

**DESIGN LOGBOOK**

**AAFKE SIMONIDES**  
*Heritage & Architecture*  
*Delft University of Technology*



“The universal concert is  
always in progress, and  
seats in the auditorium  
are free.”

– R. MURRAY SCHAFER

**WEEK 1**

*reference library visit*



**IMAGE 1**  
*Arriving at the OBA*



**IMAGE 2**  
*Visual connection between floors*



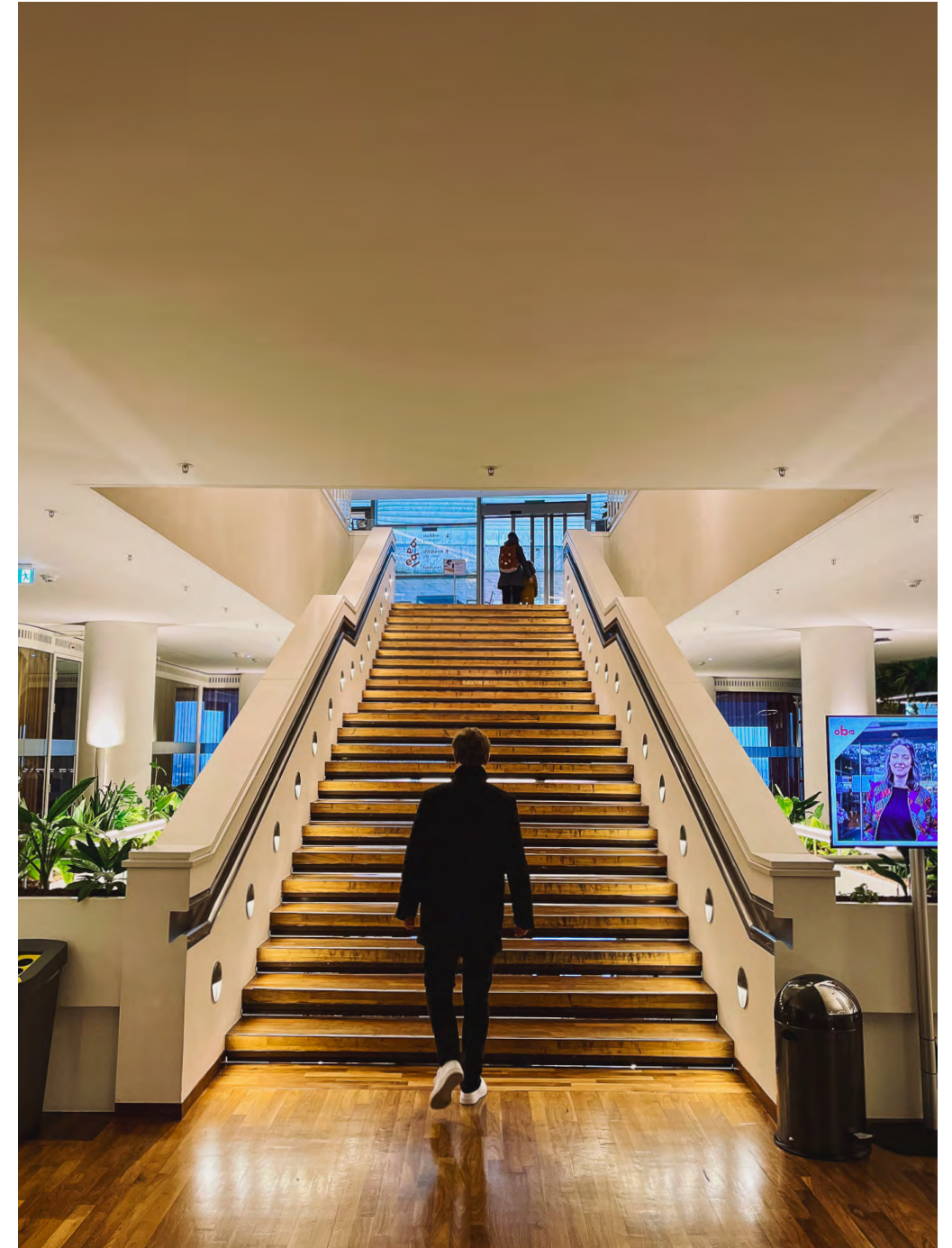
**IMAGE 3**  
*The childrens' library*



**IMAGE 4**  
*Reading and study spots at the borders of the atrium*



**IMAGE 5**  
*Reading with a view*



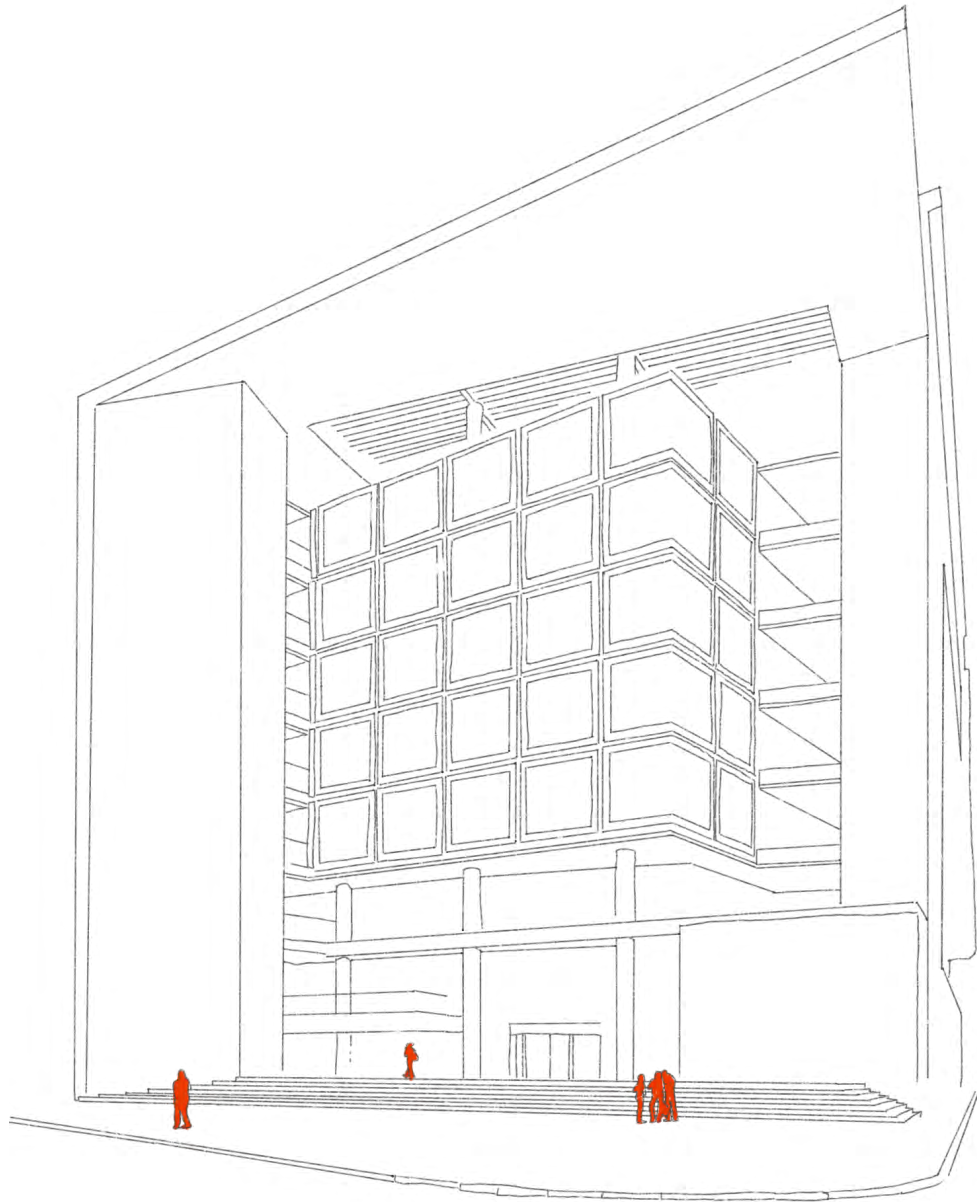
**IMAGE 6**  
*Last stairs to rooftop restaurant*



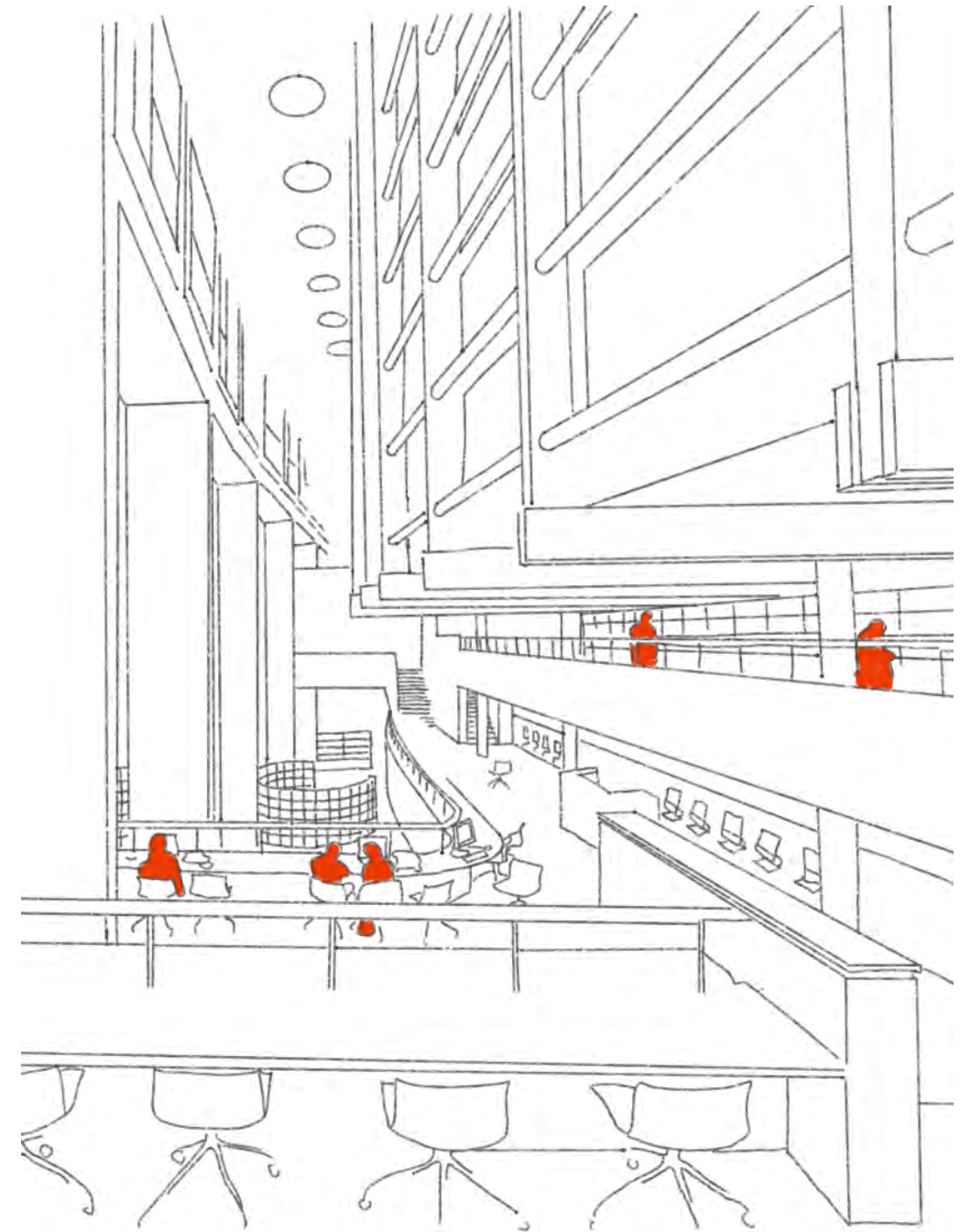
**IMAGE 7**  
*Shading elements*



**IMAGE 8**  
*Framed view*



**IMAGE 9**  
*Drawing of the facade which shows layering system in library.*

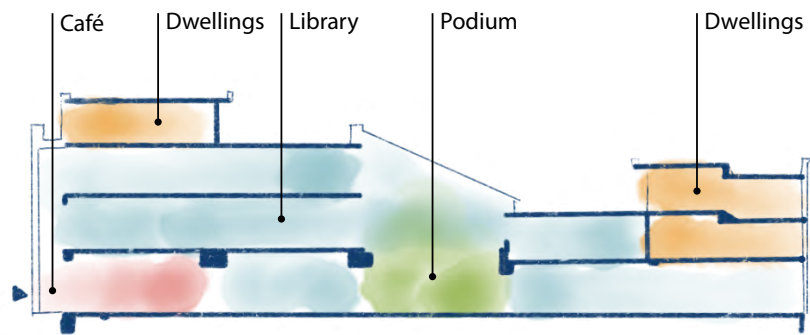


**IMAGE 10**  
*Interior drawing showing the spatialness on the ground floor.*

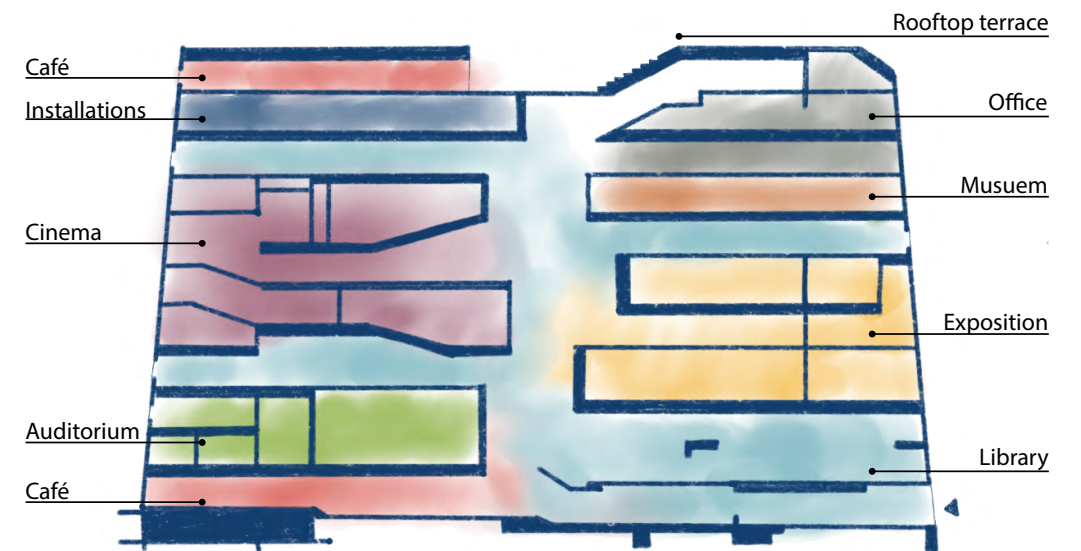


**IMAGE 11**  
*Drawing of the redesigned  
childrens' library*

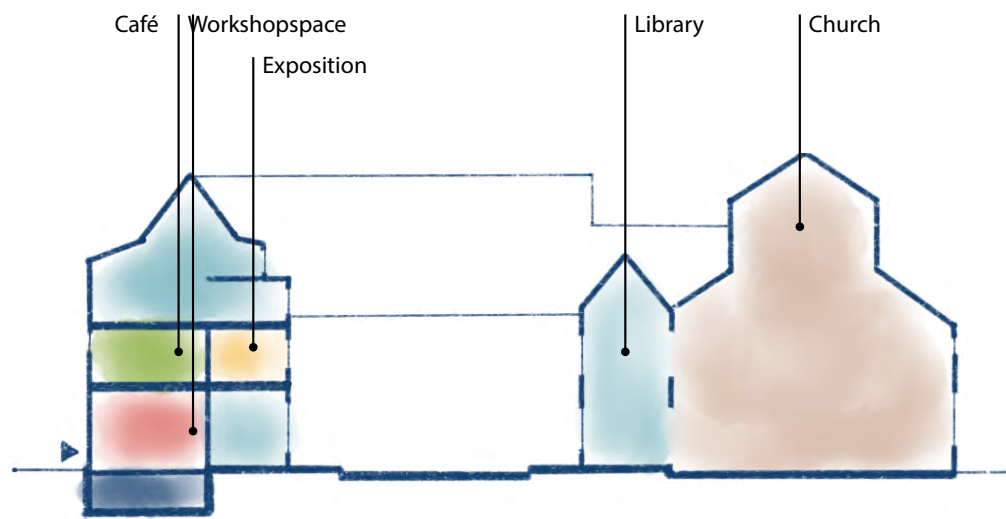
**WEEK 2**  
*reference libraries analysis*



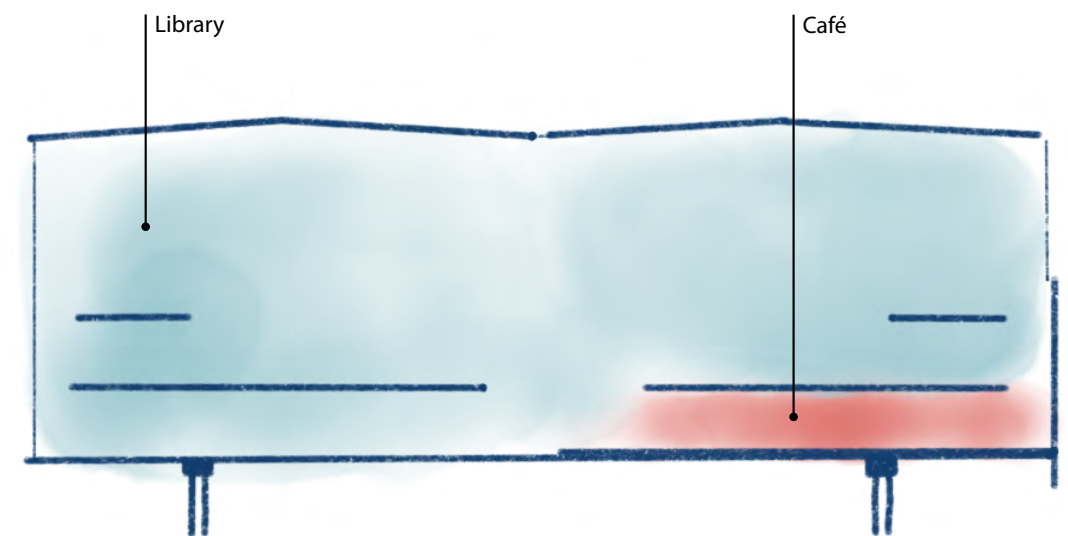
**IMAGE 12**  
*Functions in DOK OPEN, Delft.*



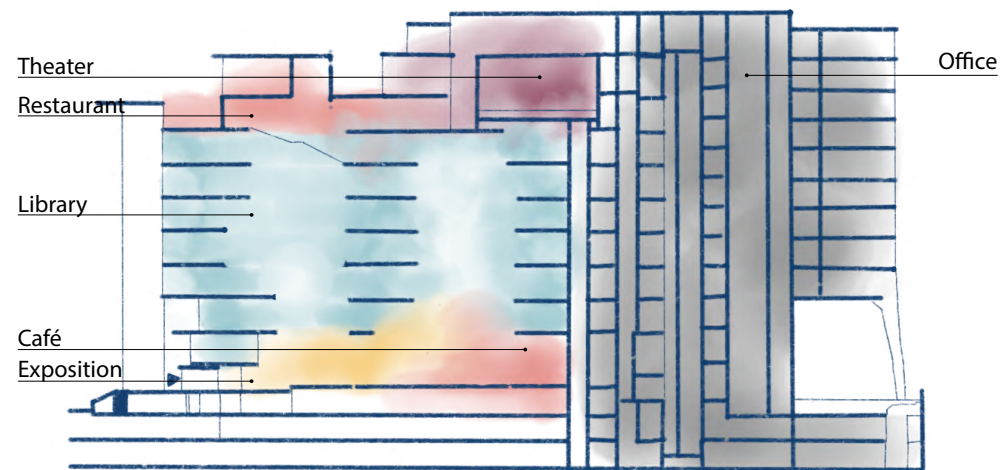
**IMAGE 13**  
*Analisis of functions in Forum, Groningen*



**IMAGE 13**  
*Functions in het Predikheren,  
Mechelen.*



**IMAGE 14**  
*Functions in LocHal, Tilburg.*



WEEK 3 & 4  
*reflection on literature*

**IMAGE 15**  
*Functions in OBA, Amsterdam.*

# PAPER 4 Sustainable Library Buildings: Green Design Needs and Interior Architecture Students' Ideas for Special Collection Rooms

(Afacan, 2017)

## INTRODUCTION

How can academic libraries grow while minimizing their impact on the environment?

## LITERATURE REVIEW

"The built environment is one of the **main factors in global energy consumption.**"

"As key buildings on campus, libraries can be a **role model** for sustainable practices, showcasing green building methods and raising awareness regarding sustainability."

## CHALLENGES OF A GREEN LIBRARY AND SUSTAINABLE SPECIAL COLLECTION ROOMS

"... knowledge in **electronic format** and digital services as sustainable practices are commonly used around the world."

"Green libraries should be **energy and water efficient, use ecological and non-toxic materials and furniture** and **reduce maintenance costs through recycling and reusing.**"

"... special collections are **important aspects of higher education** in terms of being **primary sources**, which offer students the opportunity to analyse and synthesise knowledge and enable them to acquire information through different learning styles."

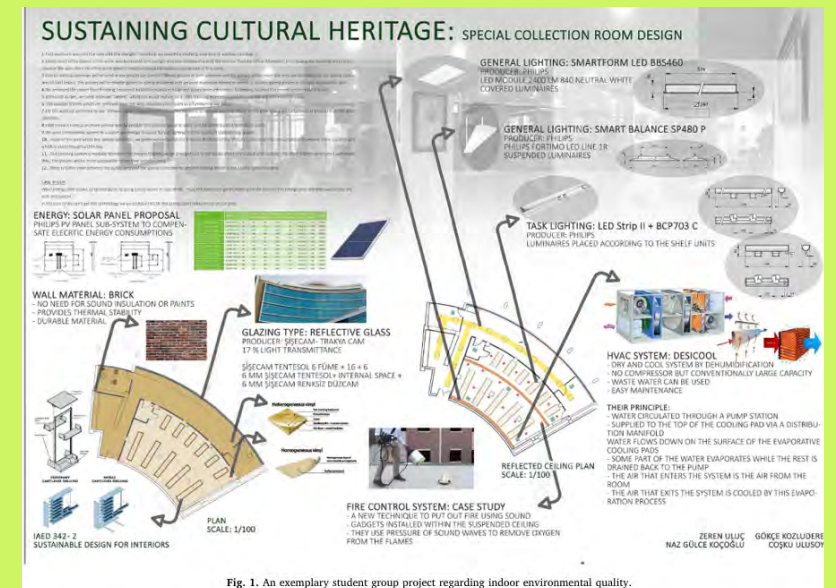


Fig. 1. An exemplary student group project regarding indoor environmental quality.

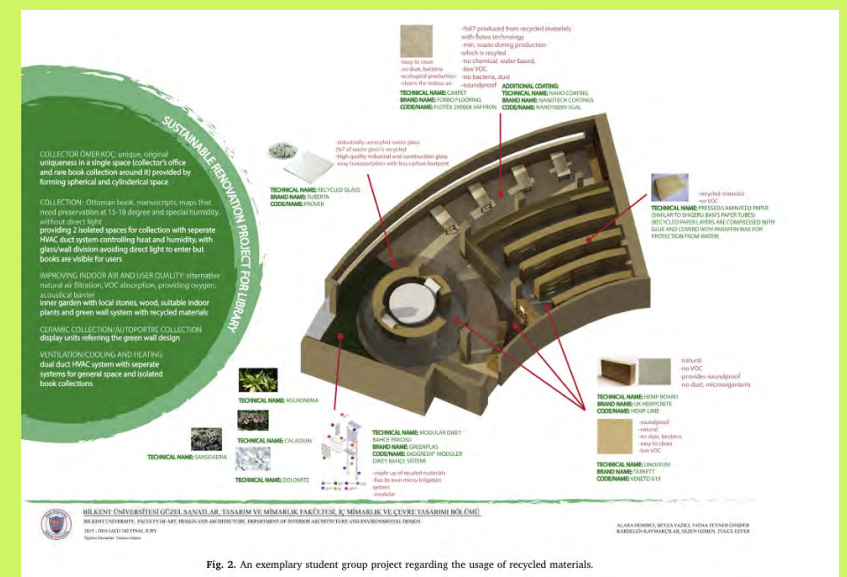


Fig. 2. An exemplary student group project regarding the usage of recycled materials.

IMAGE 16 AND 17  
Results of article (Afacan, 2017)

## PAPER 10 2050: A Library Space Odyssey. Planning the Future Library

(Latimer, 2018)

### INTRODUCTION

How can we make informed decisions when designing the future library?

### 21ST CENTURY TRENDS

*Table 1. – Changing trends.*

Library buildings: a changing typology	
20th century	21st century
Imposing	Welcoming/relaxed
Stability/permanence	Flexibility/transience
Solitude	Communal/Choice
Quiet	Zoned/Quiet – Social
Status quo	Innovation(IT)
Collections	Connections

### THE PLANNING PROCESS

“There is, however, general consensus that the goals of the library must align with the wider strategy of the parent institution and that whatever the final configuration, space and service are inseparable.”

“Space is expensive and the use to which it is put needs to be considered carefully. High quality, however, pays dividends, so wherever possible it is wise to fight for the best”

### POST-OCCUPANCY EVALUATION

The International Federation of Library Associations (IFLA)

The fairy question – “**If you had three wishes concerning the building what would they be?**” can often elicit the most revealing answers highlighting what might be changed and where successes and failures lie.

### RESOURCES FOR LIBRARY DESIGN

Designing Libraries (CIC) Website (for UK)

LIBER Architecture Group (LAG)

IFLA's Library Buildings & Equipment Section (LBES)

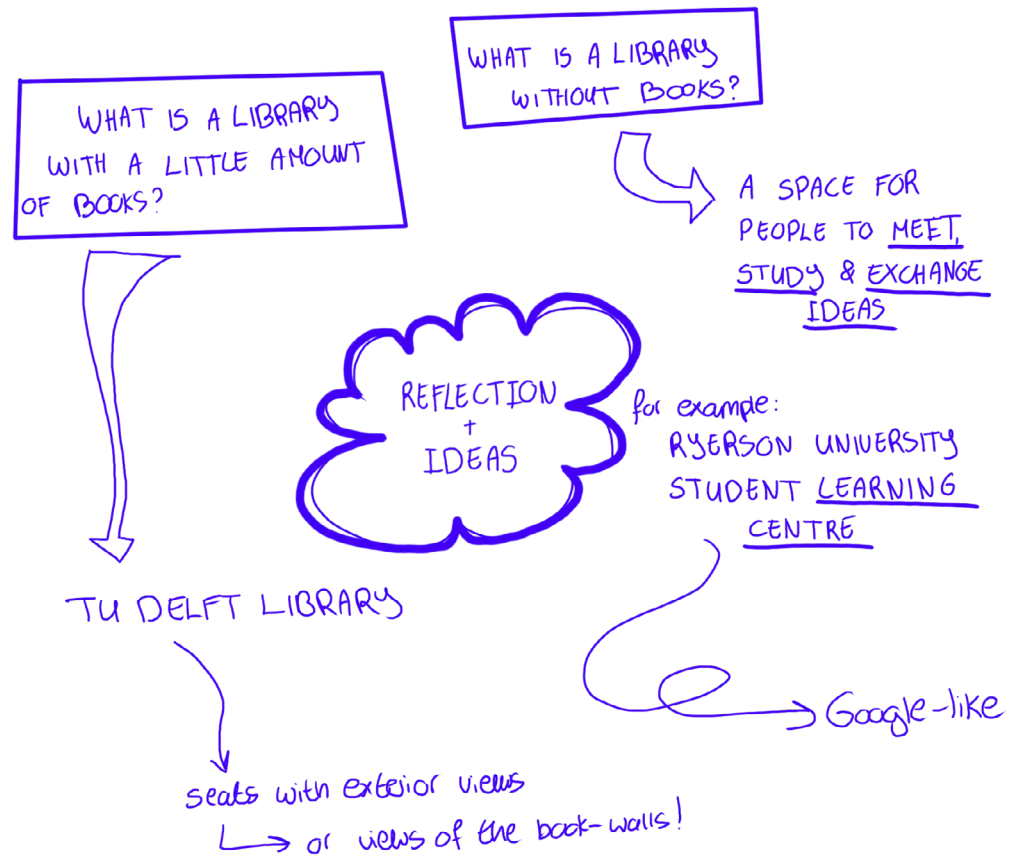
### CONCLUSION

“... those tasked with planning the future library need to be **well-informed, visionary, determined, energetic and enthusiastic.**”

“Whatever the future holds, it seems likely that **libraries will continue to have an important role** and will need to be housed in **buildings that work well and look good.**”

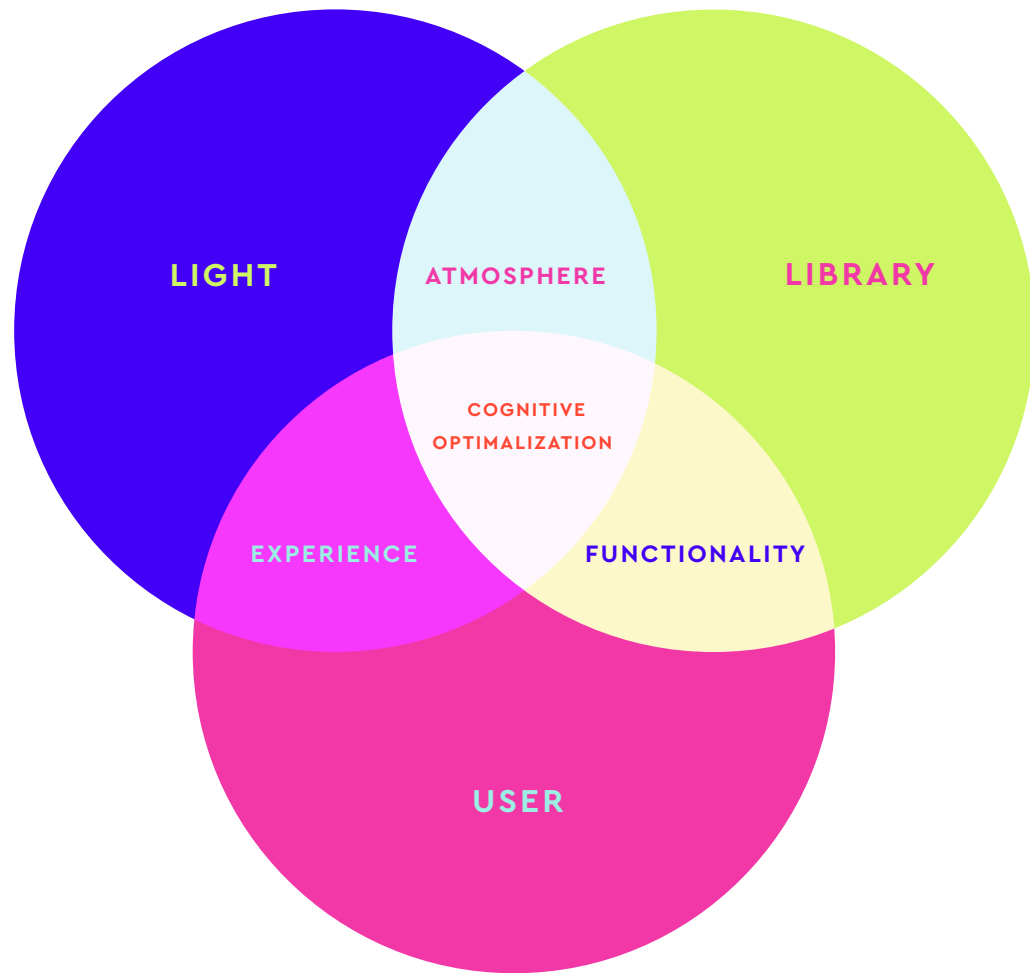
### IMAGE 18

*Results of article* (Latimer, 2018)

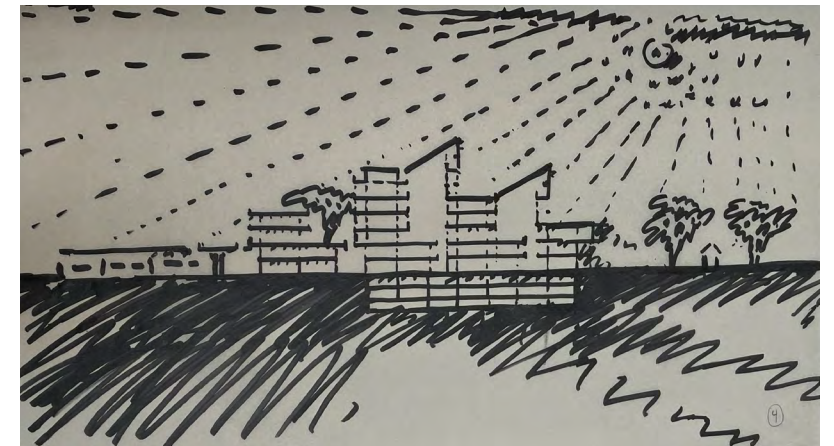


WEEK 5-7  
research topic formation

IMAGE 19  
Thoughts about articles.



**IMAGE 20**  
*Interesting themes and ideas for research.*

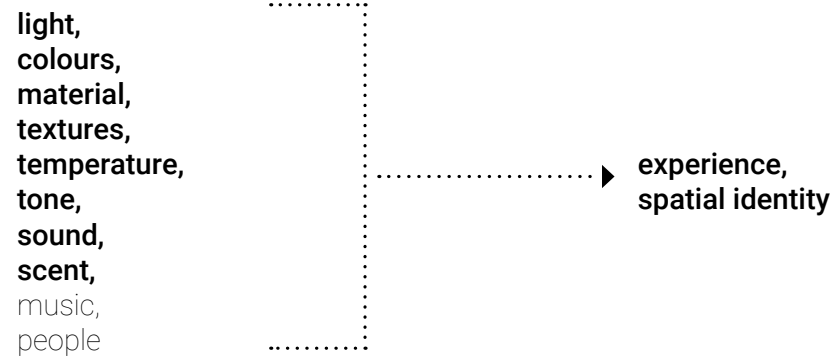


**IMAGE 21**  
*Original drawings from OD 205 for KB, from Nieuwe Instituut.*

# atmosphere

/ AT-muhss-feer / noun, English

“Our body registers and reacts to the ephemeral effects of **light, sound, heat and odor**, that are carried on or in the air, even before we consciously grasp the building as a whole. Indisputably, atmosphere is a significant and an inevitable product of the architectural design process, and therefore should be considered and discussed along with other, more commonly accepted features of built architecture, such as energy efficiency, affordability, or materiality.” (Karabašević, 2016)



seeing  
visual



hearing  
auditory



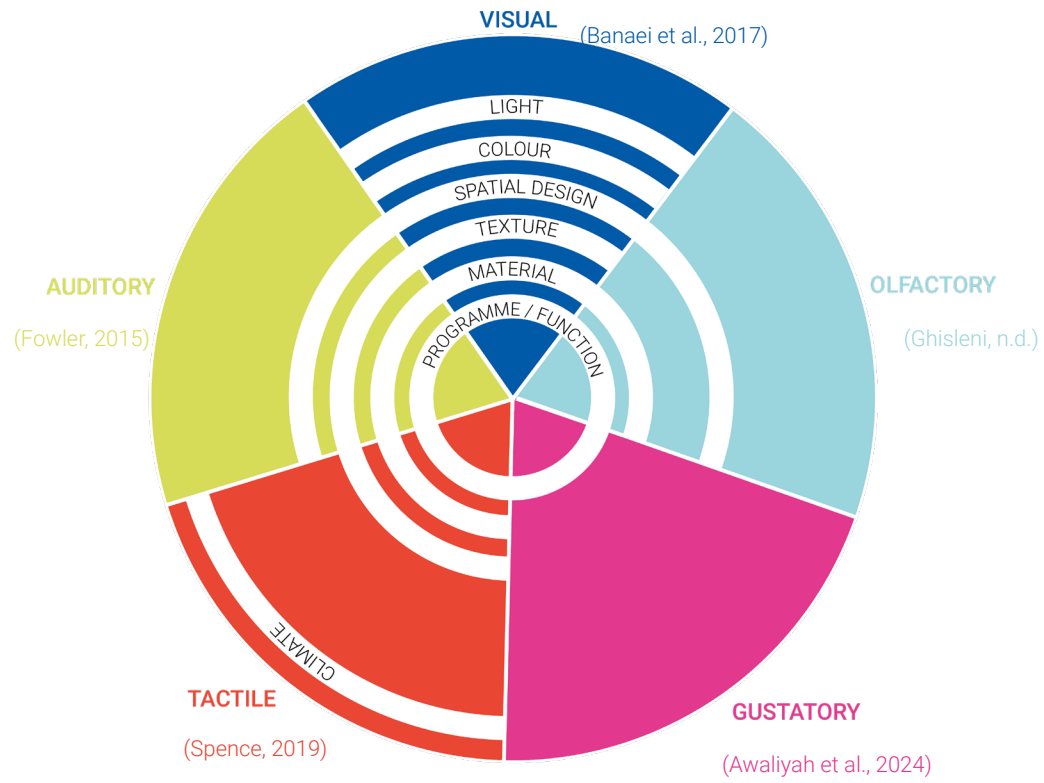
feeling  
tactile



smelling  
olfactory



tasting  
gustatory

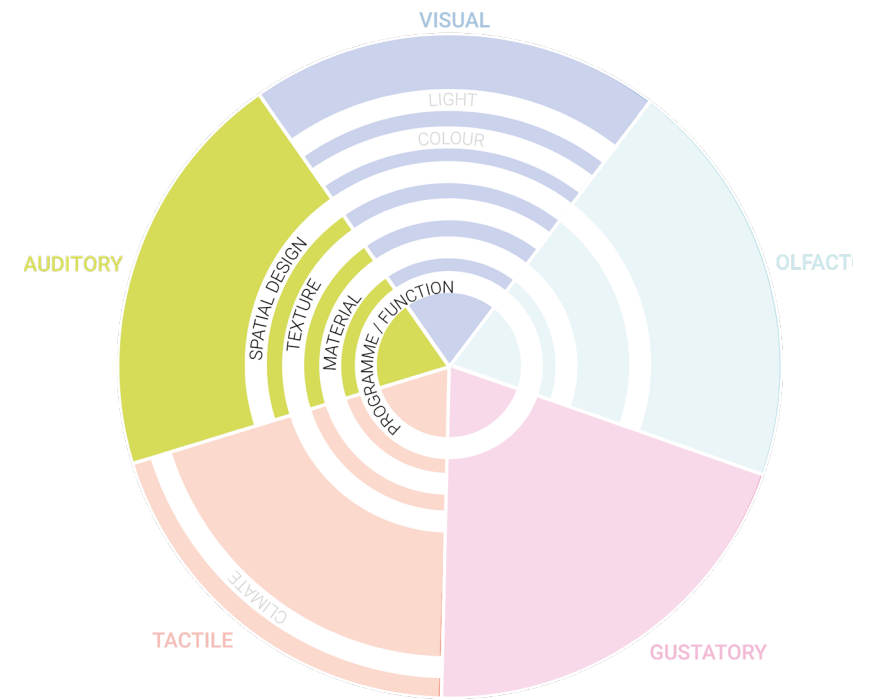


WEEK 9  
PI presentation

**IMAGE 22**  
*5 senses to experience library architecture with (own image)*



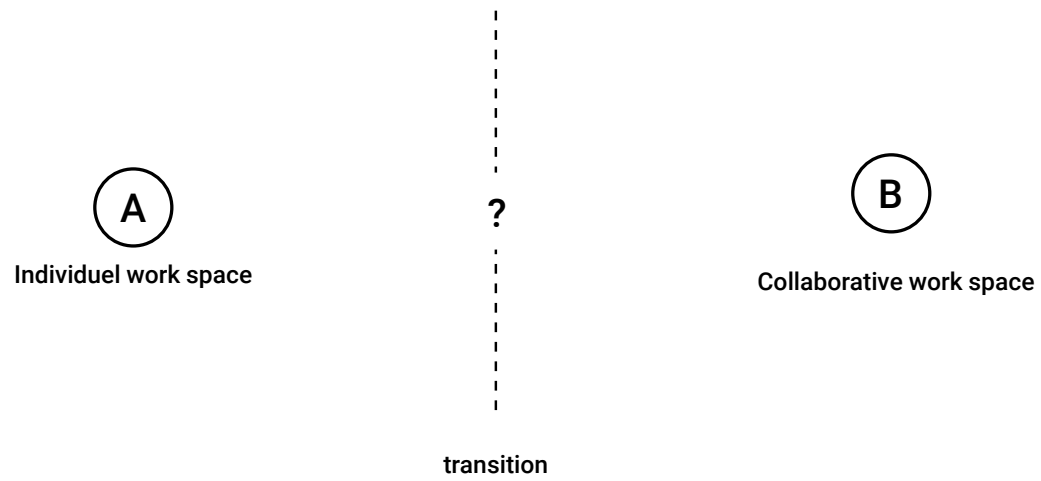
**IMAGE 23**  
Narrowing down the topic (own image)



**FOCUS ON AUDITORY (SENSE OF HEARING) BECAUSE...**

- A) Noise levels and library soundscape are an important topic in library user satisfaction (Peterson, 2023) (Li et al., 2024) (Majidi et al., 2023)
- B) Focus makes the casestudy more feasible
- C) Gives opportunity to look in to how different atmospheres can exist in the same building / how the **soundscape transition works**

**IMAGE 24**  
5 senses to experience library architecture with (own image)



	FORUM	DOK OPEN	BRITISH NATIONAL LIBRARY	TU DELFT LIBRARY
SPACE FOR CONCENTRATION, INDIVIDUAL STUDYING (QUIET)		?		
TRANSITION		?	?	
SOCIAL STUDY SPACE, GROUP WORK (LOUDER)			?	

**IMAGE 25**  
Concept of research (own image)

**IMAGE 26**  
Diagram of research (own image)



**IMAGE 25**  
Sketch of preliminary design  
ideas (own image)

### KEEP SOME BOOK (VISIBLE!)

*80/20 rule ('pareto principle')*  
*Improved atmosphere (Peterson, 2023)*  
*Helps performance and creativity (Donovan, 2019)*

### OPEN UP THE BUILDING

*Let in more daylight*  
*Create connection with outside (Peterson, 2023)*

### INCLUDE GREENERY

*reduces stress and improves mood (Kim et al., 2018) (Elsadek et al., 2024)*

### ZONES FOR DIFFERENT ACTIVITIES

*reduces noise complaints (Li et al., 2024)*

**WEEK 10**

*Heritage Values KB*



IMAGE 26  
Miro of values (groupwork image)

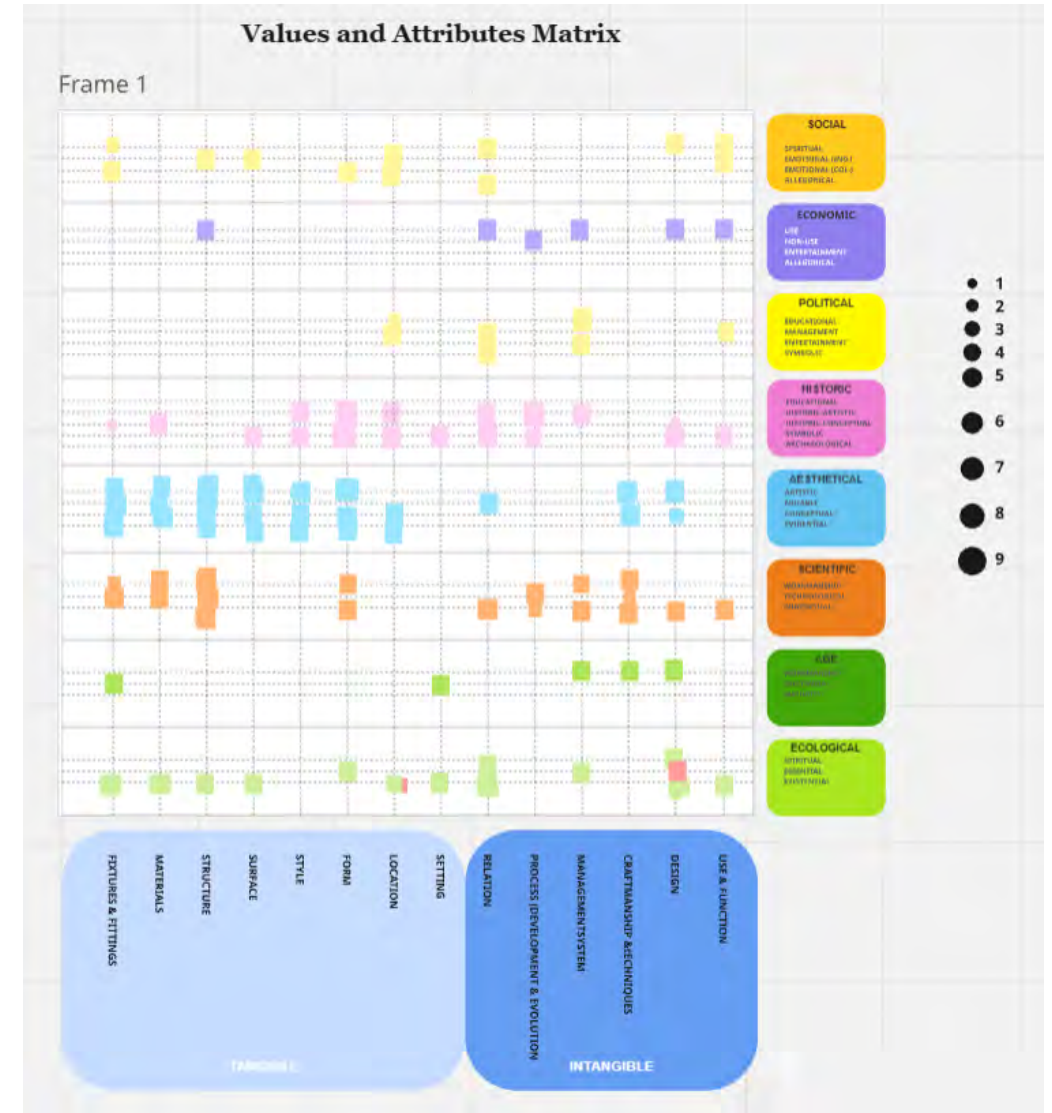


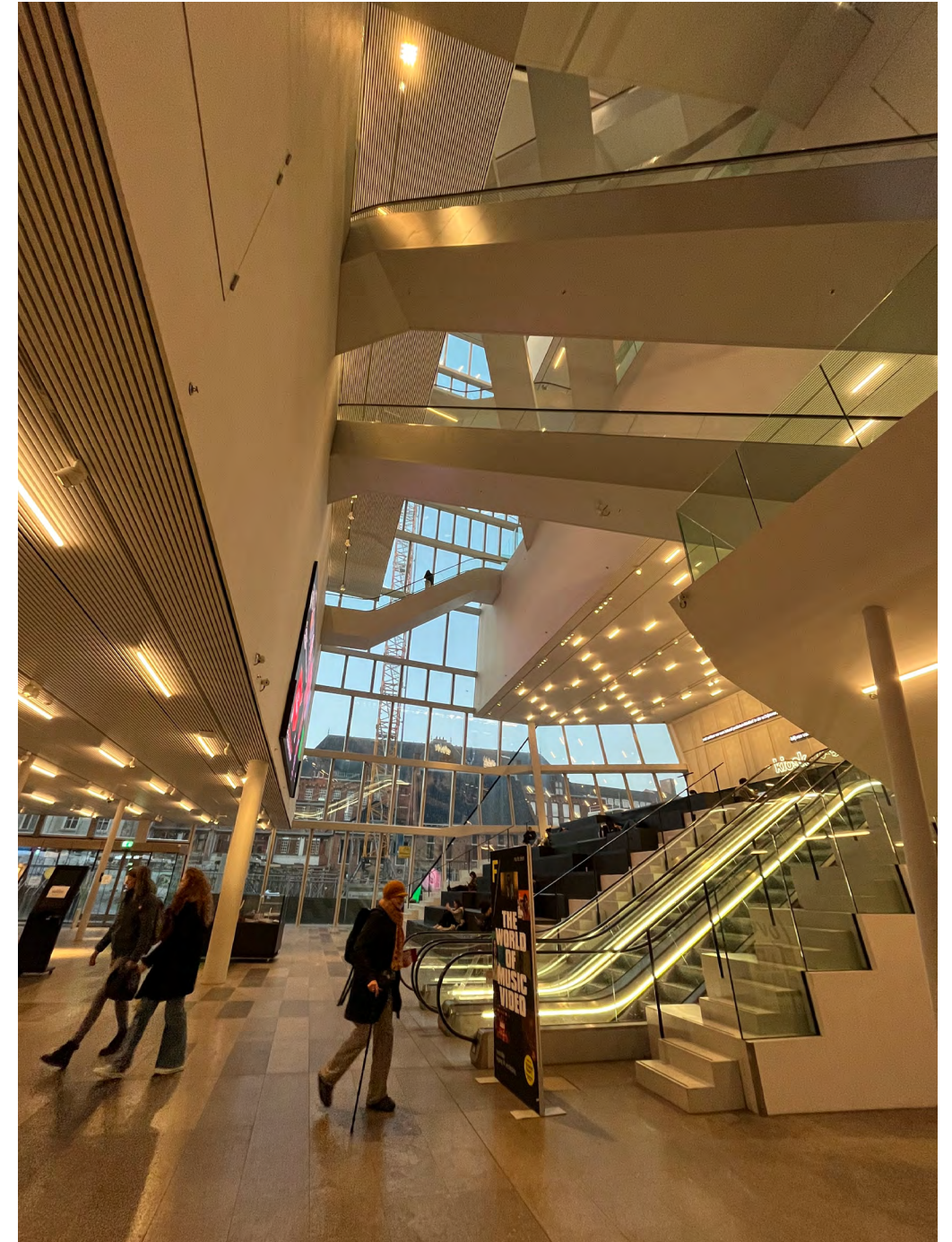
IMAGE 27  
Miro of values (groupwork image)

**WEEK 11-12**

*Forum Case Study: Site visit*  
*Building form studies*



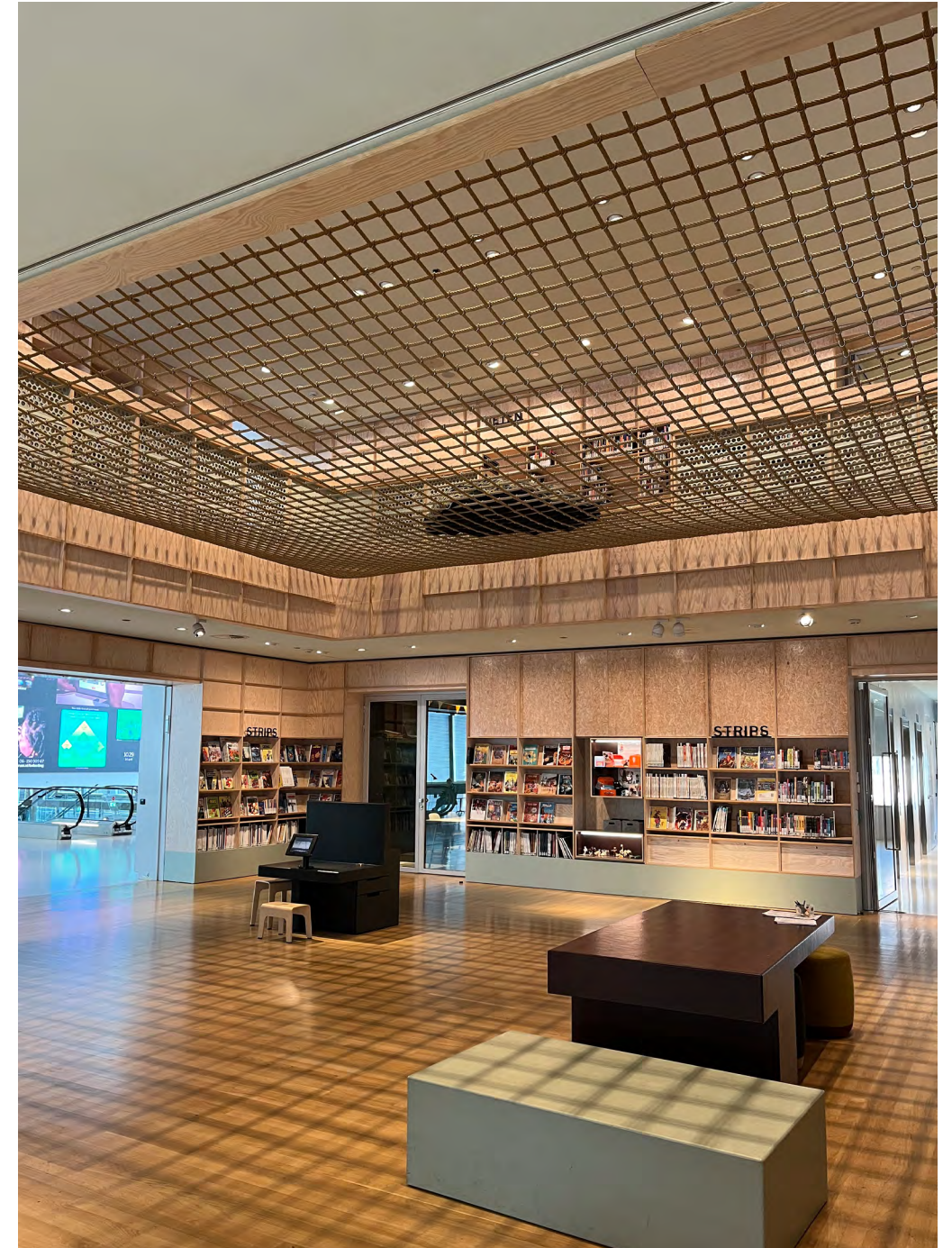
**IMAGE 28**  
*Entrance of Forum (own image)*



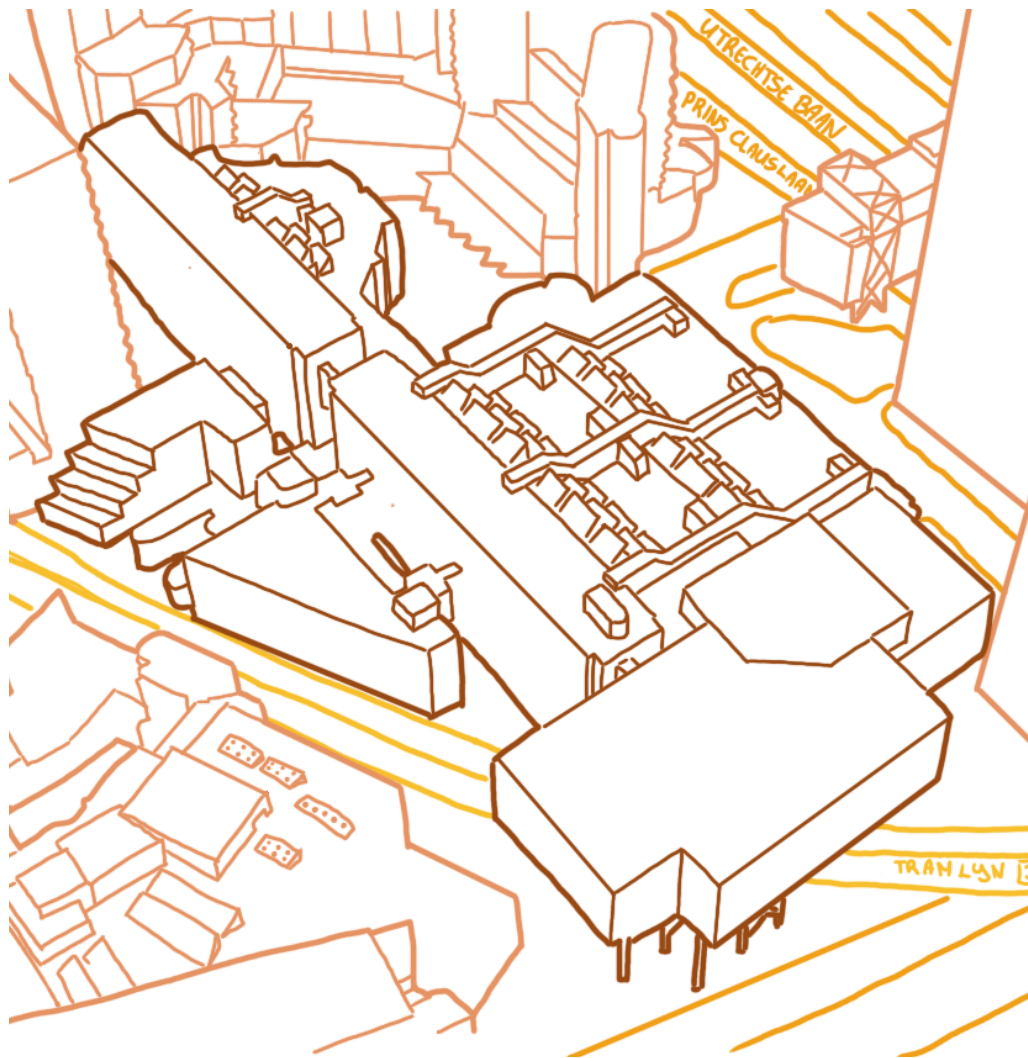
**IMAGE 29**  
*Atrium and circulation (own image)*



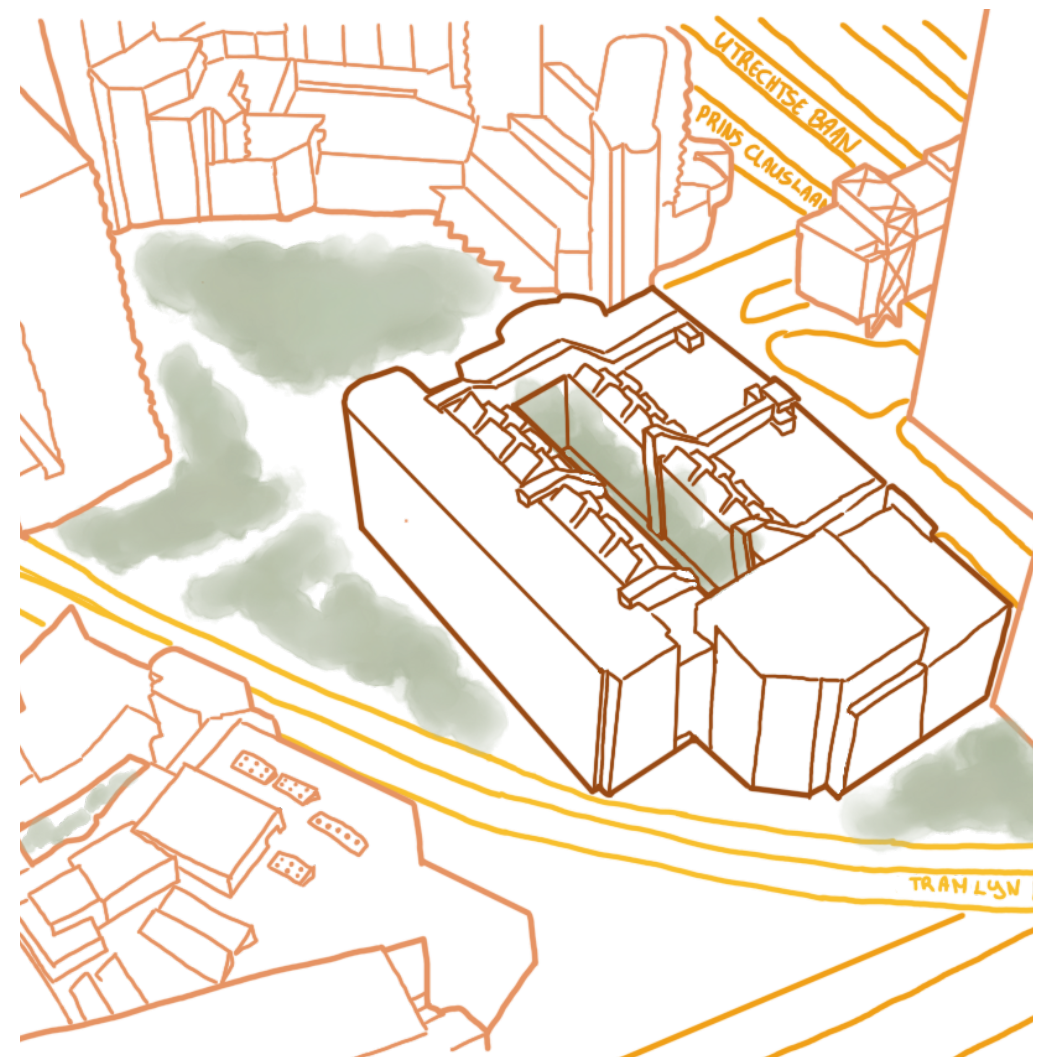
**IMAGE 30**  
*Study floor (own image)*



**IMAGE 31**  
*Childrens' library (own image)*



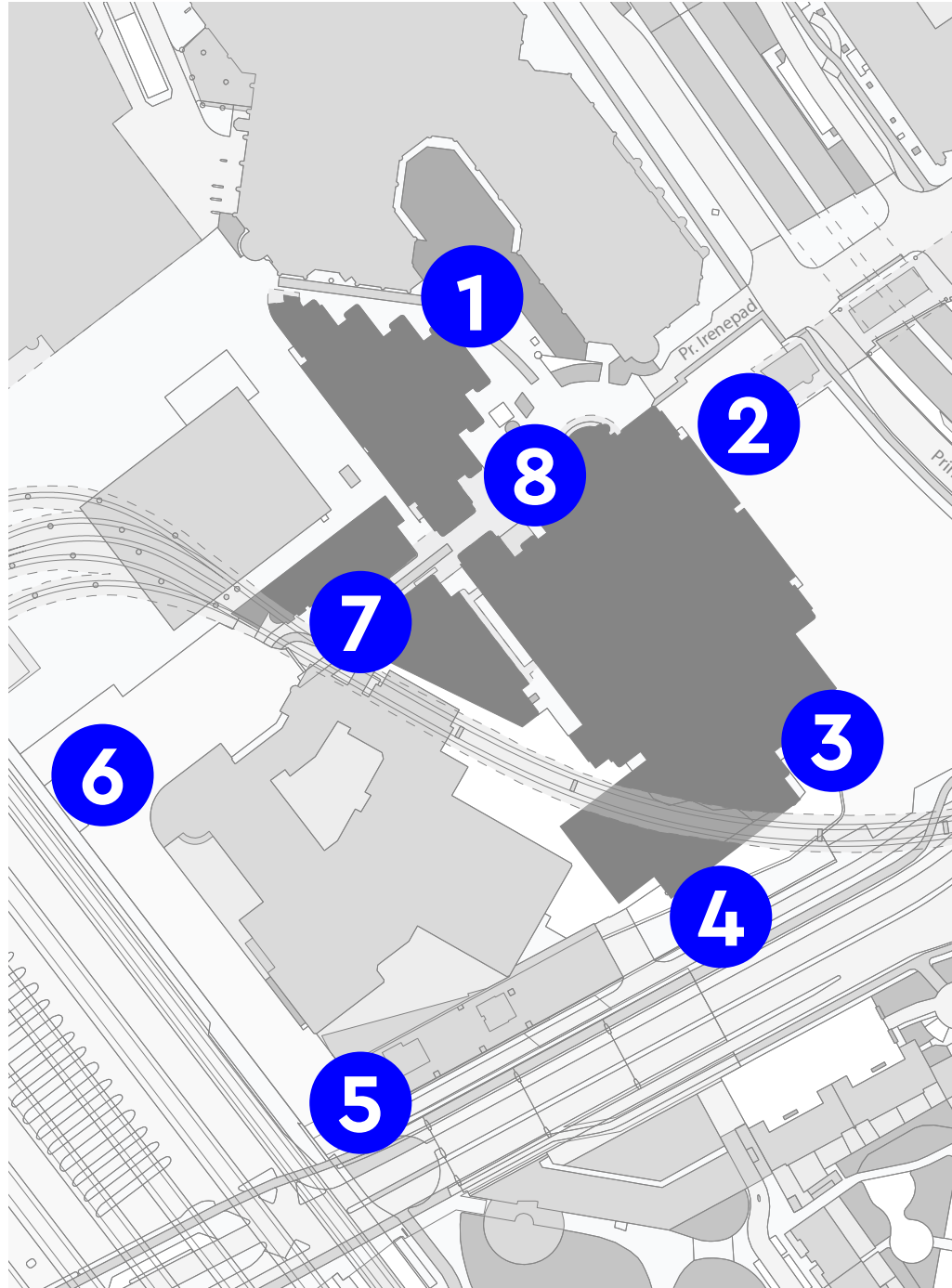
**IMAGE 32**  
*Kb current form (own image)*



**IMAGE 35**  
*KB Courtyard (own image)*

**WEEK 13**

*sound measurement KB*



**IMAGE 36**  
KB with measurement spots  
(own image)



**IMAGE 37**  
Spots 1 to 8 (own image)

**WEEK 14**  
*sun studies*  
*courtyard studies*

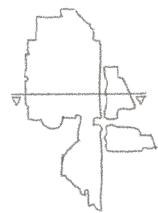


IMAGE 38  
straight courtyard (own image)

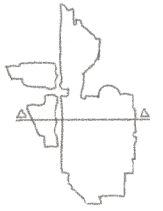


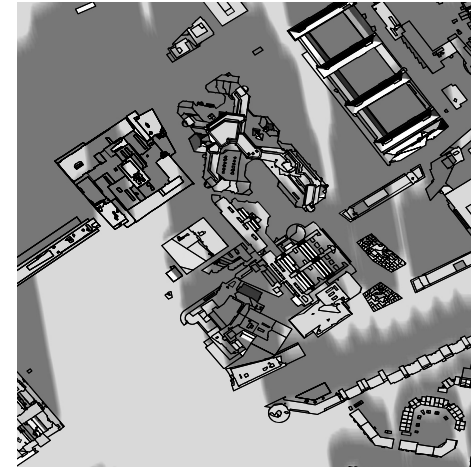
IMAGE 39  
stepped courtyard (own image)



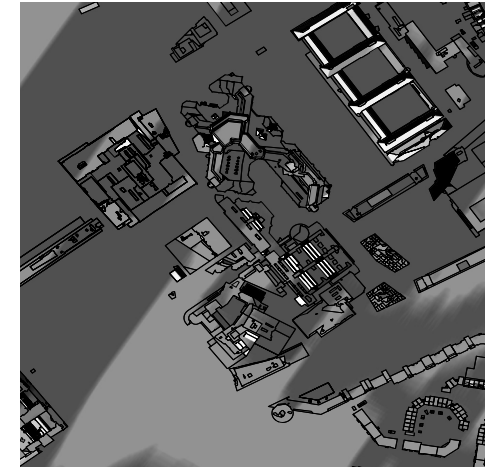
JUNE 21<sup>st</sup> morning 09:00



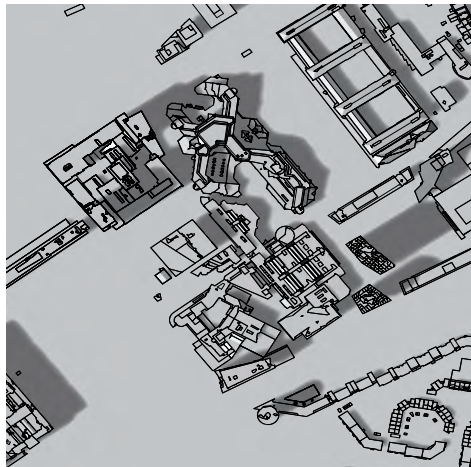
JUNE 21<sup>st</sup> midday 12:00



DECEMBER 21<sup>st</sup> midday 12:00



DECEMBER 21<sup>st</sup> mid afternoon 15:00



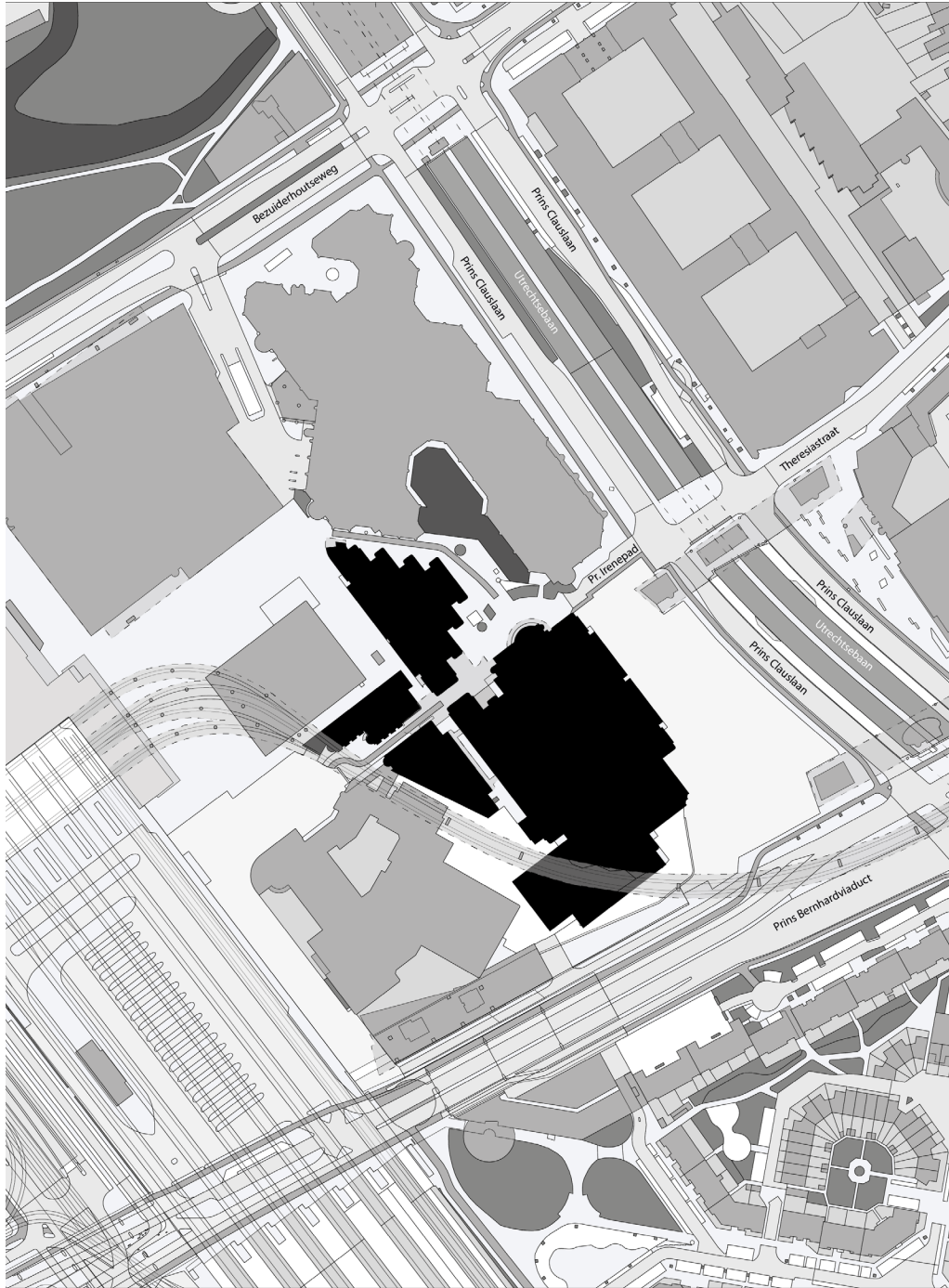
JUNE 21<sup>st</sup> mid afternoon 15:00



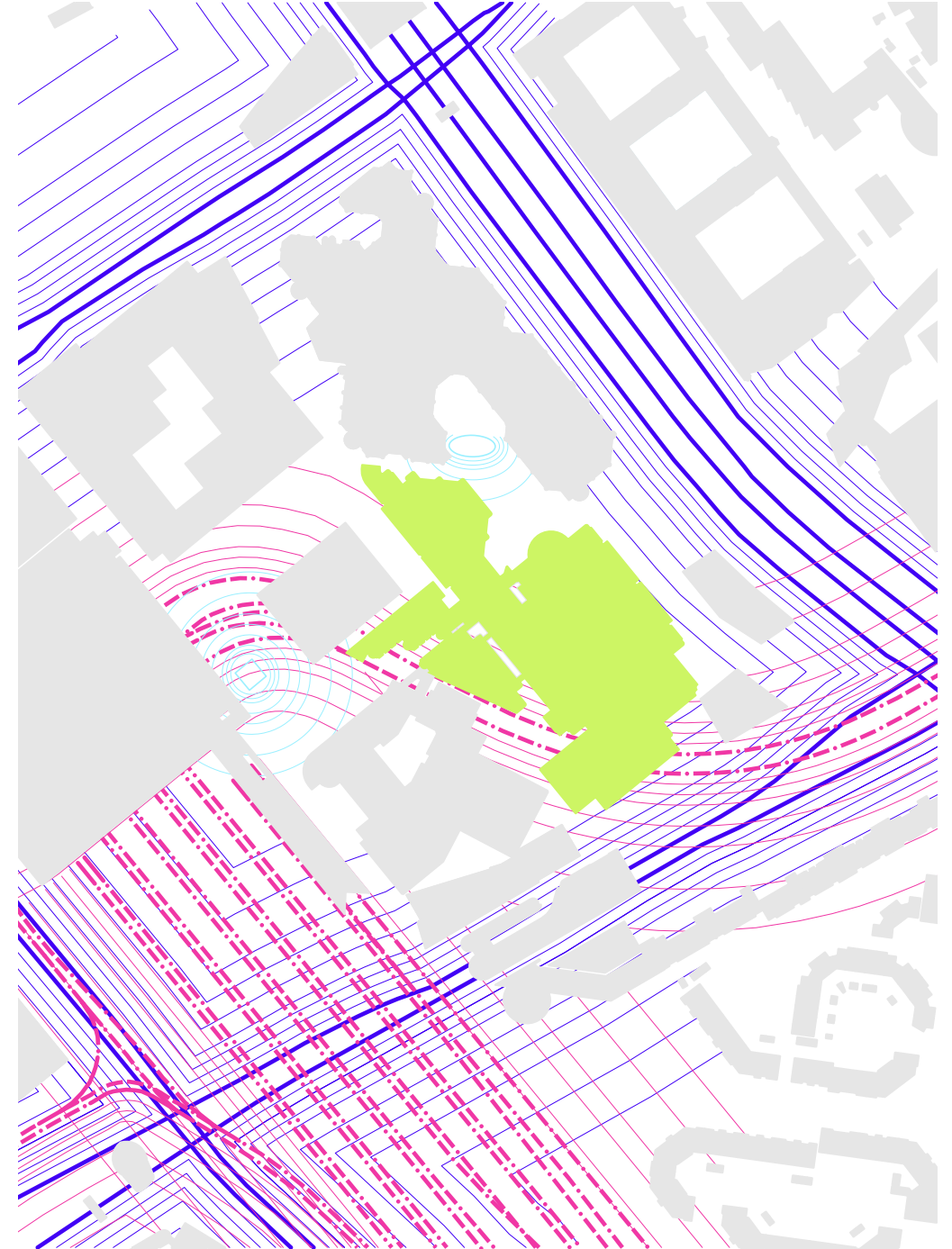
JUNE 21<sup>st</sup> late afternoon 18:00

**IMAGE 40**  
*sun studies (own image)*

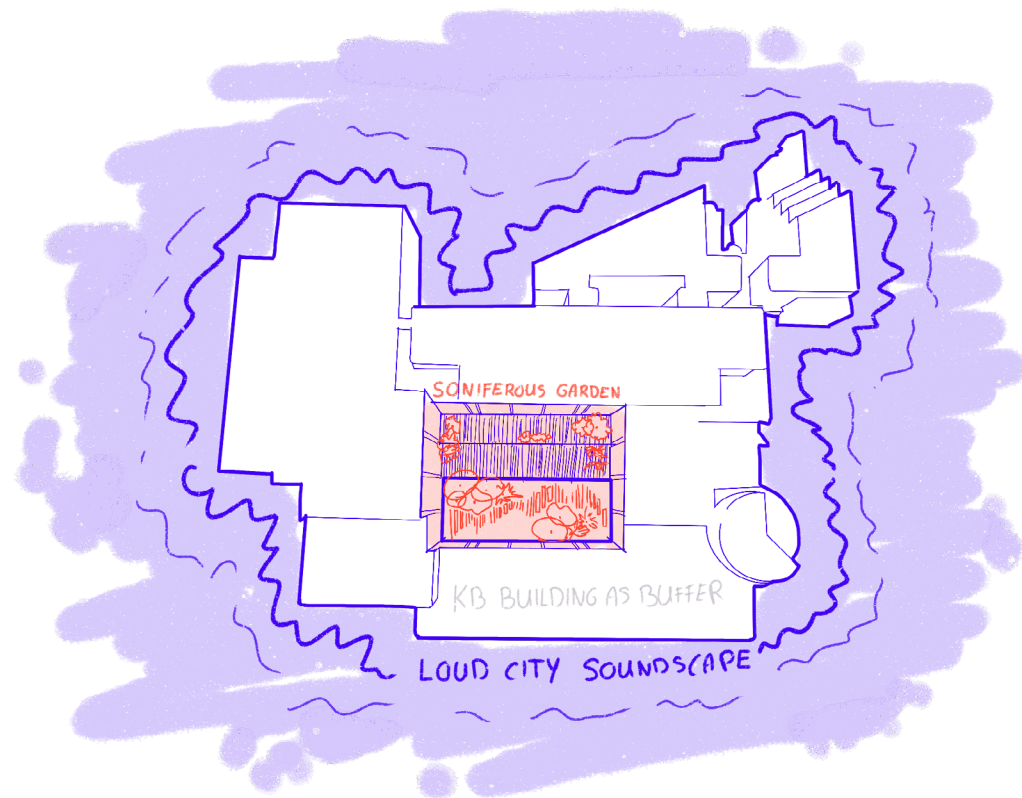
**WEEK 15-17**  
*sound mapping*  
*design concept*



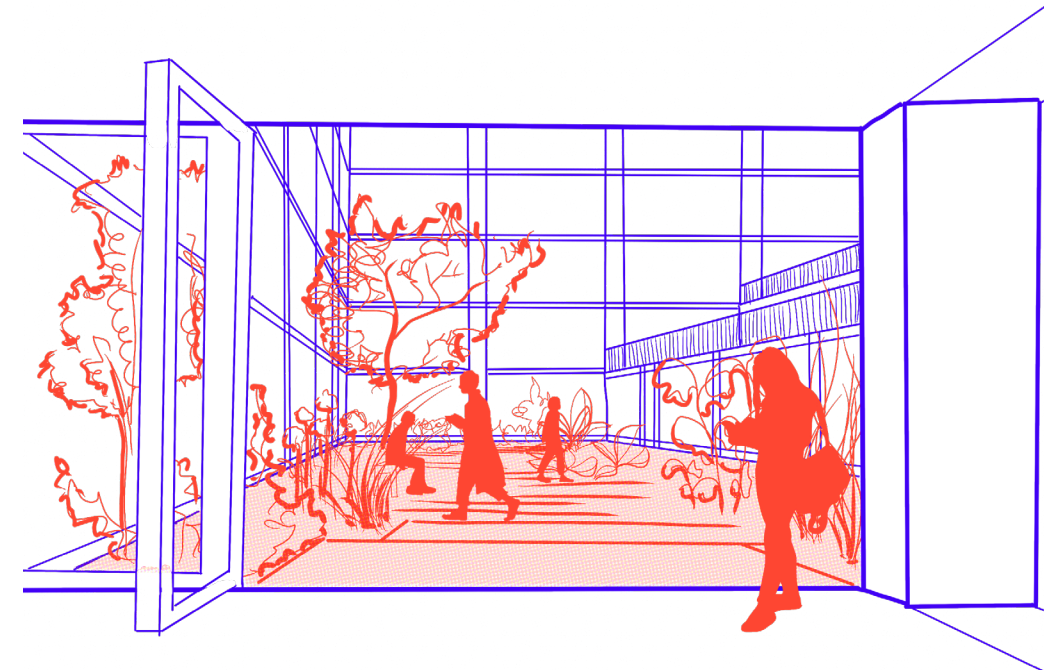
**IMAGE 41**  
*urban environment (own image)*



**IMAGE 42**  
*sound map (own image)*

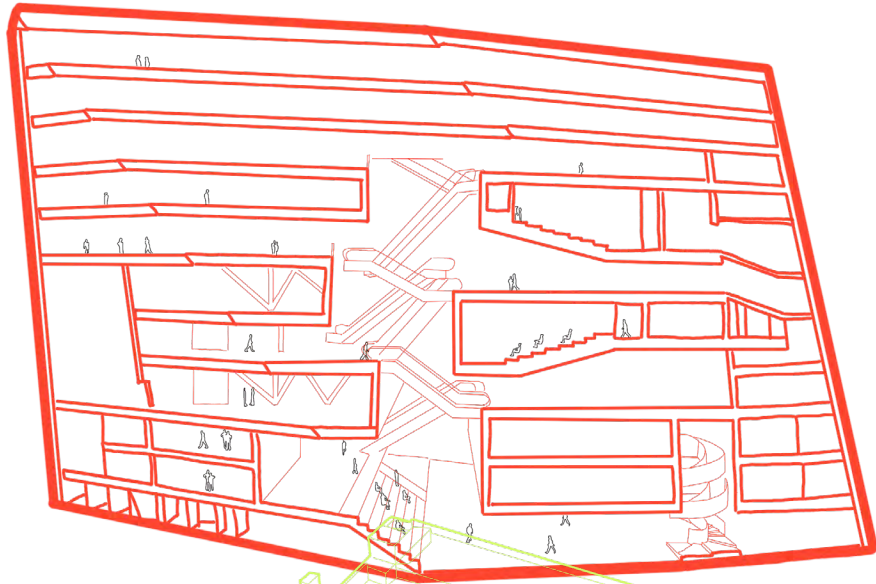


**IMAGE 43**  
*building as sound buffer (own image)*

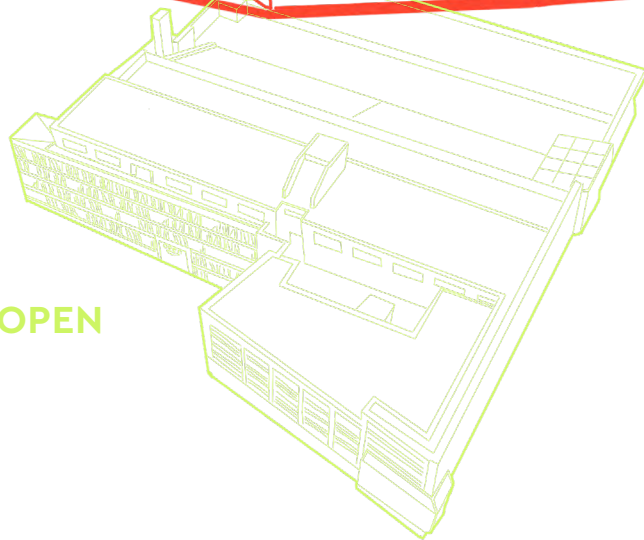


**IMAGE 44**  
*view into garden (own image)*

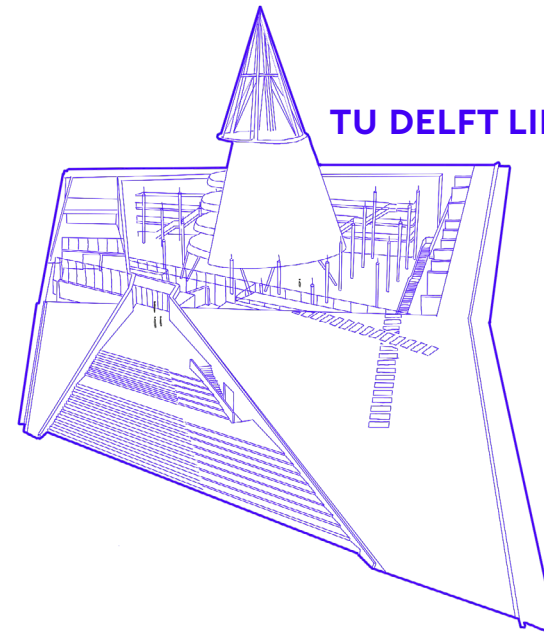
**FORUM GRONINGEN**



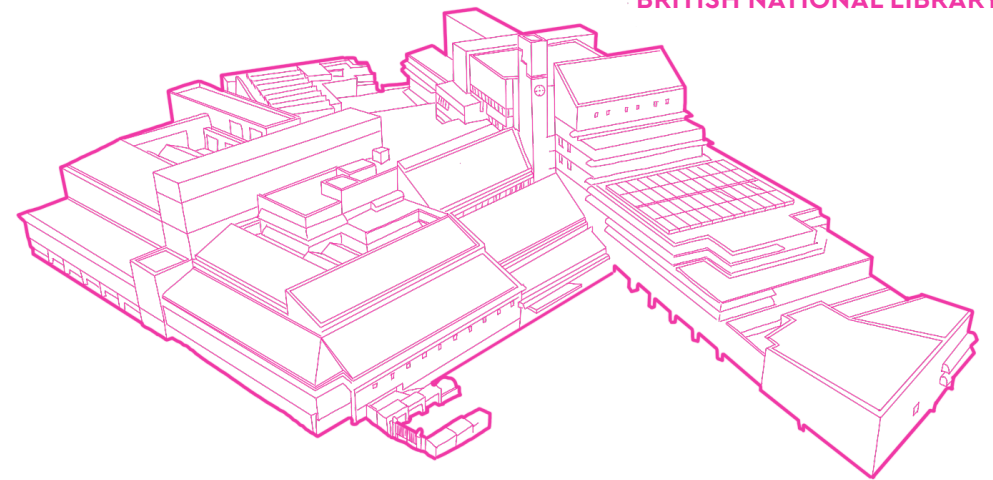
**DOK OPEN**



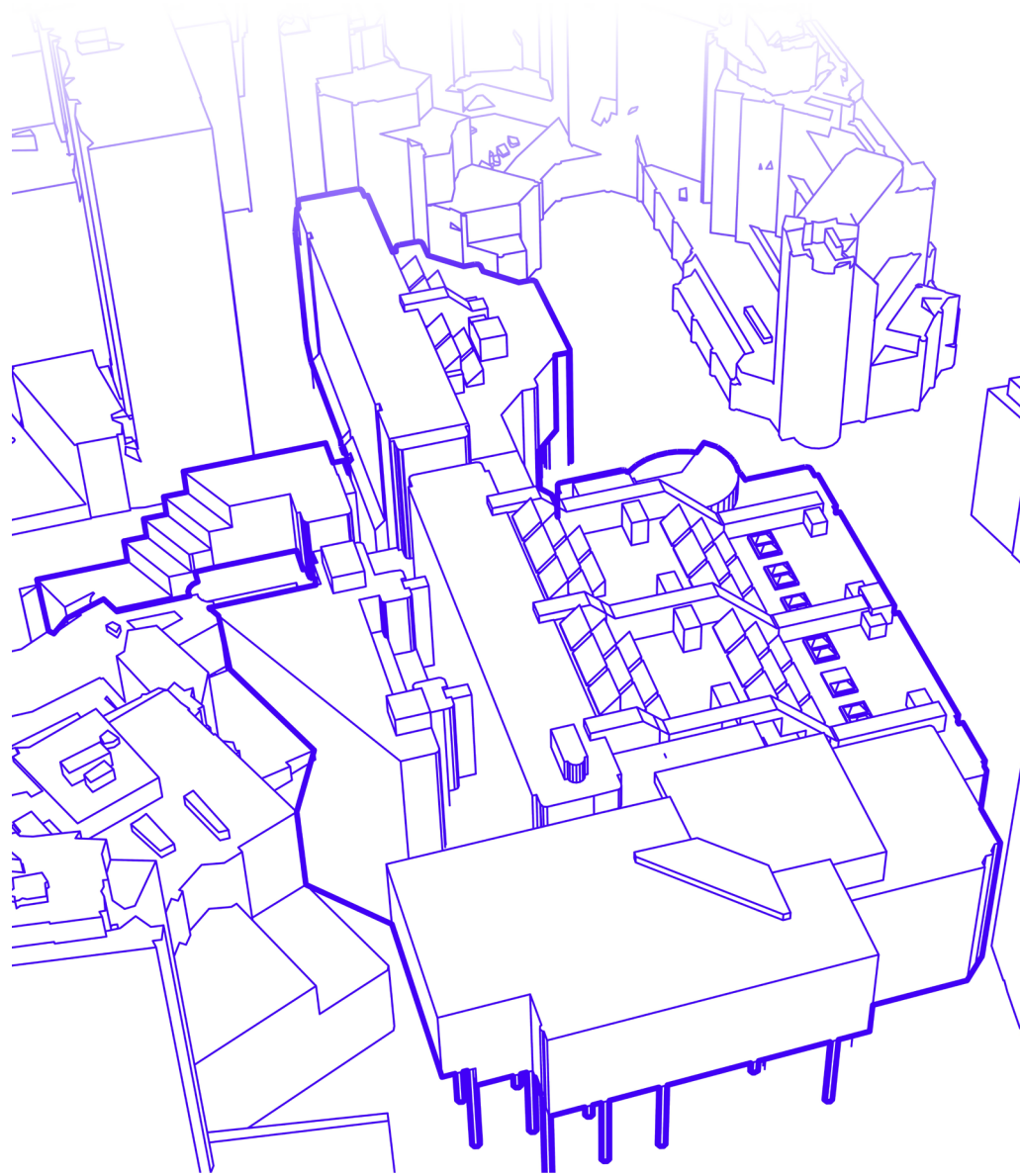
**TU DELFT LIBRARY**



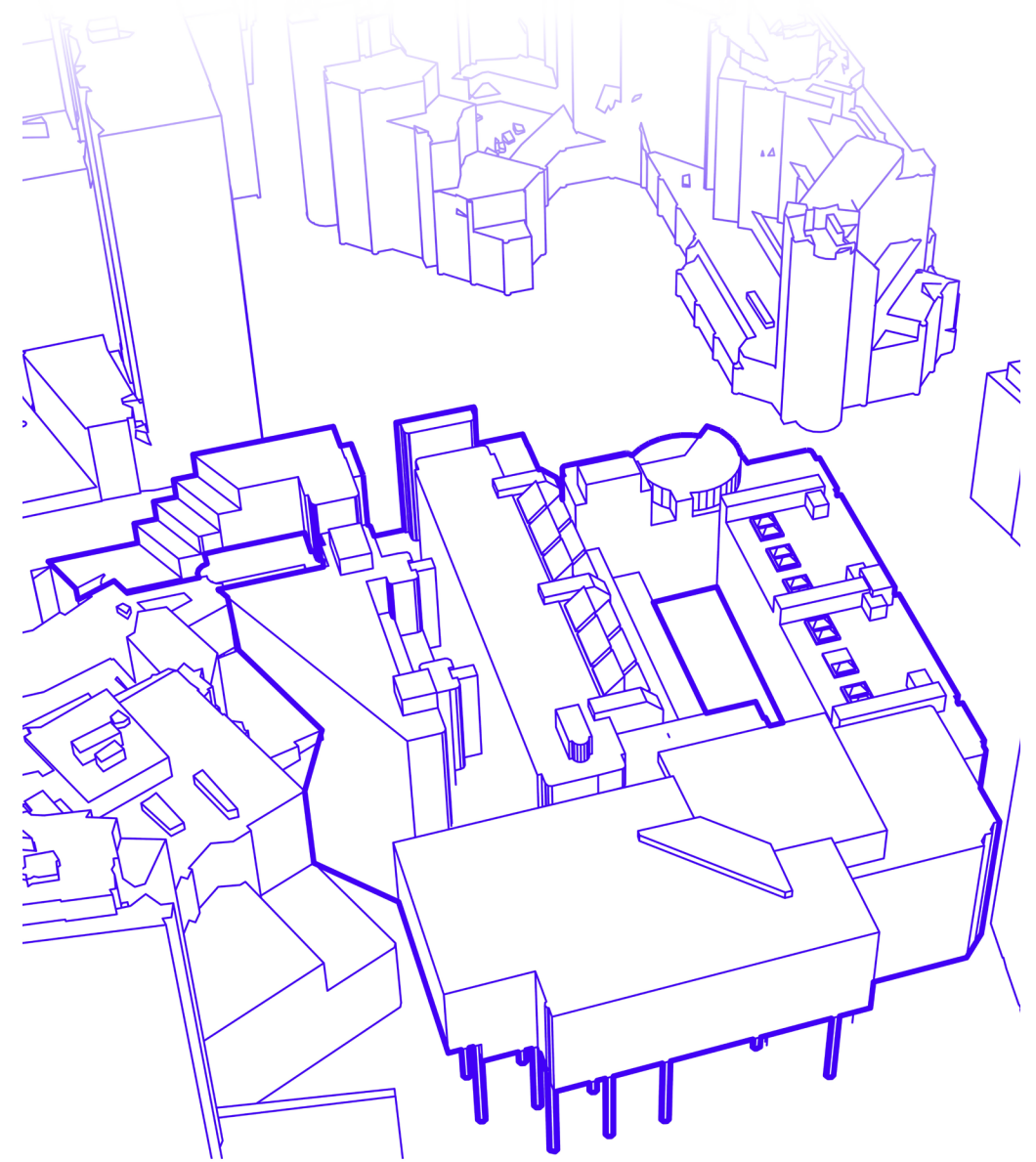
**BRITISH NATIONAL LIBRARY**



**IMAGE 45**  
case studies (own image)



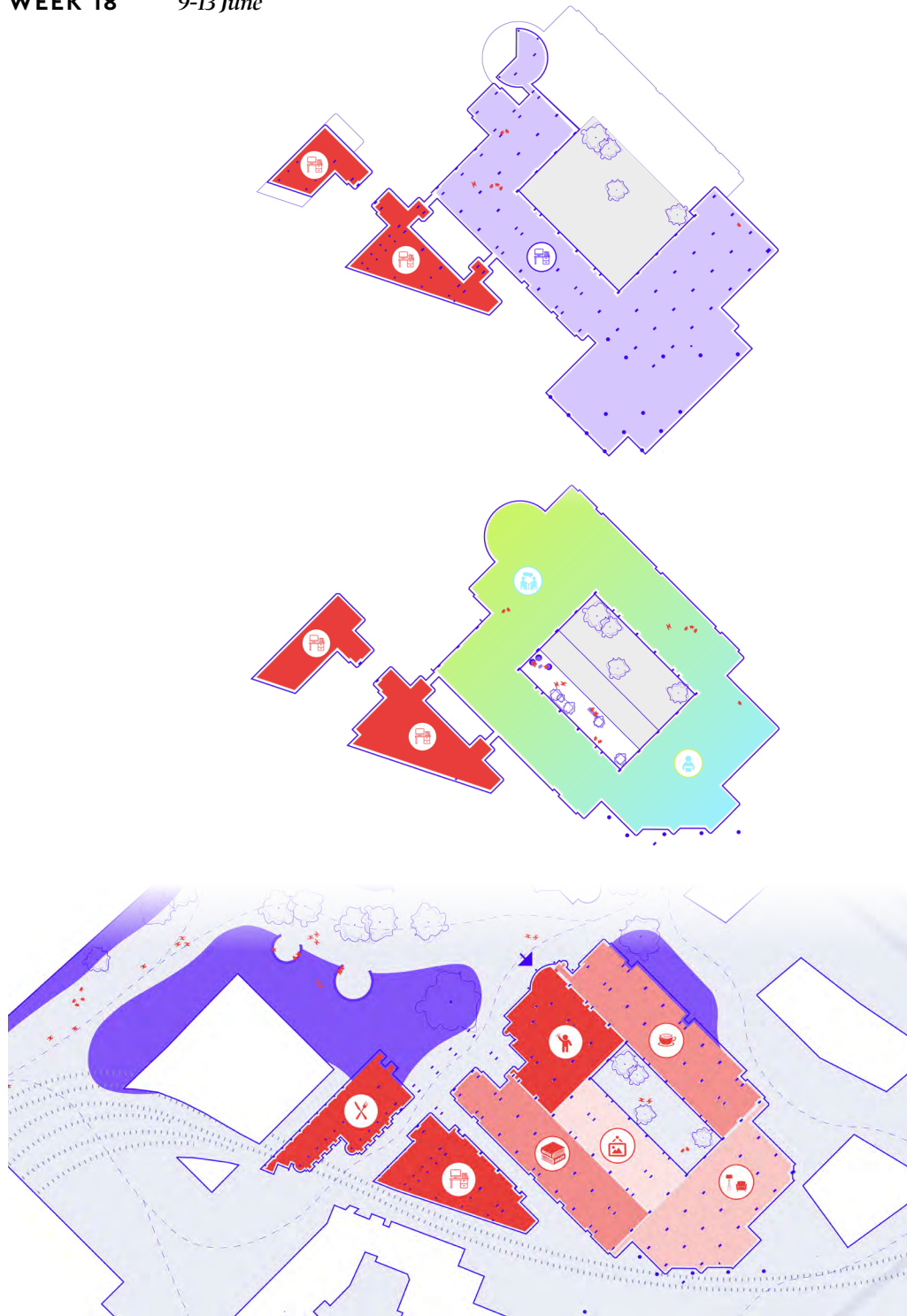
**IMAGE 46**  
*existing KB building (own image)*



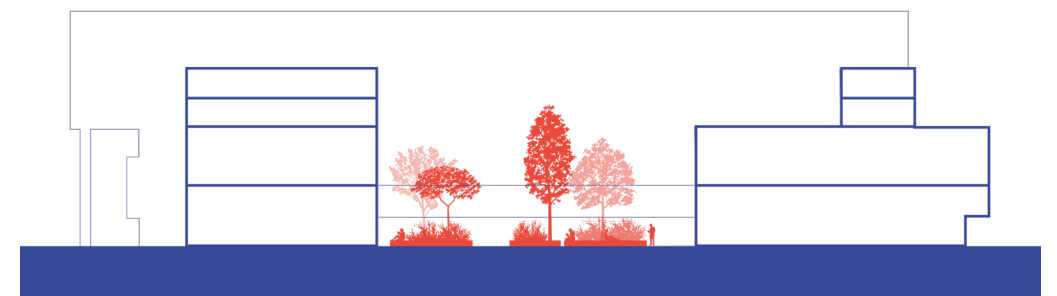
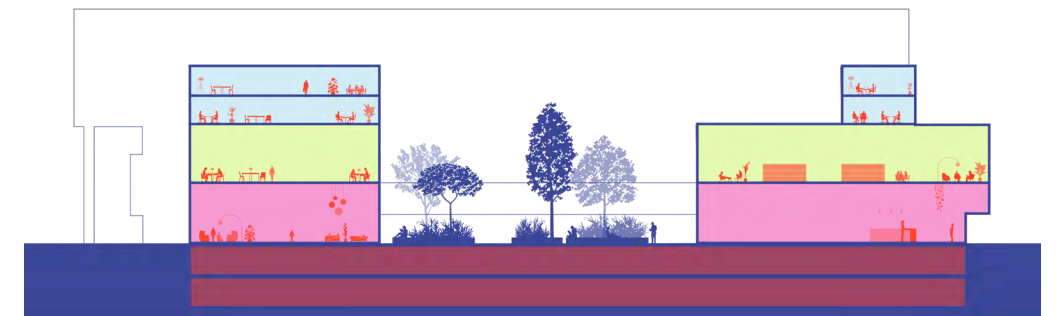
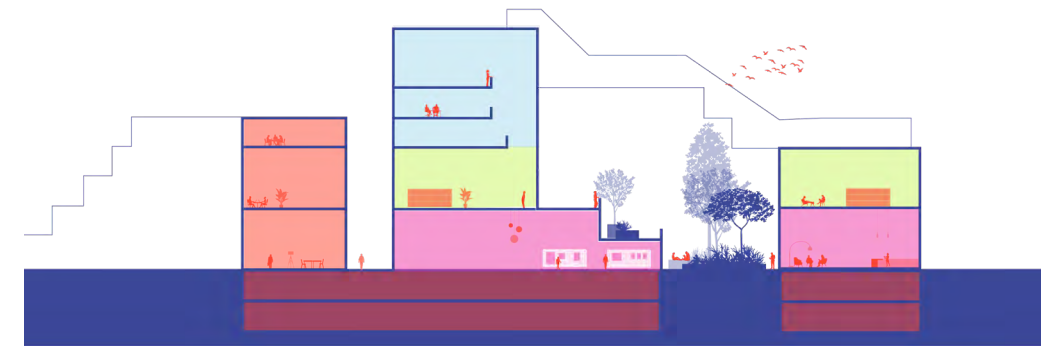
**IMAGE 47**  
*P2 proposal (own image)*

**WEEK 18**

*p2 presentation drawings*



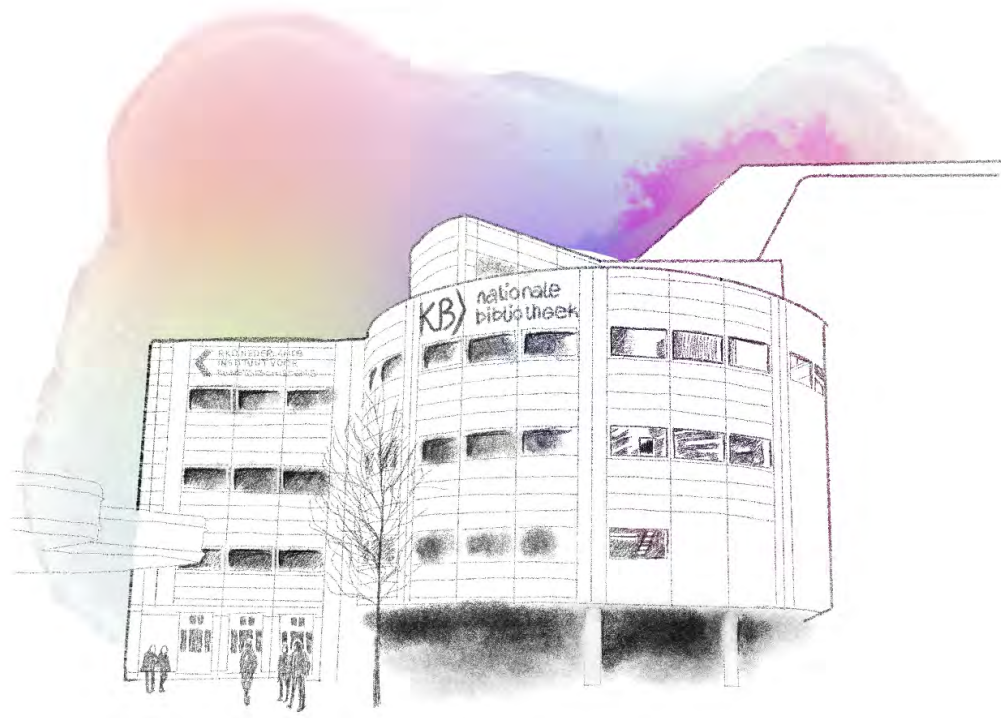
**IMAGE 48**  
*proposed floorplans of ground floor, second and fourth (own image)*



**IMAGE 49**  
*sections AA' and BB' (own image)*

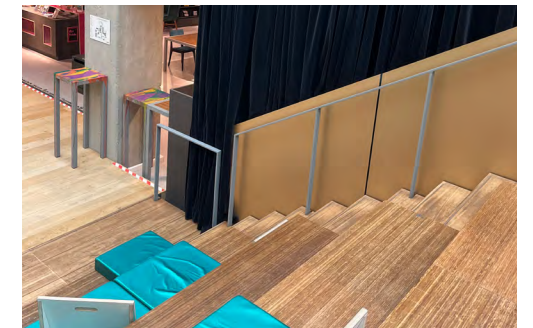
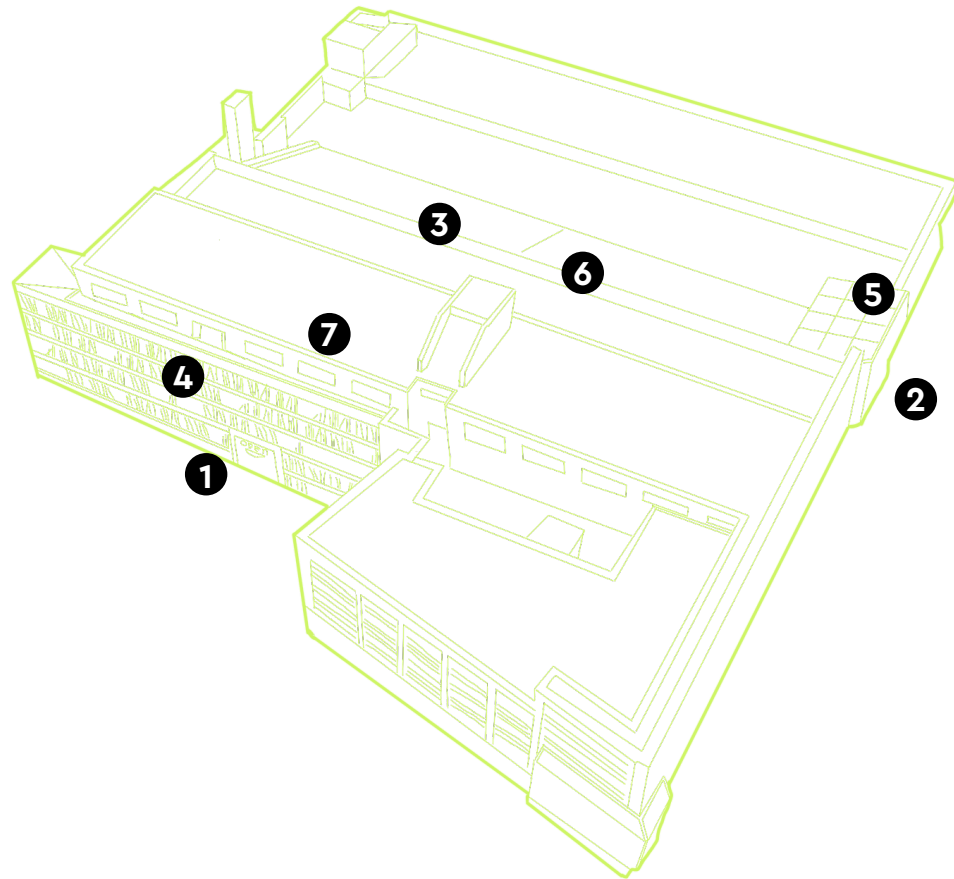


**IMAGE 50**  
*proposed facade (own image)*



WEEK 19-20  
*research*

**IMAGE 51**  
*KB entrance (own image)*



**IMAGE 52**  
*dok delft case study (own image)*

**SUMMER**

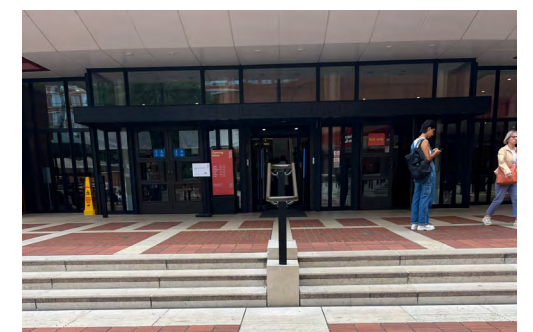
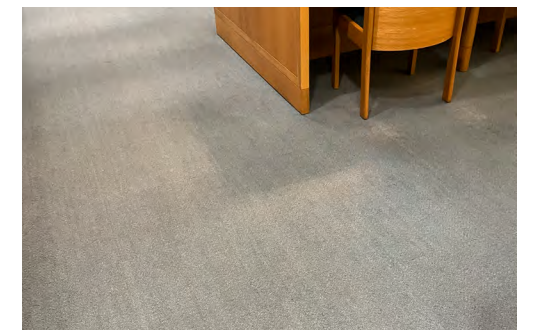
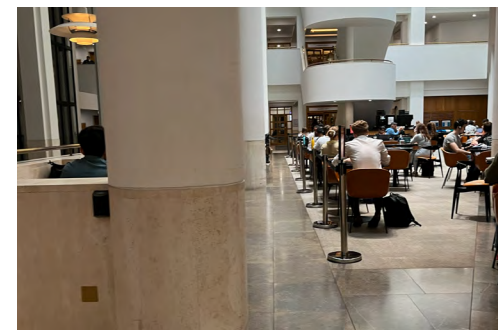
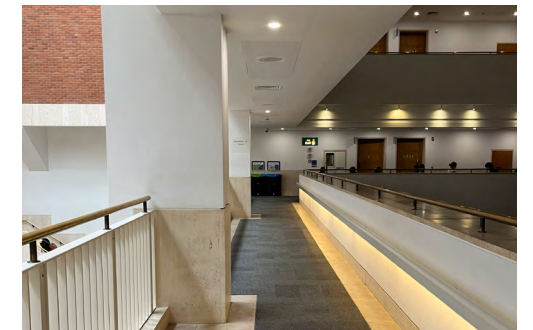
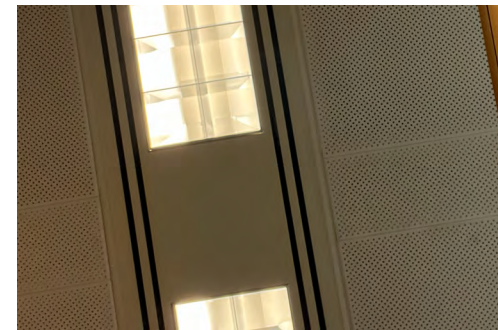
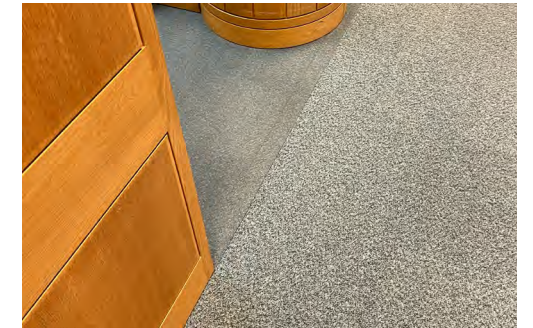
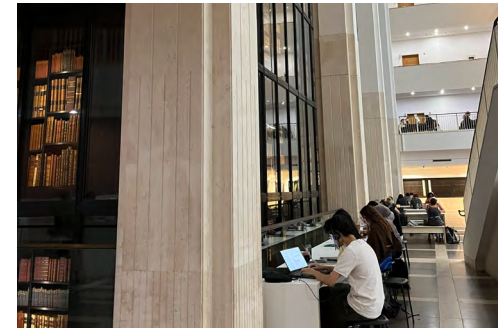
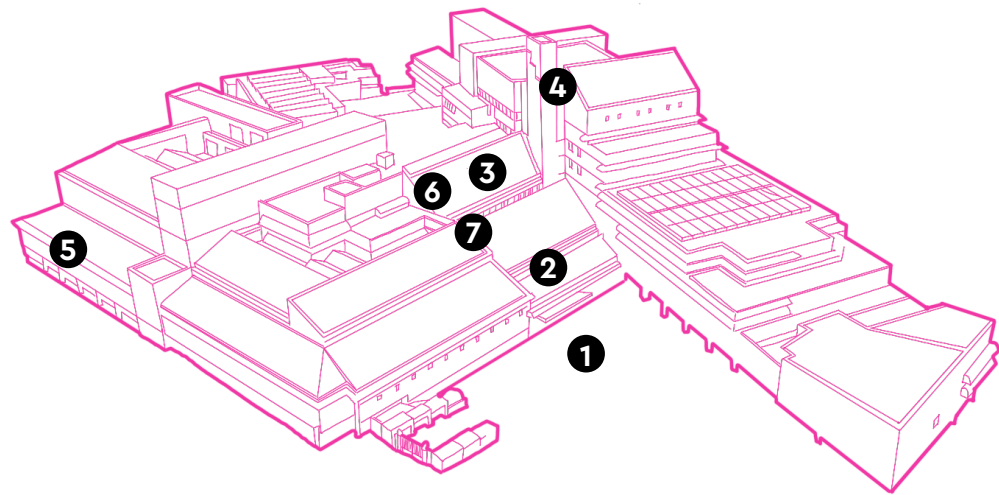
*british national library*



**IMAGE 53**  
*model of british national library*  
(own image)



**IMAGE 54**  
*section model of british national library*  
(own image)



**IMAGE 55**  
*british national library case study (own image)*

**WEEK 21**

*inventarisation summer  
findings*

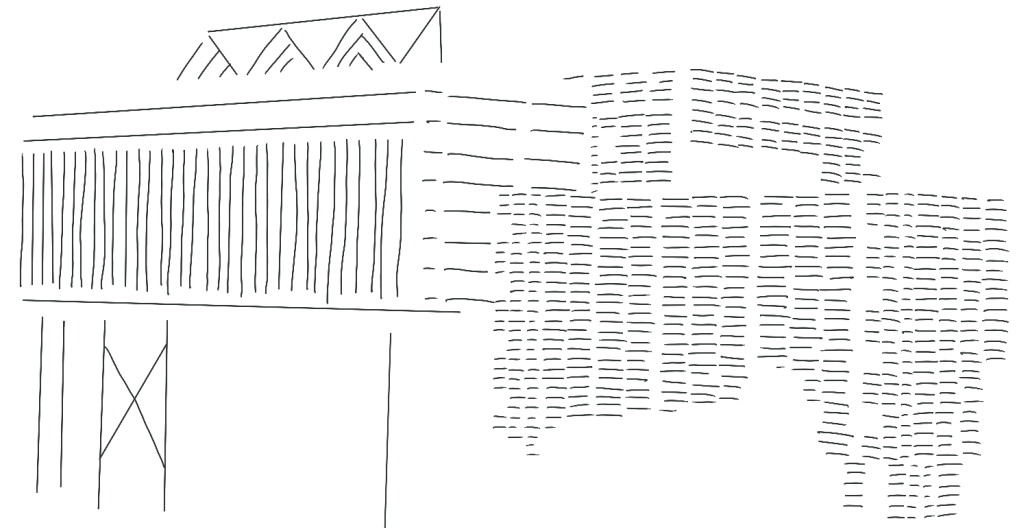


**IMAGE 56**  
*visited libraries (own image)*

- NATIONAL**  
National Library of Scotland (UK)  
National Library of England (UK)  
KB
- PUBLIC**  
DOK OPEN  
Forum Groningen  
Beleefbibliotheek Drachten  
OBA Oosterdok  
Openbare bibliotheek Rotterdam  
Public Library Inverness (UK)  
Public Library Edinburgh (UK)  
Stadtbibliothek Konstanz (DE)
- ACADEMIC**  
TU Delft Library  
The Long Room / Trinity College Library (IRL)



**IMAGE 57**  
*lines KB (own image)*

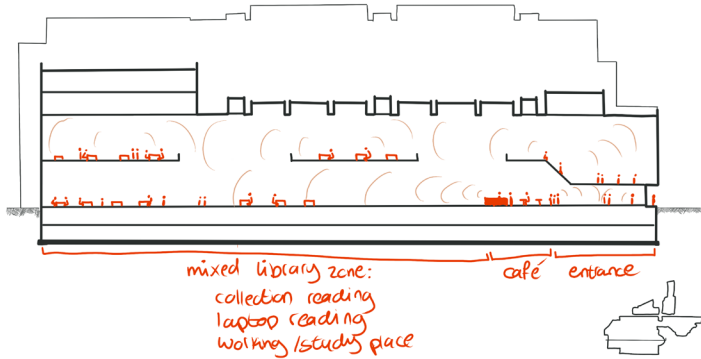


**IMAGE 58**  
*lines KB (own image)*

**WEEK 22**

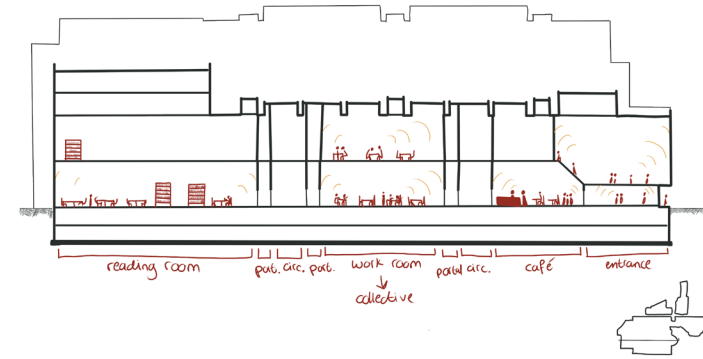
*research spatial acoustics*  
*interview patric cannon (dok architecten)*

OPEN PLAN



- reference for spatial design: Forum OBA
- + open character / welcoming
  - + allows daylight to come in
  - + big, high open spaces feel nice to be in (more air, luxurians)
  - unwanted noise carries to reading area (happened in Forum)
  - (special) books are not protected
    - ↳ was no problem in Forum / OBA since these are public libraries
  - many concrete floors will have to be demolished
  - many acoustic materials will have to be added

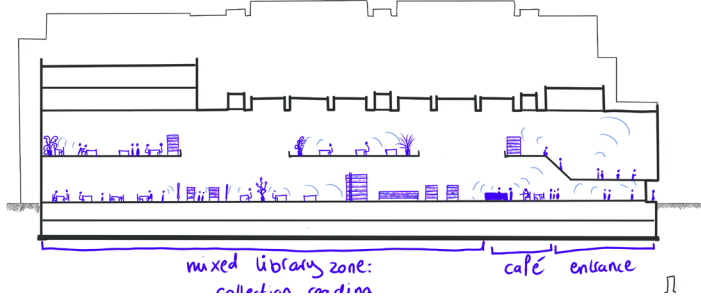
HEAVILY SEPERATED



- reference for spatial design: BNL SNL
- + books are kept very safe (both from thieves and daylight)
  - + sounds are kept within spaces (very quiet)
  - + less floors demolished
  - + not much acoustic materials needed
  - no connection to rest of building / floors
  - dark rooms - little daylight
  - very fixed layout
  - difficult wayfinding

OPEN PLAN

transition loud-quiet with furniture



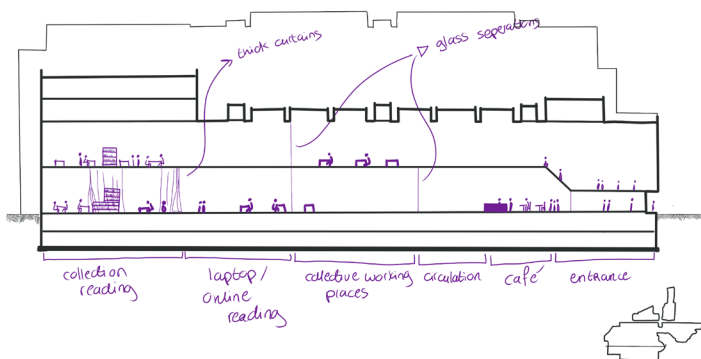
- reference for spatial design: DOK Beletfabriek
- + open character / welcoming
  - + allows daylight to come in
  - + big, high open spaces feel nice to be in (more air, luxurians)
  - + spaces are flexible, defined by bookcases, planters or (moveable) acoustic panels
  - noise will not be blocked well enough
  - lots of concrete will have to be demolished

SEPERATE BUILDINGS



- reference for spatial design: UVA Paquebisha Esp.
- + lots of daylight in the buildings
  - + sounds are kept within spaces / functions don't disturb each other
  - + clearly divided functions, helps with way finding
  - + not much acoustic materials needed
  - lots of demolition needed
  - very fixed spaces / buildings
  - have to go outside from one building to another
  - more facade needed
  - more heat loss due to more facade

LIGHTLY SEPERATED



- reference for spatial design: TU Delft Locthal
- + open character (glass separations)
  - + books can be kept safe (more)
  - + glass walls muffle noise
  - + less floors demolished
  - no connection to other floors
  - less daylight in middle parts (even though glass still lets through some)

IMAGE 59 spatial acoustics (own image)



A CLASSIC LIBRARY  
Soundlevels: 35-45 dB



CAFÉ  
Soundlevels: 55-65 dB



A FUTURE LIBRARY  
Soundlevels: 40-50 dB



RESTAURANT  
Soundlevels: 55-65 dB

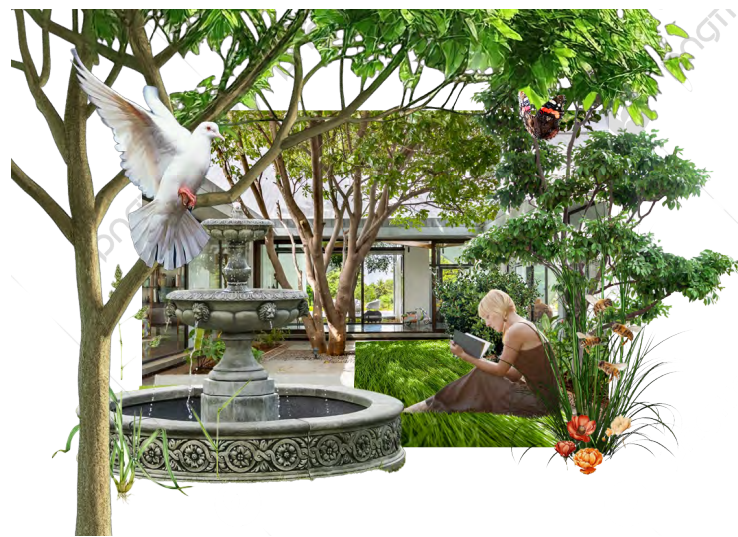
IMAGE 60  
soundscape typologies (own image)



SURROUNDING CITY  
Soundlevels: 60-70 dB



OFFICE  
Soundlevels: 45-55 dB



SECLUDED GARDEN  
Soundlevels: 40-50 dB



AUDIO EXPOSITION  
Soundlevels: 45-65 dB

IMAGE 60  
soundscape typologies (own image)

## MEDIATHEEK DELFT

INTERVIEW MET PATRICK CANNON (PARTNER DOK ARCHITECTEN)

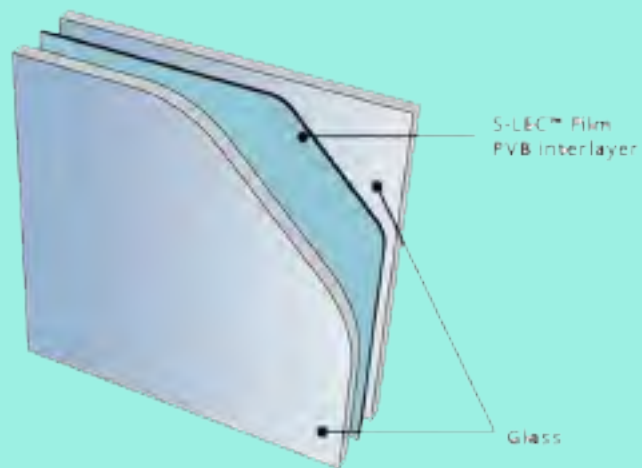
### AKOESTIEK IS GELAAGD

Technische oplossingen moeten worden gecombineerd met inrichting en programmatische keuzes.

### TECHNISCH

Toepassen van geluiddempende materialen op verschillende lagen:

- akoestische plafondplaten (aluminium platen)
- PVB-film (polyvinyl butyral folie) in ramen (om geluid harde regenval te dempen dakraam, houdt straling zon deels tegen)

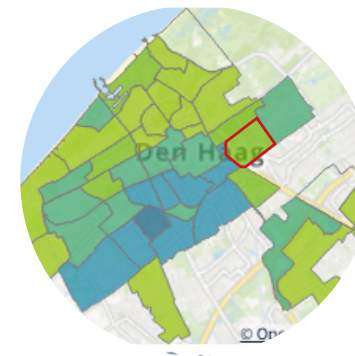


### IMAGE 61

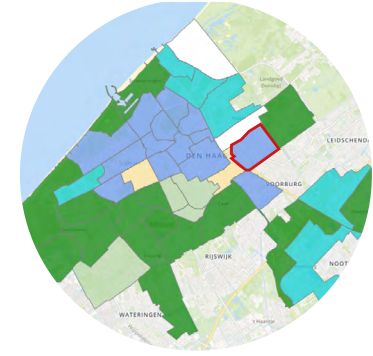
sound absorbing glass ([www.s-lecfilm.com/nl/PVB-interlayer/](http://www.s-lecfilm.com/nl/PVB-interlayer/))

WEEK 22  
planning  
interview aat vos (includi)

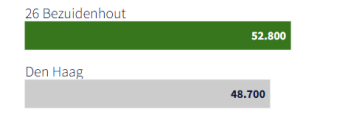
Week Number	Dates	Discipline	Theme	Products
21	1-9-2025	Research	Sound	(updated) research report + group report + map libraries visited
22	8-9-2025	Research, Architecture, BT	Sound	Acoustic strategies in section + Defining Soundscape Types + Interview DOK Architecten Mediatheek Delft + Interview Aat Vos (Includi)
23	15-9-2025	Architecture, BT	Sound, Building Volume	Atrium/courtyard sketches + sketch model current building + defining heritage values
24	22-9-2025	Architecture, BT	Urban, Interior Soundscape	Variants building masterplan in surroundings + variants zoning in library part + circulation in building
25	29-9-2025	Architecture, BT	Facade, Interior Soundscape	Variants facades + variants transitions between zones
26	6-10-2025	Architecture, BT	Urban, Interior Soundscape	Start Presentation
27	13-10-2025	Architecture, BT	Urban, Interior Soundscape	Floorplan Groundfloor, Sketch model Courtyard/atrium
28	20-10-2025	Architecture, BT	Urban, Interior Soundscape	Continue with presentation
29	27-10-2025		P3	Presentation + Sketch Model
30	3-11-2025			
31	10-11-2025			
32	17-11-2025			
33	24-11-2025			
34	1-12-2025		P4?	Presentation + Posters + Sketch Models
35	8-12-2025		P4?	Presentation + Posters + Sketch Models
36	15-12-2025			
	22-12-2025			
	29-12-2025			
37	5-1-2026		test P5	
38	12-1-2026		P5	Presentation + Posters + Final Models
39	19-1-2026			
40	26-1-2026			



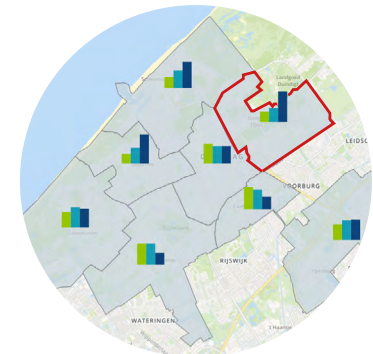
AVERAGE DISPOSABLE INCOME  
source: denhaagincijfers.nl



POLITICAL VIEWS IN THE HAGUE  
source: denhaagincijfers.nl



AVERAGE DISPOSABLE INCOME  
source: denhaagincijfers.nl



POLITICAL VIEWS IN THE HAGUE  
source: denhaagincijfers.nl

IMAGE 62  
planning untill P3 (own image)

people of the hague  
IMAGE 63  
(denhaagincijfers.nl)

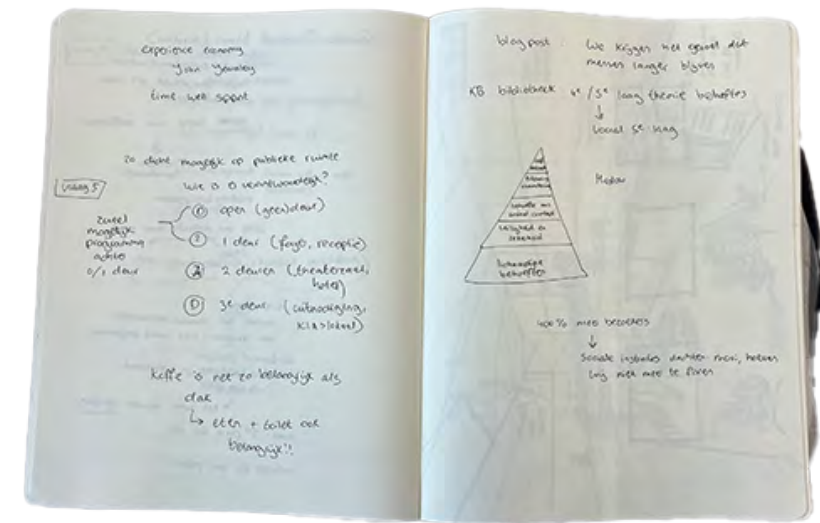
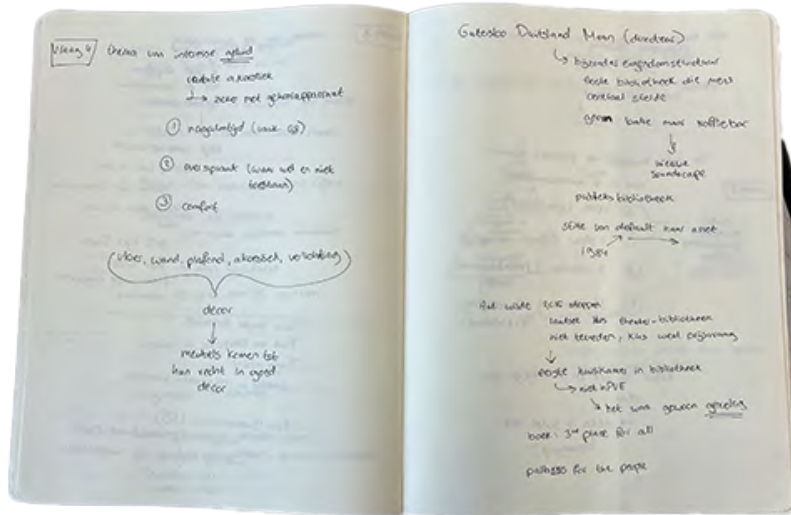
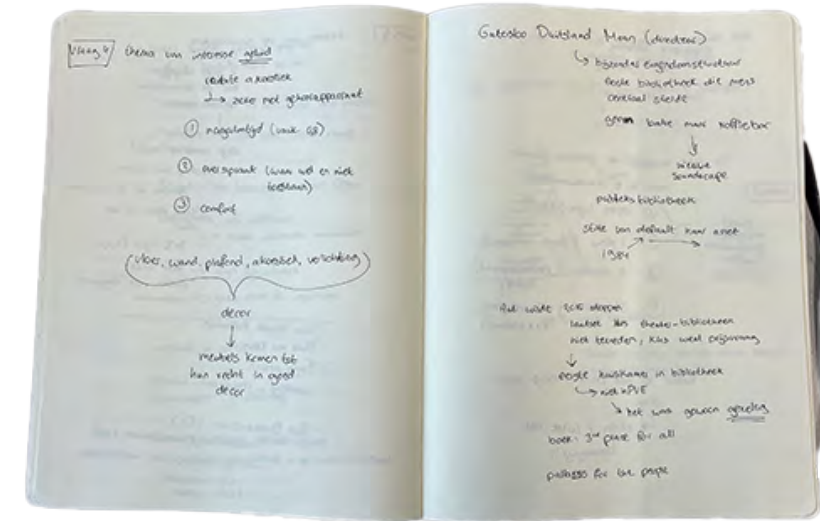
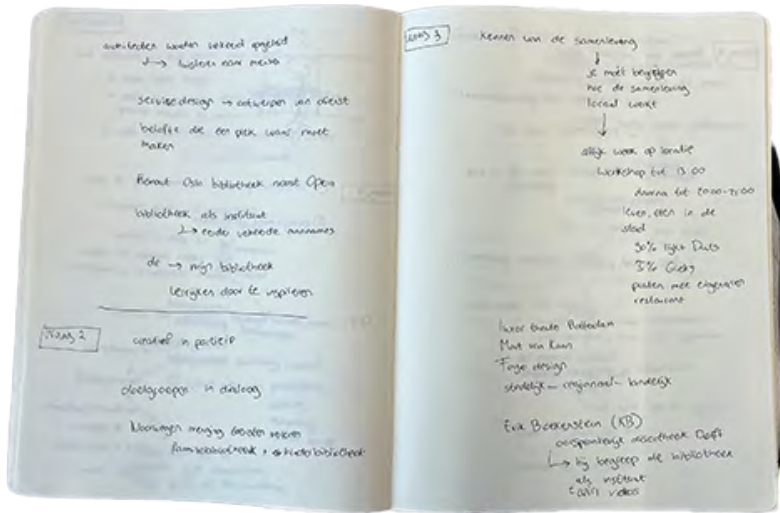
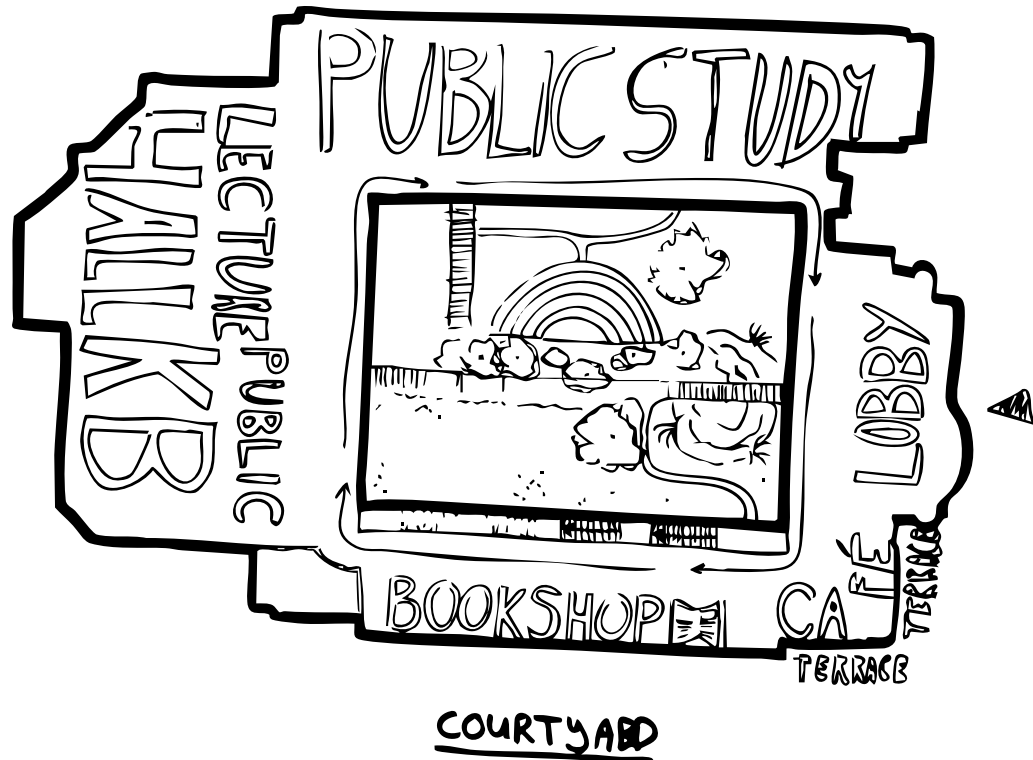
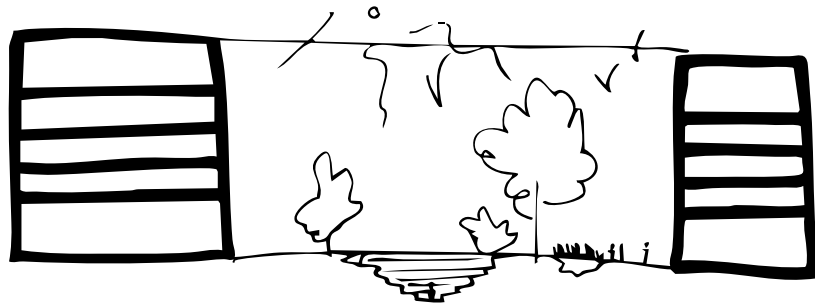


IMAGE 64 notes of interview (own images)

**WEEK 24**

*urban studies*

*building form studies*

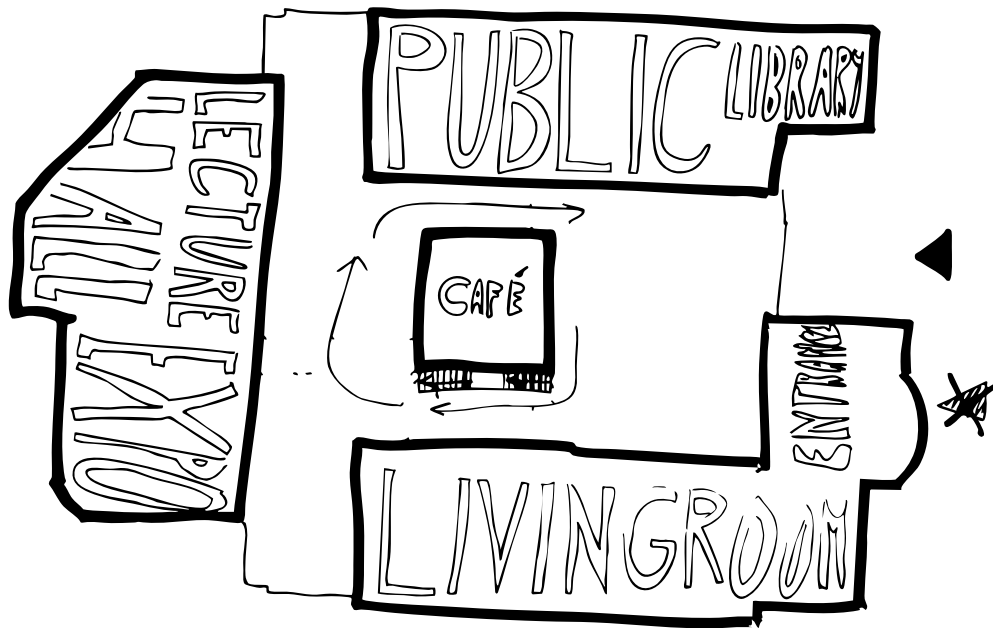
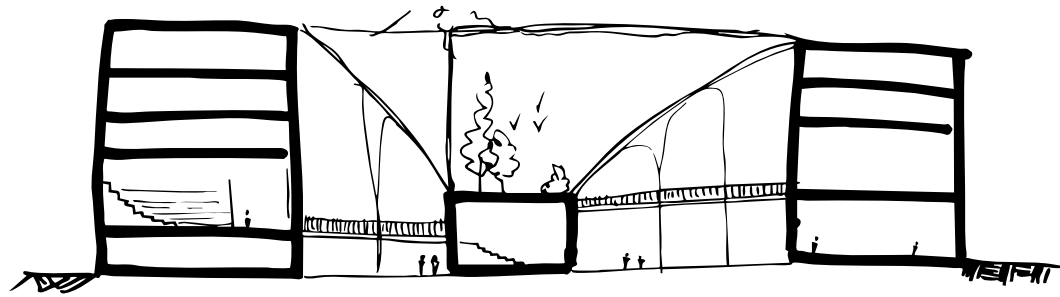


COURTYARD



Heritage Values	■ ■ ■ ■ □	Indoor atrium will disappear, facade can remain intact
Building Climate	■ ■ ■ ■ □	More facade in general which could cause heatloss, but new, high quality facade is built as well
CO2 Emissions	■ ■ ■ □ □	Floors will have to be demolished. However, using existing atrium can minimize this
Soundscape	■ ■ ■ ■ □	Strong inner-outer world idea for soundscape. Zones inside still need to be seperated.
Wayfinding	■ ■ ■ ■ ■	Courtyard will provide orientation throughout the library building
Daylight	■ ■ ■ ■ ■	Courtyard will provide daylight in building
Added Value	■ ■ ■ ■ □	Inner garden with its own soundscape, hideaway

IMAGE 65  
courtyard form study (own images)

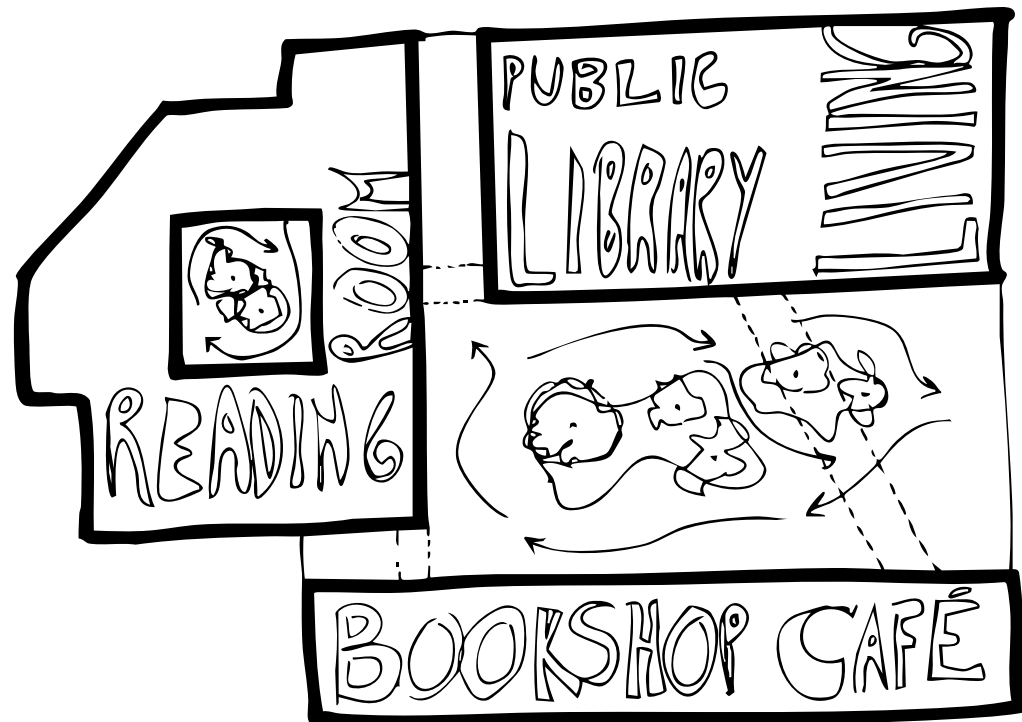
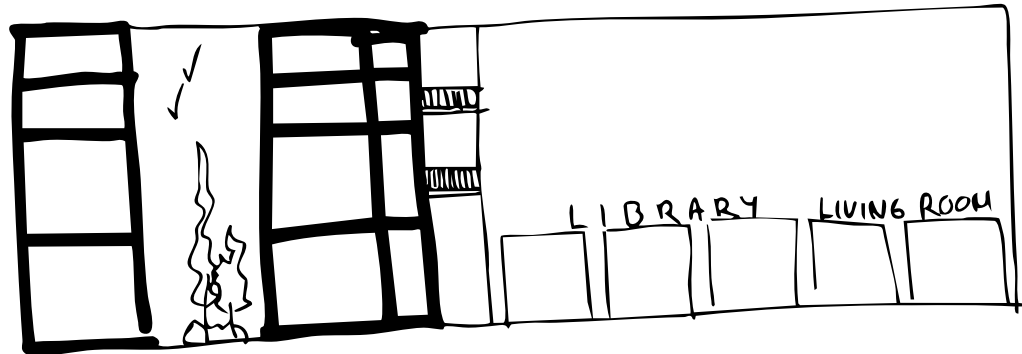


SEPERATION

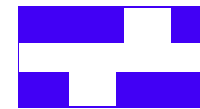


Heritage Values	■ ■ ■ □ □	Indoor atrium will dissapear, facade can remain somewhat intact. However, facade panels could be reused in new atrium 'street'
Building Climate	■ ■ ■ ■ ■	More facade in general which could cause heathloss, but new, high quality facade is built as well and big part of facade will be in atrium
CO2 Emissions	■ ■ □ □ □	Floors will have to be demolished. However, using existing atria can minimize this
Soundscape	■ ■ ■ ■ □	Strong inner-outer world idea for soundscape, zones are seperated, atrium needs attention in terms of materializaation for acoustics
Wayfinding	■ ■ ■ ■ ■	Atriumstreets will provide orientation throughout the library building
Daylight	■ ■ ■ ■ ■	Atriumstreets will provide daylight in building and
Added Value	■ ■ ■ ■ ■	Building as city concept, strong identities throughout building parts, inner world, new entrance

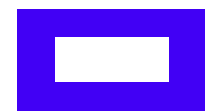
IMAGE 66  
seperation form study (own images)



SEPERATION



+  
COURTYARD



Heritage Values	■ ■ ■ □ □	Indoor atrium will dissapear, facade can remain somewhat intact. However, facade panels could be reused in new atrium 'square'
Building Climate	■ ■ ■ ■ ■	New, high quality facade is built well and big part of facade will be in atrium. However, atrium will need to be well designed.
CO2 Emissions	■ ■ □ □ □	Floors will have to be demolished. However, using existing atria can minimize this.
Soundscape	■ ■ ■ ■ □	Strong inner-outer world idea for soundscape, zones are seperated, atrium needs attention in terms of materializaation for acoustics
Wayfinding	■ ■ ■ ■ ■	Atriumstreets will provide orientation throughout the library building
Daylight	■ ■ ■ ■ ■	Atriumstreets will provide daylight in building and
Added Value	■ ■ ■ ■ ■	Building as city concept, strong identities throughout building parts, inner world, new entrance

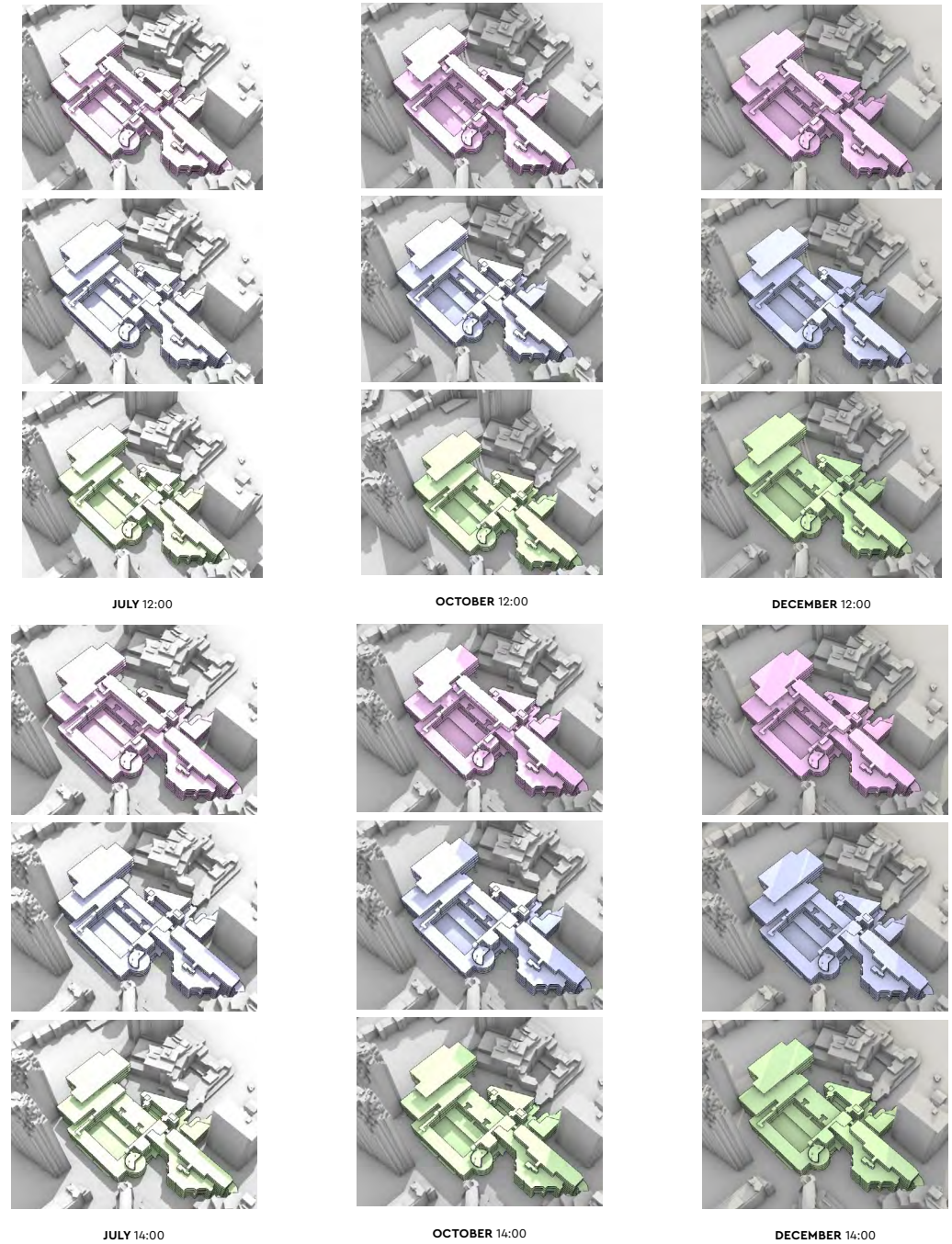
IMAGE 67  
seperation and courtyard form  
study (own images)

**WEEK 25**

*axo studies*  
*atrium studies*



**IMAGE 68**  
arrival problem identification  
(own images)



**IMAGE 69**  
sun studies on courtyard (own  
images)

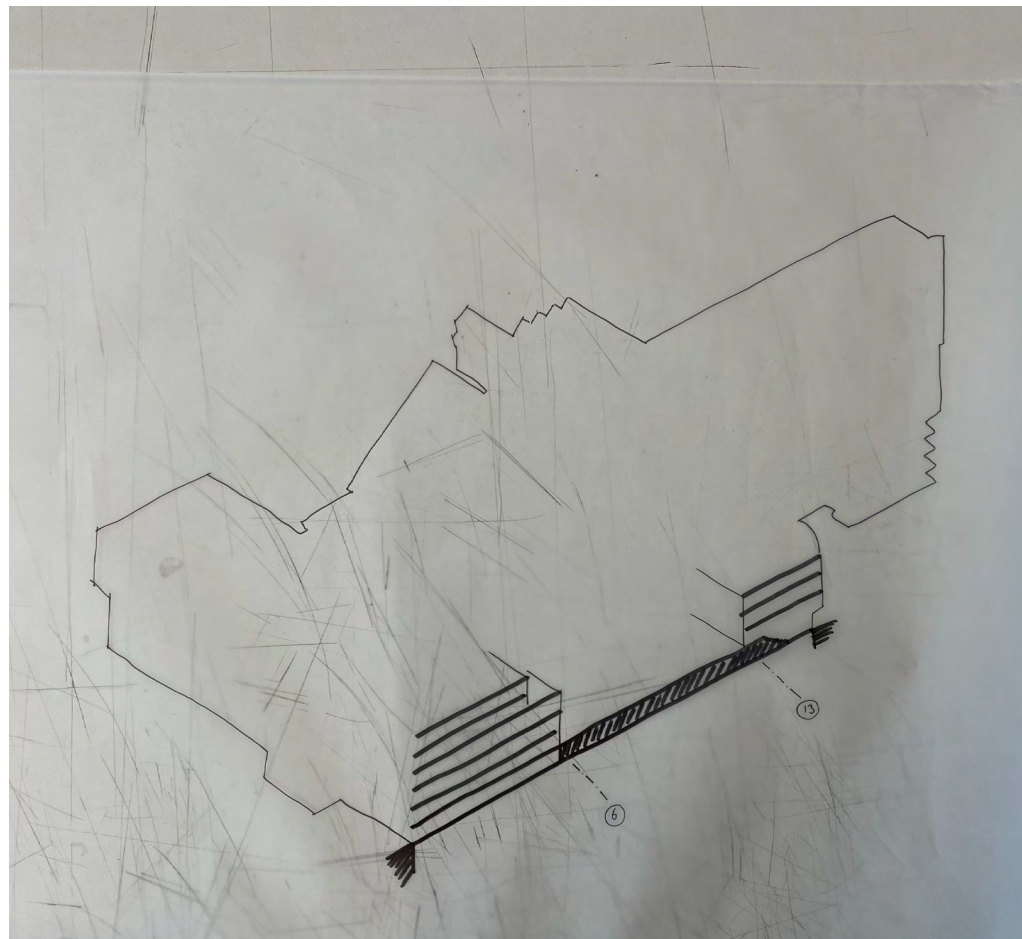
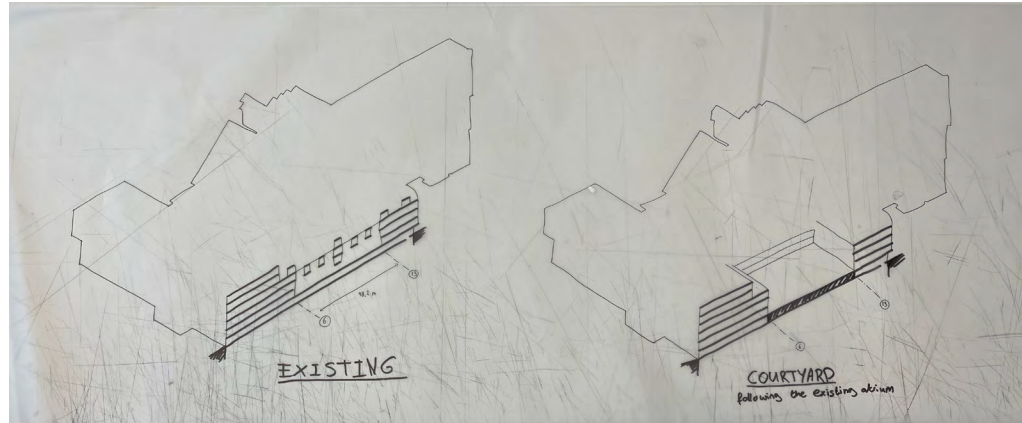


IMAGE 70  
atrium studies (own images)

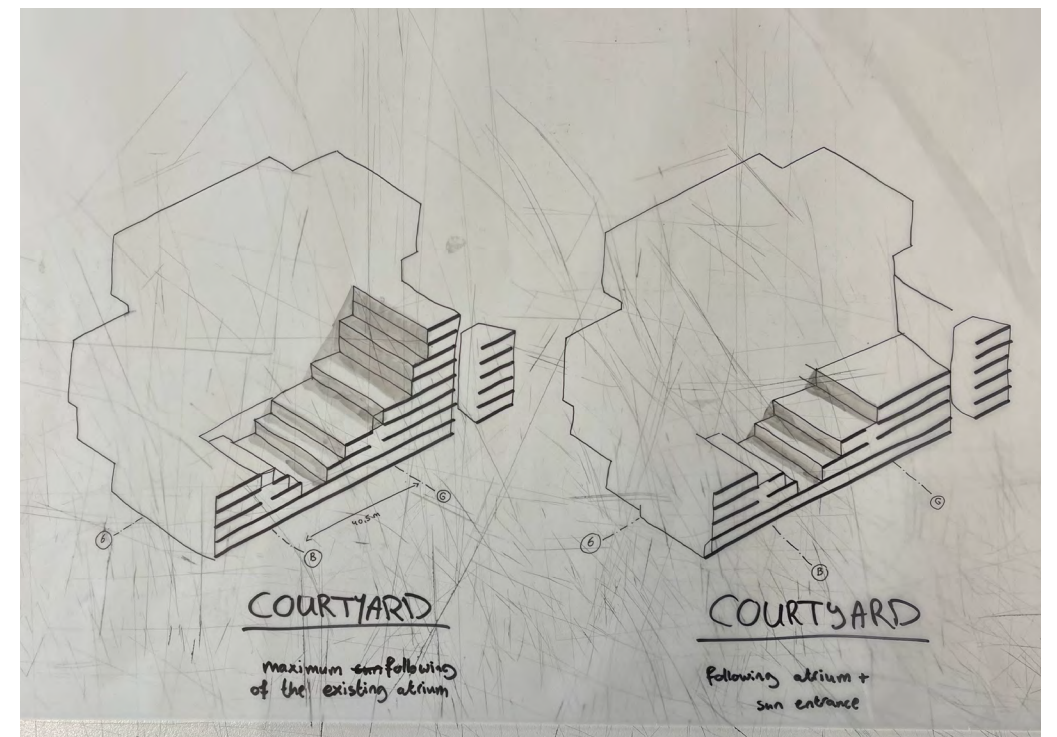
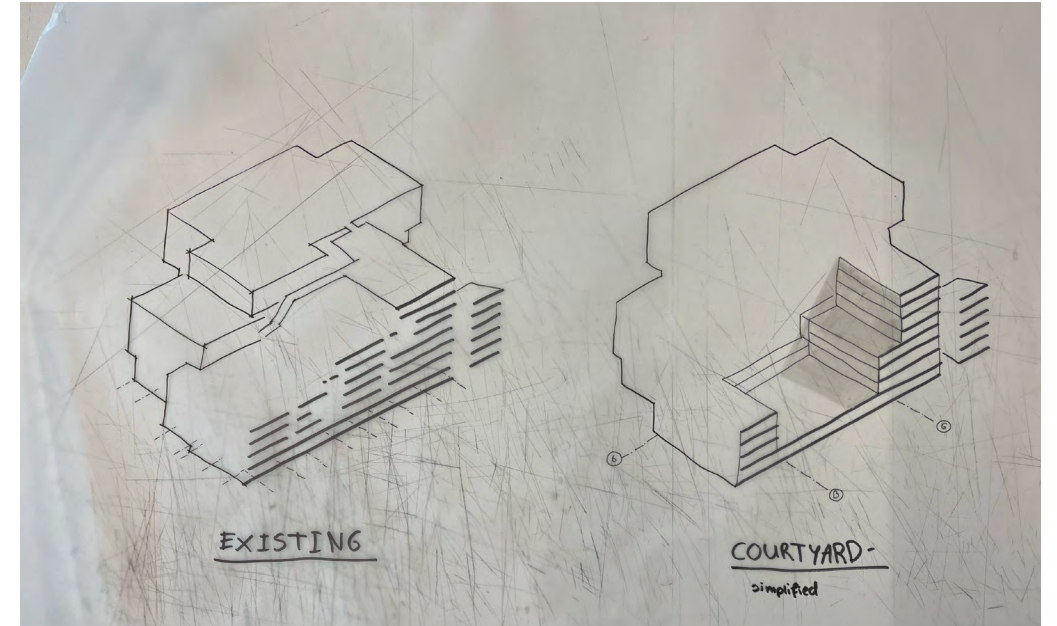
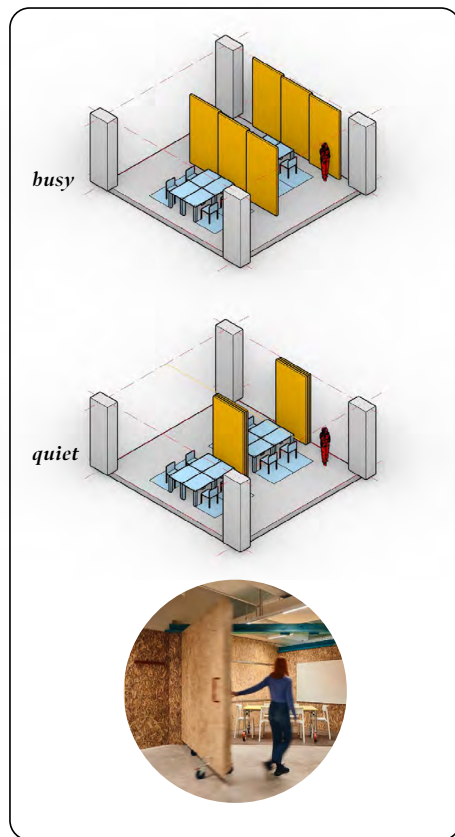


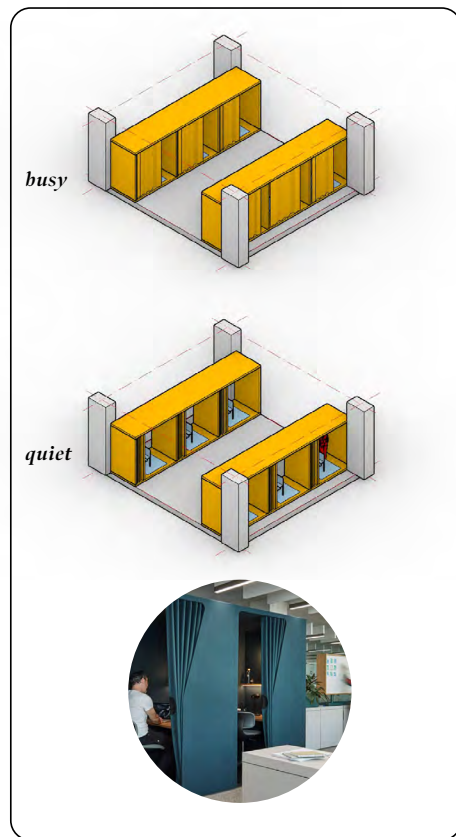
IMAGE 71  
atrium studies (own images)

**WEEK 26**

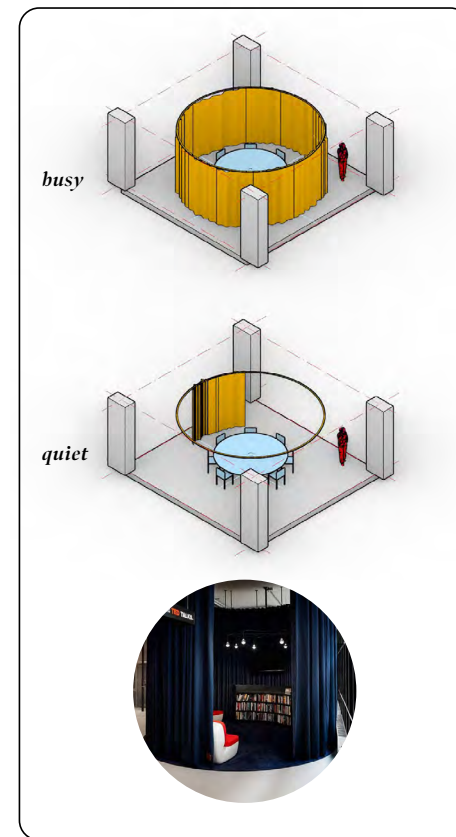
*sheering layers*  
*soundblocks*  
*section studies*



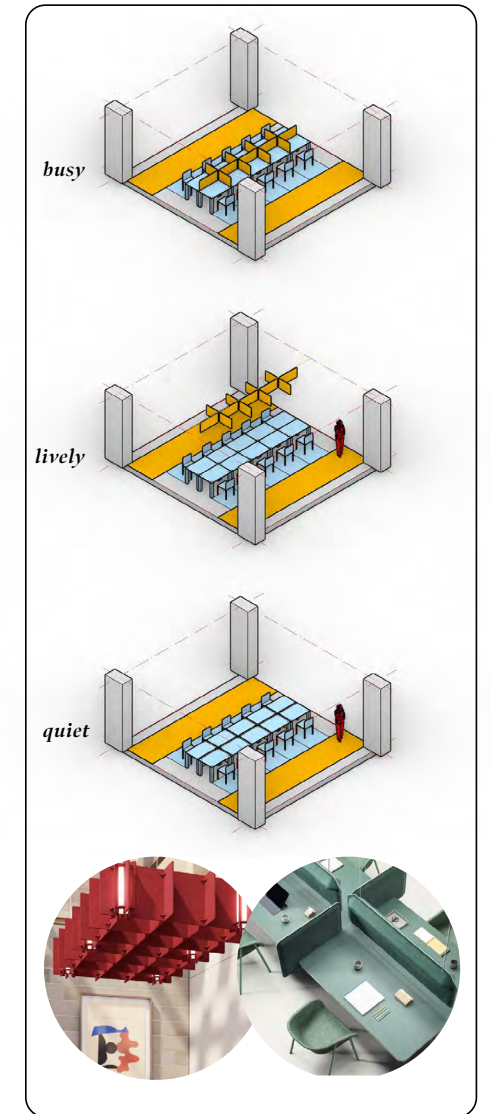
GROUPWORK



CALL PODS



MEETING ROOM

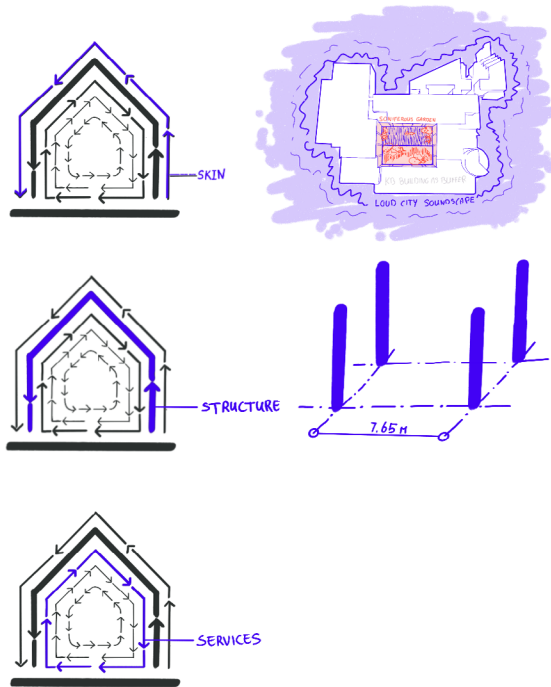


INDIVIDUAL STUDY

IMAGE 72  
soundblocks (own images)

IMAGE 73  
soundblocks (own images)

SOUNDSCAPES  
through the  
SHEARING LAYERS



the KB's skin protects the library soundscape from the surroundings' city soundscape.

the KB's structure provides flexibility + open plans. without measures, the interiors' soundscape becomes one.

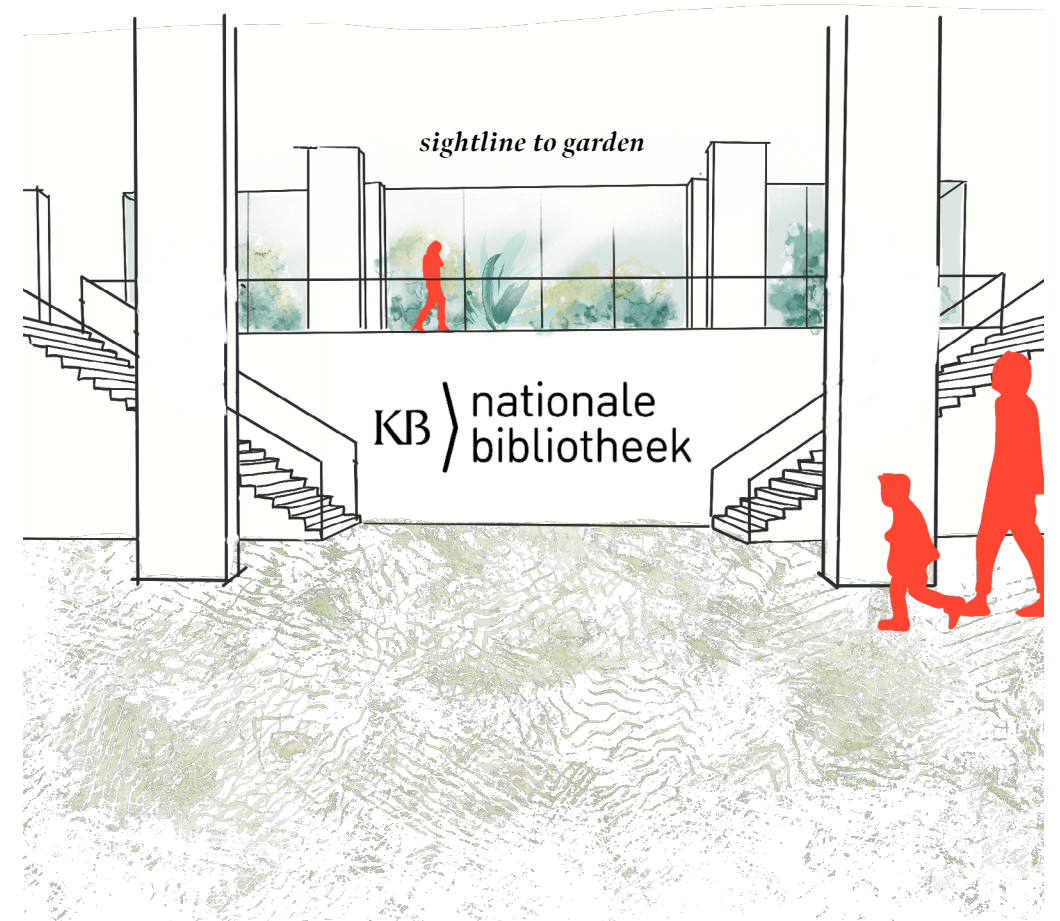


IMAGE 74  
sheering layers (own images)

IMAGE 75  
entrance (own images)



IMAGE 76  
soundscape axo (own images)

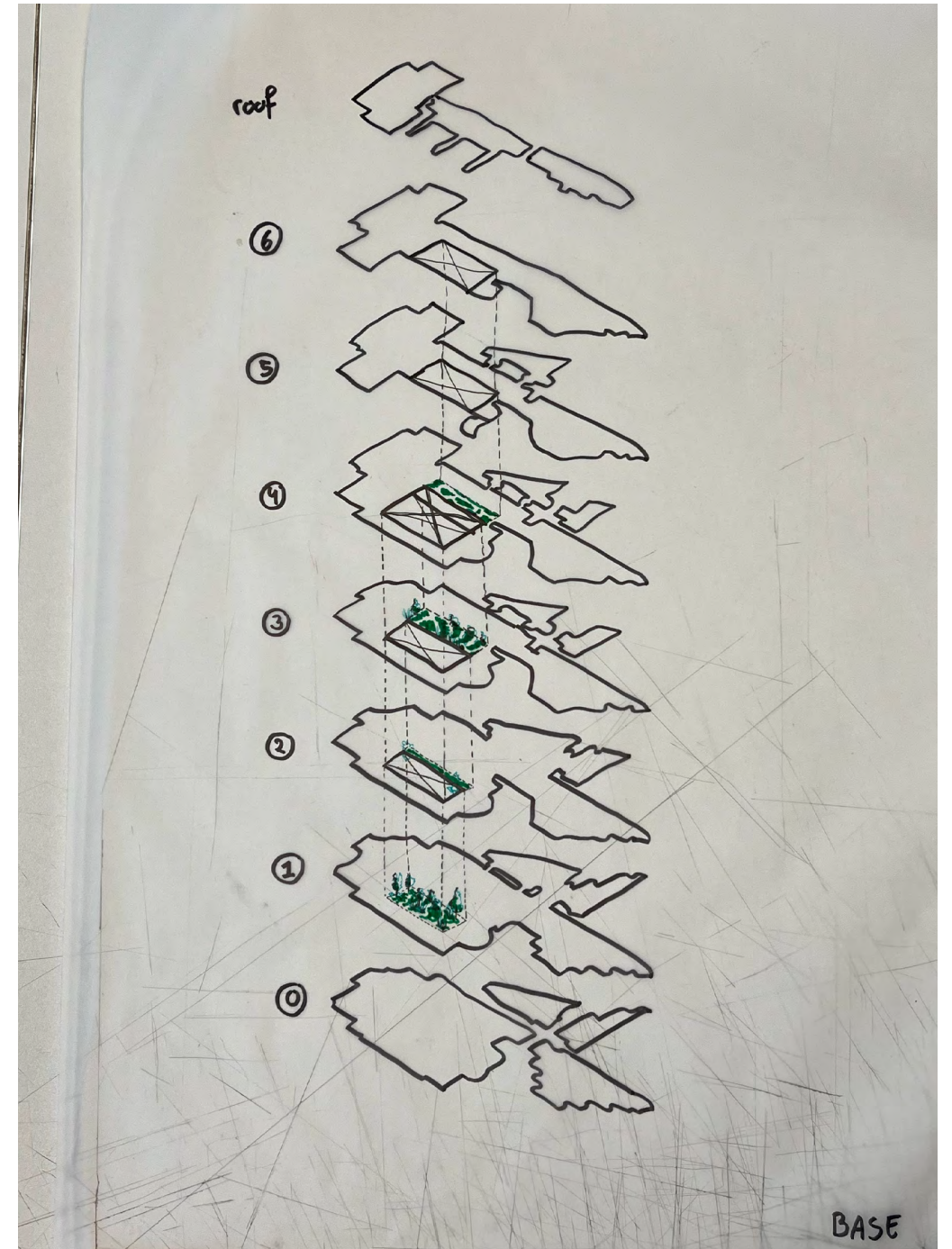


IMAGE 77  
base axo (own images)

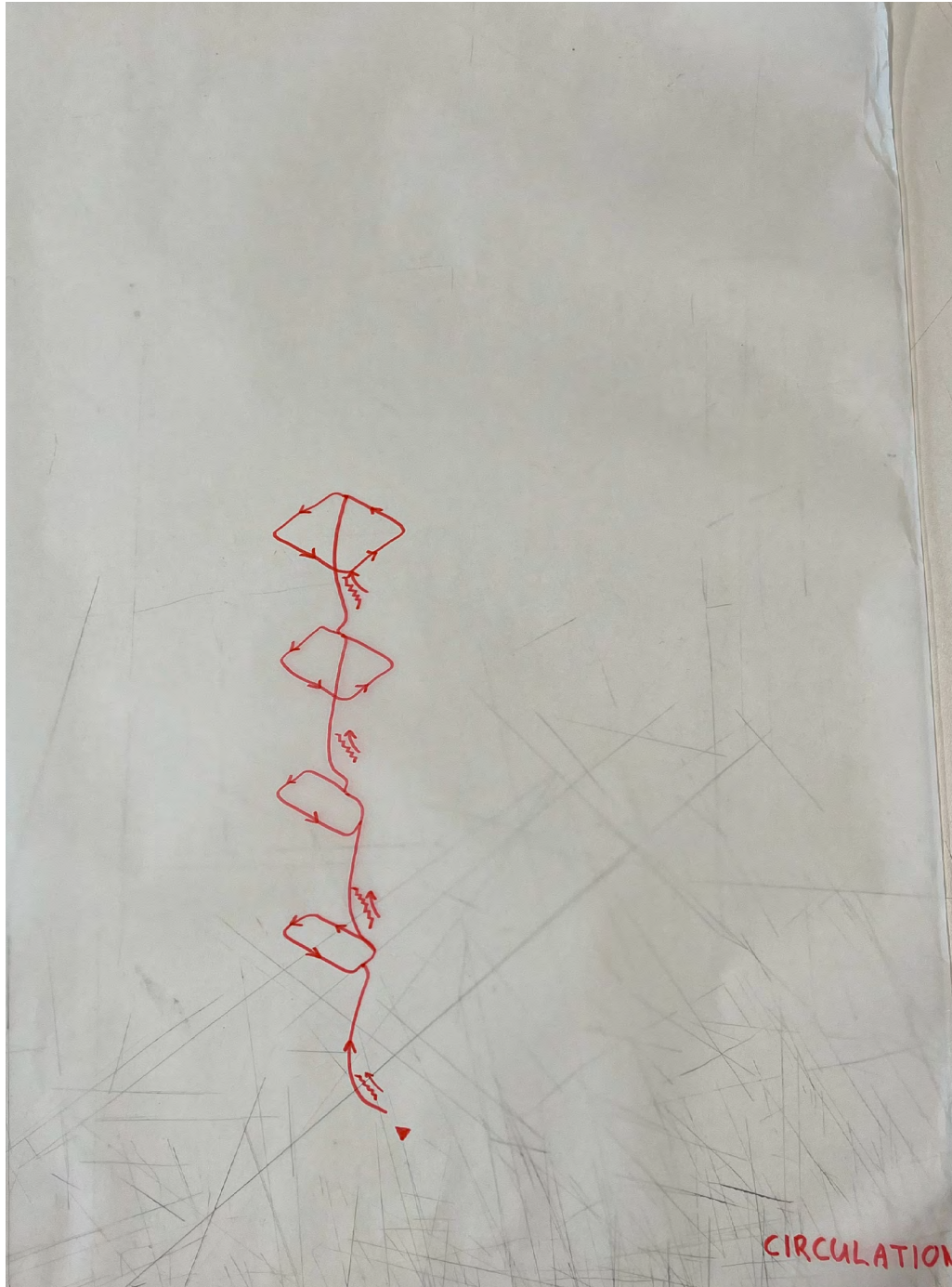


IMAGE 78  
circulation axo (own images)

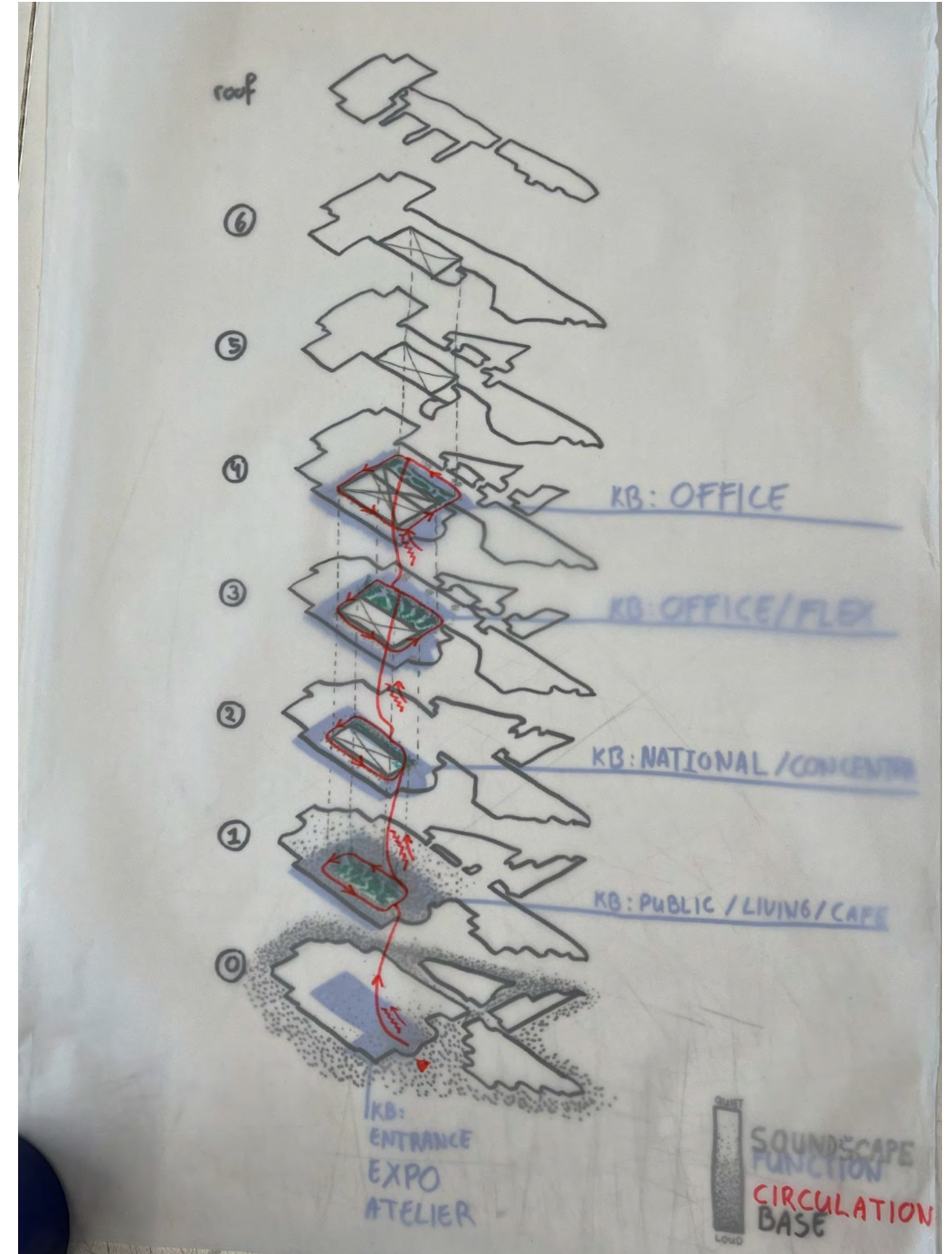
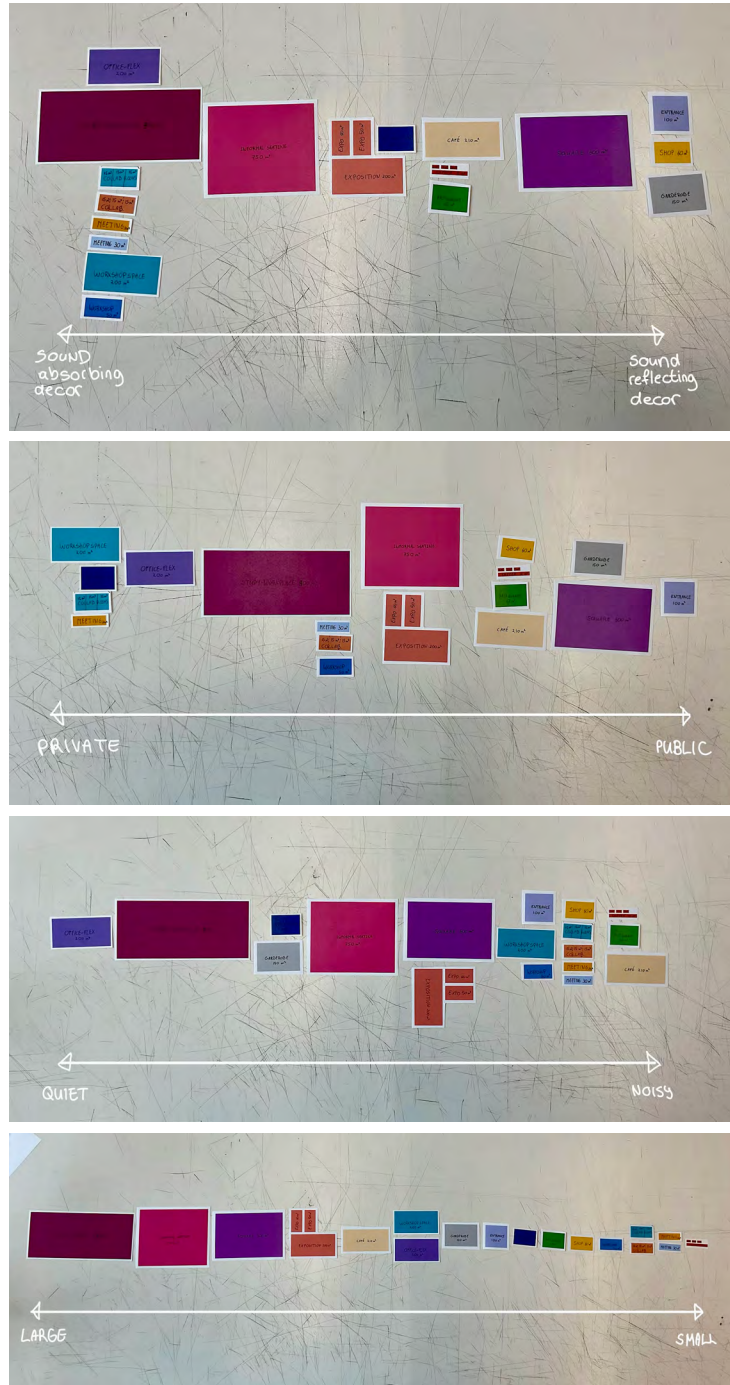


IMAGE 79  
combined axo (own images)

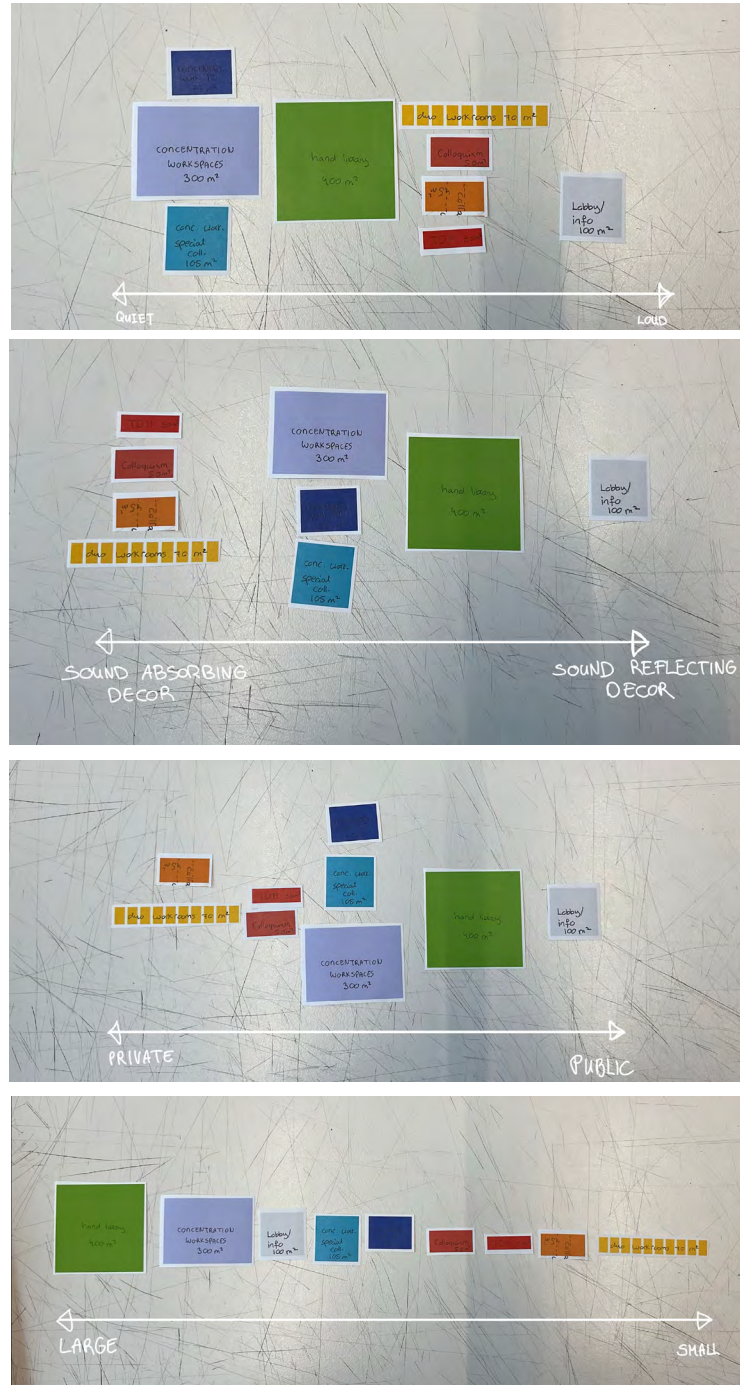




**IMAGE 81**  
programme studies (own images)



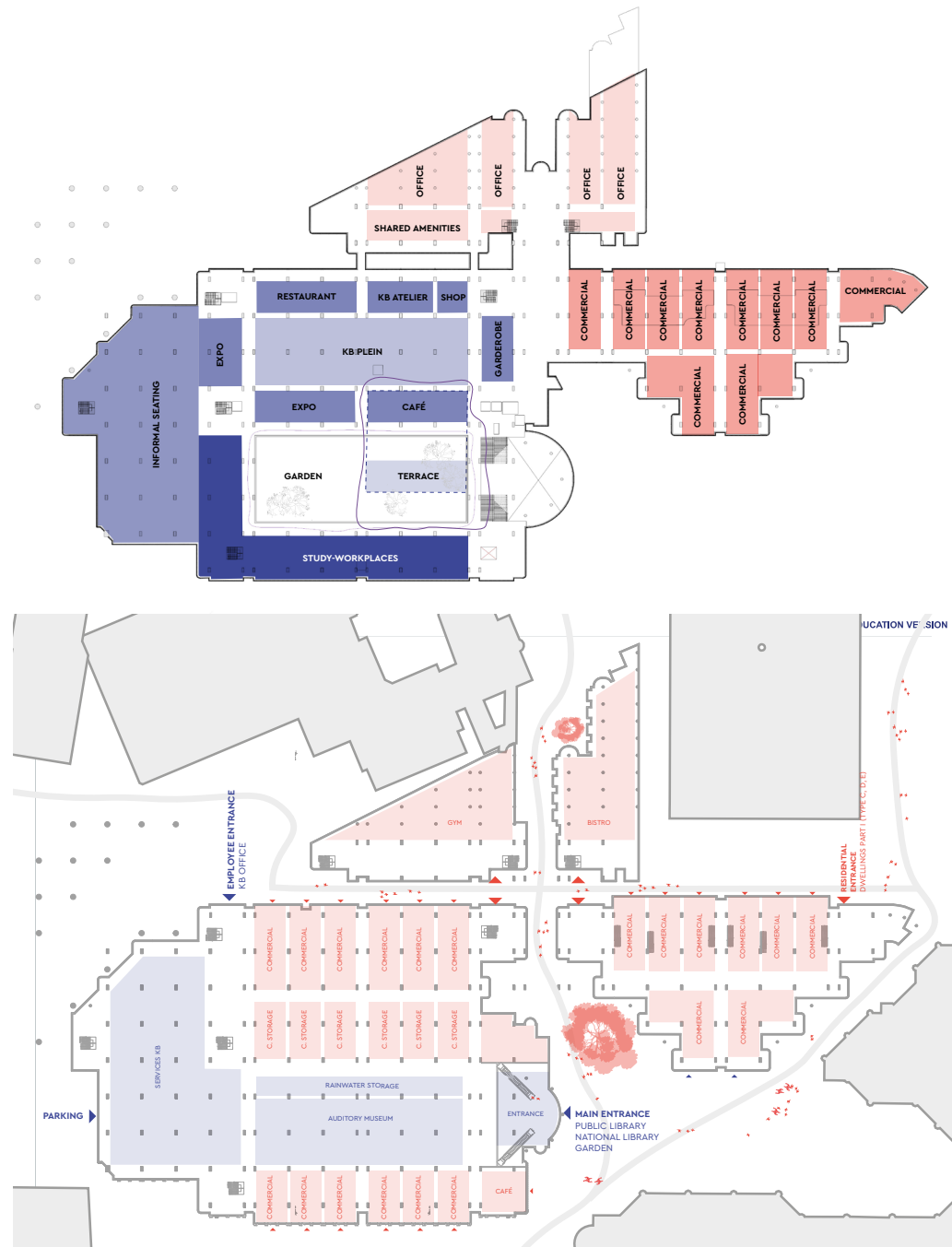
**IMAGE 82**  
programme studies (own images)



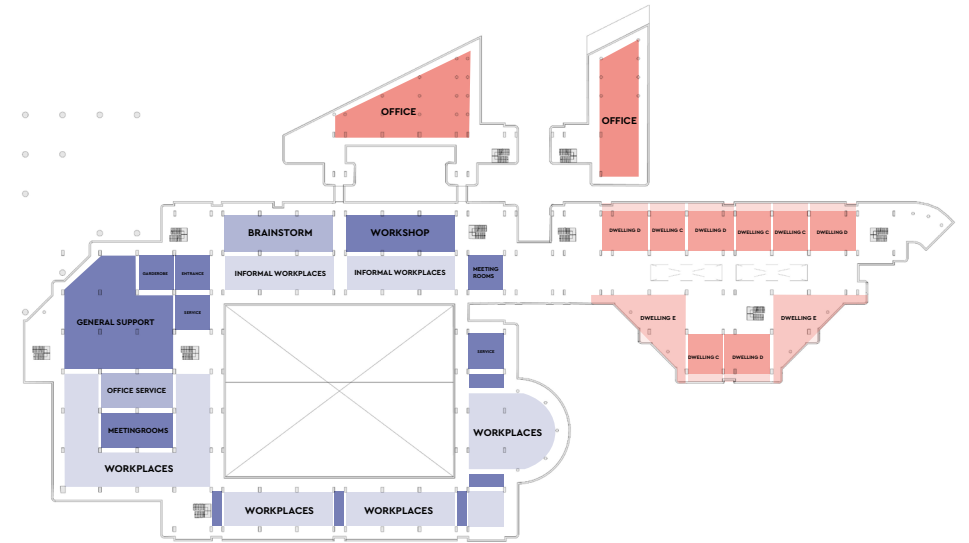
**IMAGE 83**  
programme studies (own images)



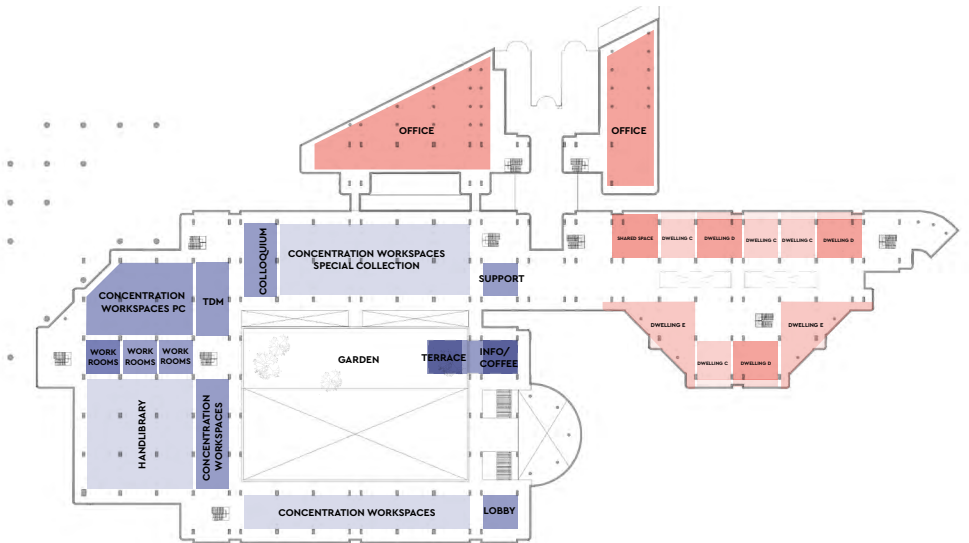
**IMAGE 84**  
programme studies (own images)

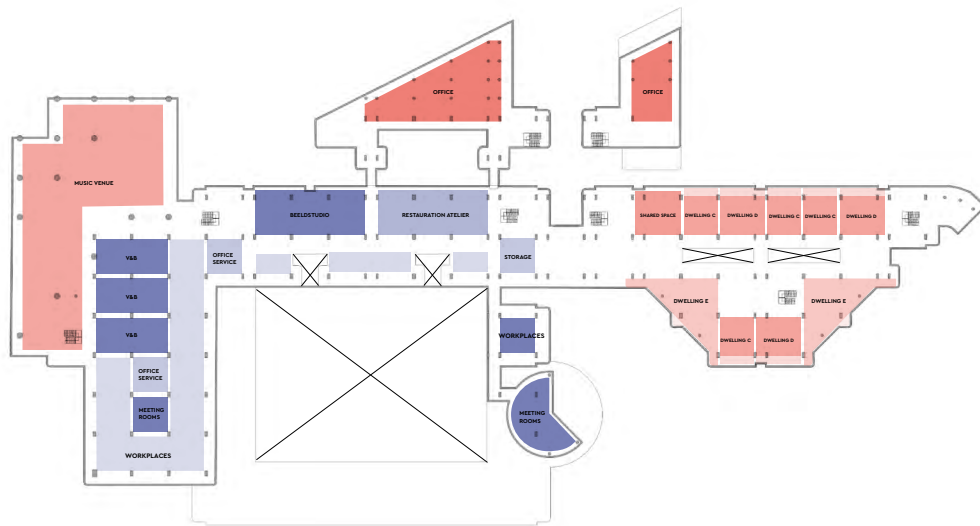
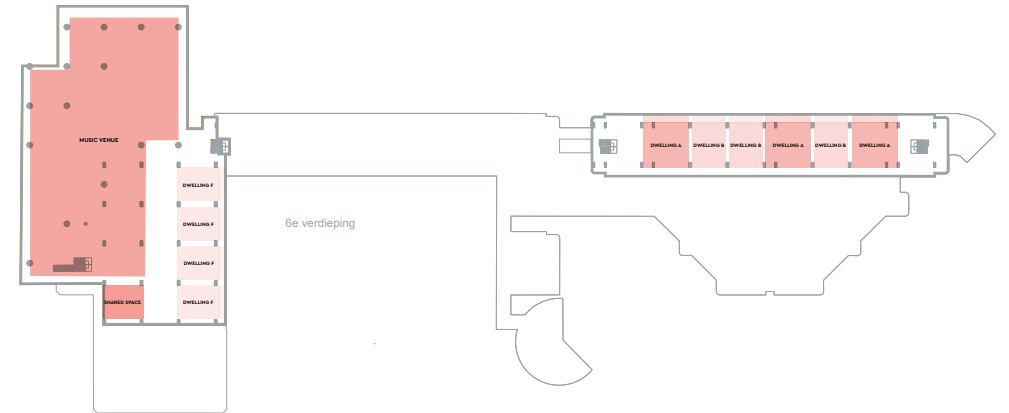
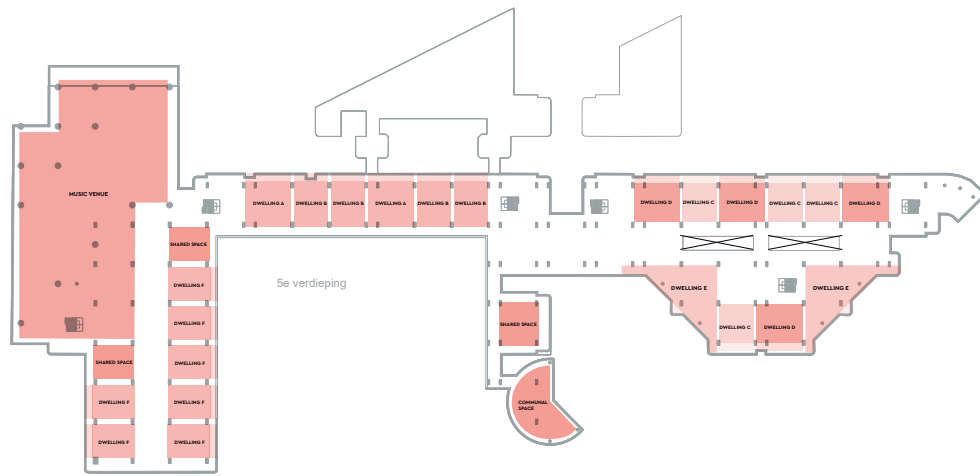


**IMAGE 85**  
*masterplan 0 and 1 (own images)*



**IMAGE 86**  
*masterplan 2 and 3 (own images)*





**IMAGE 87**  
masterplan 5 and 6 (own images)

**IMAGE 88**  
masterplan 6 (own images)

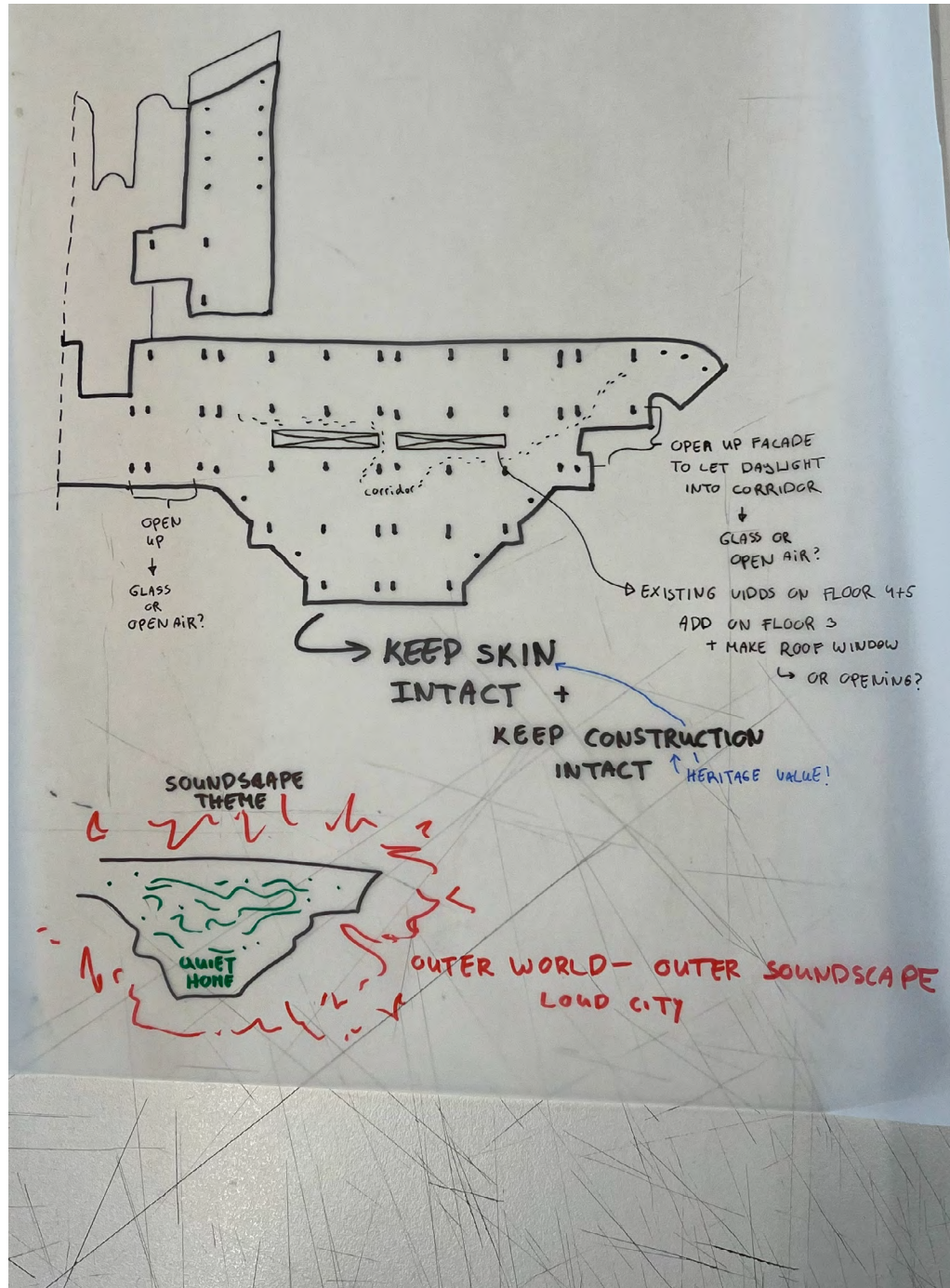


IMAGE 89 plan for dwellings in part i (own images)

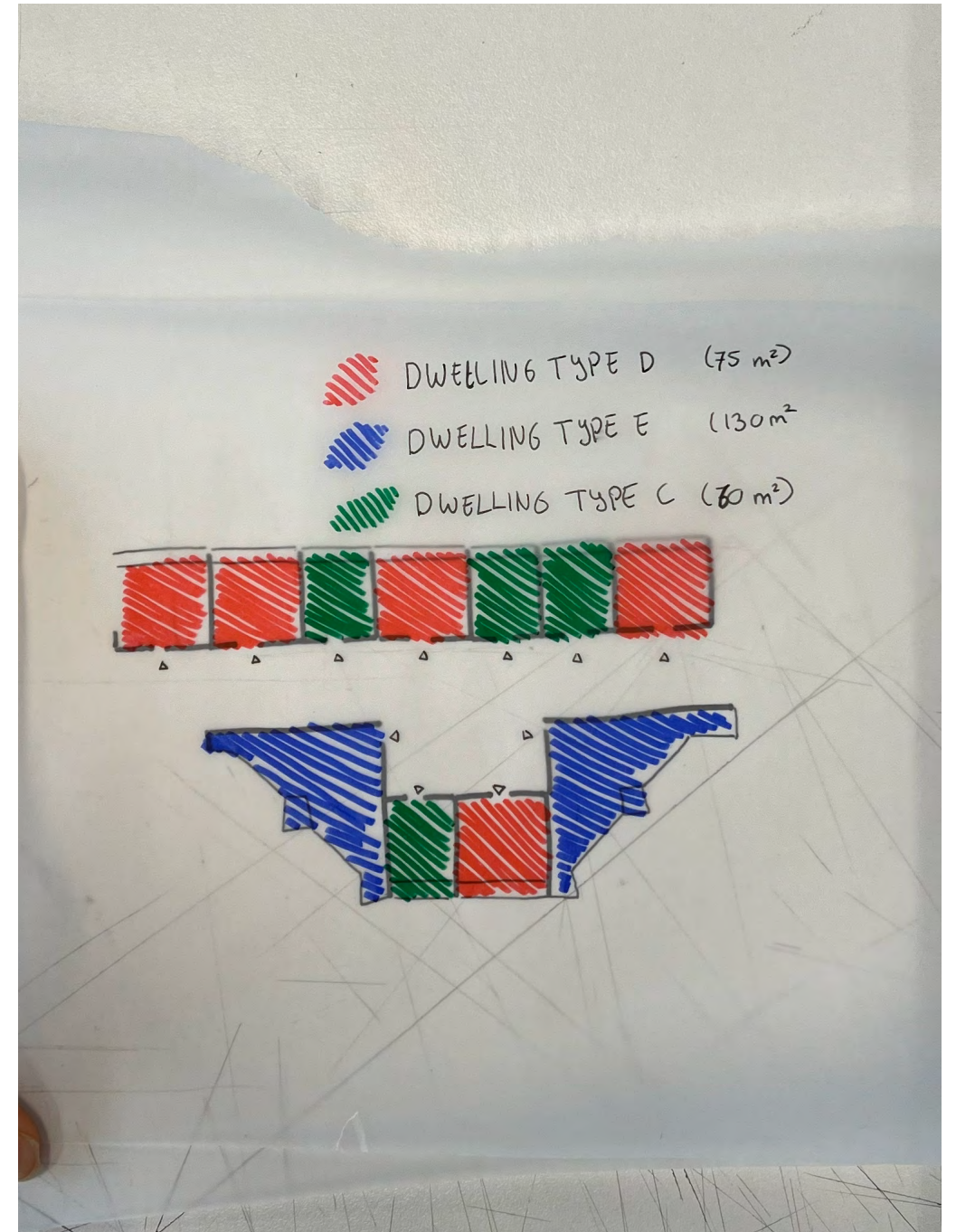


IMAGE 90 plan for dwellings in part i (own images)

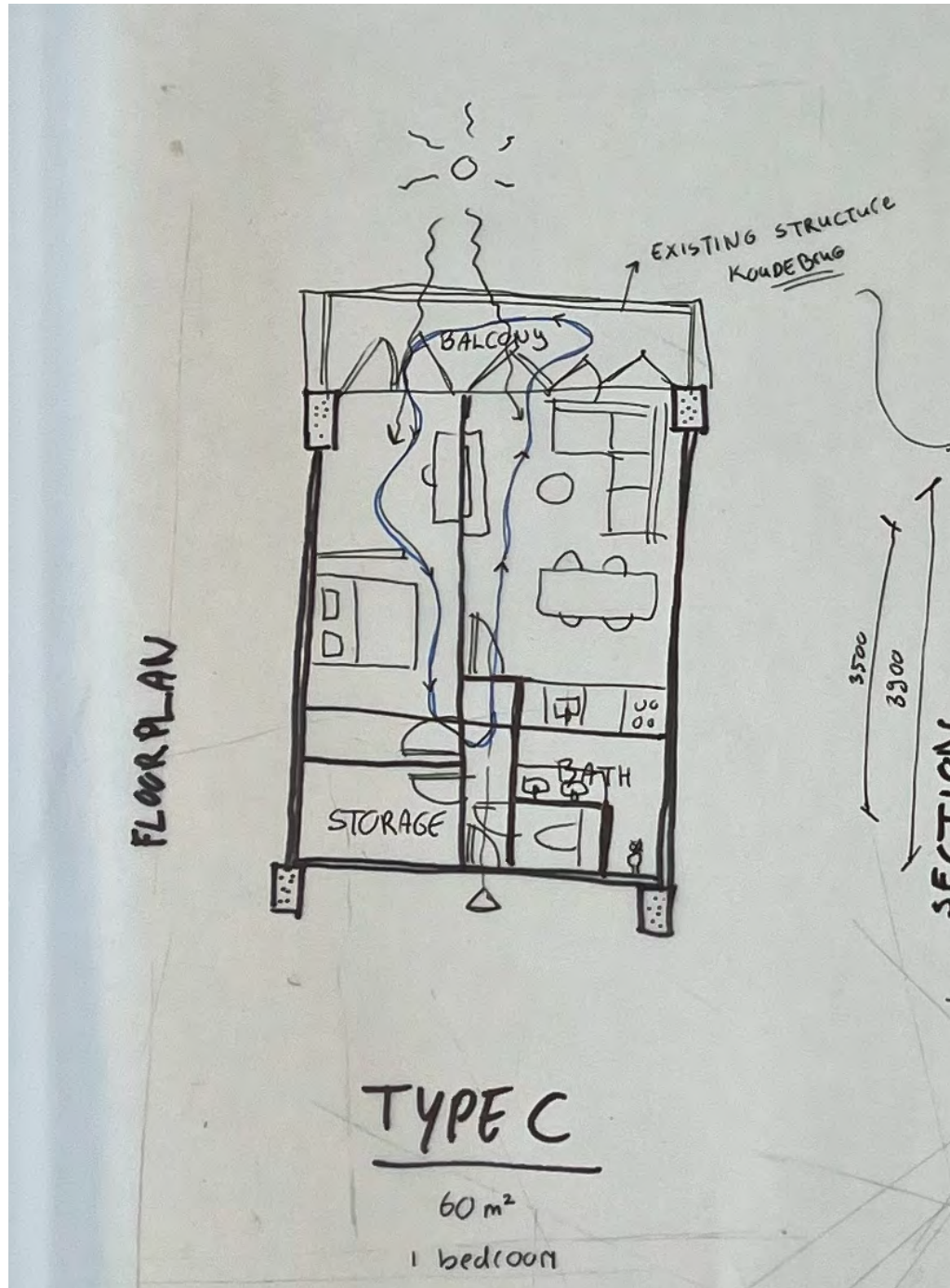


IMAGE 91  
plan for dwellings in part i (own images)

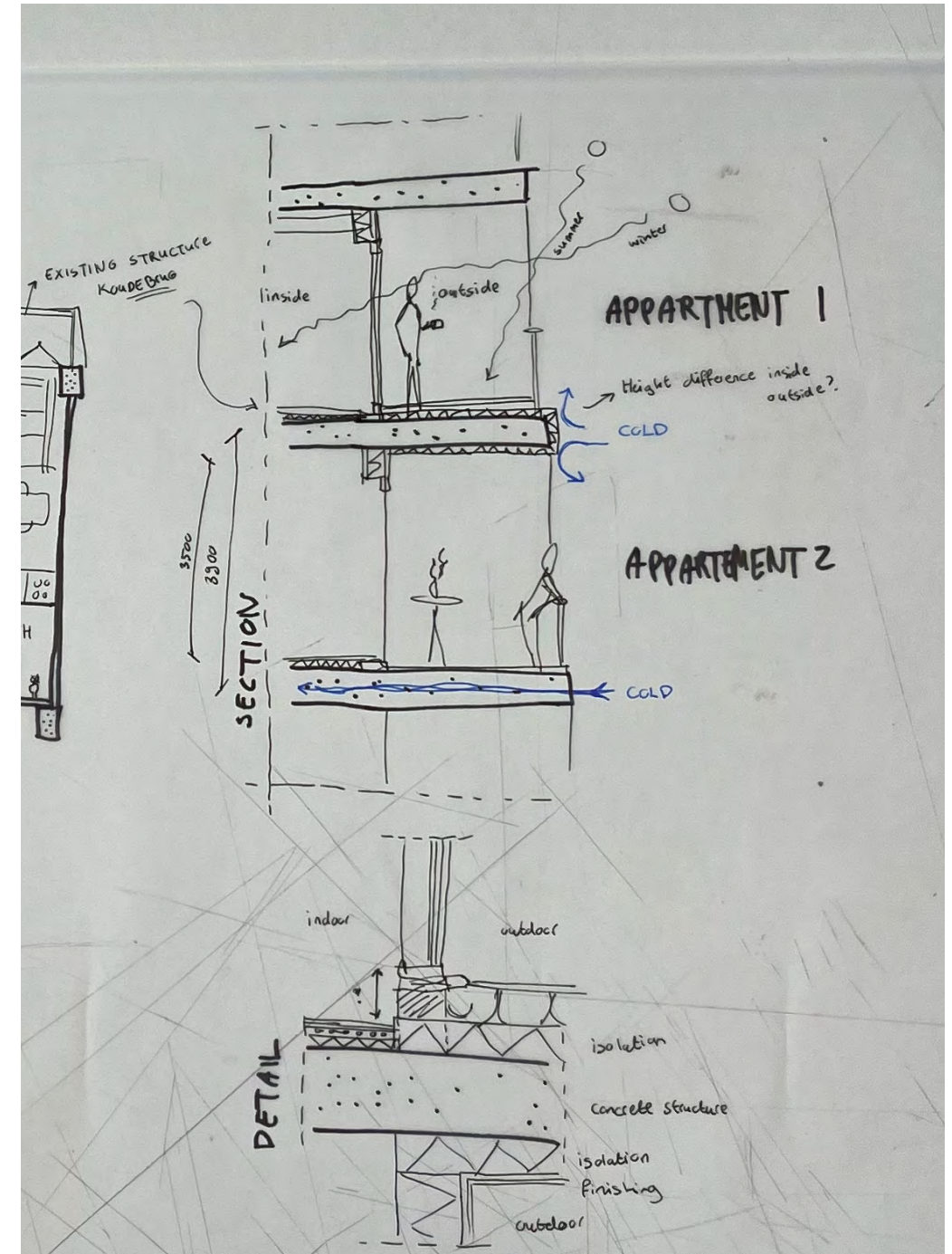
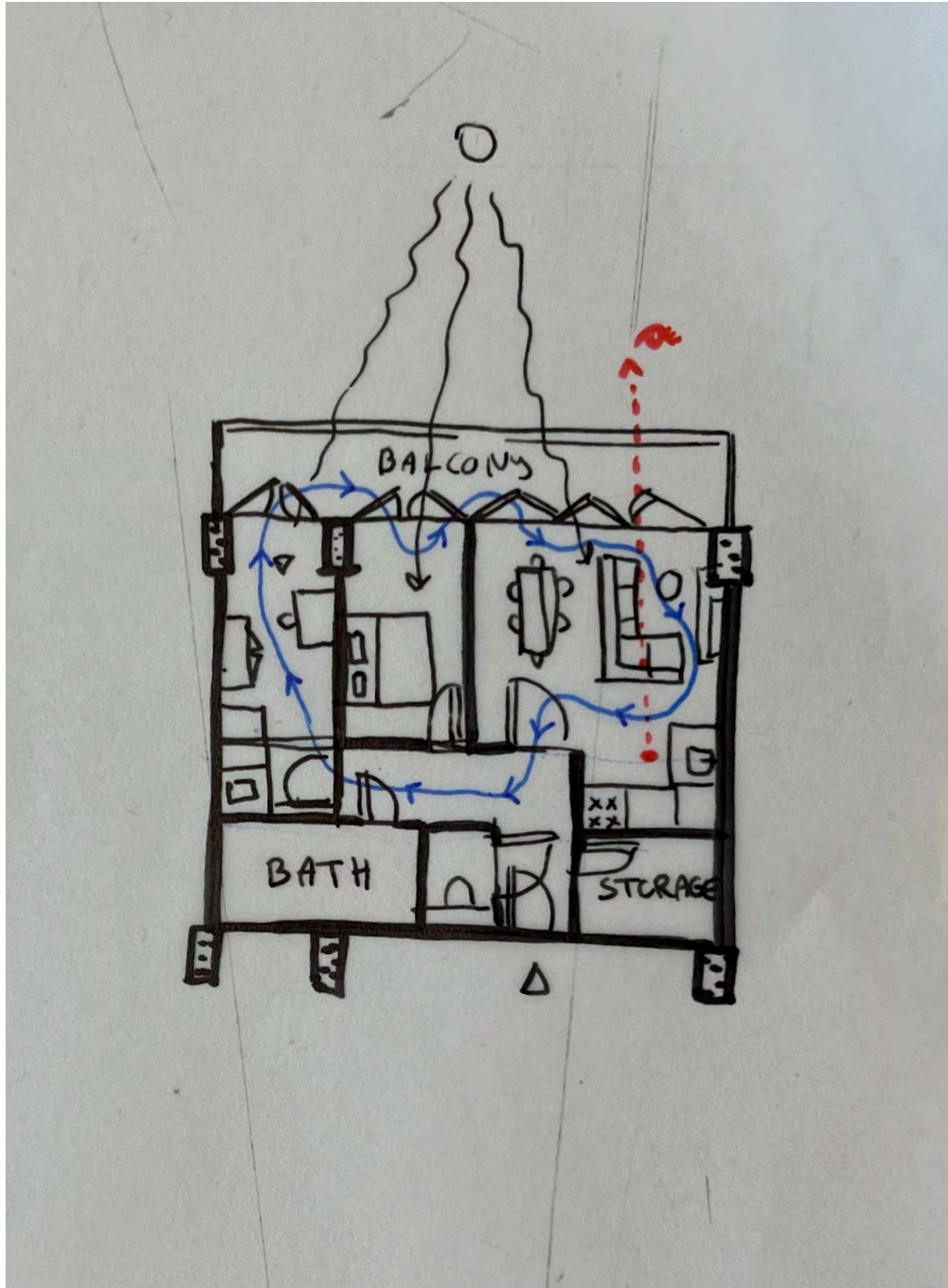
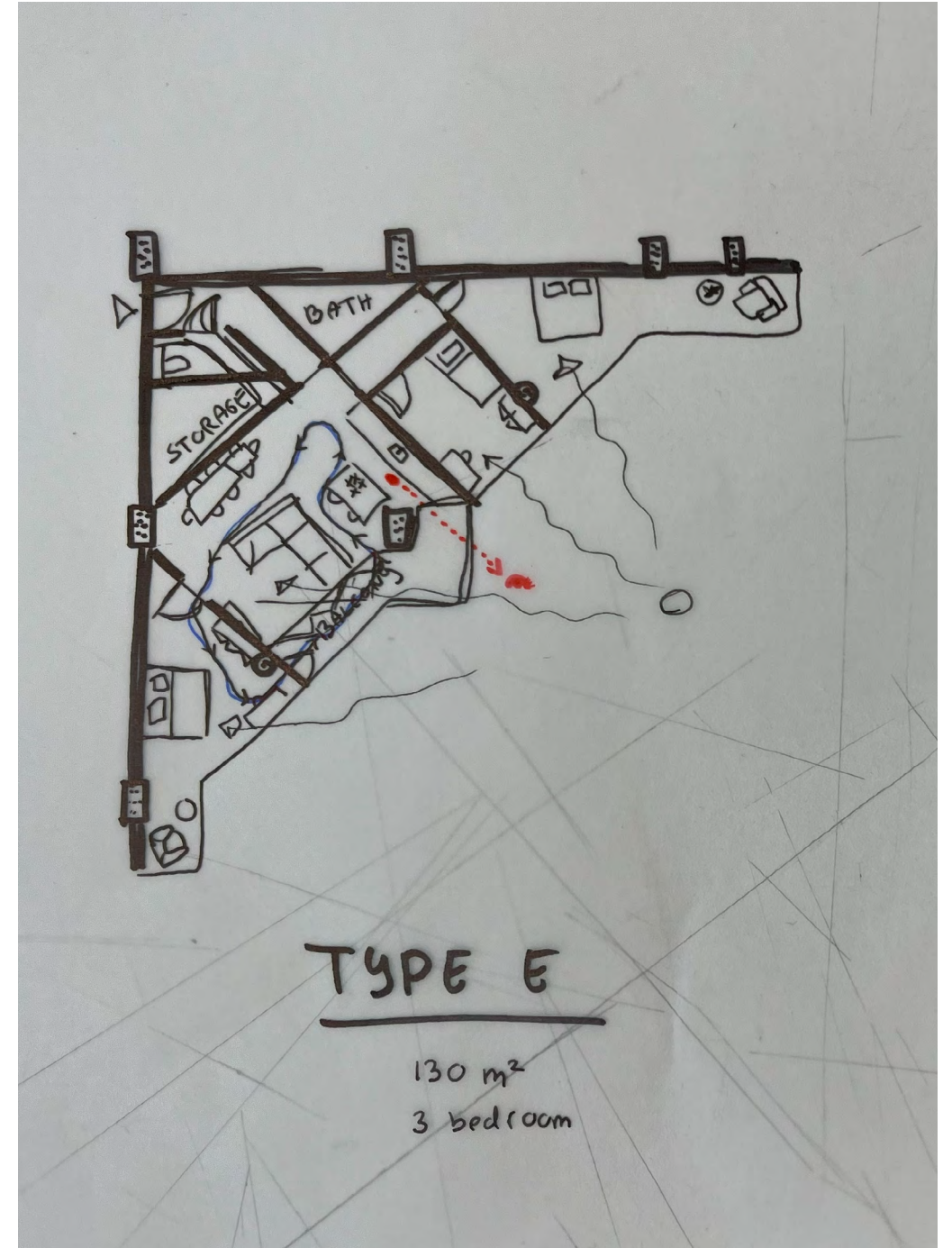


IMAGE 92  
plan for dwellings in part i (own images)



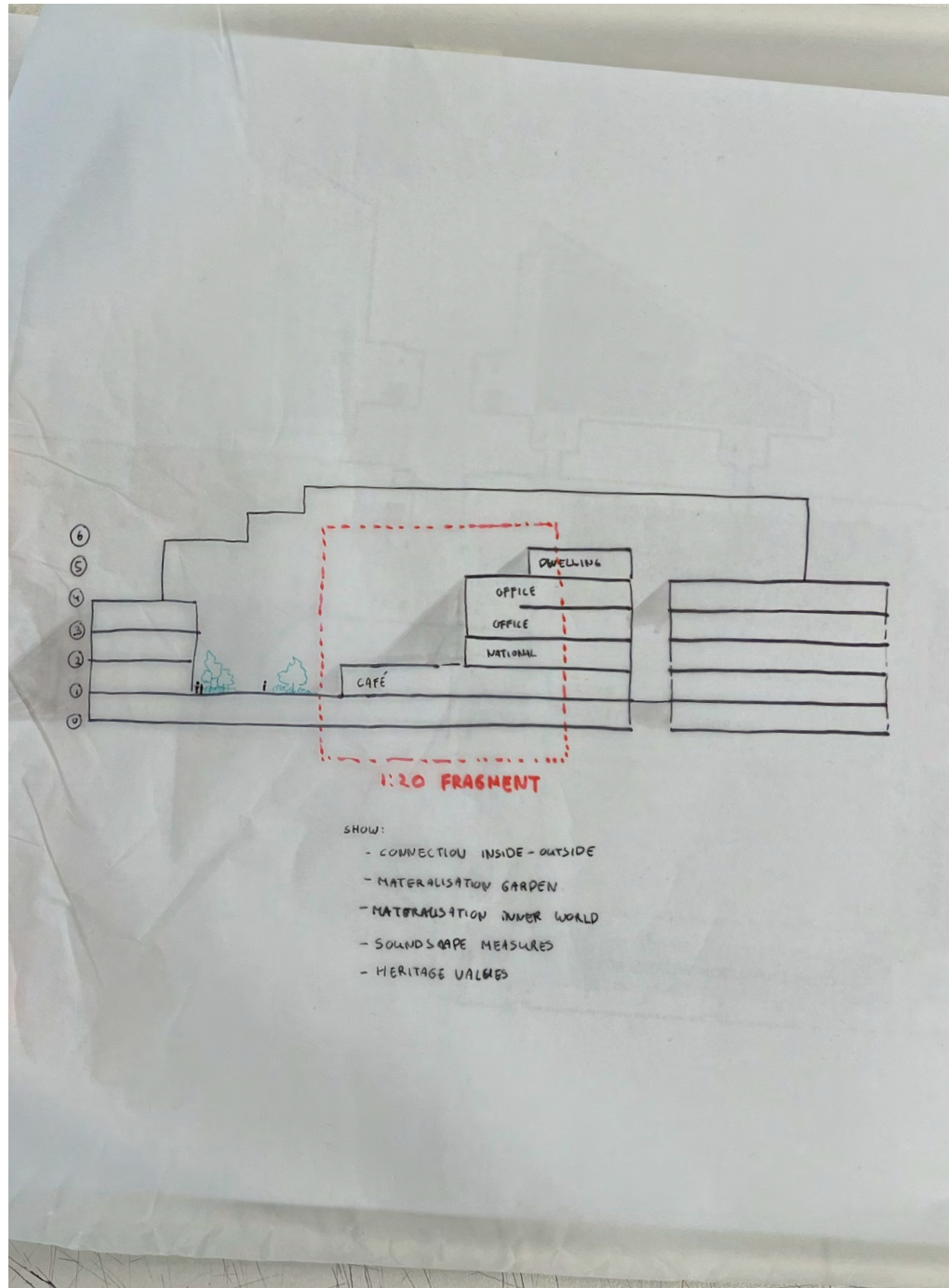
**IMAGE 93**  
plan for dwellings in part i (own images)



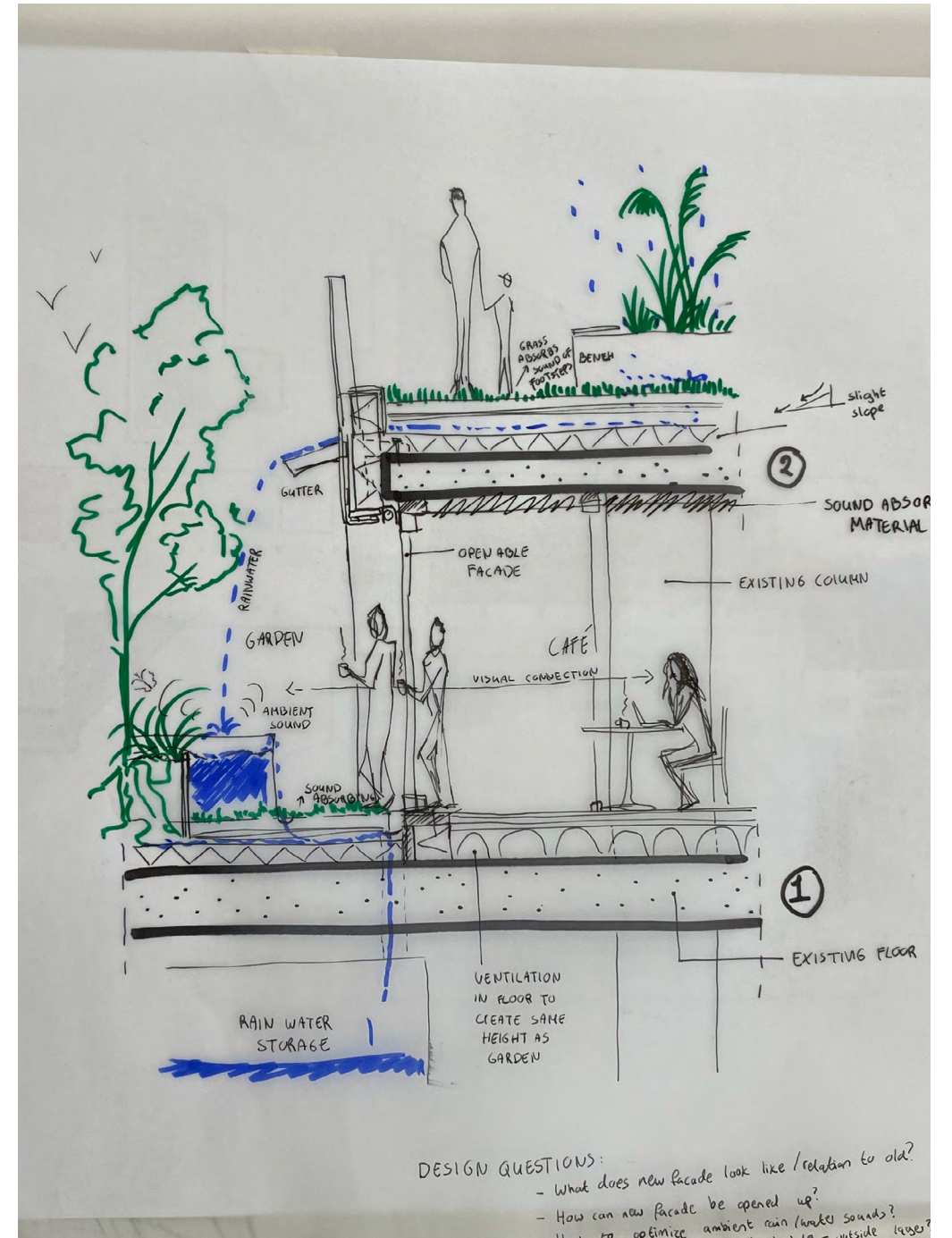
**IMAGE 94**  
plan for dwellings in part i (own images)

**WEEK 28**

*fragment studies*  
*facade and entrance*  
*preparing p3*



**IMAGE 95**  
location of fragment (own images)



**IMAGE 96**  
fragment study (own images)

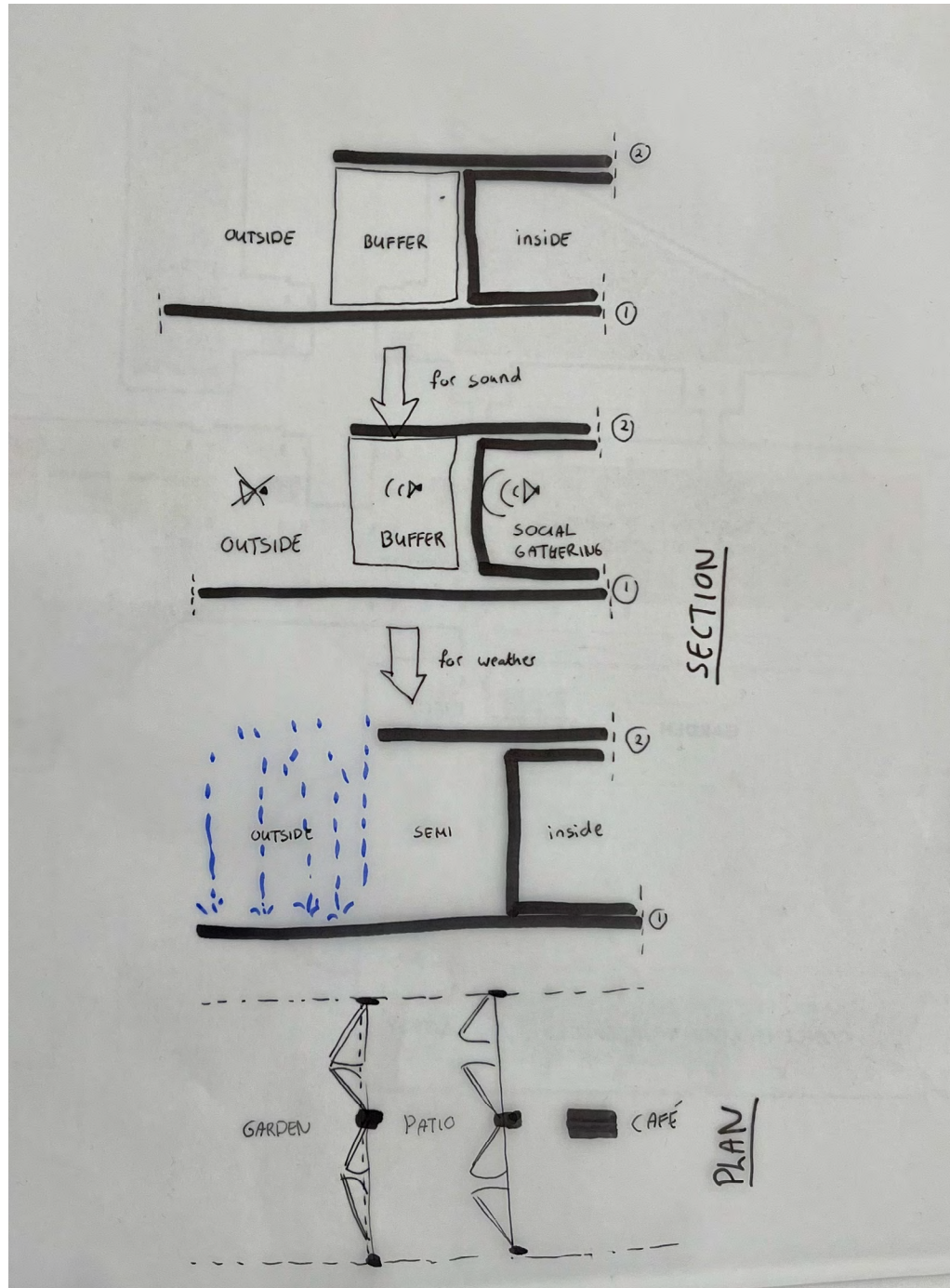


IMAGE 97 principles of in-between (own images)

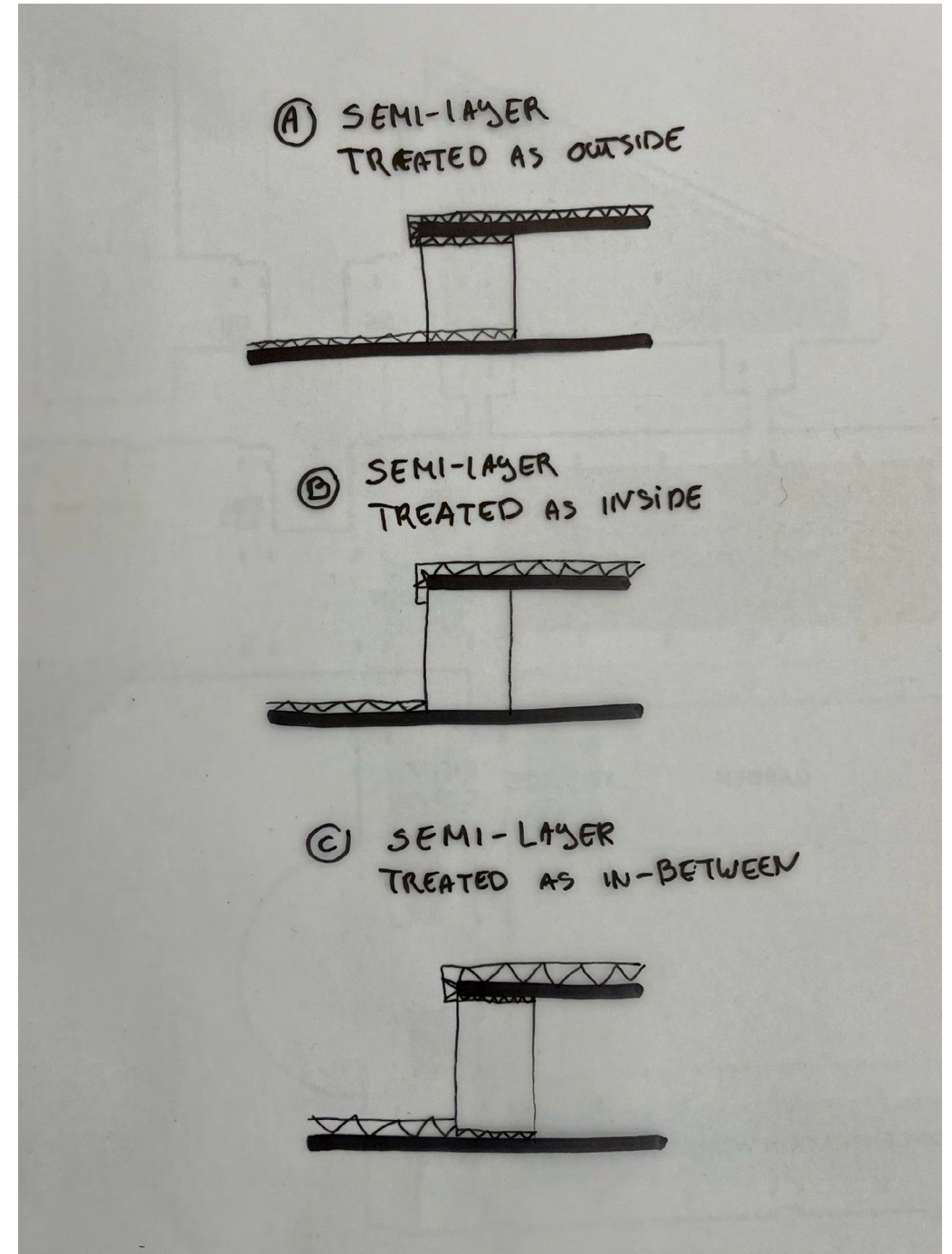


IMAGE 96 semi layer insulation (own images)

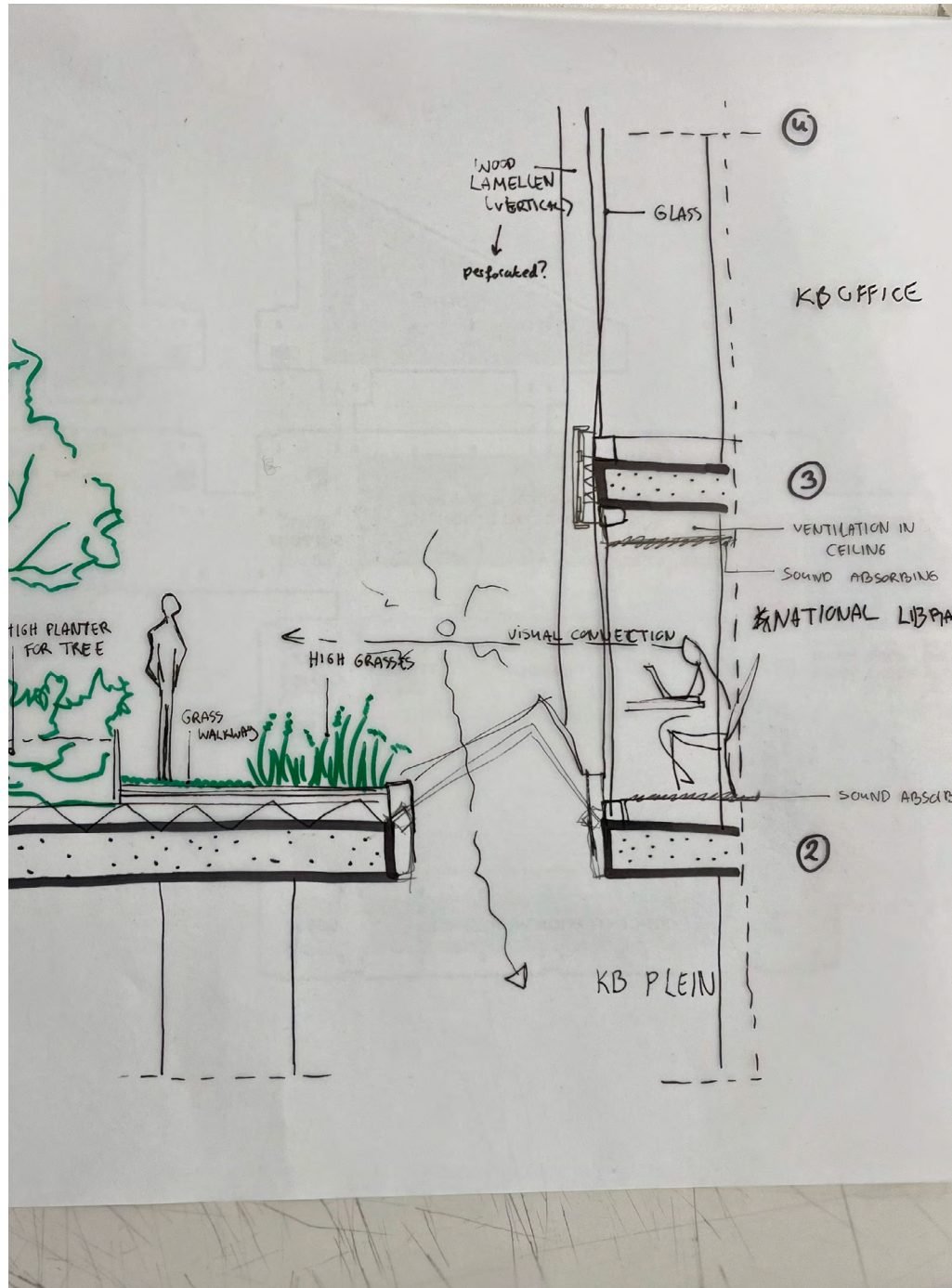


IMAGE 97 principles of in-between (own images)

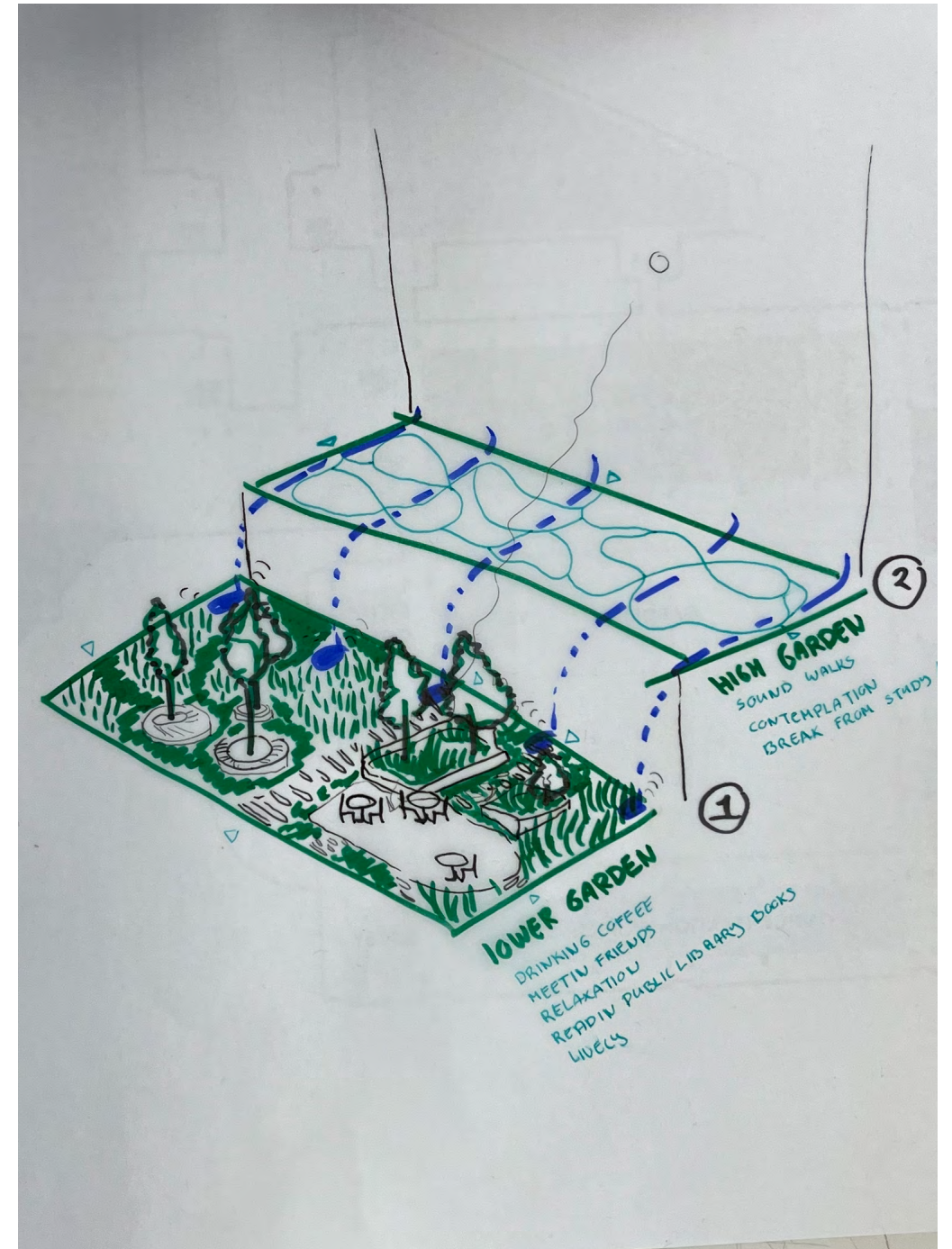


IMAGE 98 semi layer insulation (own images)

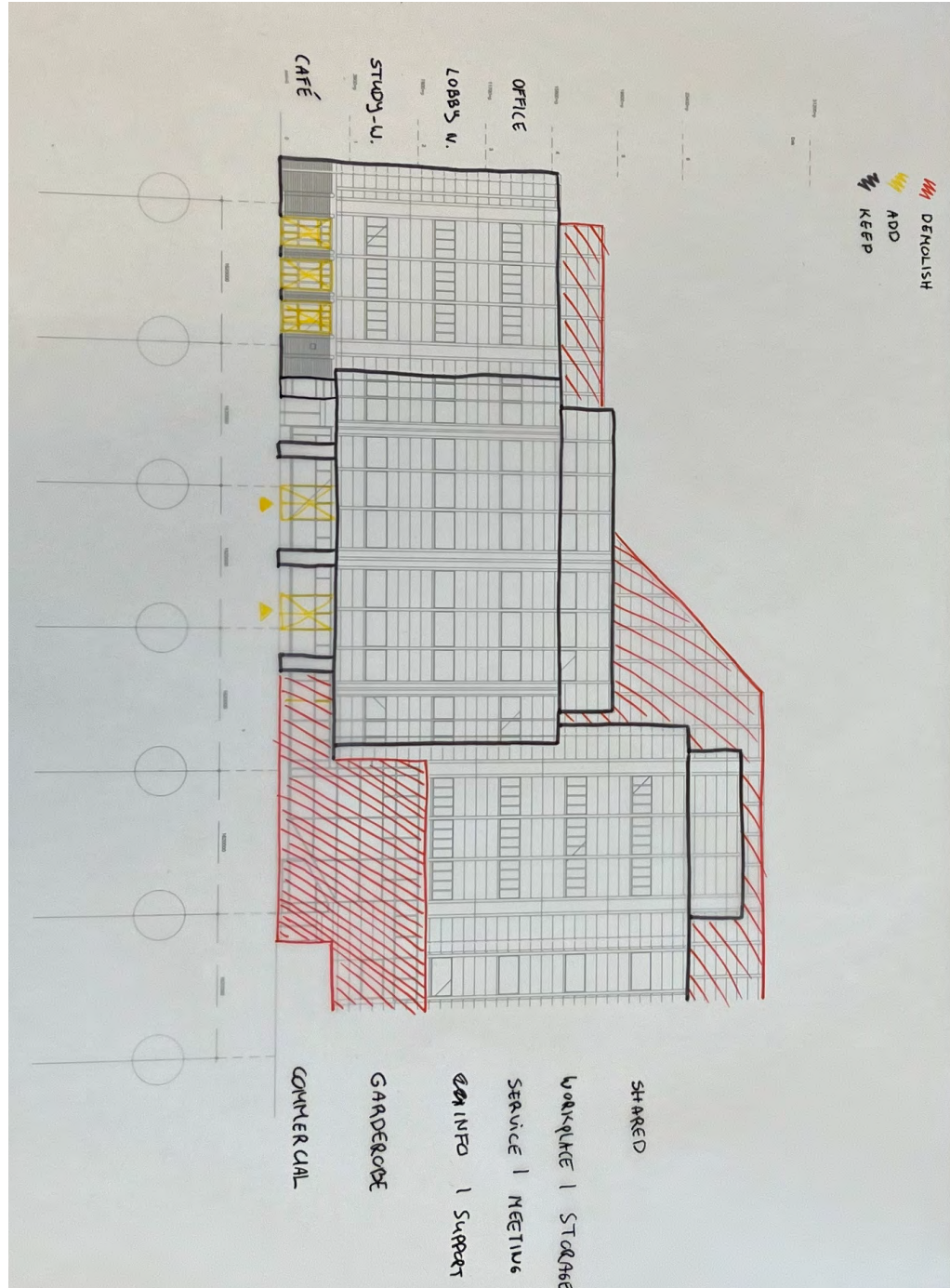


IMAGE 99  
entrance renovation plan (own images)

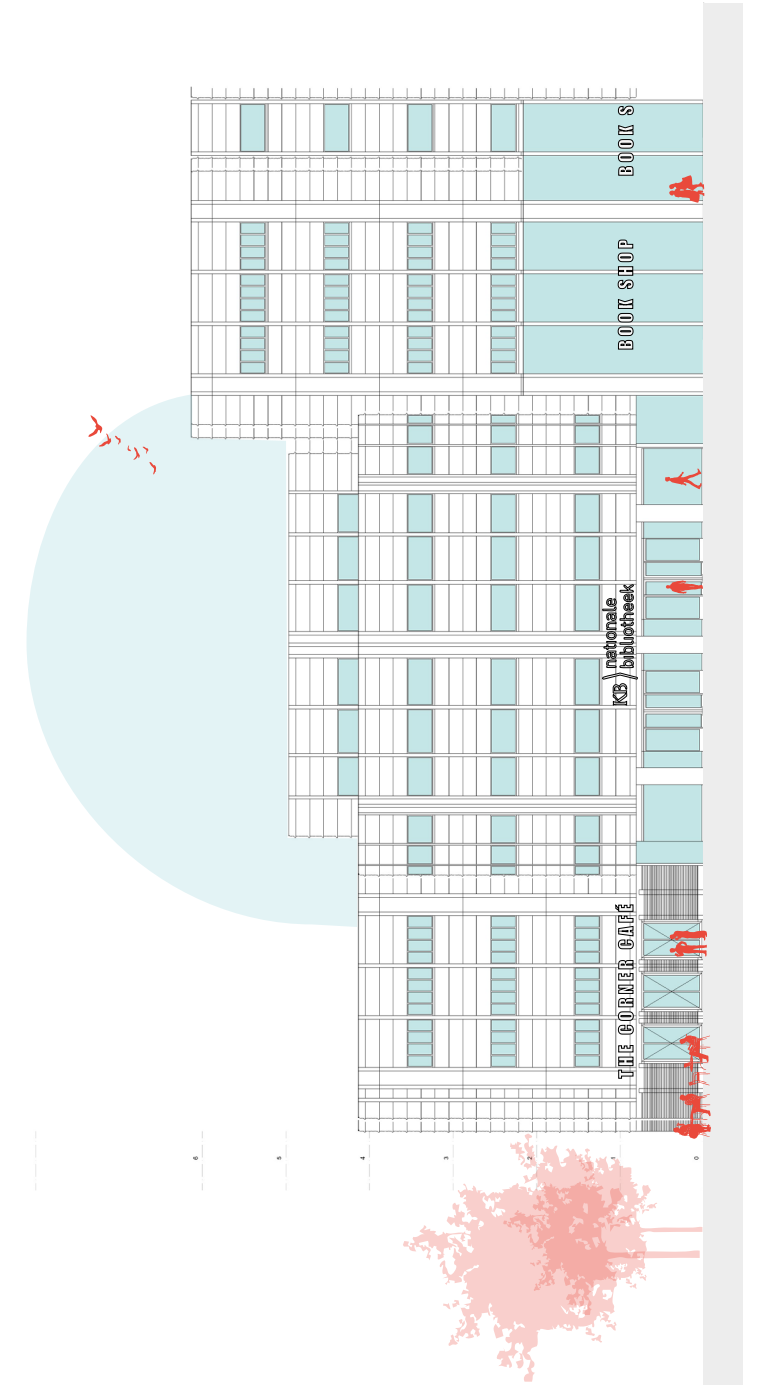


IMAGE 100  
semi layer insulation (own images)

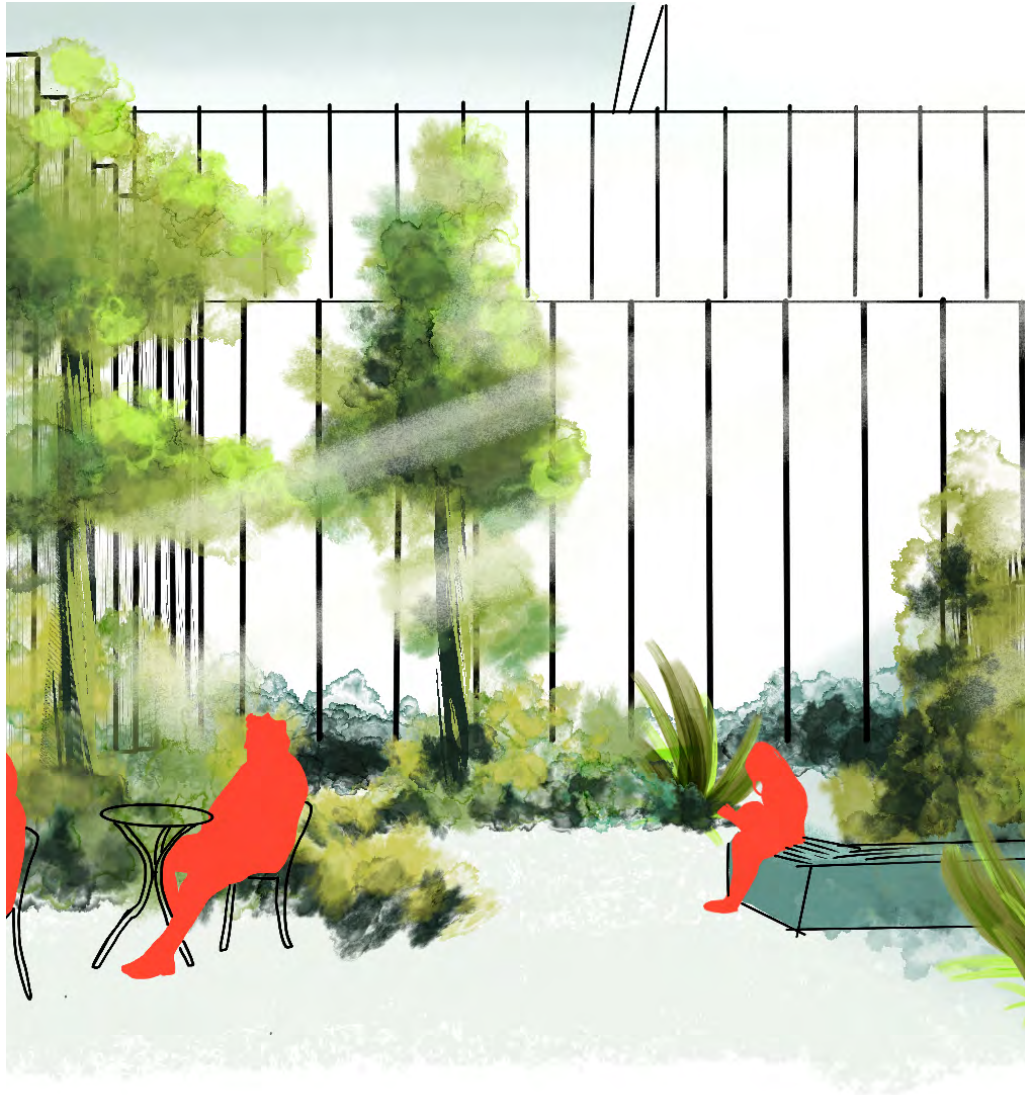


IMAGE 101  
garden (own images)

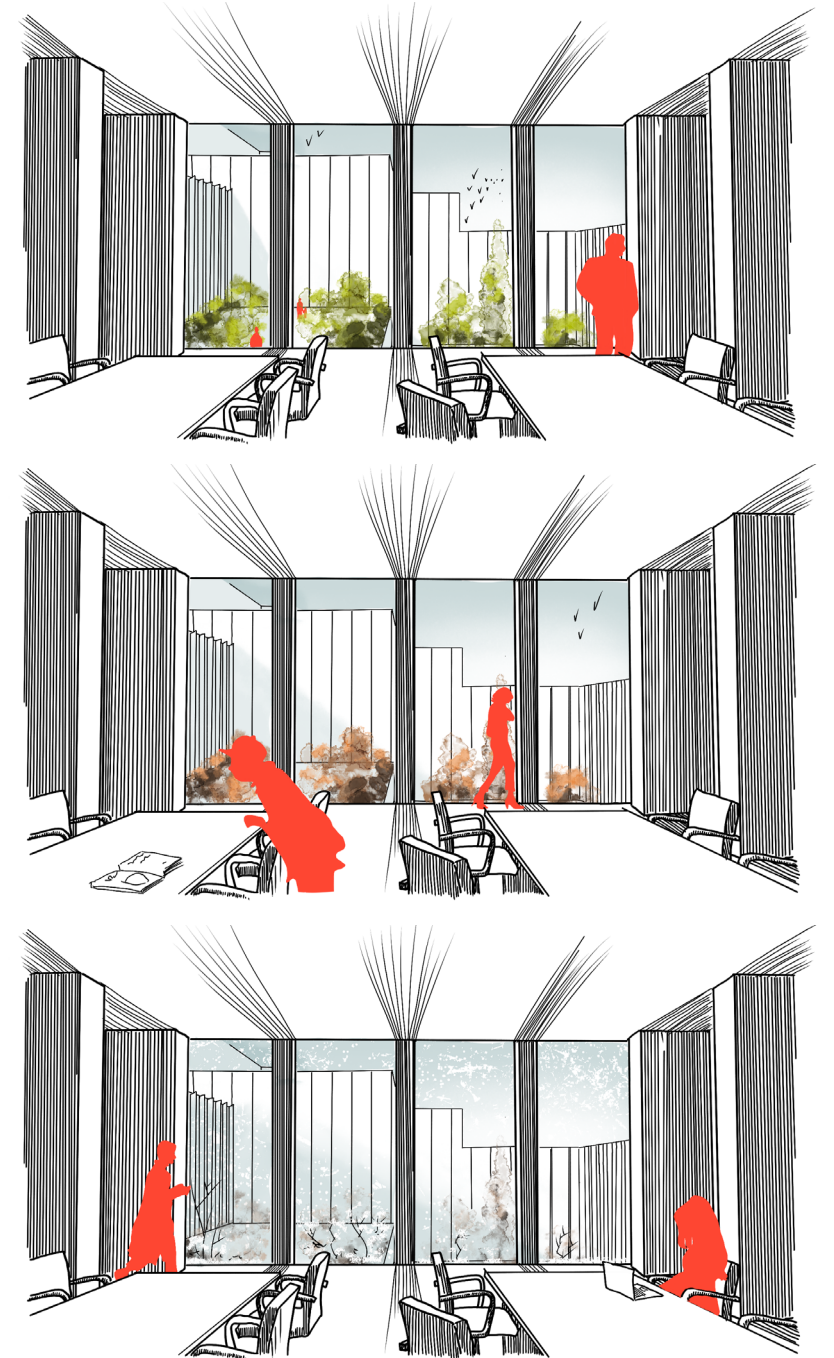


IMAGE 102  
office view through the seasons  
(own images)

**WEEK 29**  
*preparing p3*

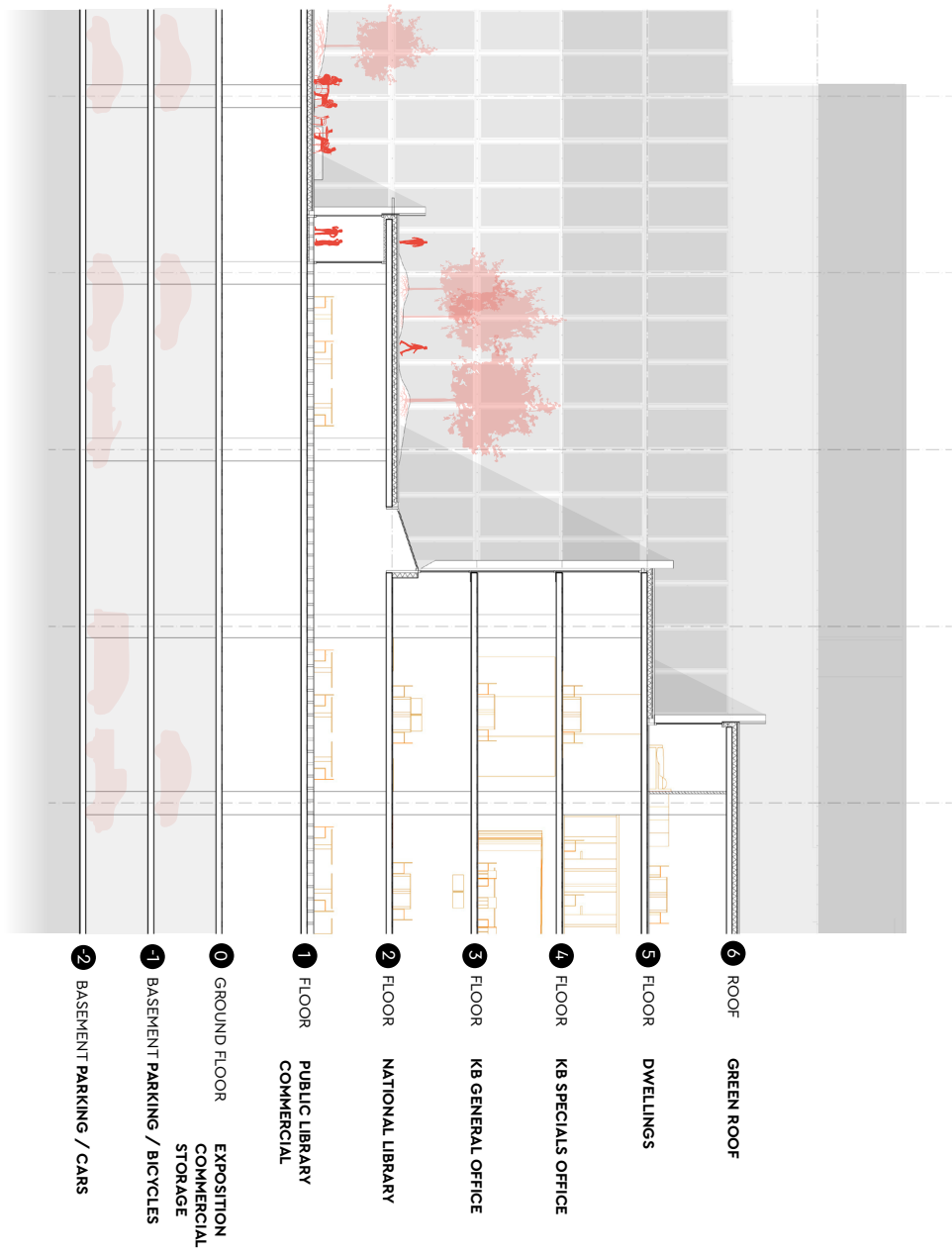


IMAGE 103  
fragment (own images)

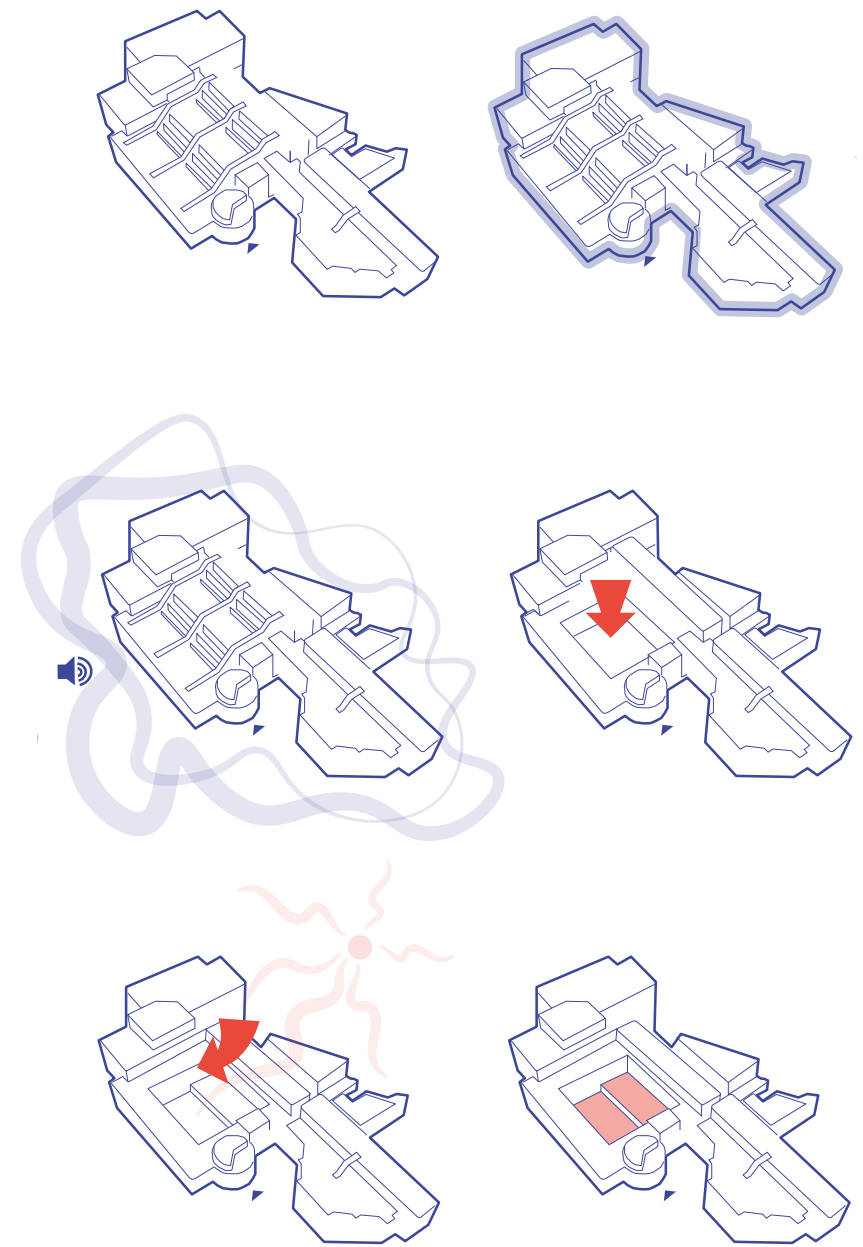


IMAGE 104  
design steps (own images)



grass



sand



wood



metal



rain water



terrace sounds

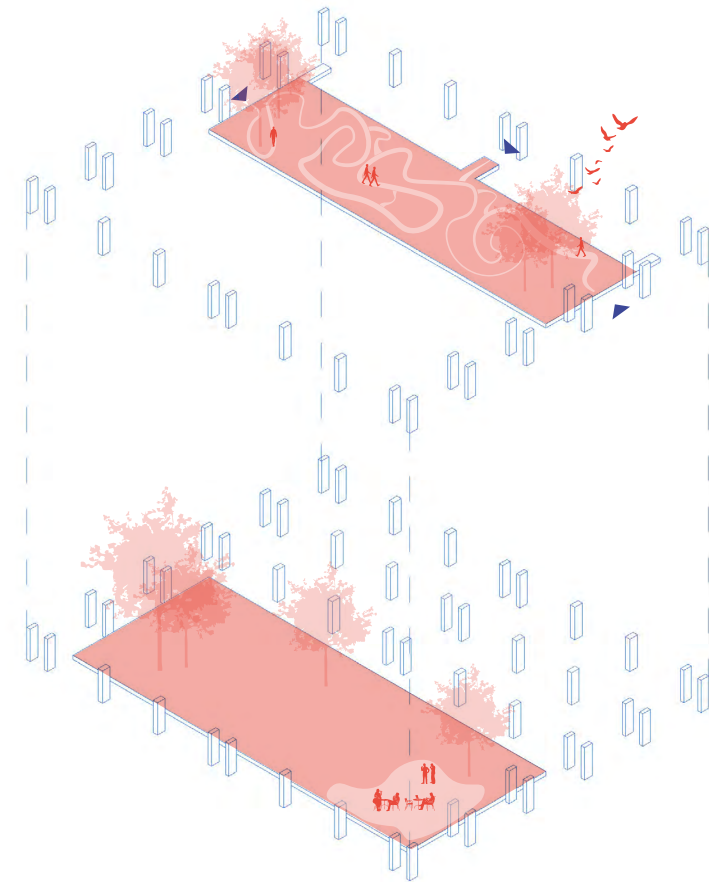


chatter



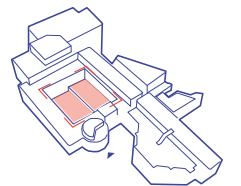
rain drops

**IMAGE 105**  
materialisation (source:  
pinterest)

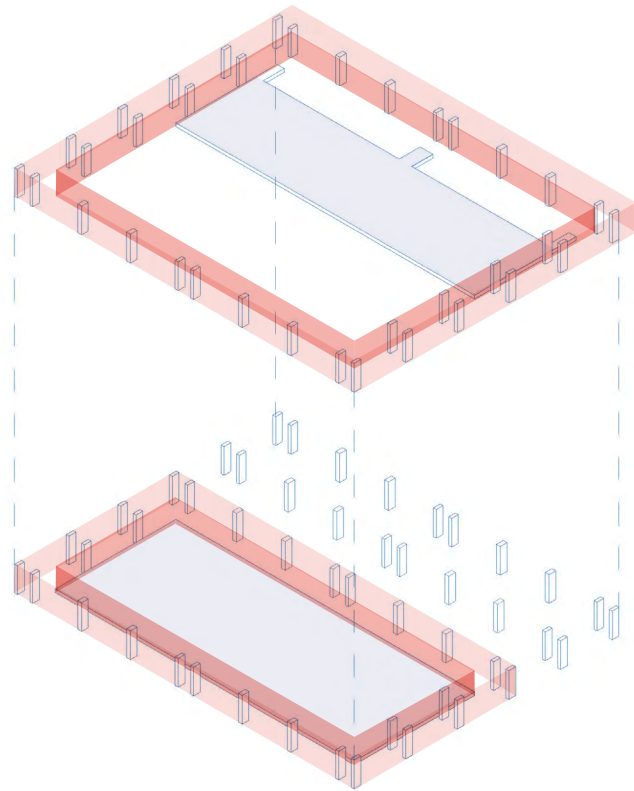


**2** HIGHER GARDEN  
SOUND WALKS  
CONTEMPLATION  
MOVEMENT

**1** LOWER GARDEN  
CAFÉ TERRACE  
MEETING SPOT  
READING PLACES  
LONGER STAYS



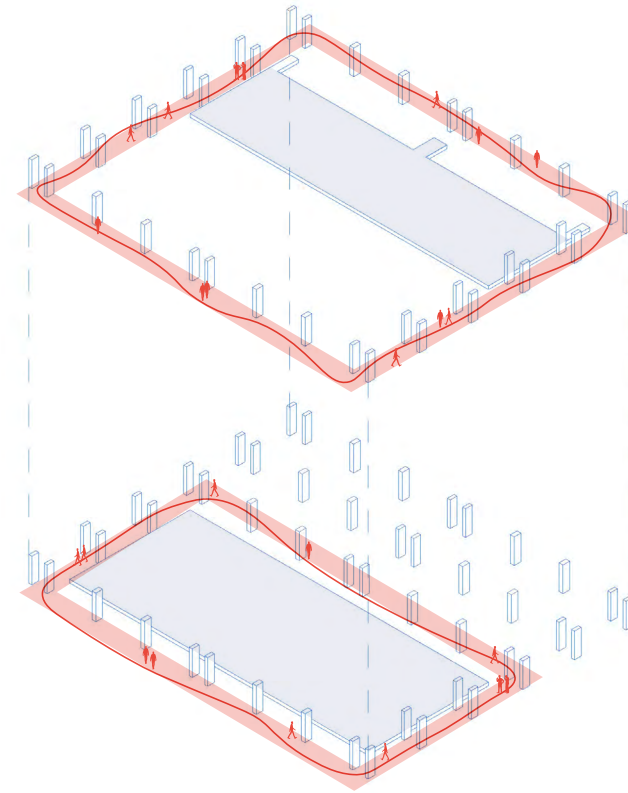
**IMAGE 106**  
garden (own images)



2 HIGHER GARDEN  
NATIONAL LIBRARY  
CONCENTRATION WORKSPACES

1 LOWER GARDEN  
PUBLIC LIBRARY  
CAFÉ  
RESTAURANT

IMAGE 107  
*climate buffer (own image)*



2 HIGHER GARDEN  
NATIONAL LIBRARY  
CONCENTRATION WORKSPACI

1 LOWER GARDEN  
PUBLIC LIBRARY  
CAFÉ  
RESTAURANT

IMAGE 108  
*circulation (own image)*



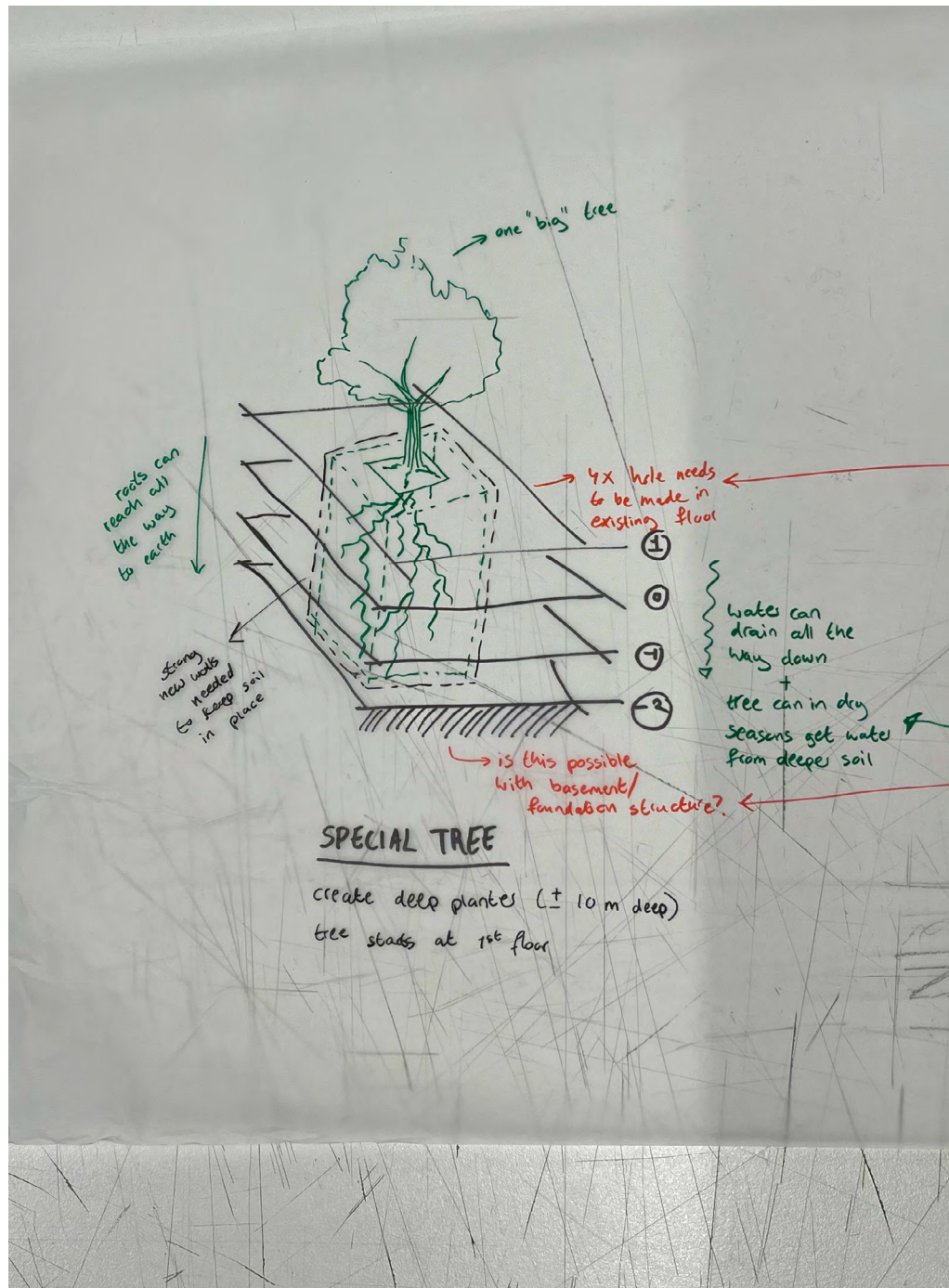


IMAGE 108 garden studies (own image)

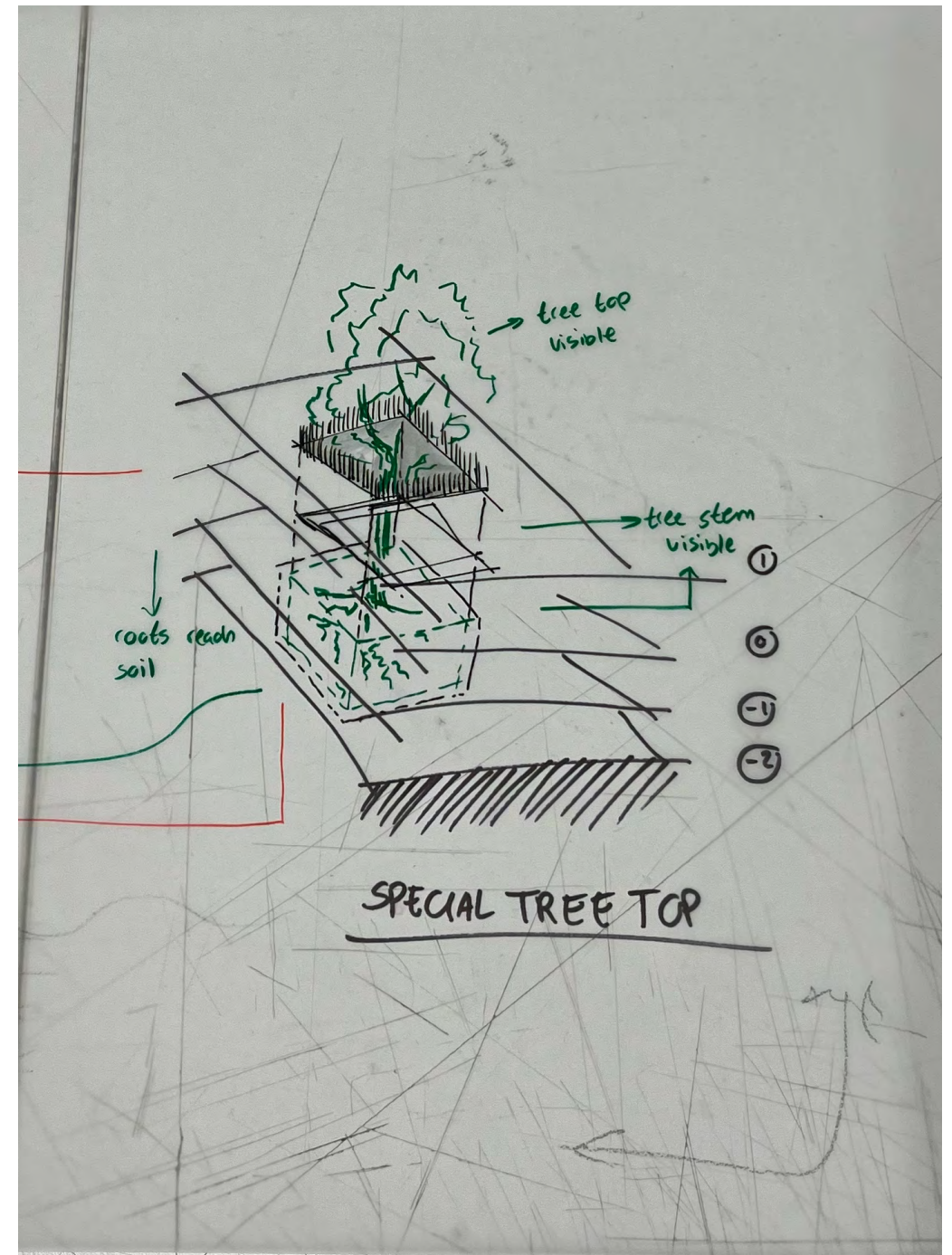


IMAGE 109 garden studies (own image)

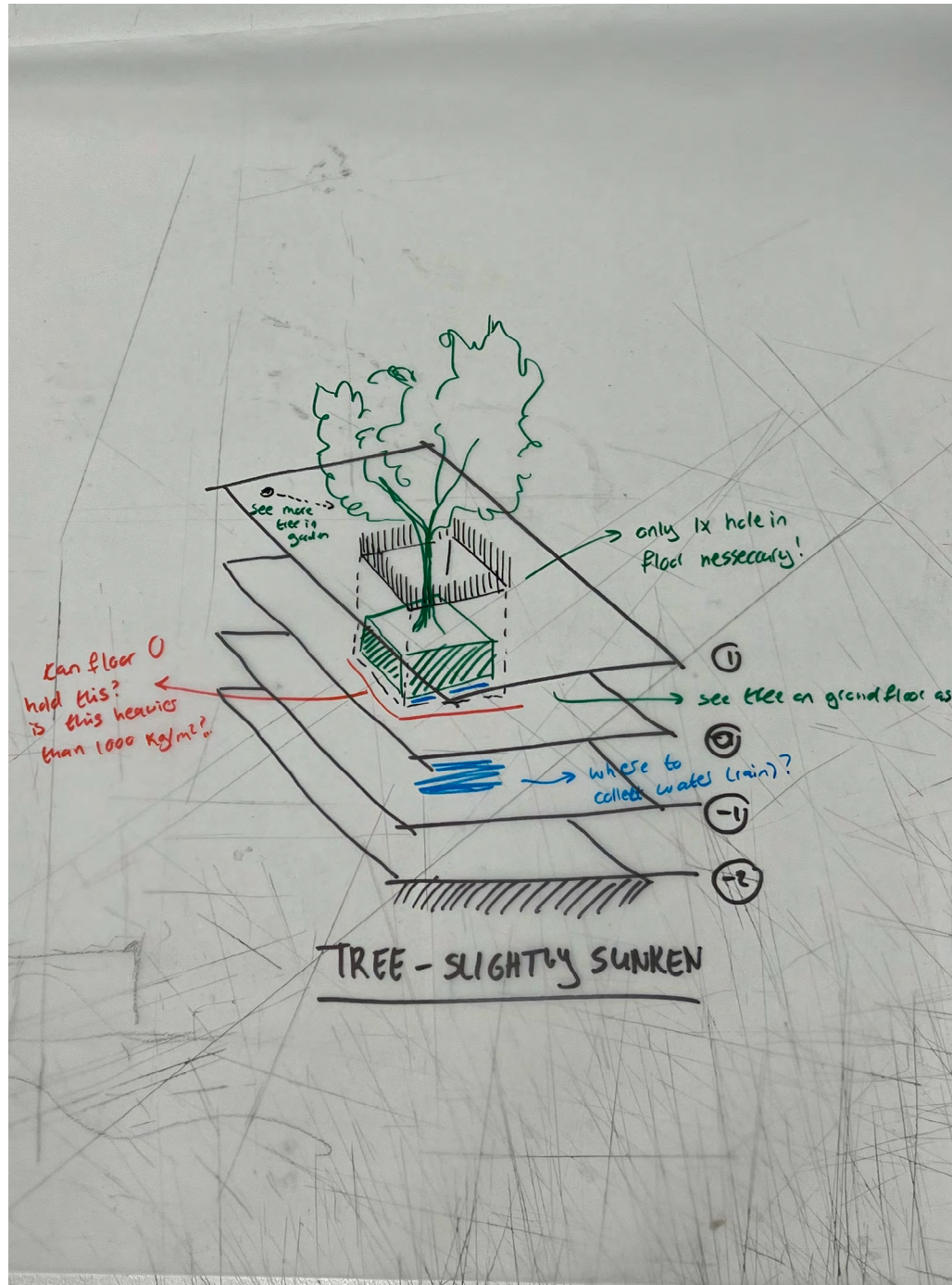


IMAGE 110 garden studies (own image)

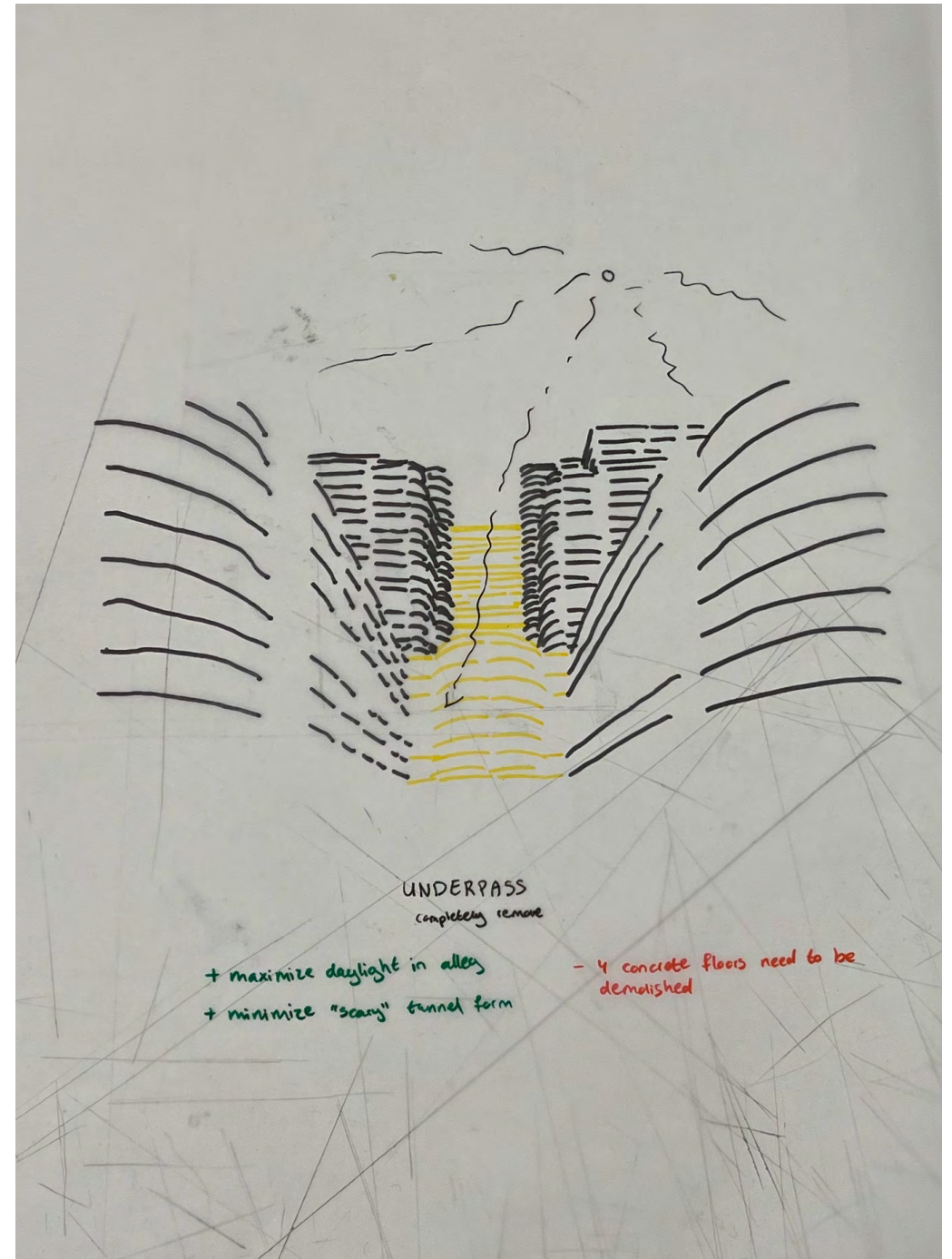
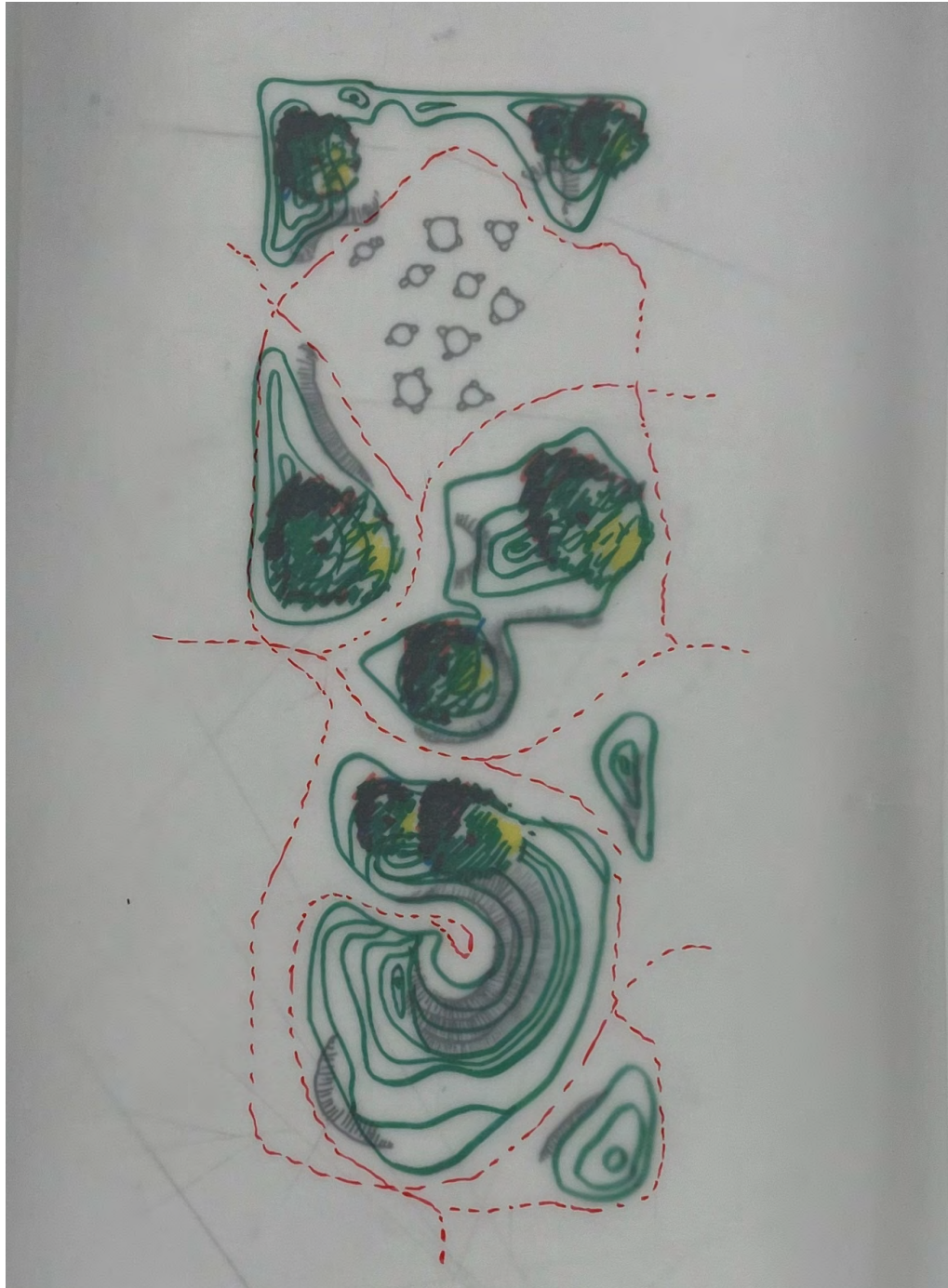
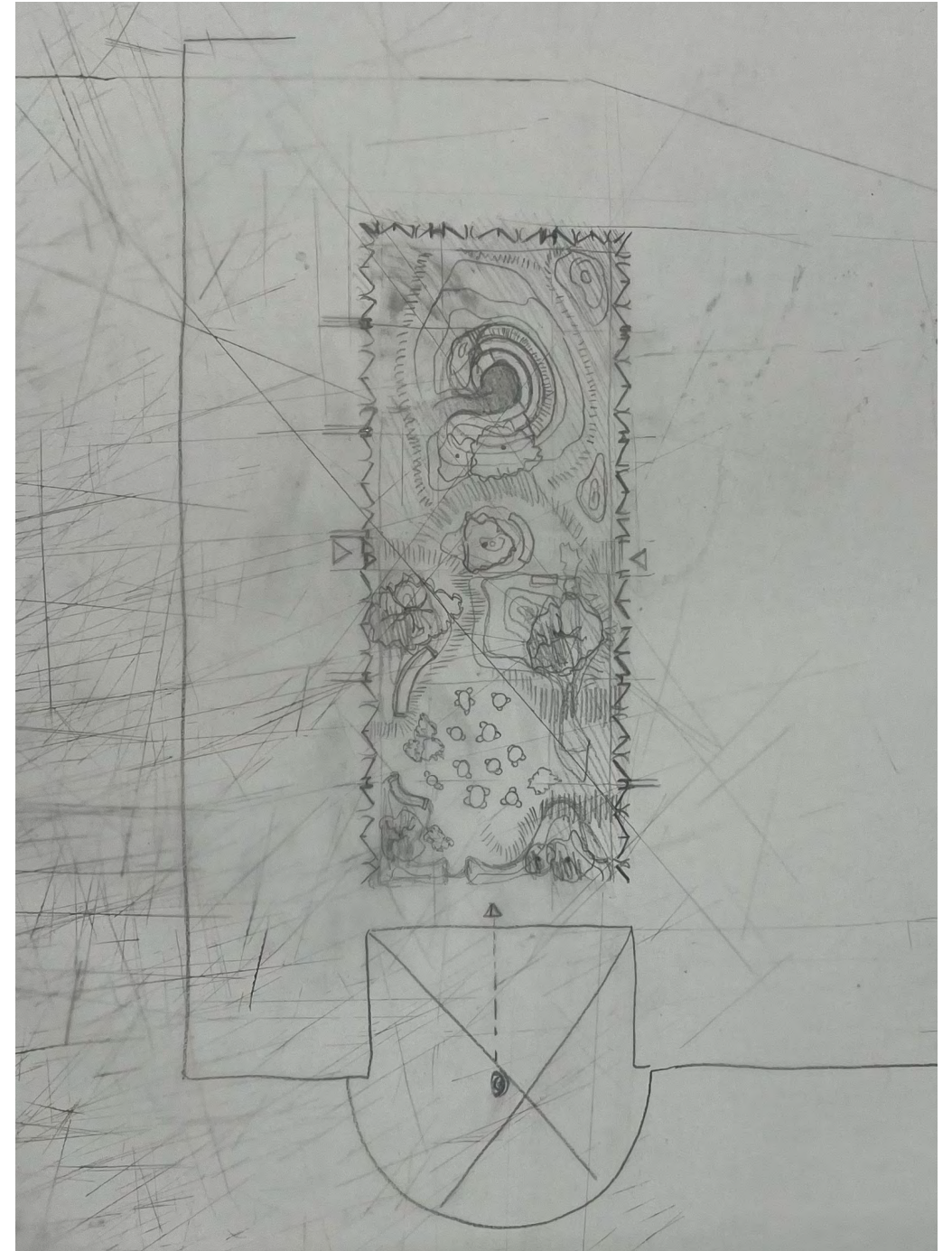


IMAGE 111 underpass study (own image)



**IMAGE 112**  
*garden studies (own image)*



**IMAGE 113**  
*garden design (own image)*

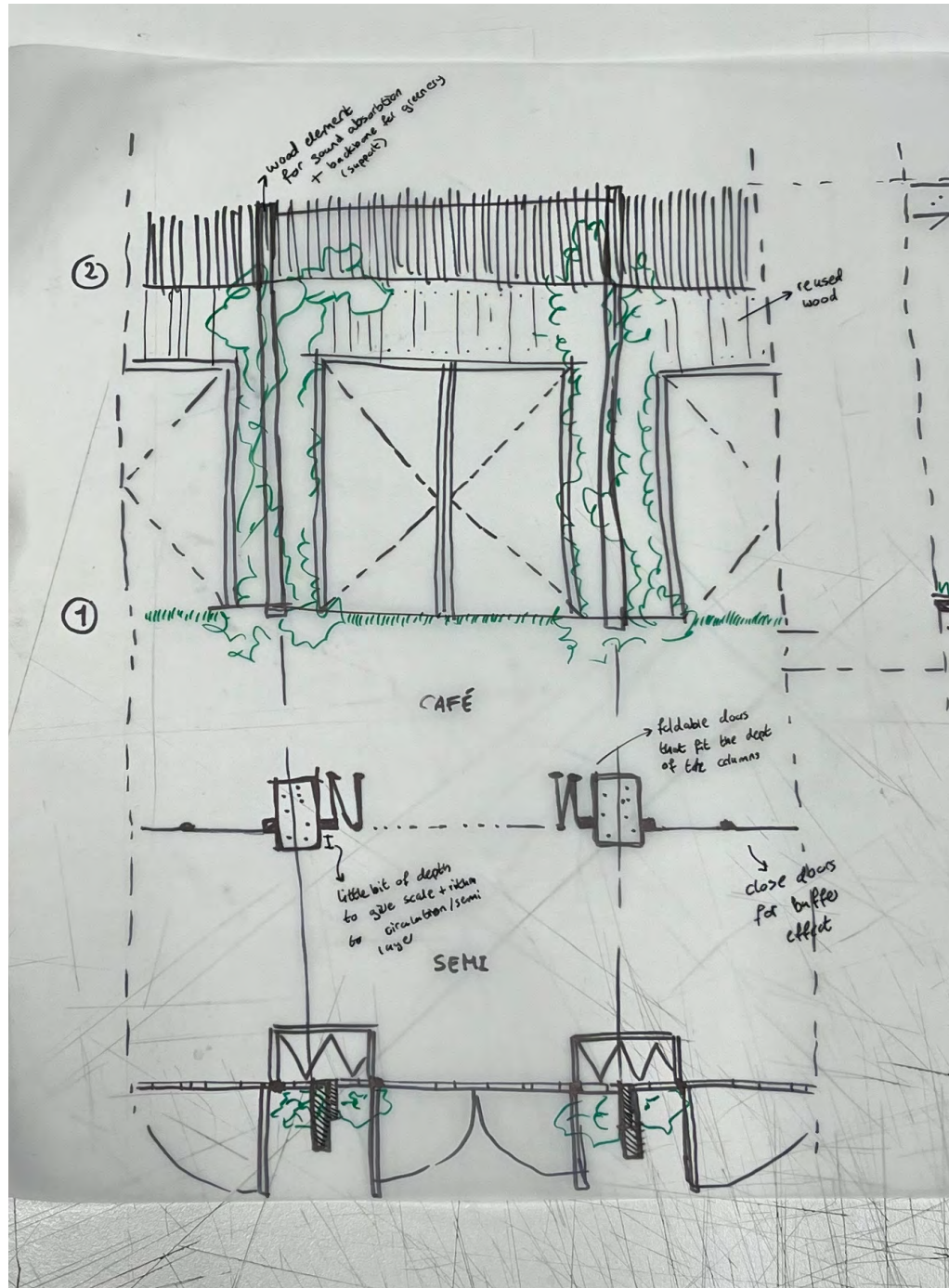


IMAGE 114 facade studies (own image)

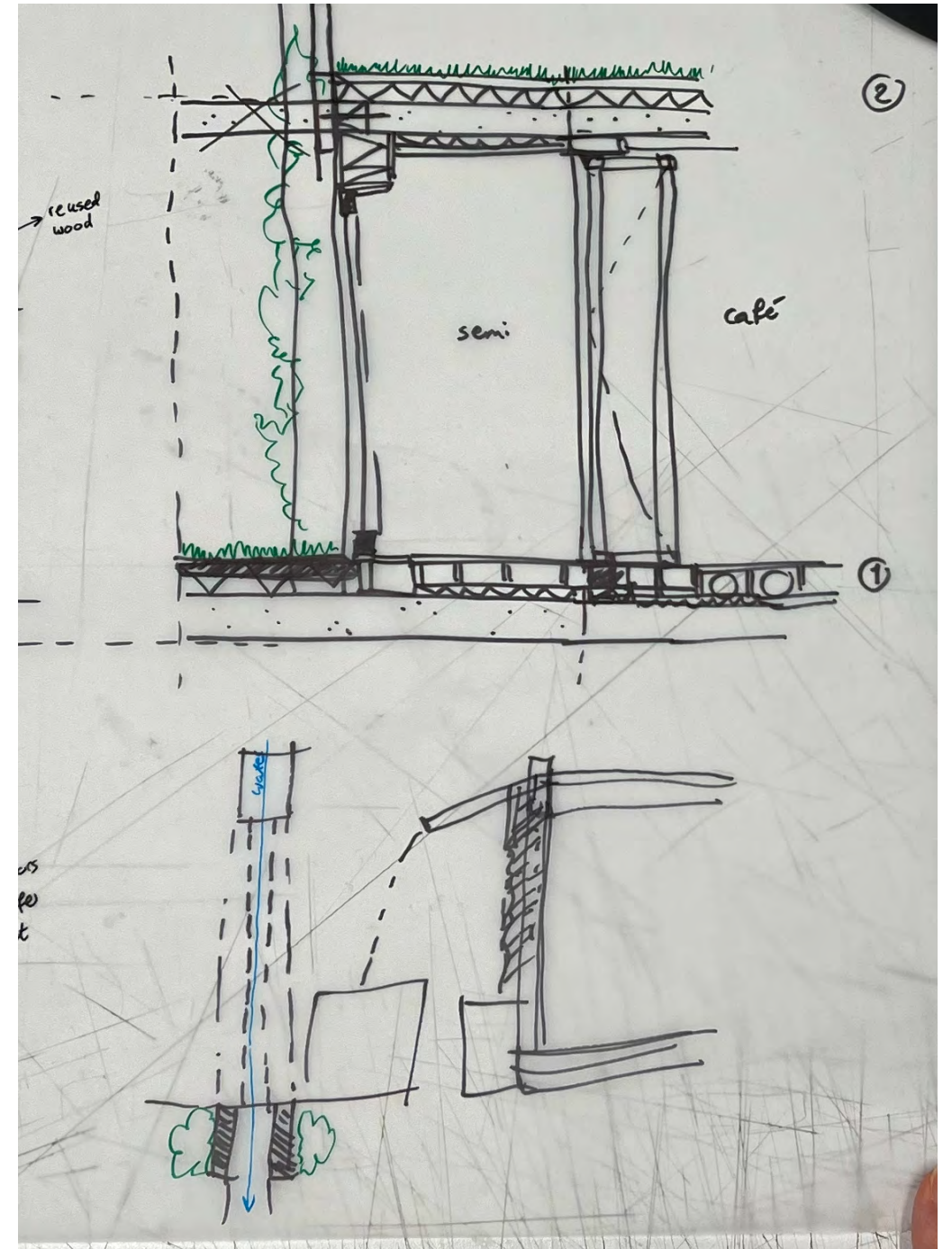


IMAGE 115 facade studies (own image)

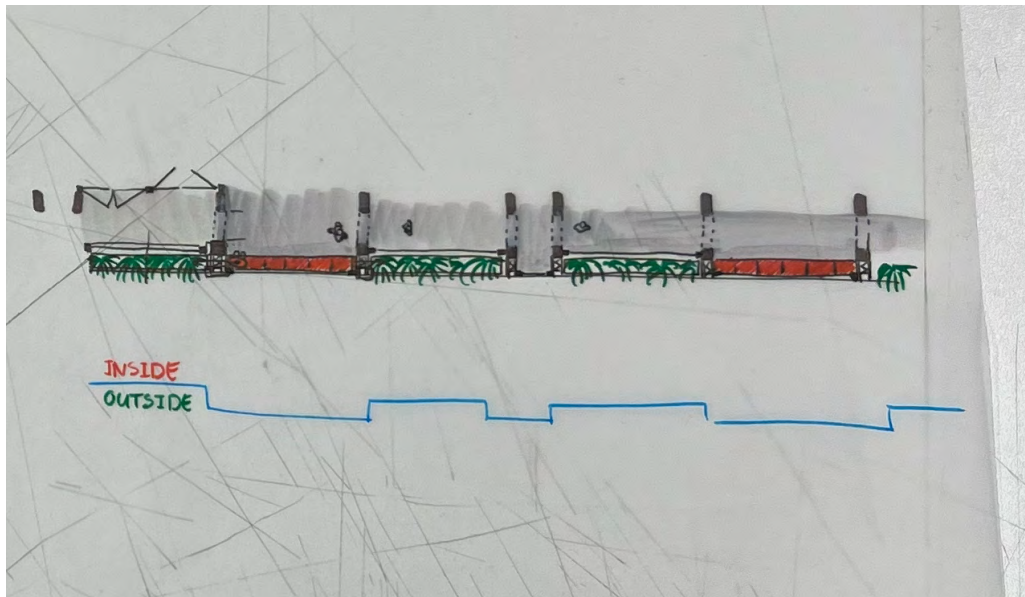


IMAGE 116  
facade studies (own image)

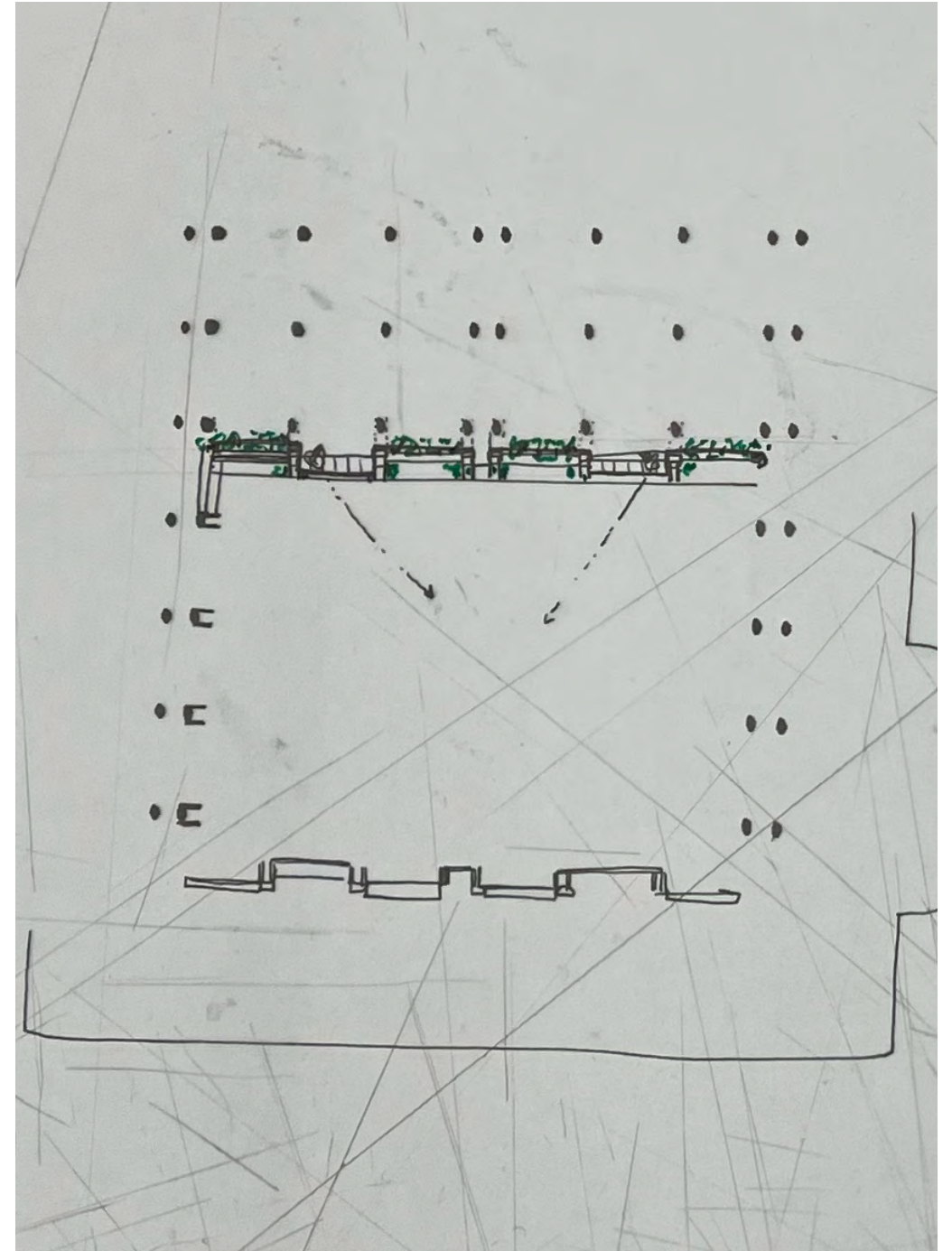
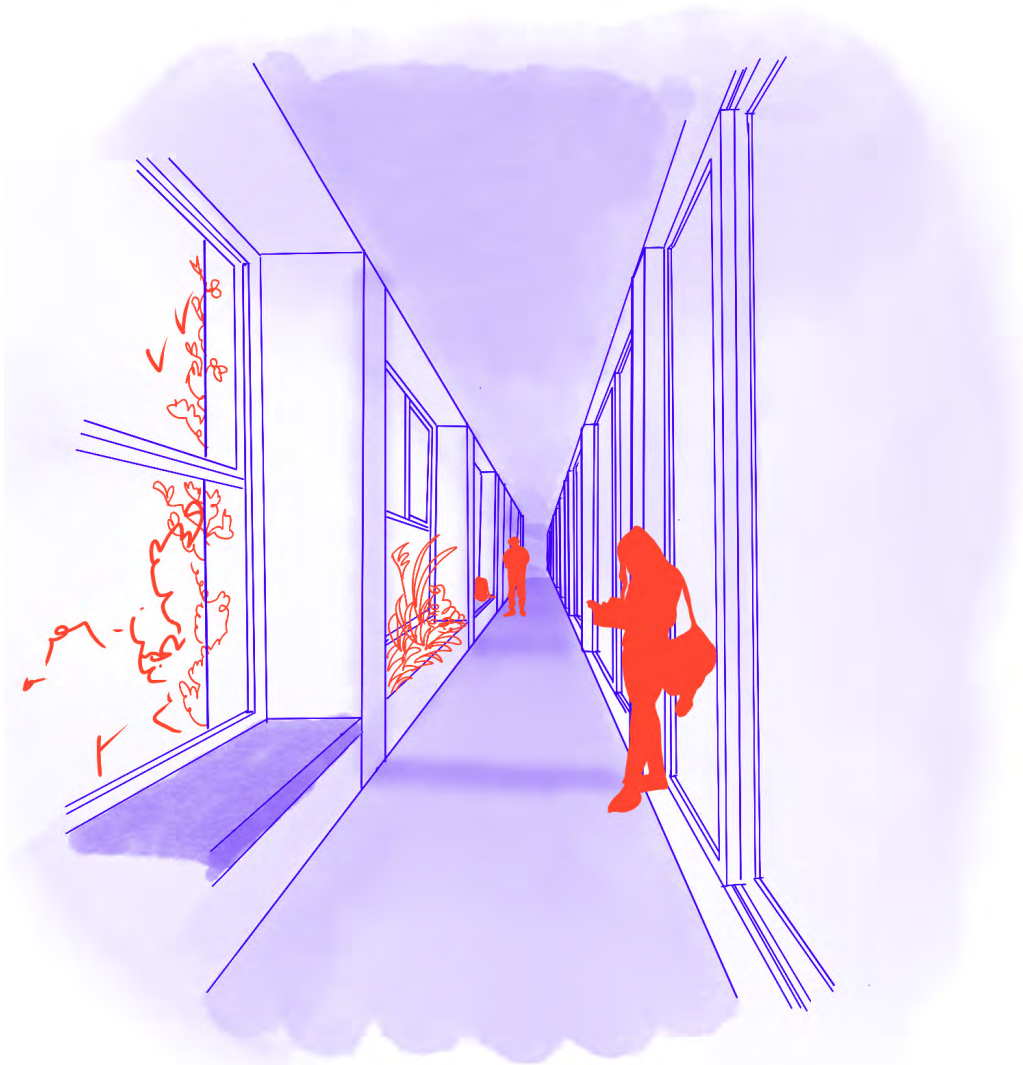
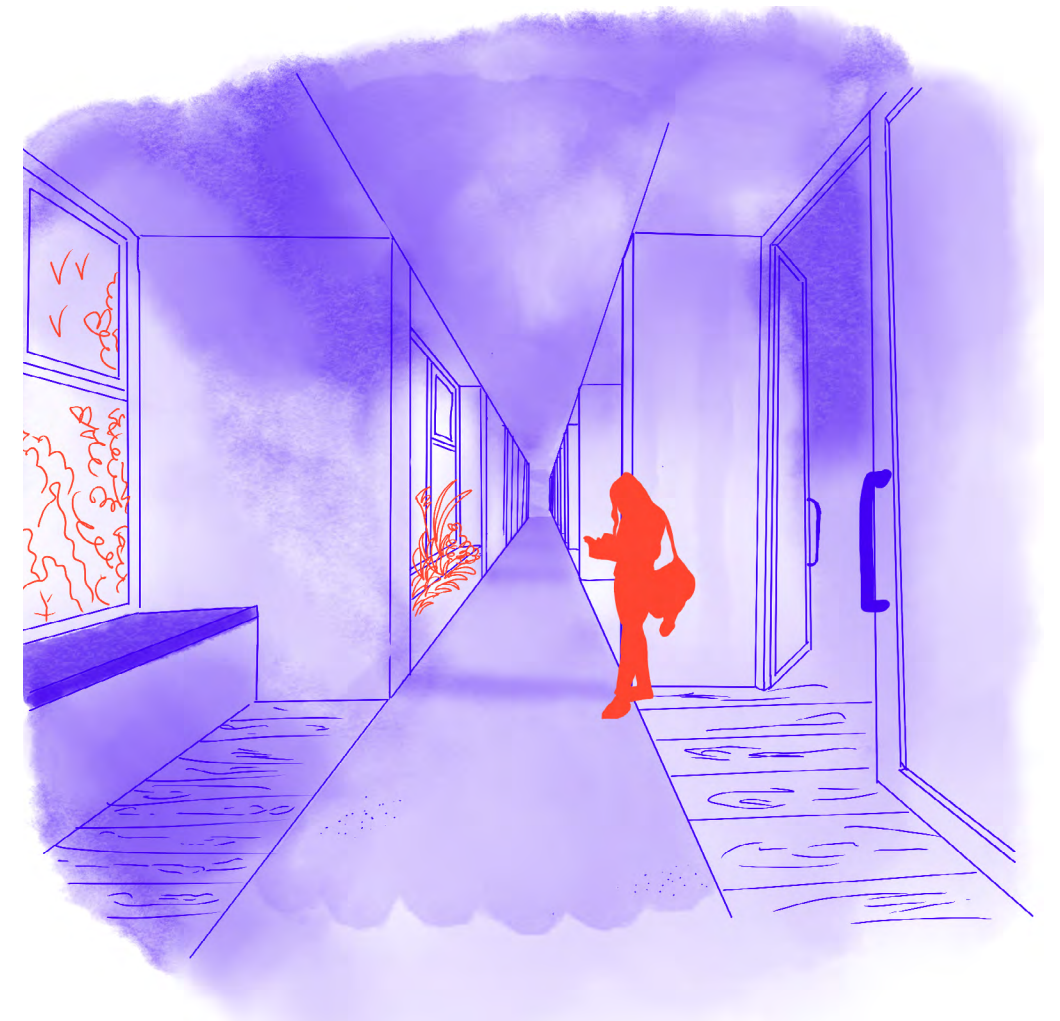


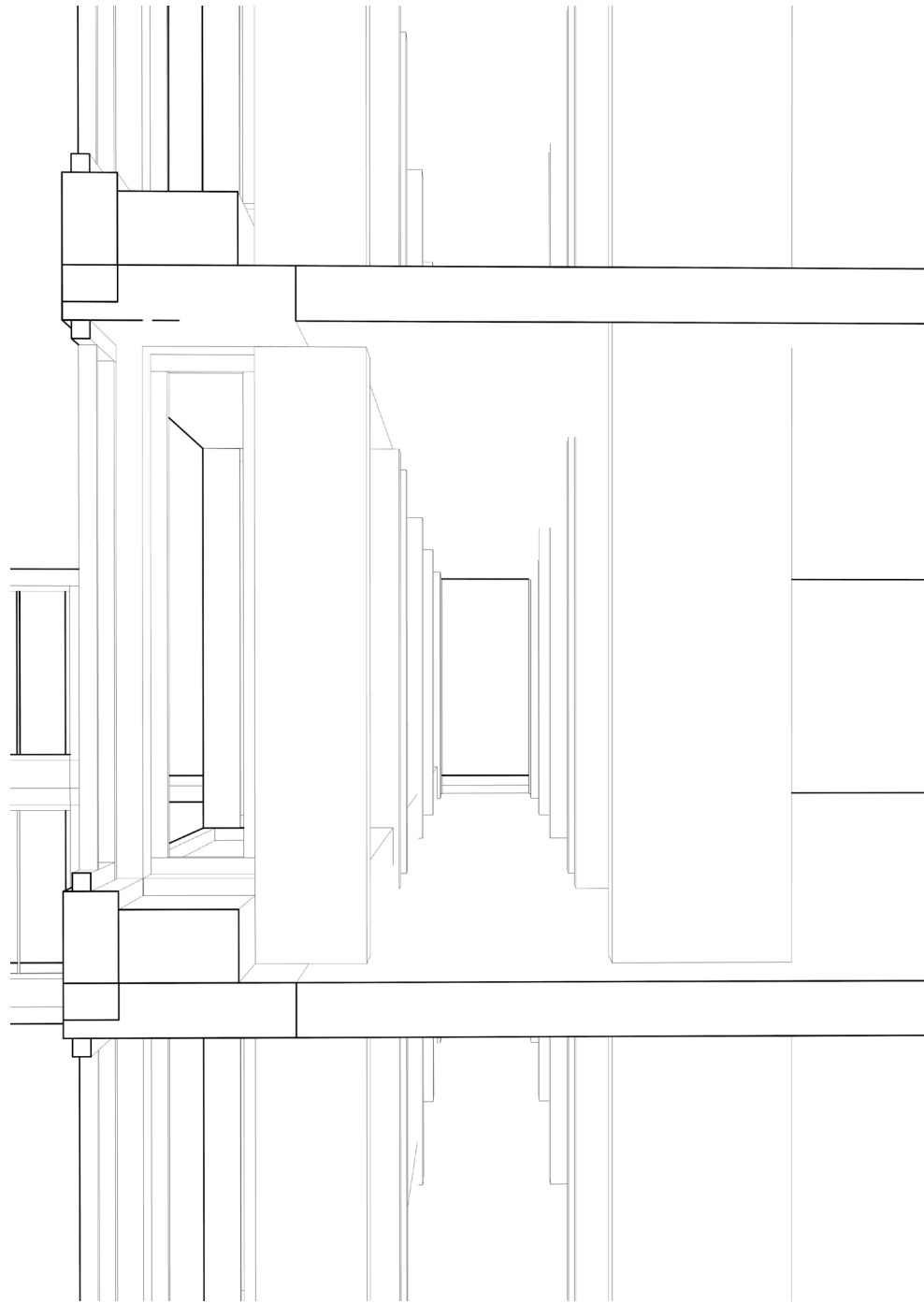
IMAGE 117  
facade studies (own image)



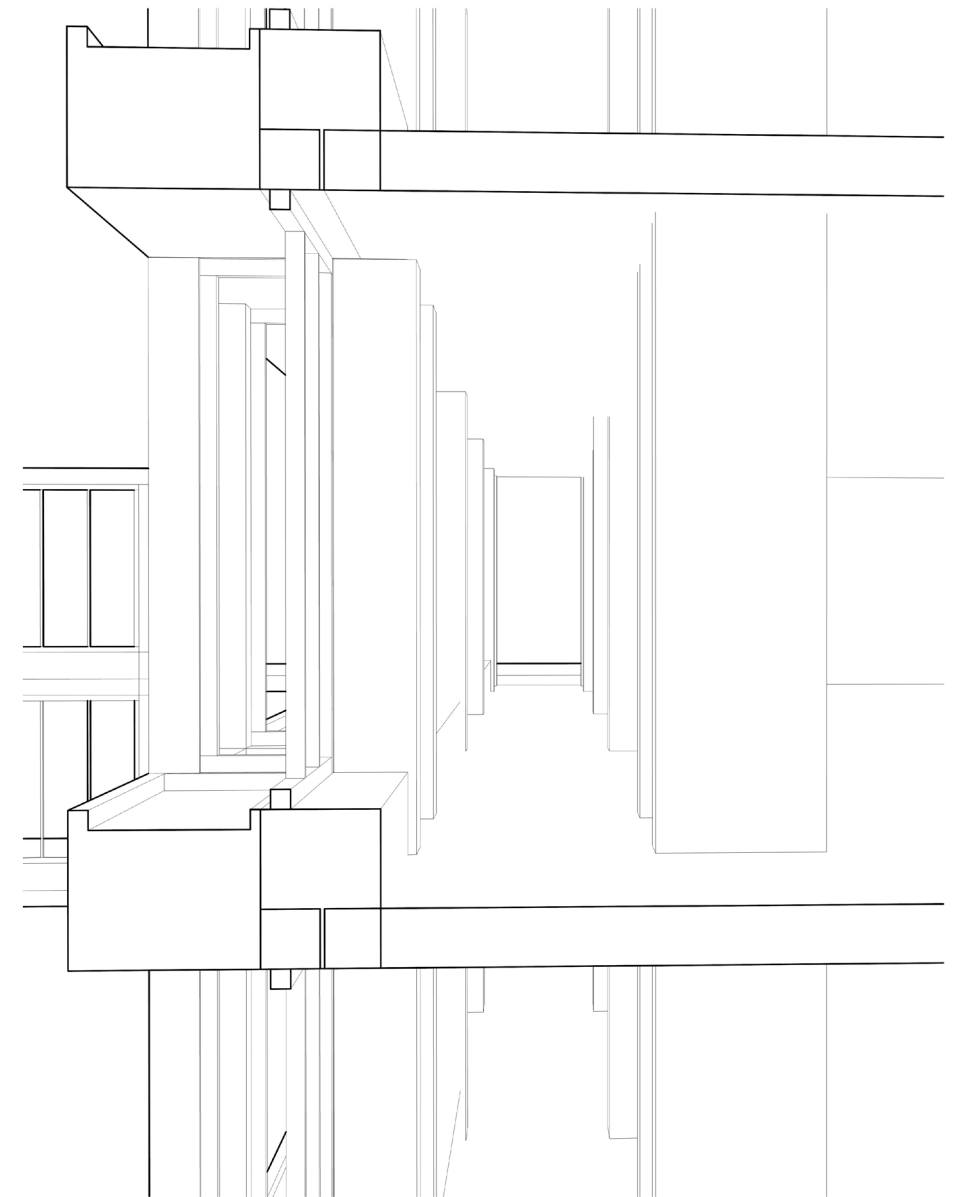
**IMAGE 118**  
*semi zone studies (own image)*



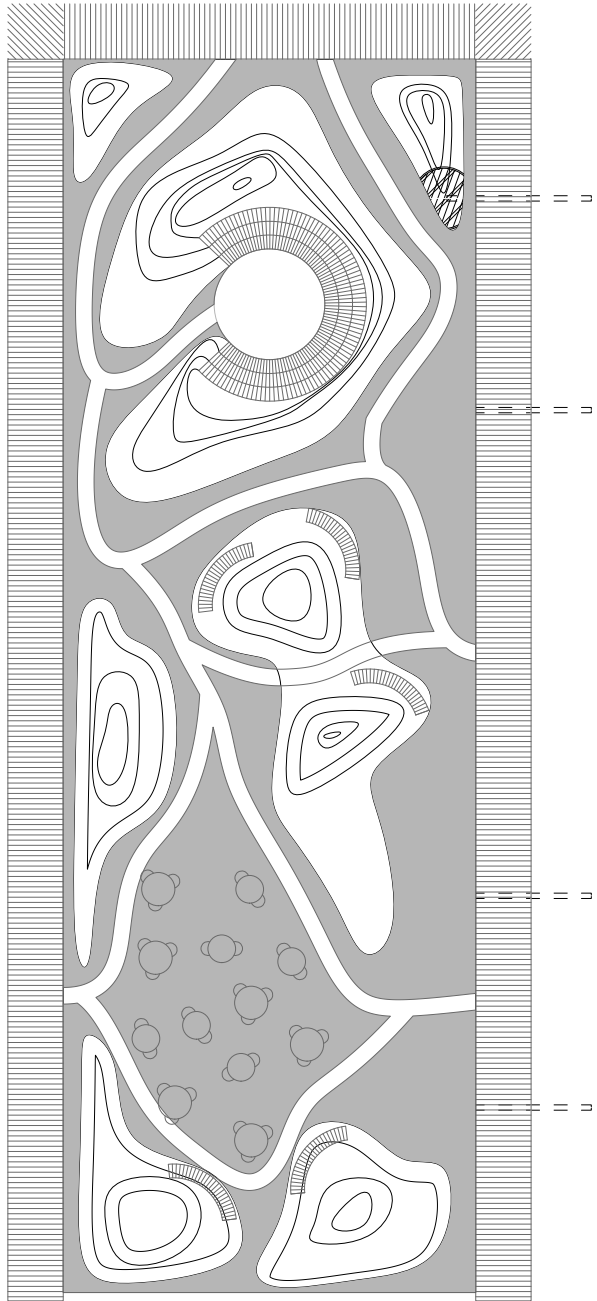
**IMAGE 119**  
*semi zone studies (own image)*



**IMAGE 120**  
*section interior bench (own  
image)*



**IMAGE 121**  
*section interior planter (own  
image)*



**IMAGE 122**  
*lower garden design (own  
image)*

**WEEK 31**  
*fragment studies*

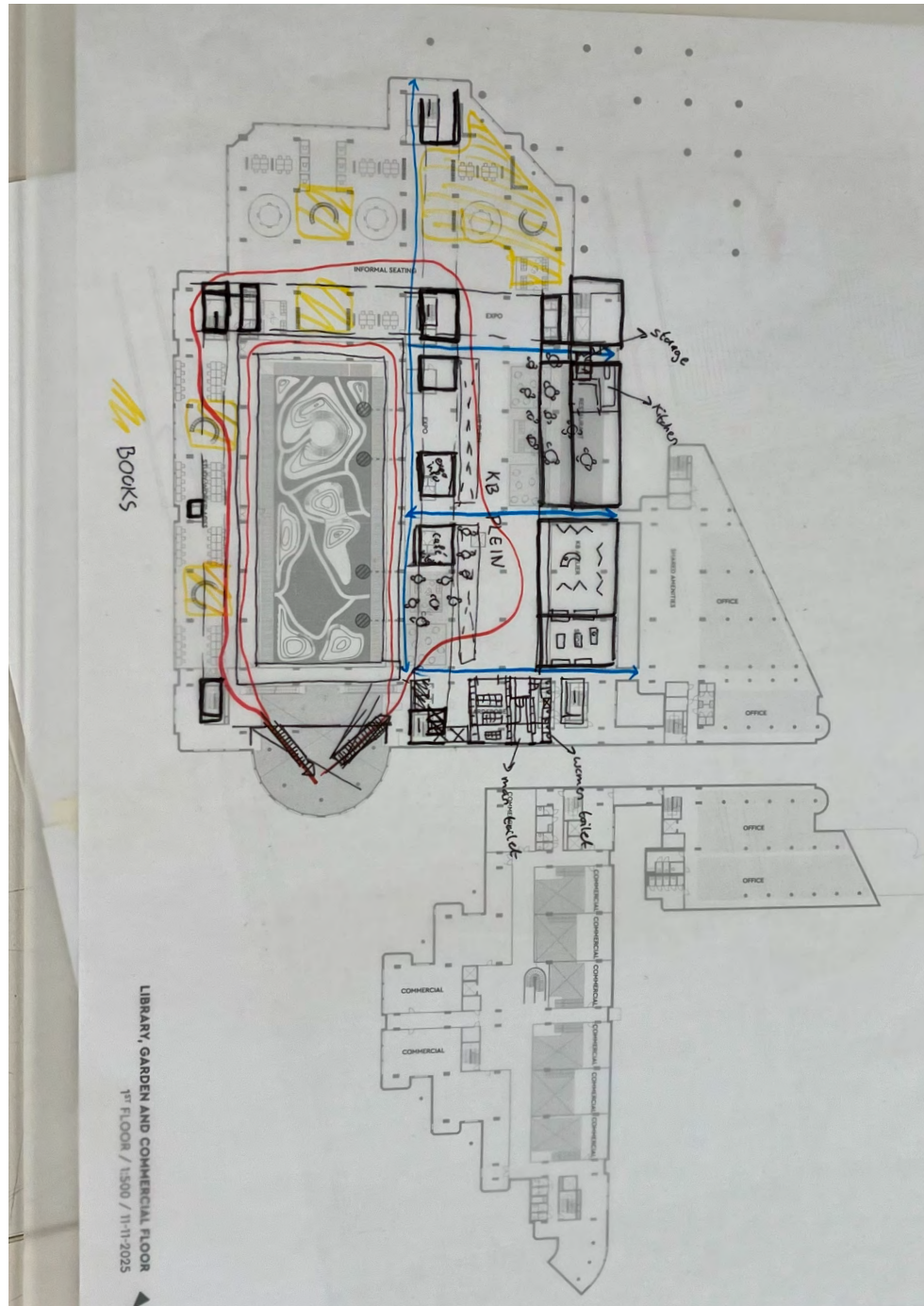


IMAGE 122 floorplan first floor (own image)

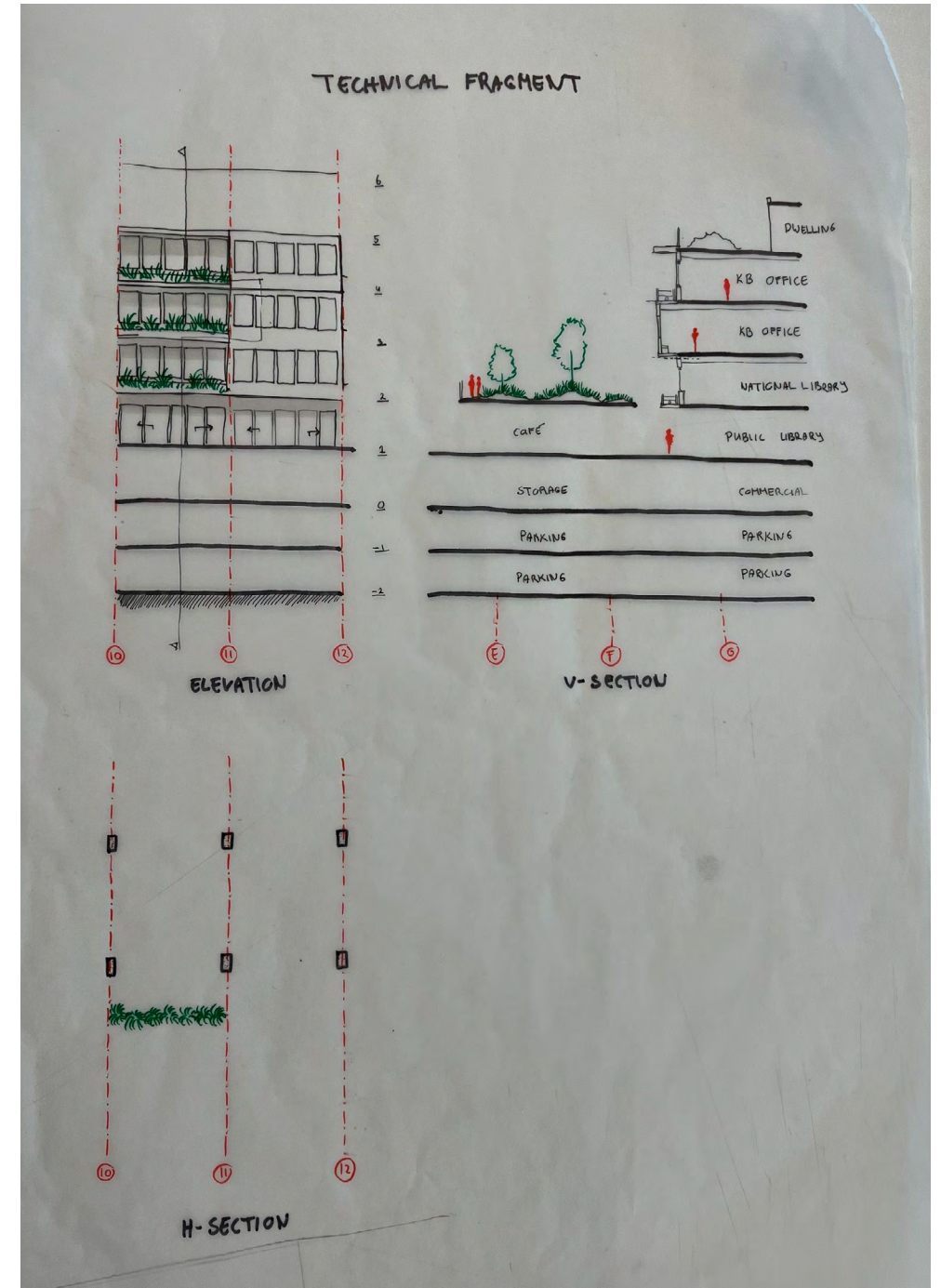


IMAGE 123 fragment (own image)

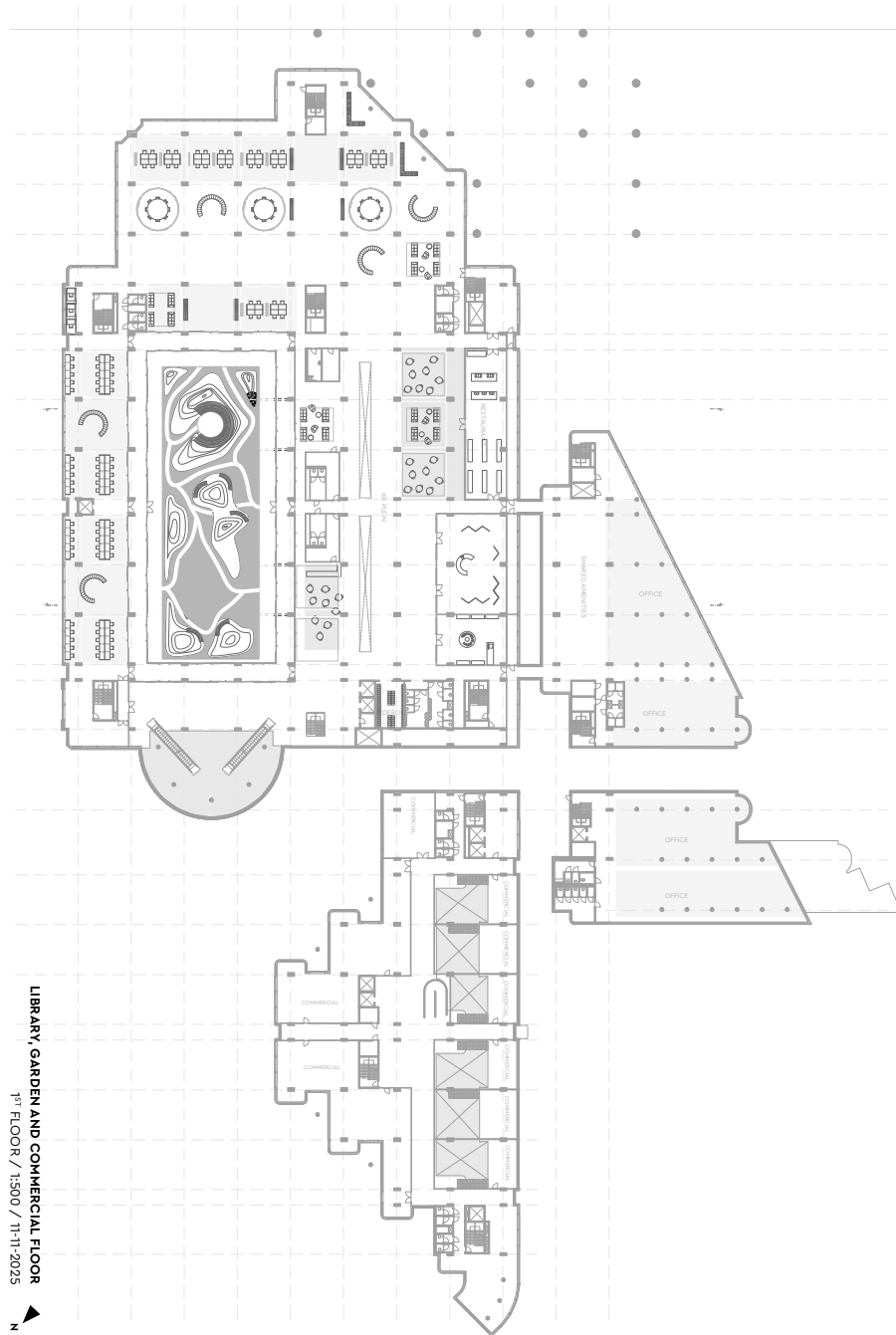


IMAGE 124  
floorplan first floor (own image)

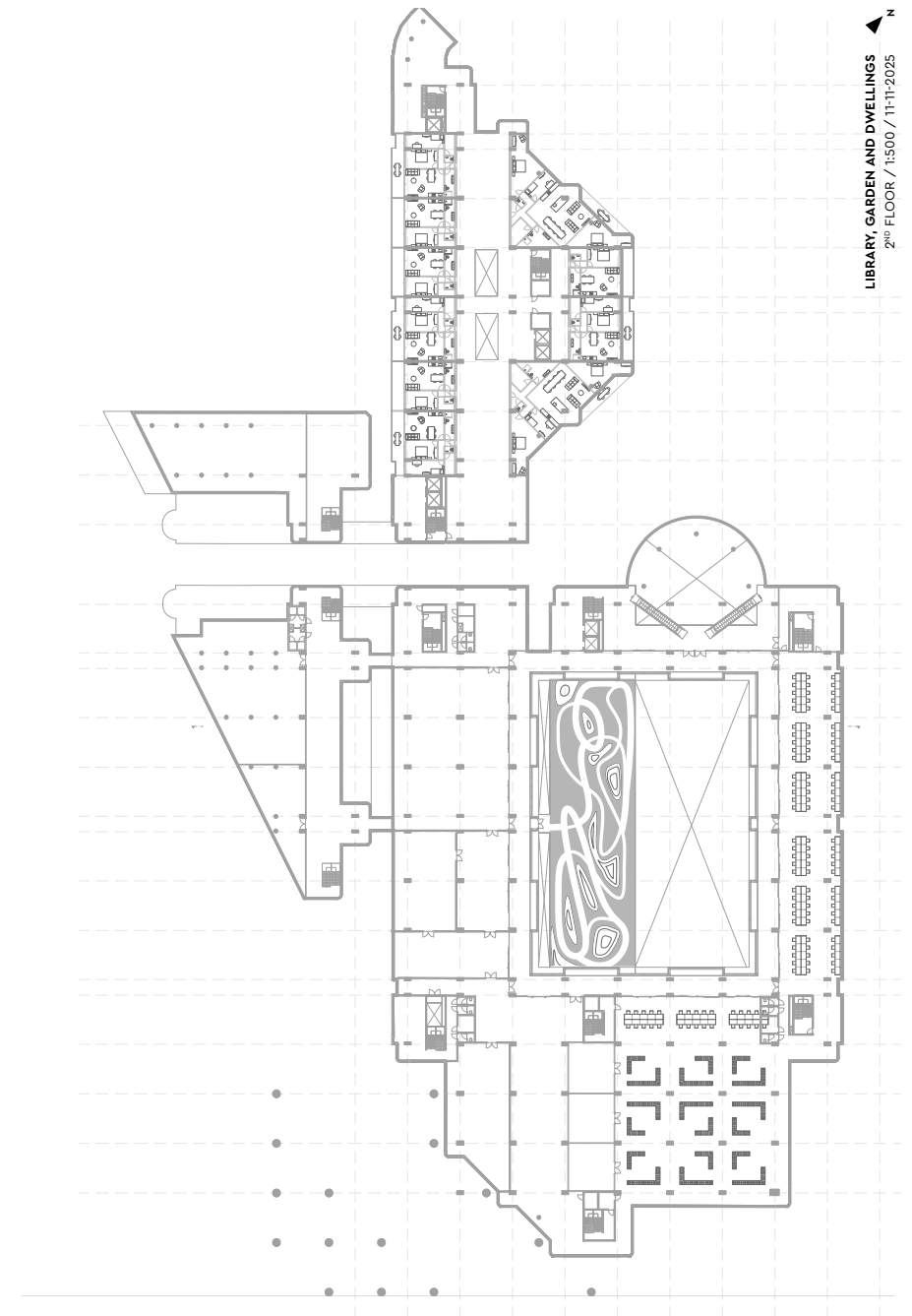
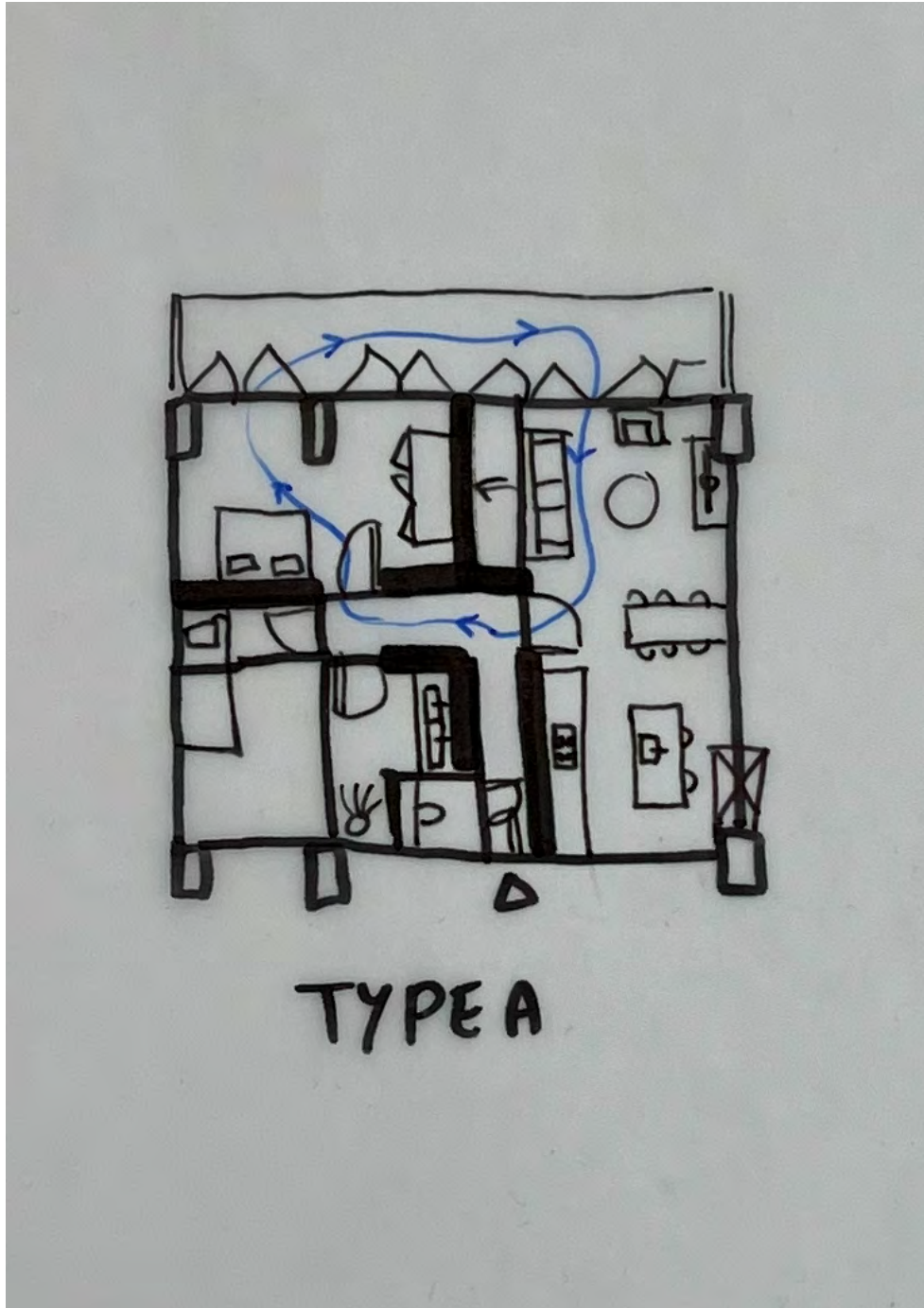
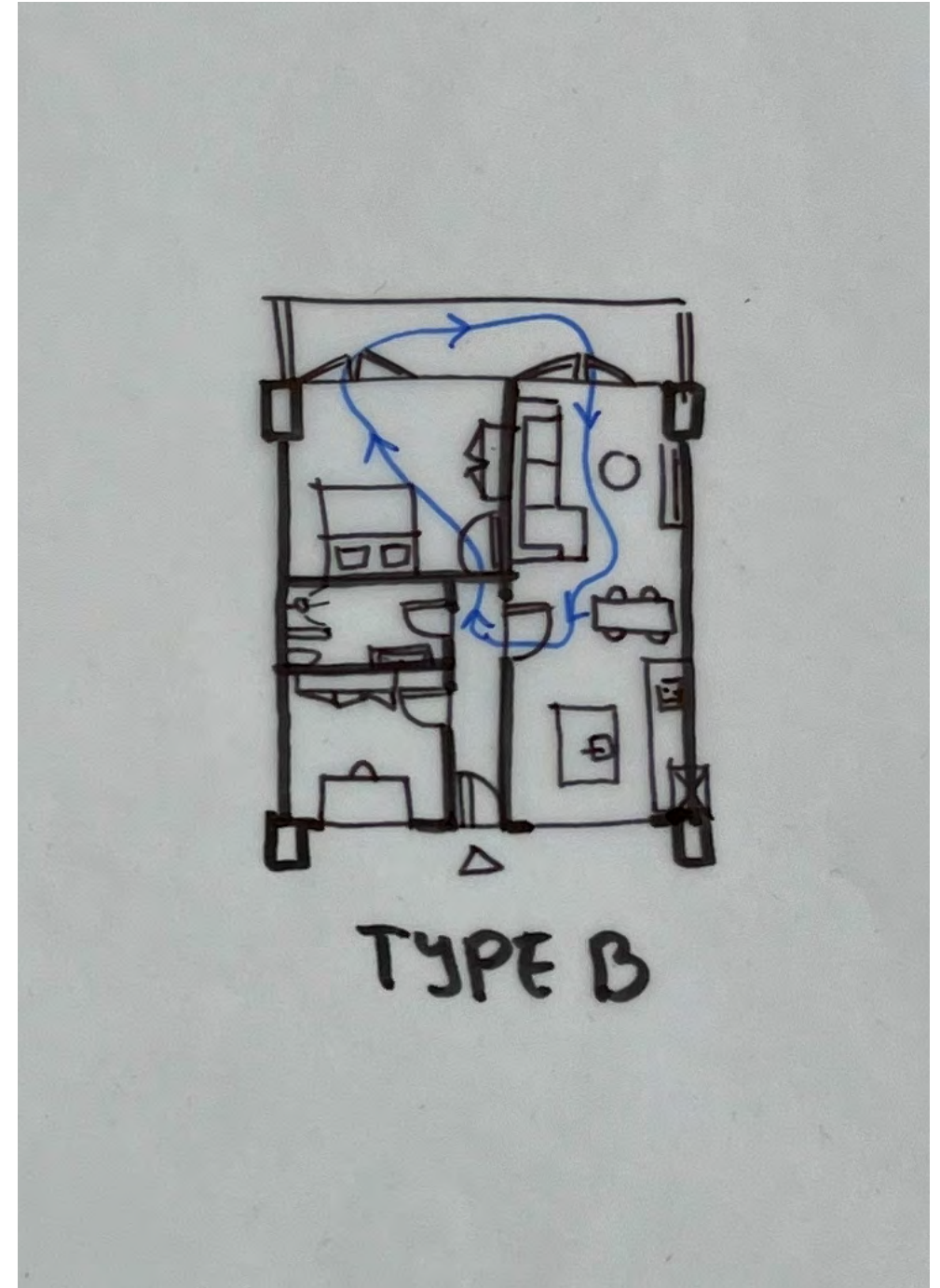


IMAGE 125  
floorplan second floor (own image)



**IMAGE 126**  
floorplan dwelling type A (own image)



**IMAGE 127**  
floorplan dwelling type B (own image)

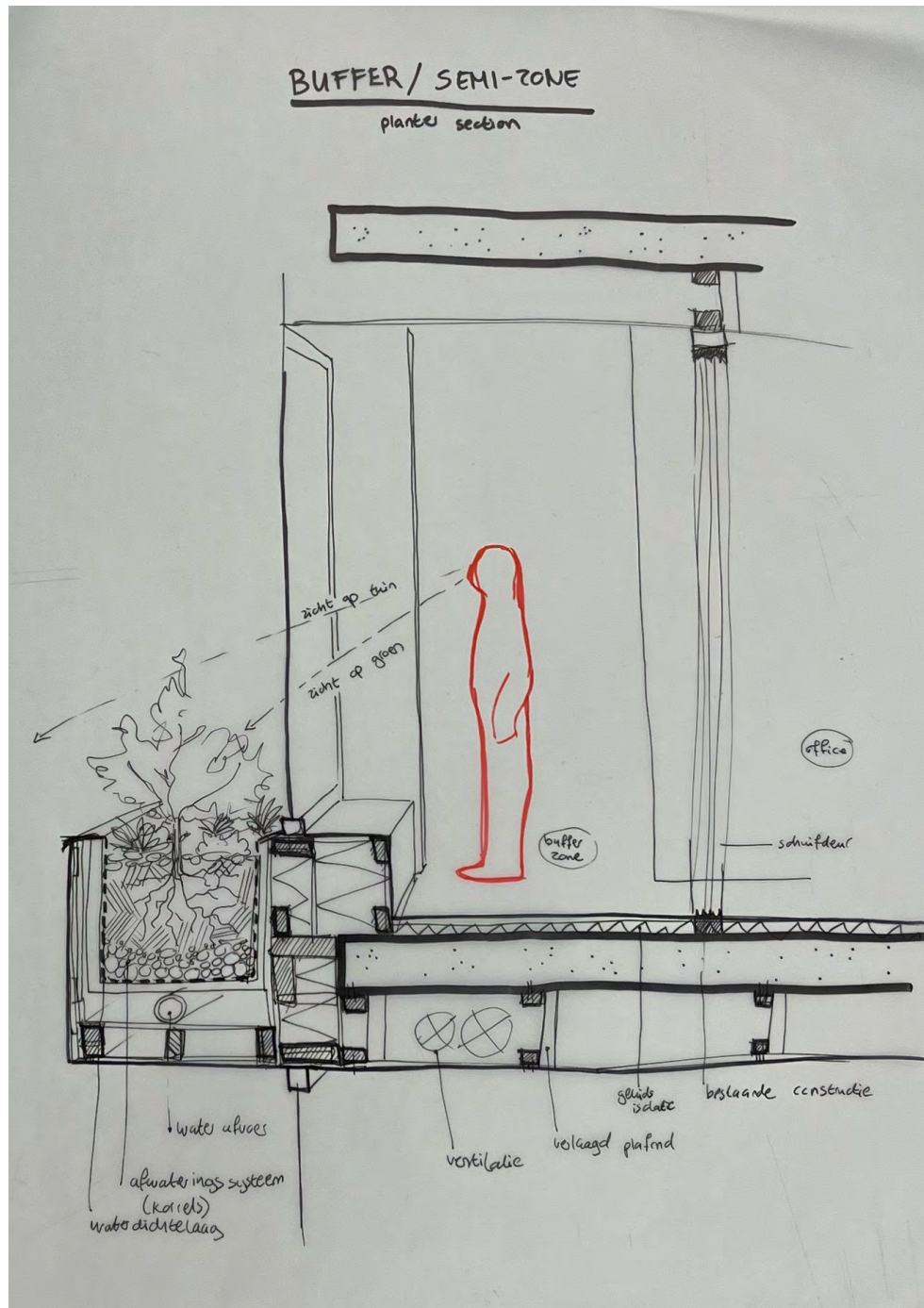


IMAGE 128  
detail planter (own image)

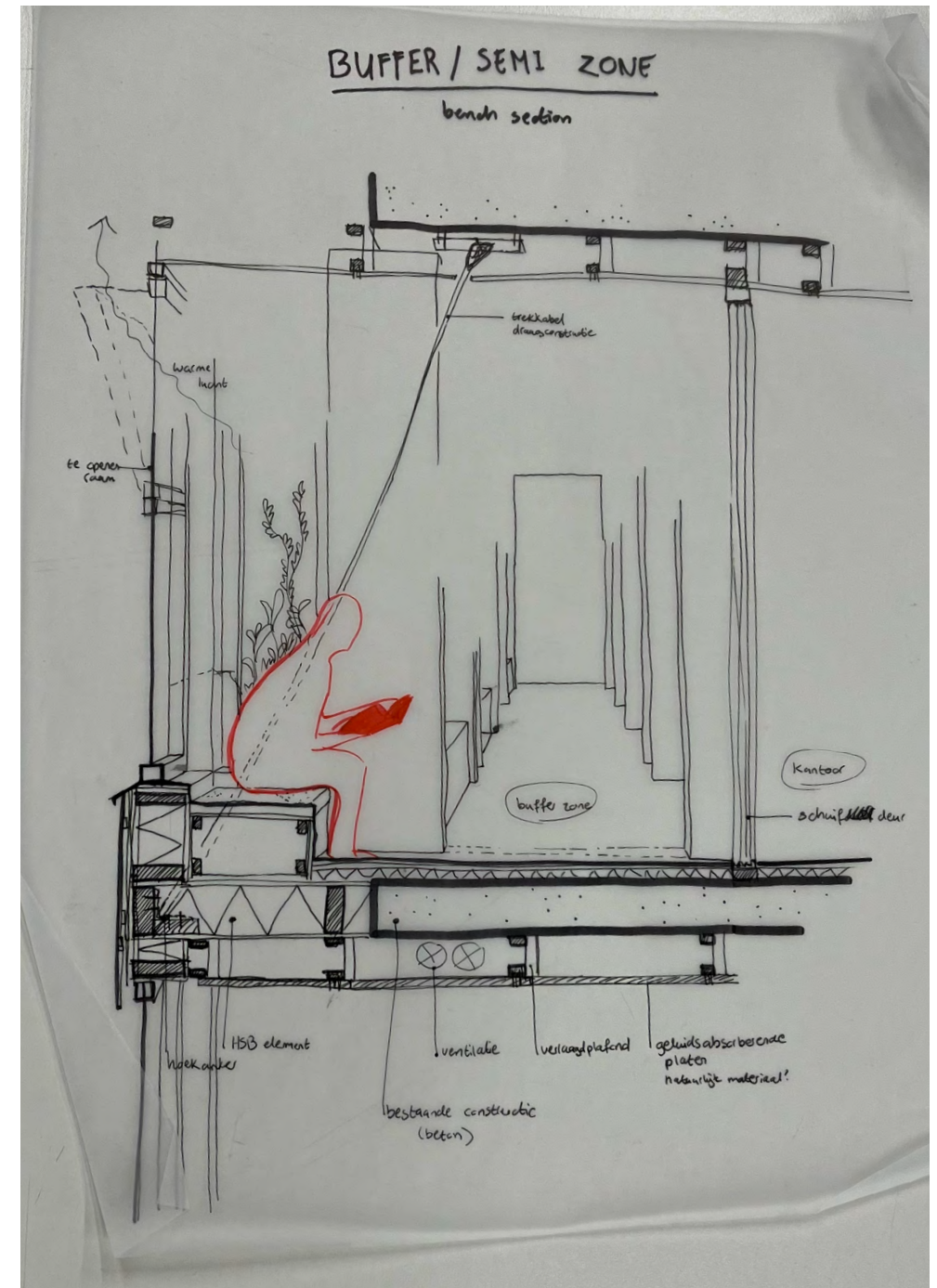
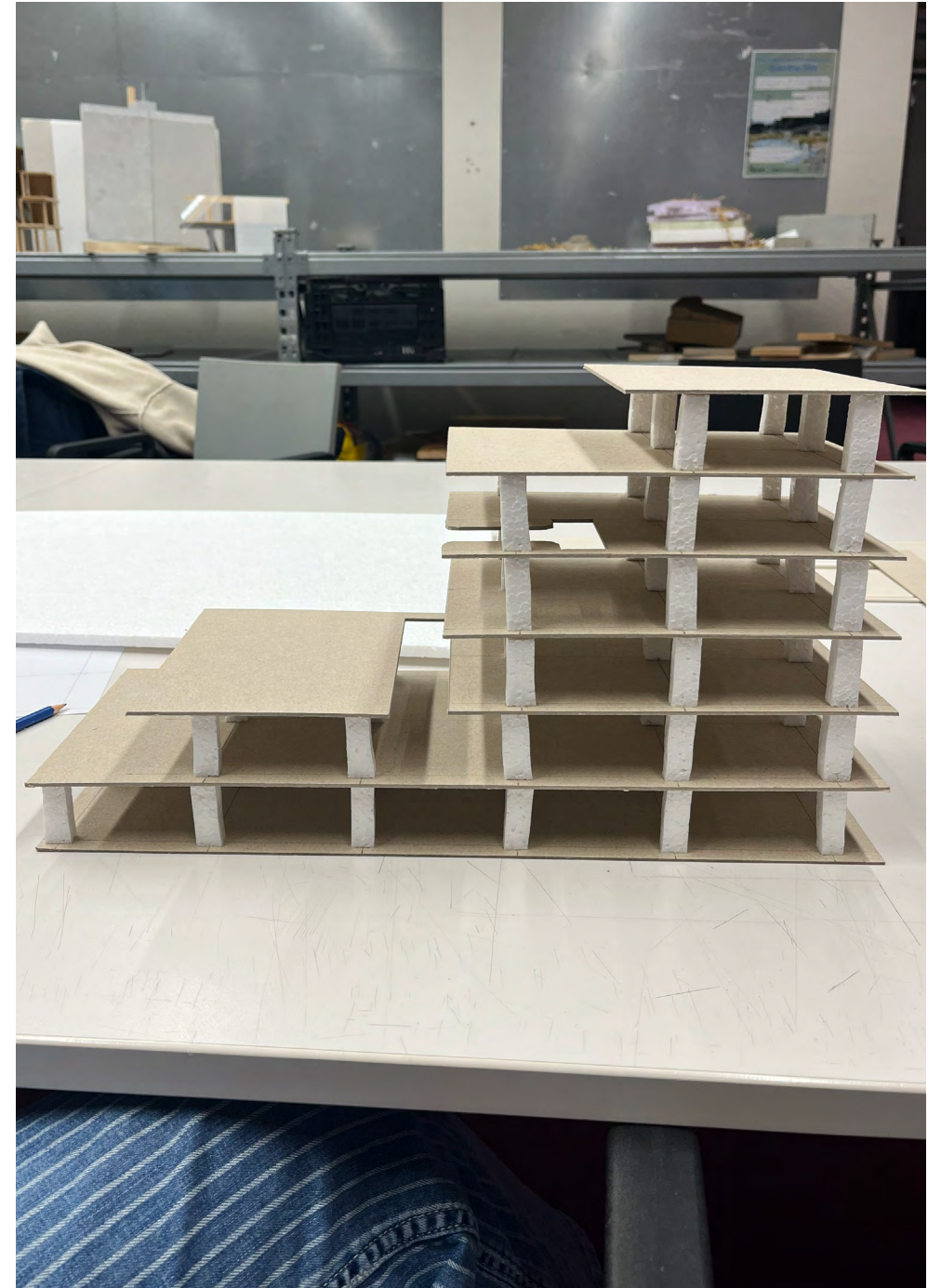


IMAGE 129  
floorplan dwelling type B (own image)



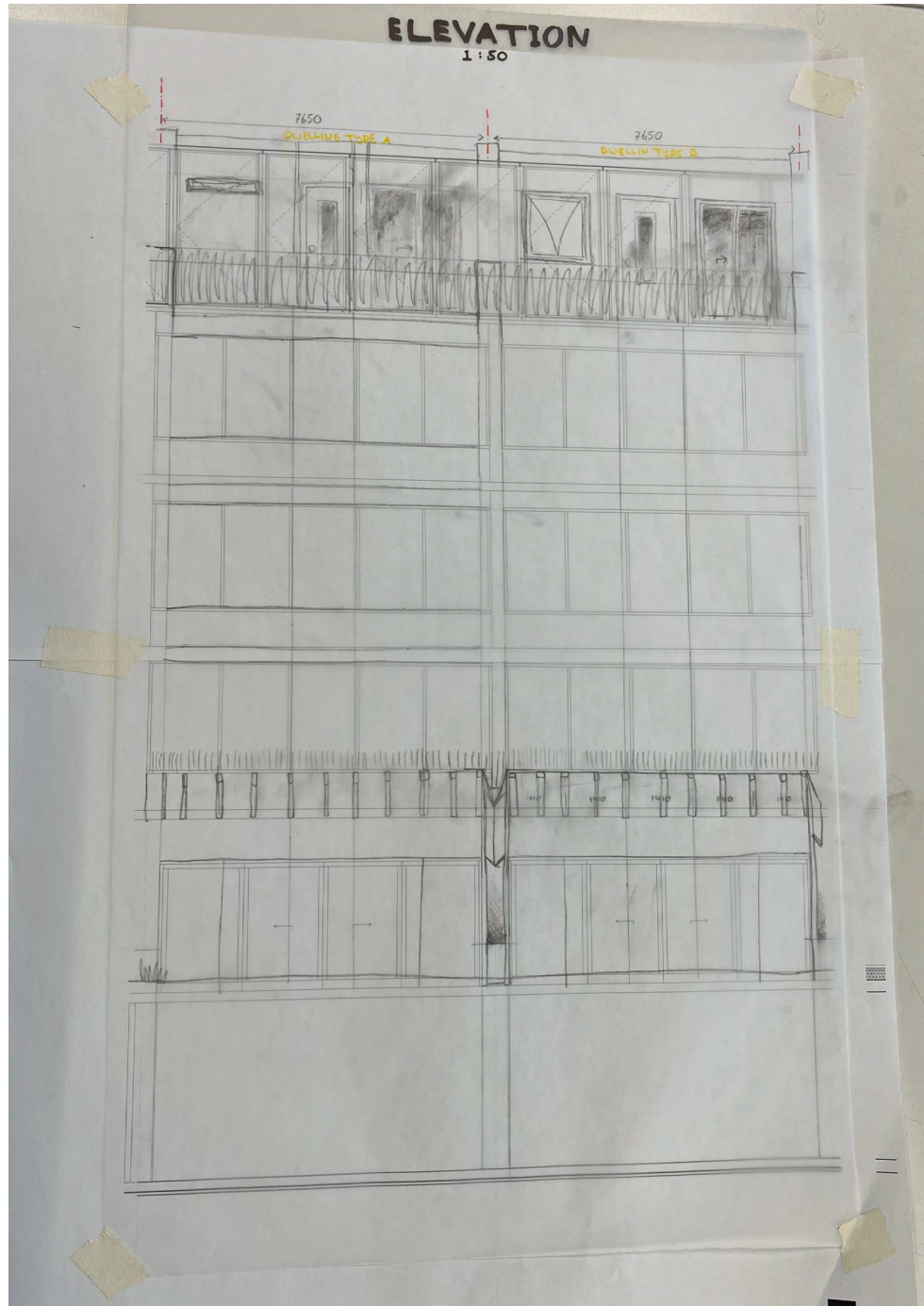
**IMAGE 130**  
*sketchmodel 1 to 100 (own image)*



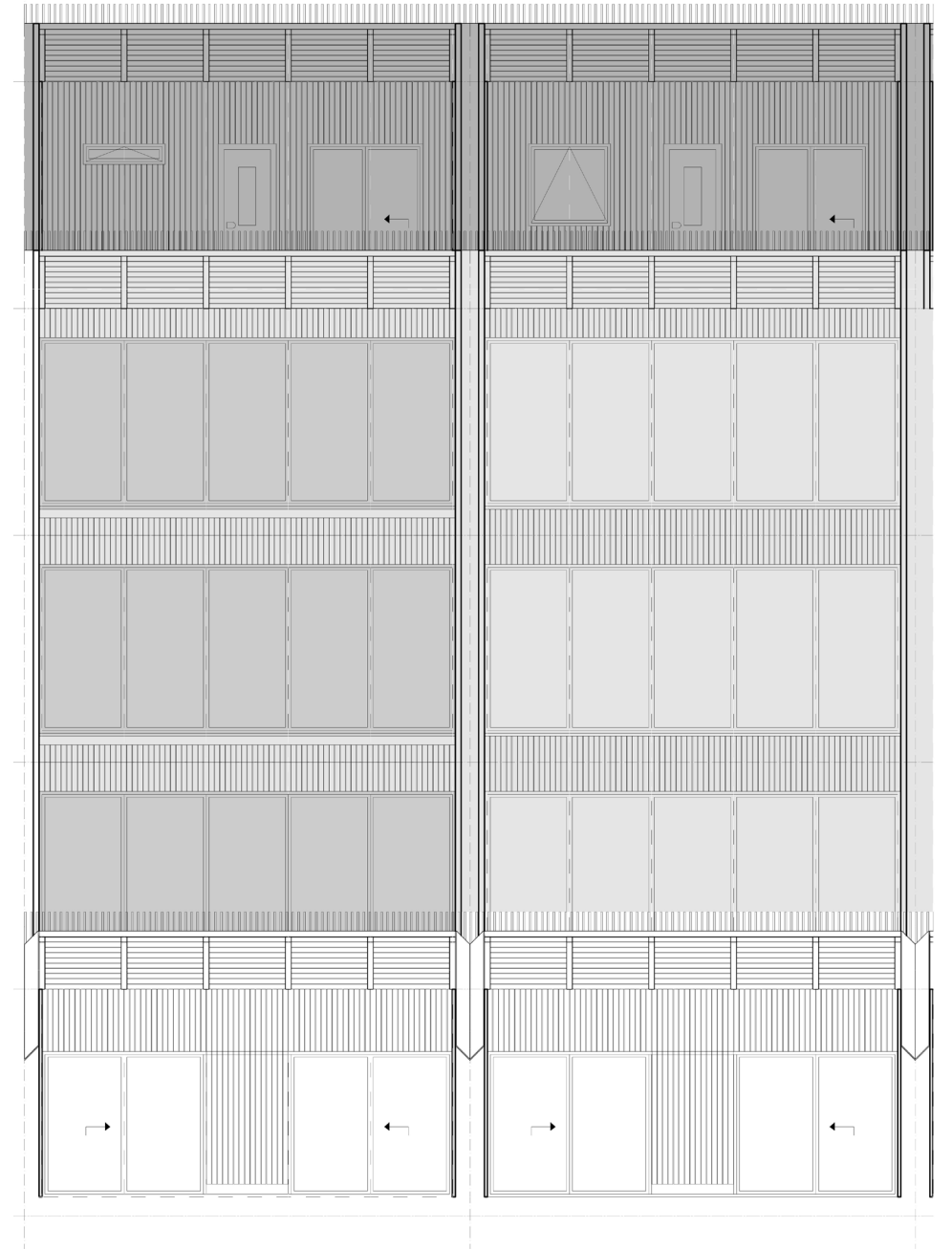
**IMAGE 131**  
*sketchmodel 1 to 100 (own image)*

**WEEK 32**

*fragment studies*  
*facade studies*



**IMAGE 132**  
sketchmodel 1 to 100 (own image)



**IMAGE 133**  
sketchmodel 1 to 100 (own image)

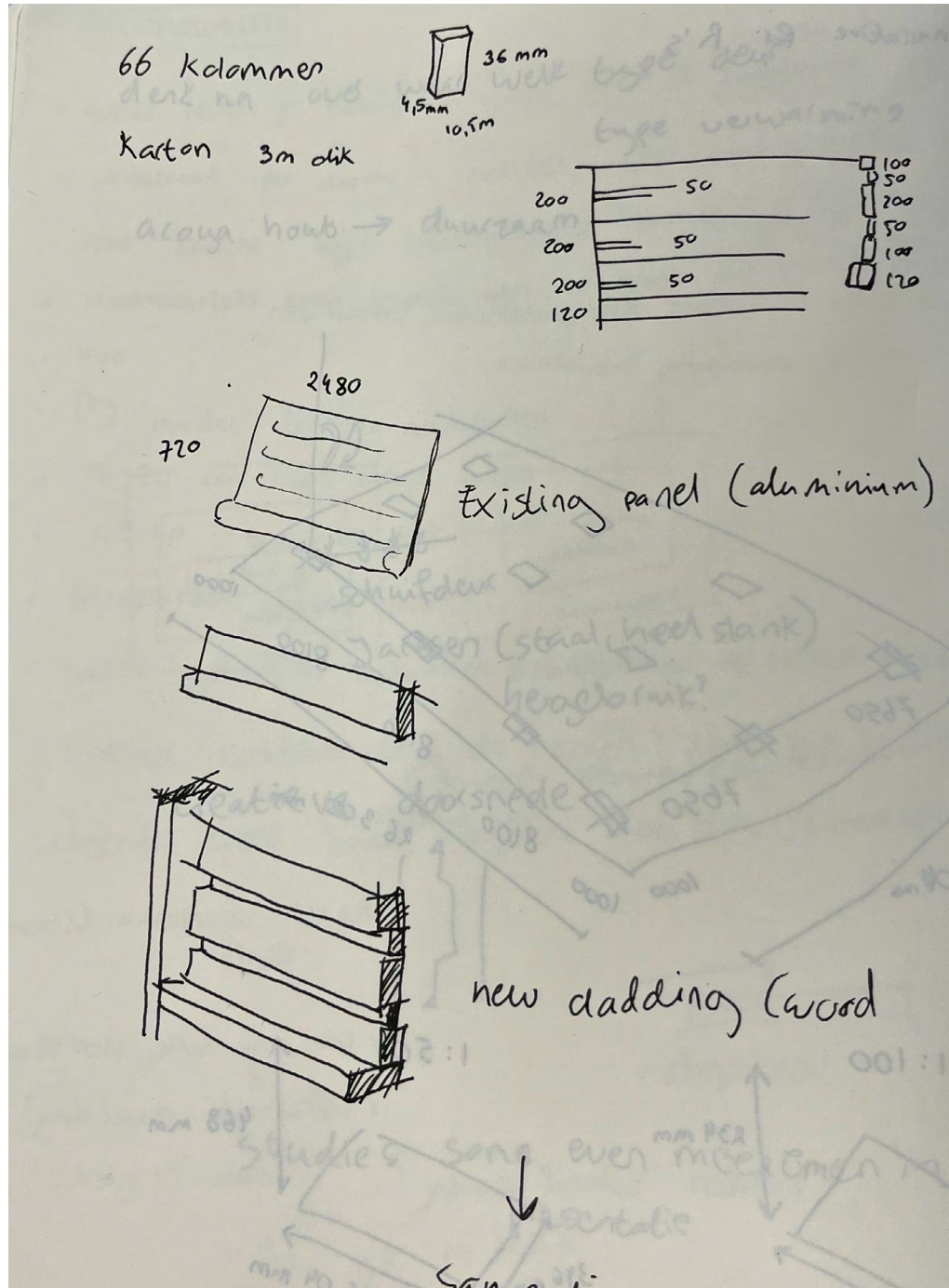
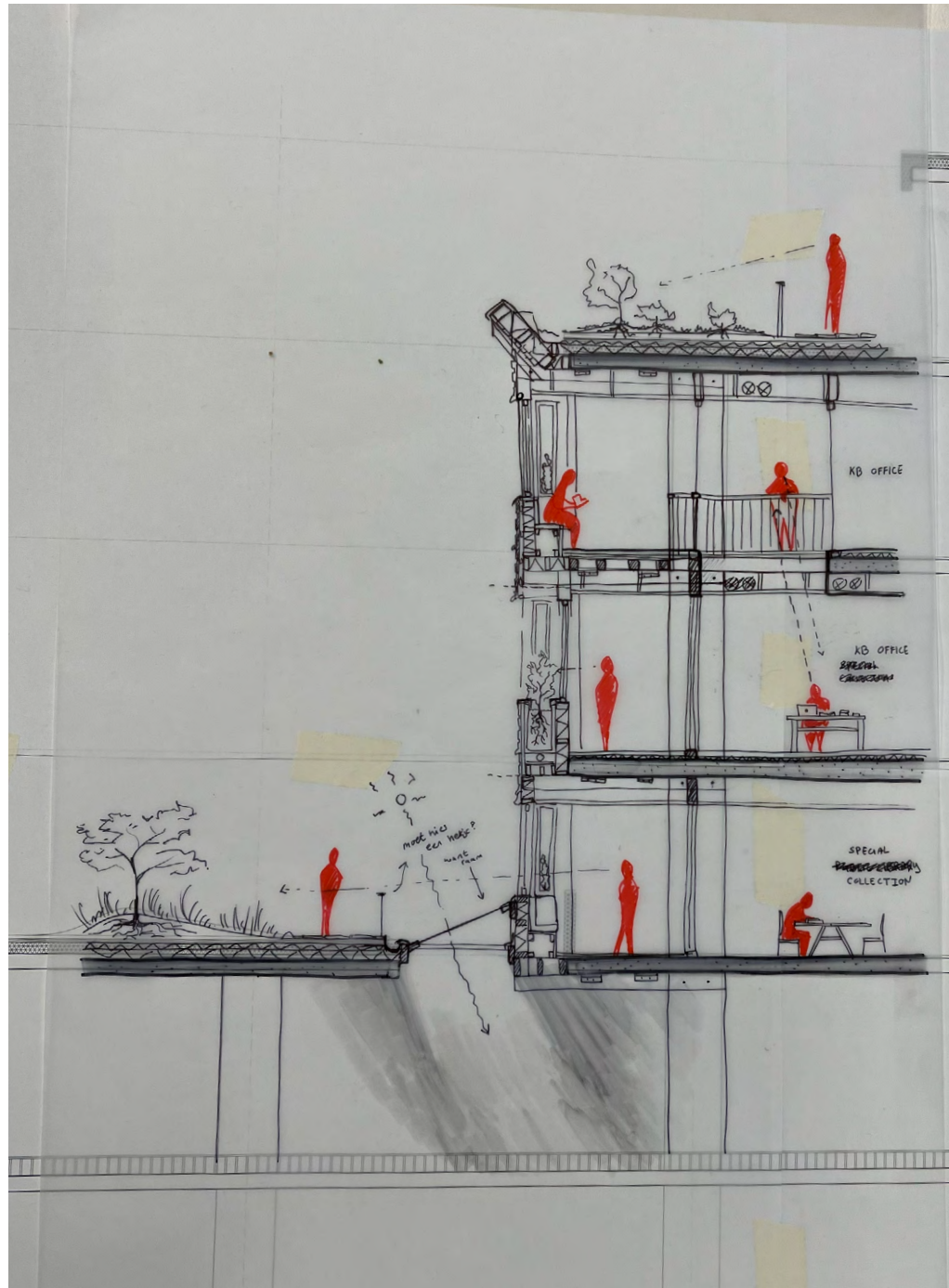


IMAGE 134  
sketchmodel 1 to 100 (own image)

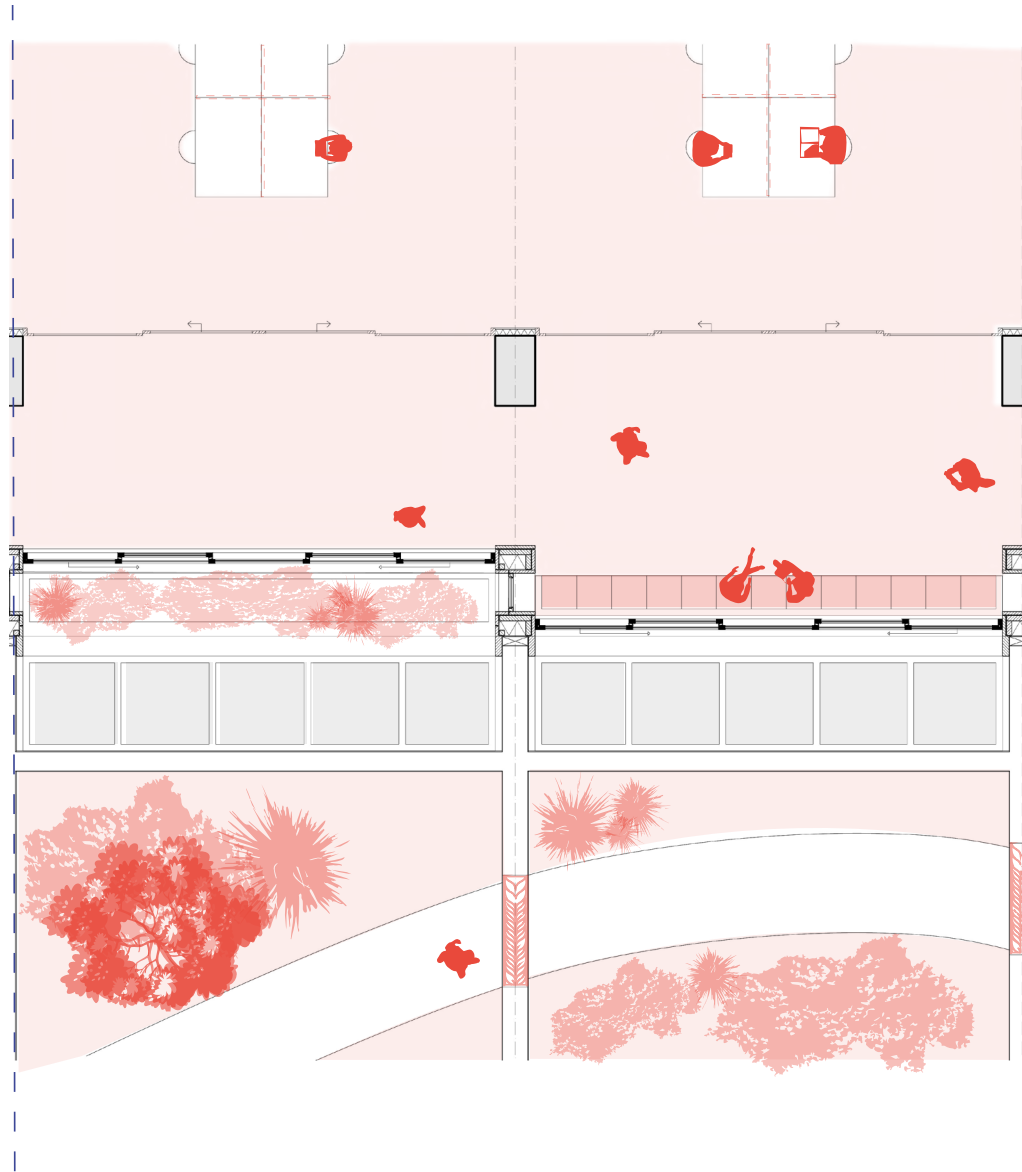


IMAGE 135  
sketchmodel 1 to 100 (own image)

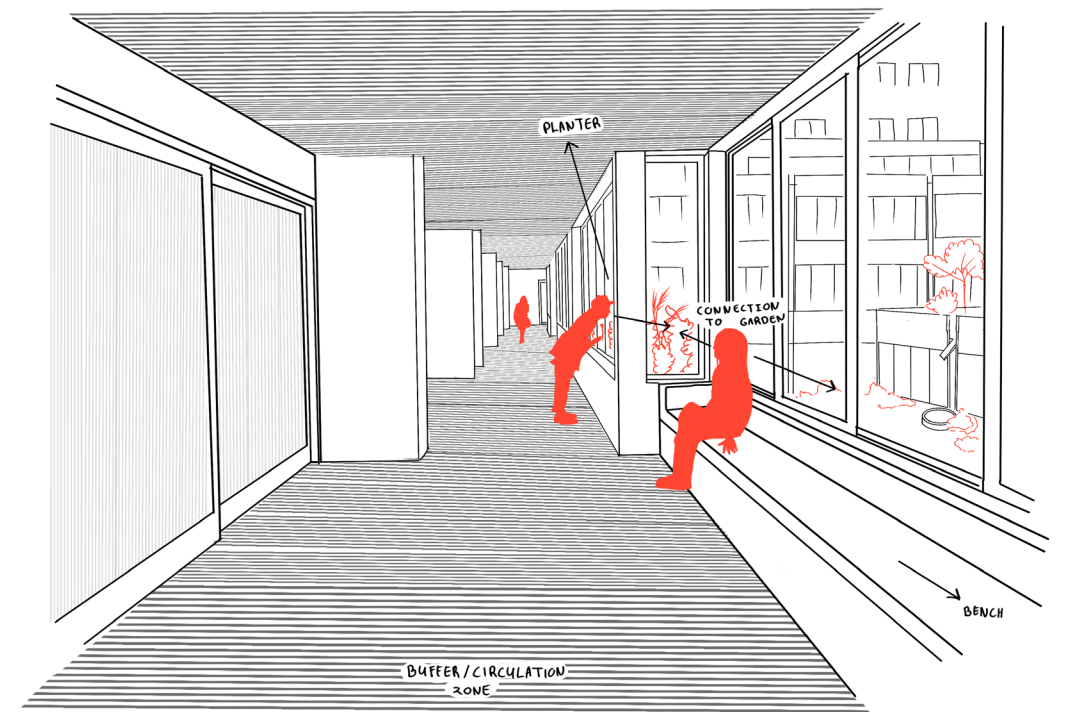


WEEK 33 & 34  
p4 preparations

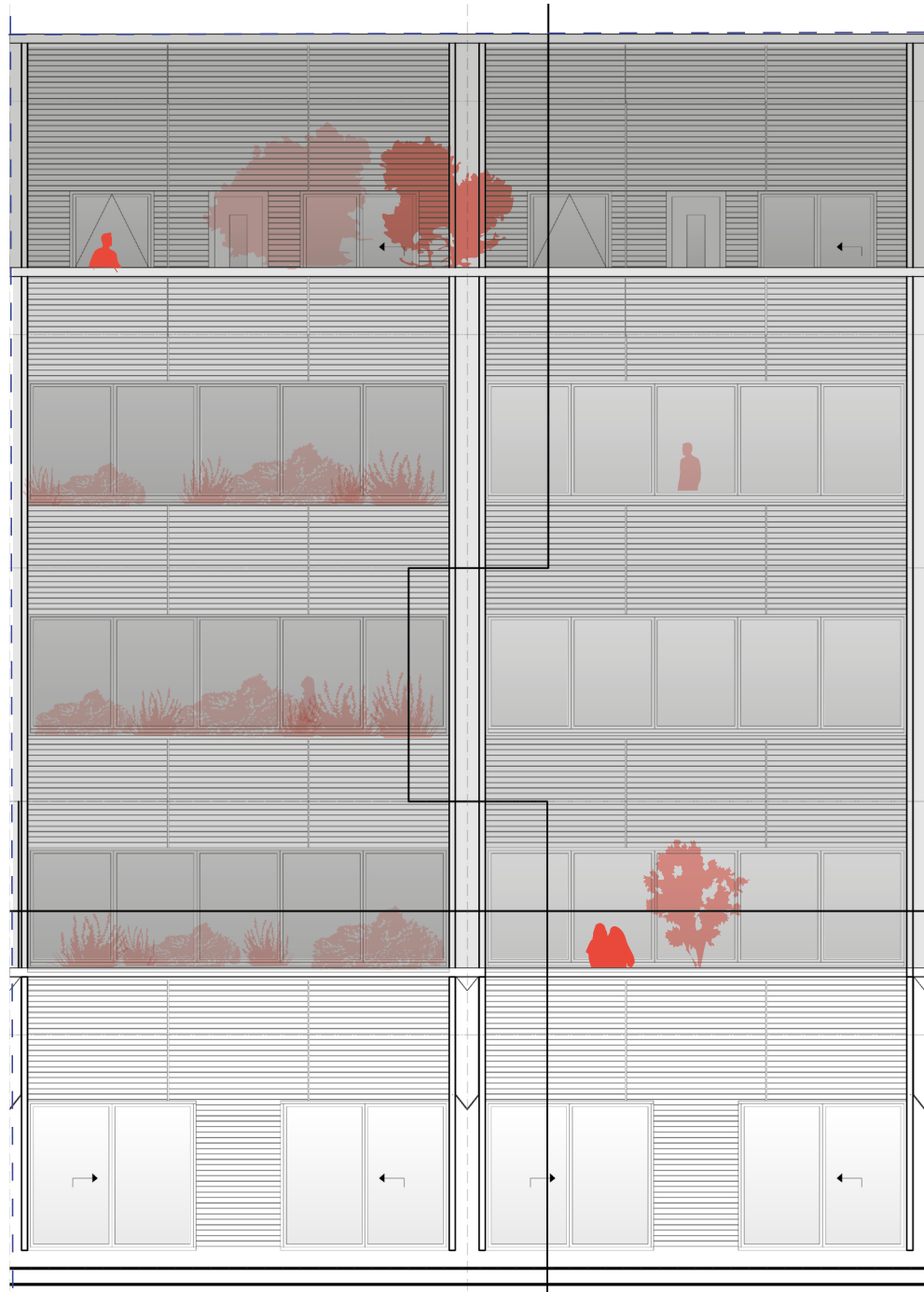
IMAGE 136  
sketchmodel 1 to 100 (own  
image)



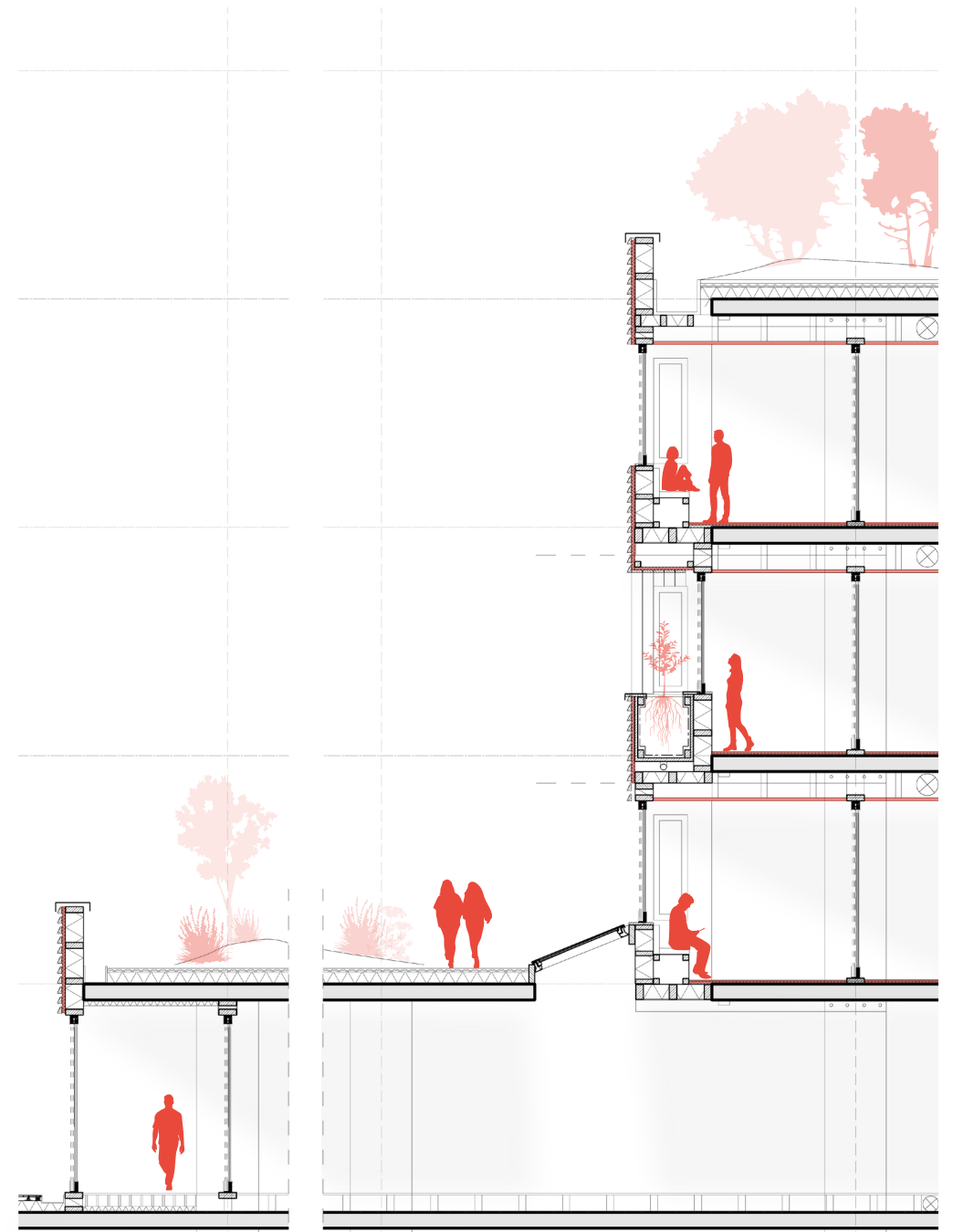
**IMAGE 137**  
*fragment section (own image)*



**IMAGE 138**  
*bufferzone (own image)*



**IMAGE 139**  
*fragment elevation (own image)*



**IMAGE 140**  
*fragment vertical section (own image)*

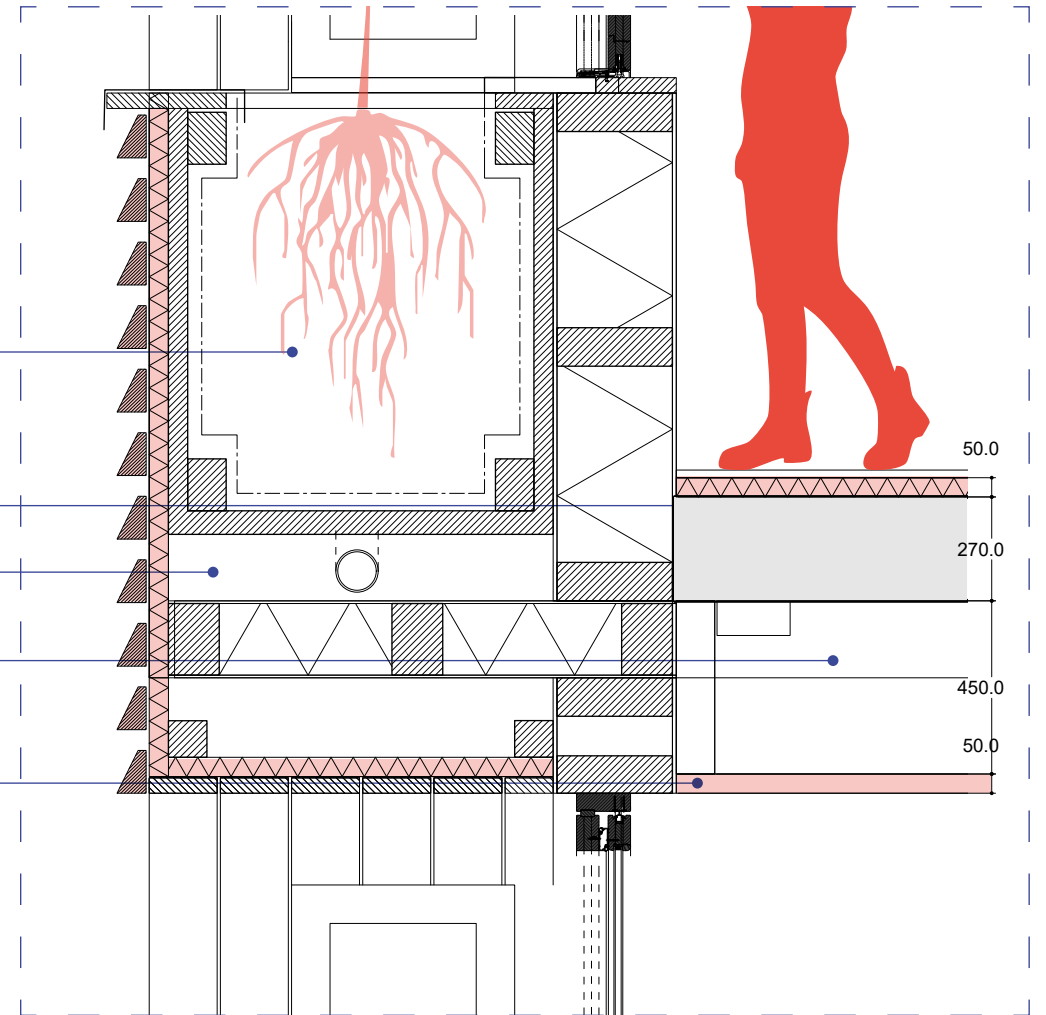
planter

existing floor

rainwater drainage

added structural beam

lowered acoustic ceiling



● SOUNDSCAPE ELEMENT

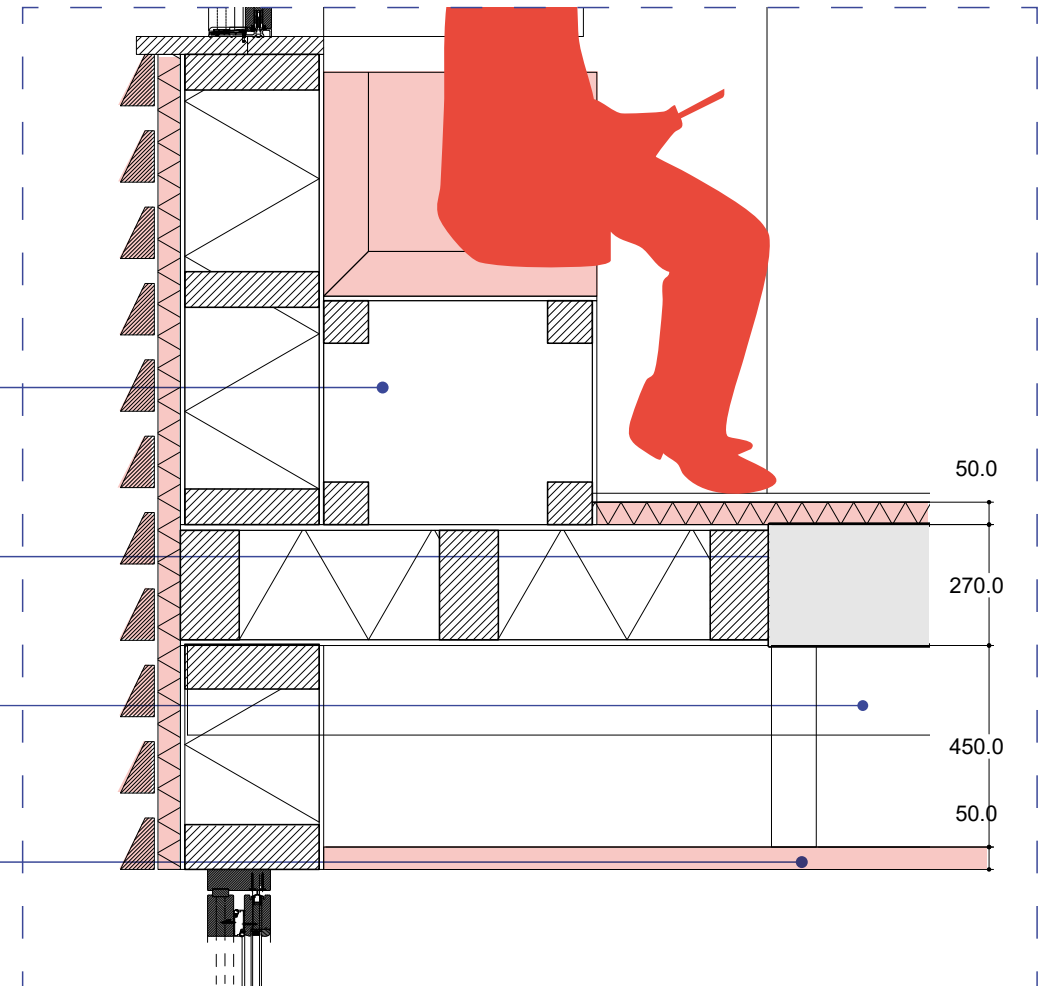
**IMAGE 141**  
*planter detail (own image)*

*built-in bench*

*existing floor*

*added structural beam*

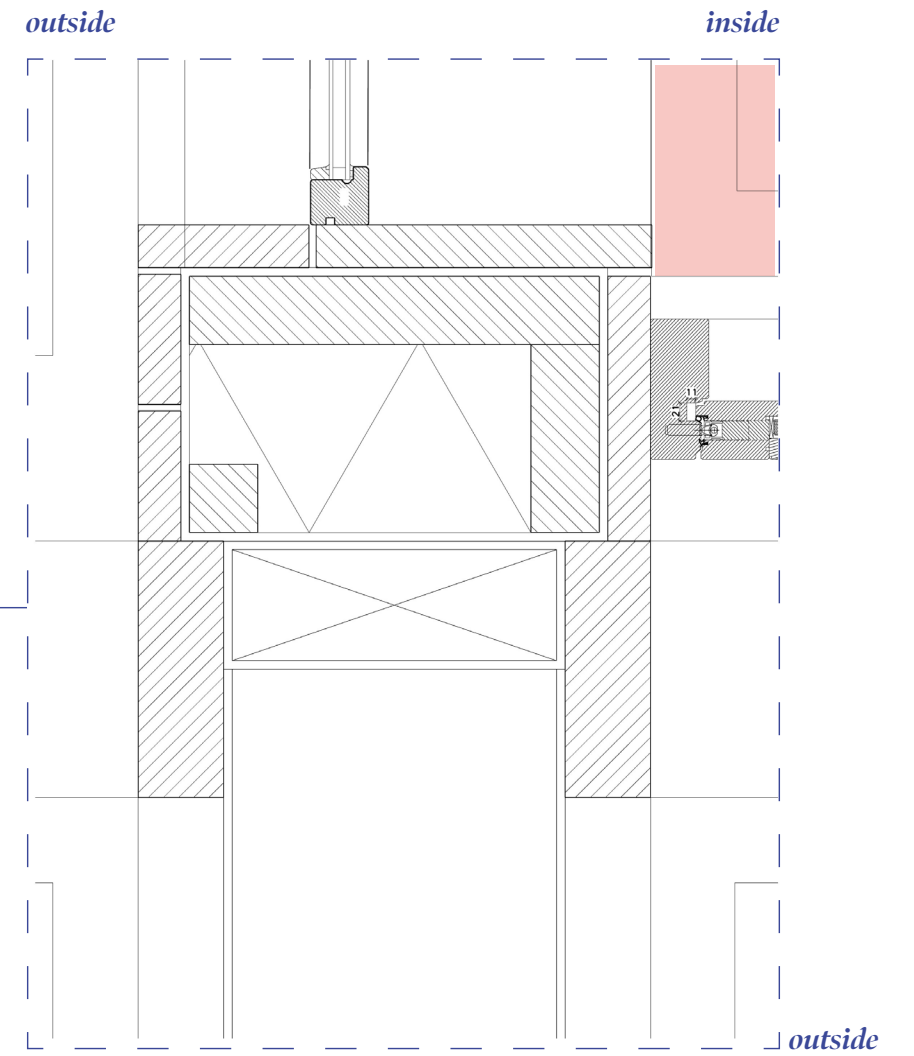
*lowered acoustic ceiling*



● SOUNDSCAPE ELEMENT

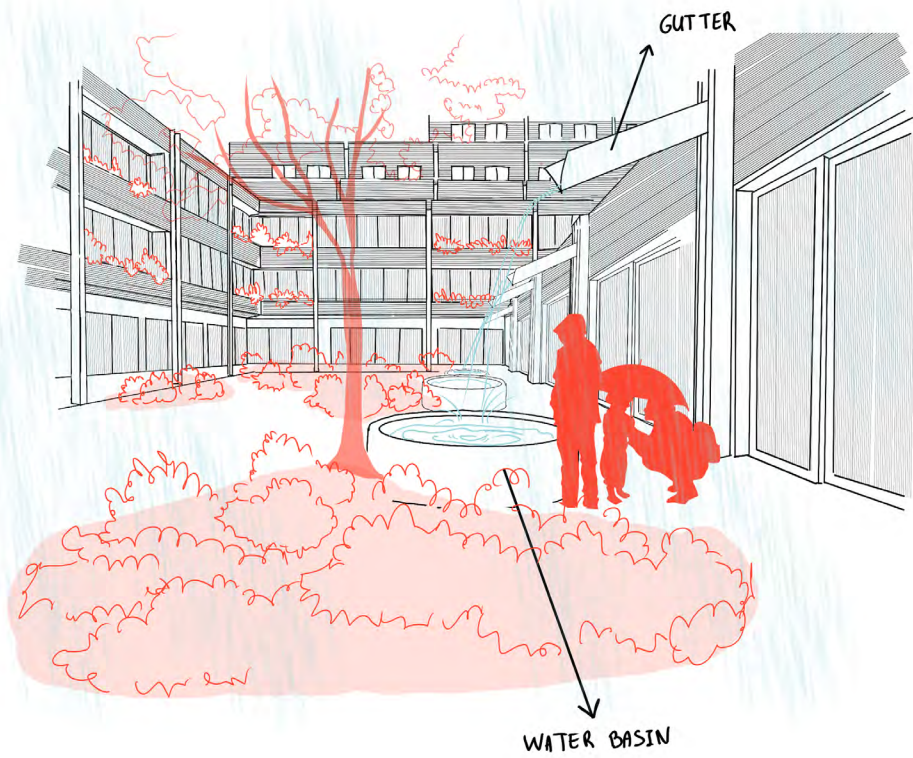
**IMAGE 142**  
*bench detail (own image)*

rainwater drainage

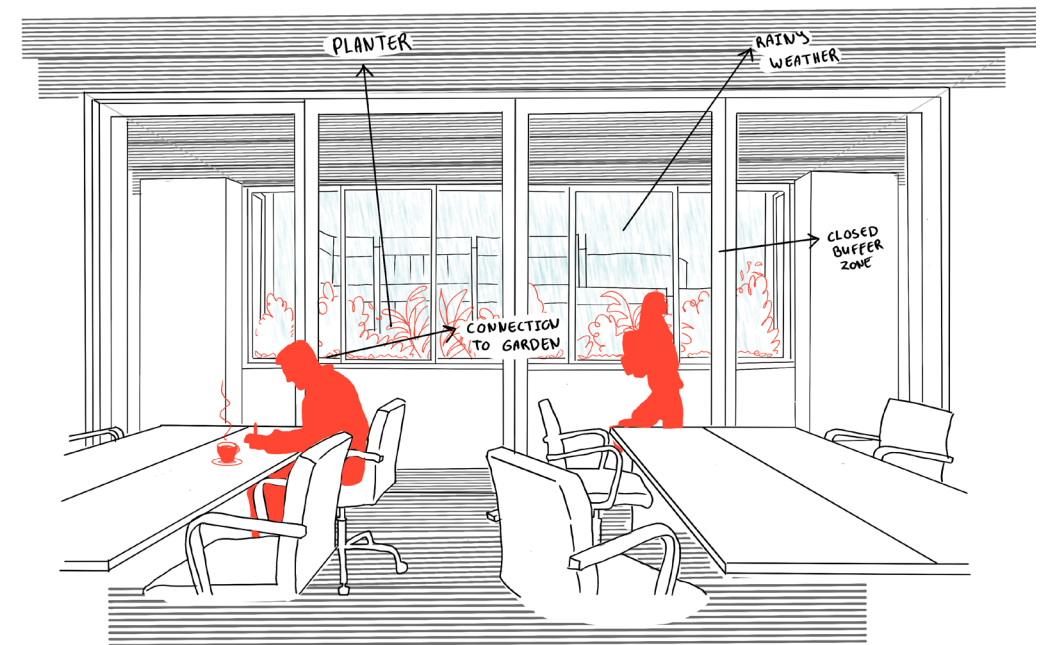
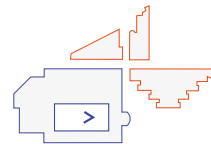


● SOUNDSCAPE ELEMENT

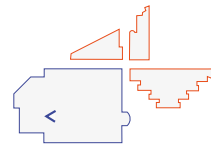
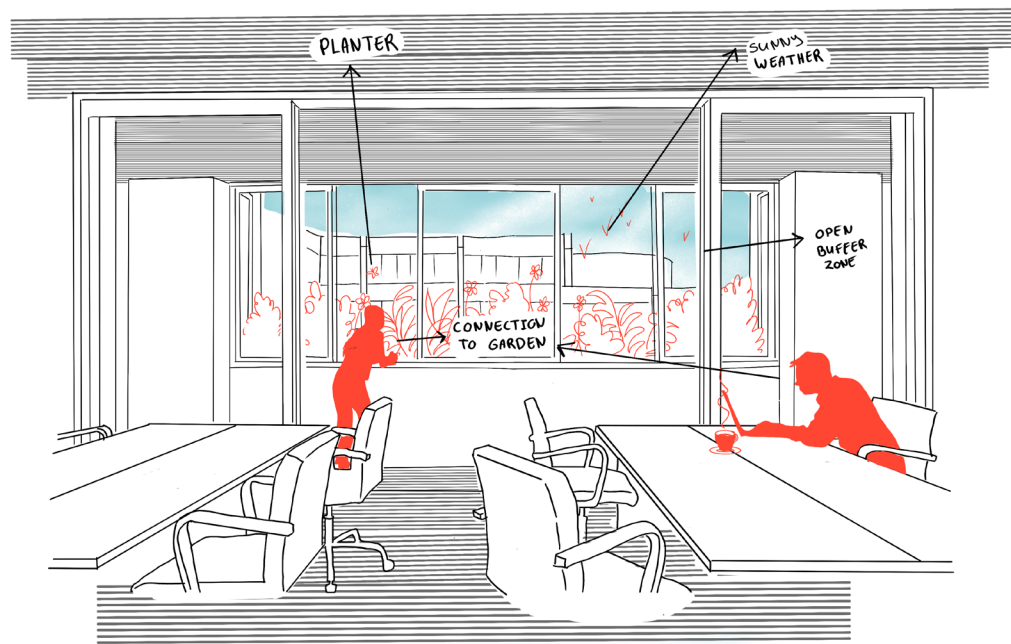
**IMAGE 143**  
*horizontal gutter detail (own image)*



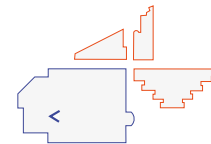
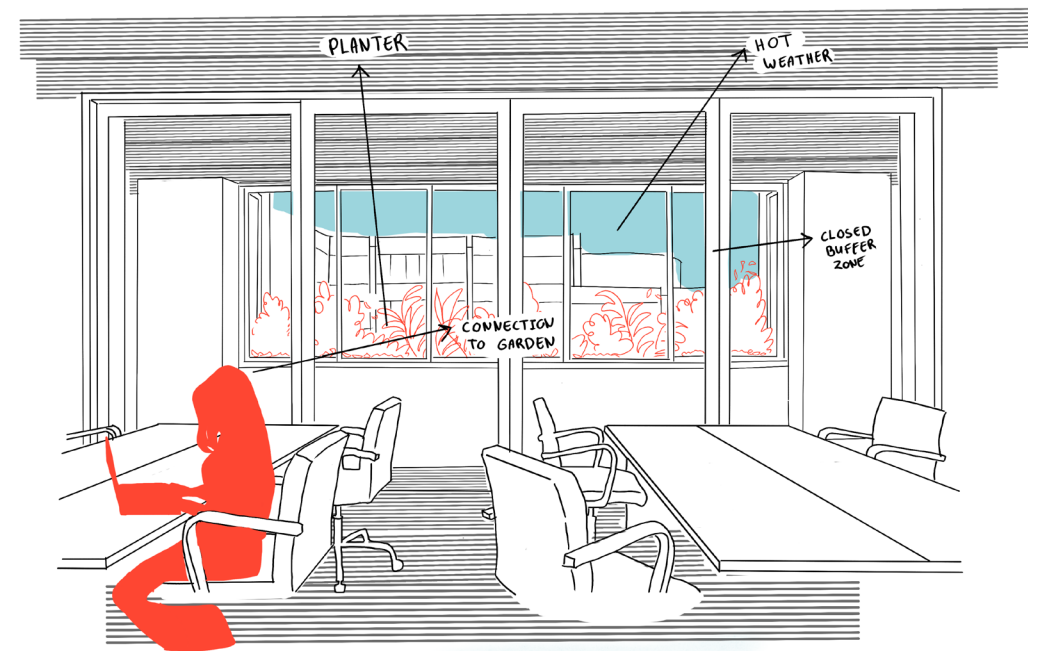
**IMAGE 144**  
garden during rain (own image)



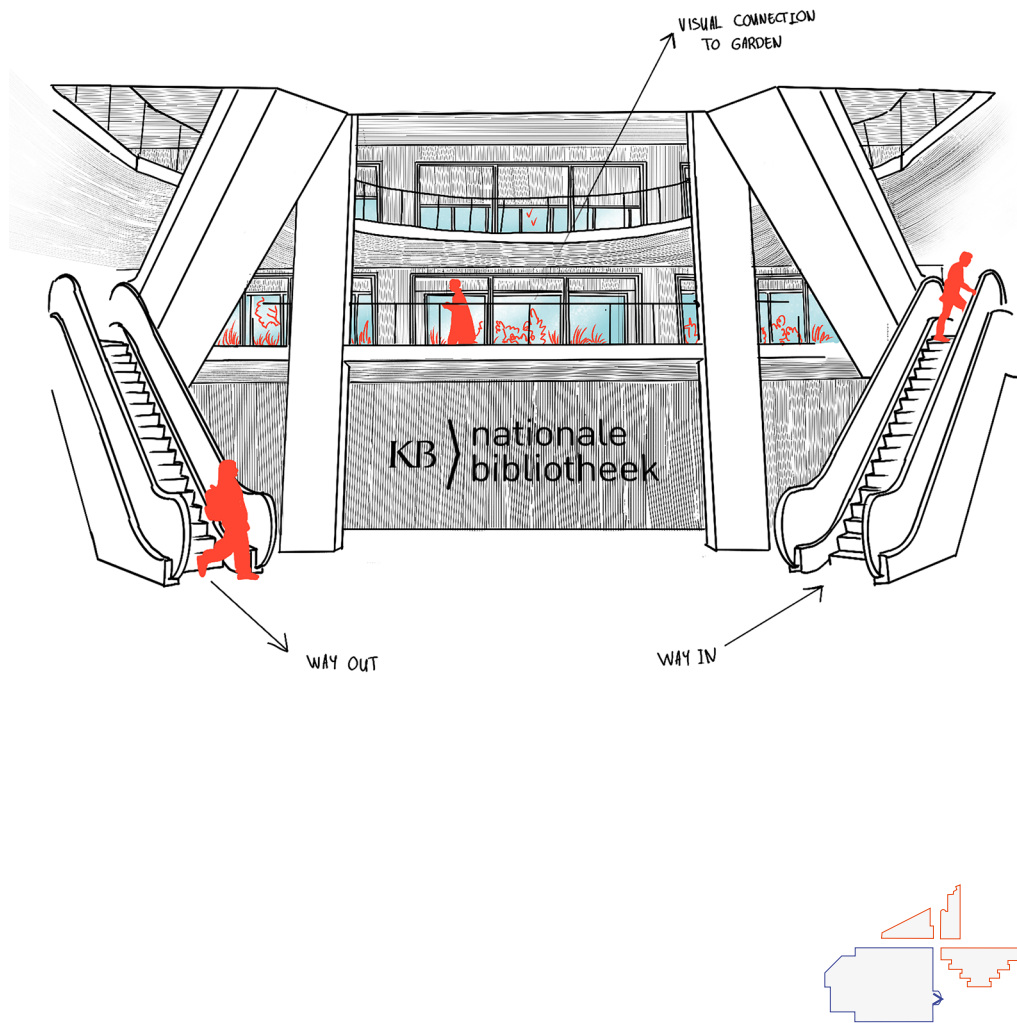
**IMAGE 145**  
workspace during rain (own image)



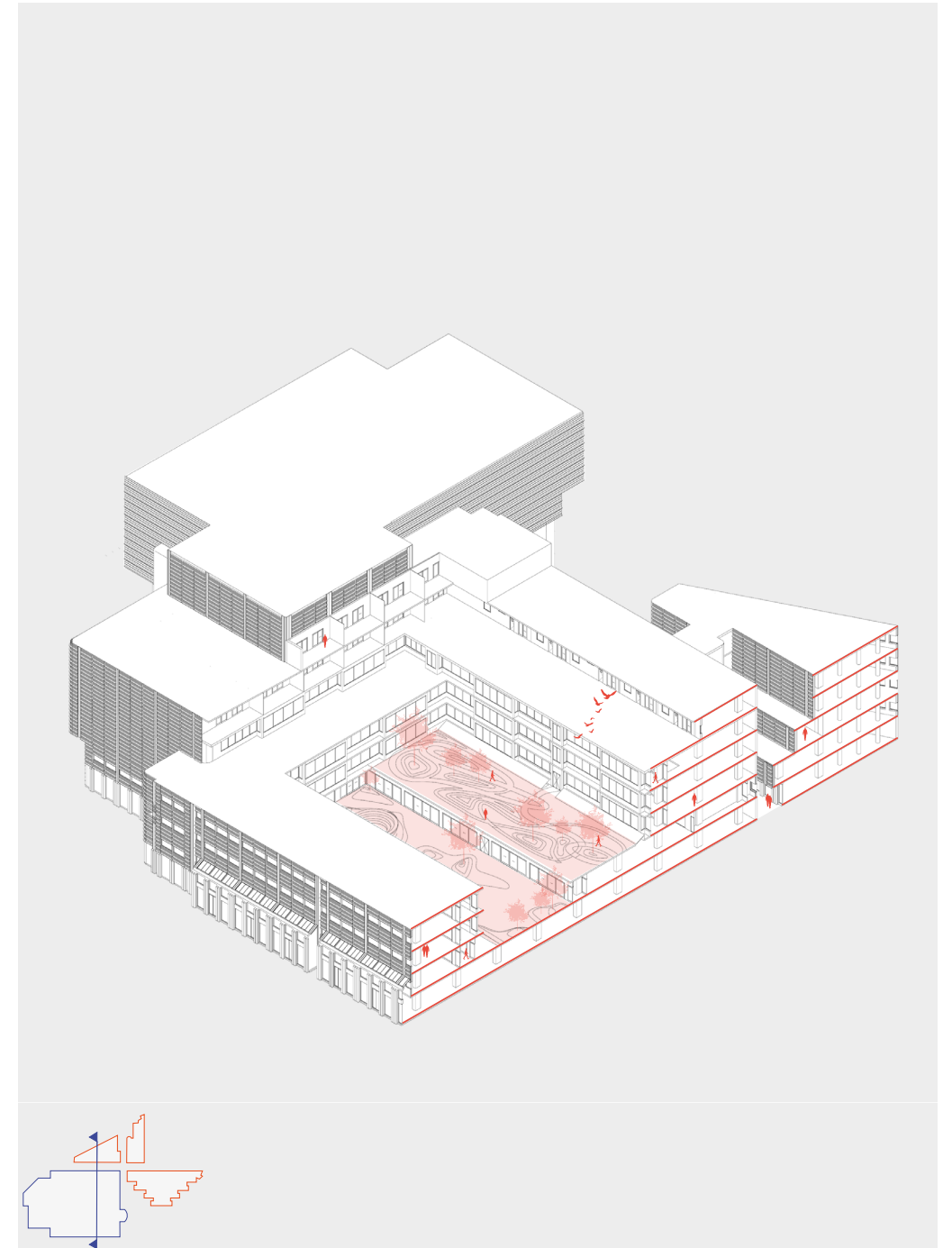
**IMAGE 146**  
workspace in spring (own image)



**IMAGE 147**  
workspace in summer (own image)



**IMAGE 148**  
new entrance view (own image)



**IMAGE 149**  
overview section in axonometry (own image)



**IMAGE 150**  
*existing facade part I (own image)*



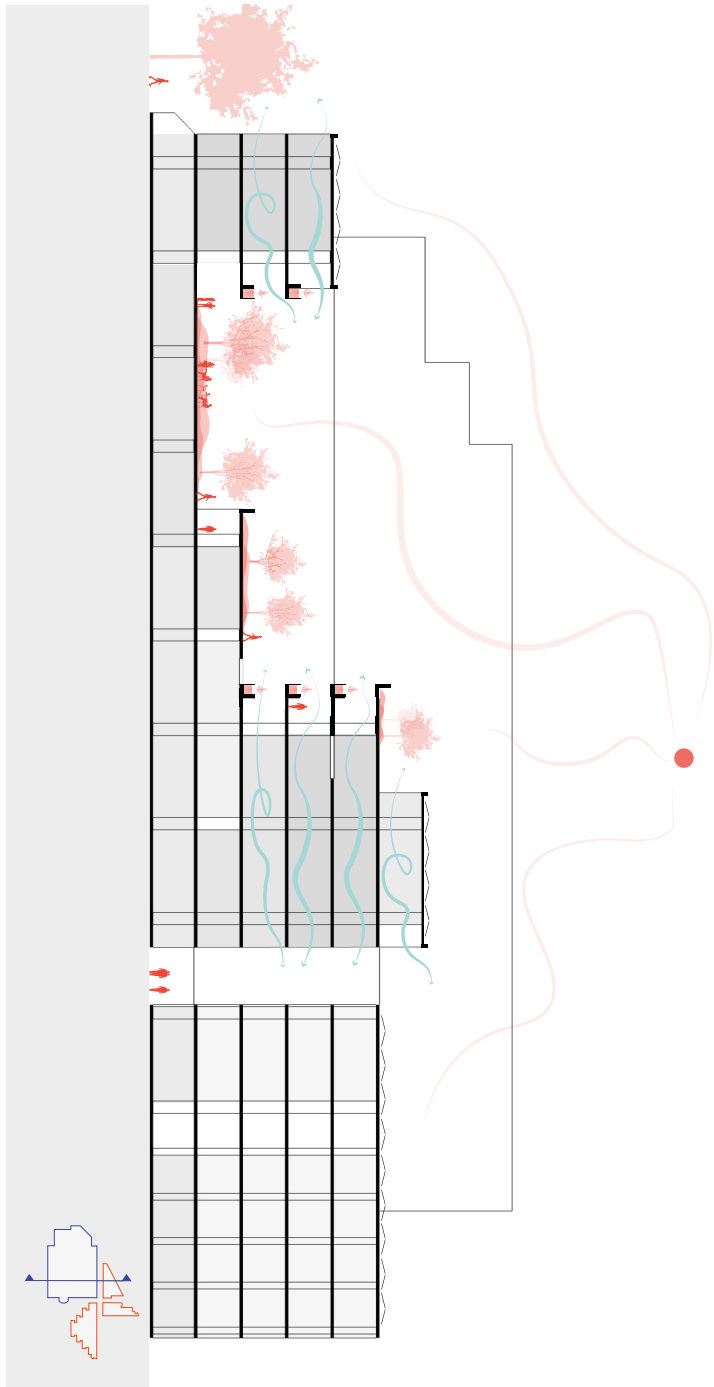
**IMAGE 151**  
*parts to be removed (own image)*



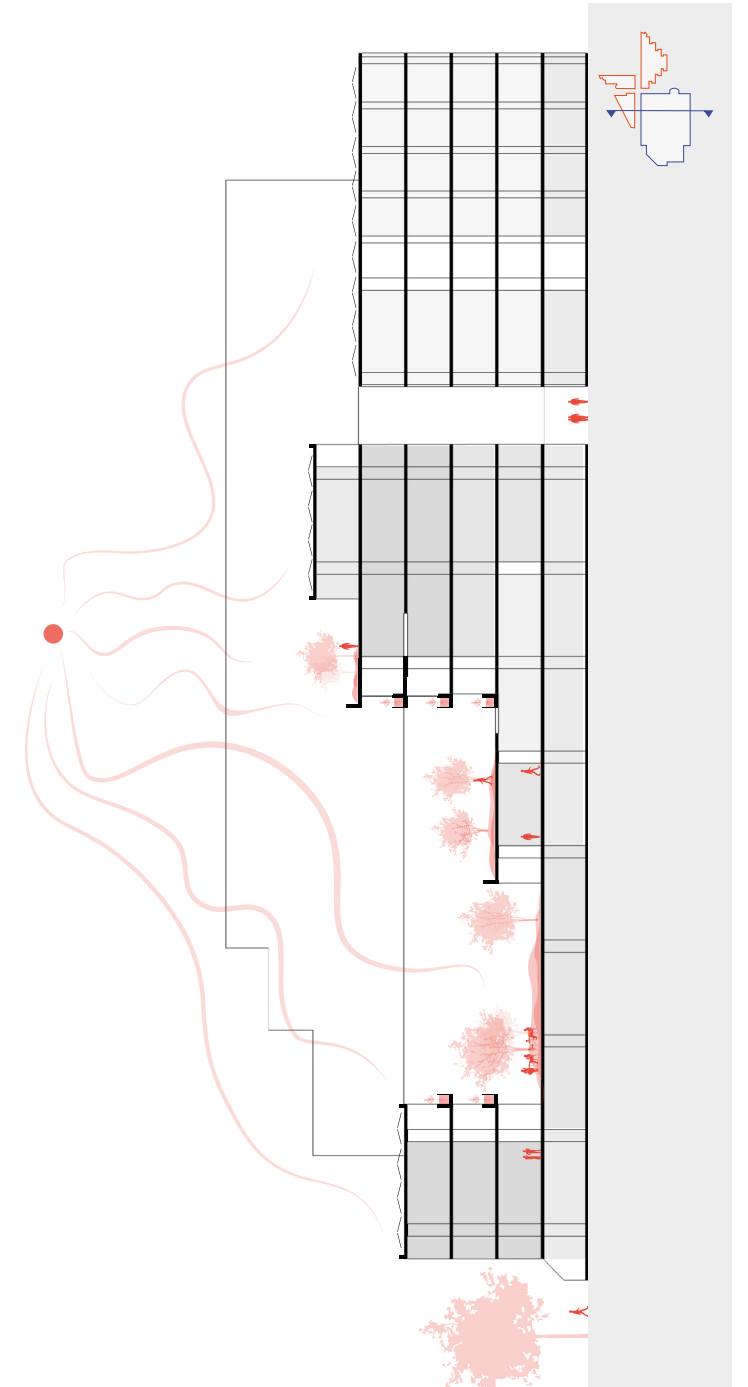
**IMAGE 152**  
*parts to be added (own image)*



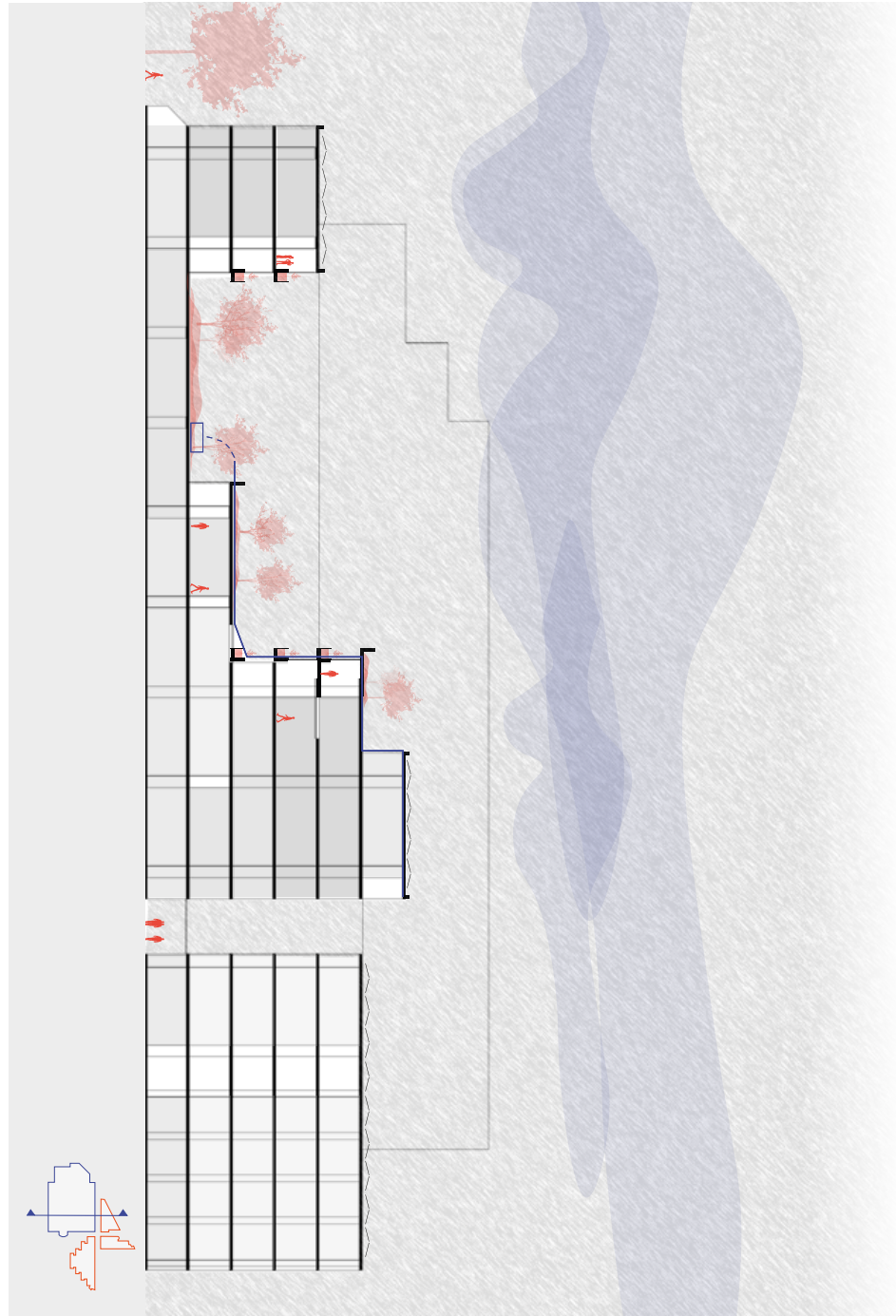
**IMAGE 153**  
*new facade (own image)*



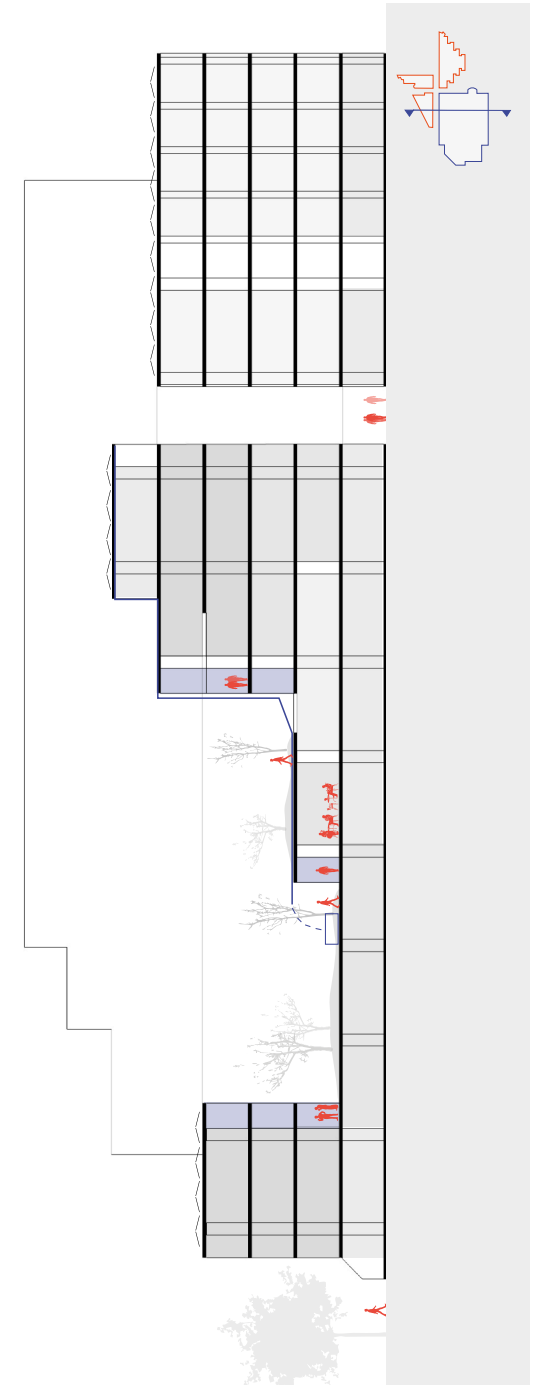
**IMAGE 154**  
*climate section spring (own image)*



**IMAGE 155**  
*climate section summer (own image)*

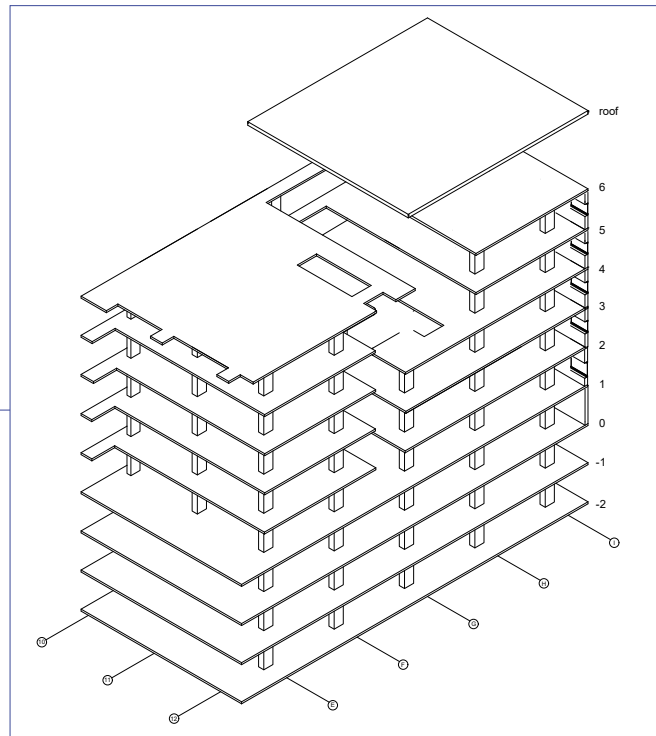


**IMAGE 156**  
*climate section autumn (own image)*

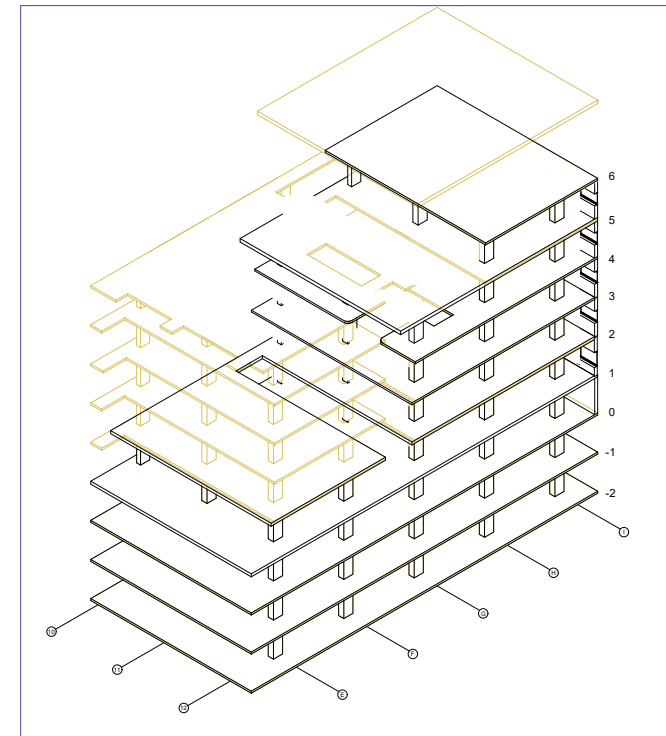


**IMAGE 157**  
*climate section winter (own image)*

*existing structure*  
*1939 m<sup>3</sup> concrete*



**IMAGE 158**  
*fragment existing structure*  
*(own image)*

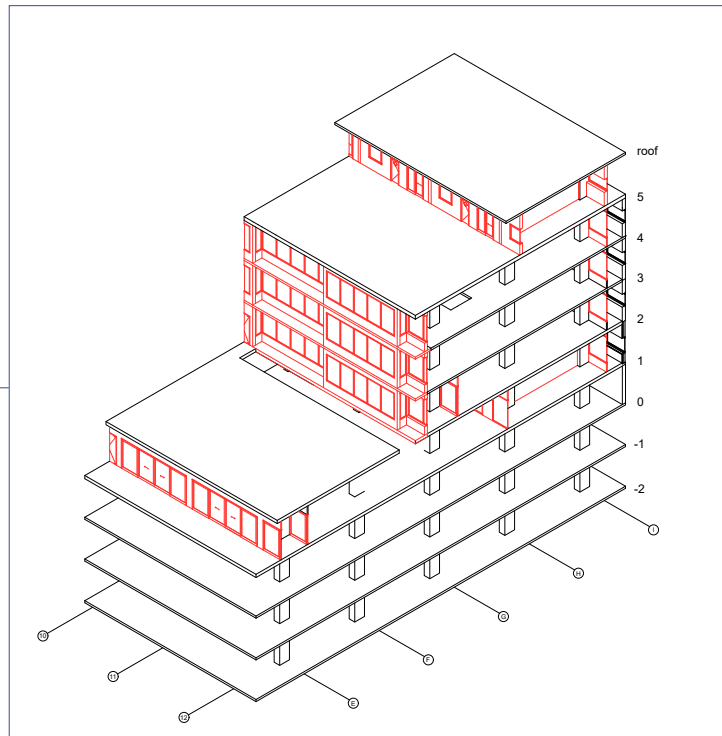


*existing facade surface*  
*75% re-use*

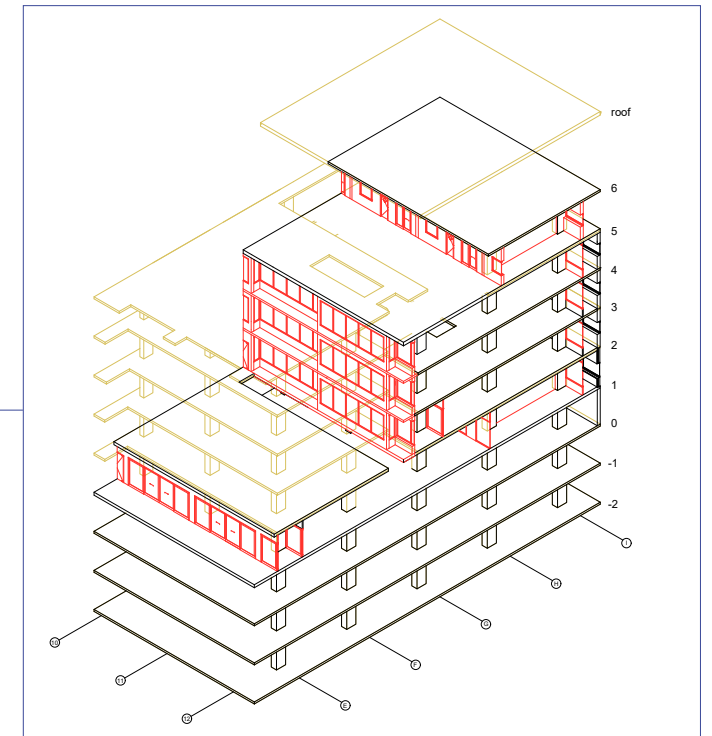
*1564m<sup>3</sup> concrete*  
*81% re-use*

**IMAGE 159**  
*keep facade (own image)*

adding new facade area:  
385 m<sup>2</sup>



overview of structure and  
facade removed, kept and  
added

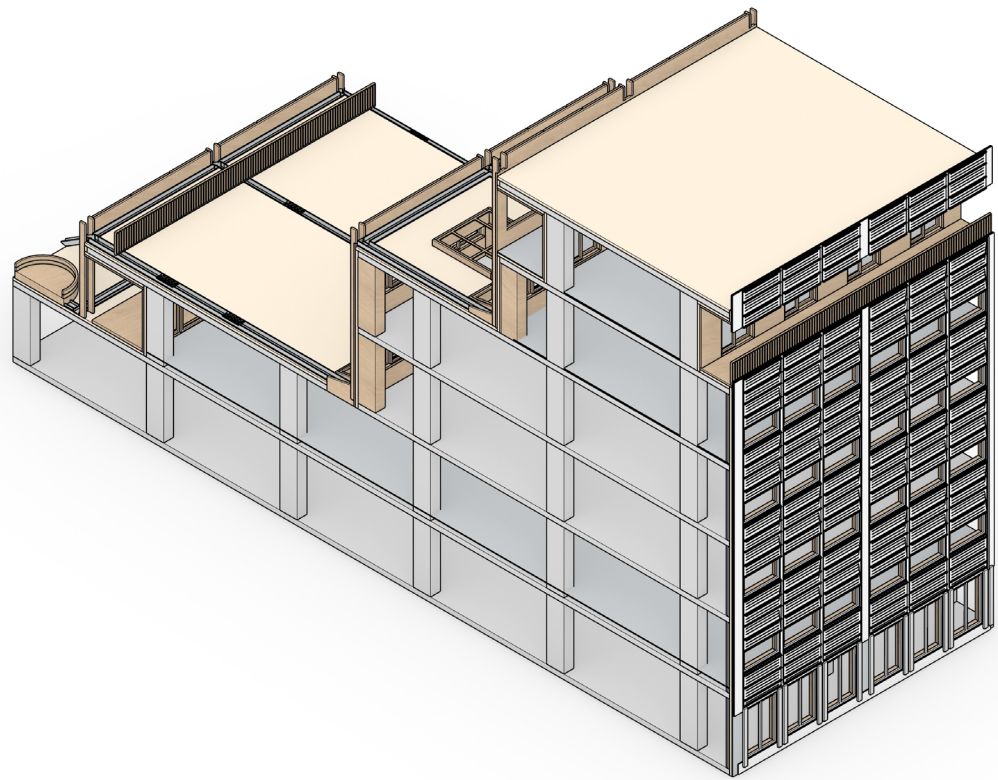


**IMAGE 160**  
add facade courtyard (own  
image)

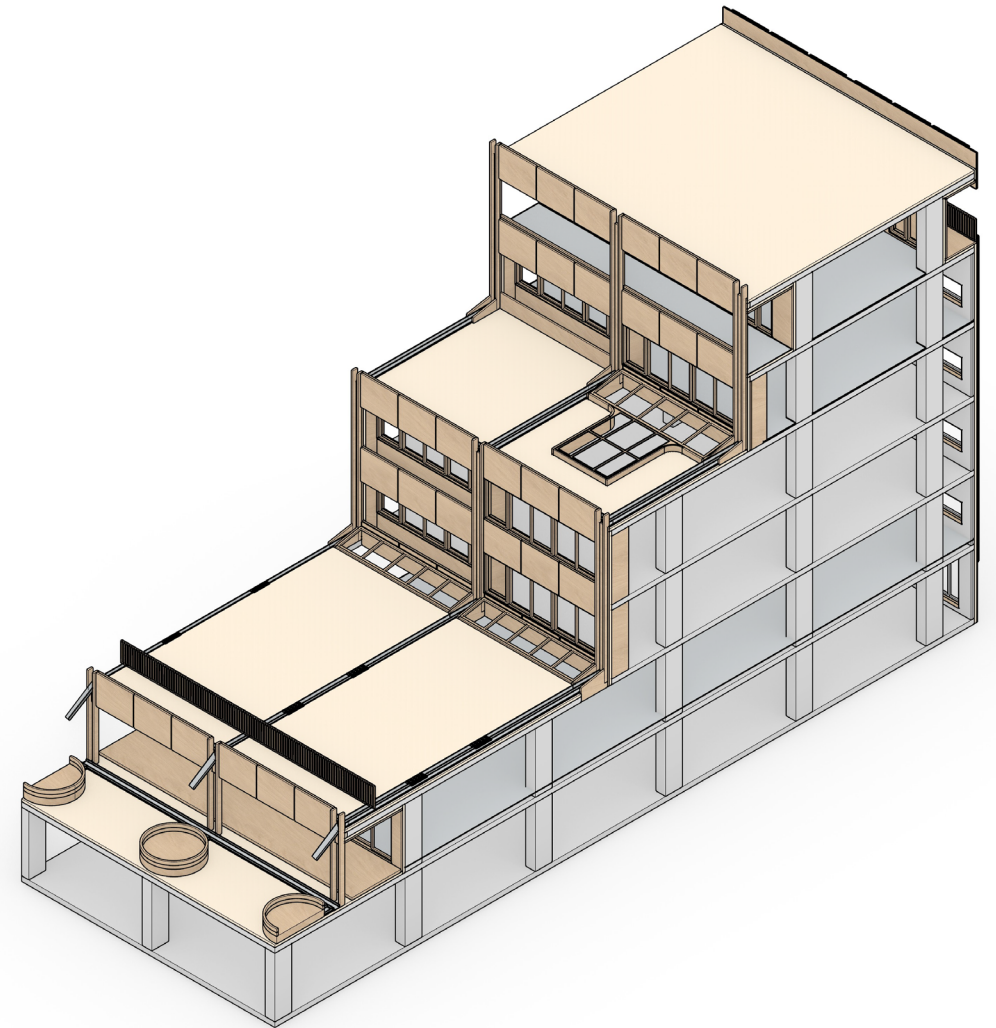
**IMAGE 161**  
overview removed, kept and  
added (own image)

**WEEK 35 - 38**

*p5 preparations*



**IMAGE 162**  
*3D Rhino for physical model*  
*(own image)*



**IMAGE 163**  
*3D Rhino for physical model*  
*(own image)*



**IMAGE 164**  
*model progress (own image)*



**IMAGE 165**  
*model progress (own image)*



**IMAGE 166**  
*model progress (own image)*



**IMAGE 167**  
*model progress (own image)*



**IMAGE 168**  
*model progress (own image)*



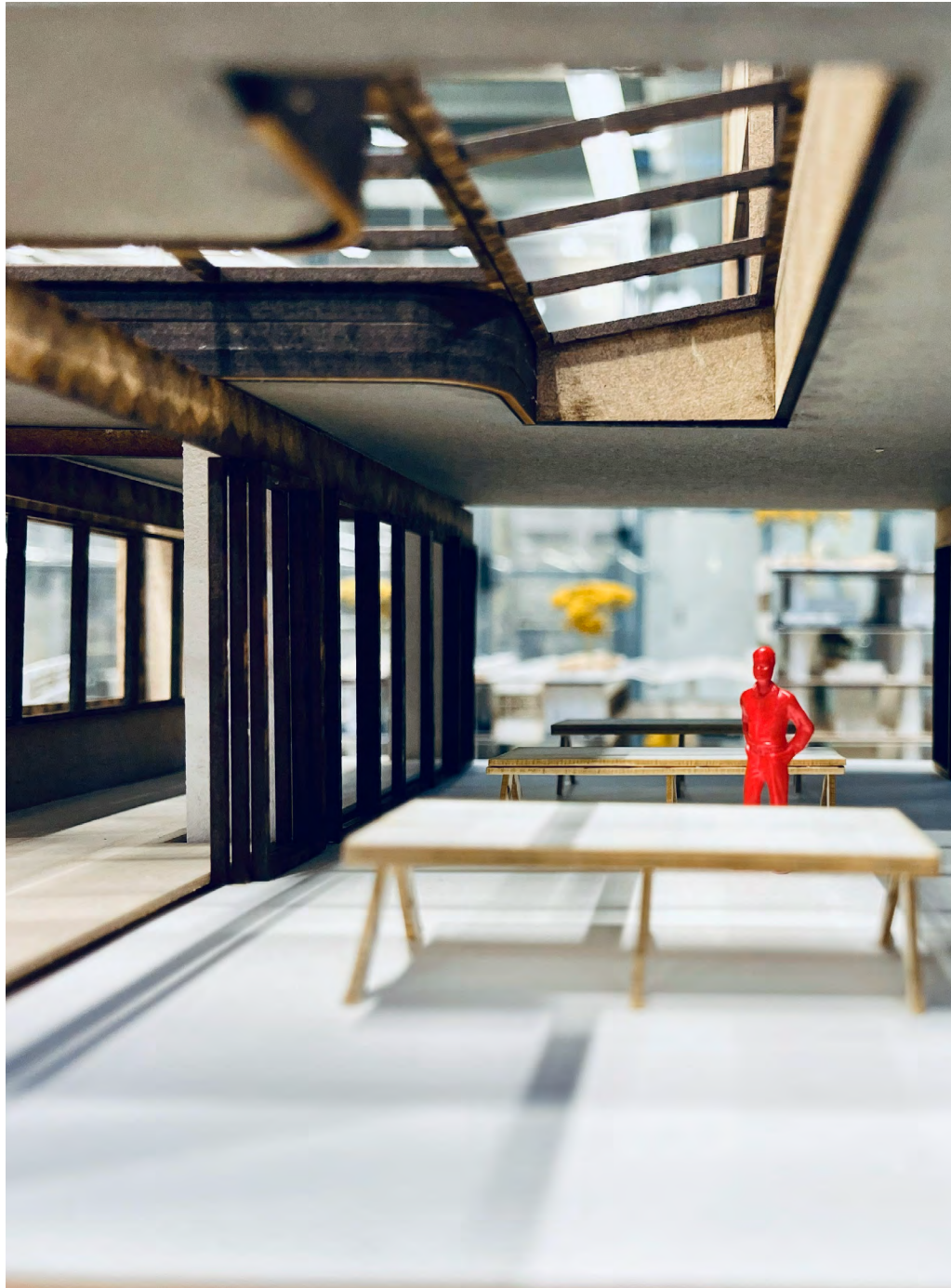
**IMAGE 169**  
*model progress (own image)*



**IMAGE 170**  
*model progress (own image)*



**IMAGE 171**  
*model progress (own image)*



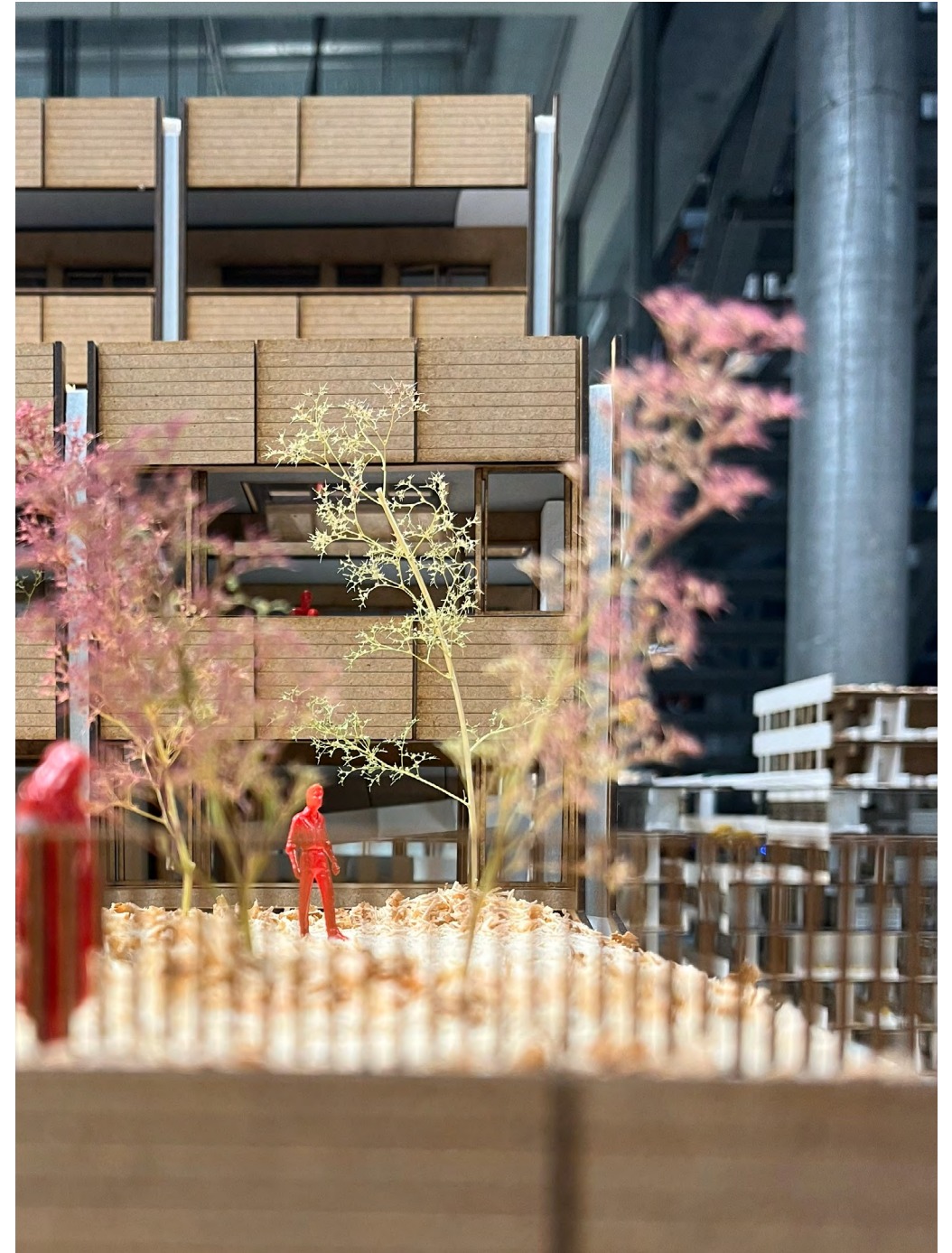
**IMAGE 172**  
*model progress (own image)*



**IMAGE 173**  
*model progress (own image)*



**IMAGE 174**  
*model progress (own image)*



**IMAGE 175**  
*model progress (own image)*



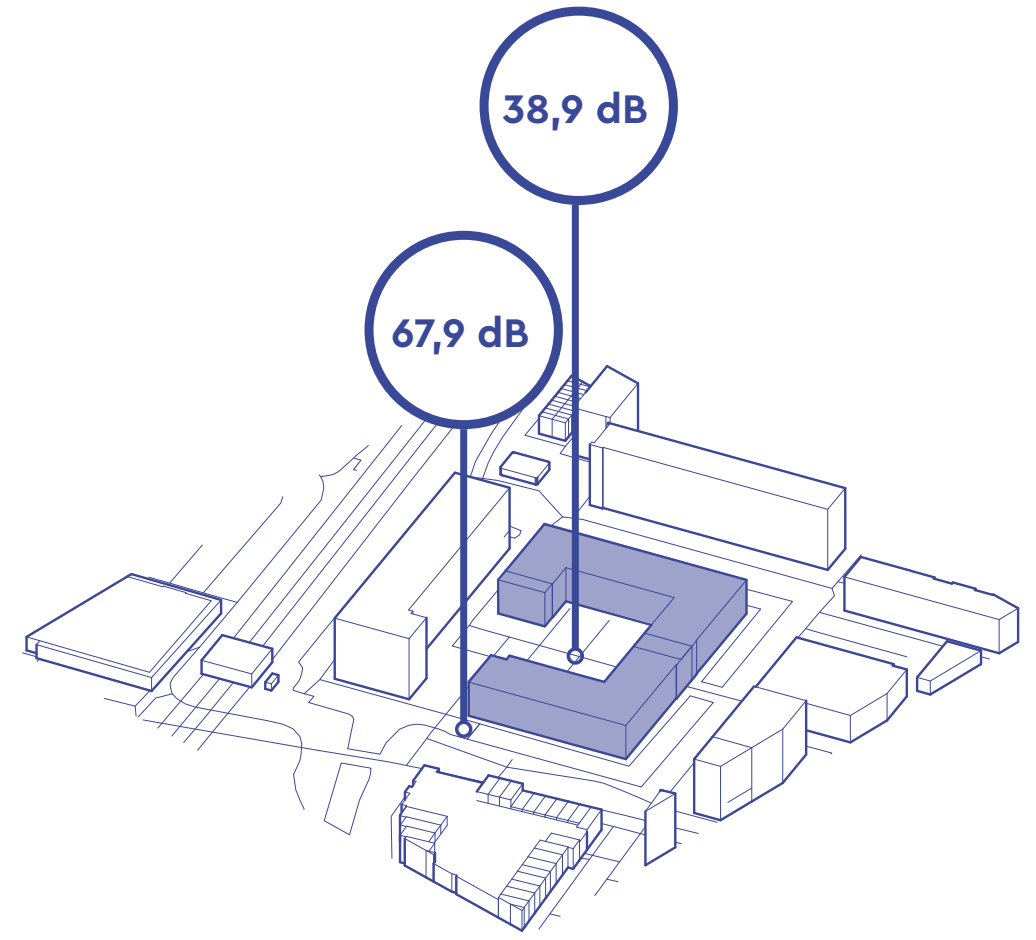
**IMAGE 176**  
*model progress (own image)*



**IMAGE 177**  
*model progress (own image)*



**IMAGE 178**  
*x-ray courtyard (own image)*



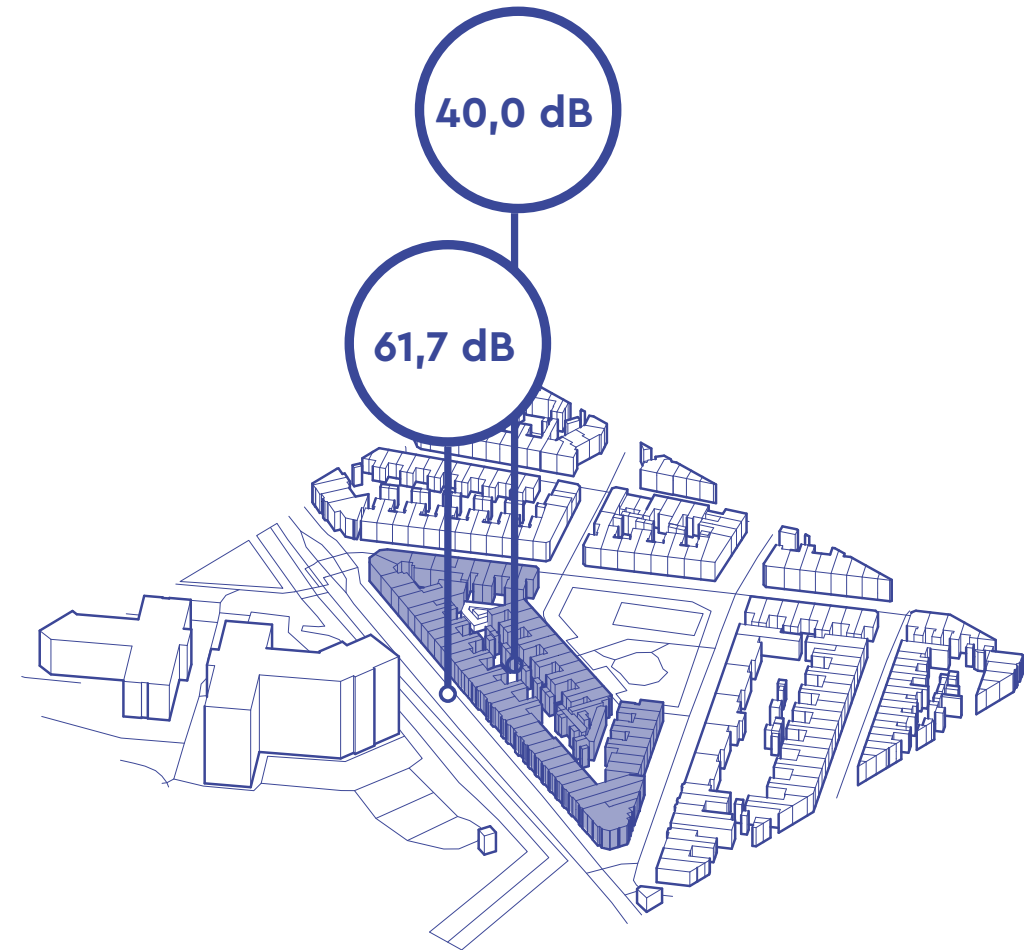
**X-RAY**

*29 dB difference*

**IMAGE 179**  
*results (own image)*



**IMAGE 179**  
*backyard delfgauwseweg (own image)*



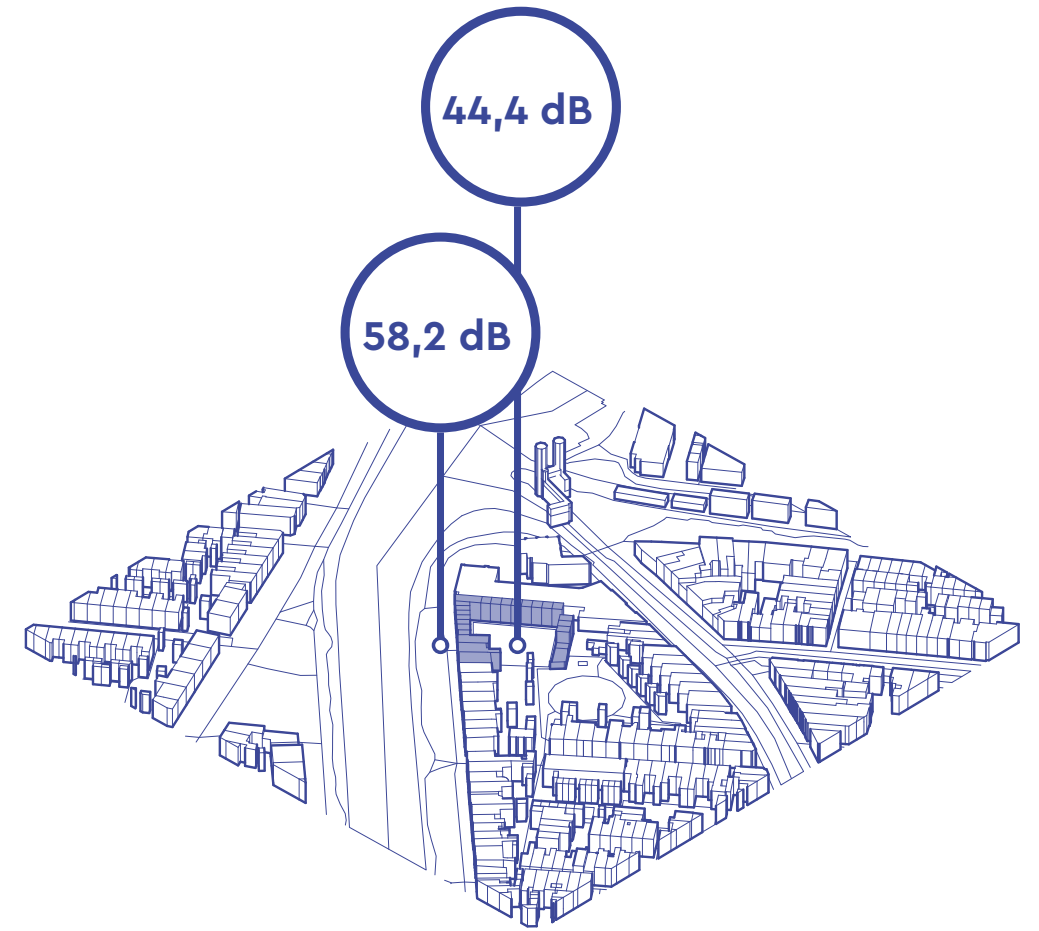
**DELFGAUWSEWEG**

*21,7 dB difference*

**IMAGE 180**  
*results (own image)*



**IMAGE 181**  
*klauwscourtyard (own image)*



**KLAEUWSHOFJE**

*13,8 dB difference*

**IMAGE 182**  
*results (own image)*



**IMAGE 183**  
*courtyard render (own image)*



**IMAGE 184**  
*public library render (own image)*



**IMAGE 185**  
*renewed entrance render (own  
image)*



PROJECT TITLE

**SOUNDSCAPING THE FUTURE LIBRARY**

SUB TITLE

*Explorations of the auditory library experience*

STUDIO

*Heritage and Architecture MSc3/4\_ Revitalising Heritage*

COURSE CODE

*AR3AIII5*

NAME

*Aafke Simonides*

STUDENT NUMBER

*5021138*

*Emeline Lin*

*Uta Pottgiesser*

RESEARCH

*Paddy Tomesen*

DESIGN

BUILDING TECHNOLOGY



**IMAGE 186**  
*current KB entrance (own  
image)*

## INTRODUCTION

My graduation project focuses on the Royal Library (Koninklijke Bibliotheek, KB) in The Hague, the national library of the Netherlands. Since most of its original programme will disappear, the building faces a major transformation challenge. The KB aims to reposition itself as an open, welcoming and contemporary library. My project, "Soundscaping the Future Library: Explorations of the Auditory Library Experience", investigates how sound and atmosphere can contribute to this renewed identity.

My choice of topic stems from my fascination with the atmosphere of buildings. Atmosphere is the first thing I sense when entering a space, yet it is a complex and layered concept that involves all five senses. Because architecture is often dominated by visual considerations, I wanted to focus on the auditory dimension. The library typology, where silence and sound are inherently significant, provided an ideal framework. By concentrating on soundscapes, I was able to make the abstract notion of atmosphere more tangible and measurable.

This topic fits well within my master track Heritage & Architecture, which focuses on the adaptation and reuse of existing buildings. My project explores how a 1980s building (outdated in function yet rich in potential) can be revitalised. It also aligns with the broader MSc Architecture, Urbanism and Building Sciences, which seeks to renew and improve the built environment.

## APPROACH AND METHODOLOGY

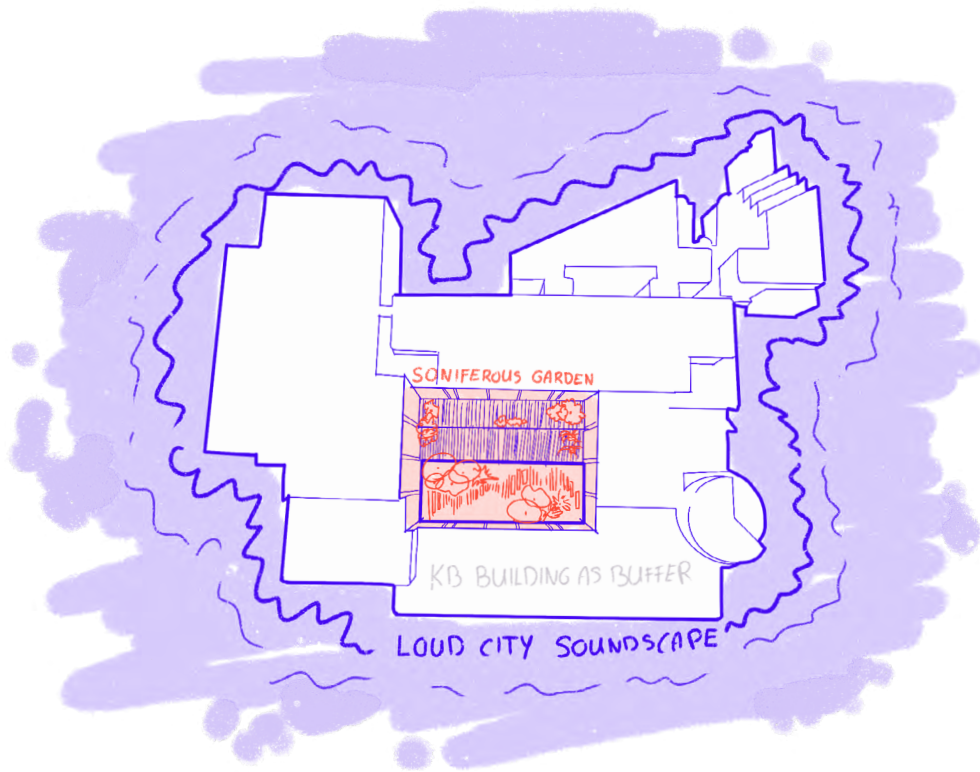
In the first quarter, I focused on defining my topic and establishing a research framework. Through extensive literature review and discussions with peers and tutors, I realised that concentrating on soundscapes was both academically relevant and feasible.

I then conducted comparative research on four libraries (Forum Groningen, DOK Open Delft, the TU Delft Library, and the British Library in London) using sound recordings and decibel measurements to analyse and compare spatial and acoustic qualities. At the KB site, I measured and recorded outdoor soundscapes to understand the influence of the surrounding urban noise from traffic and public transport.

One of my main sources of inspiration was R. Murray Schafer's *The Soundscape: Our Sonic Environment and the Tuning of the World*. His idea of the "soniferous garden" directly inspired the concept of a large interior courtyard in my design.

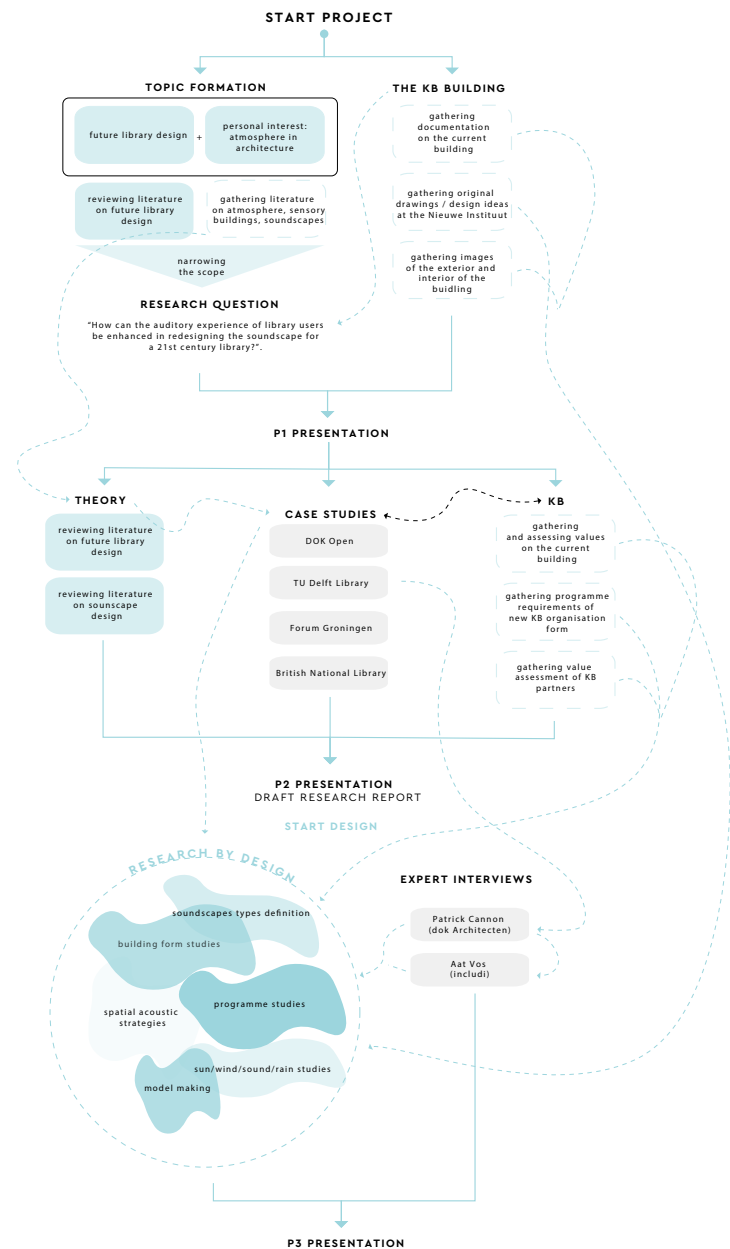
Although the expert interviews I conducted did not always yield straightforward answers to my questions, they provided valuable insights into the design of 'third places' and the role of sound in public buildings. During the third quarter, I began research through design, testing spatial variants and evaluating them in relation to their acoustic qualities and experiential impact.

This relationship between research and design proved crucial (see image 188). The research guided the design process, while the act of designing generated new questions: for instance, how to create spaces that feel comfortable and inclusive for people with different backgrounds and sensitivities to sound?



**IMAGE 187**  
*initial design concept (own image)*

## FEEDBACK, SUPERVISION, AND PERSONAL DEVELOPMENT

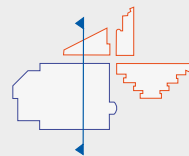
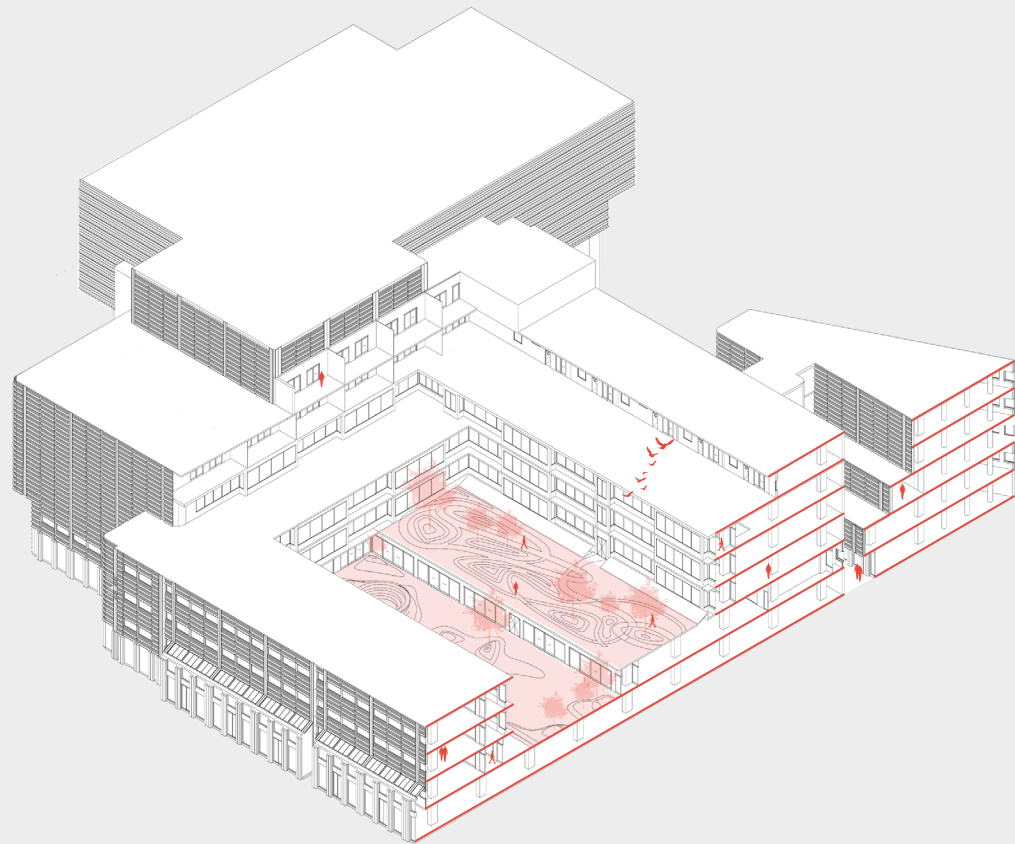


**IMAGE 188**  
*research and design diagram*  
 (own image)

Throughout the process, I benefited from the diverse perspectives of my mentors. My research mentor guided me in sharpening and deepening my topic; her suggestion to focus on soundscapes was decisive. My design mentor encouraged typological exploration (such as referencing the monastery typology for the courtyard) and urged me to critically reflect on the expression and atmosphere of my design. The building technology mentor emphasised sketching by hand, exploring materiality, and developing multiple design variants.

At times, I consciously decided not to follow every piece of advice. For instance, despite suggestions to prioritise other tasks, I chose to make a physical model of the existing building to understand its complex floor structure and voids. This model later became a valuable tool for both myself and my peers. I also experienced moments of conflicting feedback: while one mentor asked for technical precision, another encouraged exploratory hand sketches. Over time, I learned to navigate these differences and make independent choices based on my own design goals.

I discovered that the graduation process is more demanding than I had anticipated. Because I deeply care about the quality and impact of this project, I tend to set high expectations for myself, which occasionally causes stress. Nevertheless, I have developed a steady work rhythm: I work at the faculty every day, focusing on achievable daily goals. Studying alongside fellow students has been particularly motivating. I have also learned to embrace an iterative working style: not waiting for perfect ideas, but allowing design and thinking to evolve through sketching and making.



**IMAGE 189**  
*axo section overview (own  
image)*

## VALUE, CONTEXT, AND ETHICAL CONSIDERATIONS

The ambition of my project is to raise awareness of the impact of sound in architectural design. Sound is often treated as a secondary or technical concern, yet it plays a fundamental role in how people experience space. By placing soundscapes at the centre of the design process, I aim to contribute to a broader discussion on sensory experience and well-being in architecture.

The societal relevance of the project lies in its sustainable and circular approach. By reusing the existing concrete structure and adapting it for new functions, the design minimises material waste. The redesigned building is more inclusive and accessible, with improved wayfinding, a recognisable entrance, and a programme that invites diverse forms of use and interaction.

Two ethical aspects have been central to my process: environmental impact and the treatment of heritage. Initially, I planned to demolish more of the existing structure. However, after receiving feedback during the P2 phase, I critically reconsidered this approach and decided instead to transform part of the building into housing. This decision reduced environmental impact and reinforced the building's continuity and social value. It was a key realisation that sustainability and heritage preservation are not opposites, but can mutually strengthen one another.

## PERSONAL REFLECTION QUESTIONS

### 1. If I were to conduct a new research project for this building, which theme would I choose, and how might it alter the perspective on the library of the future?

If I were to conduct a new research project for this building, I would still focus on atmosphere as a guiding principle, but I would give prominence to a different sense.

In my current project, the emphasis on the auditory dimension emerged naturally from the library typology and from the clear need to improve the existing soundscapes in and around the building. However, a building is never defined by sound alone. If I were to continue this line of inquiry, I would be highly interested in exploring the visual sense, specifically, the role of light and colour. This would include a deeper investigation into colour theory and a study of how natural light shapes atmosphere in libraries.

I believe that future libraries will increasingly function as places for pleasant, meaningful stay rather than solely as repositories of knowledge, as much of the latter continues to shift to digital platforms. Human beings remain physical creatures situated in a physical world, where spaces for concentration, social interaction, debate, and personal development retain profound importance. Atmospheric conditions, especially those created through light, will play a decisive role in shaping such experiences. A well-designed visual environment can attract users and encourage them to return, as it supports productive, enjoyable learning experiences.

Had I centred my research on light instead of sound, several design decisions would likely have differed. For instance, the inner garden might have become an atrium, where a glazed roof could have introduced abundant daylight into the heart of the building. I might also have adapted the existing façades more substantially in order to optimise the ingress of natural light. This alternate focus would have opened a distinct set of spatial

strategies and led to a different interpretation of the future library.

### 2. How has this graduation process shaped my understanding of my role as an architect, and which aspects of my working method do I aim to develop further in future projects?

Throughout this graduation project, I have constantly navigated between architectural dreams and practical realities, and this process has fundamentally shaped my understanding of my role as an architect.

Through conversations with fellow students, friends, and tutors, I repeatedly realised how essential it is for architects to dare to imagine, to articulate ambitions that may initially appear costly, demanding, or drastic. Architects play a unique role in defending and advancing the quality of the built environment; few other professions are positioned, or even inclined, to advocate so strongly for spatial well-being. Embracing this responsibility has become an important part of how I now understand my professional identity.

This project has also profoundly changed my perception of the existing KB building. At the outset, I had little appreciation for its structure and quickly categorised it as a “typically unattractive 1980s building.” As I progressed, however, I developed a more nuanced understanding of its spatial logic, craftsmanship, and architectural intentions. I gained a deep respect for the original architect and came to recognise the building as a meaningful piece of architectural history. This shift in perspective strengthened my conviction that such buildings deserve to be valued and preserved, not only for their material qualities, but as markers of how architectural thought, human needs, and cultural ideals evolve over time.

This learning process has reshaped both my design attitude and my long-term vision of practice. Going forward, I aim to cultivate this balance between critical appreciation of the existing context and the courage to propose

ambitious transformations, ensuring that my work contributes meaningfully to the ongoing development of architecture.



**IMAGE190**  
*drawing of KB (own image)*

## **TRANSFERABILITY, FUTURE OUTLOOK, AND SELF-REFLECTION**

The principles I developed (designing from an auditory perspective, introducing a quiet inner courtyard by using the building as a buffer towards the noisy city, and shaping soundscapes through spatial zoning and material choice) can be applied to many other projects. They offer a way for architects to engage with sound as a creative design tool rather than as a problem to be mitigated.

In the next phase, I aim to translate my conceptual ideas into detailed technical and visual representations. This includes developing CAD drawings, researching reference details and materials, and building a physical model that communicates the spatial and sensory essence of the project.

Looking ahead, I hope that my project, together with the work of my fellow students, can inspire the real architects involved in the actual renovation of the KB. My wish is that soundscapes will become an active consideration in their design decisions, that reuse will remain a priority, and that the future library will become a place where stillness and liveliness coexist.

Reflecting on this process so far, I realise that I have grown in critical thinking, and intuition. I now experience architecture differently: I try to listen to spaces as well as looking at them.

