RESPONSIVE URBAN LANDSCAPES

Re-imagining brownfields through architecture as field conditions for responsive and inclusive transformation

Matt van Kessel - 5010438

Architectural Design Crossovers
A4 Presentation - 26/06/2026

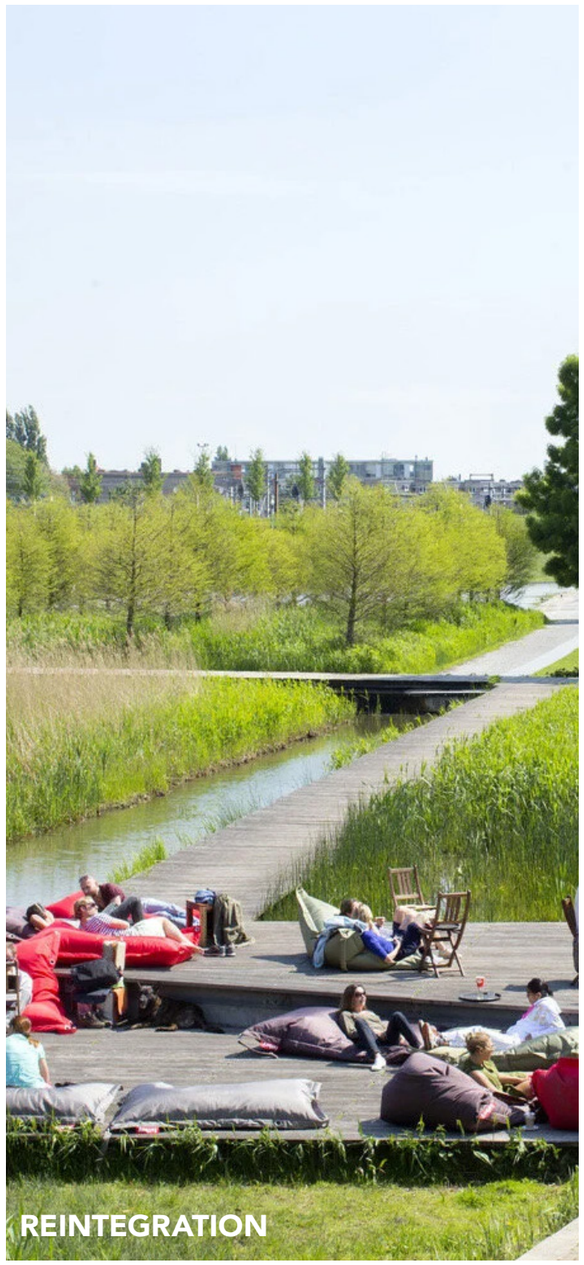
Johan van Lierop
Alper Alkan
Florian Eckardt

WHAT IS A BROWNFIELD SITE?

LIFE CYCLE OF INDUSTRIAL PRECINCT







Remediation of Westergasfabriek terrein, Amsterdam

PRIORITIES URBAN LAND



A Confrontation (Agnes Denes, 1982). A 2-acre wheat field was planted on a landfill in lower Manhattan.

REWILDING OF URBAN SPACES



Le Jardin Du Tiers-Paysage, Saint Nazaire (Gilles Clément, 2009)

NEW USE AND REDEVELOPMENT



Kings Cross pond club, London (Ooze, 2015-2016)

OUR RELATION WITH THE LAND



De Ceuvel, Amsterdam (Delva landscape, Space & Matter, 2014)

THE FUTURE OF URBAN PARKS



Former Nordbahnhof railway station, Berlin

How can architecture act as a driver for the reintegration of urban brownfields by working with their existing spatial and ecological qualities to support responsive urban transformation?

MADRID AS URBAN LABRATORY



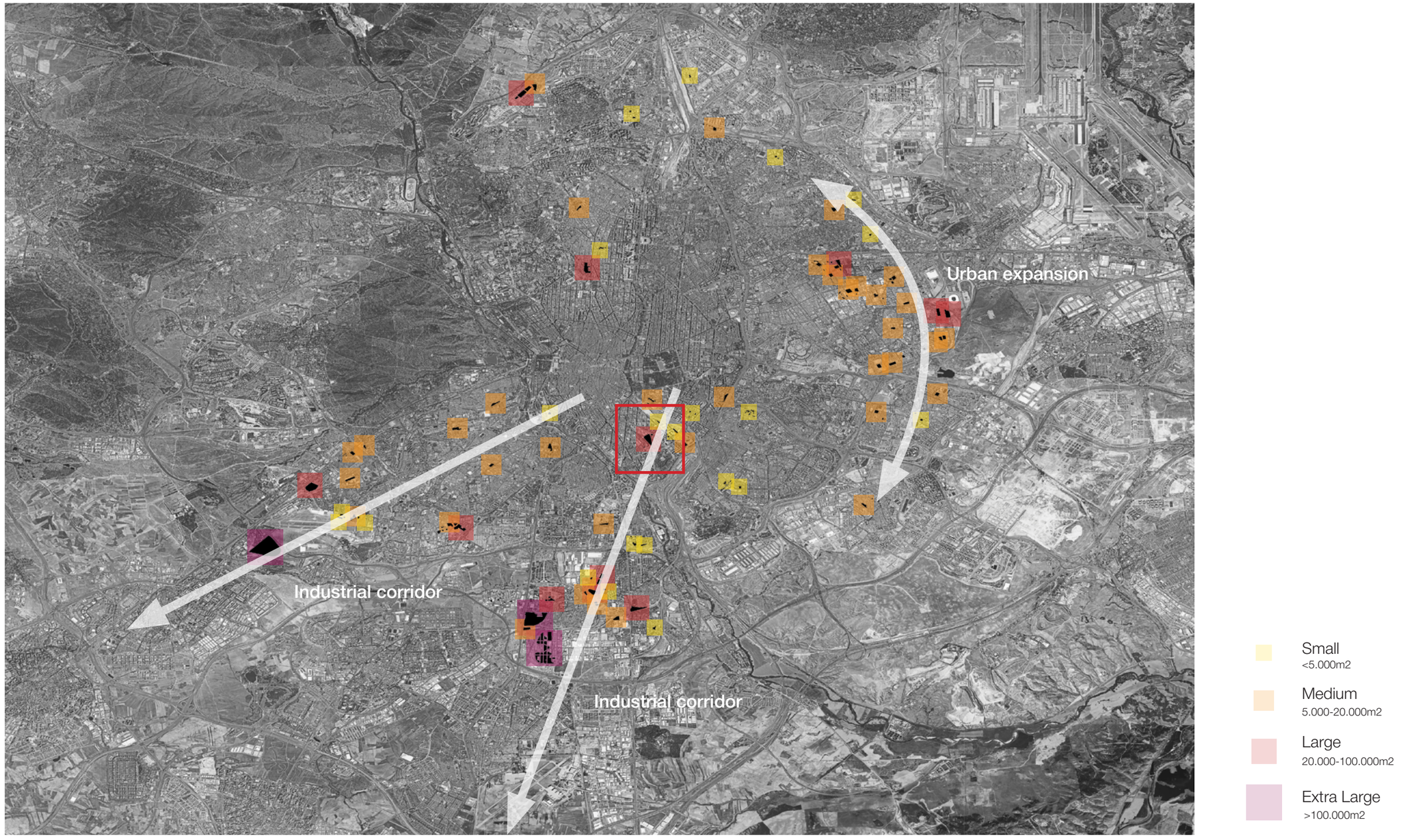
BROWNFIELDS IN MADRID



DOMINANT PATTERNS BROWNFIELDS



DOMINANT PATTERNS BROWNFIELDS



ARGANZUELA TODAY



Former Delicias train station



Parque Enrique Tierno Galván



Matadero art centre

ARGANZUELA 18TH CENTURY



El paseo de las Delicias, en Madrid. Francisco Bayeu y Subias (1785)
Museo del Prado

ARGANZUELA 20TH CENTURY



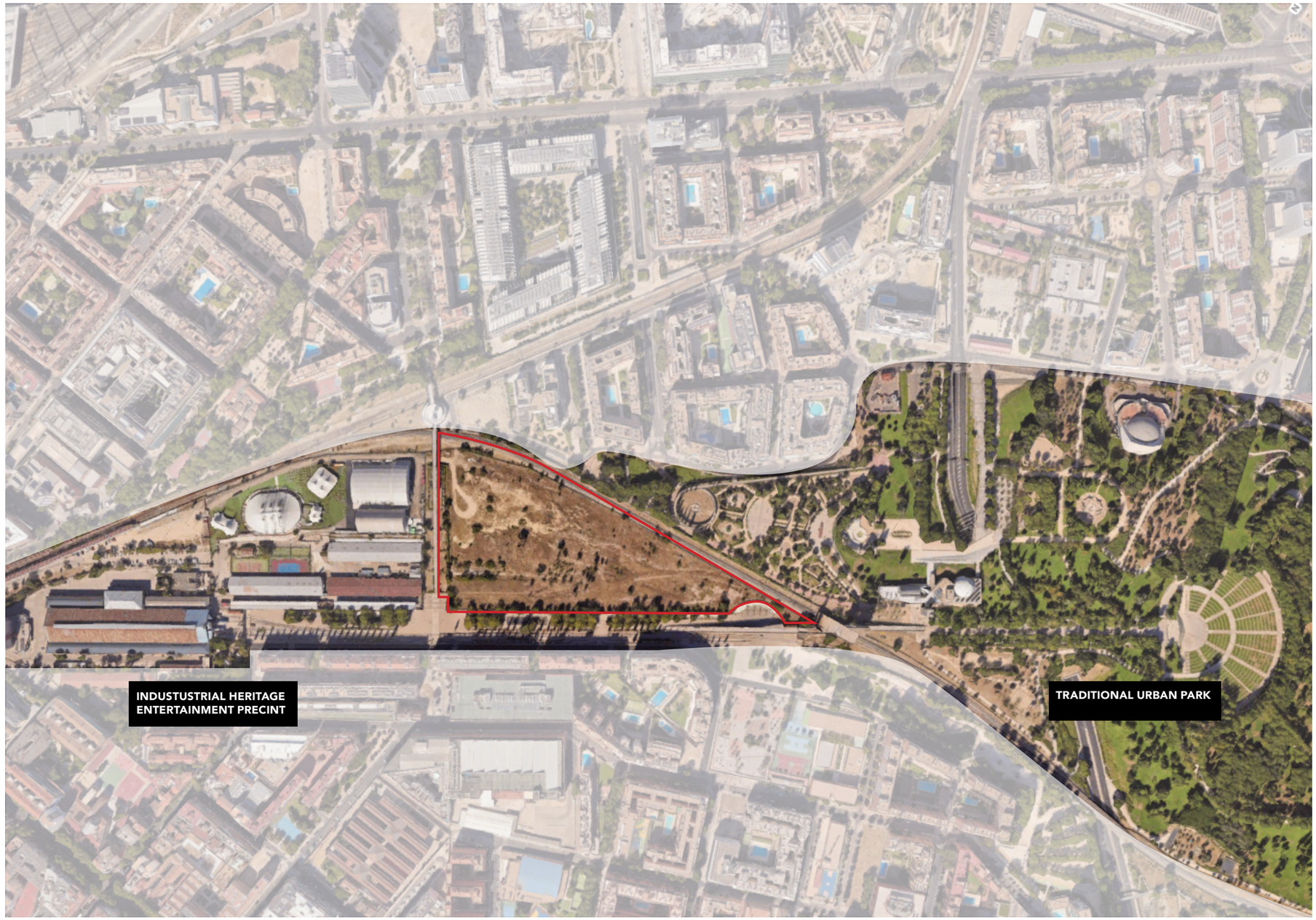
Aerial view of Delicias railway complex (1961)

ARGANZUELA 21TH CENTURY



Aerial view of Delicias railway complex (2026)

INTERLOCKING OF URBAN CONDITIONS



INSTITUTIONAL INTERESTS



The Espacio Delicias entertainment precinct

PUBLIC NEEDS



STOP Espacio Delicias

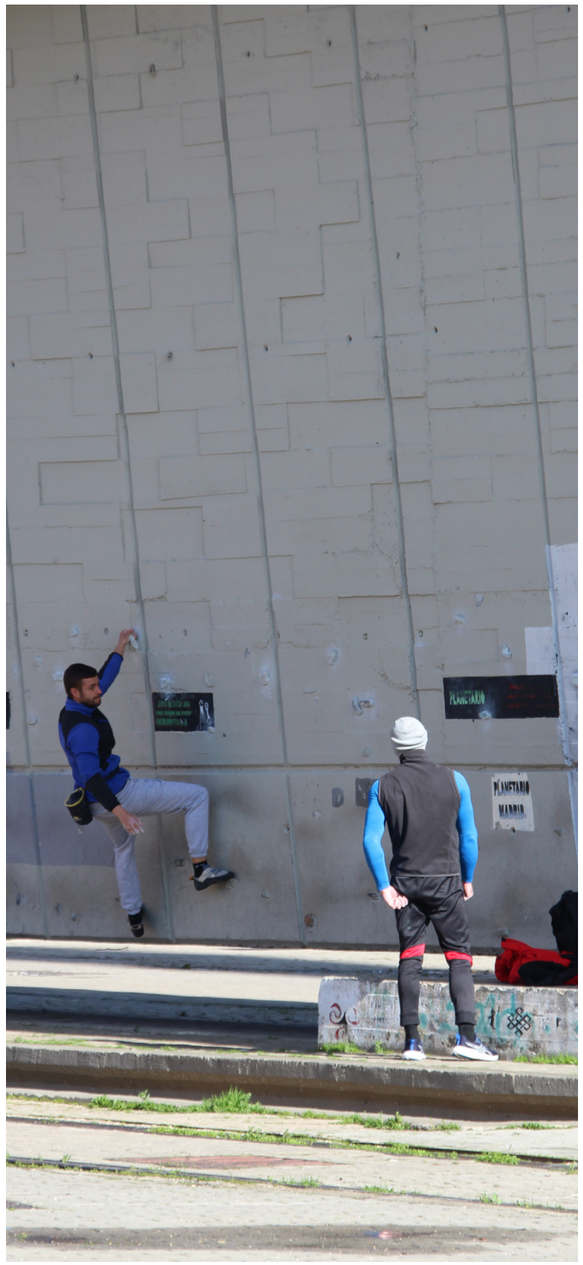
Information and proposals in the fight to achieve the endowment use committed for the plots of the old Delight Station

Neighbourhood groups continue to protest

SITE SURVEY



Slow traffic axis North side



Slow traffic bridge is used for climbing



Slow traffic axis connecting to park

INDUSTRIAL REMNANTS



Remnants of the rail way track running through the site

INDUSTRIAL REMNANTS AND NATURE

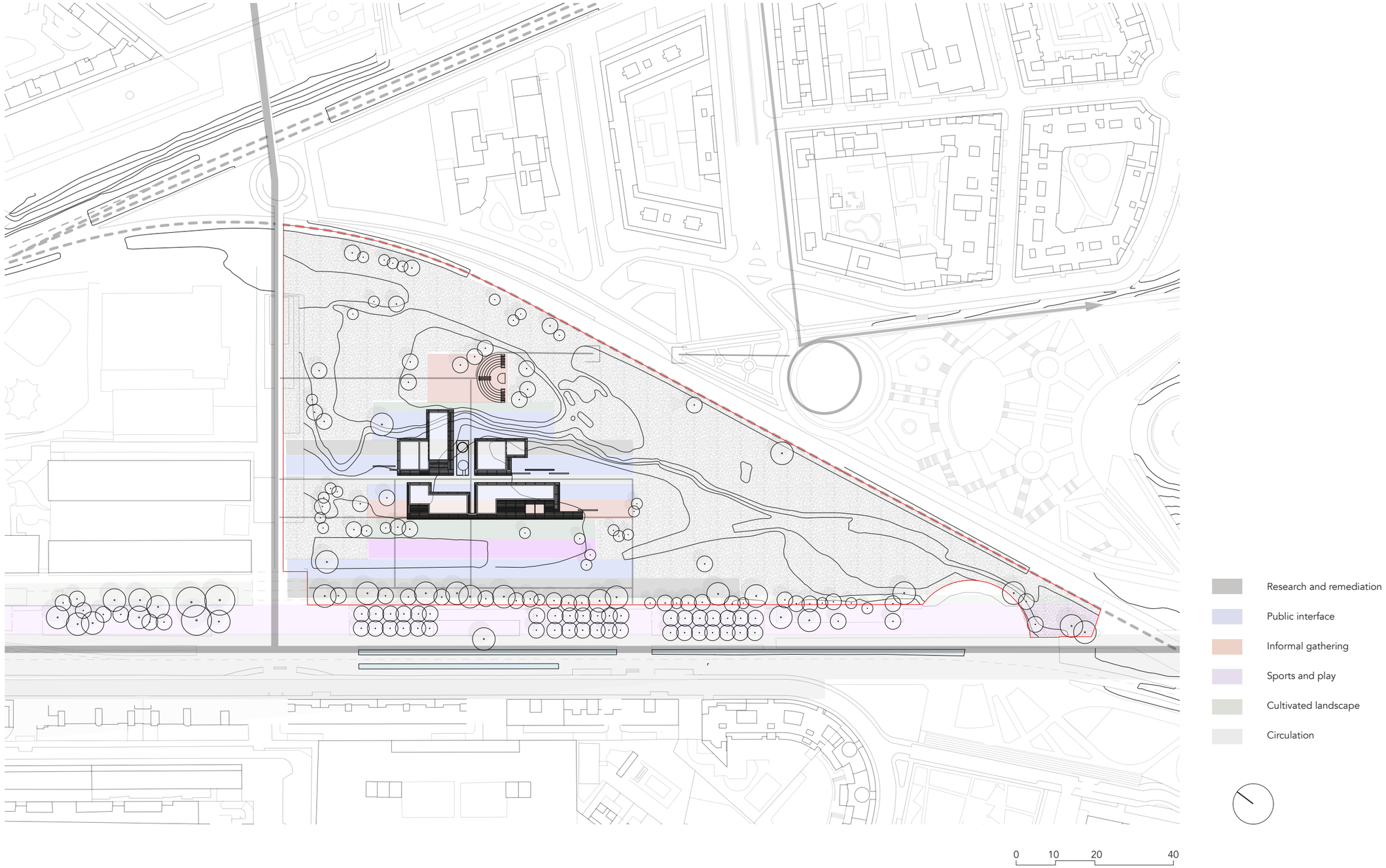


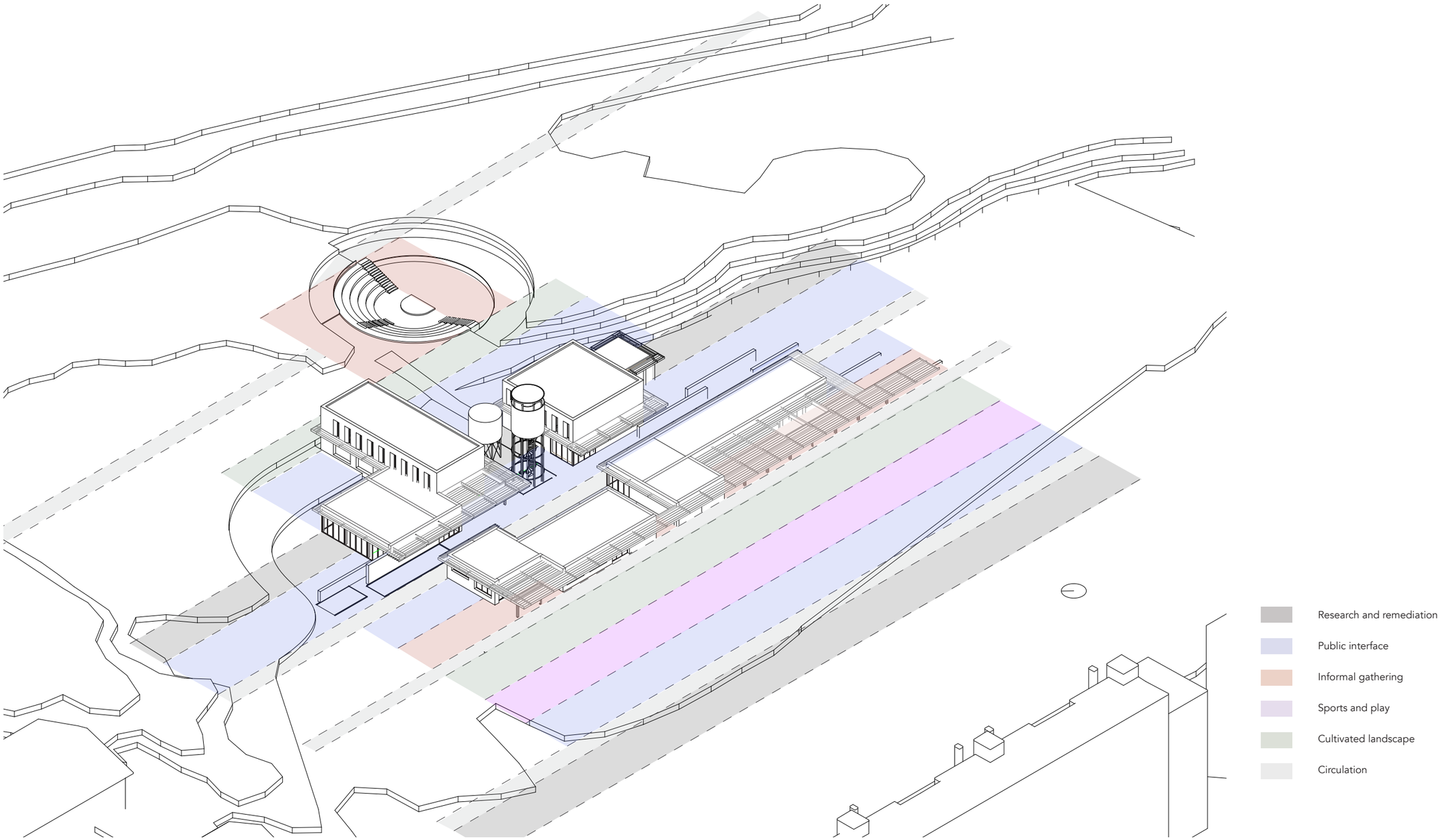


The site hosts spontaneous vegetation alongside the remains of its industrial heritage.

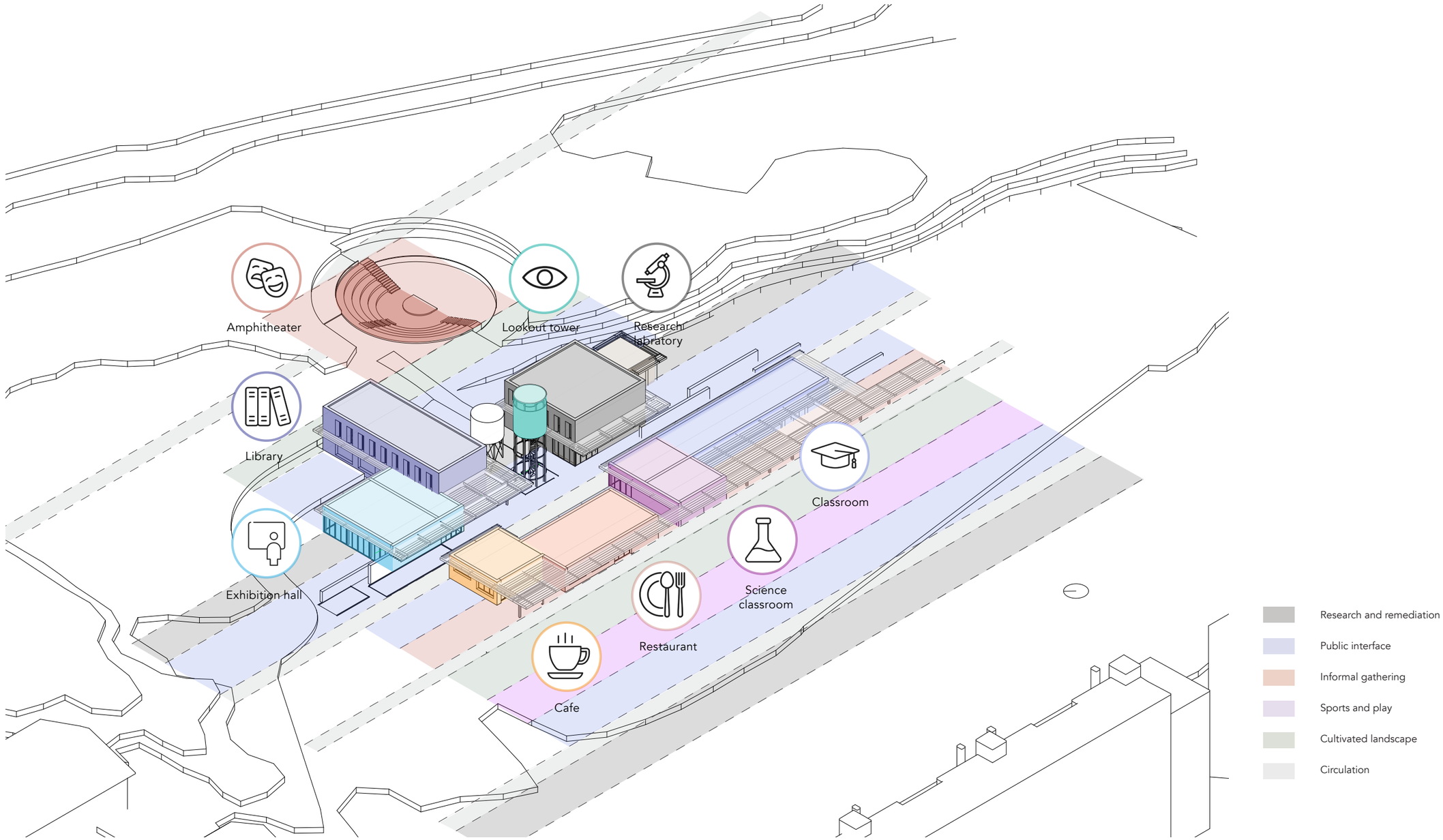
So how can architecture strengthen these existing qualities instead of replacing them?

REPROGRAMMING OF THE SITE

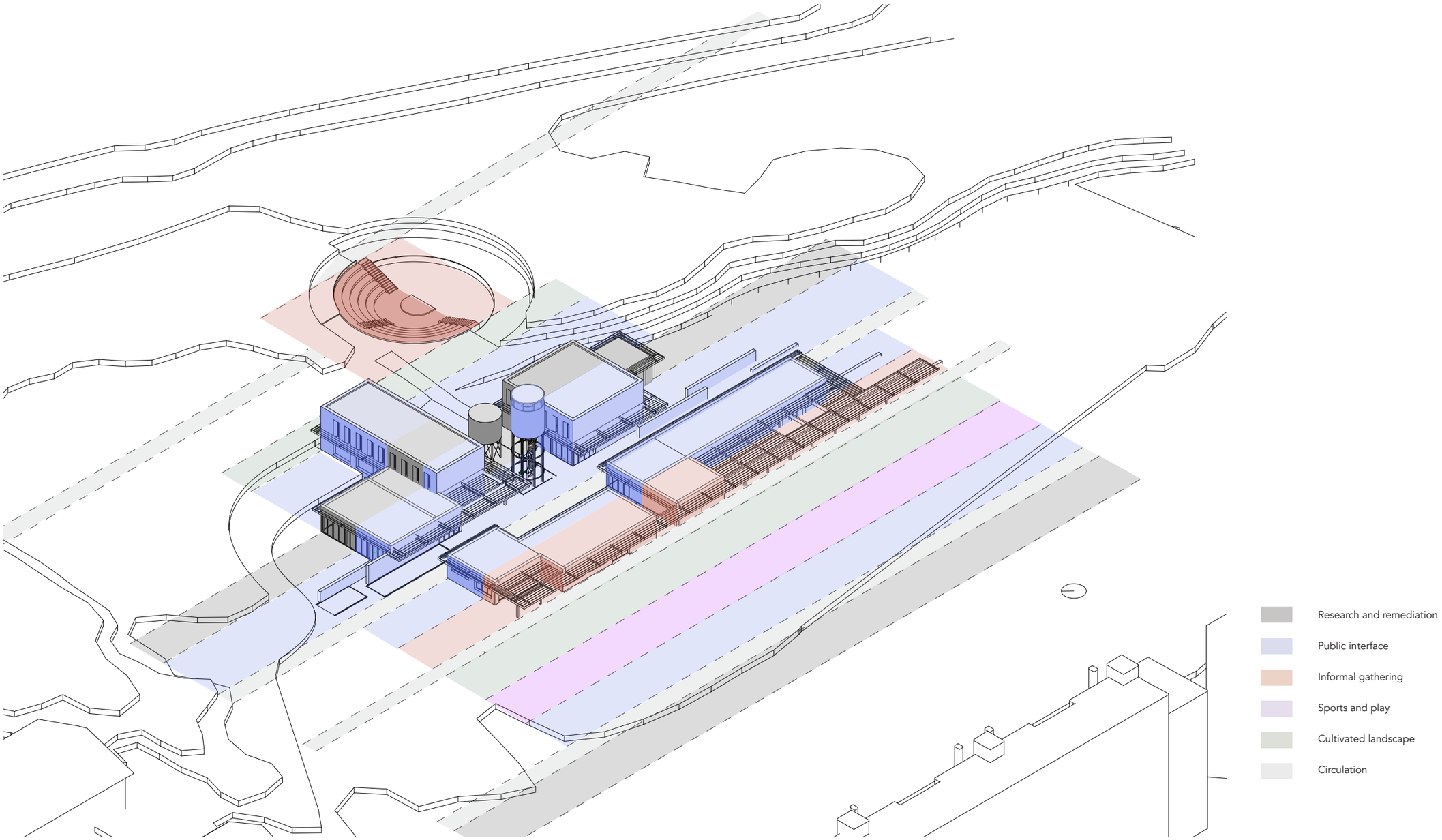




The site is reprogrammed through a series of programmatic strips. Integrated within this framework, a composition of buildings responds to the site's characteristics.



The programme responds to public needs while connecting research and community.



Within the building composition, the programmatic strips continue, giving different spaces distinct characteristics.

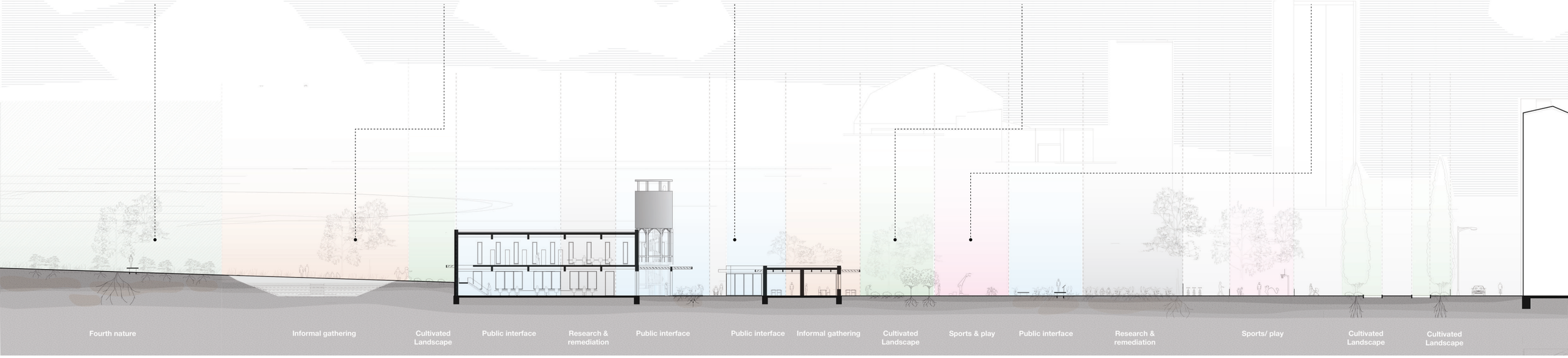


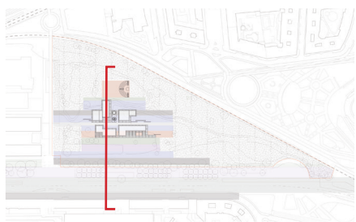












CROSS SECTION SITE

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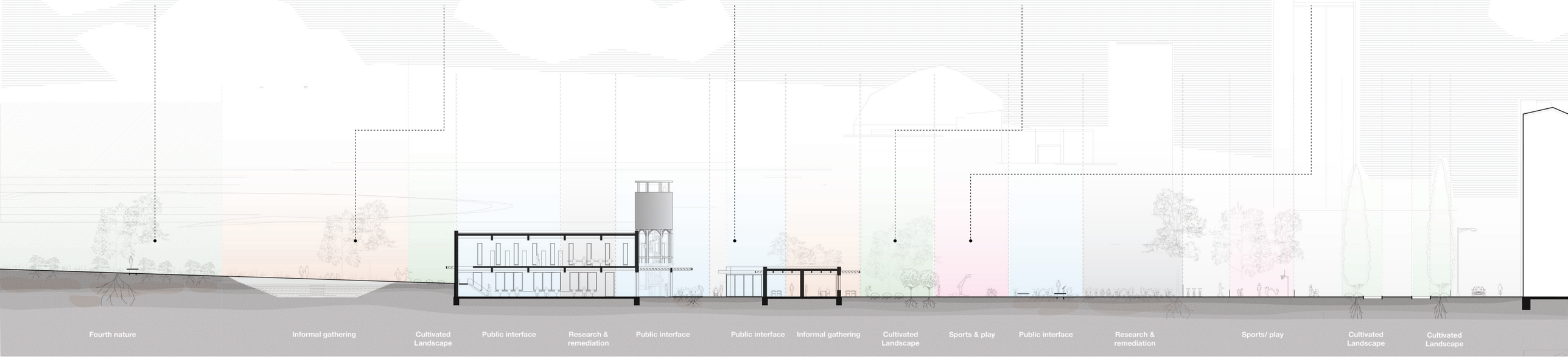


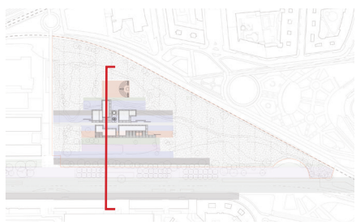












CROSS SECTION SITE

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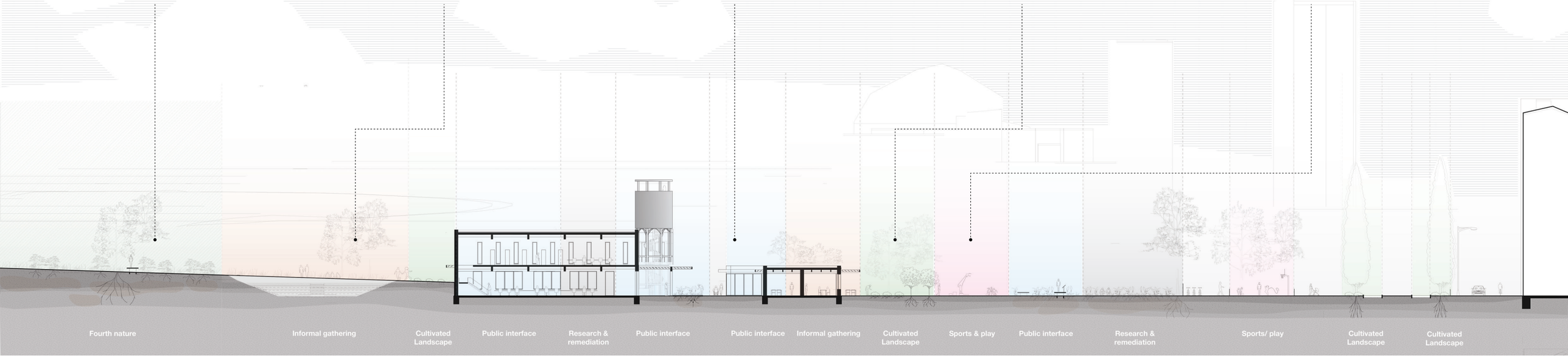


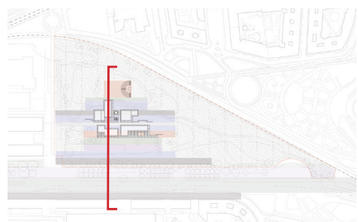












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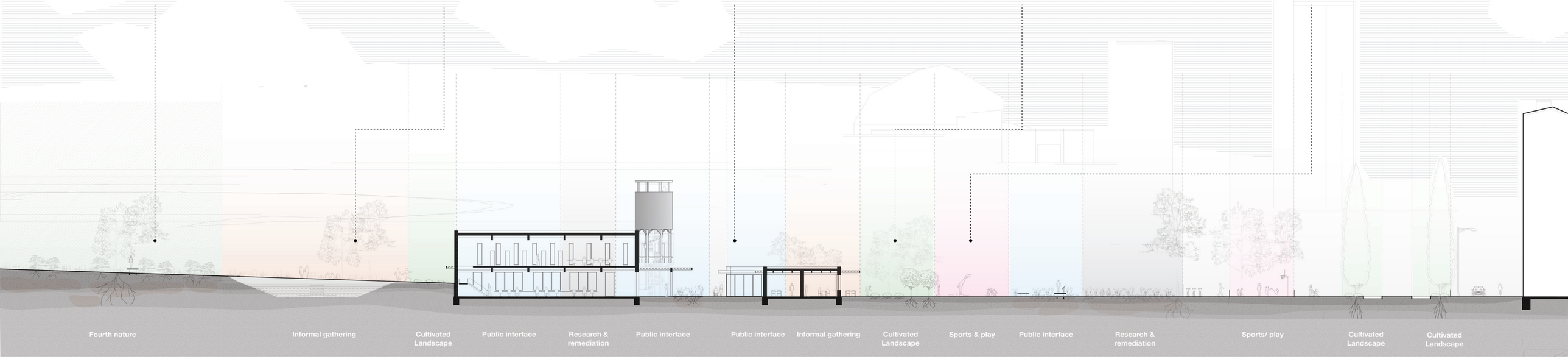


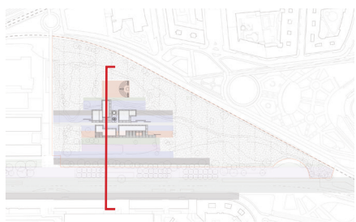












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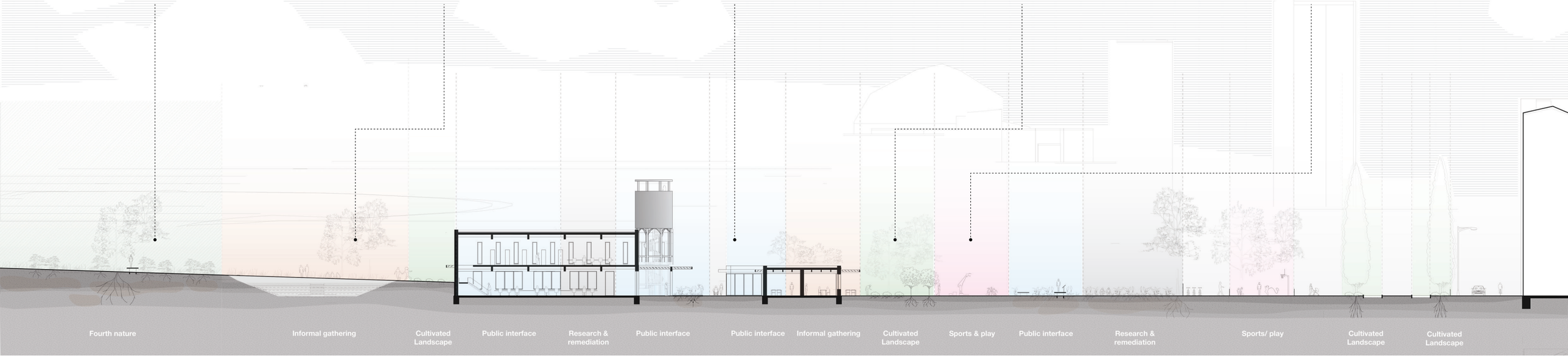


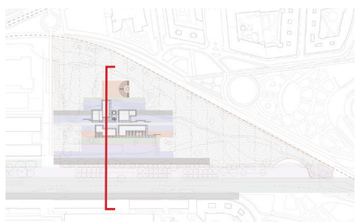












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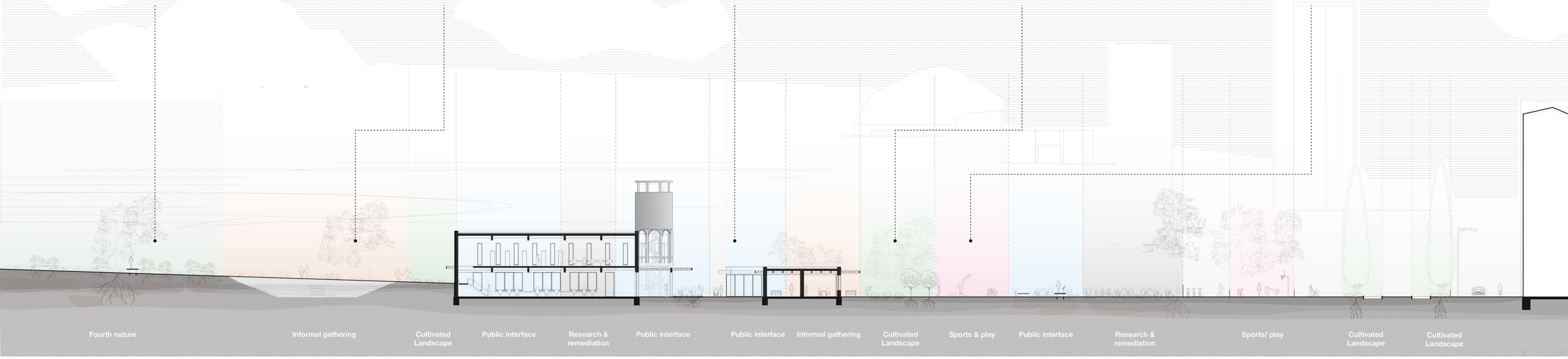


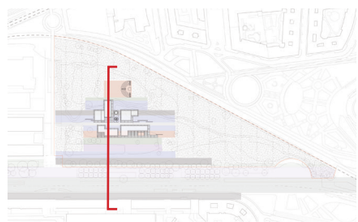






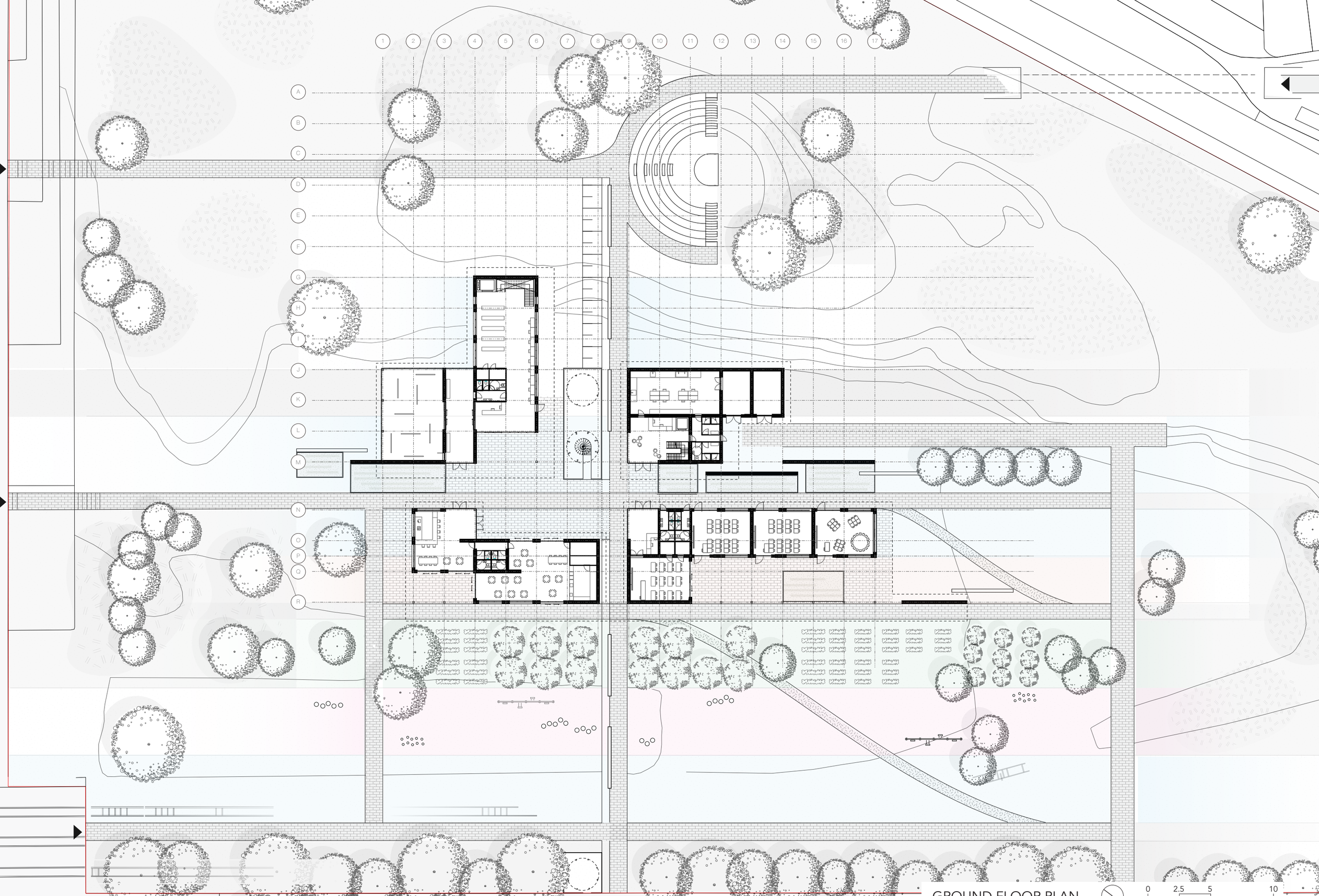






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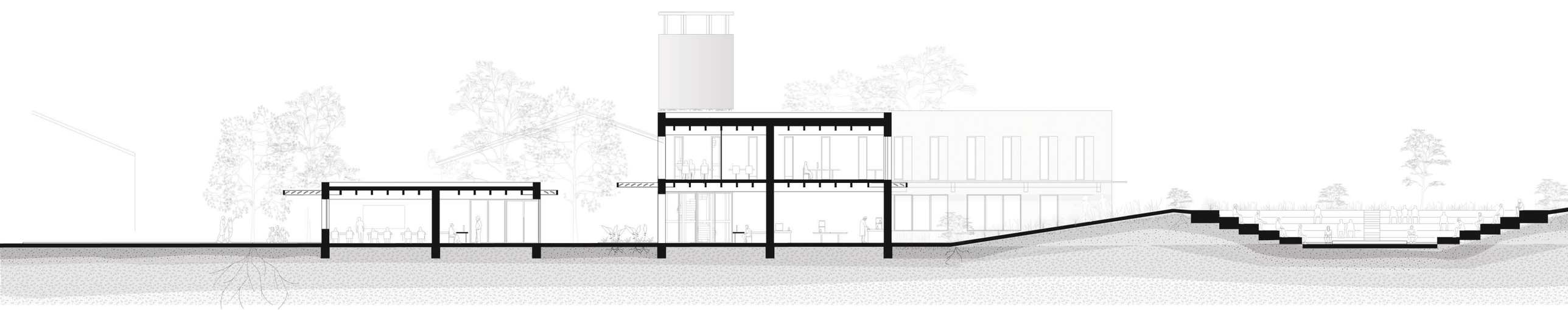
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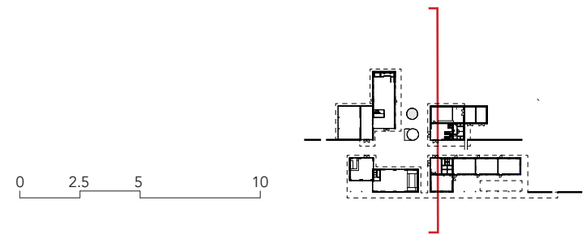
GROUND FLOOR PLAN

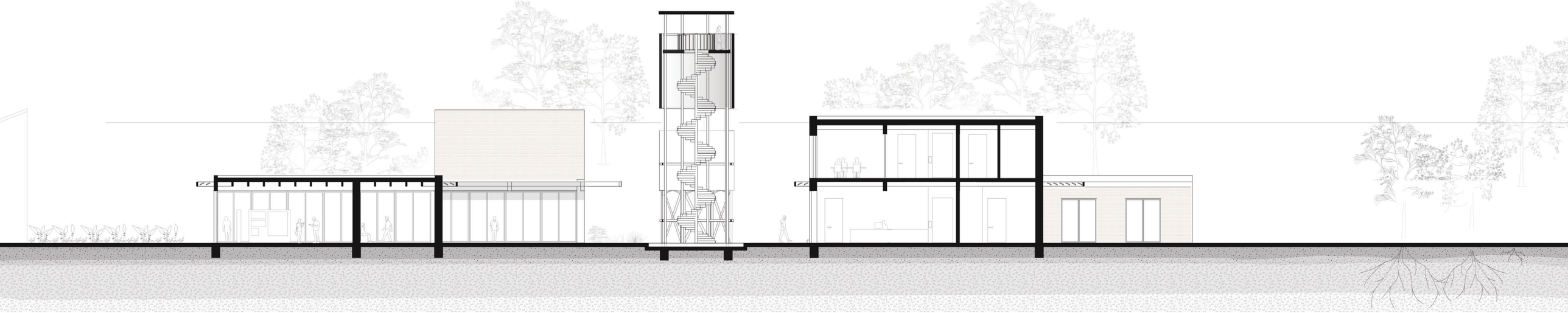
Matt van Kessel

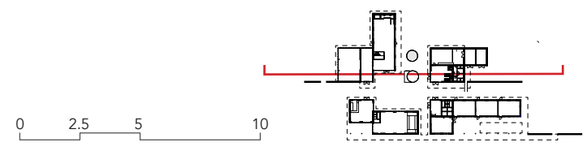
Responsive Urban Landscapes



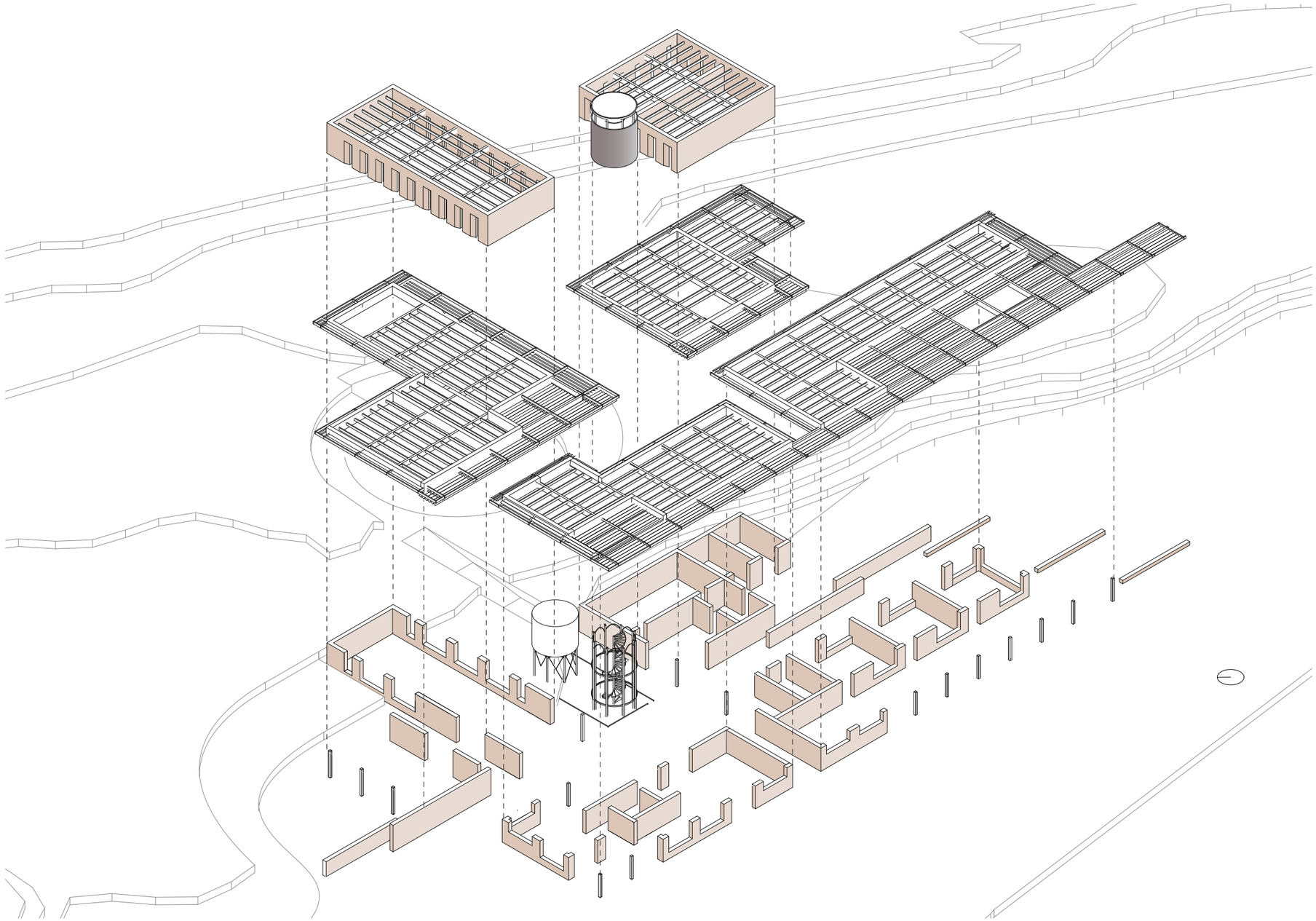
SECTION AMPHITHEATER



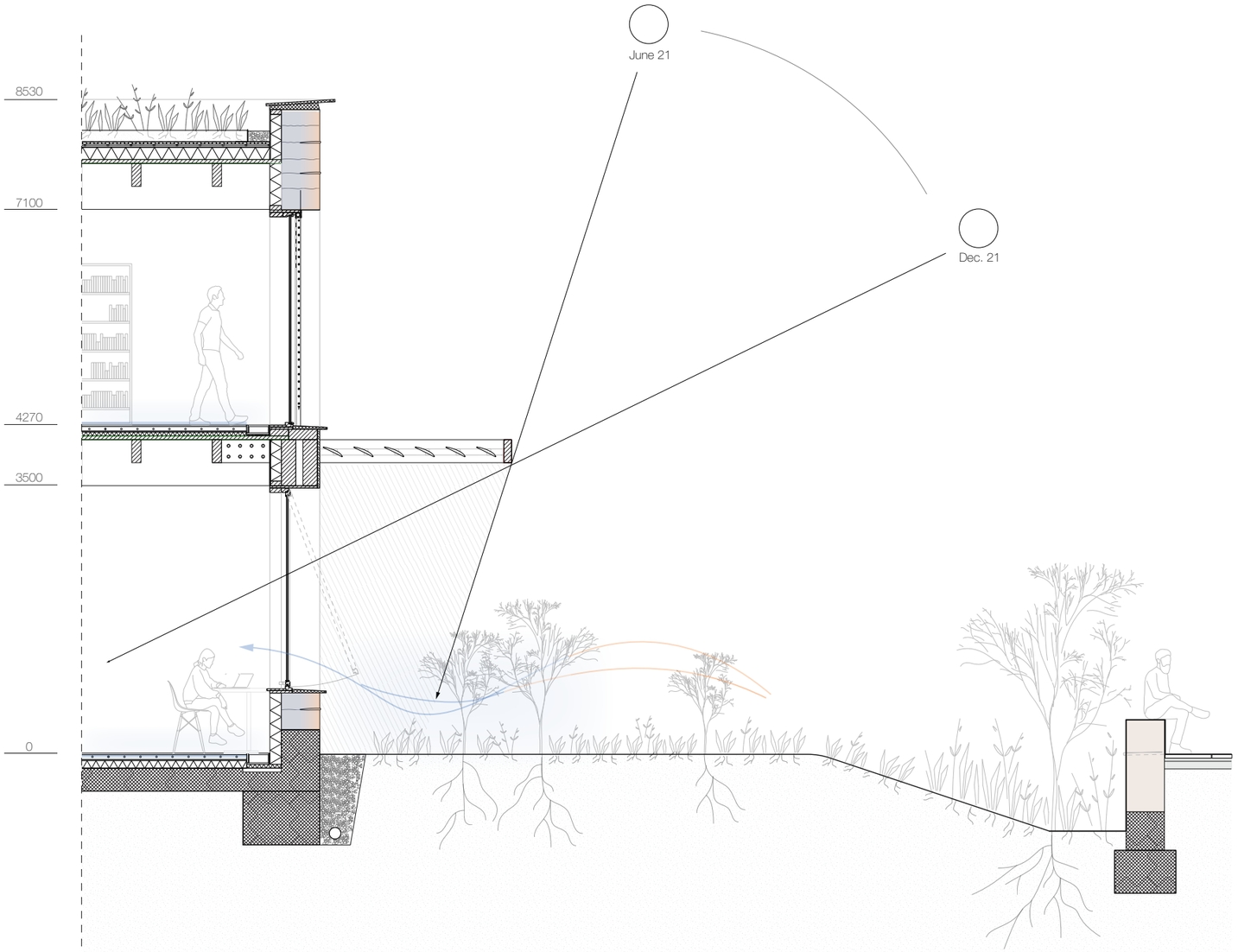


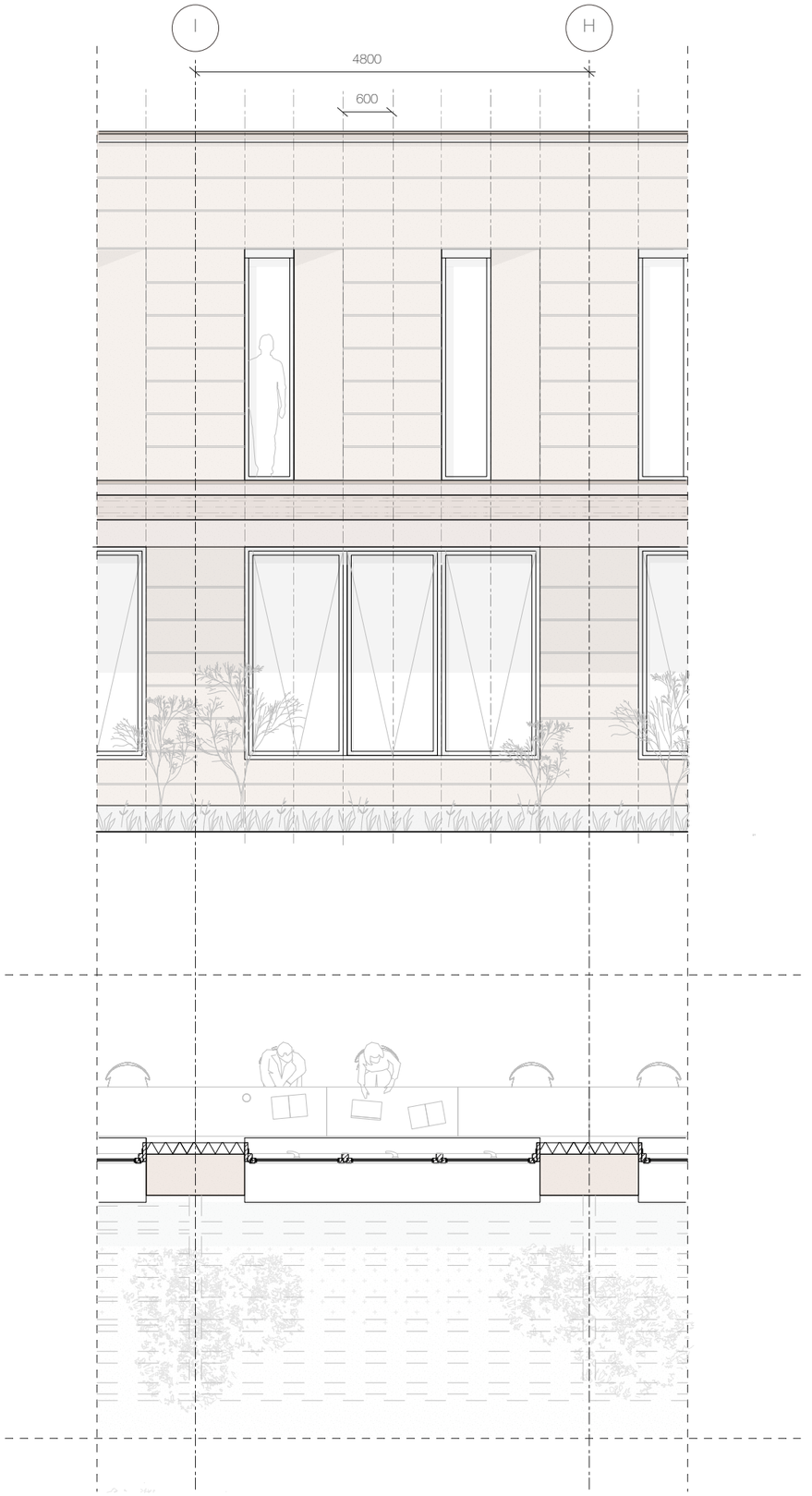


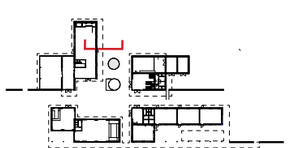
SECTION WATER TOWER



FRAMEWORK OF WALLS AND SHADE





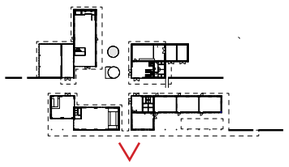


BUILDING FRAGMENT

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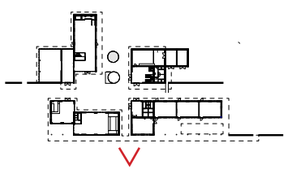
PERSPECTIVE MORNING





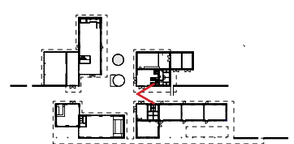
PERSPECTIVE EVENING





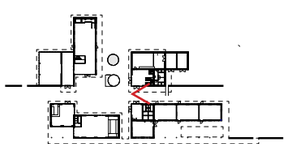
PERSPECTIVE WEEKDAY





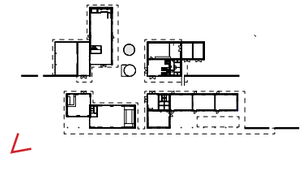
PERSPECTIVE WEEKEND





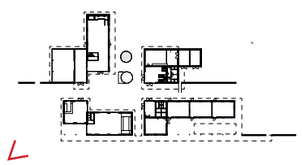
PERSPECTIVE WINTER

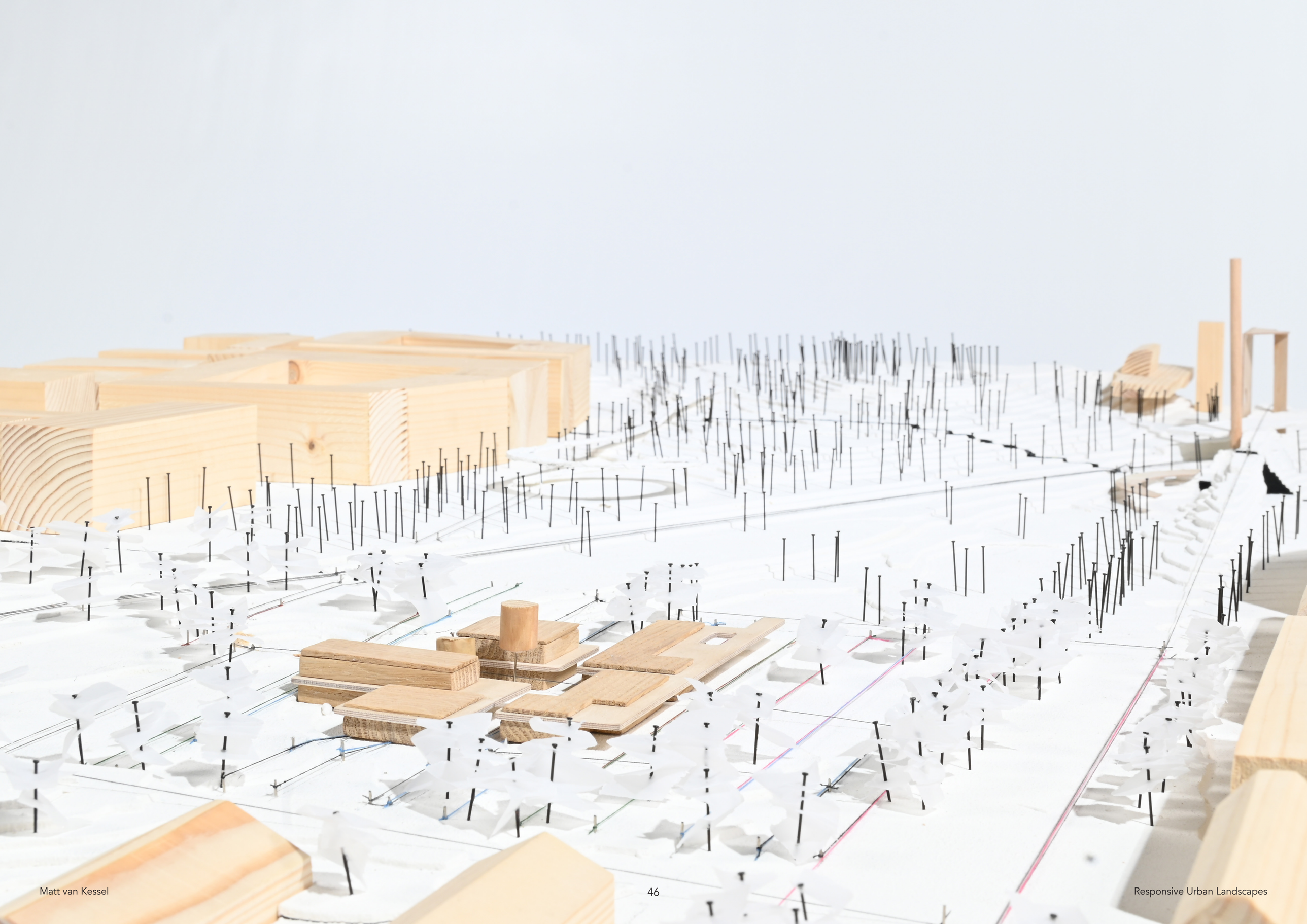




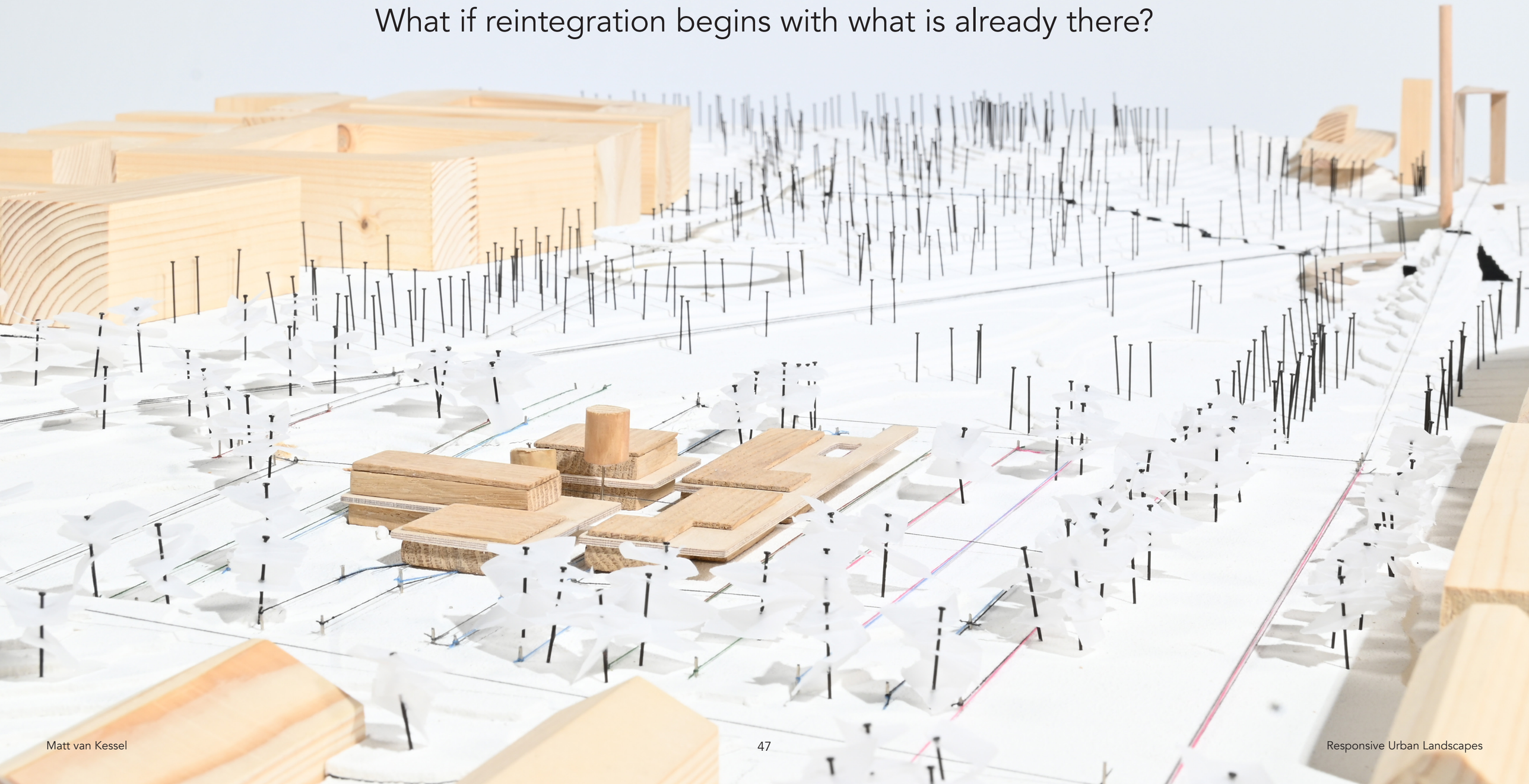
PERSPECTIVE SPRING







What if reintegration begins with what is already there?



THEORETICAL FRAMEWORK

- Preserve temporal character
- building upon, not erasing
- Supporting natural processes
- Focus on nature based remediation processes
- Space for experimental programme
- Inclusive and responsive programming



Terrain Vague



Fourth Nature

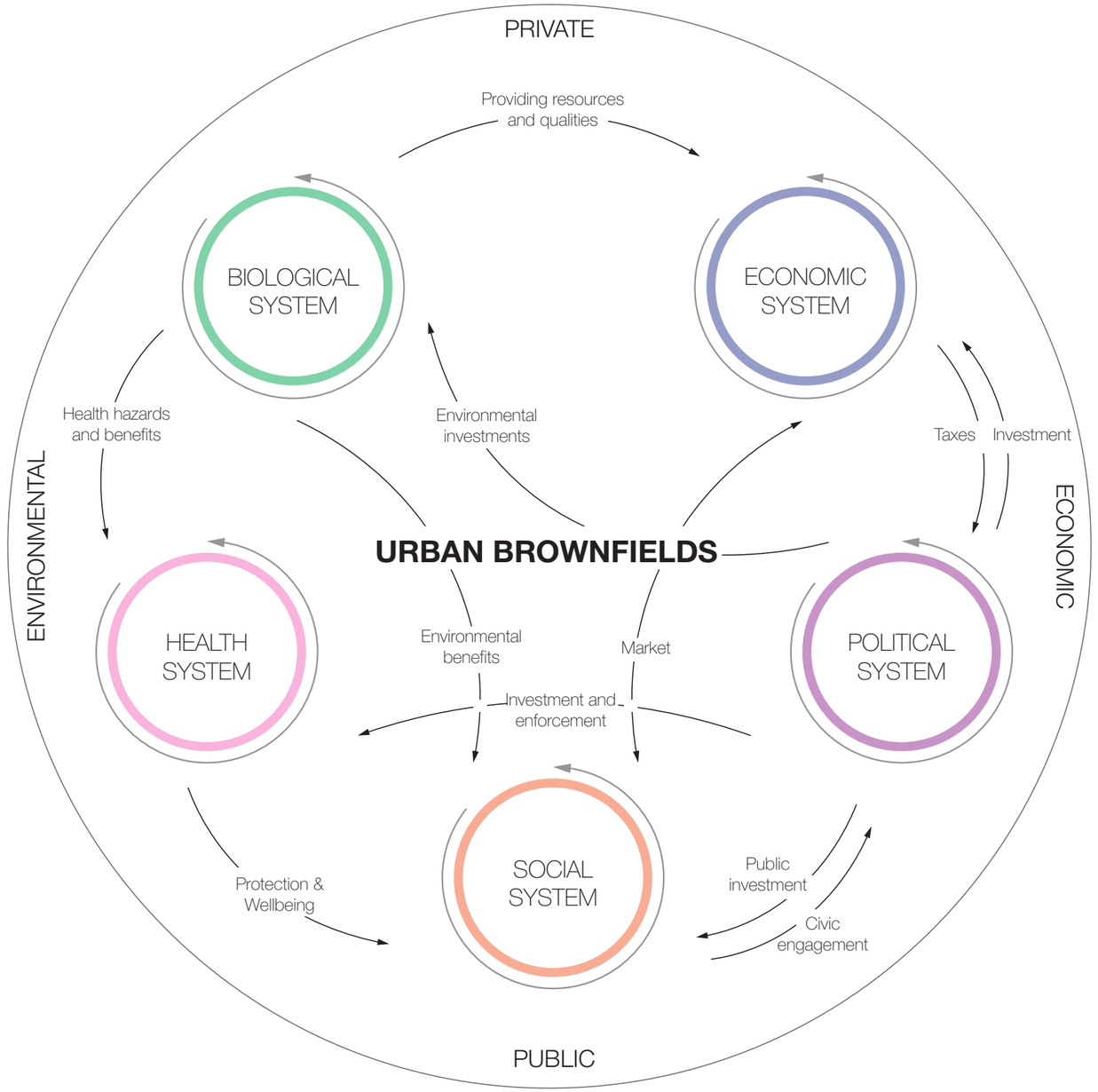


Experimental uses



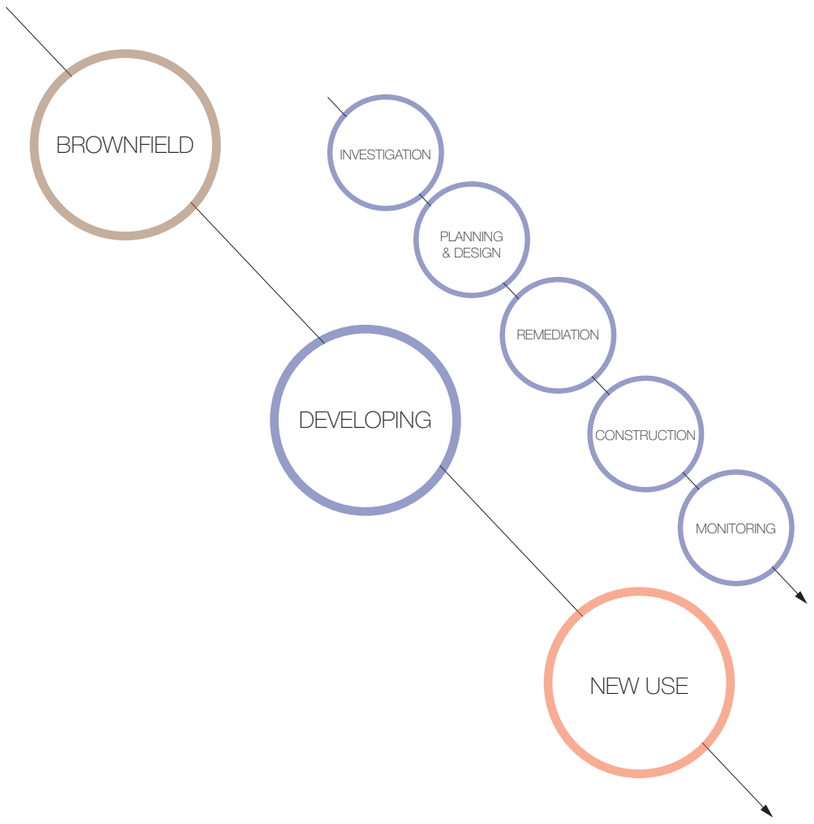
Natural remediation

URBAN BROWNFIELD SYSTEMS

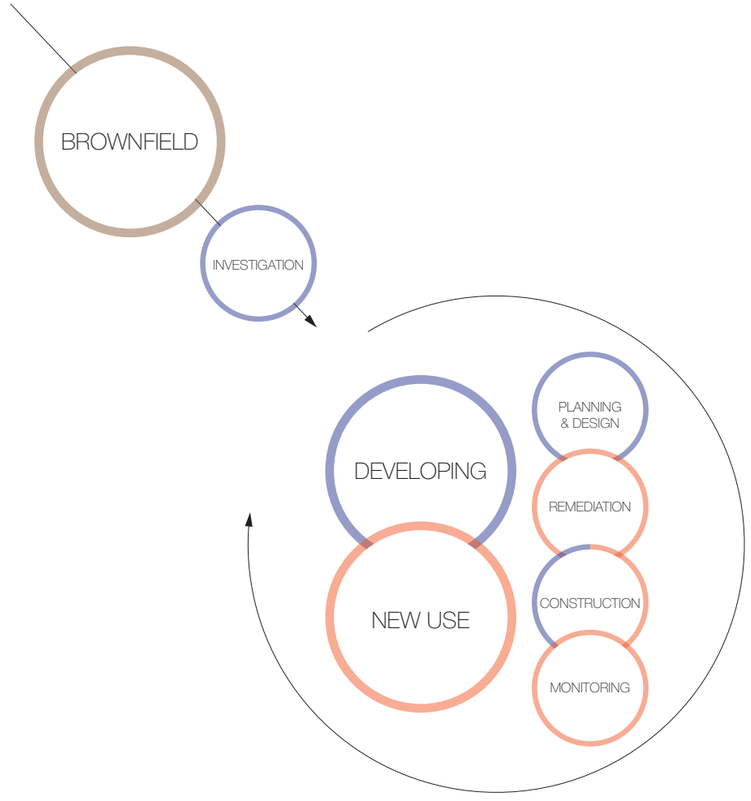


System diagram urban brownfields

RE-IMAGINING THE REDEVELOPMENT PROCESS

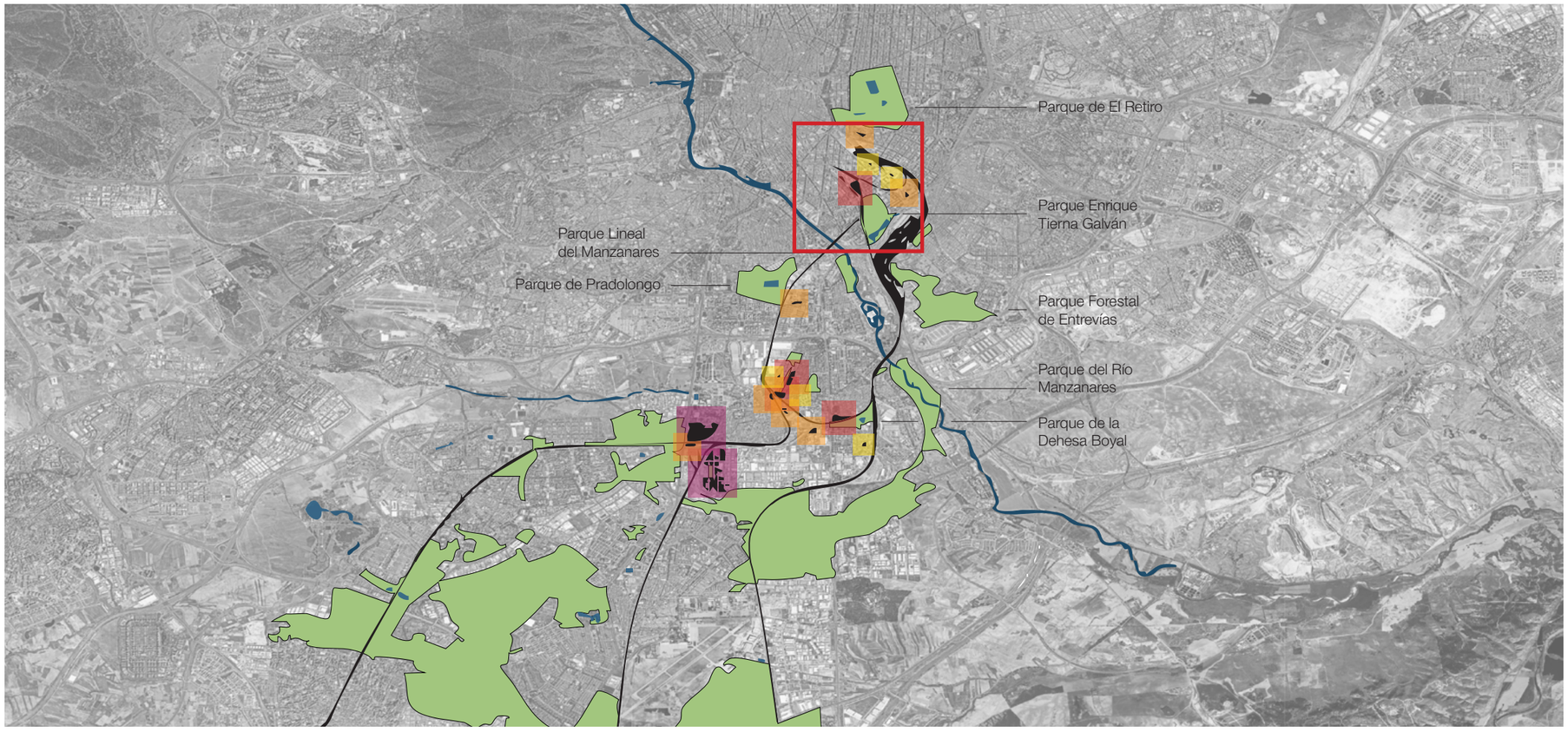


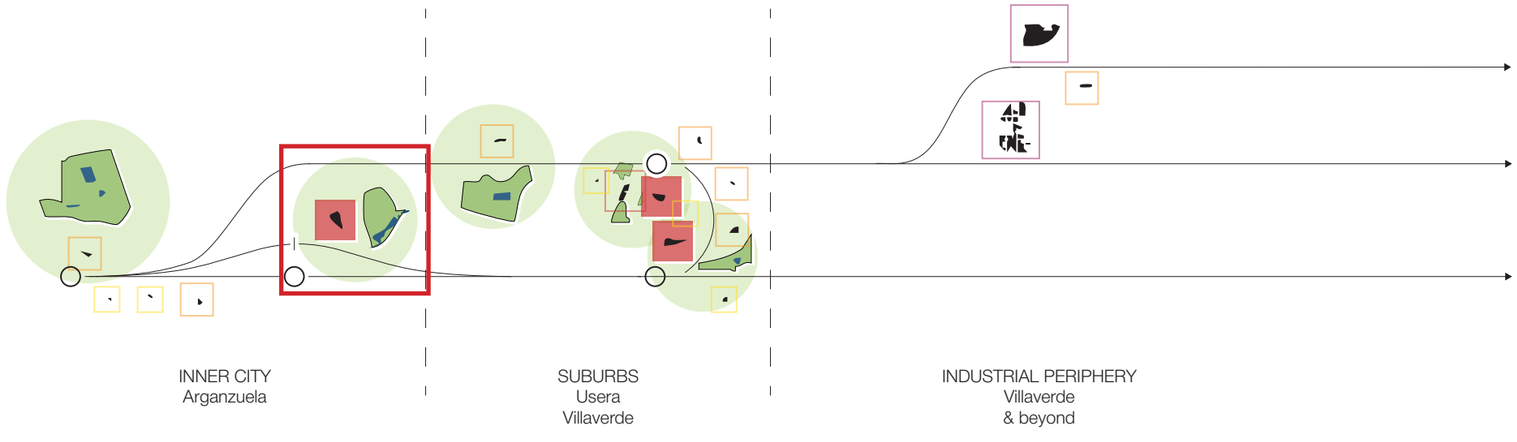
Conventional



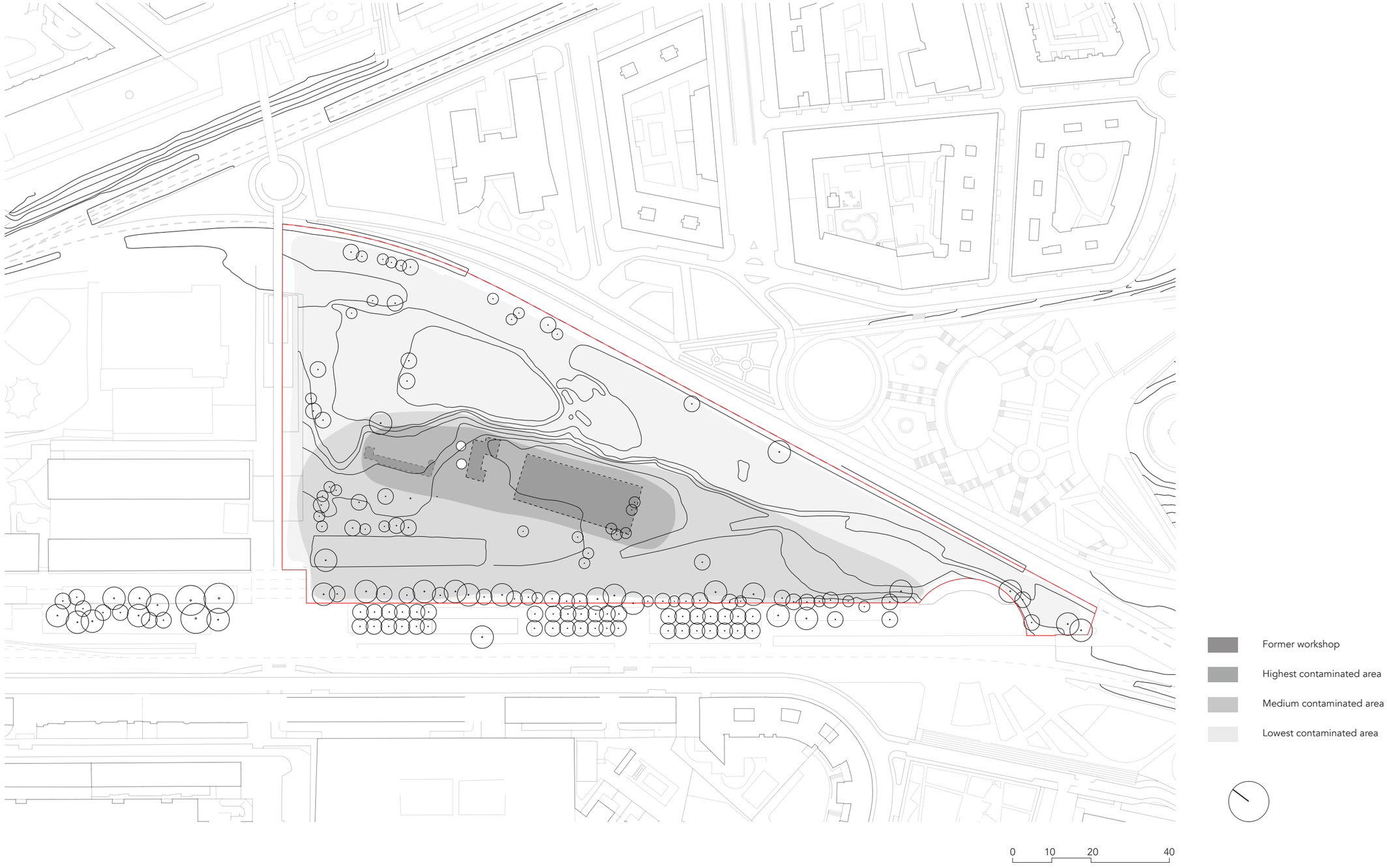
Proposed

SITE SELECTION

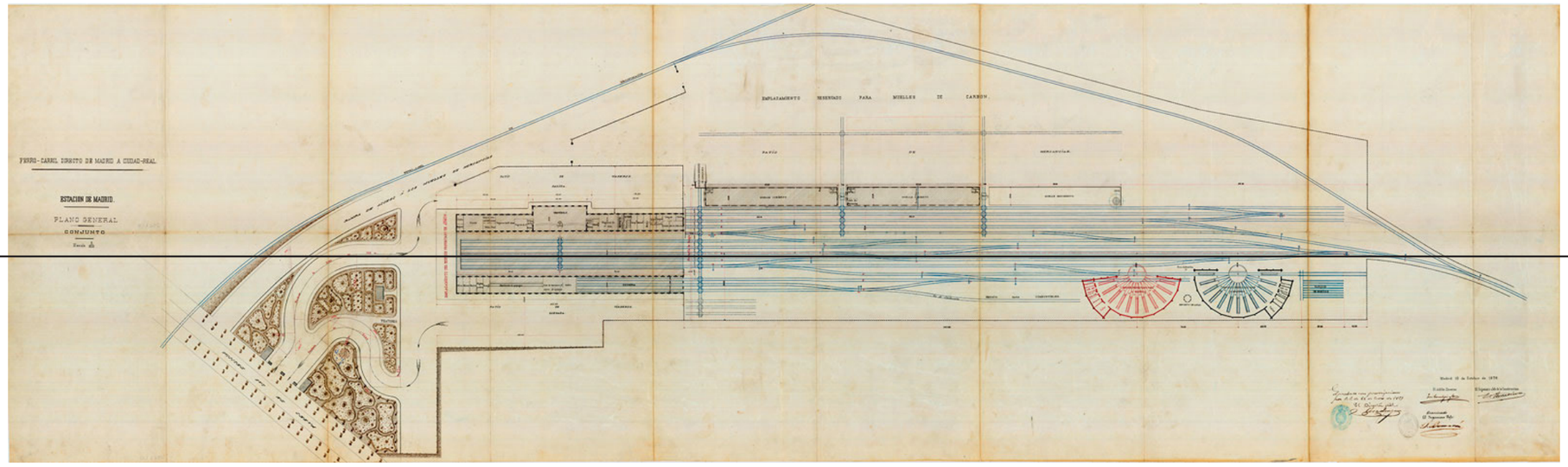




CONTAMINANTS ESTIMATION SITE



LINEARITY



General view of the station project (1878)



Aerial view of Delicias railway complex (2026)

1. Lobby
2. Exhibition space
3. Library
4. Research wet lab
5 Cafe
6 Restaurant
7. Classroom
8. Science classroom
9 Storage space research
10 Storage space public
11 Changing rooms

0 2.5 5 10

GROUND FLOOR PLAN

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17

A B C D E F G H I J K L M N O P Q R

3

13 12

14

15

3. Library
12. Research lab (analytical)
13. Office space
14. Meeting rooms
15. Lookout point

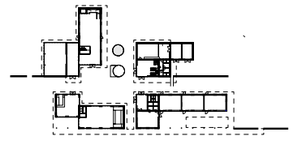
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FIRST FLOOR PLAN

Matt van Kessel

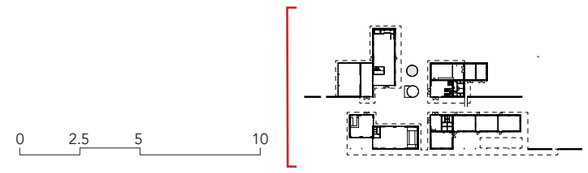


SOUTH- WEST FACADE



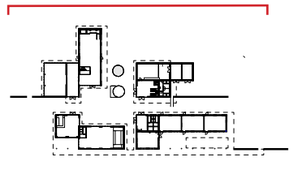


NORTH- WEST FACADE



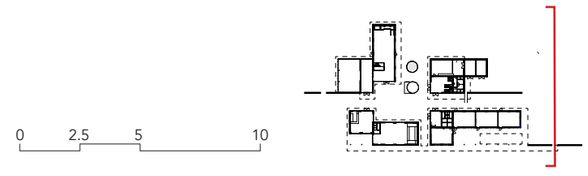


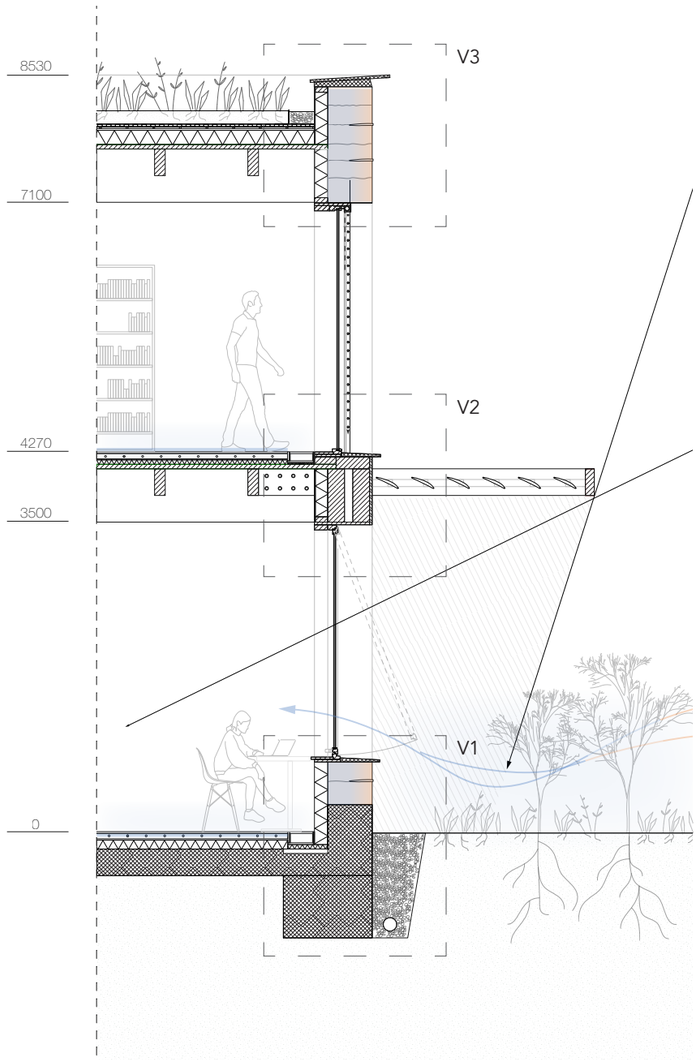
NORTH EAST FACADE

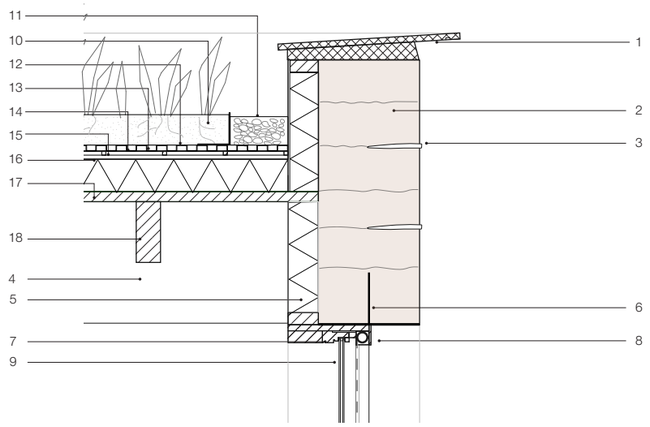




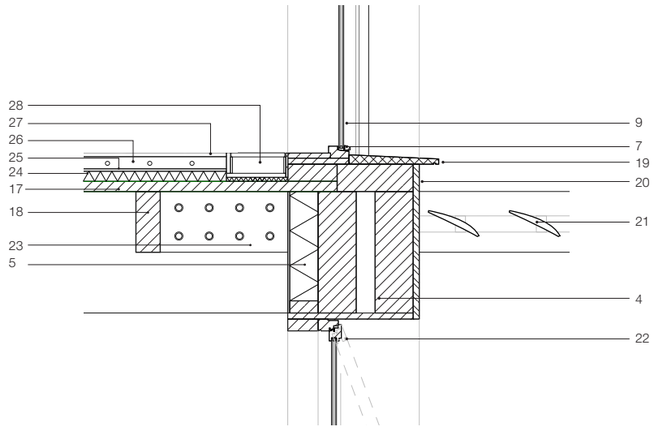
SOUTH- EAST FACADE



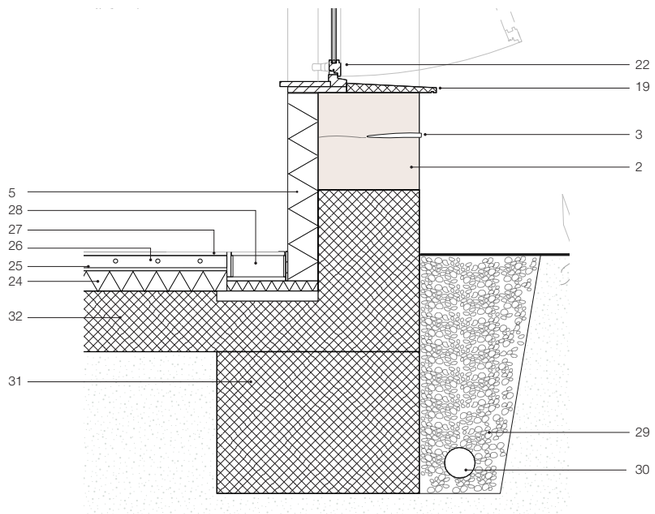




V3 ROOF DETAIL (1:20)



V2 CANOPY DETAIL (1:20)



V1 TYPICAL FOUNDATION DETAIL (1:20)

1 Ceramic roof finish
2 500mm rammed earth wall
3 Erosion brake (placed every 400mm)
4 600 x 200mm Glue laminated timber beam
5 140mm Hempcrete insulation (λ = 0,06)
6 Steel lintel
7 Oak timber window frame
8 Retractable exterior solar screen
9 HR++ double glazing
10 150mm On-site sourced soil substrate
11 Gravel drainage gutter
12 Filter layer
13 30mm Drainage layer
14 Waterproof membrane
15 40mm sawn timber planks
16 160mm Thermacork insulation (λ = 0,037)
17 50mm Sawn timber planks
18 300 x 120mm Glue laminated timber beam
19 Exterior ceramic sill
20 Corten steel panel
21 Solar louvre
22 Oak timber tilt window frame
23 300 x 120mm Glue laminated timber beam connected to main structure by bolted connection
24 100mm Thermacork insulation (λ = 0,037)
25 10mm Wood fiber board
26 Underfloor heating
27 Timber floor finish
28 System gutter system
29 Gravel drainage layer
30 Perforated drainage pipe (Ø = 150mm)
31 Concrete strip footing
32 Concrete floor slab with strip footing (separating rammed earth from ground)