

a regenerative brownfield development

(landscape) architecture for ecological restoration



50 years > -50%

problem statement

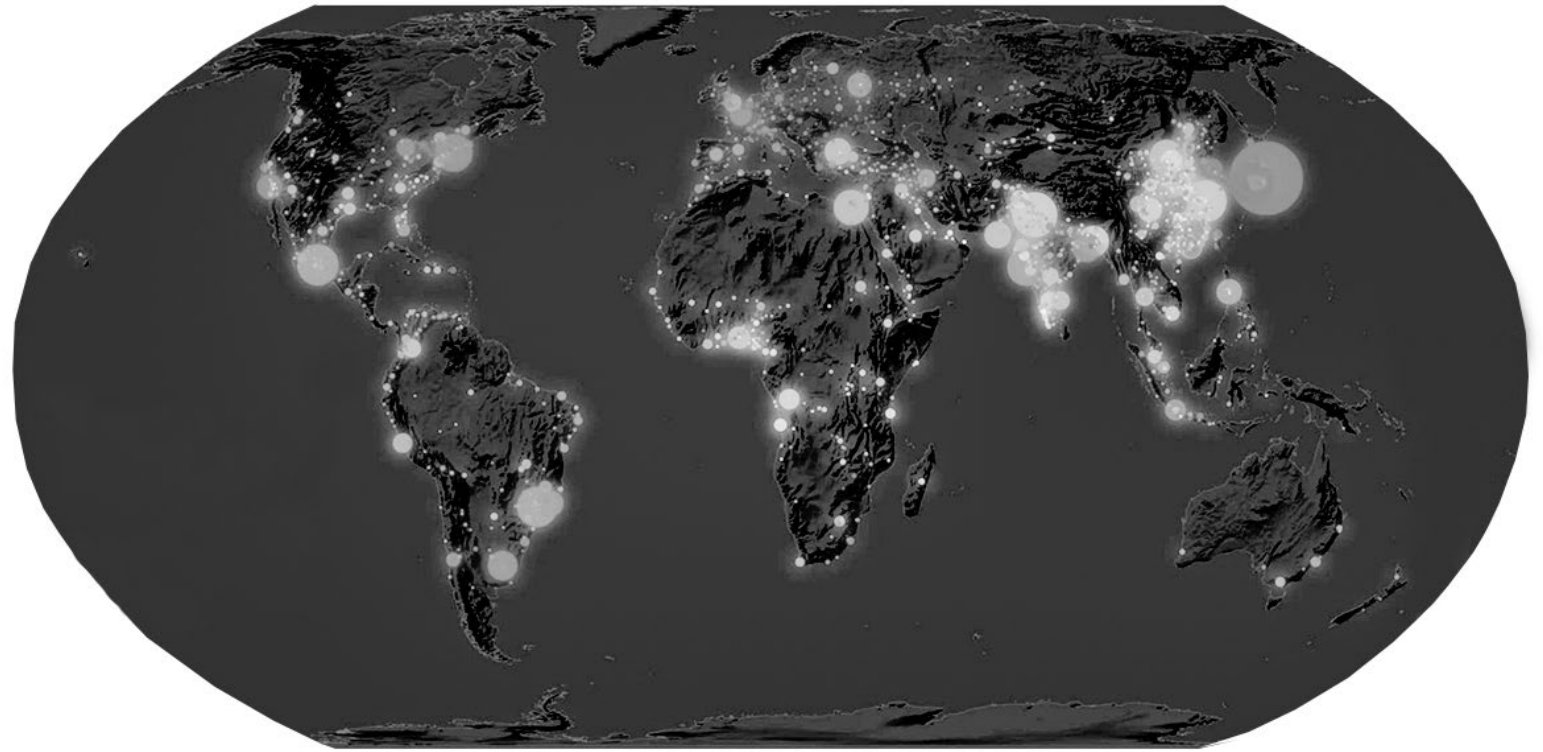
anthropocentric, urban
environment is destructive
towards nature



human – nature dichotomy

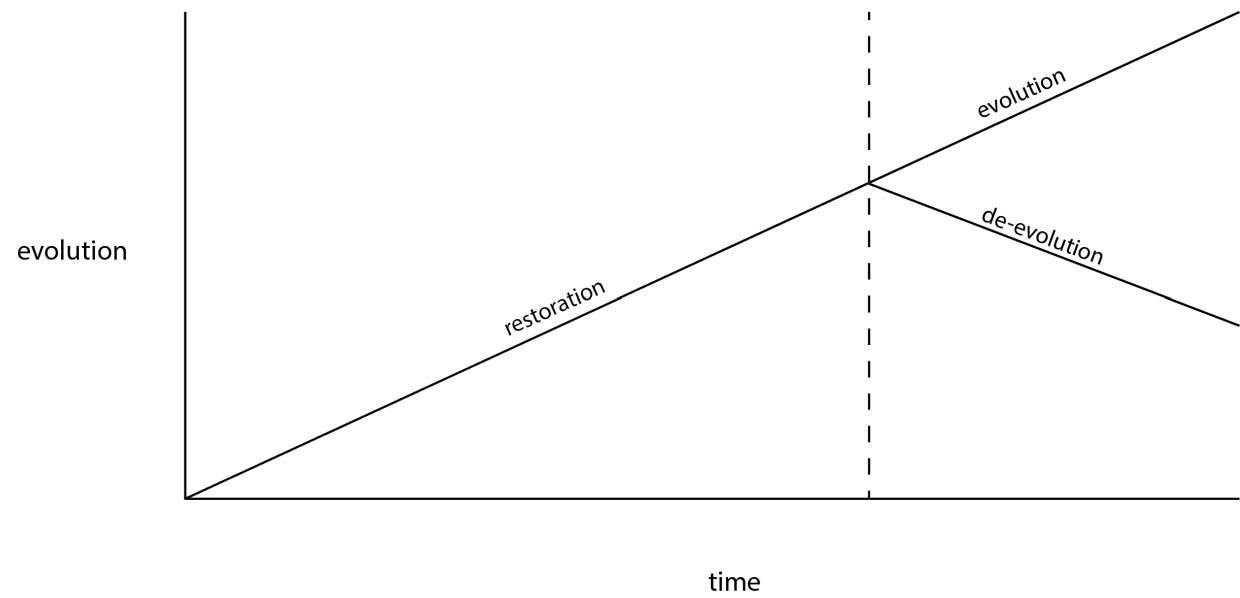
global urbanization

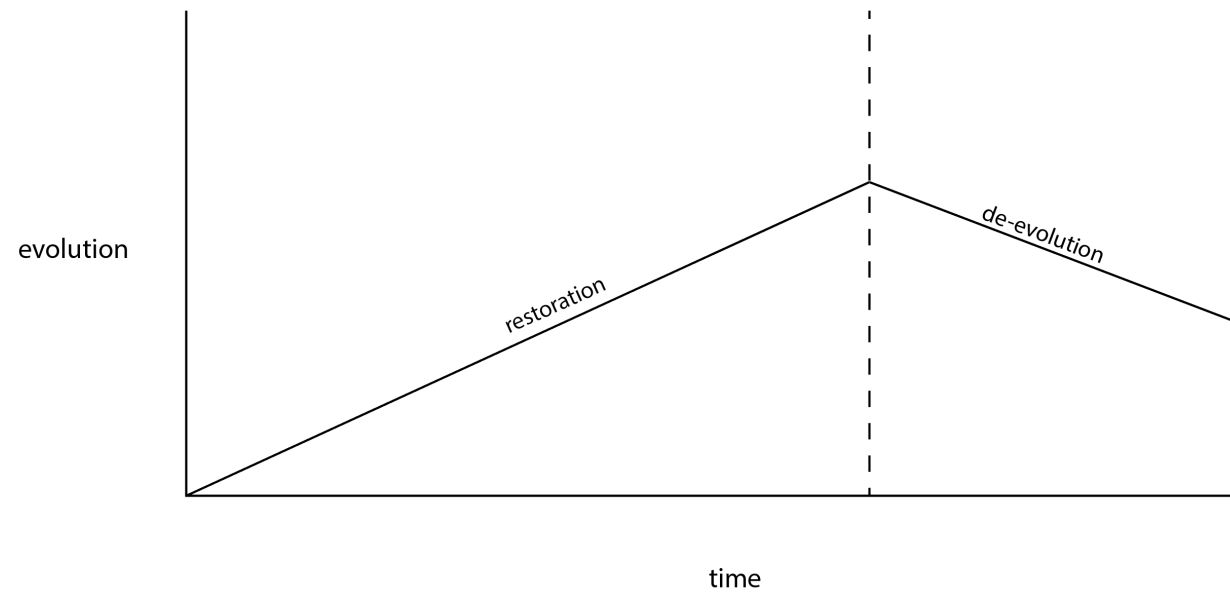
In 2050 -
70% of world
population



restoration

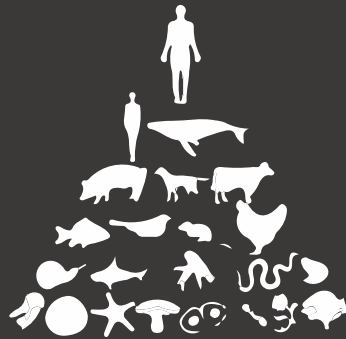




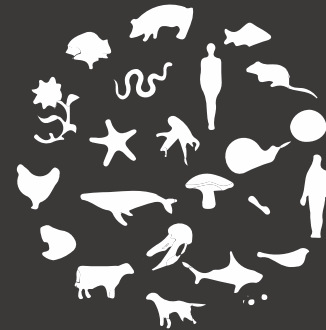


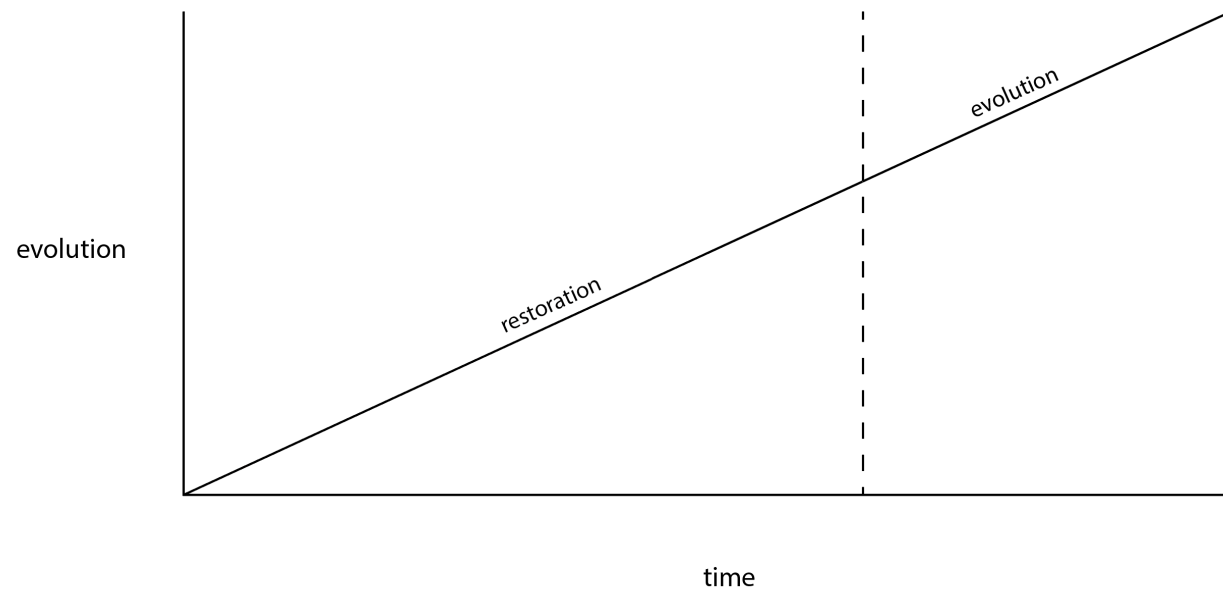
cause

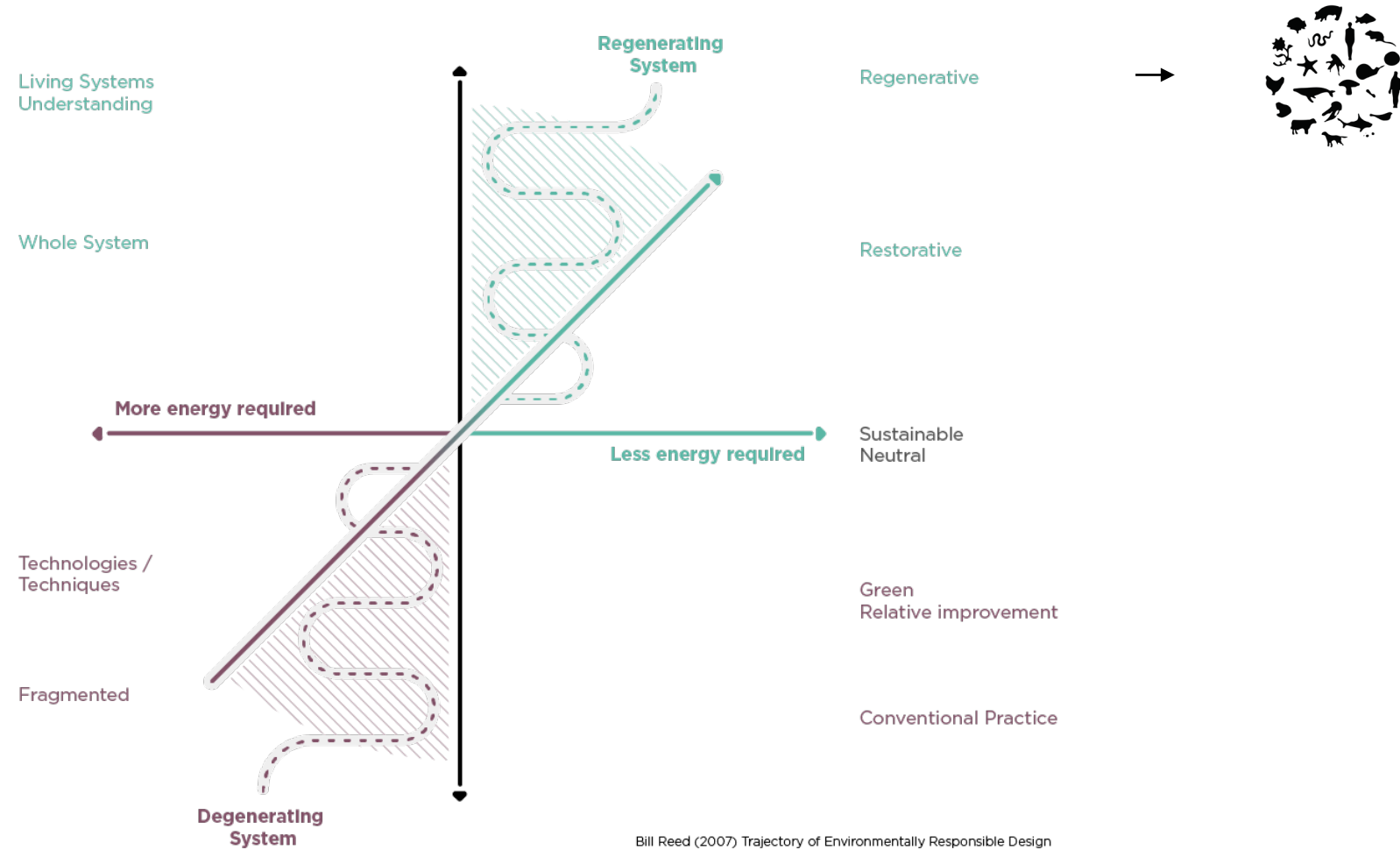
anthropocentric



ecocentric



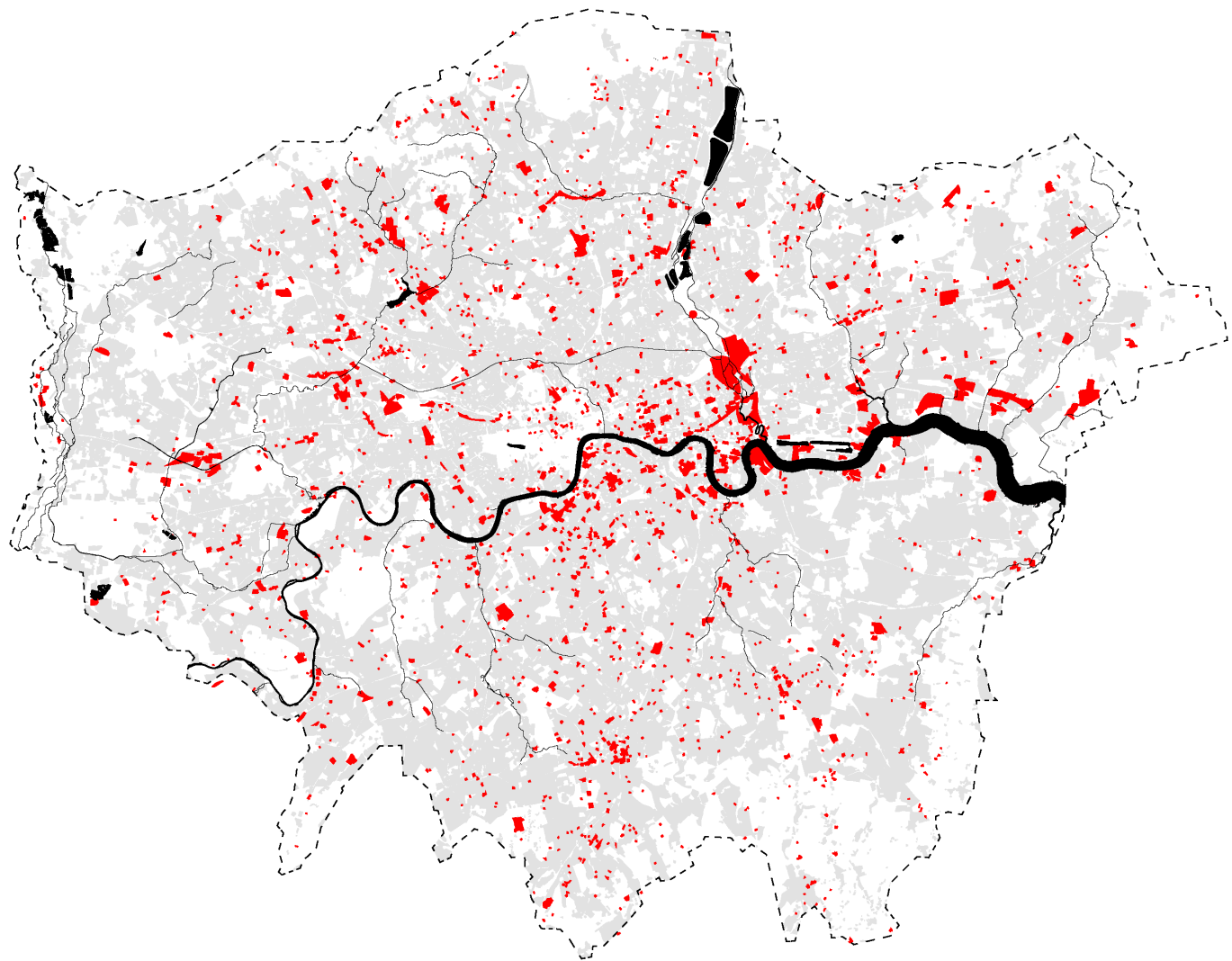




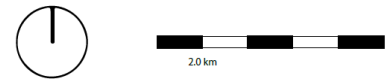
brownfields

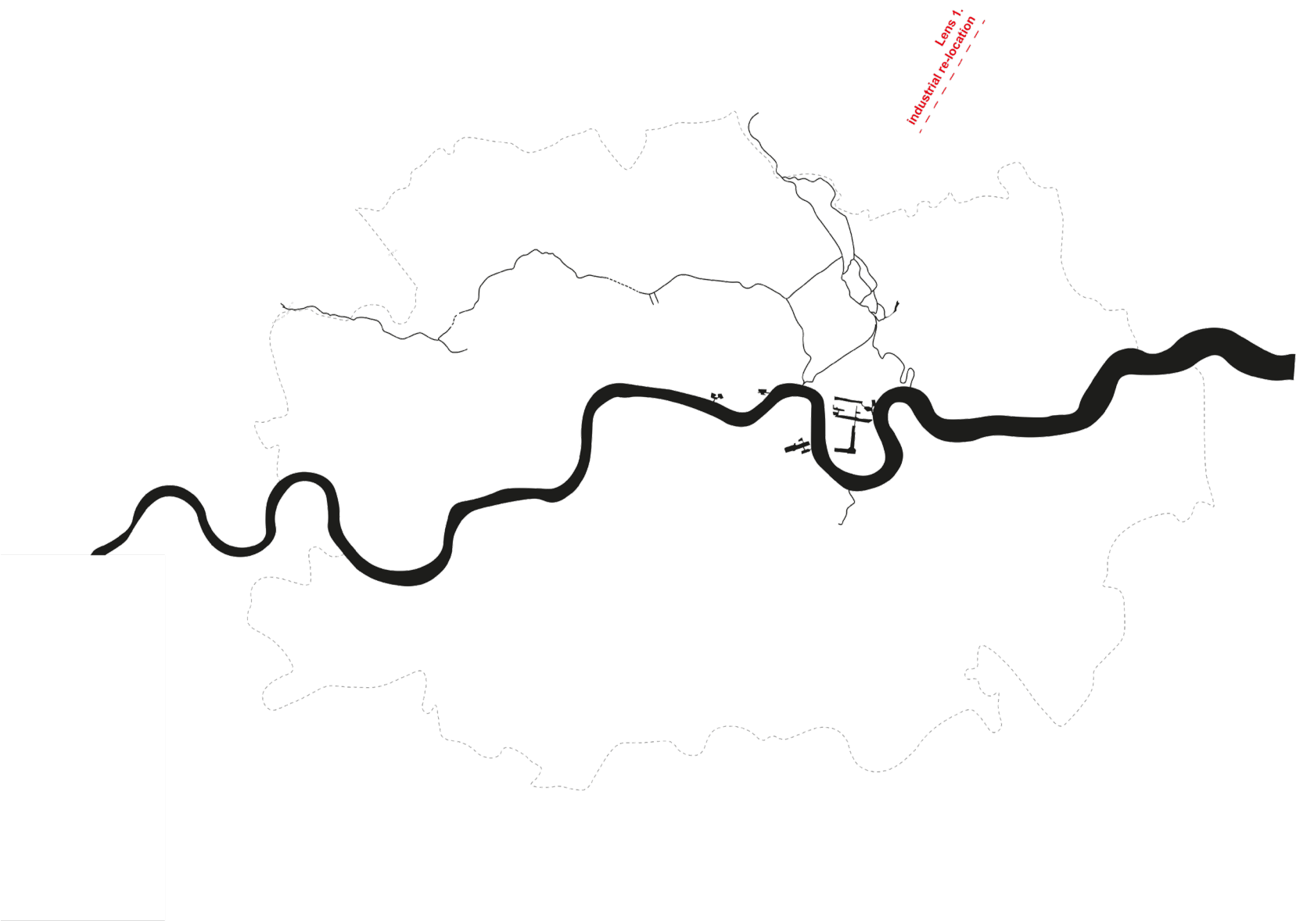


brownfields

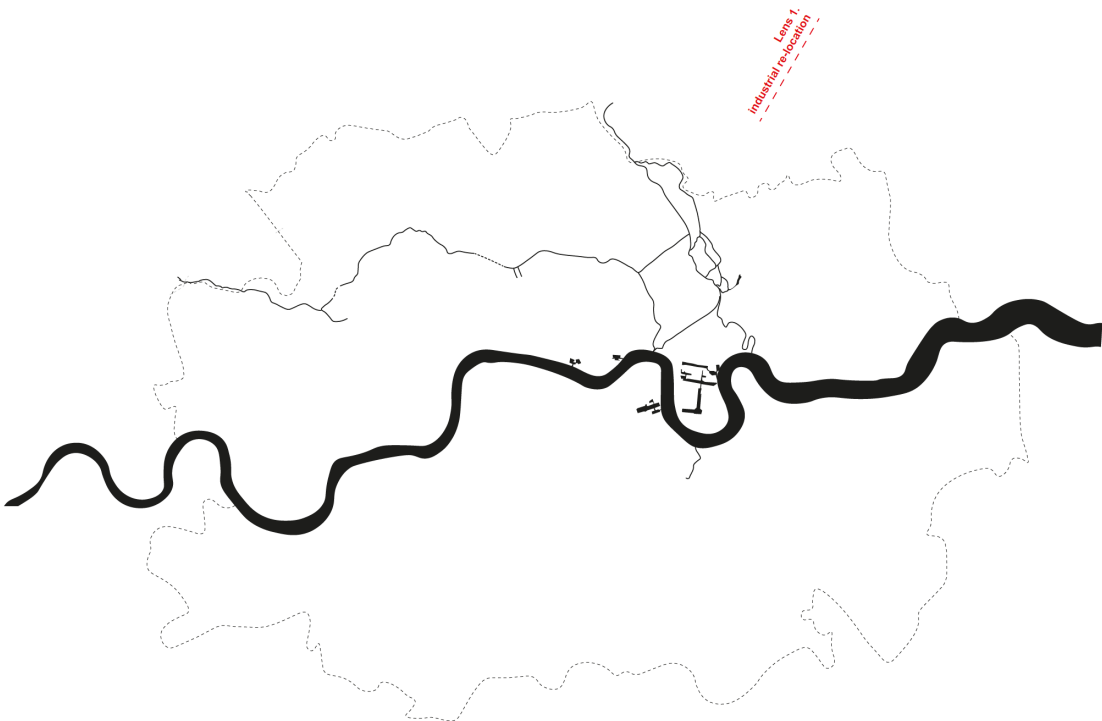
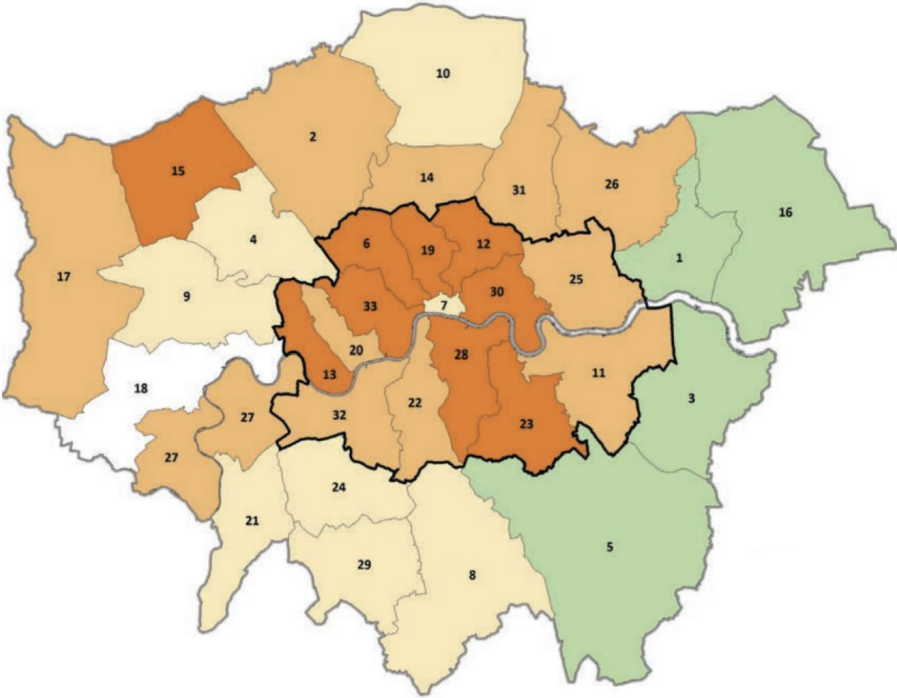


Lea Valley

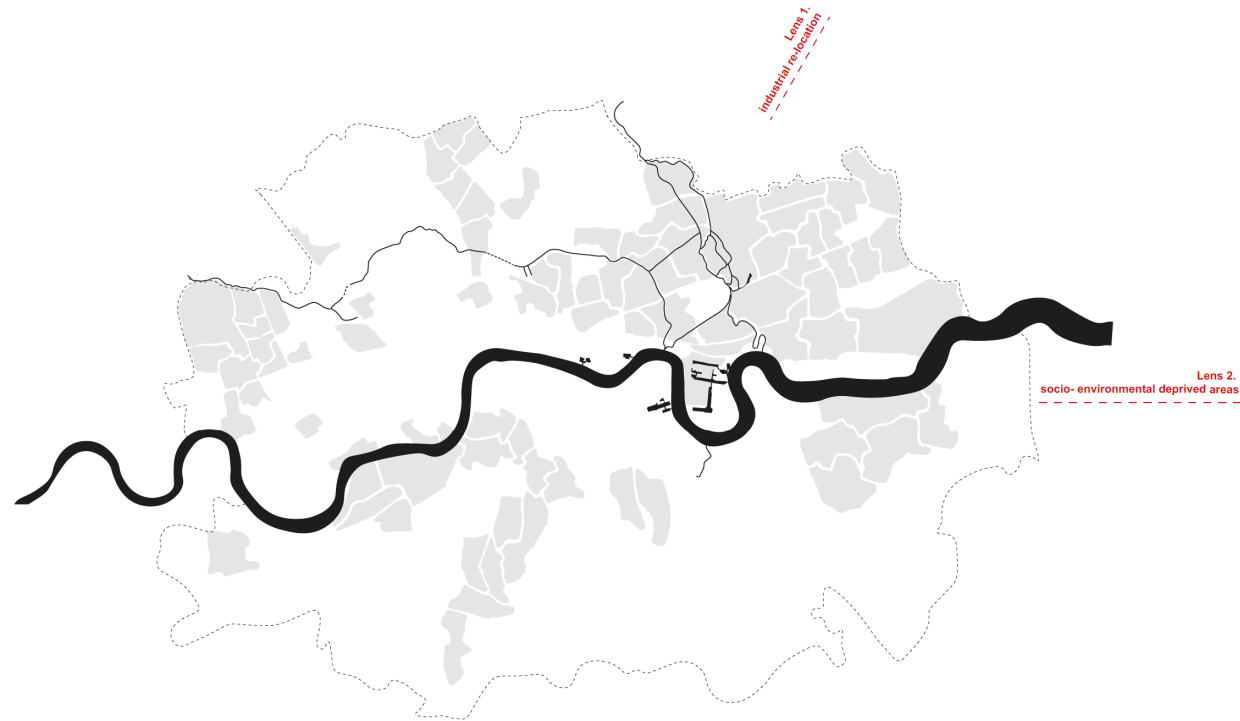
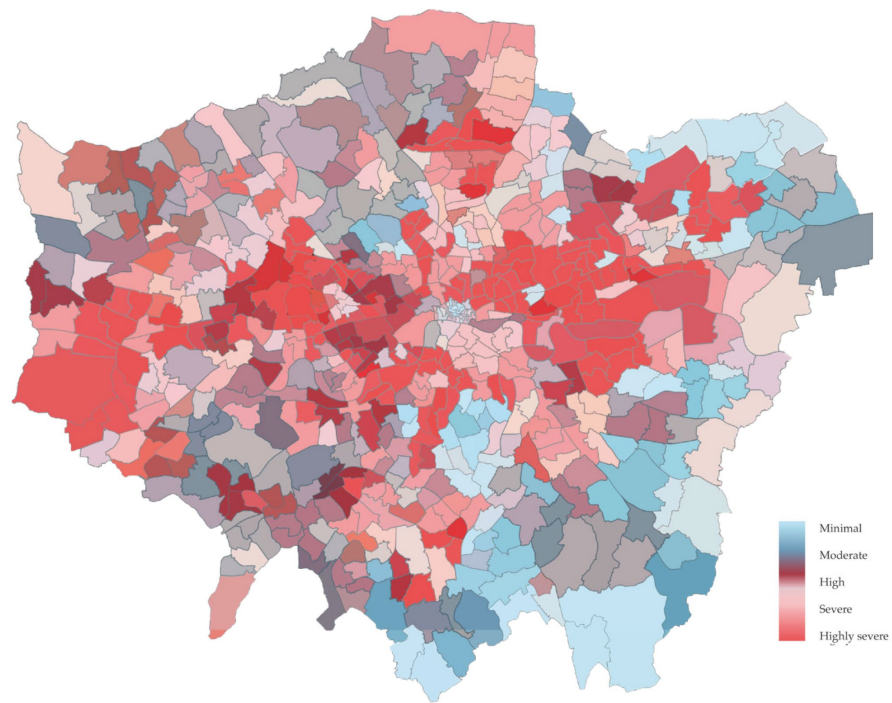




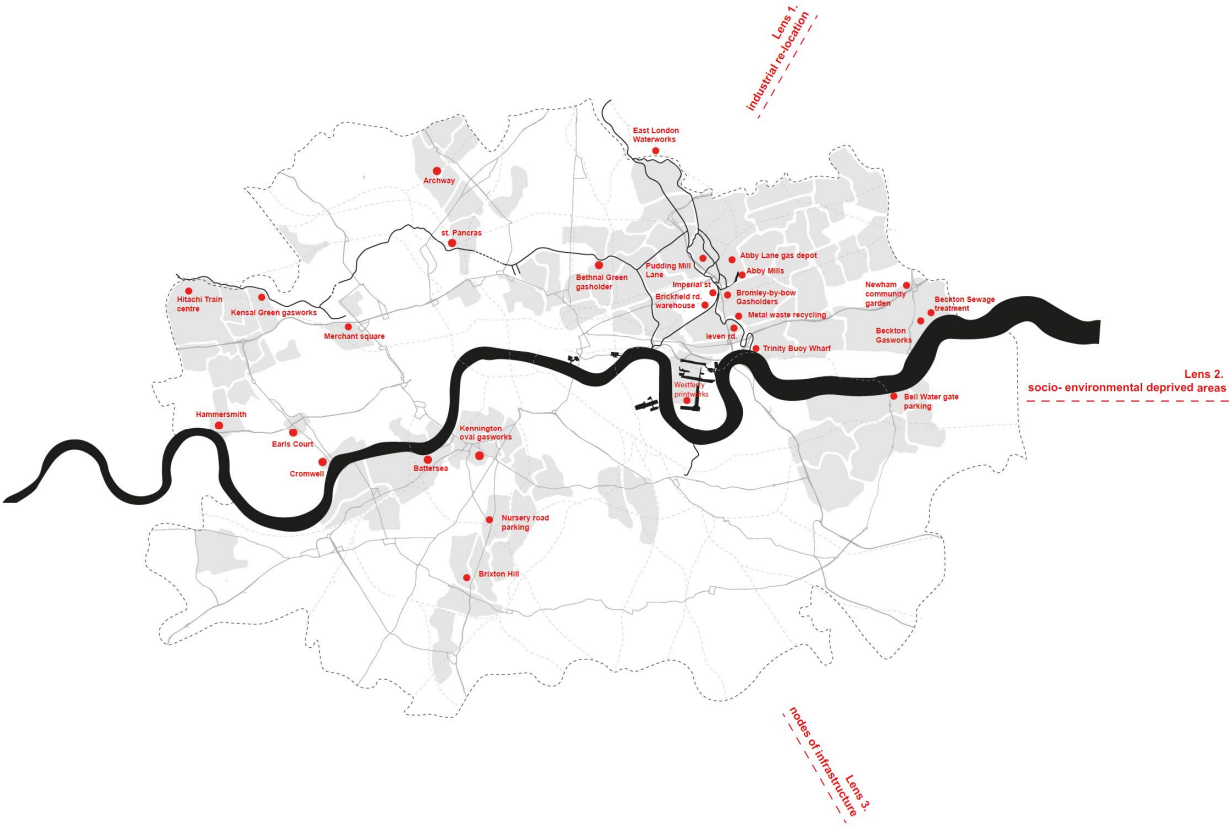
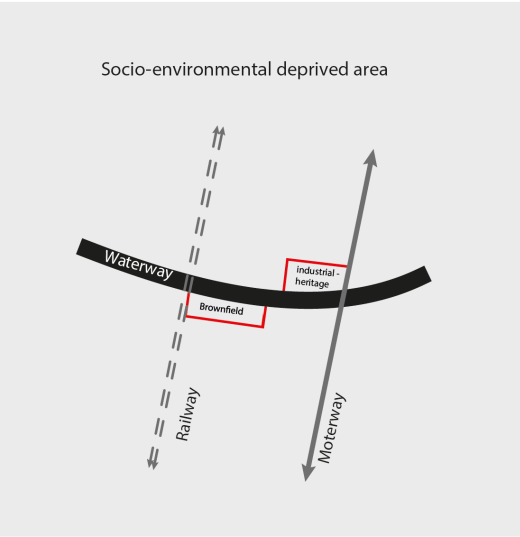
Lens 1 – Industrial re-location



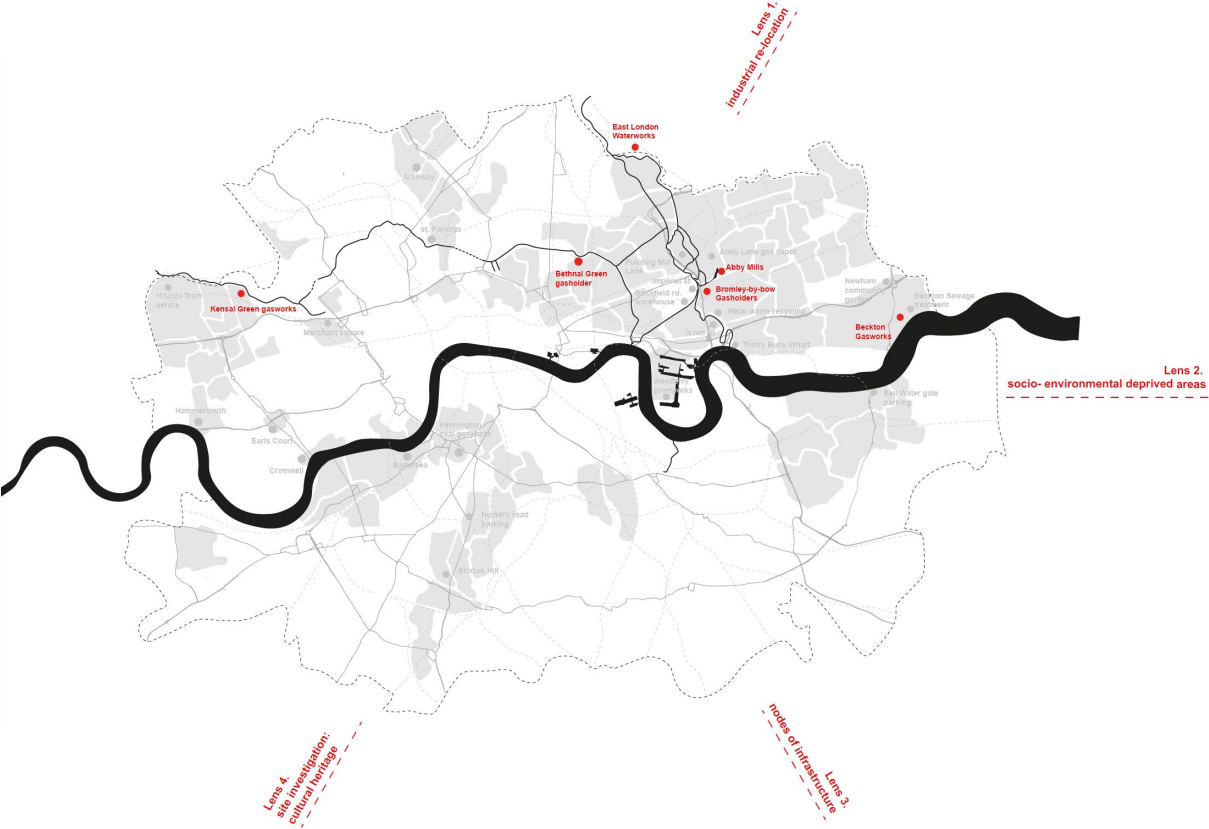
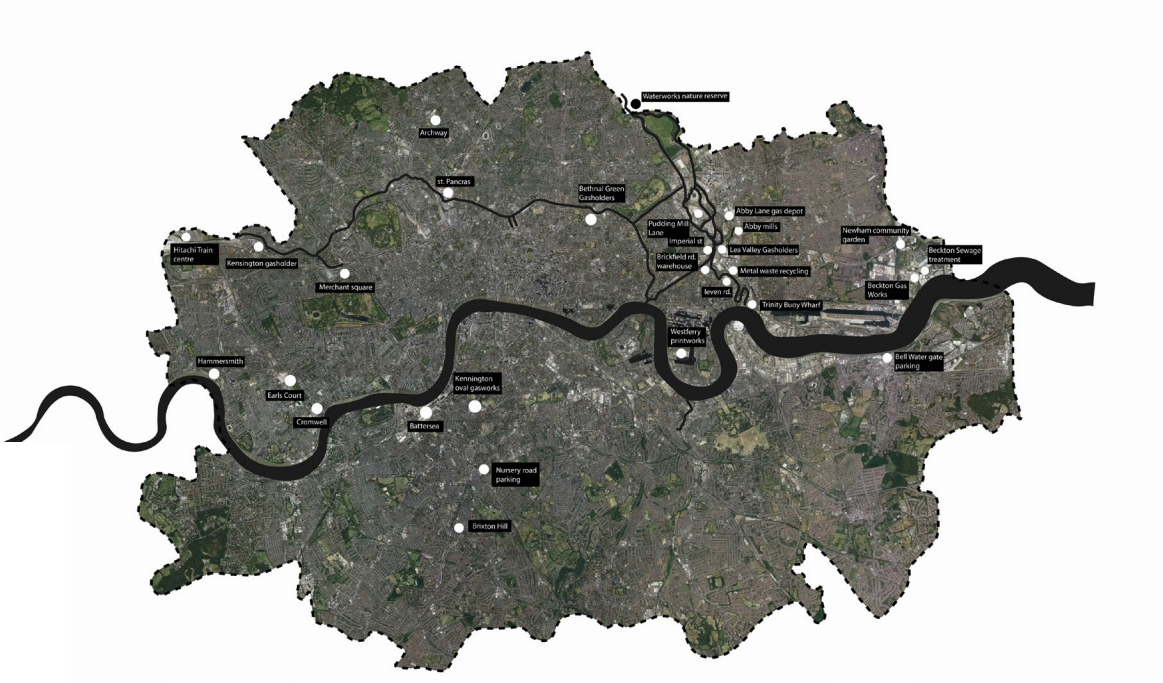
Lens 2 – Socio- environmental deprived areas



Lens 3 – Nodes of infrastructure



Lens 4 – Site investigation – cultural heritage



Lens 4 – Site investigation – cultural heritage



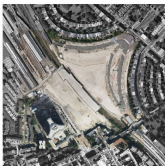
Hammersmith



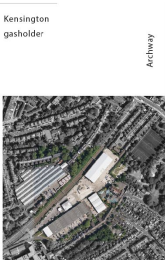
Merchantsquare



UNDER DEVELOPMENT



Eells court



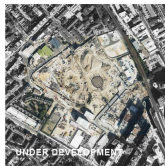
Kensington gasholder



Archway



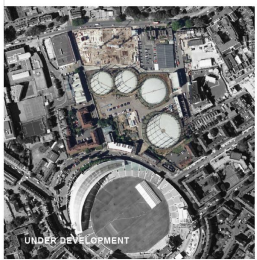
St. Pancras



Cromwell



Battersea



Kensington Oval gasworks



Bellwater gate parking



Beckton sewage treatment



Beckton gasworks



Nursery road parking



Newham community garden



Bromley-by-bow gasholders



UNDER DEVELOPMENT



Waterworks nature reserve



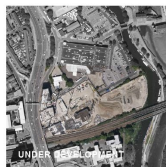
Pudding Mill lane



Abbey Lane gas depot



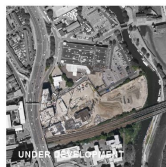
Brickfield rd. warehouses



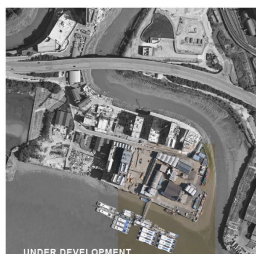
Imperial st.



Bethnal Green gasholders



Abbey Mills



Trinity Buoy Wharf



Westferry printworks



Metal waste recycling



Leeward



Bromley-by-bow gasholders

Lens 5 – Site analysis – potential occupancy

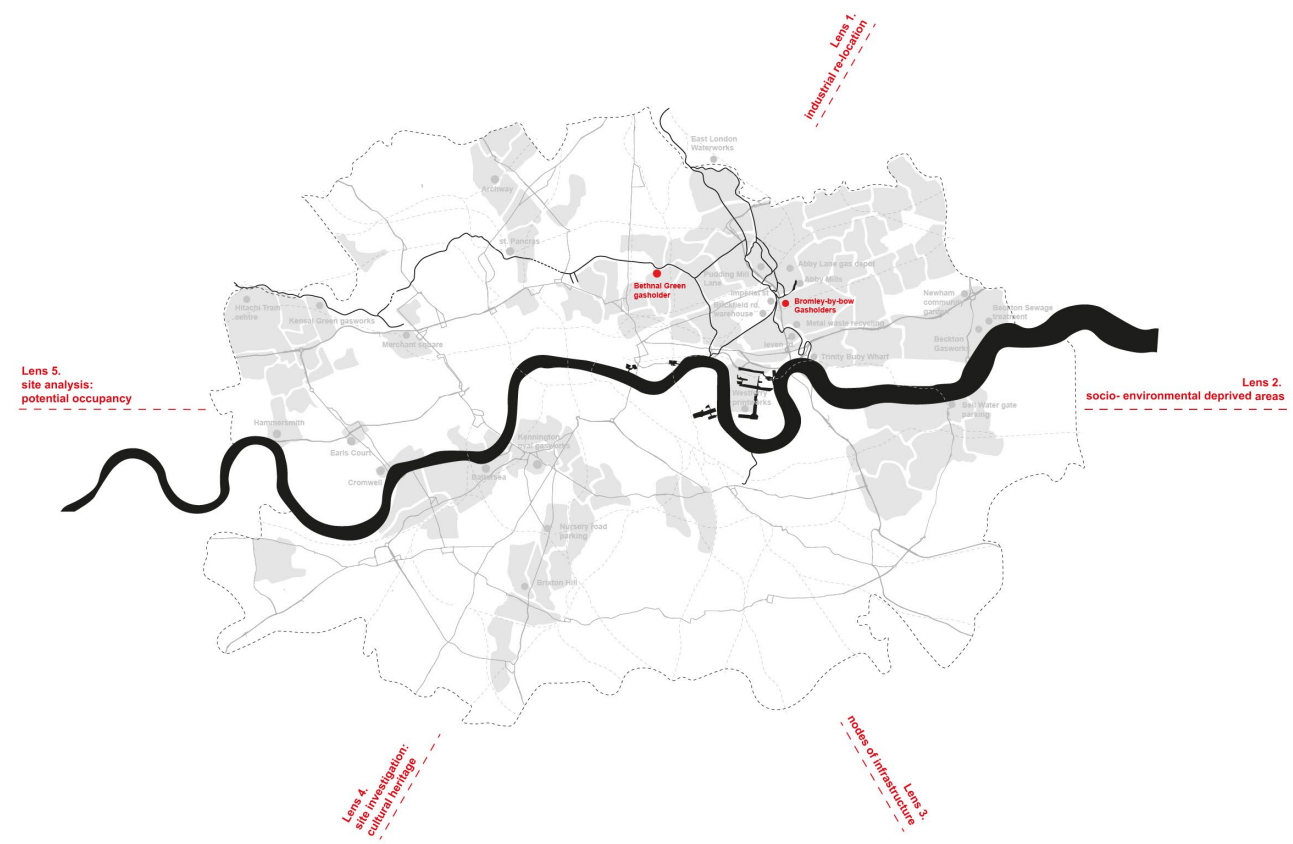
	SITE	AREA OF INVESTIGATION	POPULATION DENSITY	LEISURE AREA	SIZE ON SCALE 1:40,000	RESULT	
BETHNAL GREEN GASHOLDERS						within high dense populated area intensely connected to leisure relatively small though sufficient size high potential occupancy	✓
KENSAL GREEN GASWORKS						-within high dense populated area sufficient connected to leisure medium, sufficient site medium-high potential occupancy	✗
BROMLEY-BY-BOW GASWORKS						within high dense populated area medium connection to leisure -large, site high potential occupancy	✓
ABBY MILLS						within low dense populated area low connection to leisure relatively small though sufficient size low potential occupancy	✗
EAST LONDON WATERWORKS						in between dense populated area intensely connected to leisure medium size medium potential occupancy	✗
BECKTON GASWORKS						within low dense populated area low connection to leisure large size low potential occupancy	✗

[Arcgis, 2021]

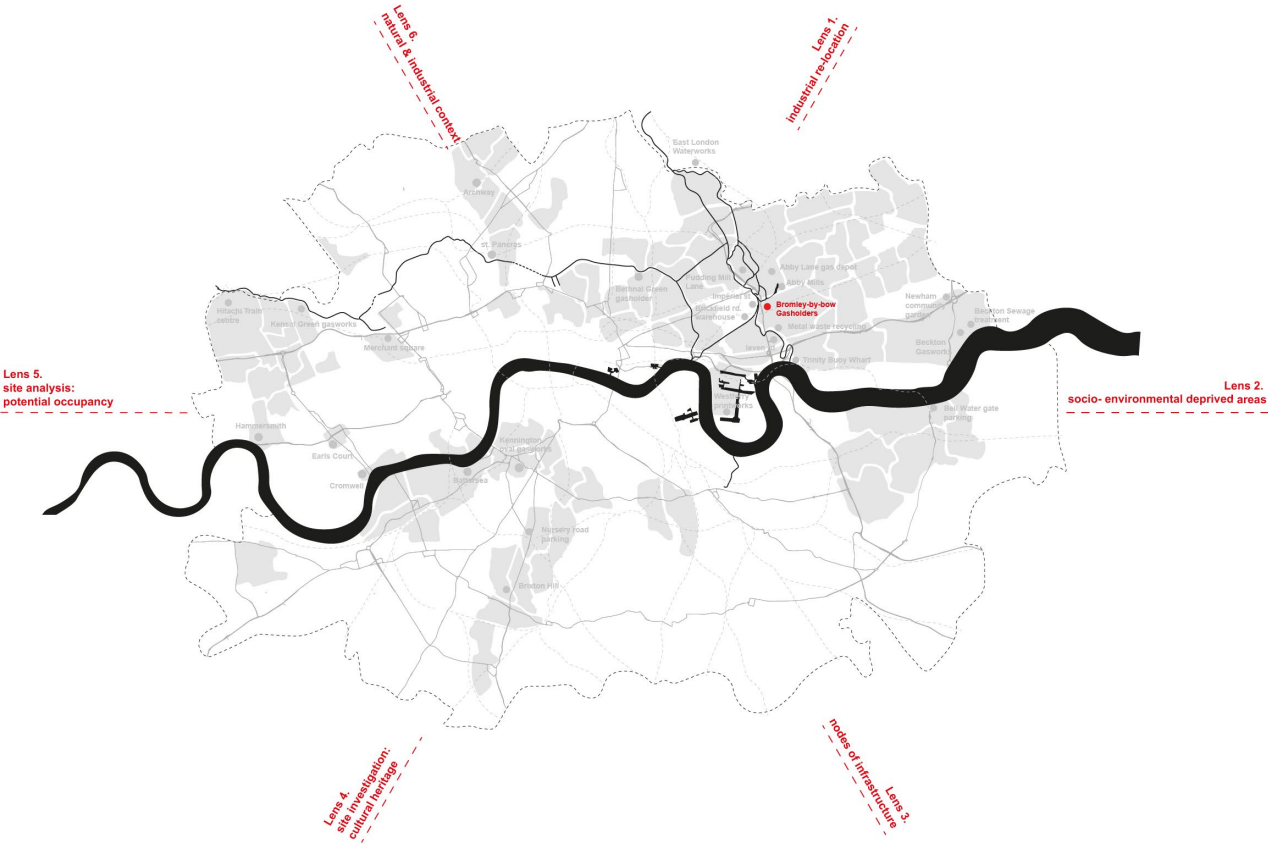
[HeatmapStrava, 2021]

Legend:

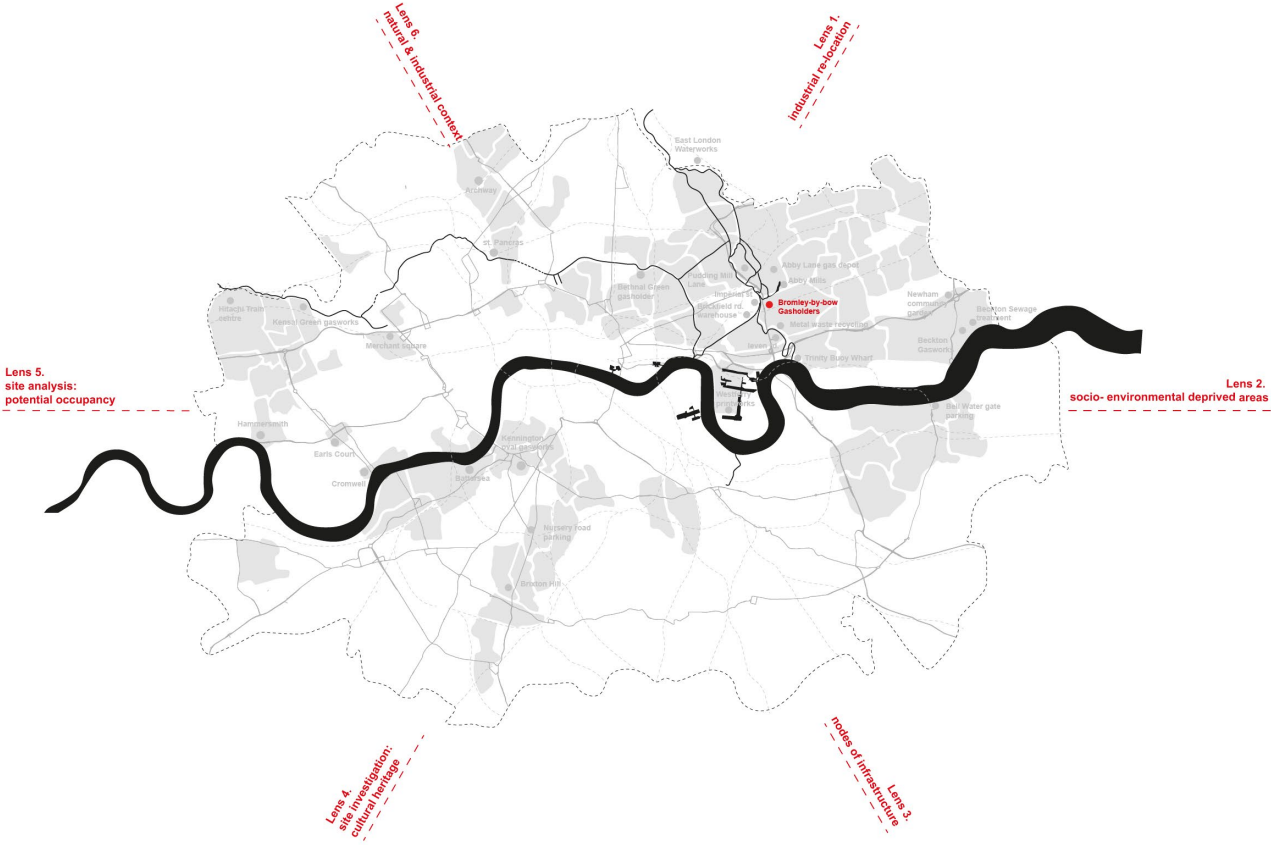
- Highest
- Very high
- High
- Low
- Very low
- Lowest



Lens 6 – Context – industrial



Bromley-by-bow Gasworks





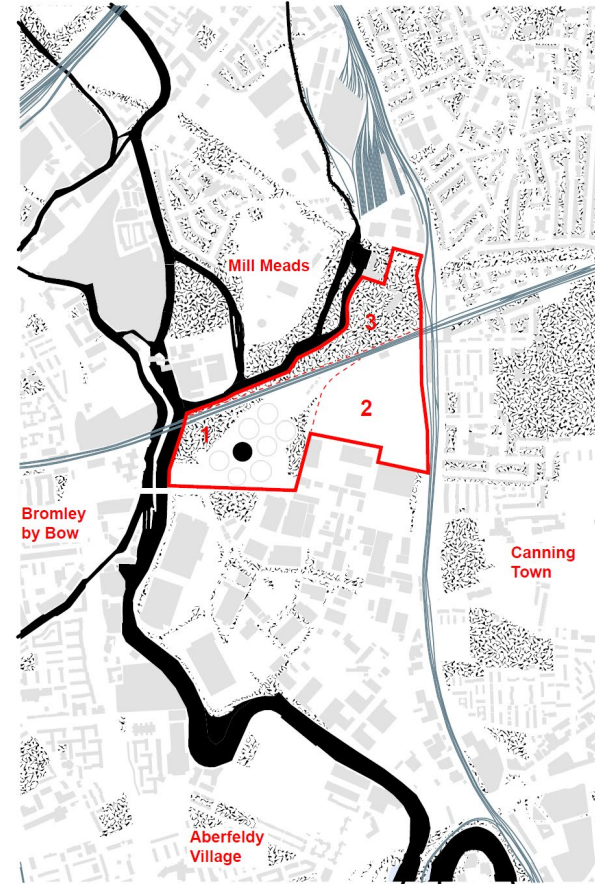
Lea Valley

Adjacent brownfields

aerial

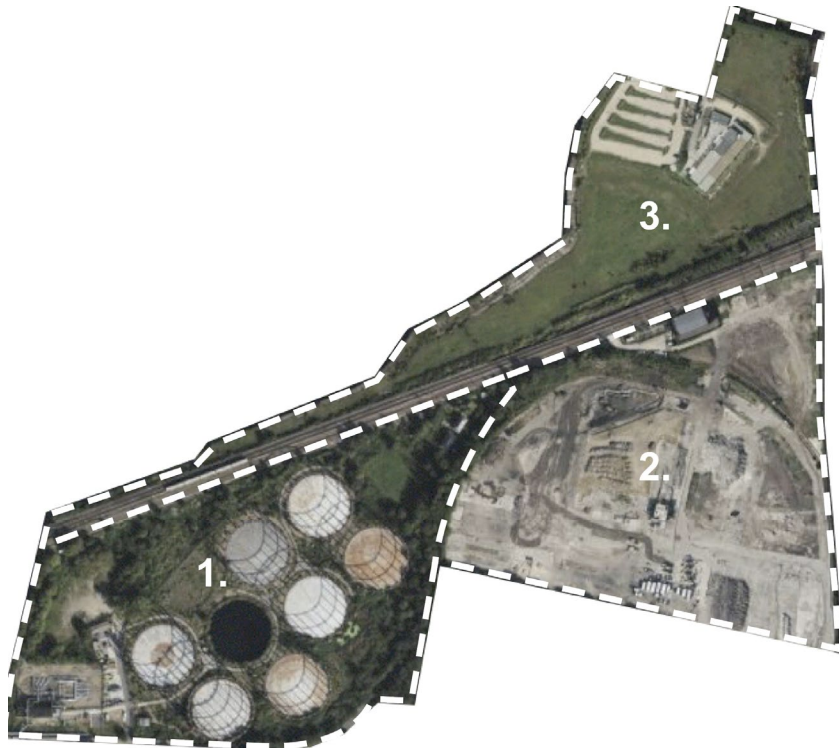


site



Landscape cultivation

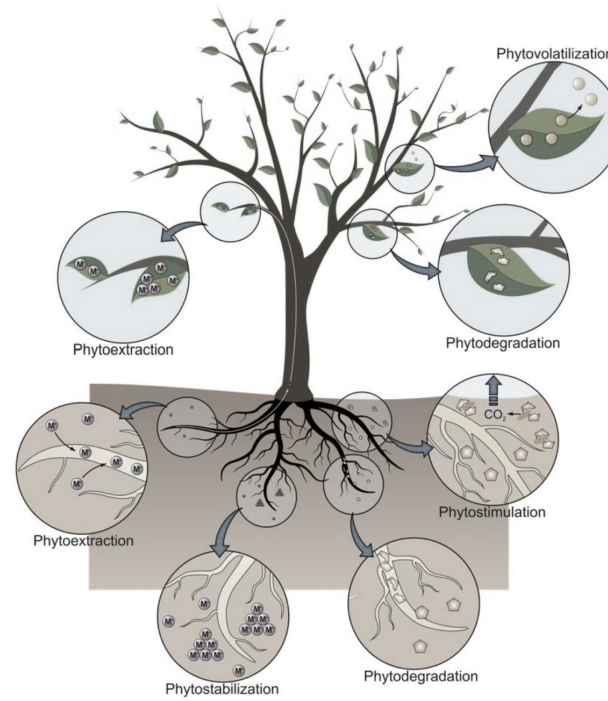






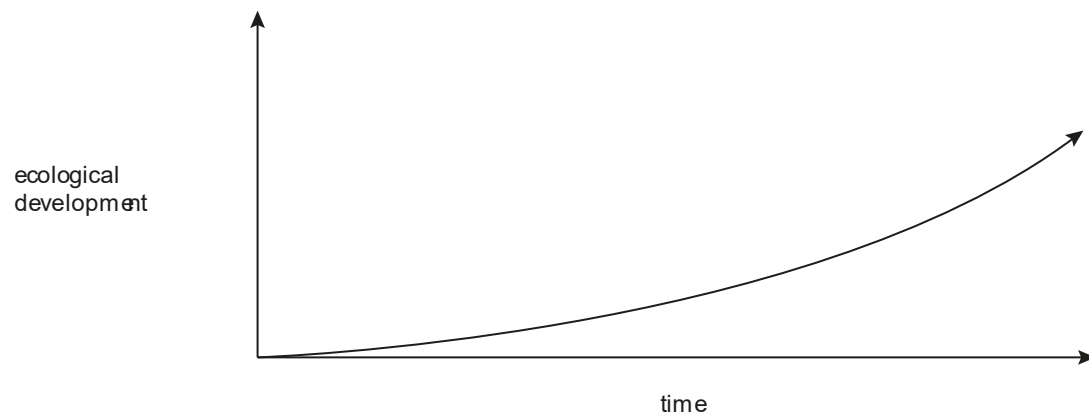
Chernobyl

4th nature



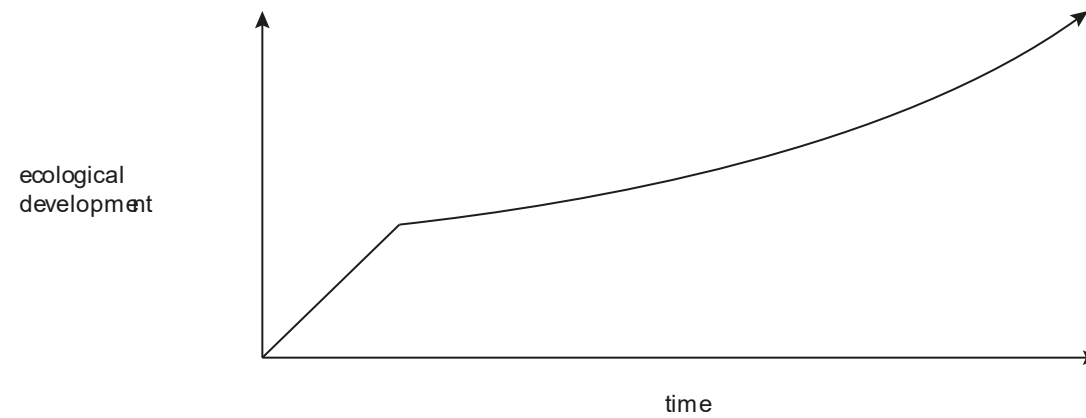
pioneer species

Nature 4.0

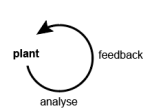
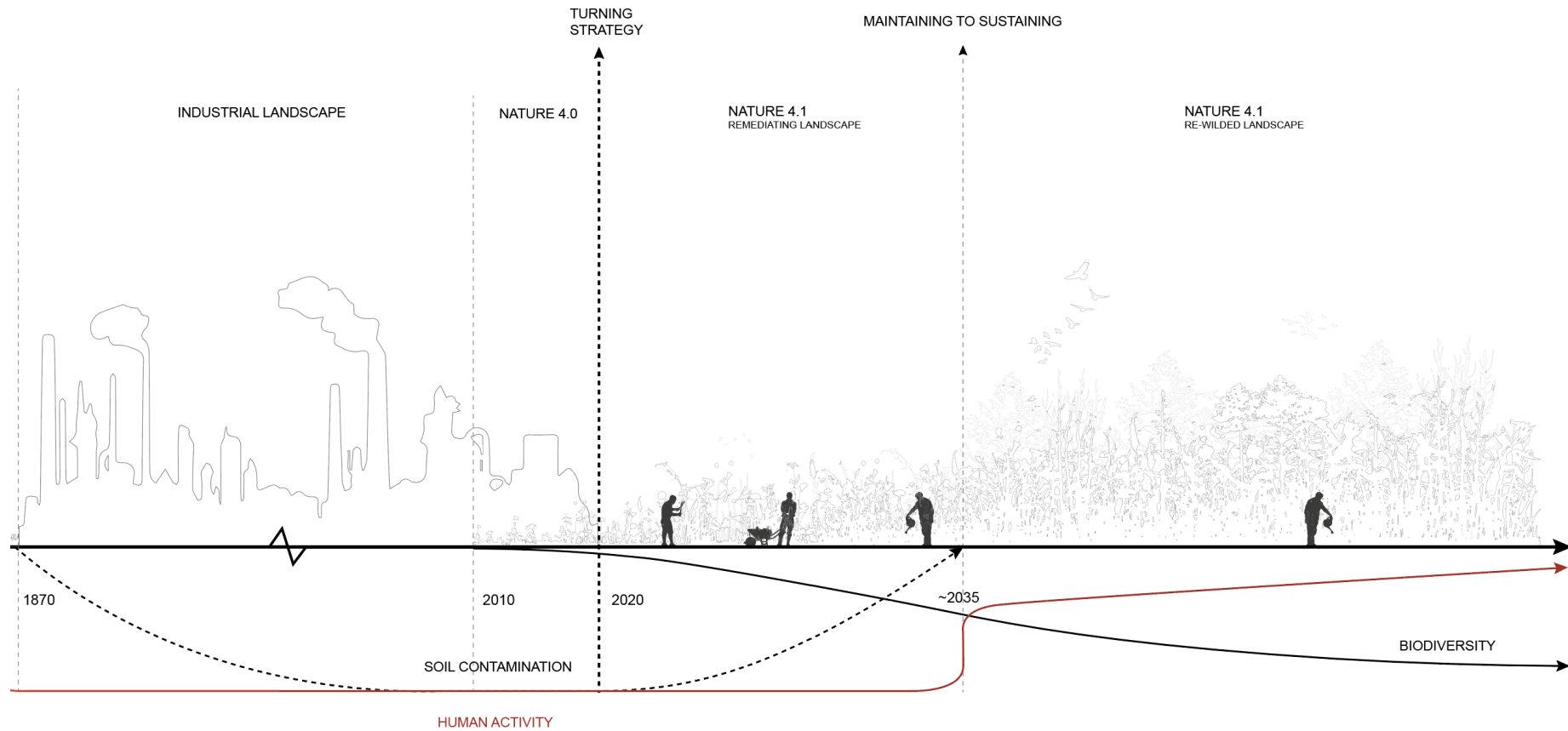


dichotomy

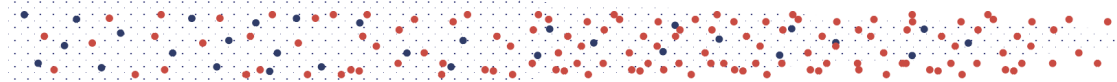
Nature 4.1

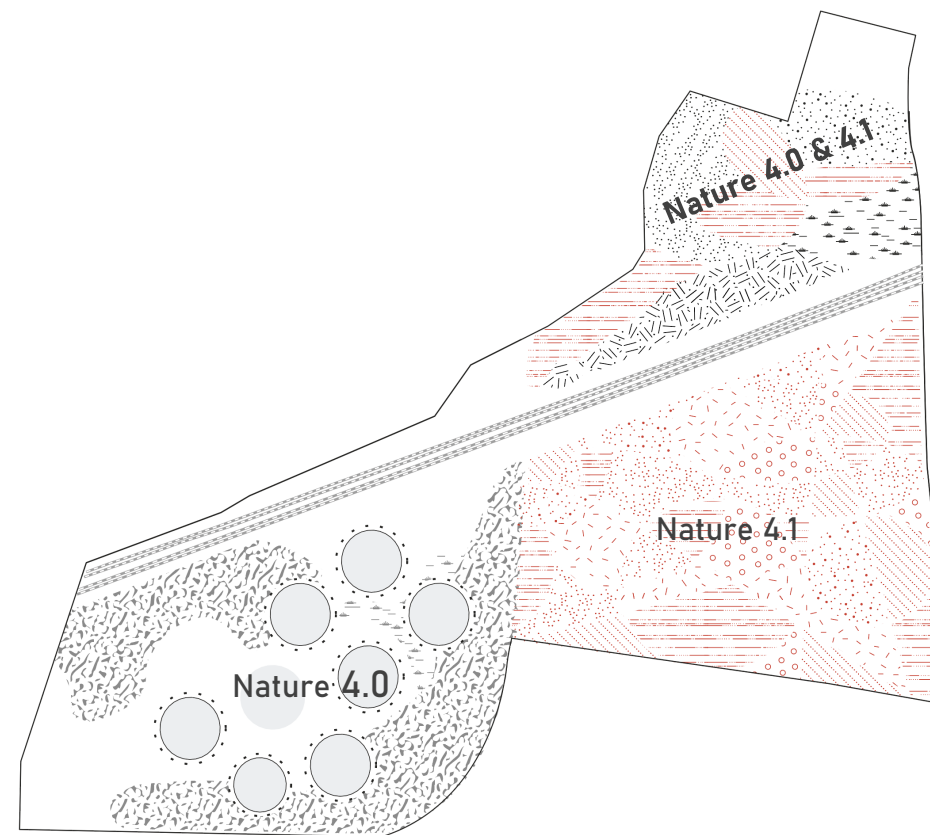
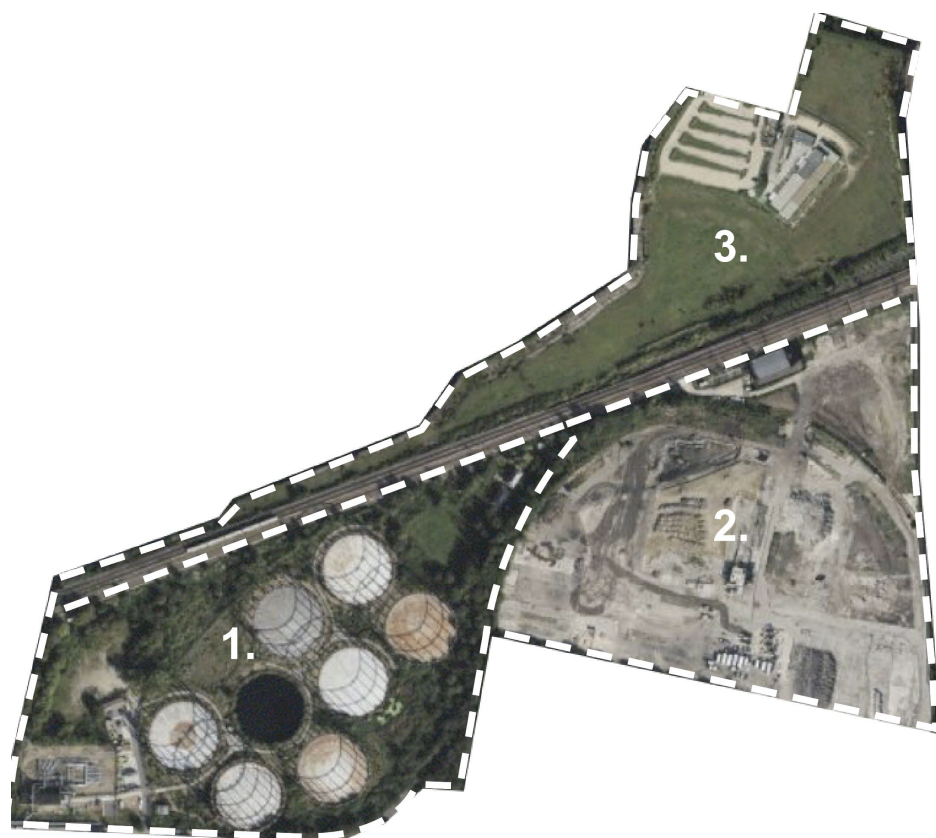


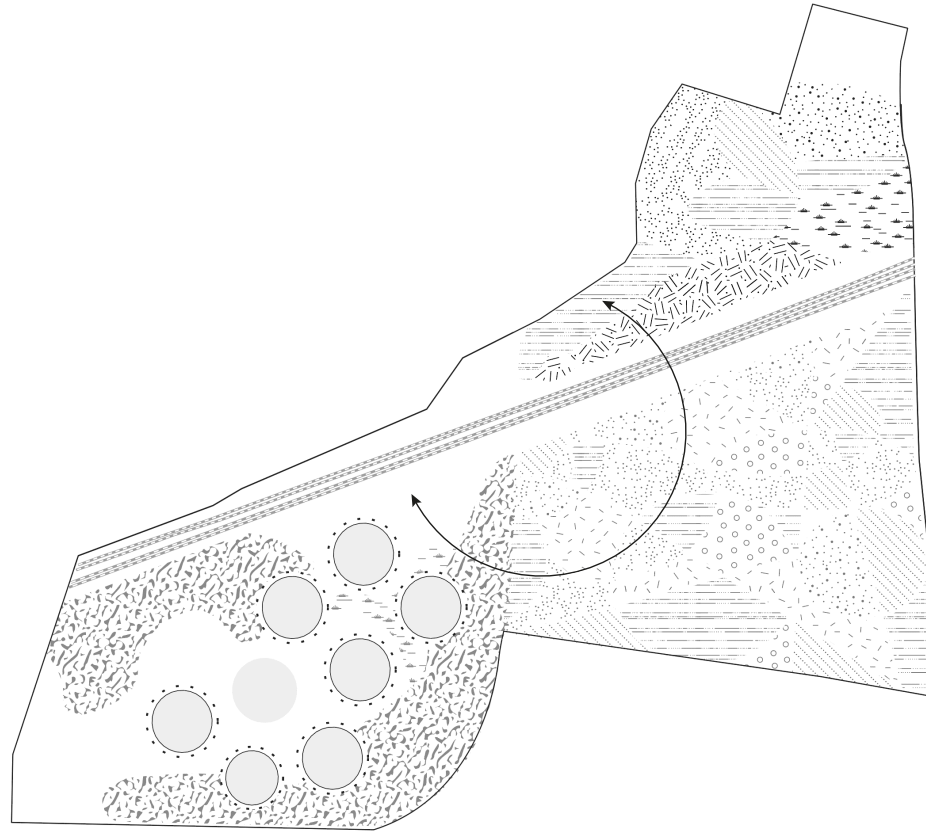
synergy



species
● existing
⋯ initiated
● attracted



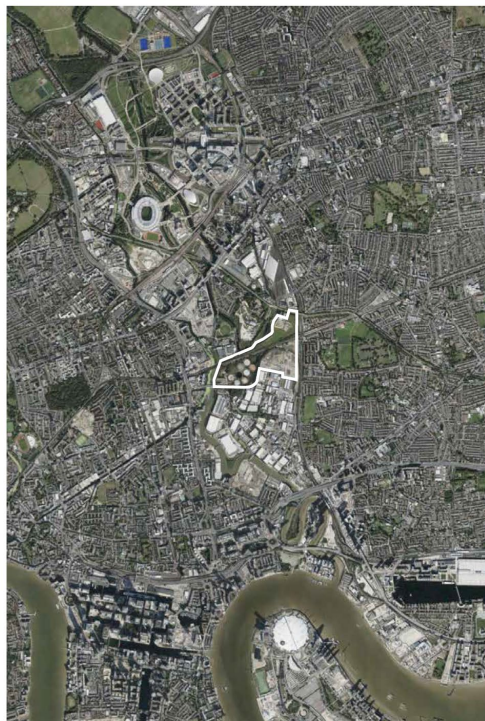




Testing ground of Fourth Nature landscape typologies

Lea Valley

aerial



1.0 km

deprivation



deprivation scale 1:10
very low low medium very high highest

density



1.0 km

very low low medium very high highest

industry

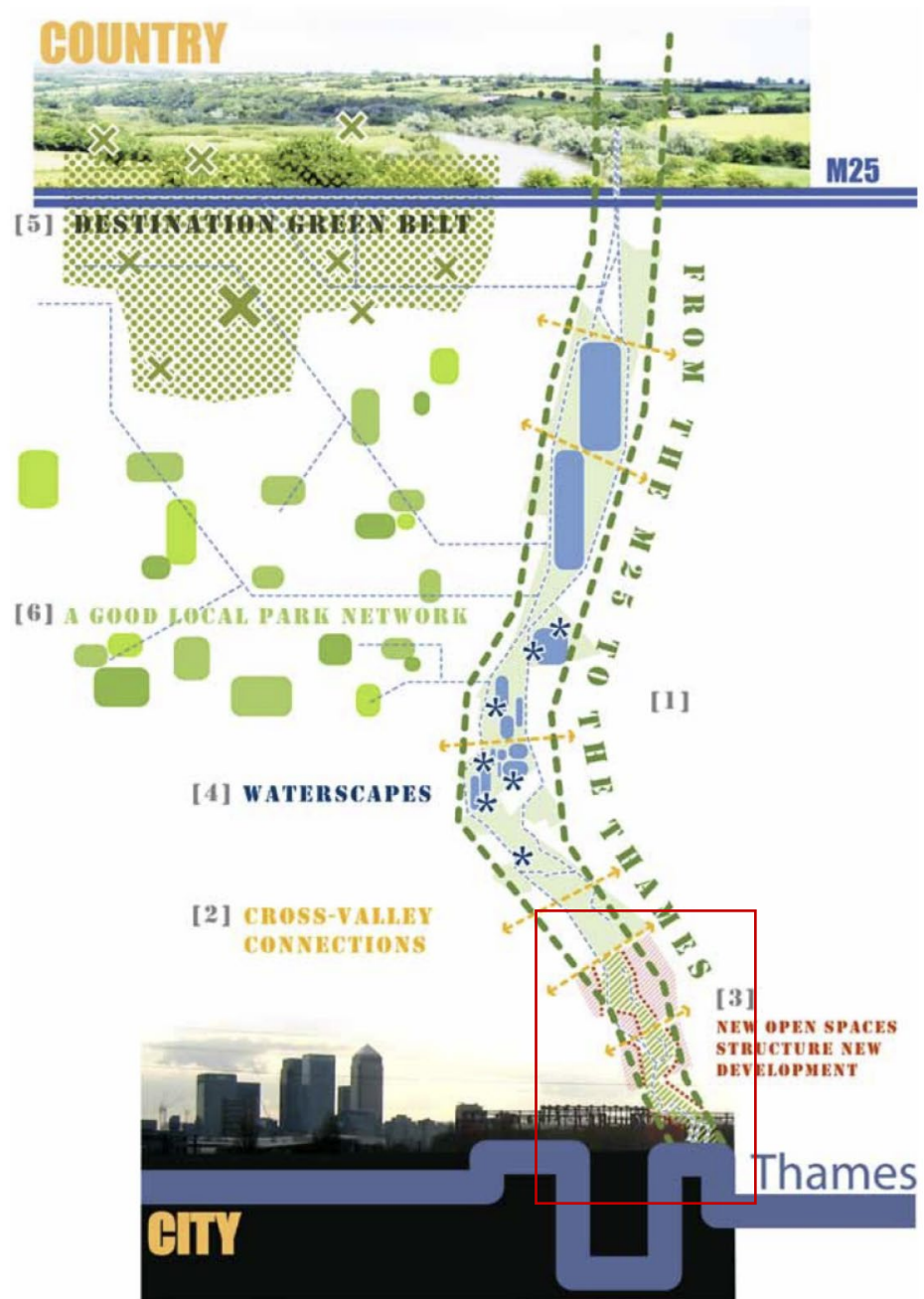


residential nature industry

infrastructure



railway main roads



Lea Valley

London Government vision

Lea Valley

London Government vision



Increase access to open space, the Green Belt and the urban fringe



Conserve landscape and the natural environment and increase access to nature



Adapting to climate change



Making sustainable travel connections



Enhancing distinctive visitor destinations and boosting the visitor economy



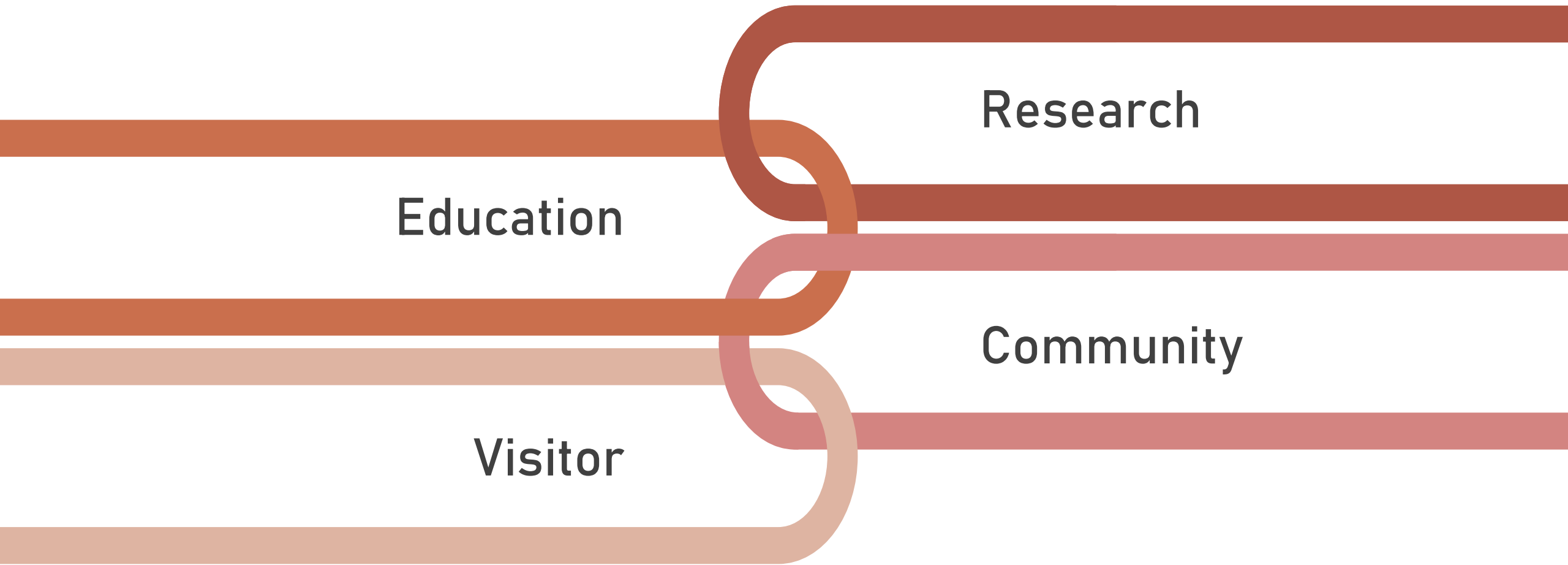
Promote healthy living



Promote sustainable food production



Promote green skills and sustainable design, management and maintenance



Education

Visitor

Research

Community



0m 100m 200m

Useable elements



0m 100m 200m

Useable elements



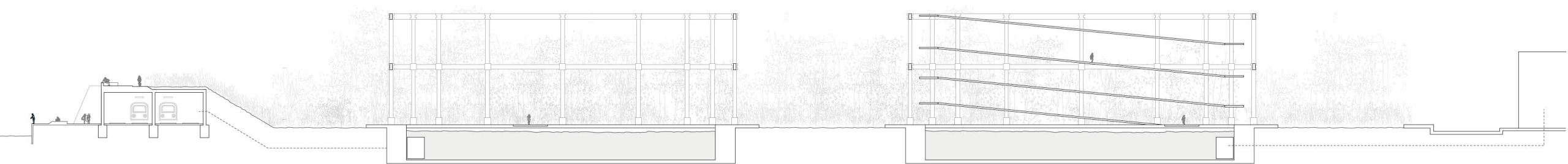
0m 100m 200m

Useable elements



Useable elements

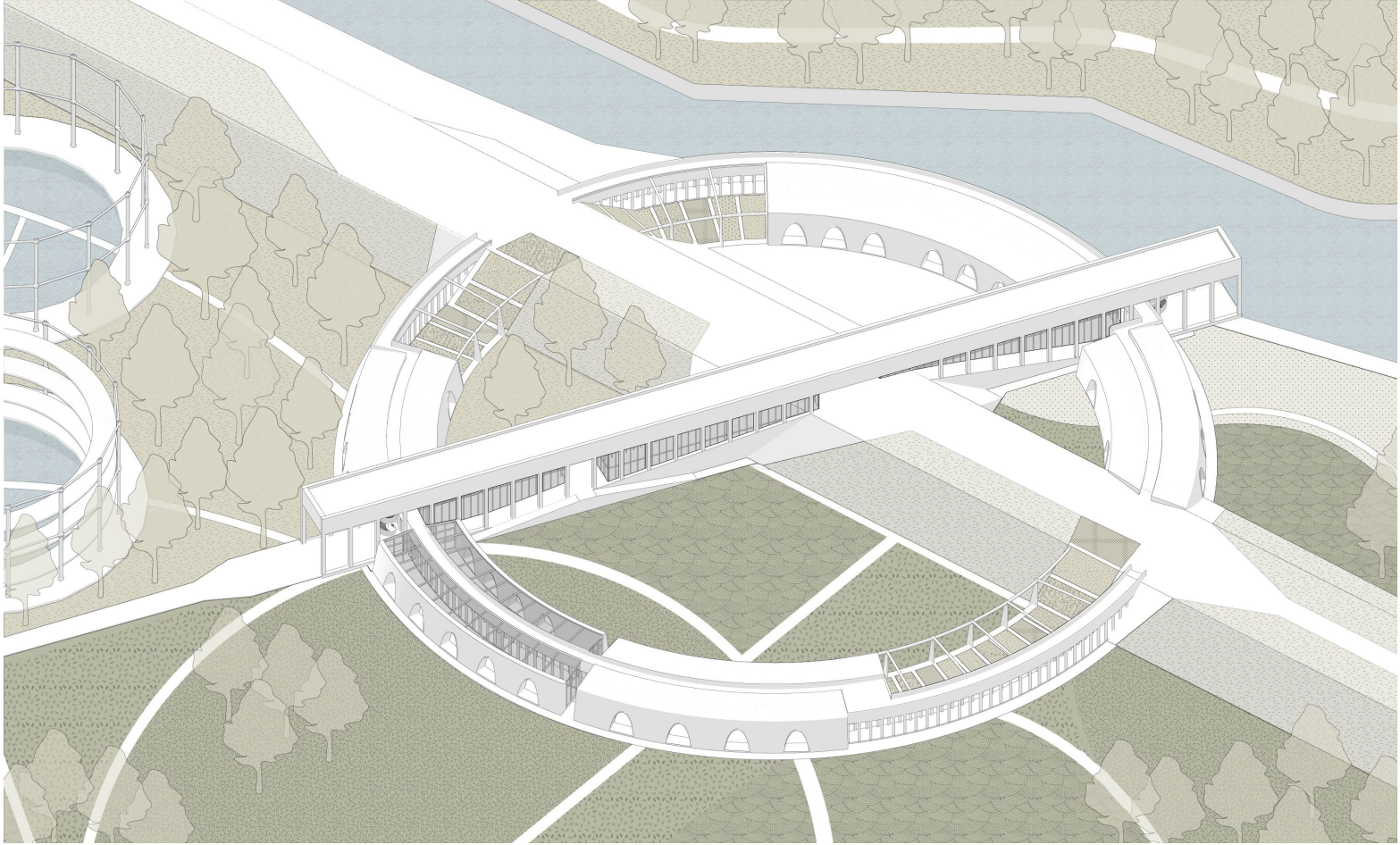


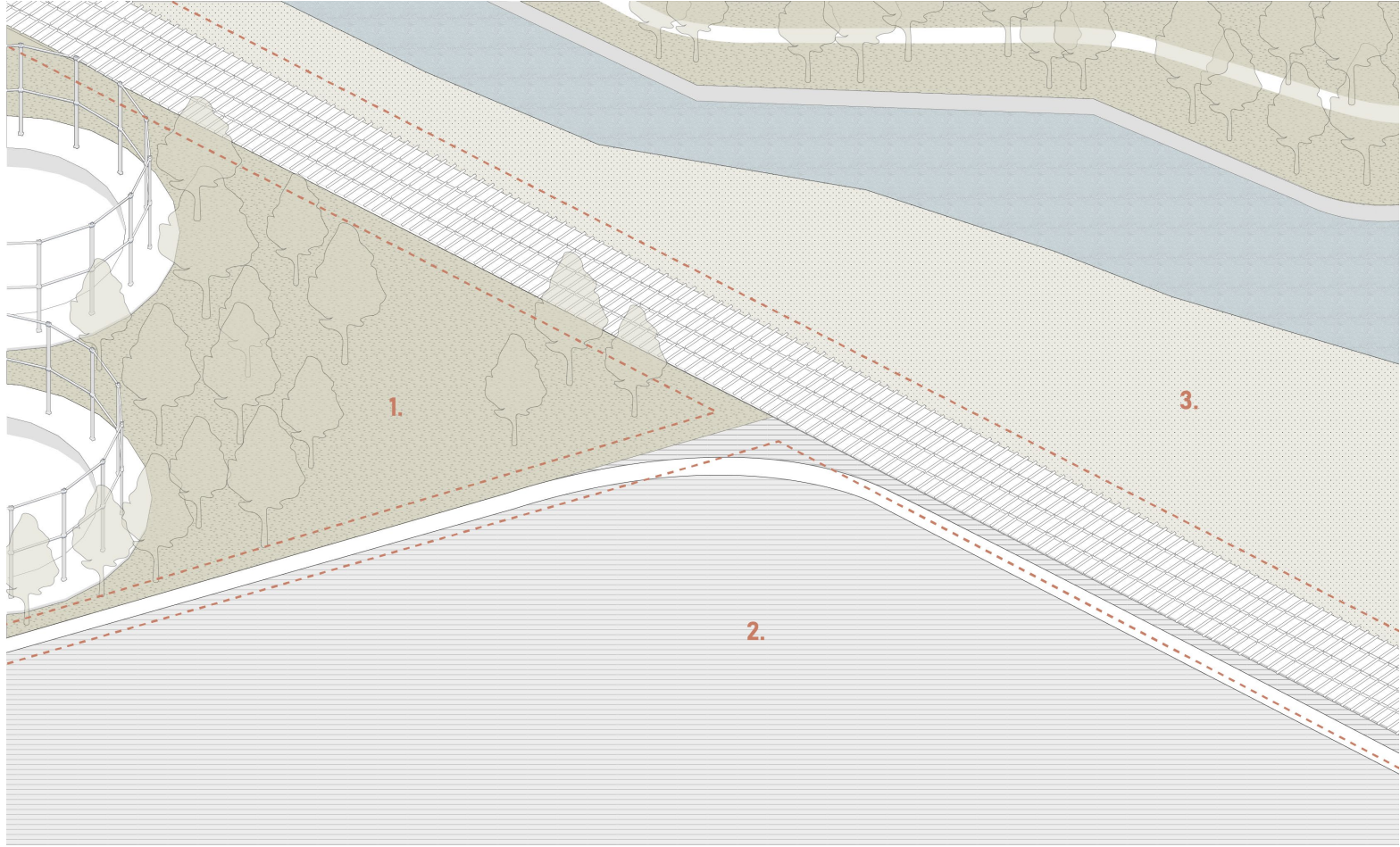


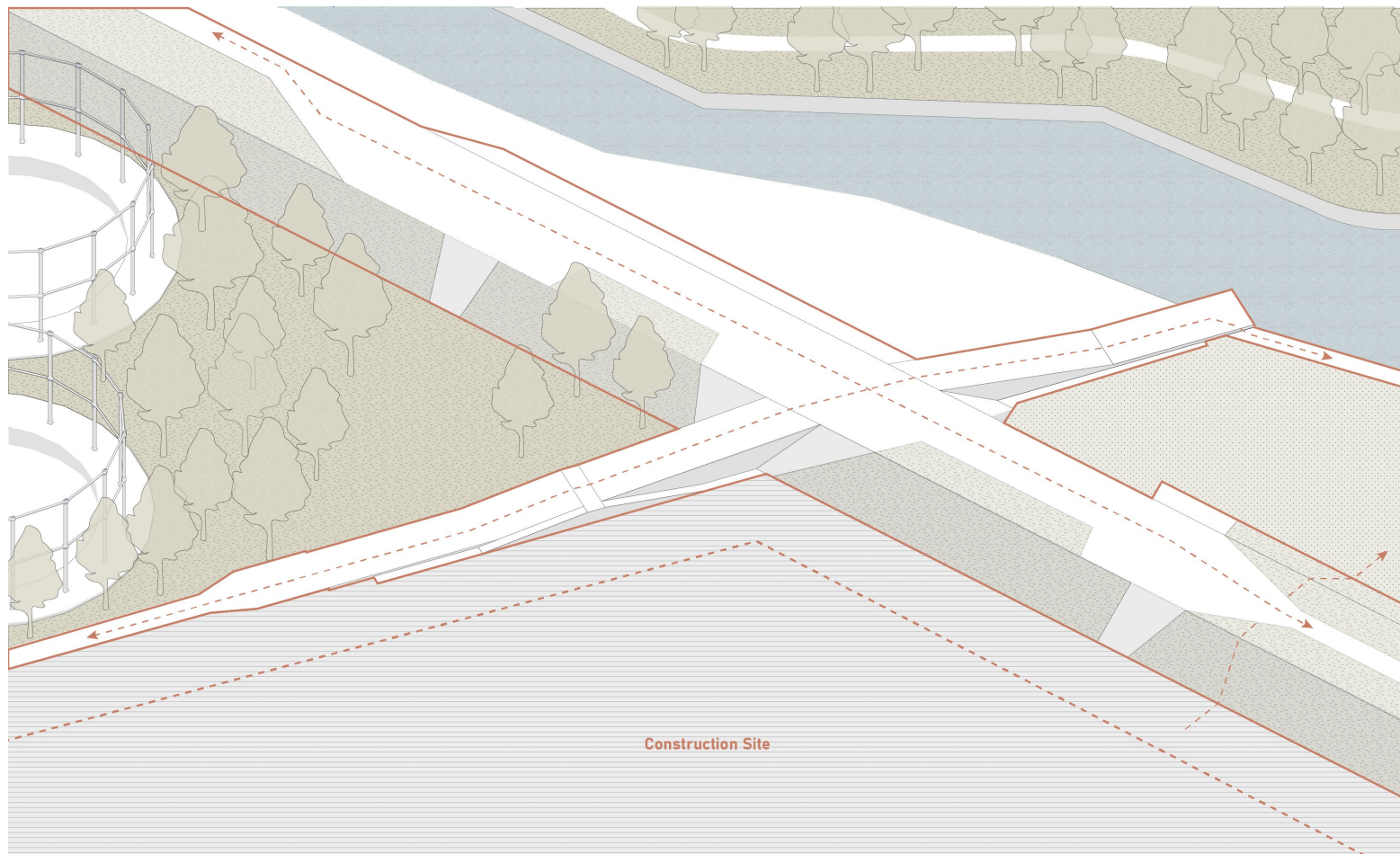
constructed wetlands

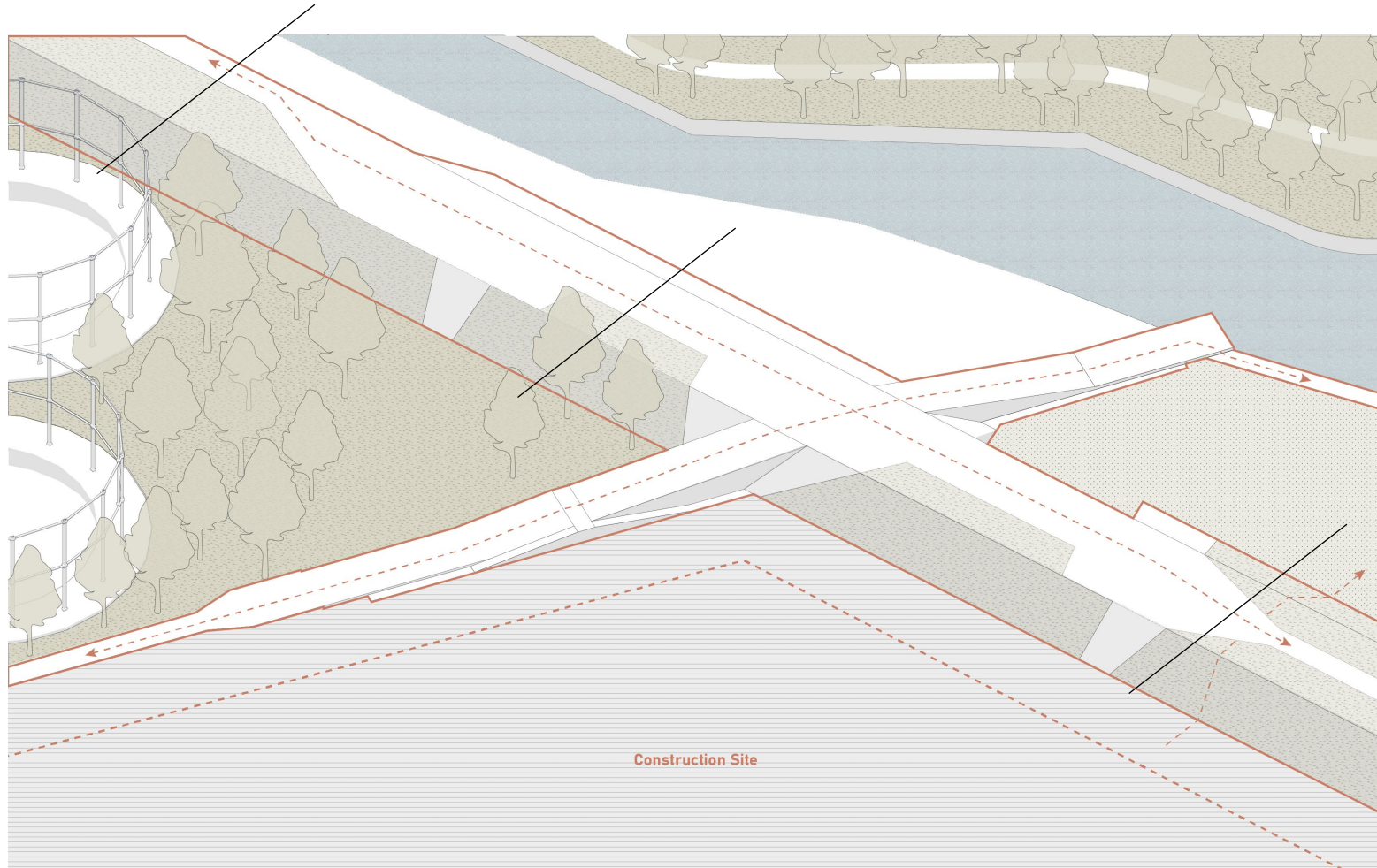


Useable elements

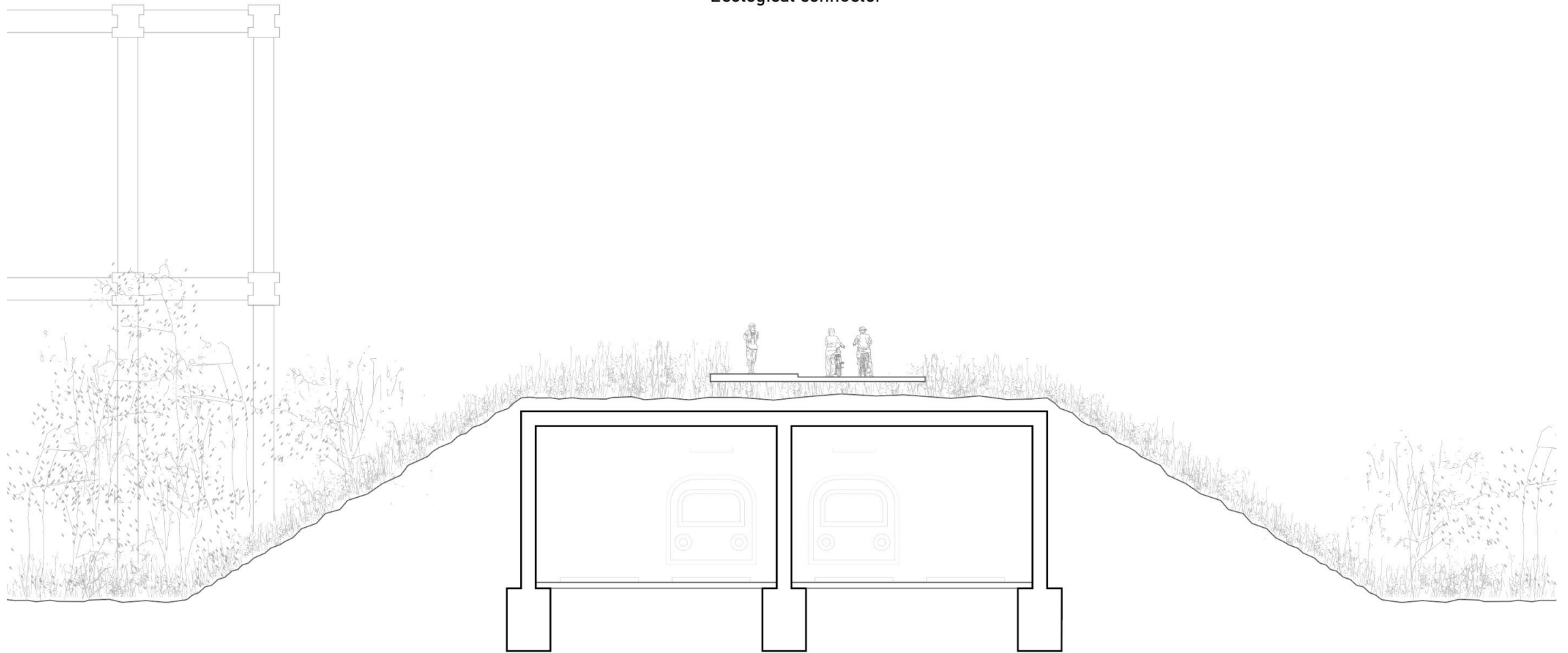








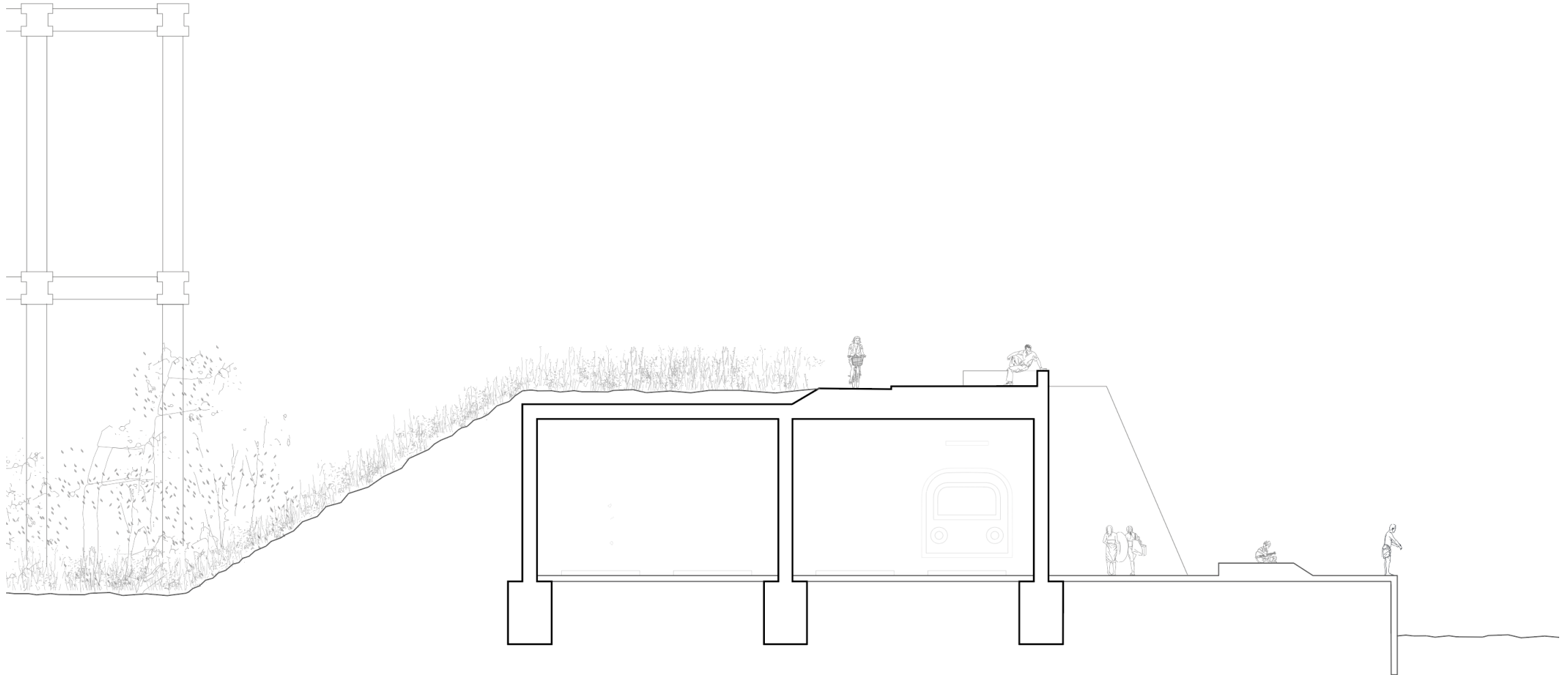
Ecological connector



0m 5m 10m

1:200

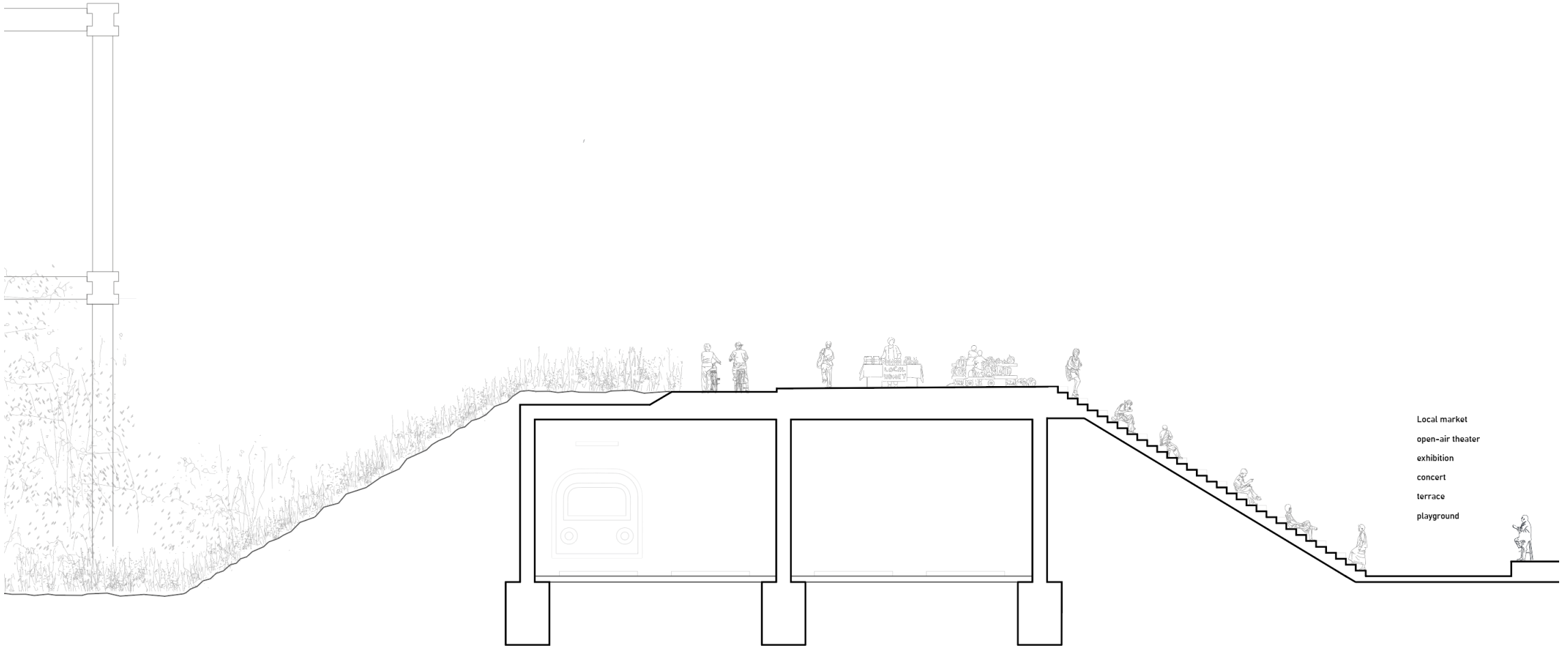
social catalyst



0m 5m 10m

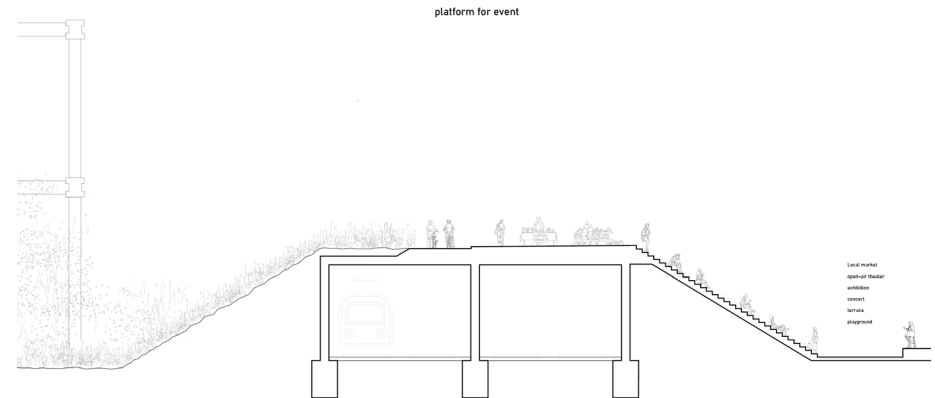
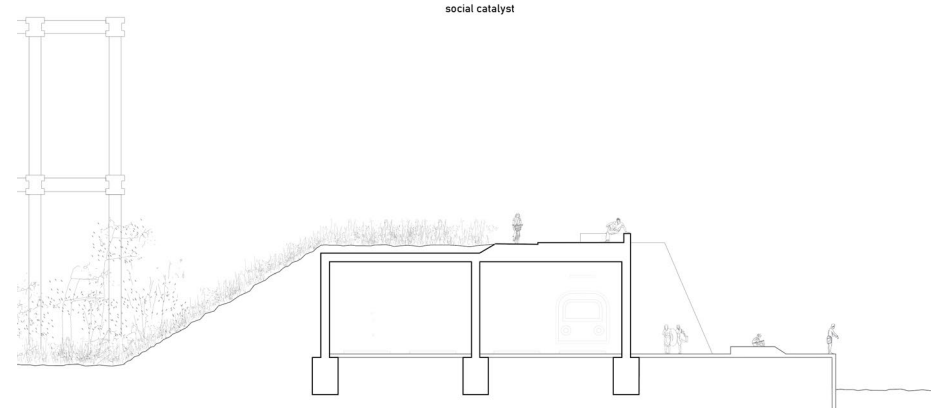
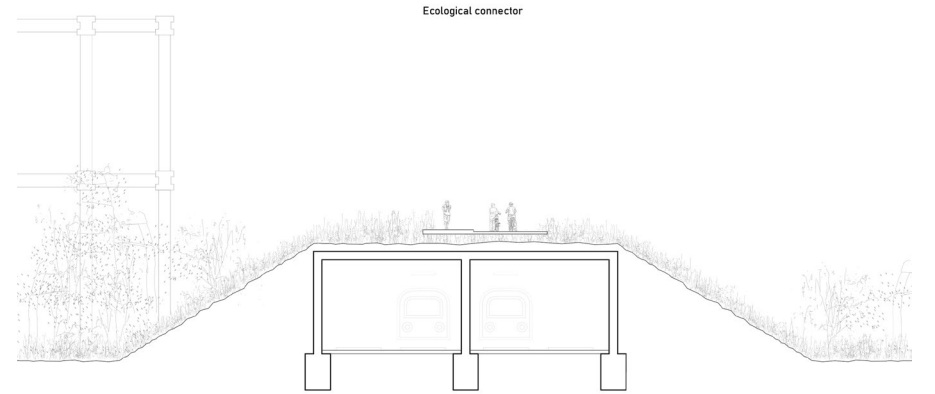
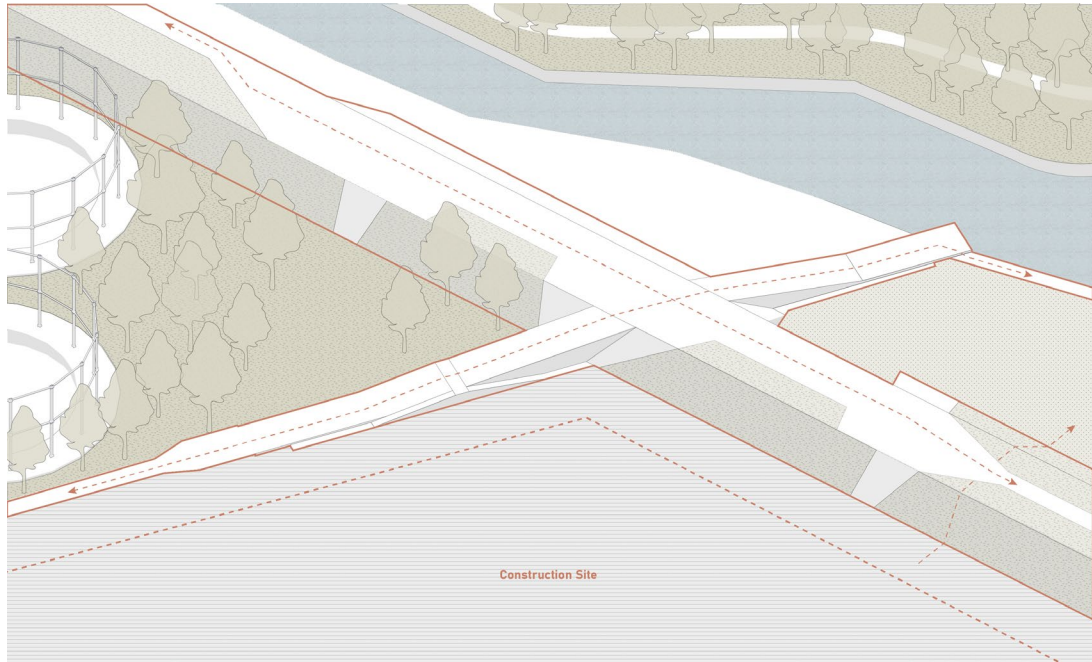
1:200

platform for event

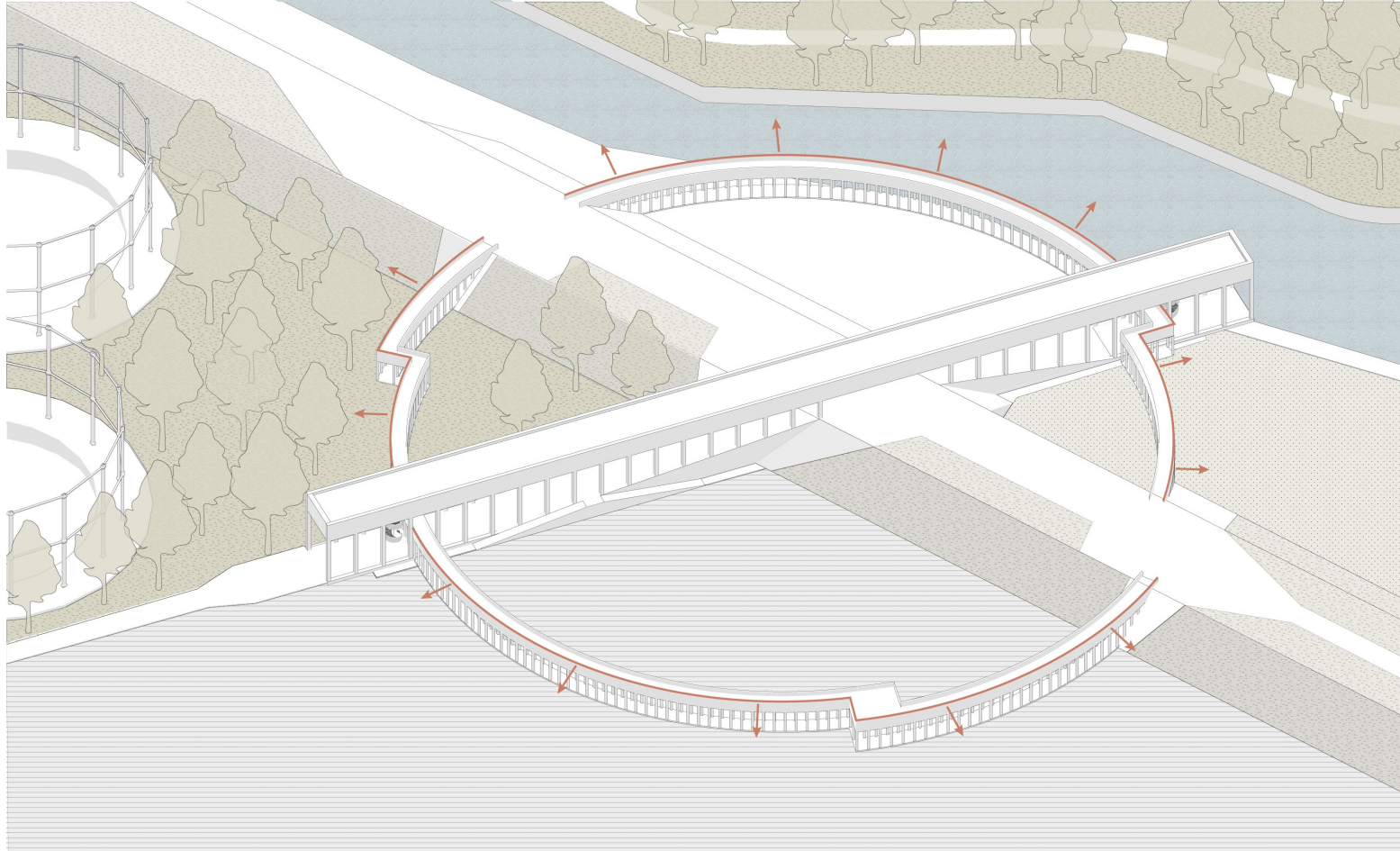


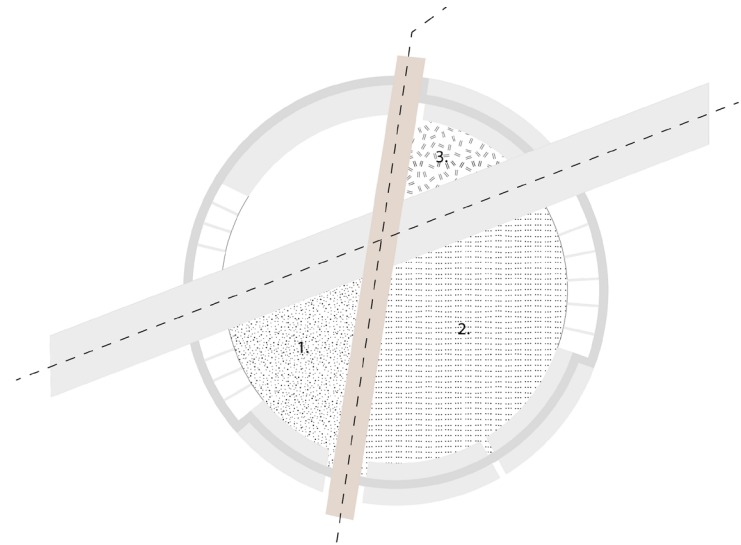
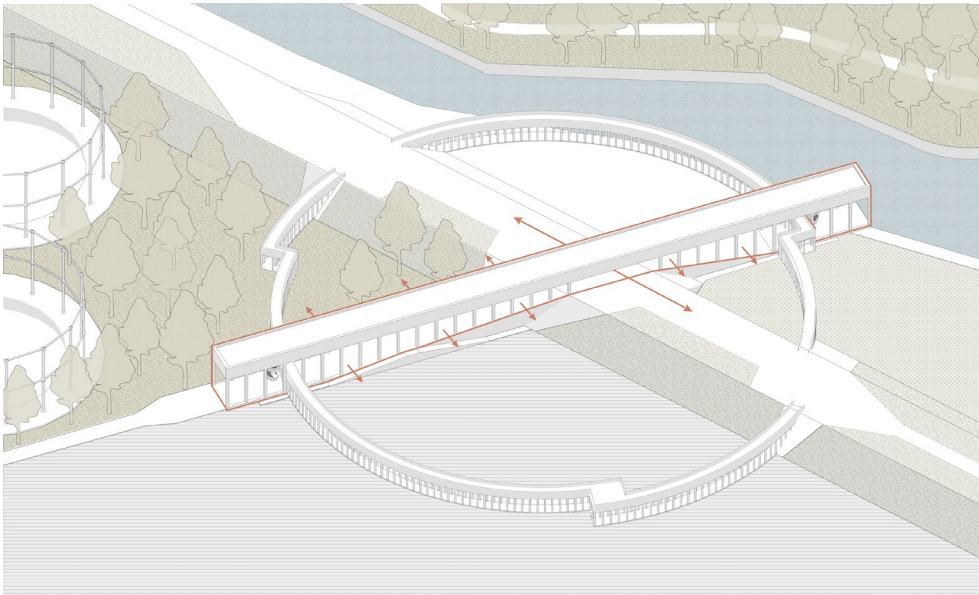
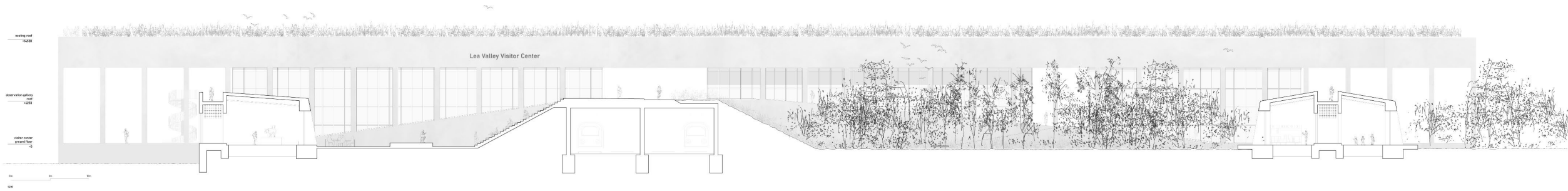
0m 5m 10m

1:200



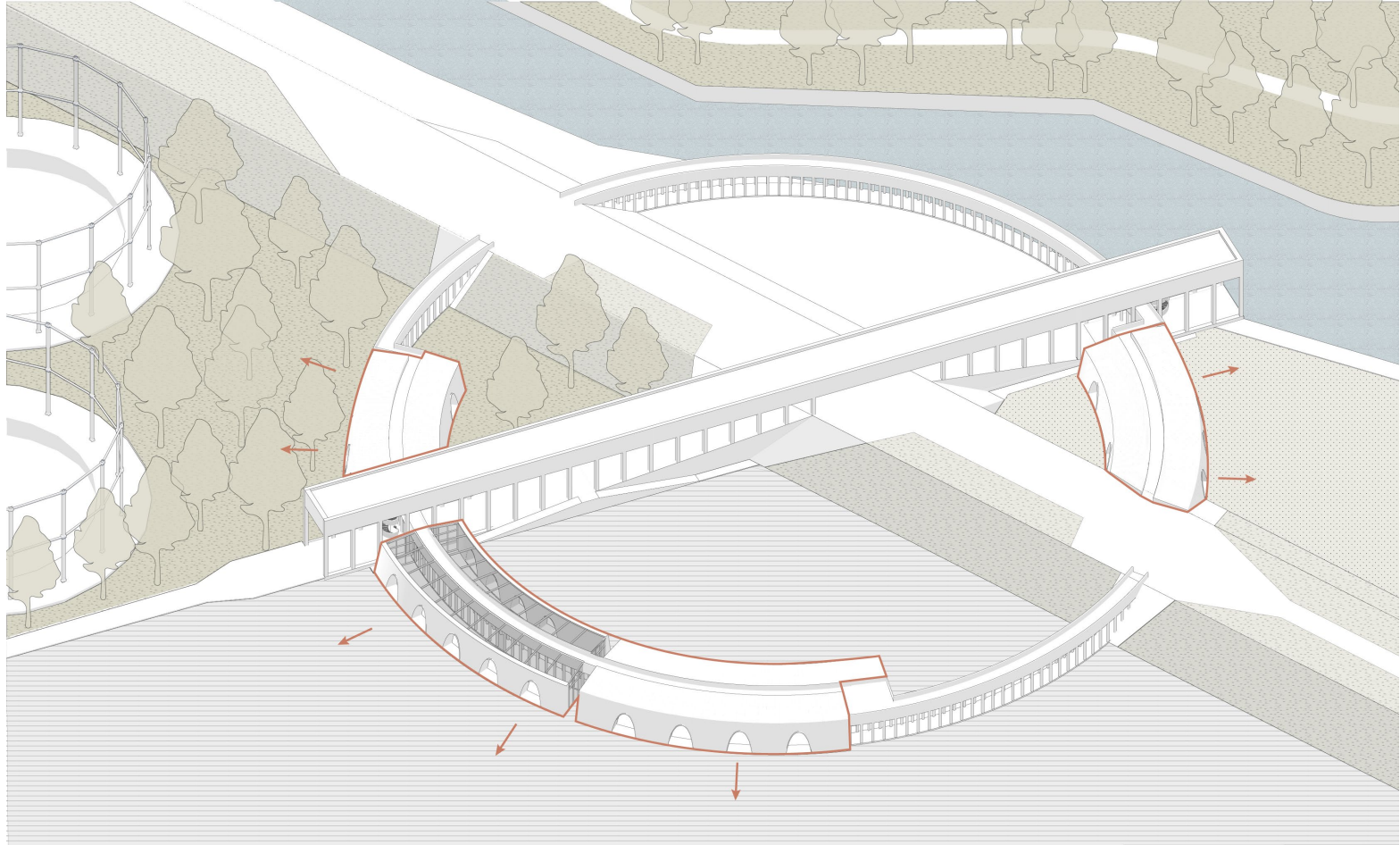
Observing the landscape

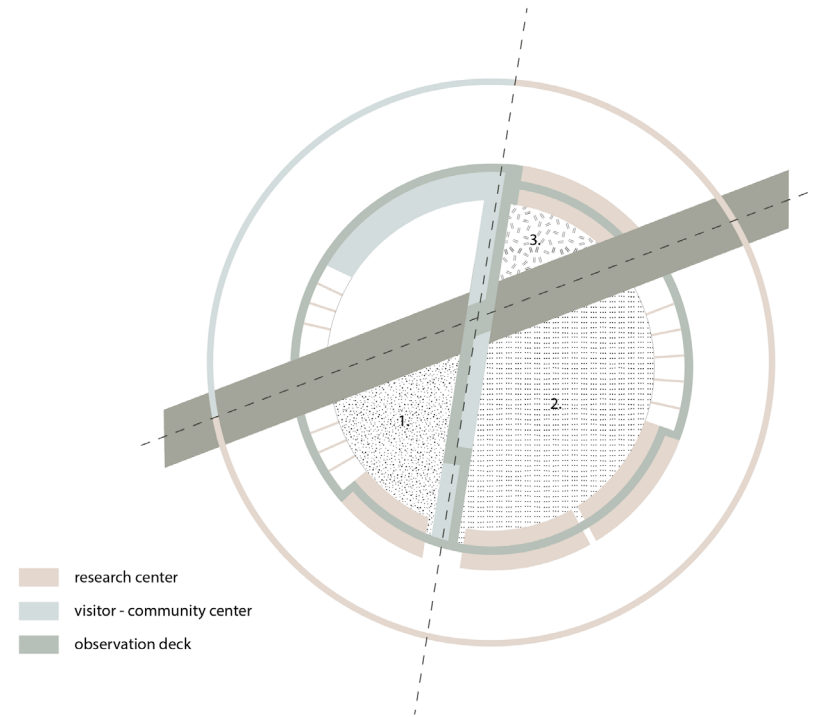
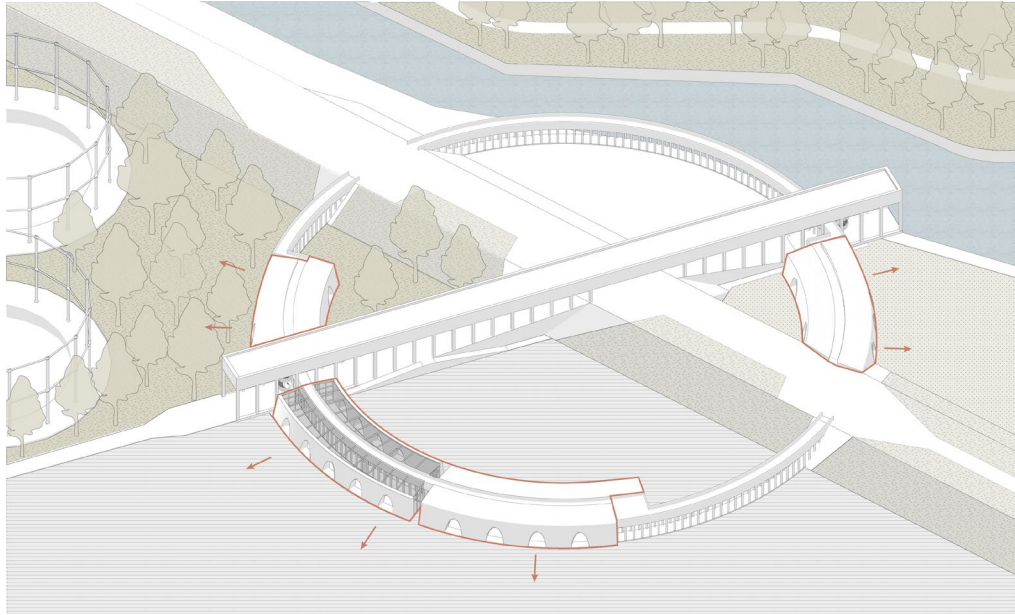




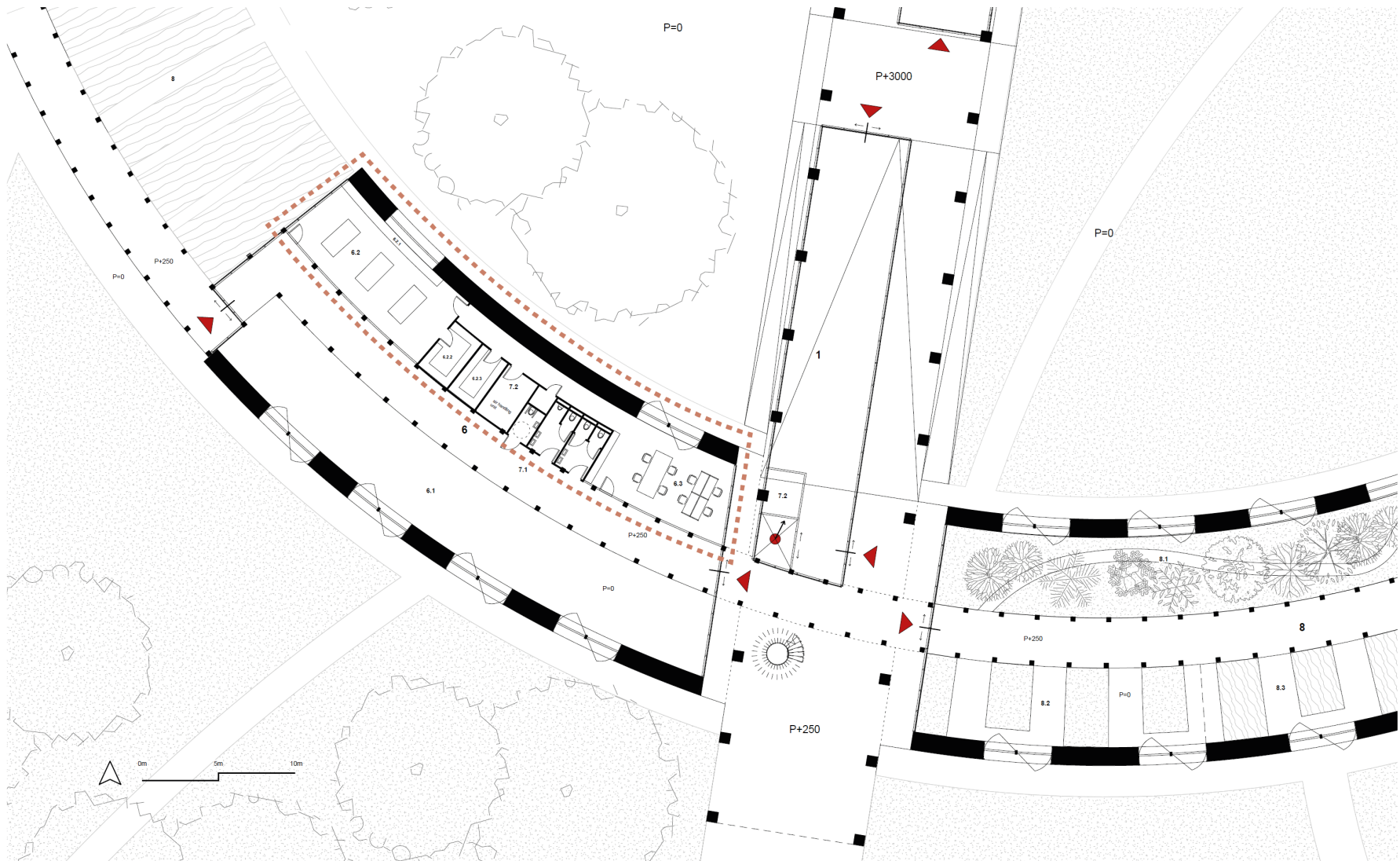


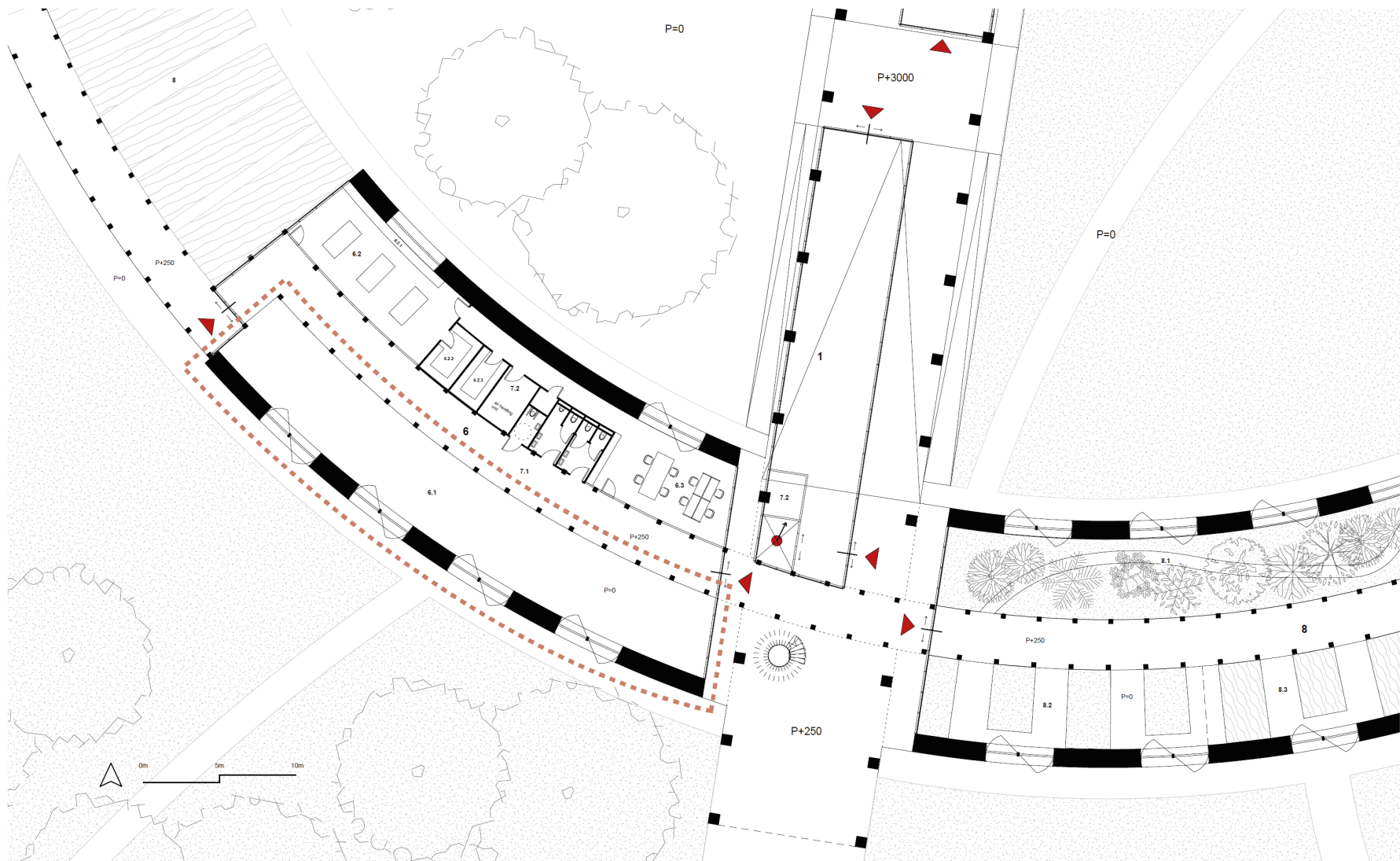




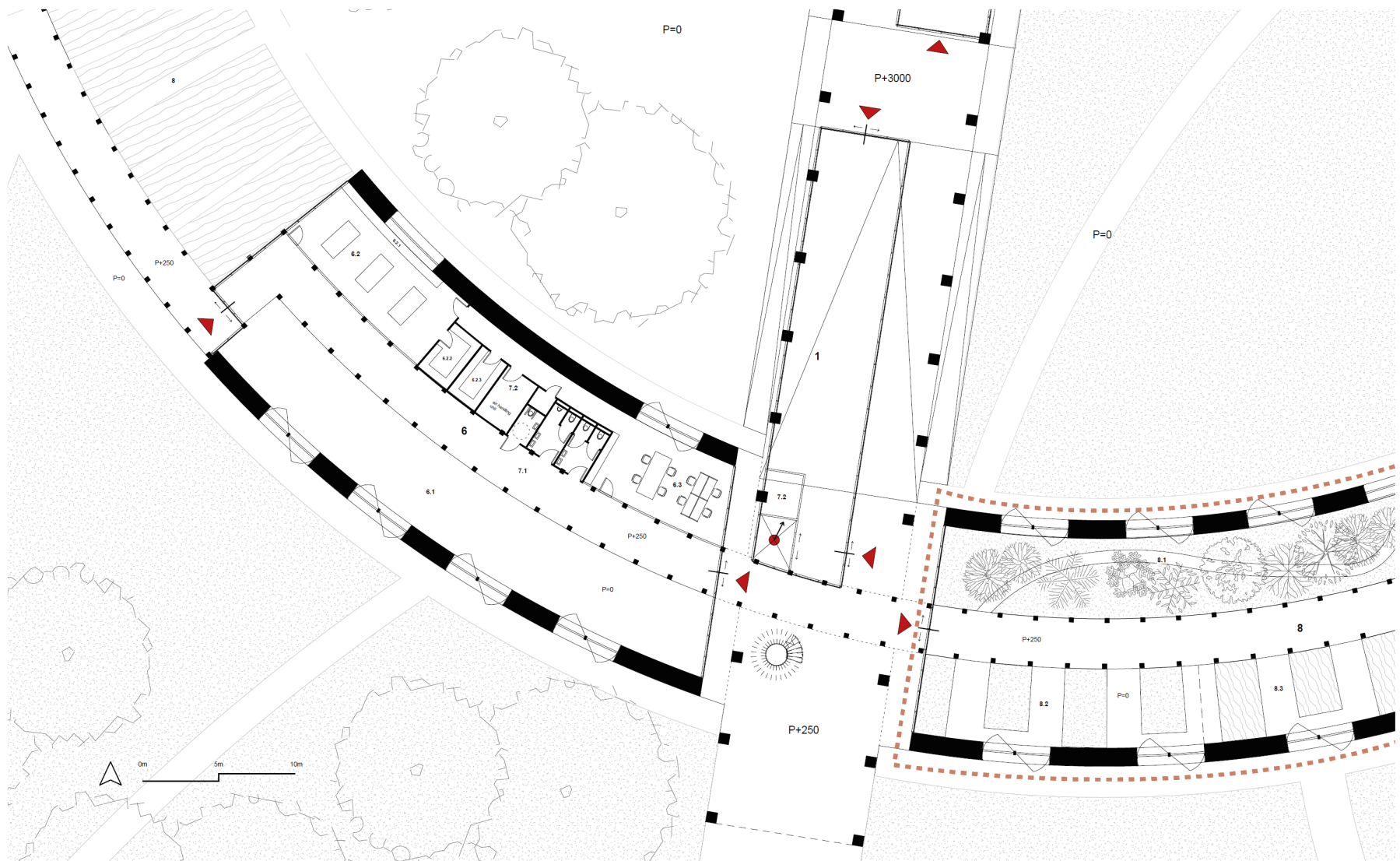


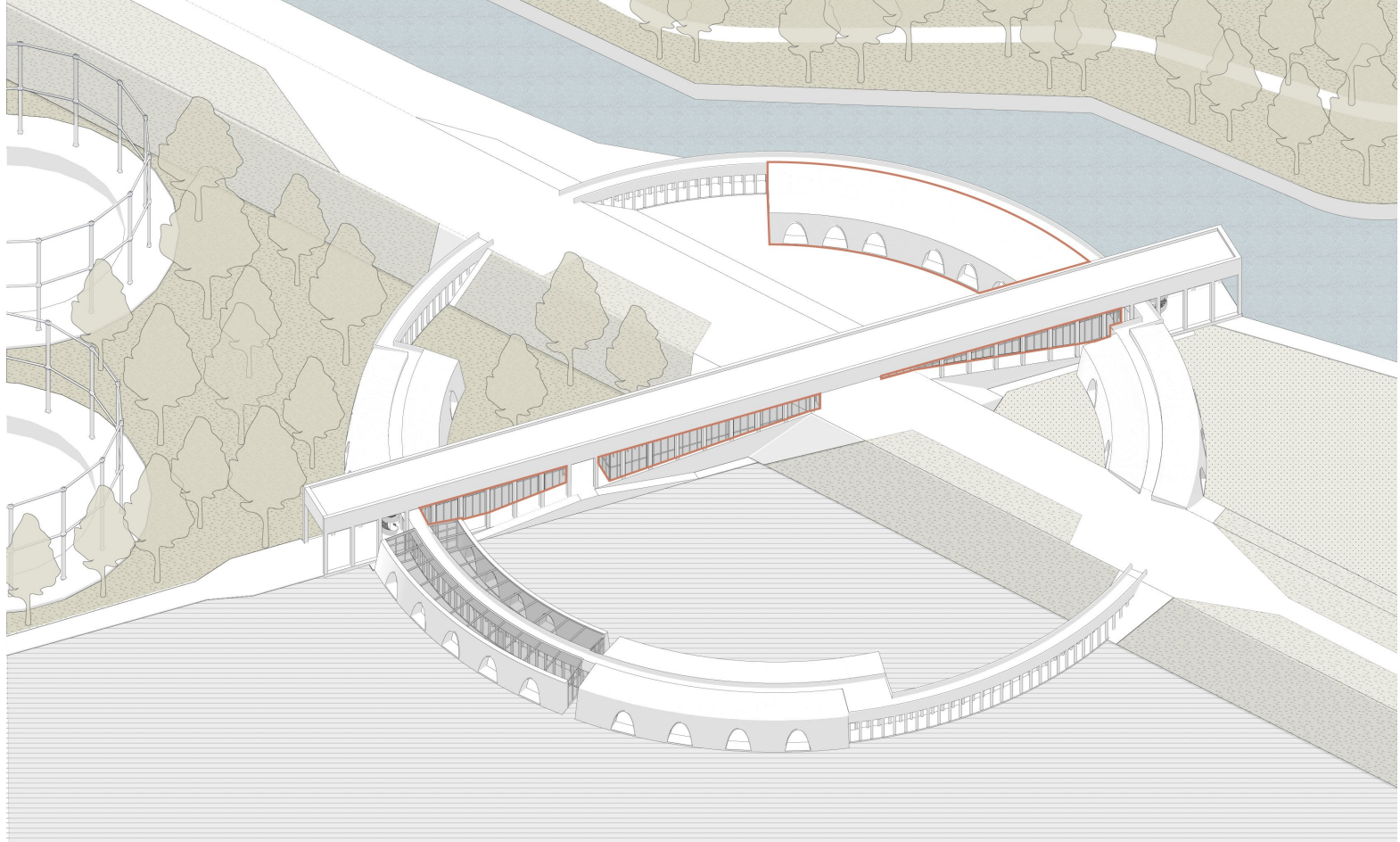
- research center
- visitor - community center
- observation deck

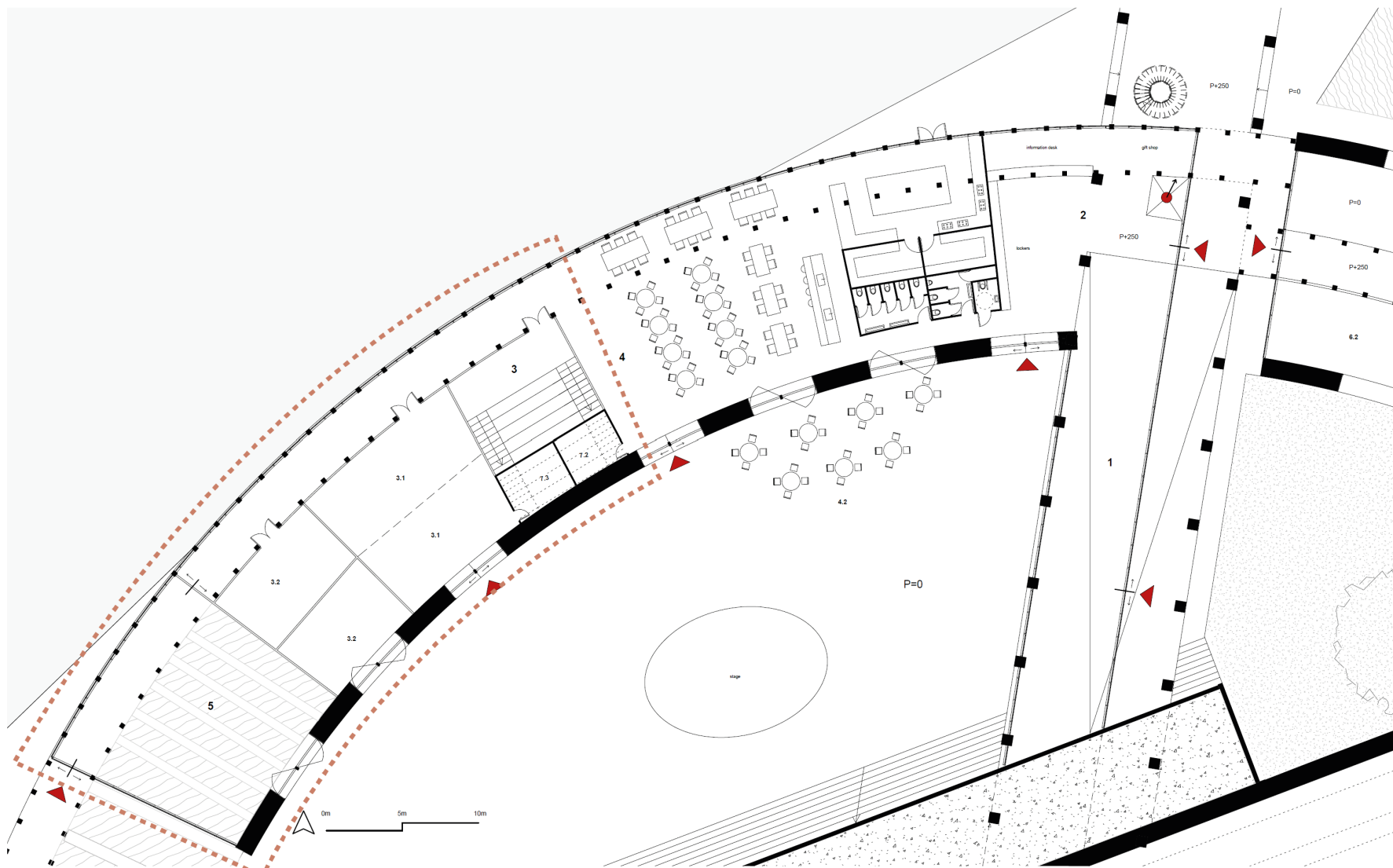


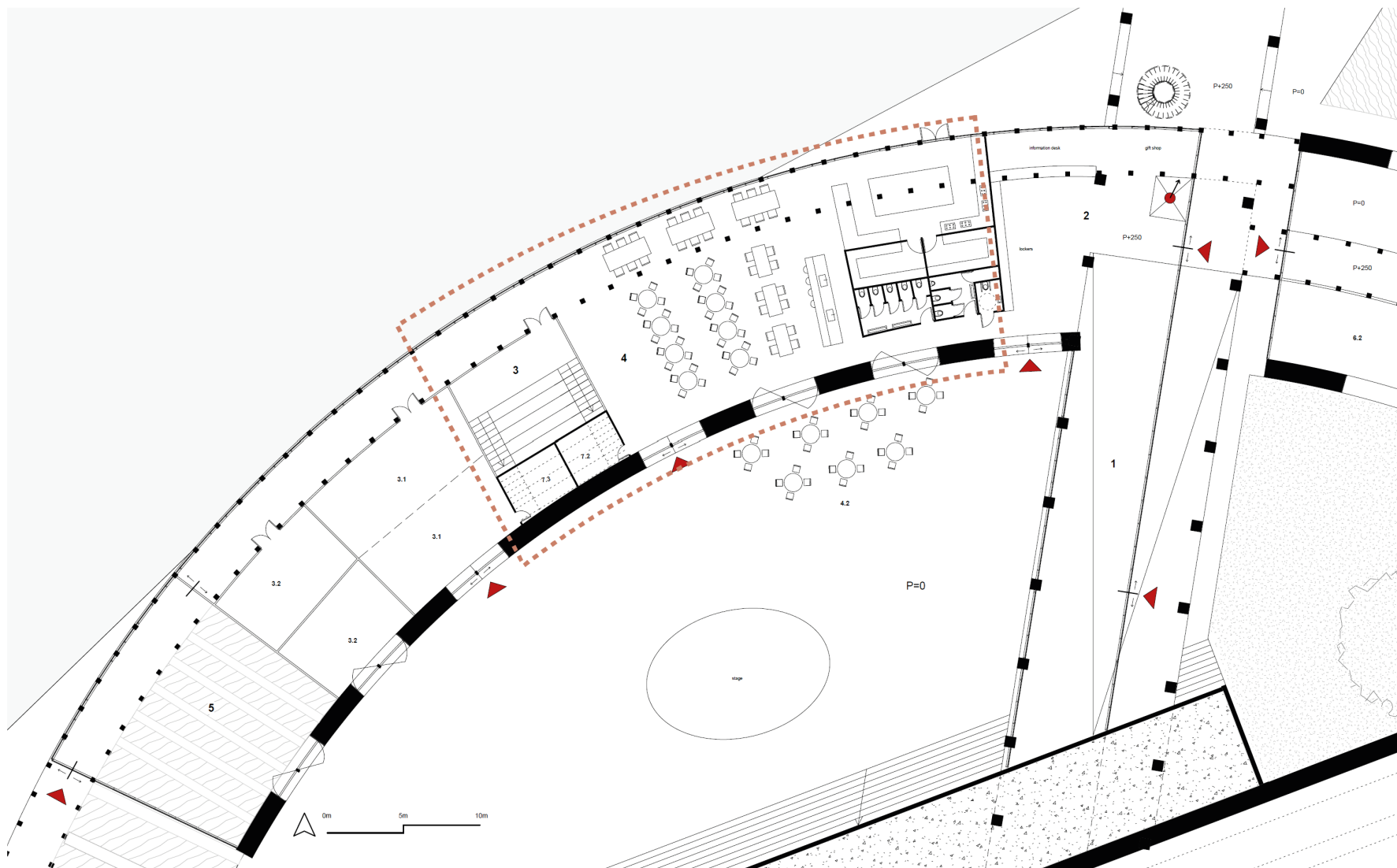






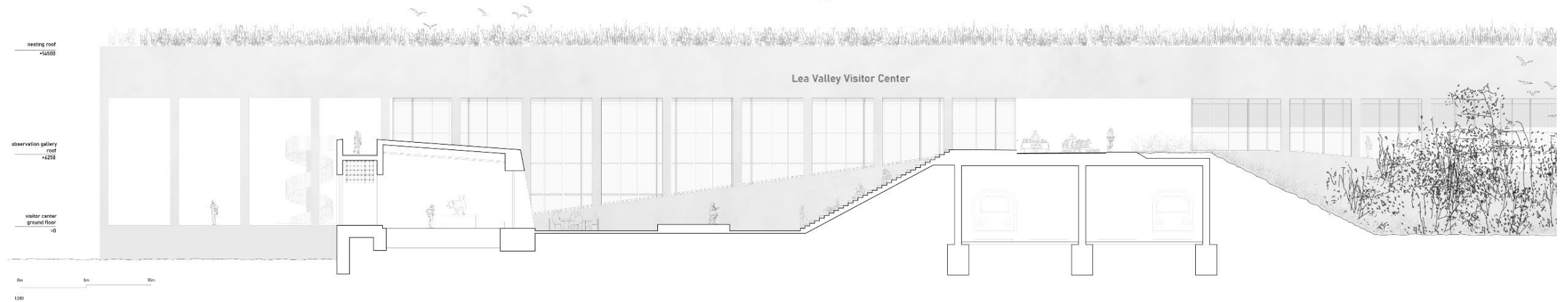


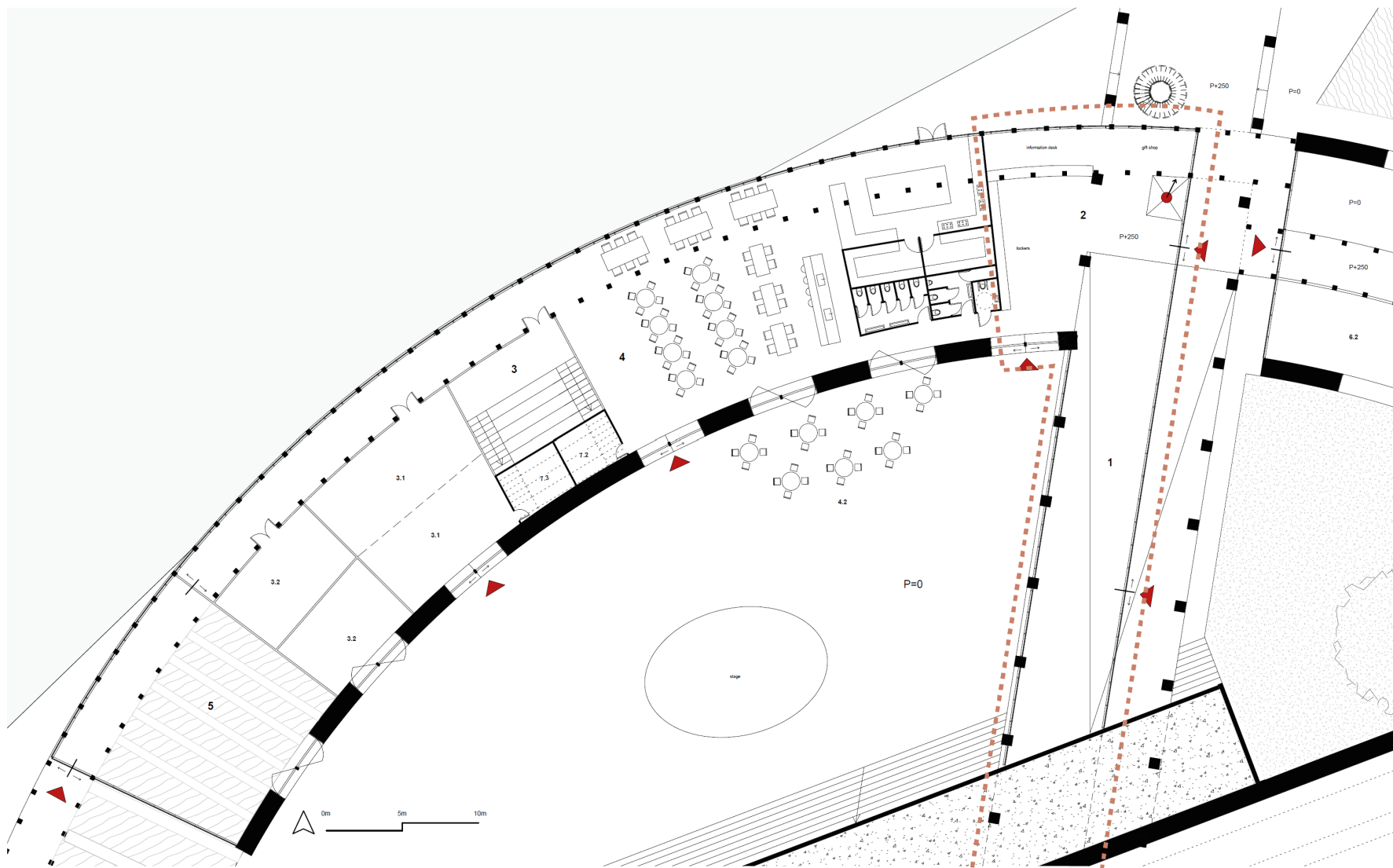


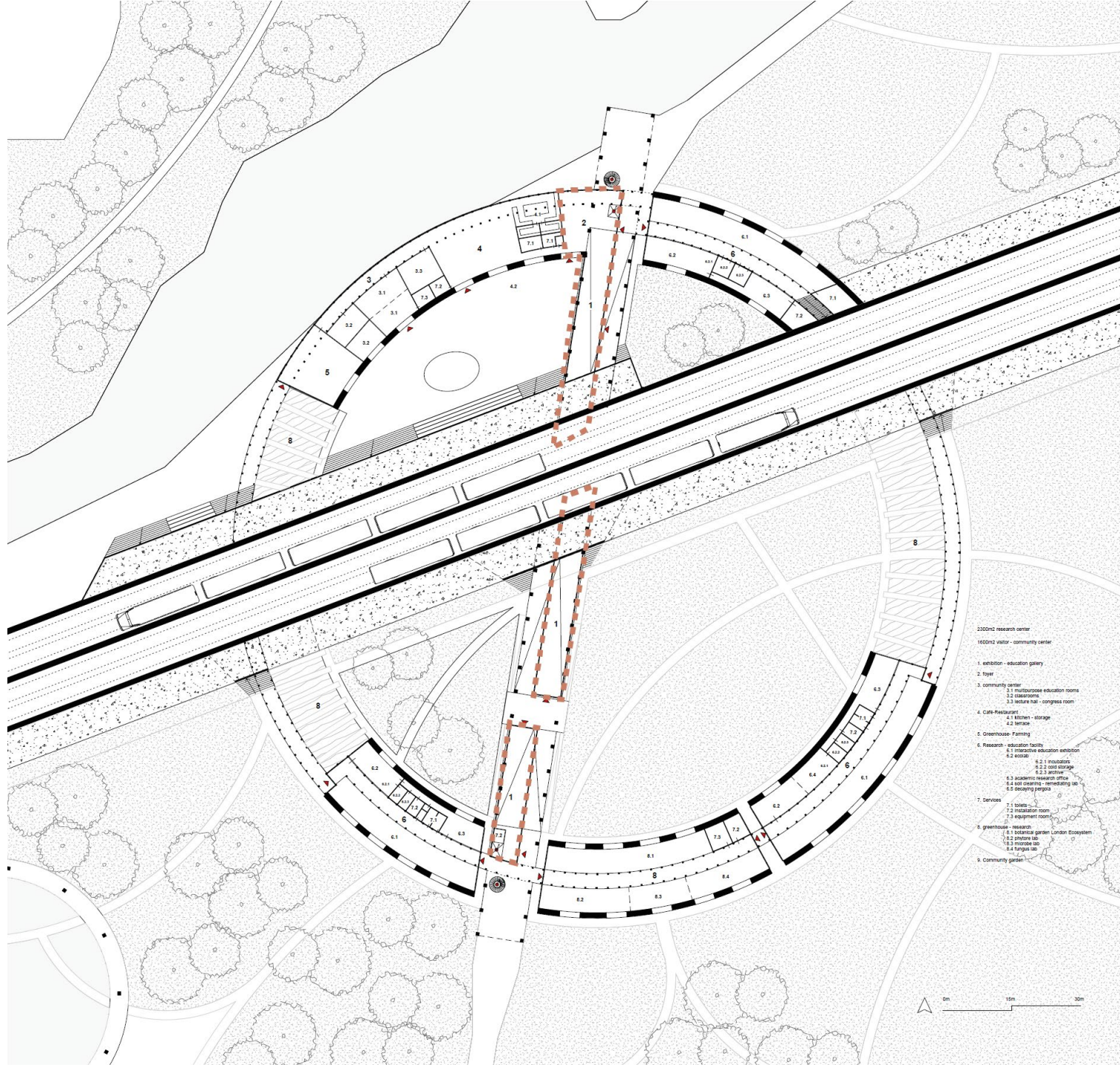


Platform for event

Ecological development



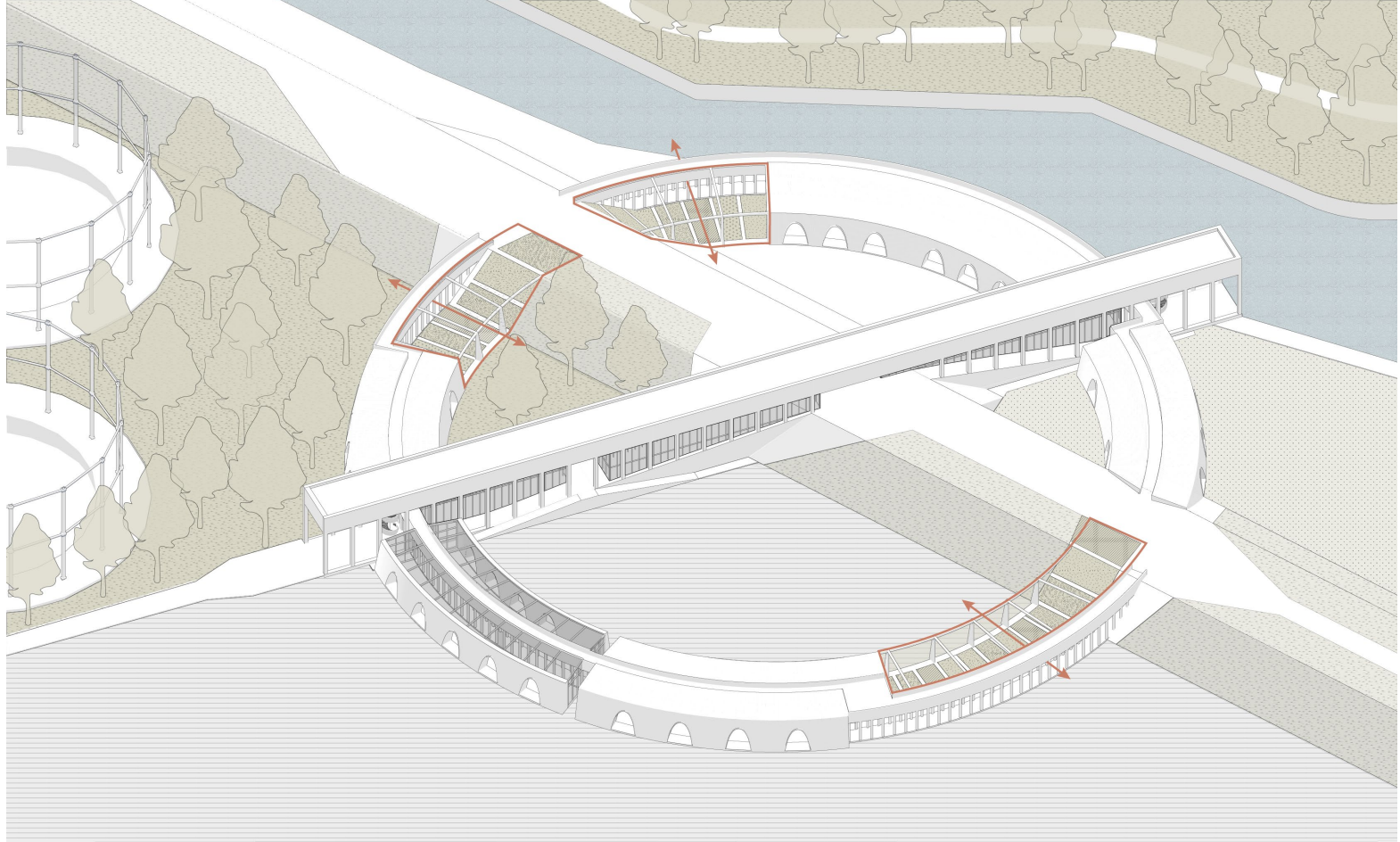


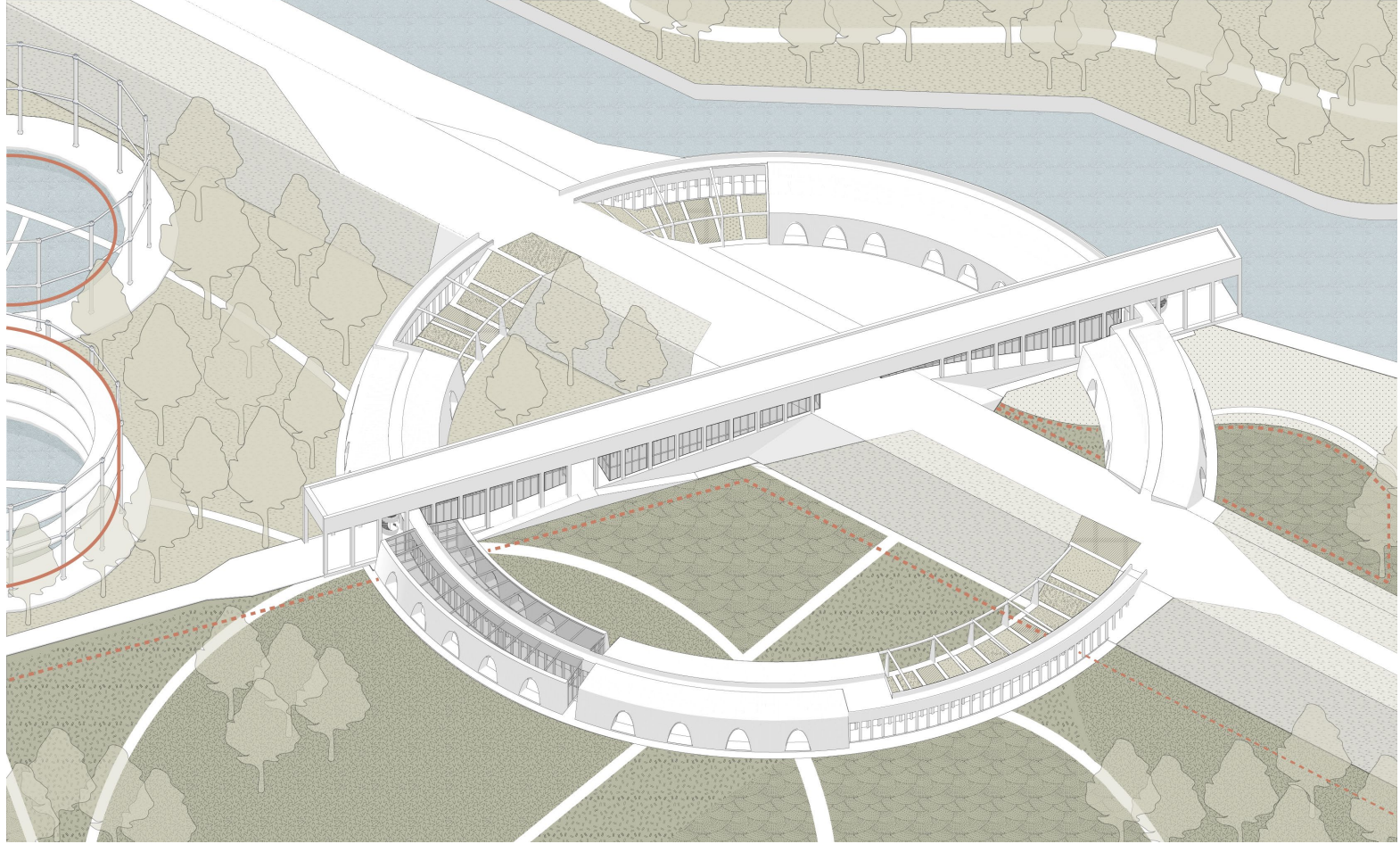


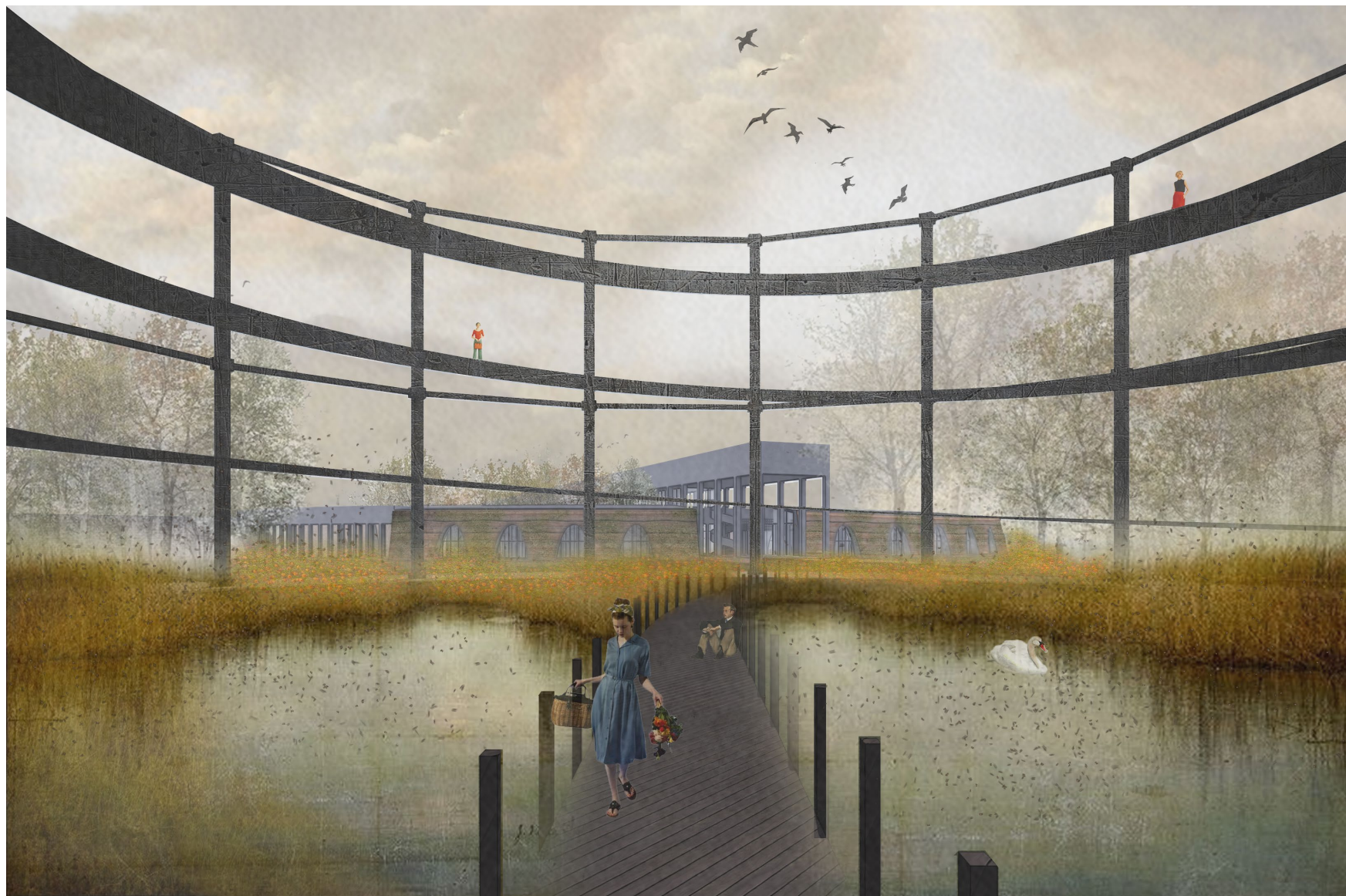




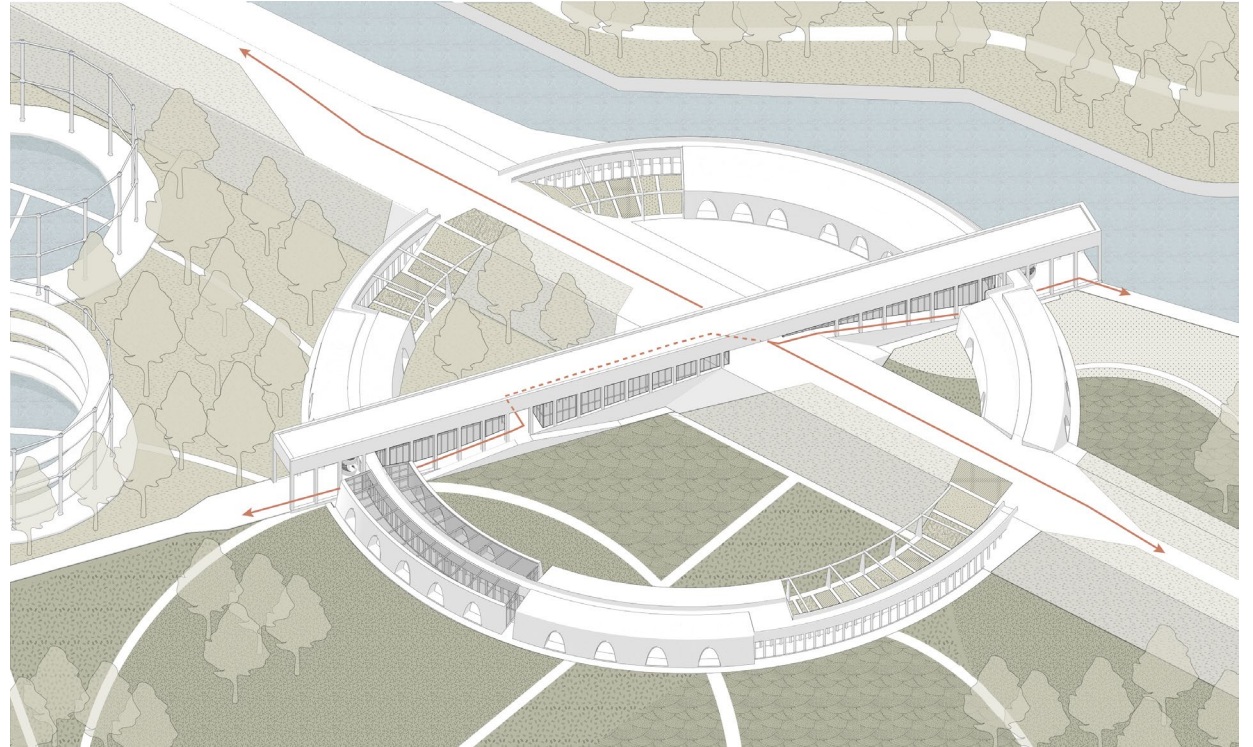
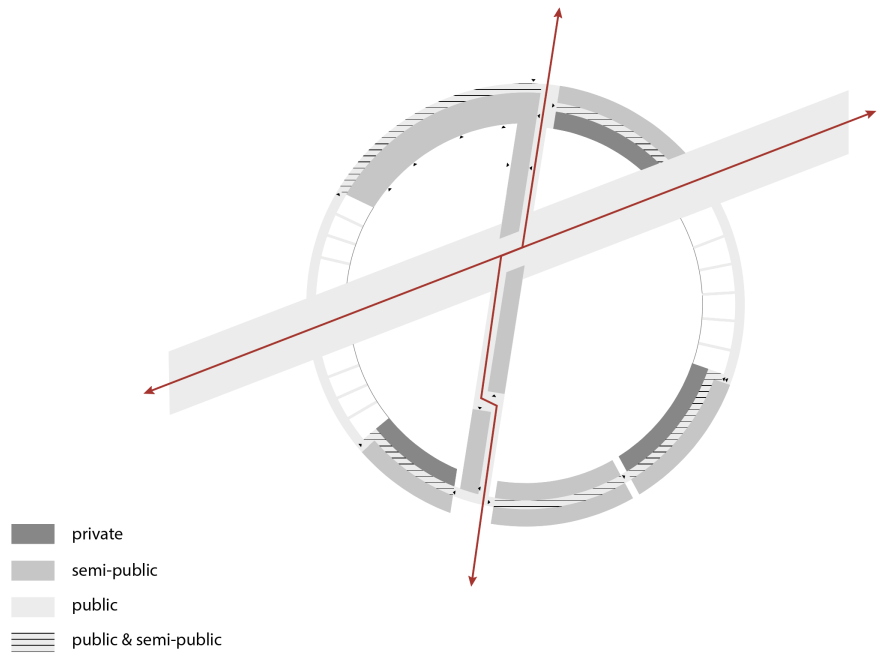




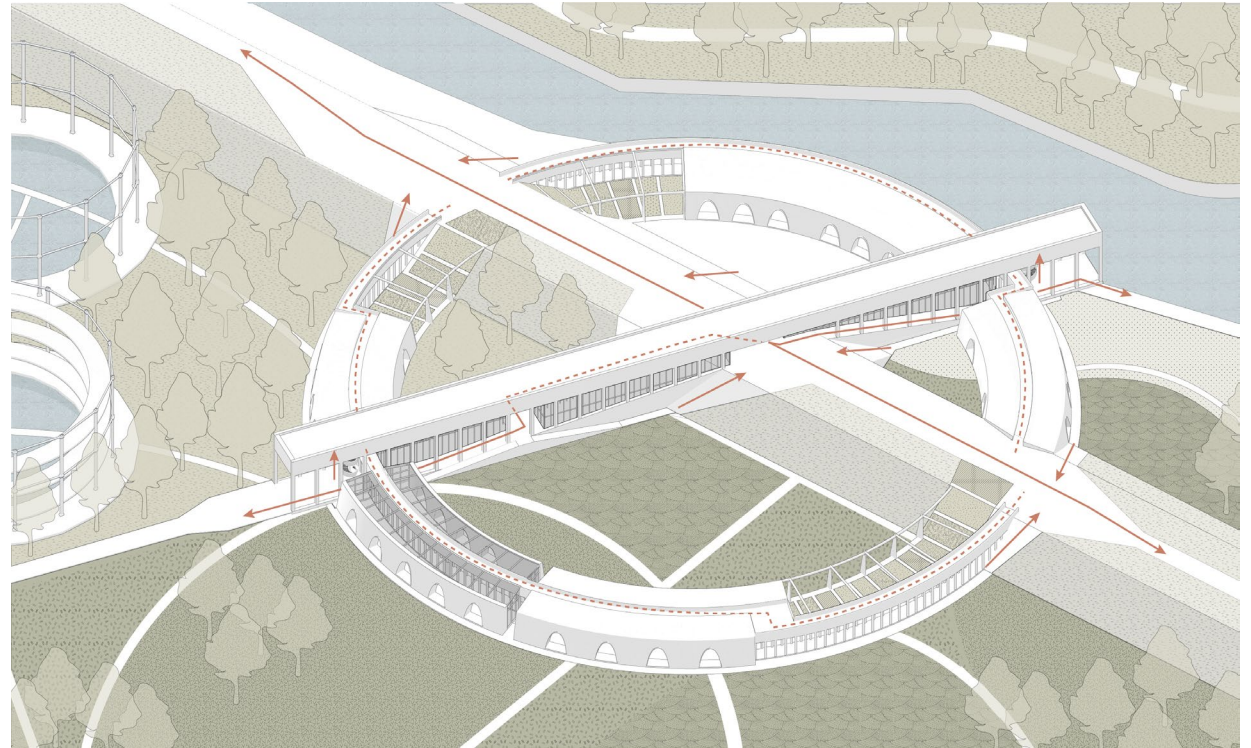
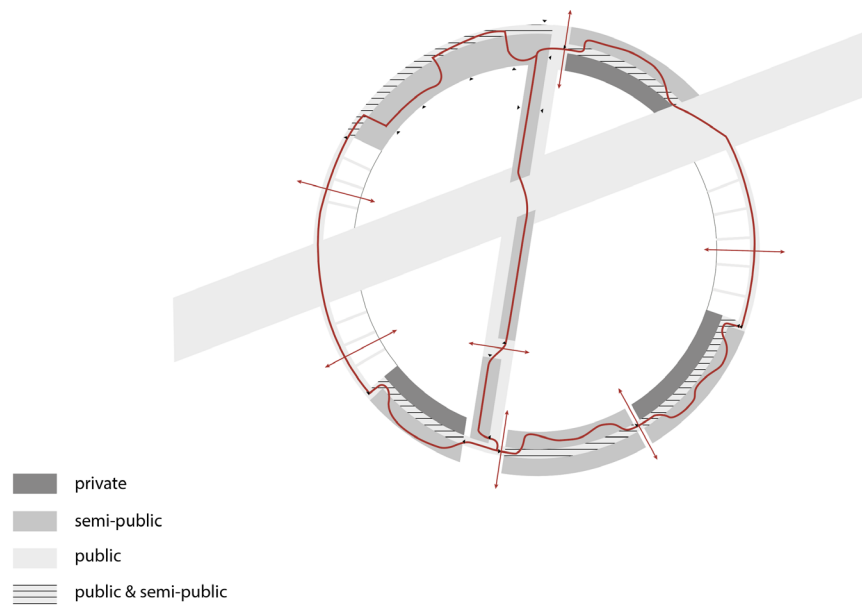




crossing

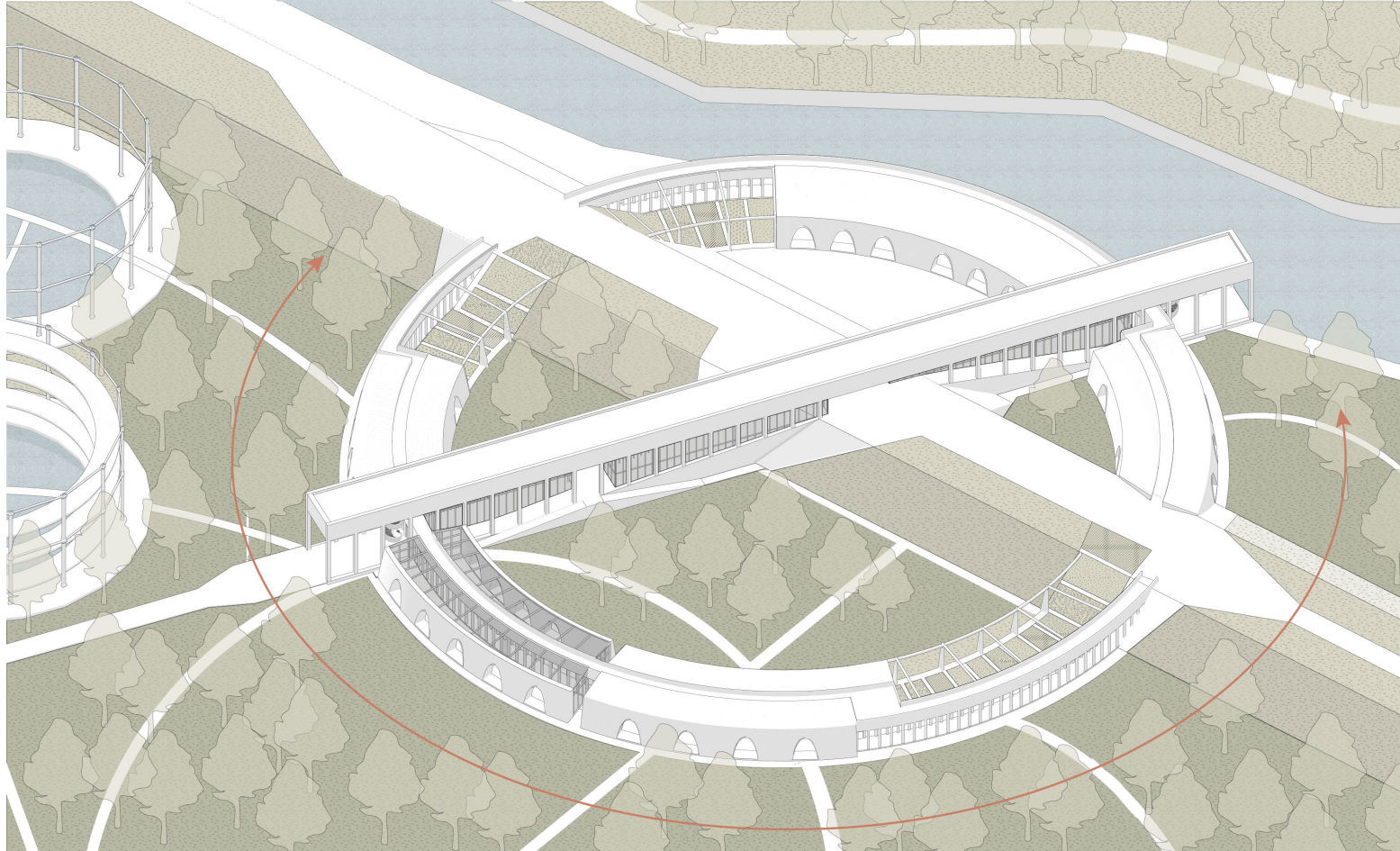


Visiting

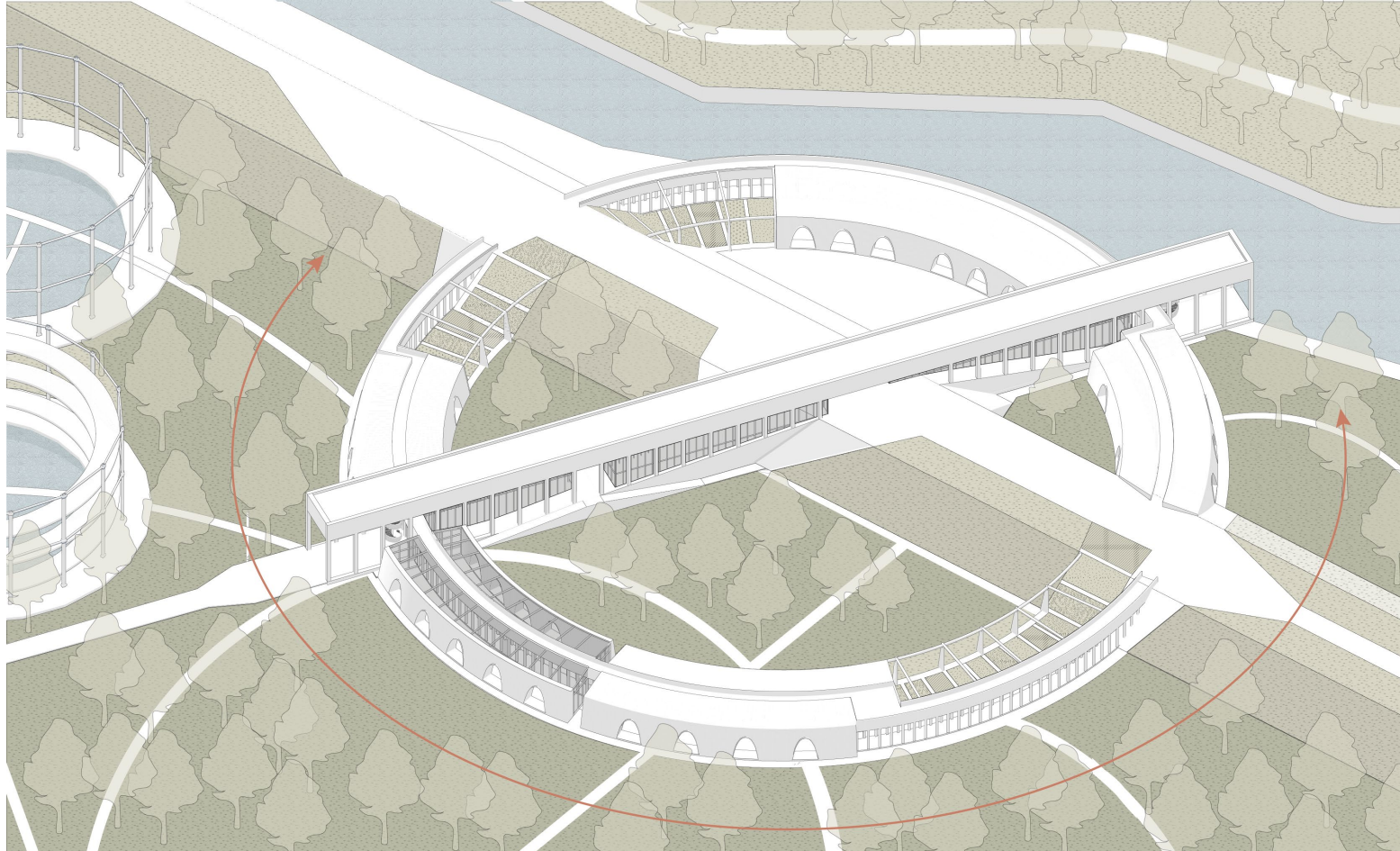




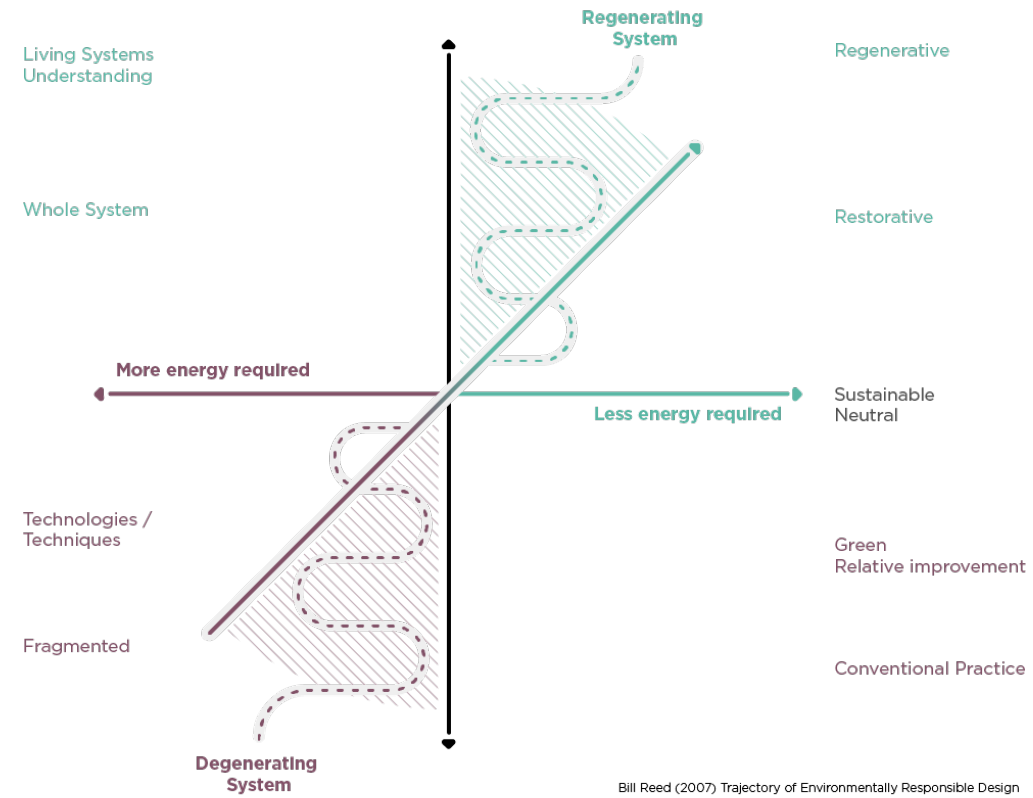
>60 years



>60 years



Becoming the landscape



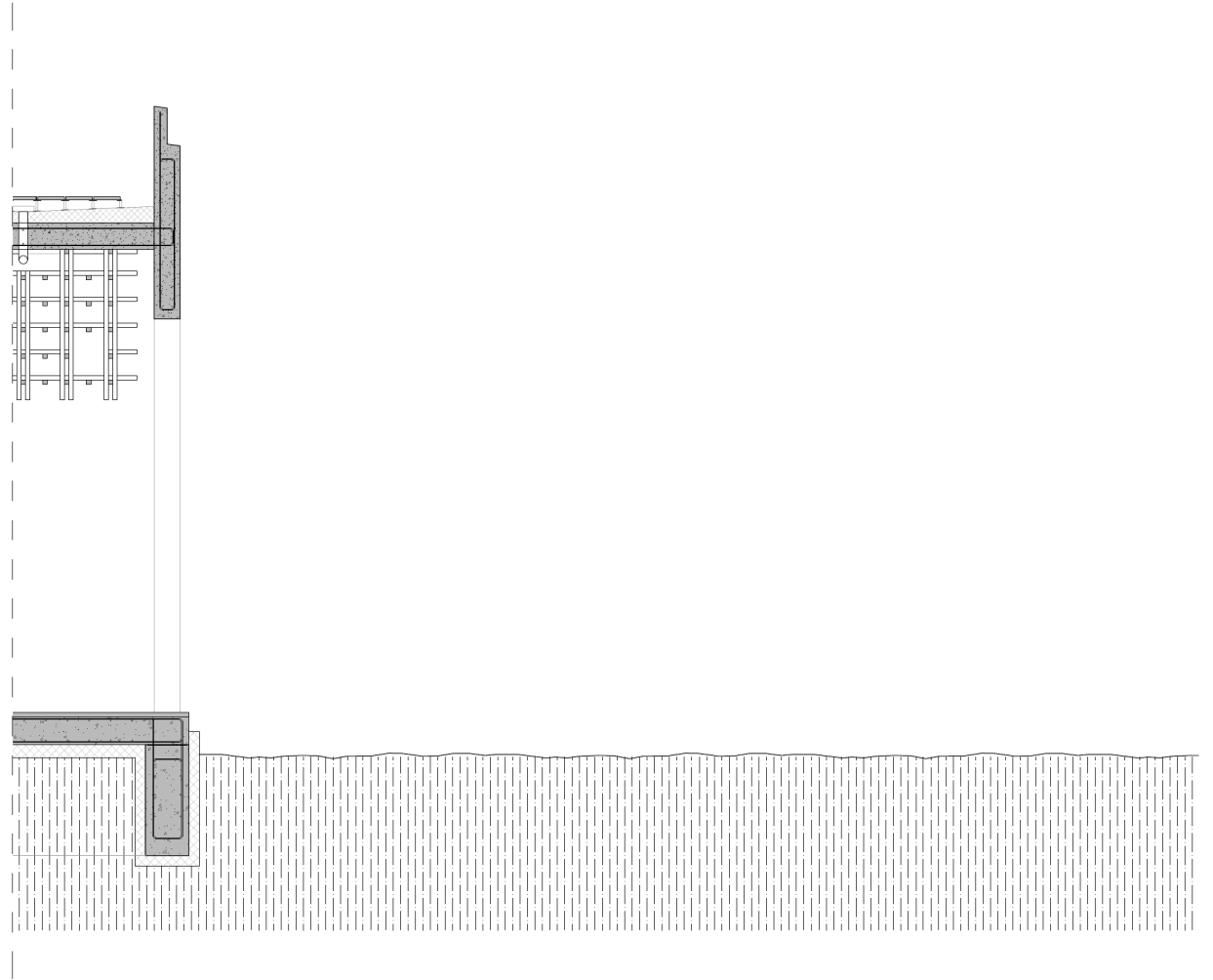


today



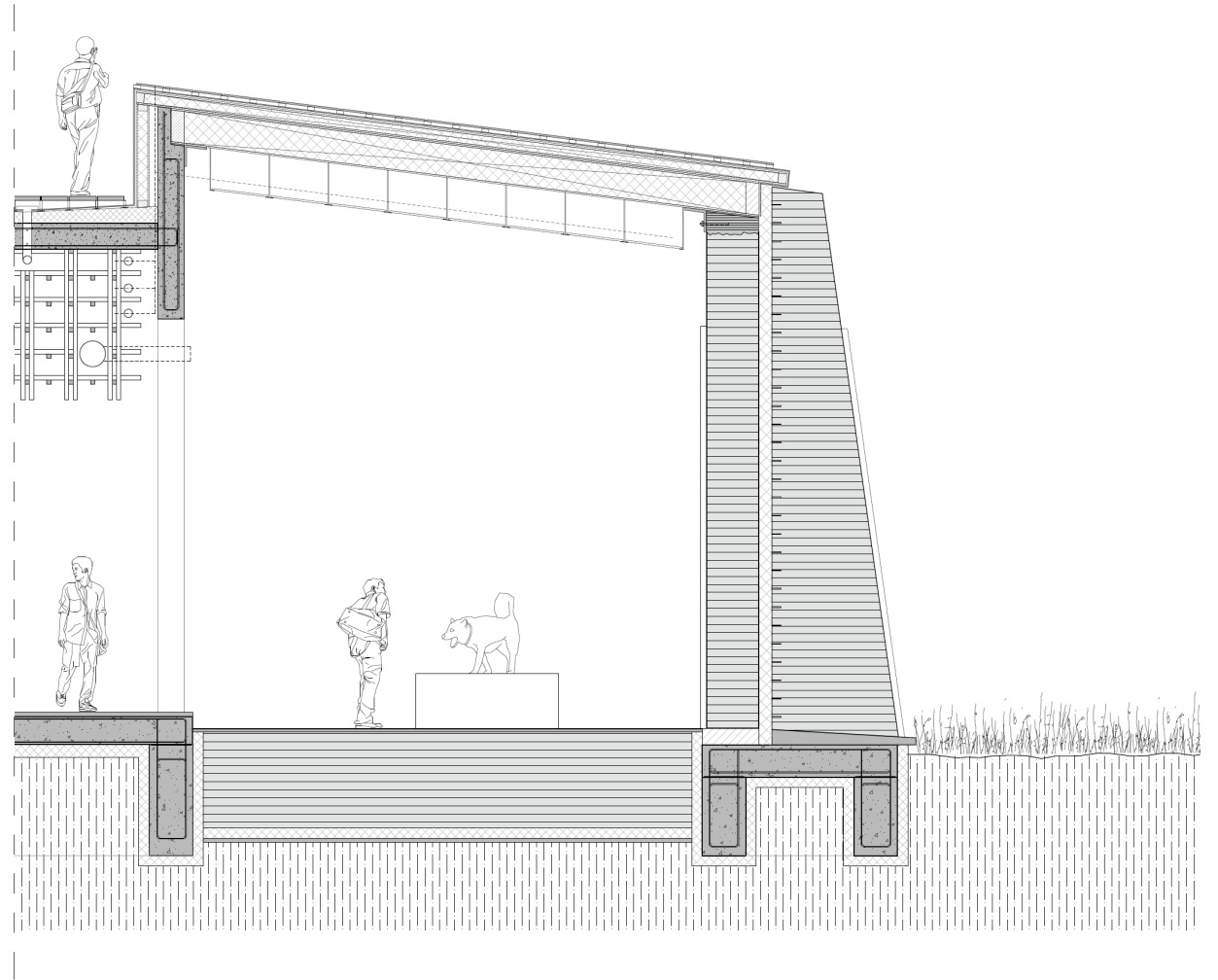


construction



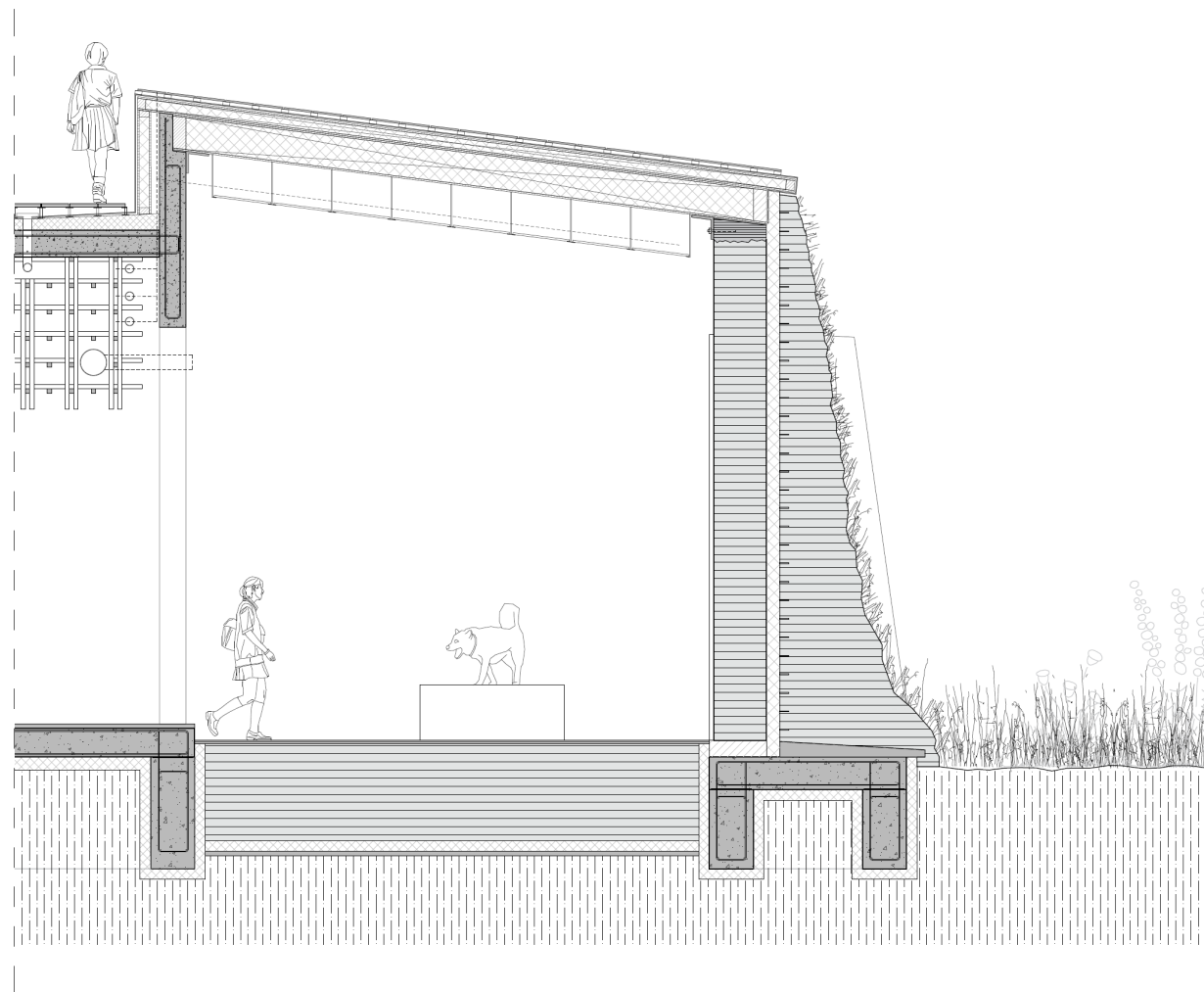


0 years

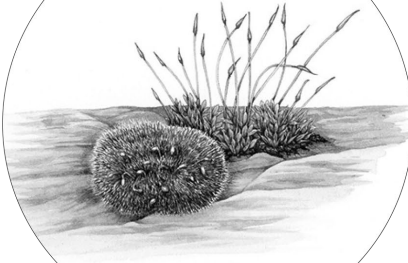




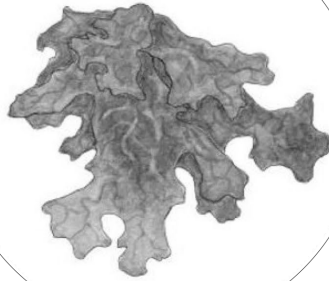
0-60 years



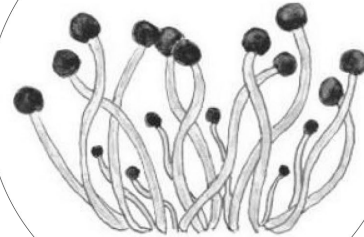
moss



lichen



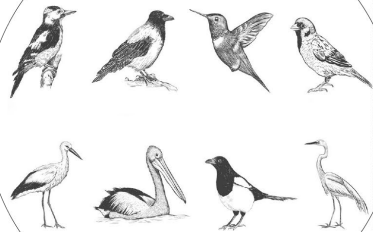
Fungi



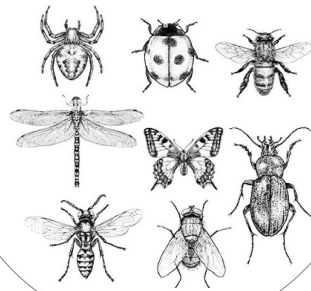
wildflower



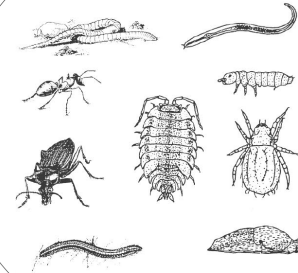
birds



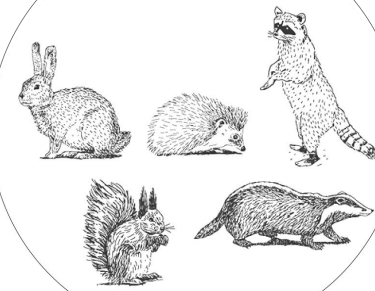
insects



invertebrates

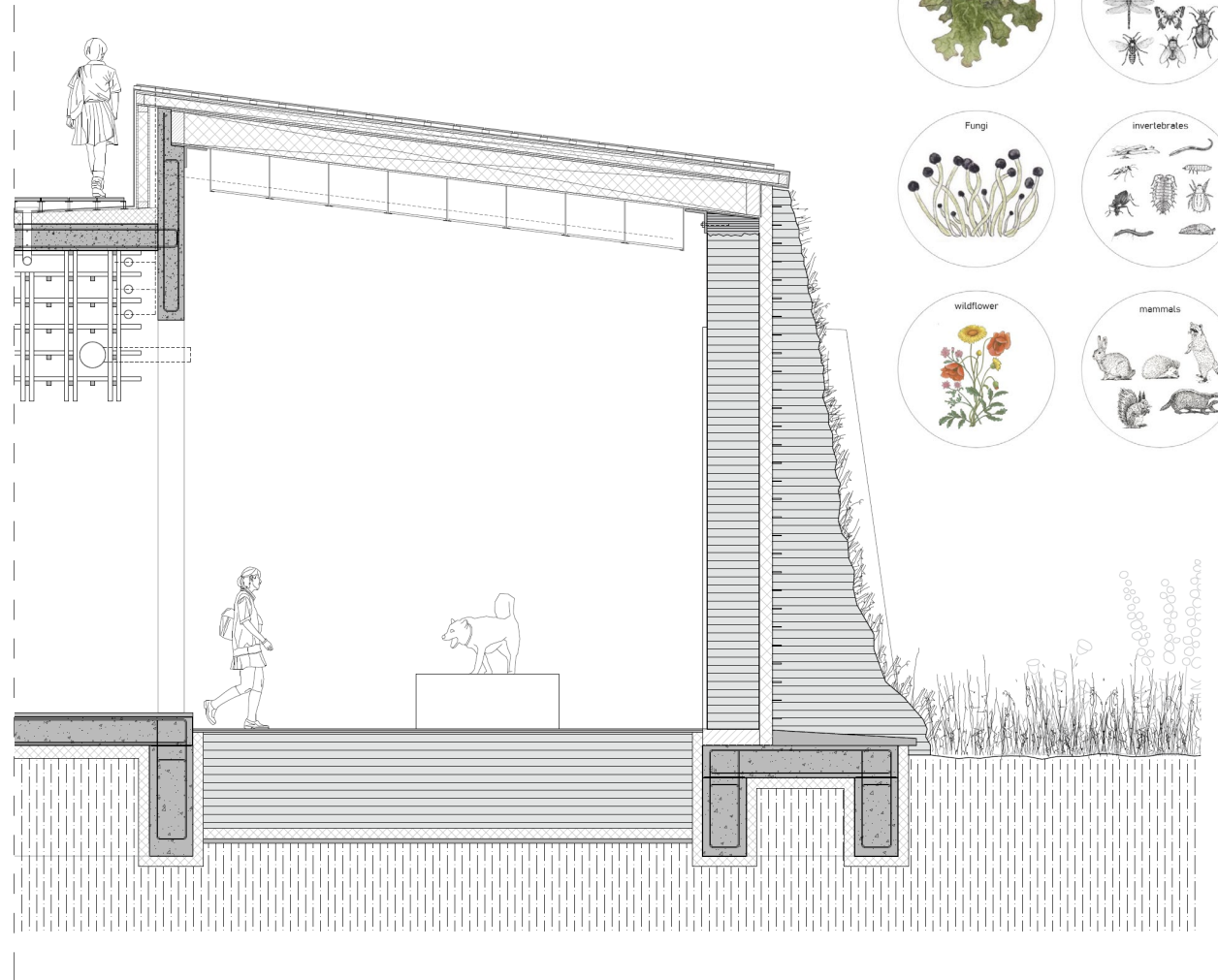


mammals

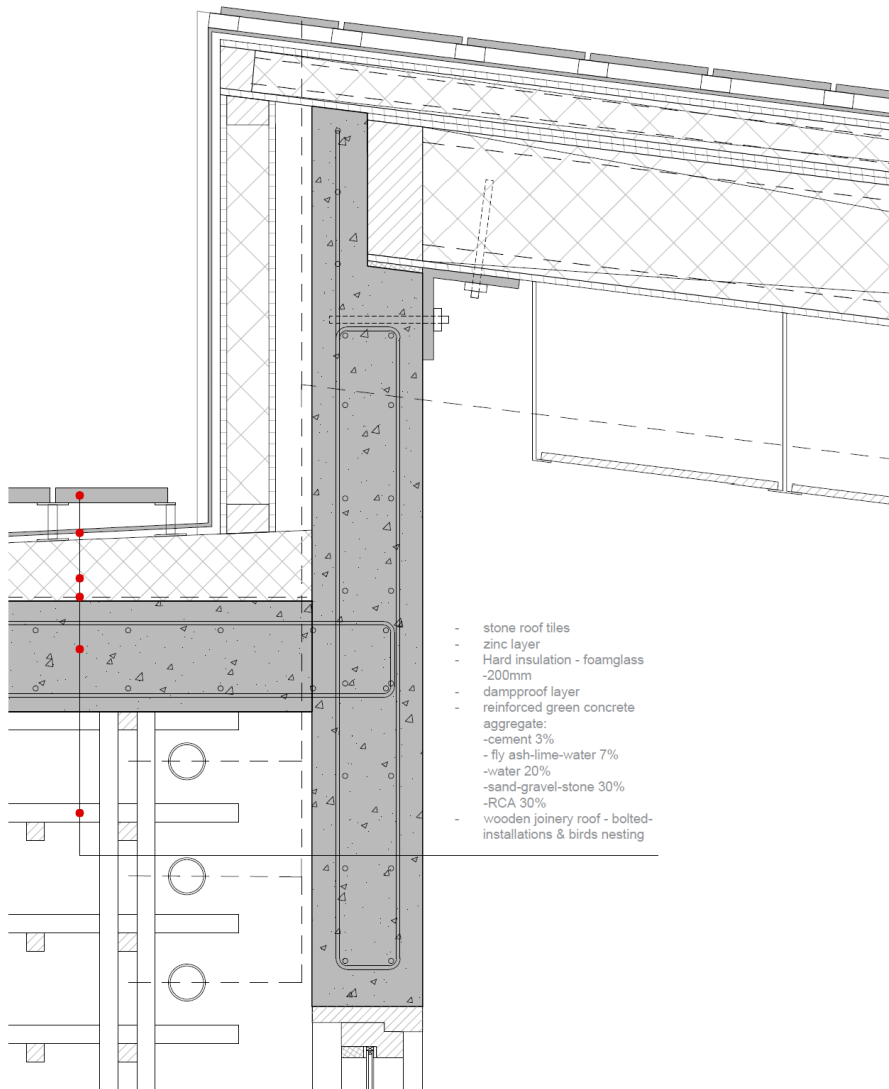




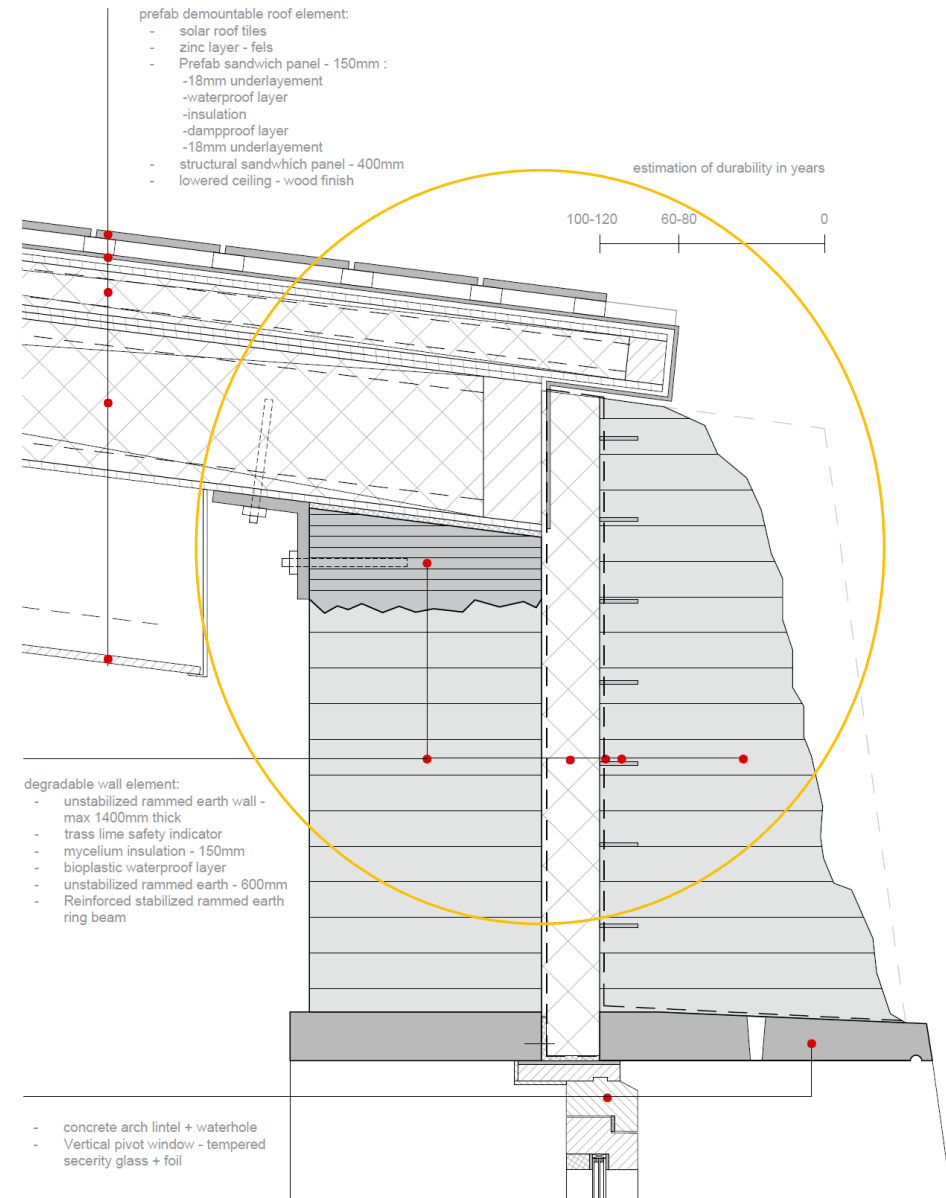
0-60 years

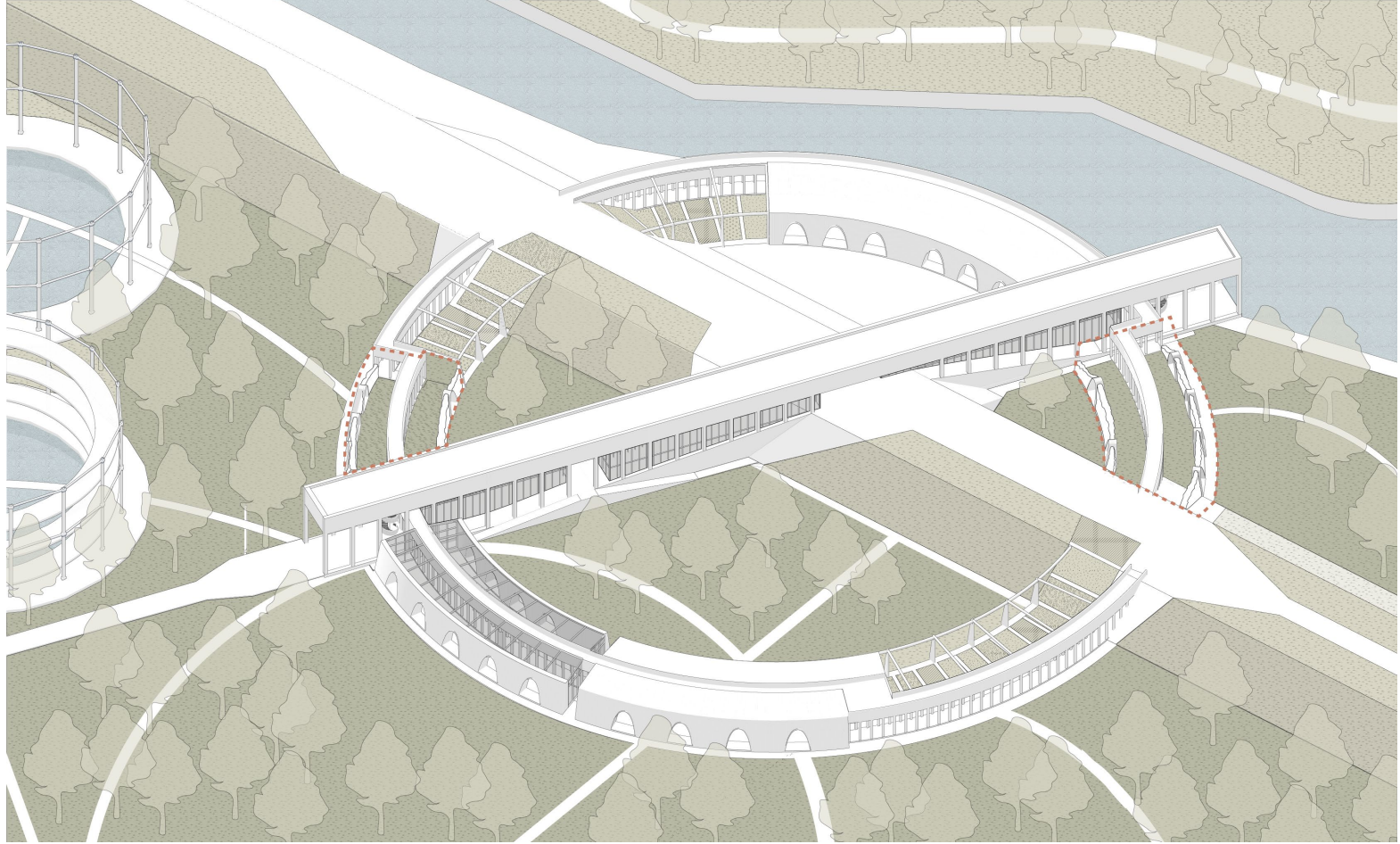


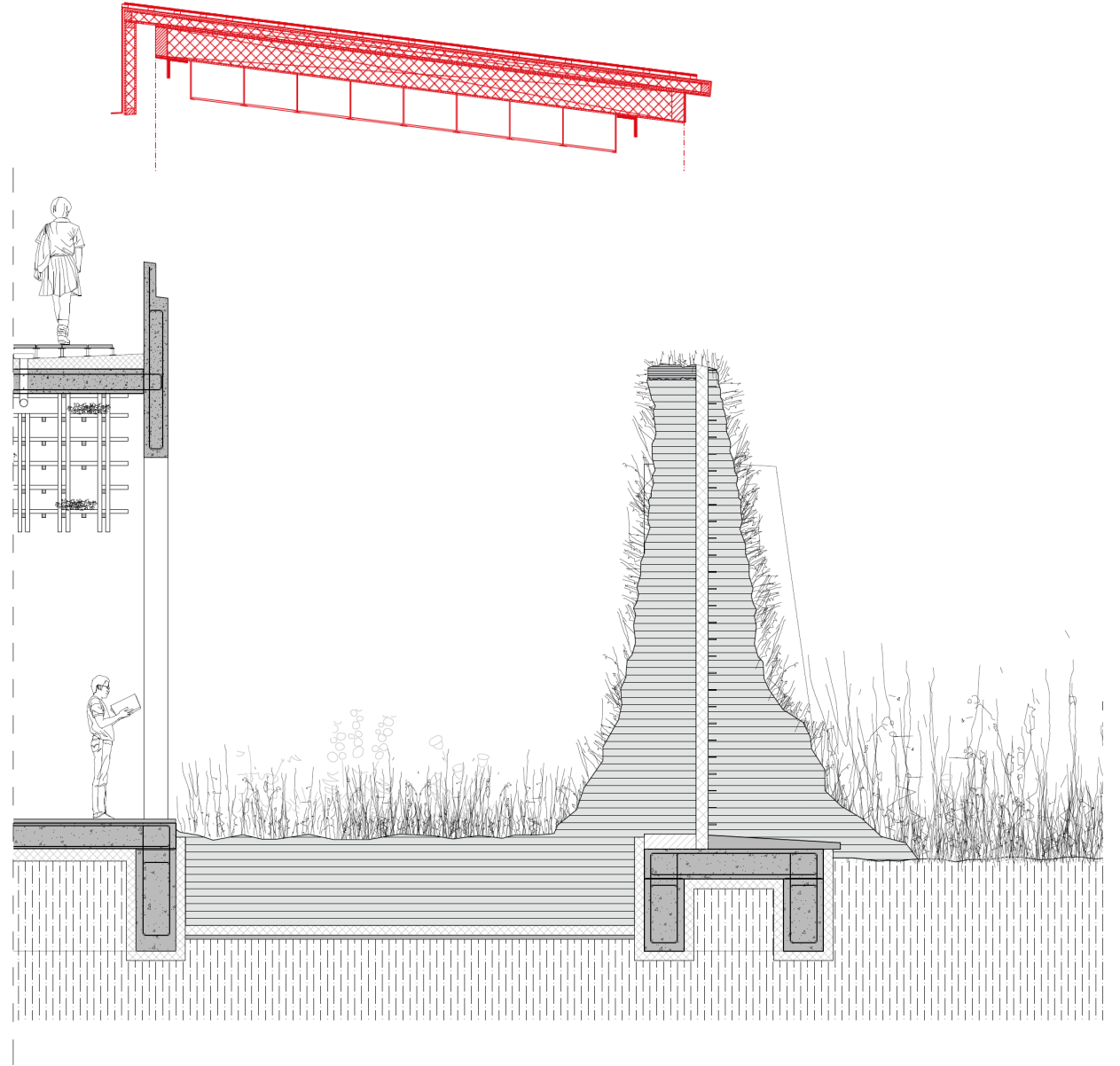
Detail 1
1:10



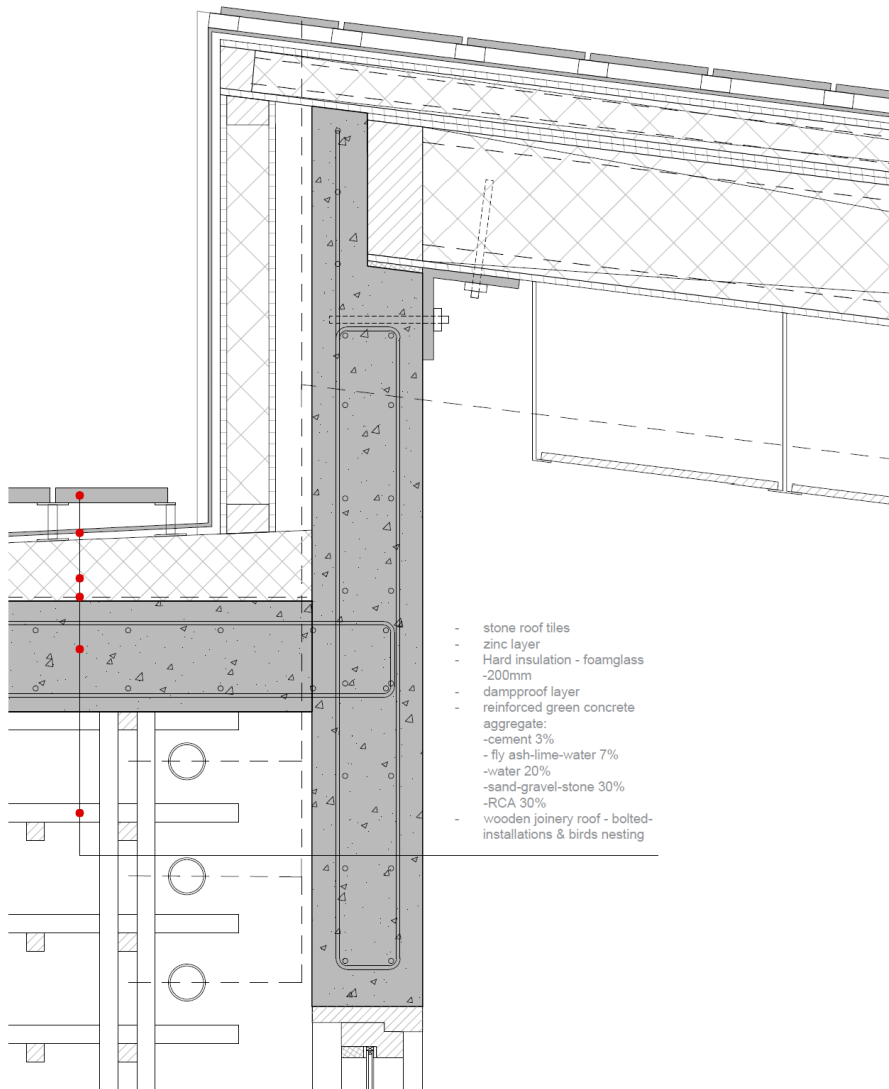
Detail 2
1:10



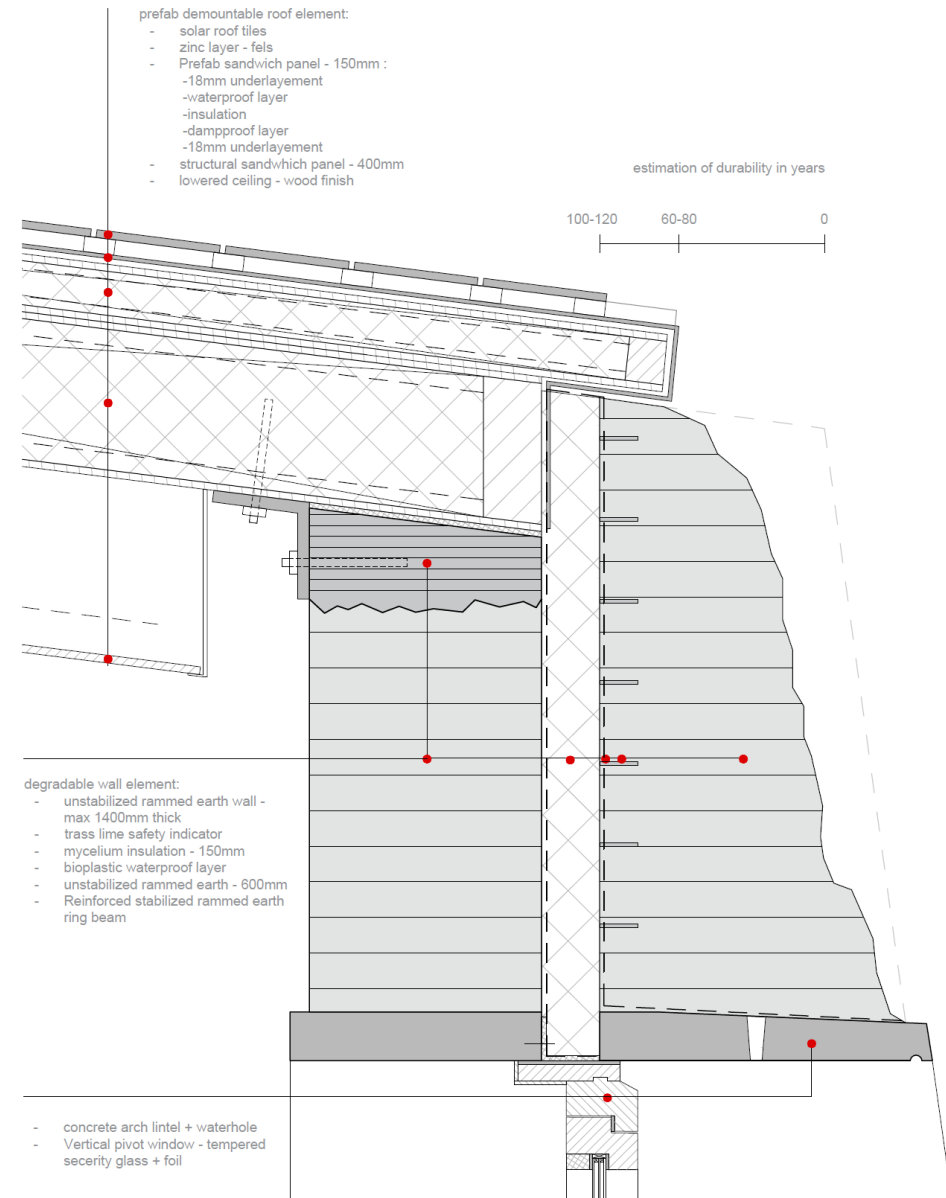




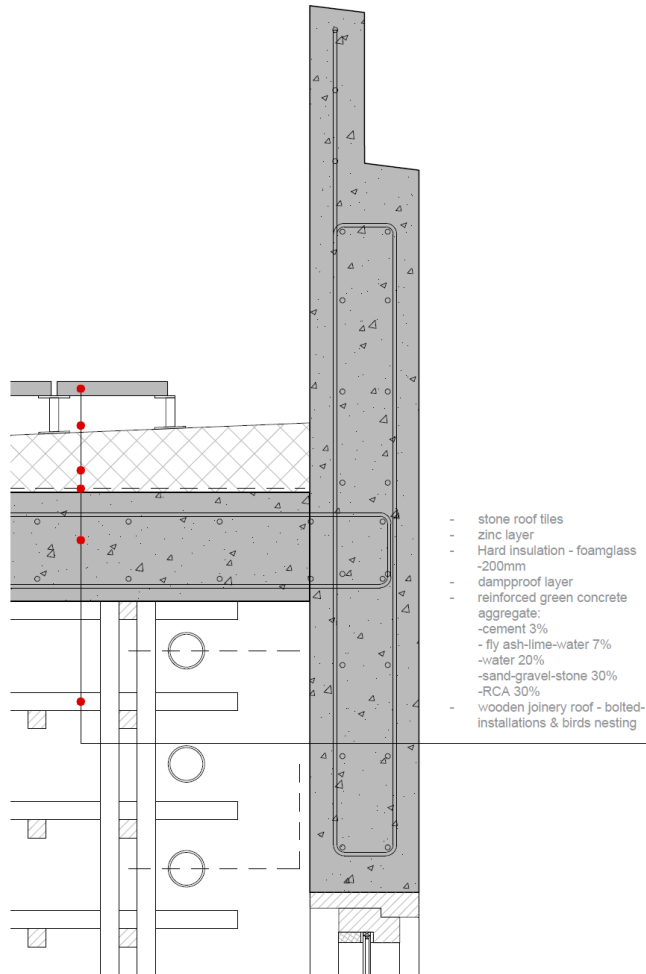
Detail 1
1:10



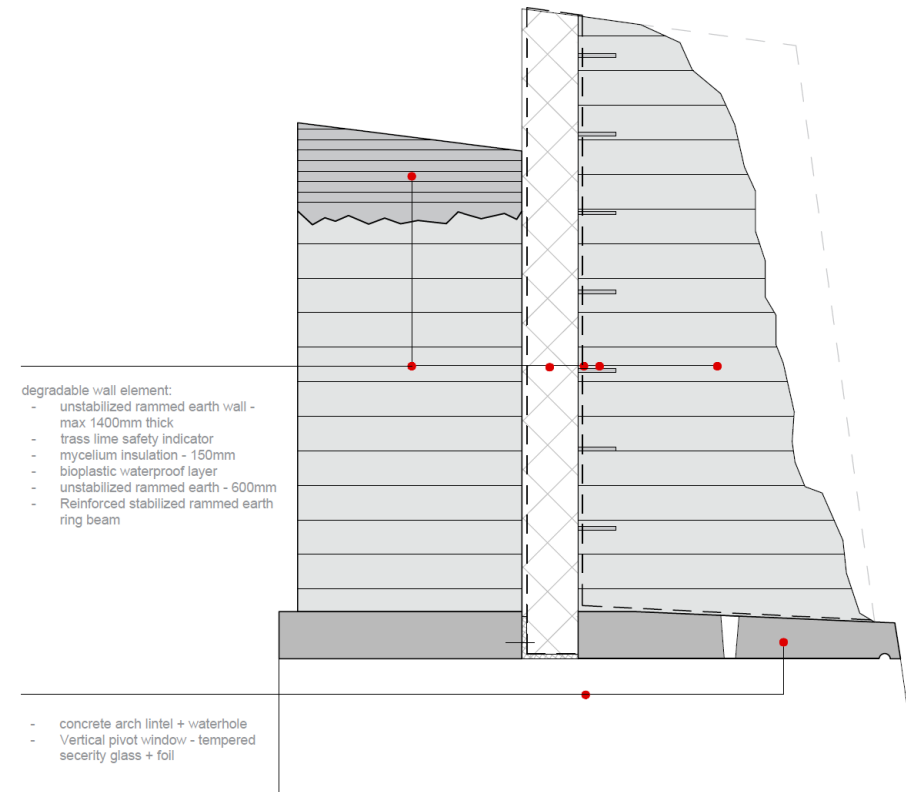
Detail 2
1:10



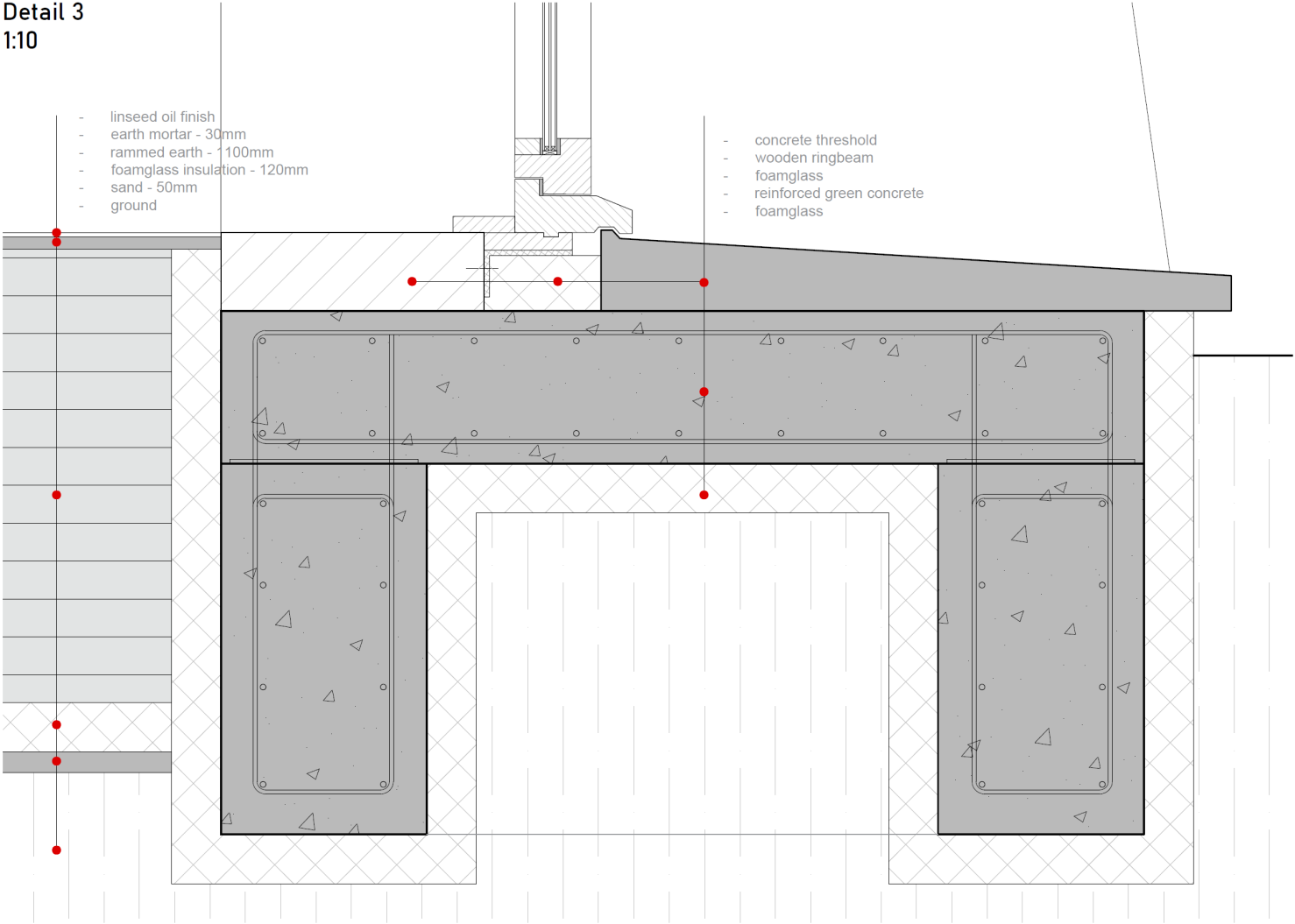
Detail 1
1:10

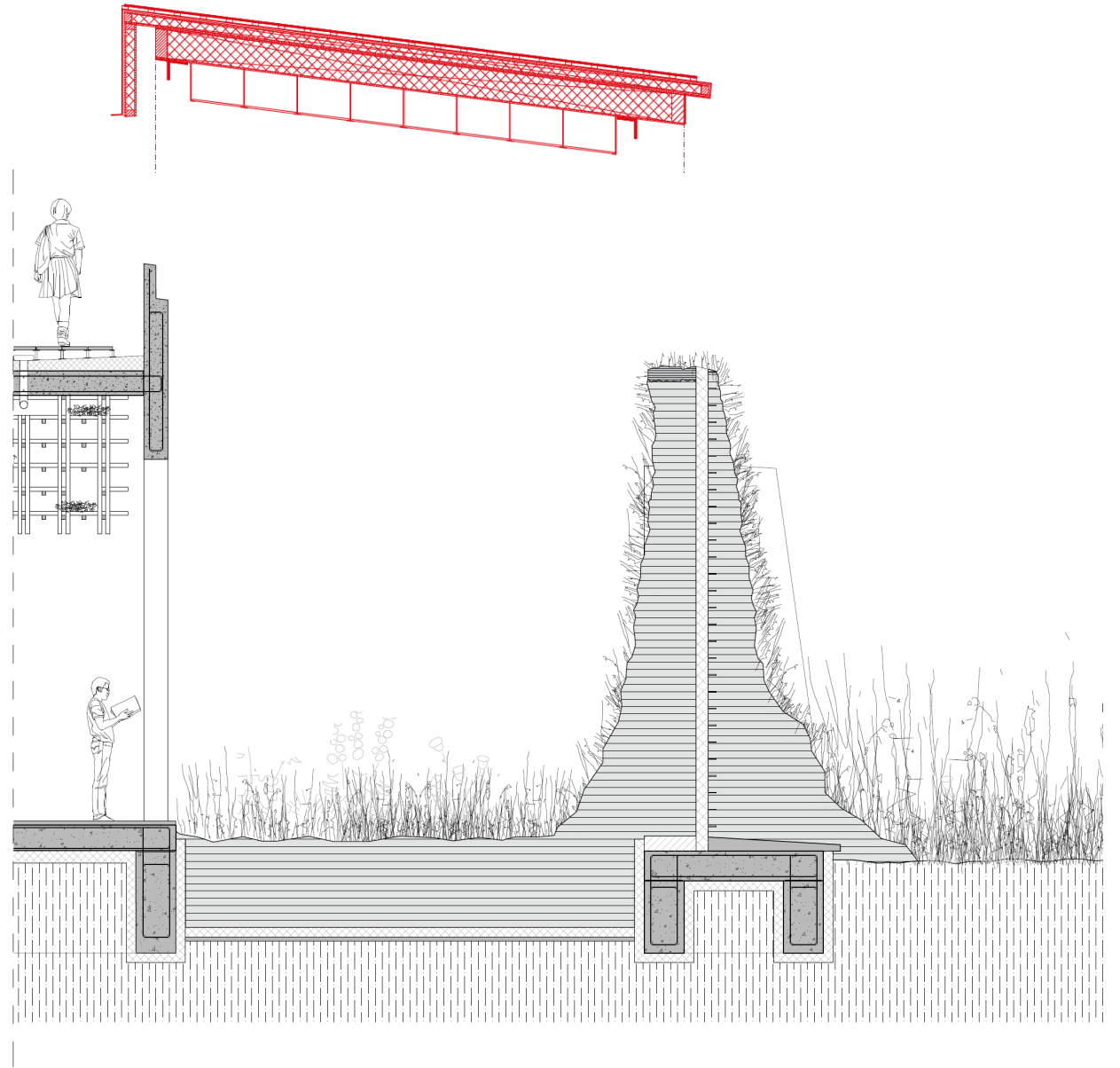


Detail 2
1:10

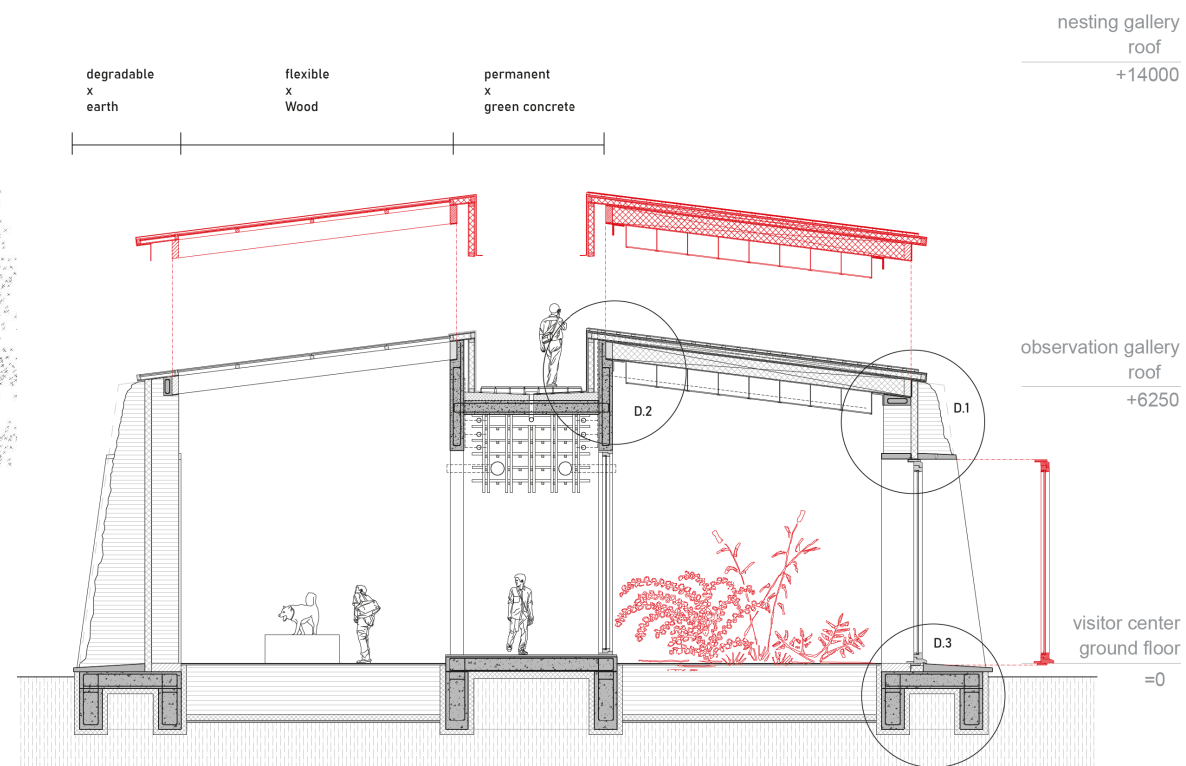


Detail 3
1:10

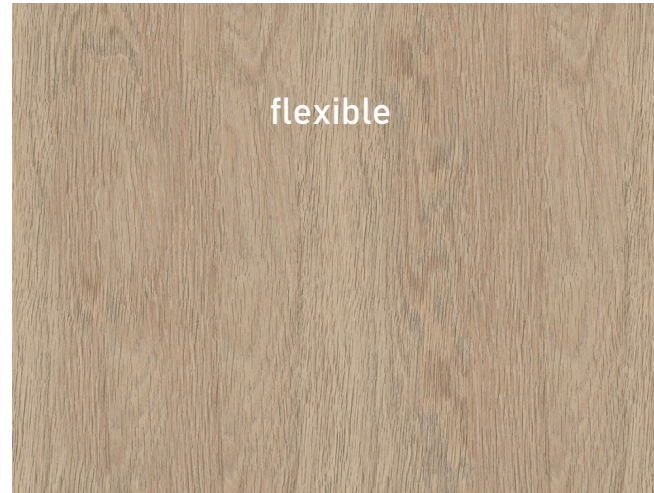




Becoming the Landscape



Materials



Rammed earth

- Dredged sand - 50%
- Lime gravel - 20%
- Clay - 15%
- Silt - 15%

local

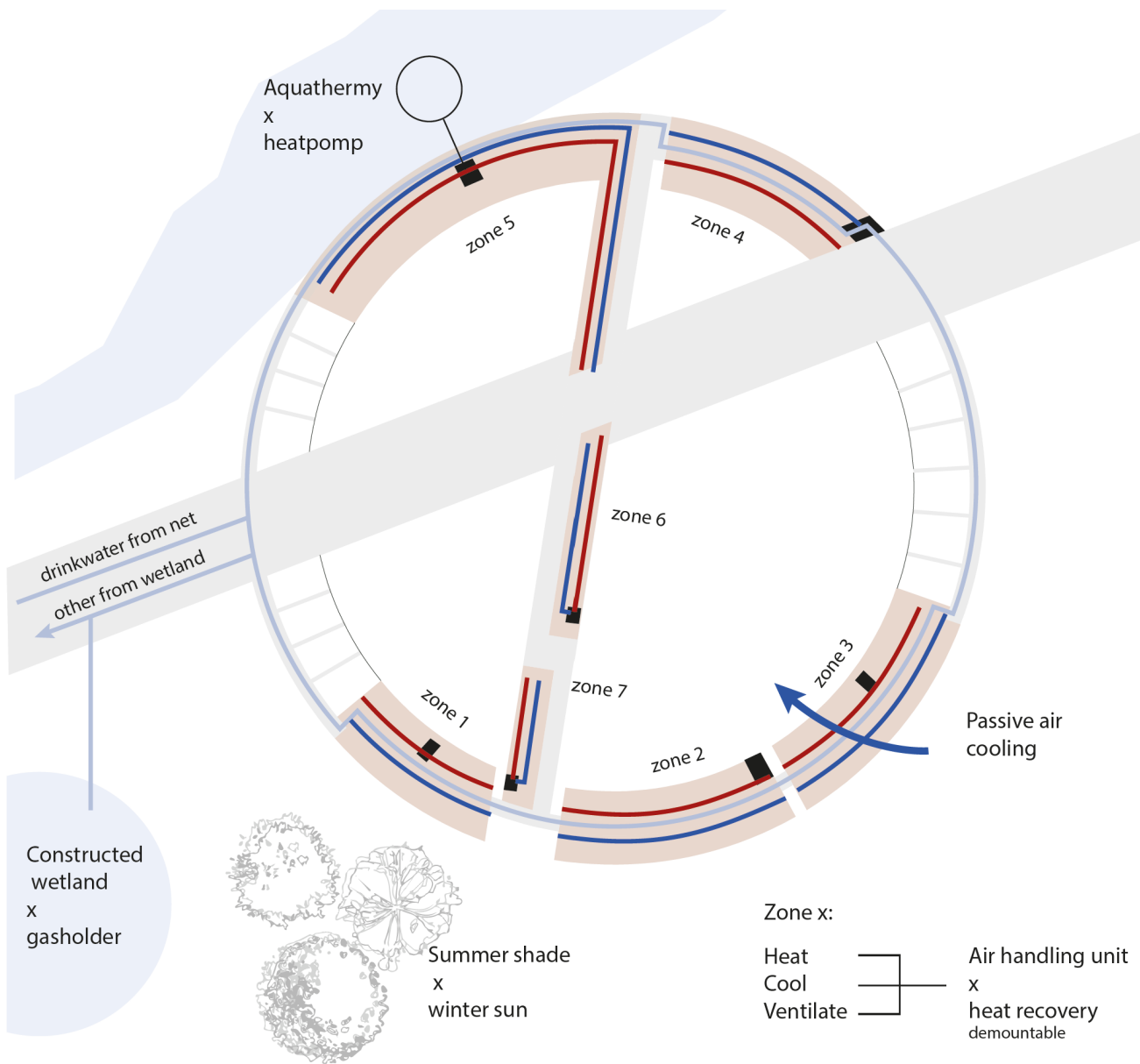
Wood

- Sawn wood

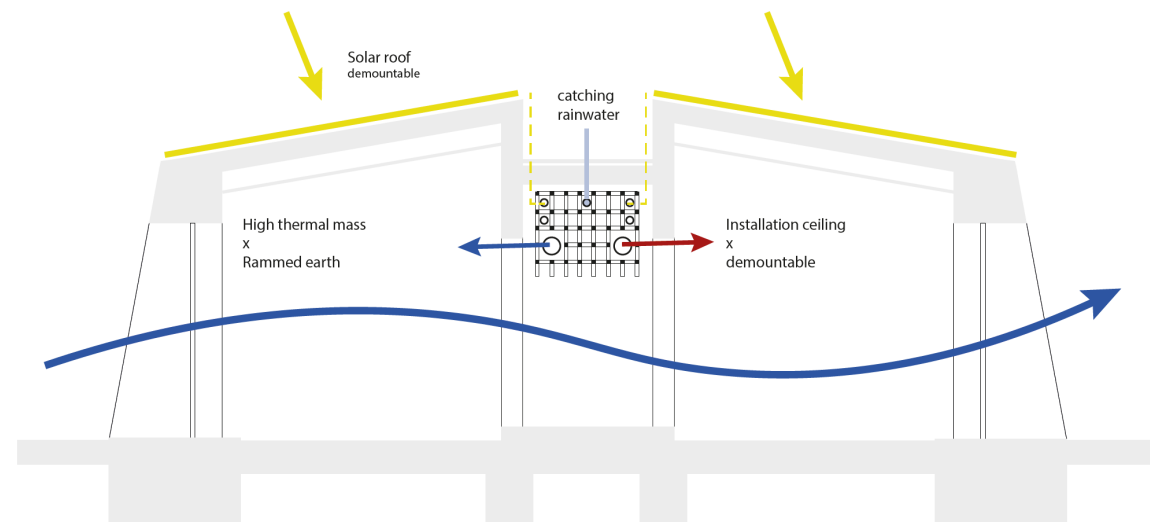
local

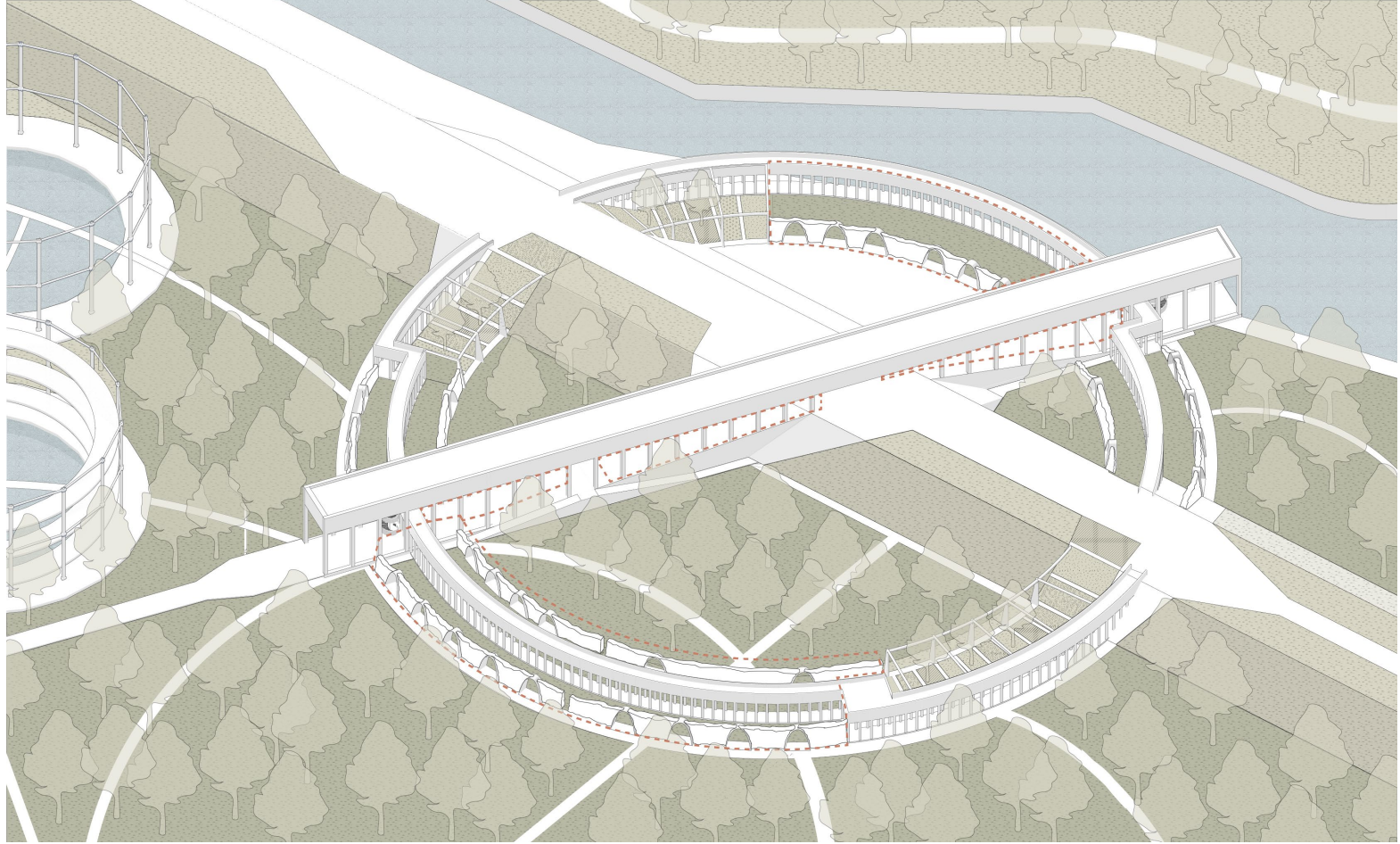
Green concrete

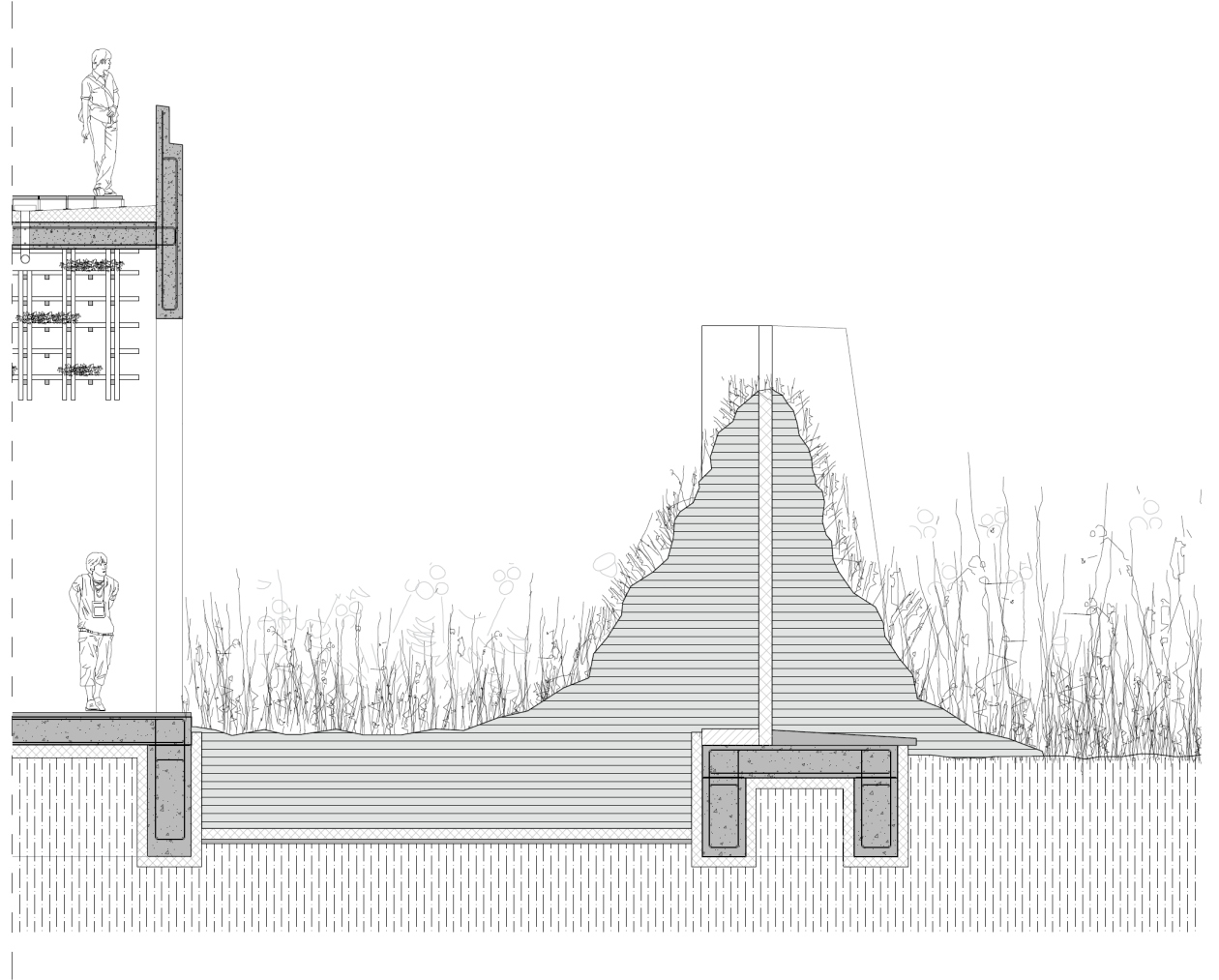
- Cement - 3%
- Fly ash - lime - water - 7% recycle
- Sand - gravel - stone - 35% local
- RCA - 35% recycle
- Water - 20% local



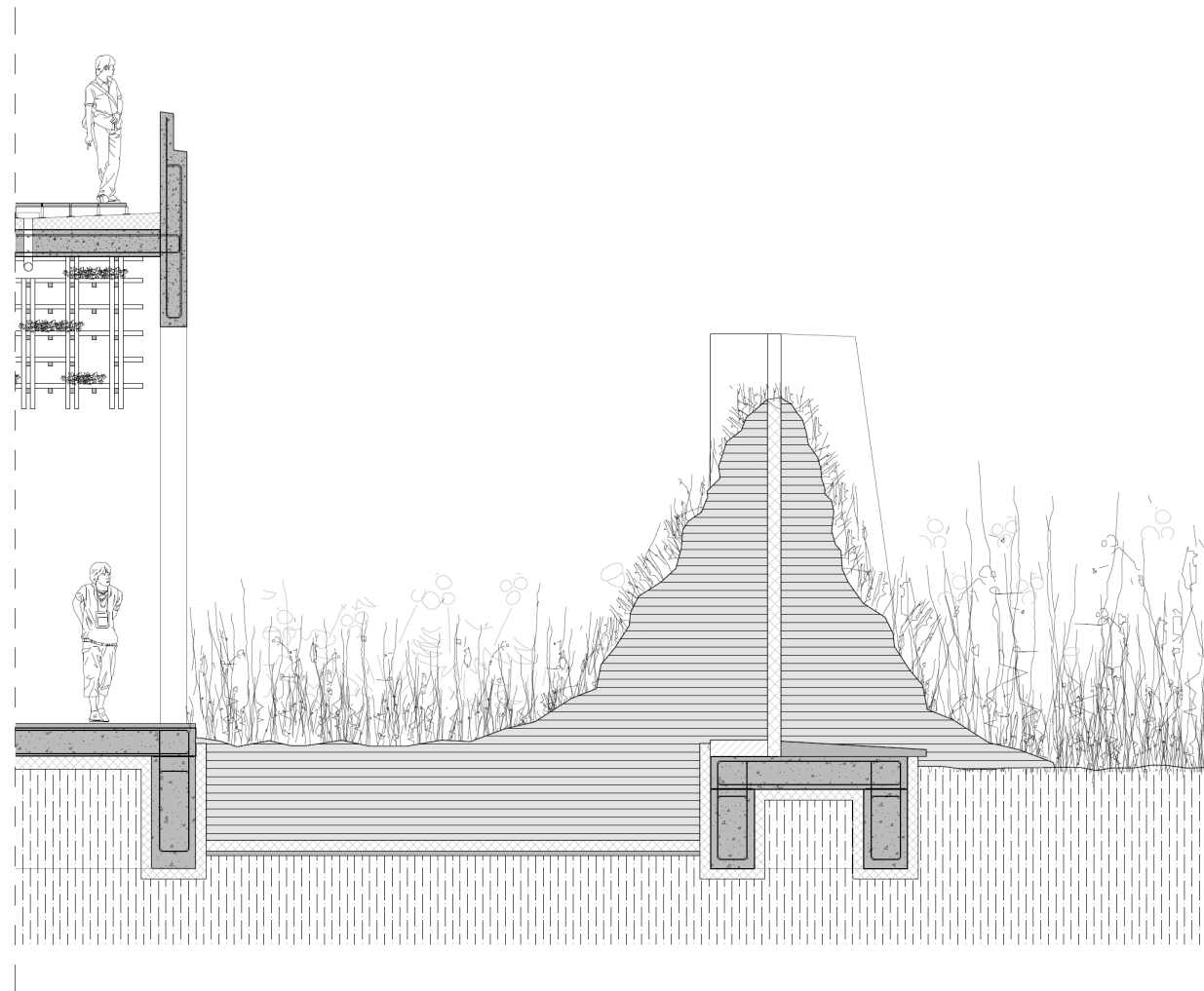
Climate







The end



The end