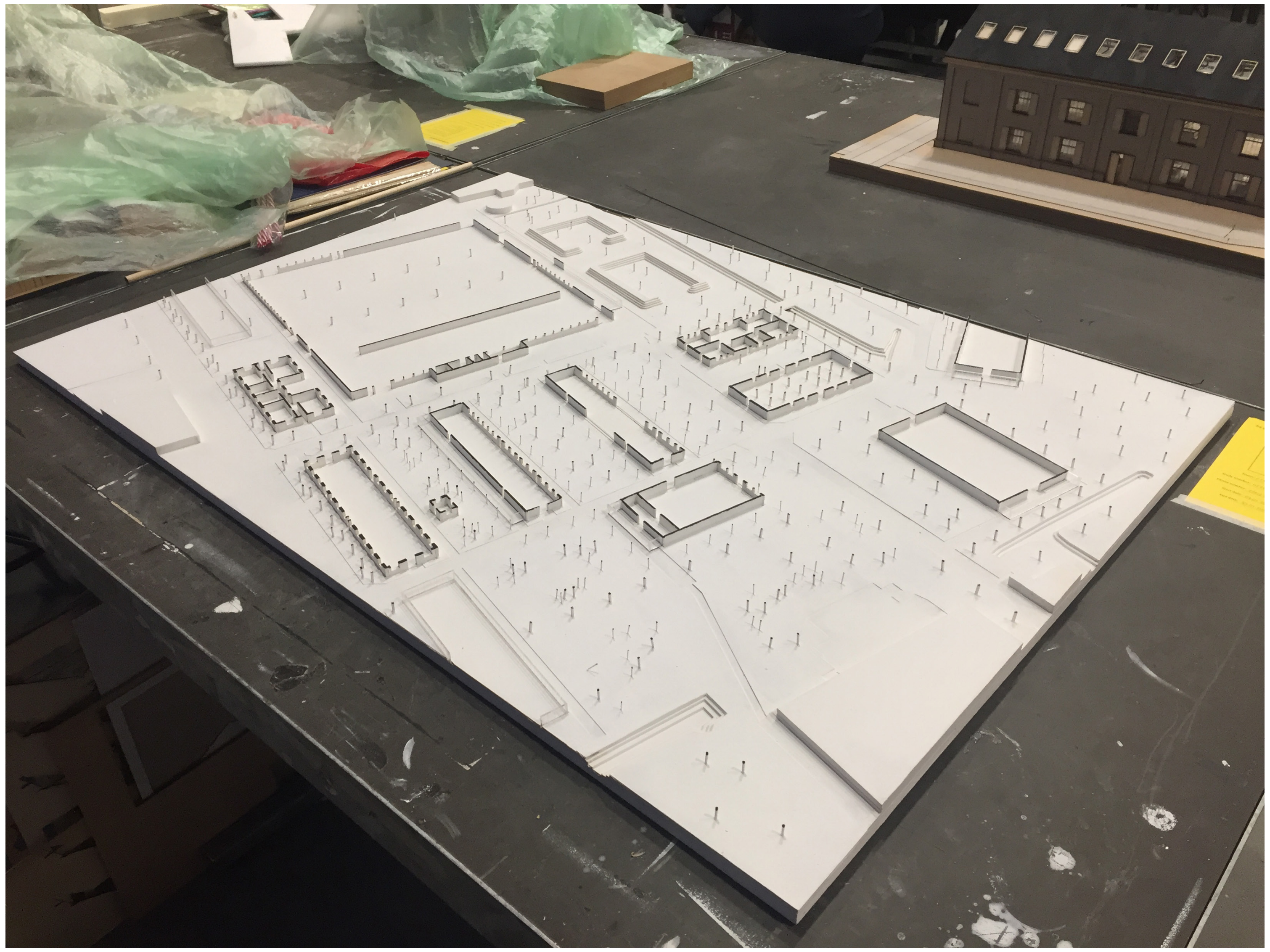
cloakroom and mini theater or presenting space

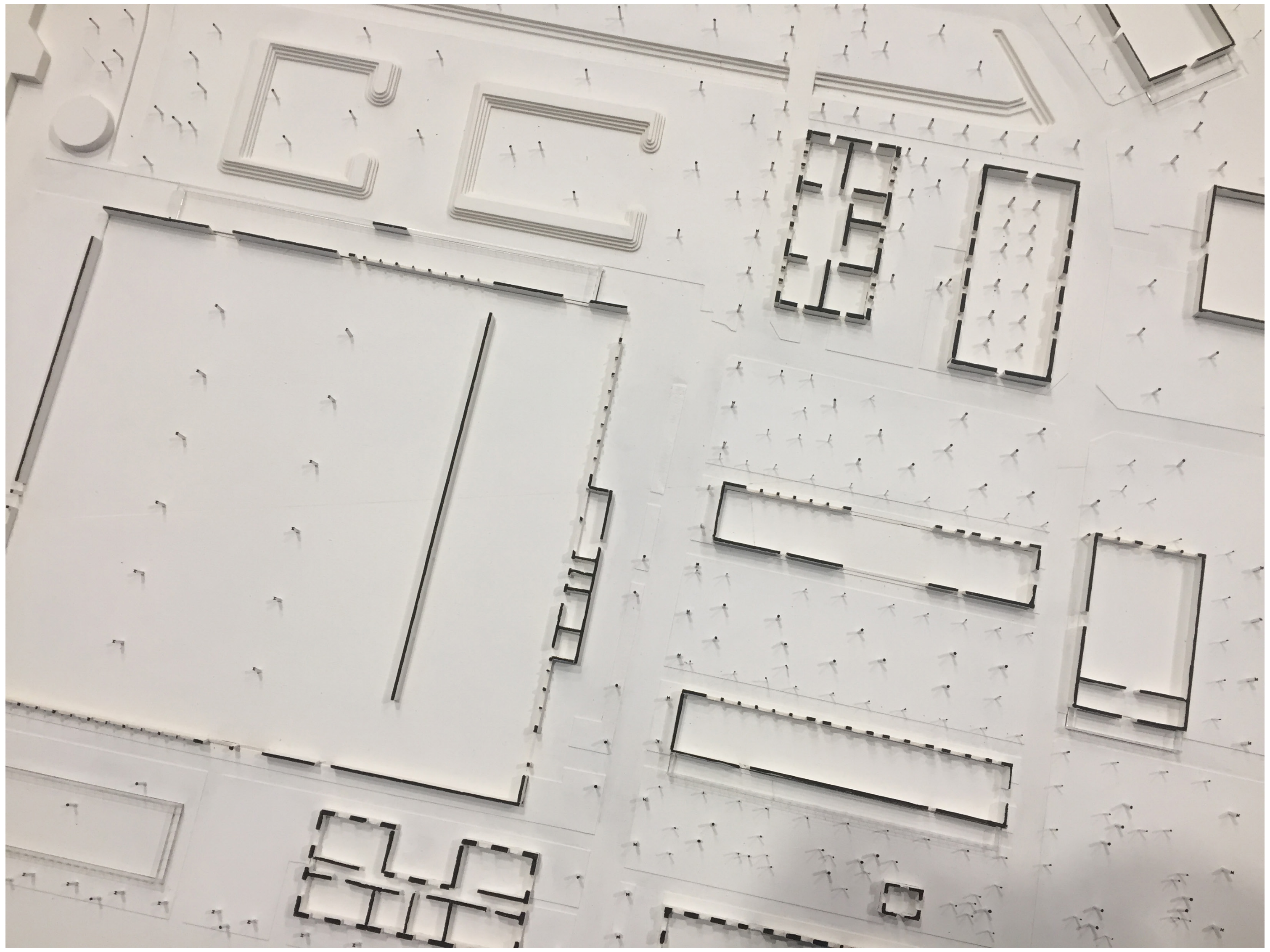
behind the curtains

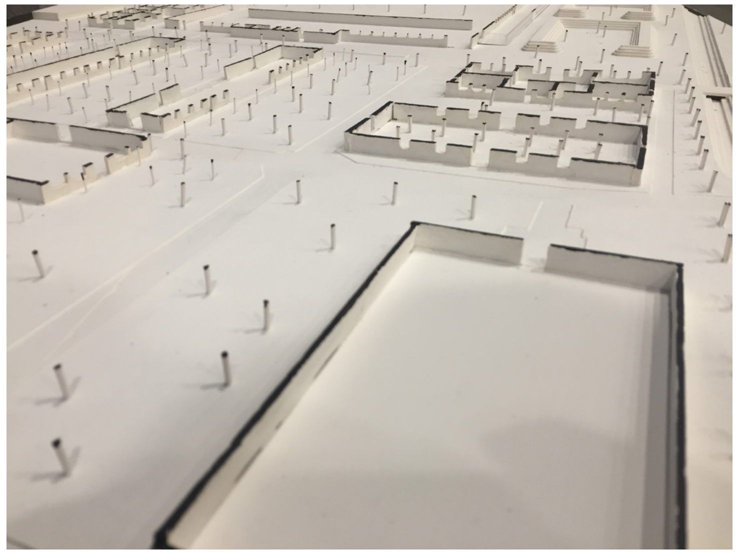
main hall

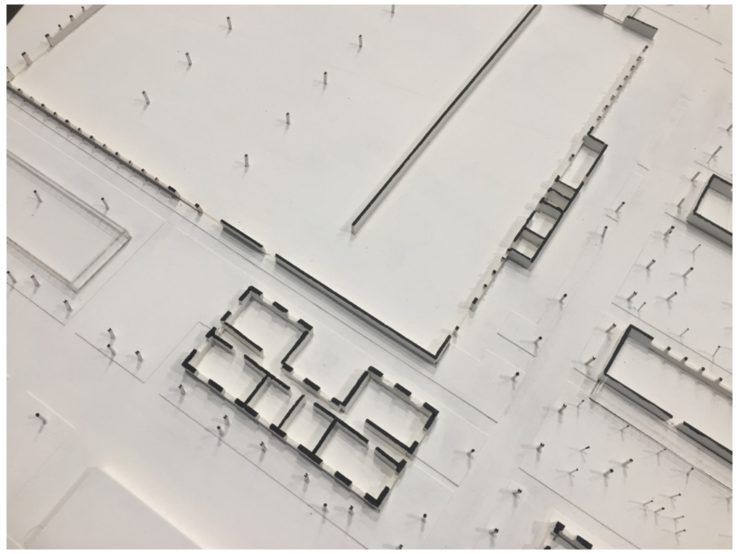


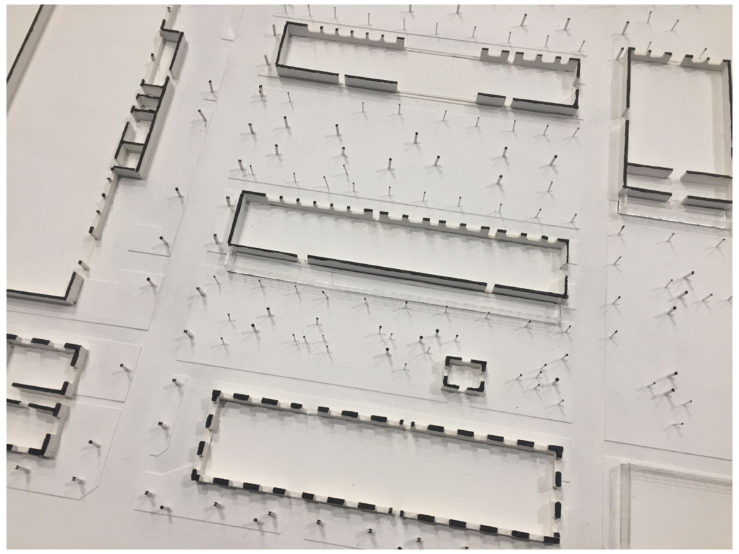
Hembrug heat and energy network

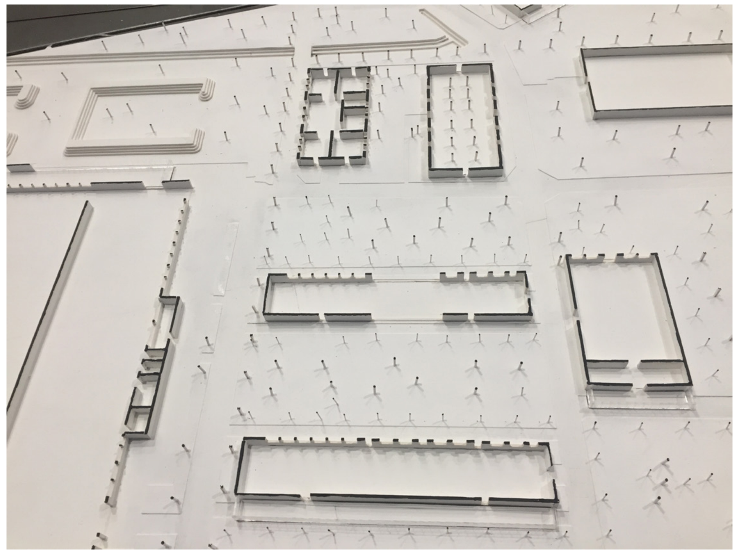




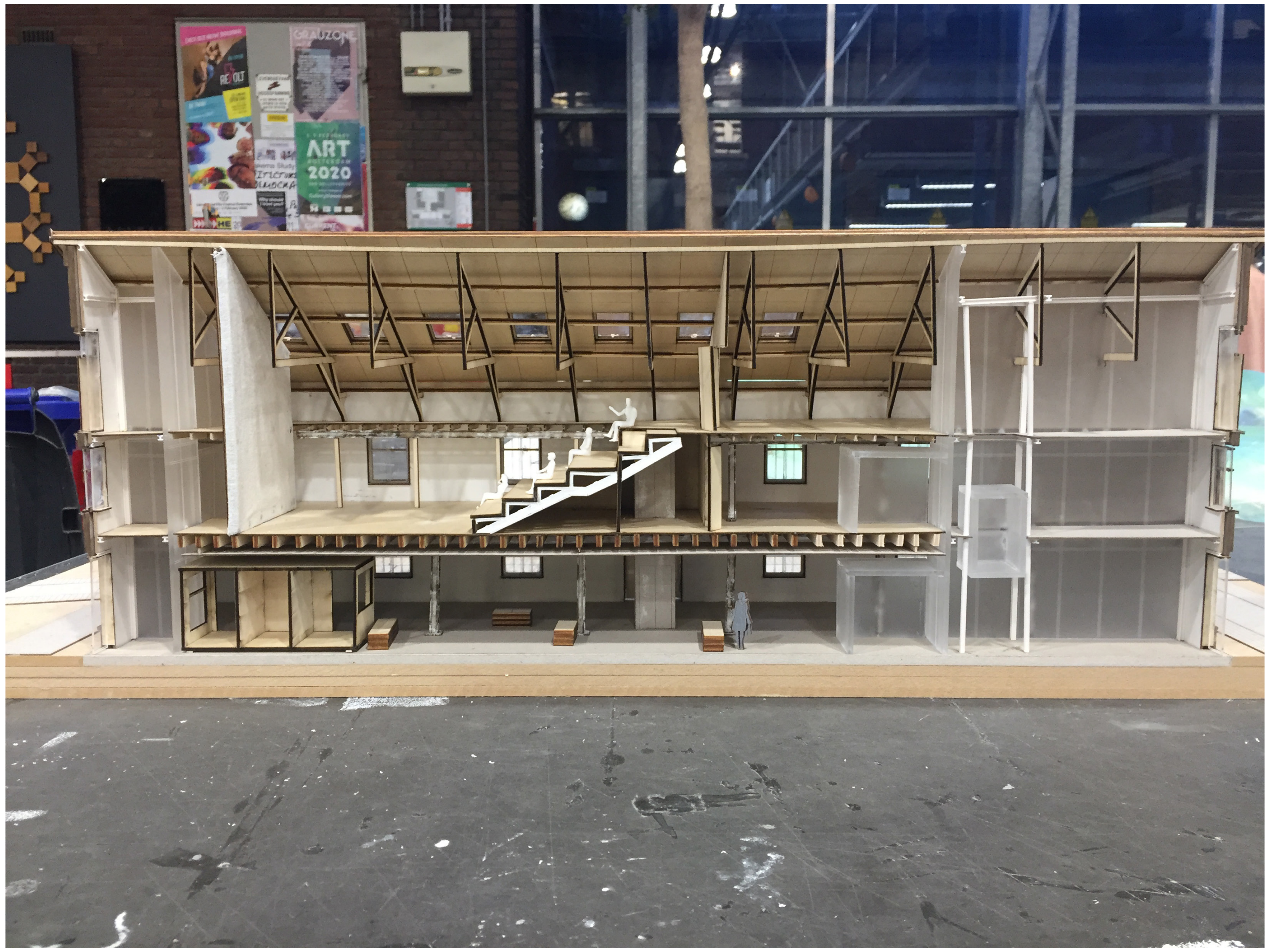






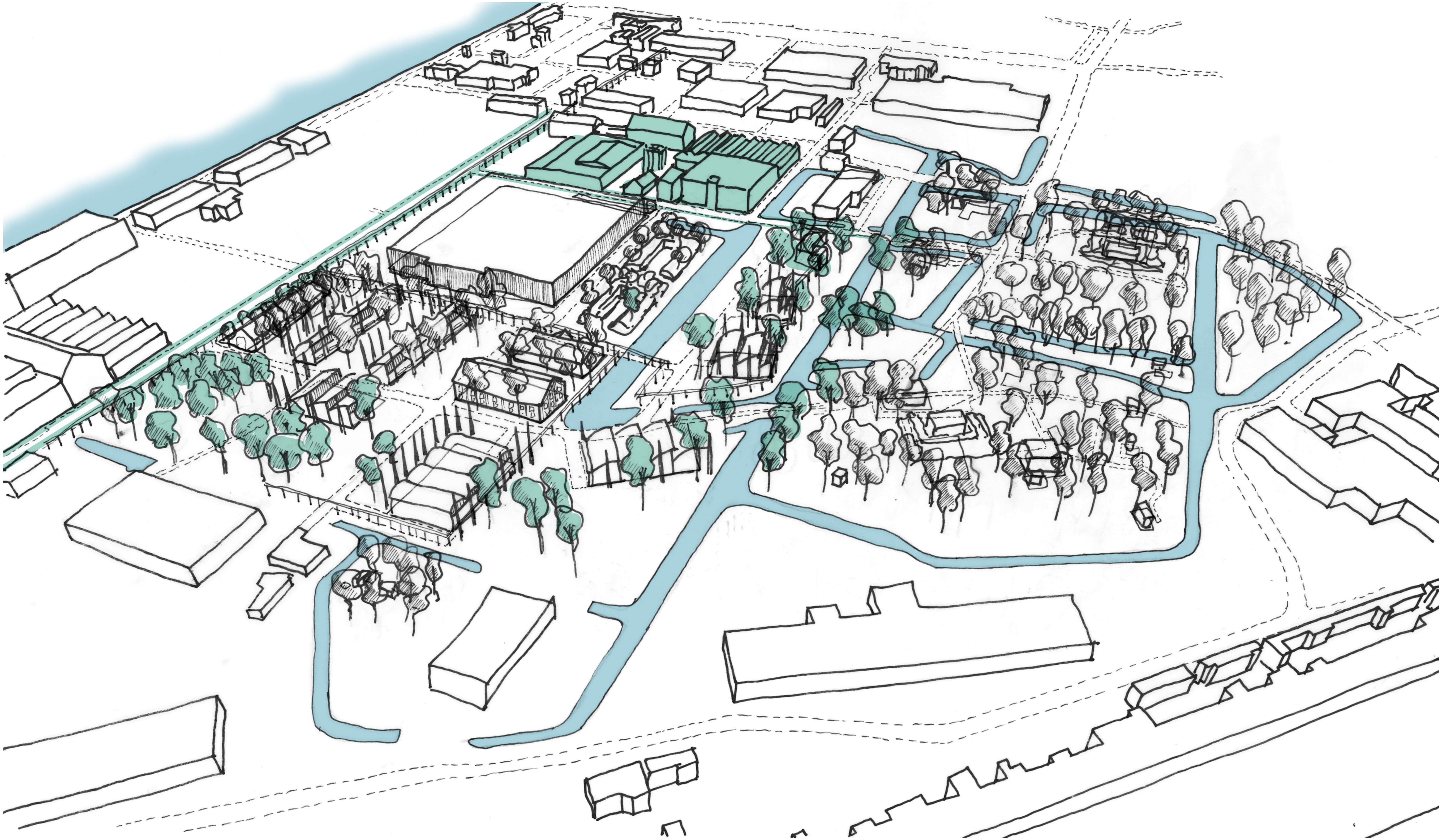


1:200 site "plan" model

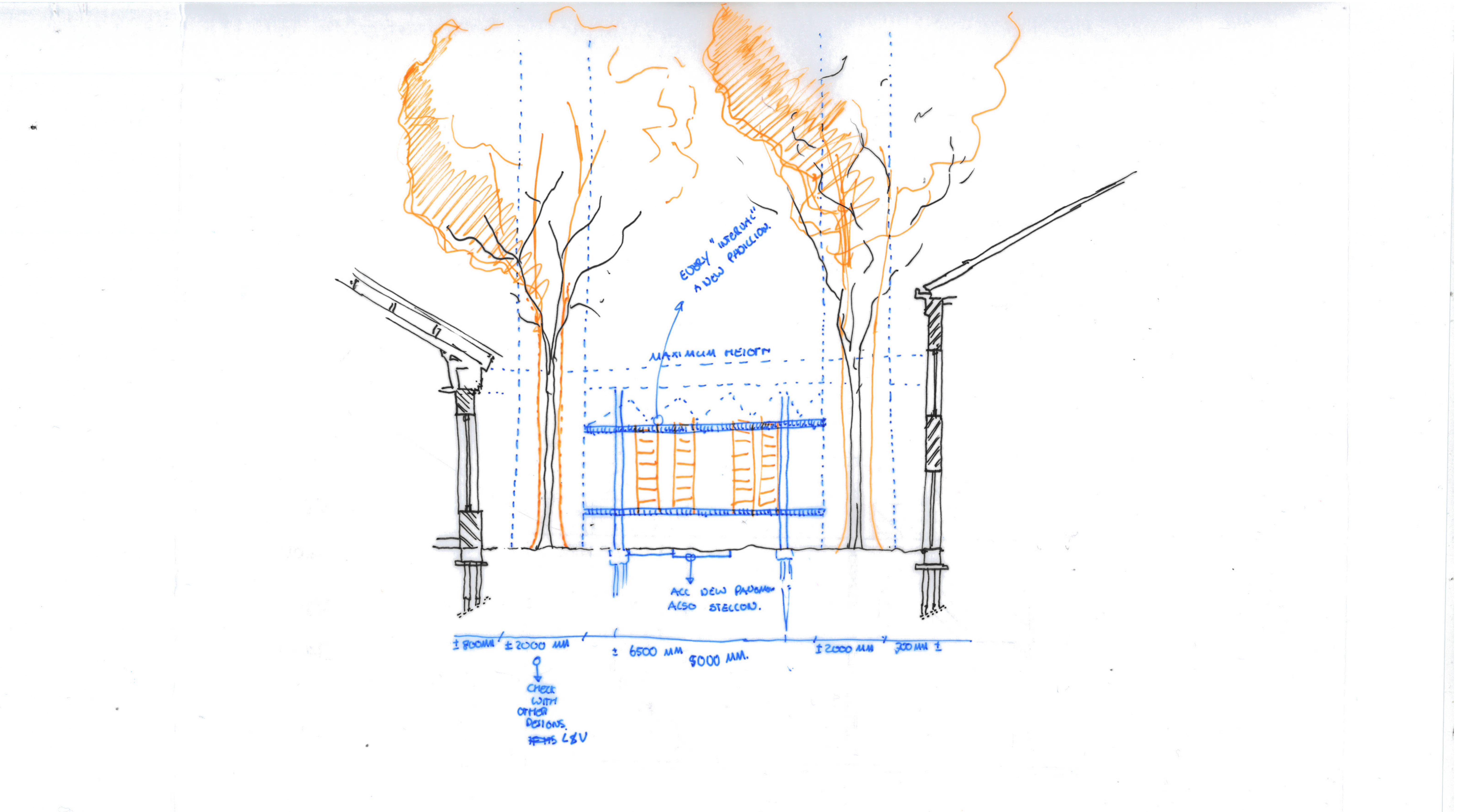


1:50 section model of the theater and restaurant

what to elaborate/research/complete for the p5?



the borders of *Plots in the Wood* are roughly where the fences used to be.



connecting space: pavilion and possible herb growing space