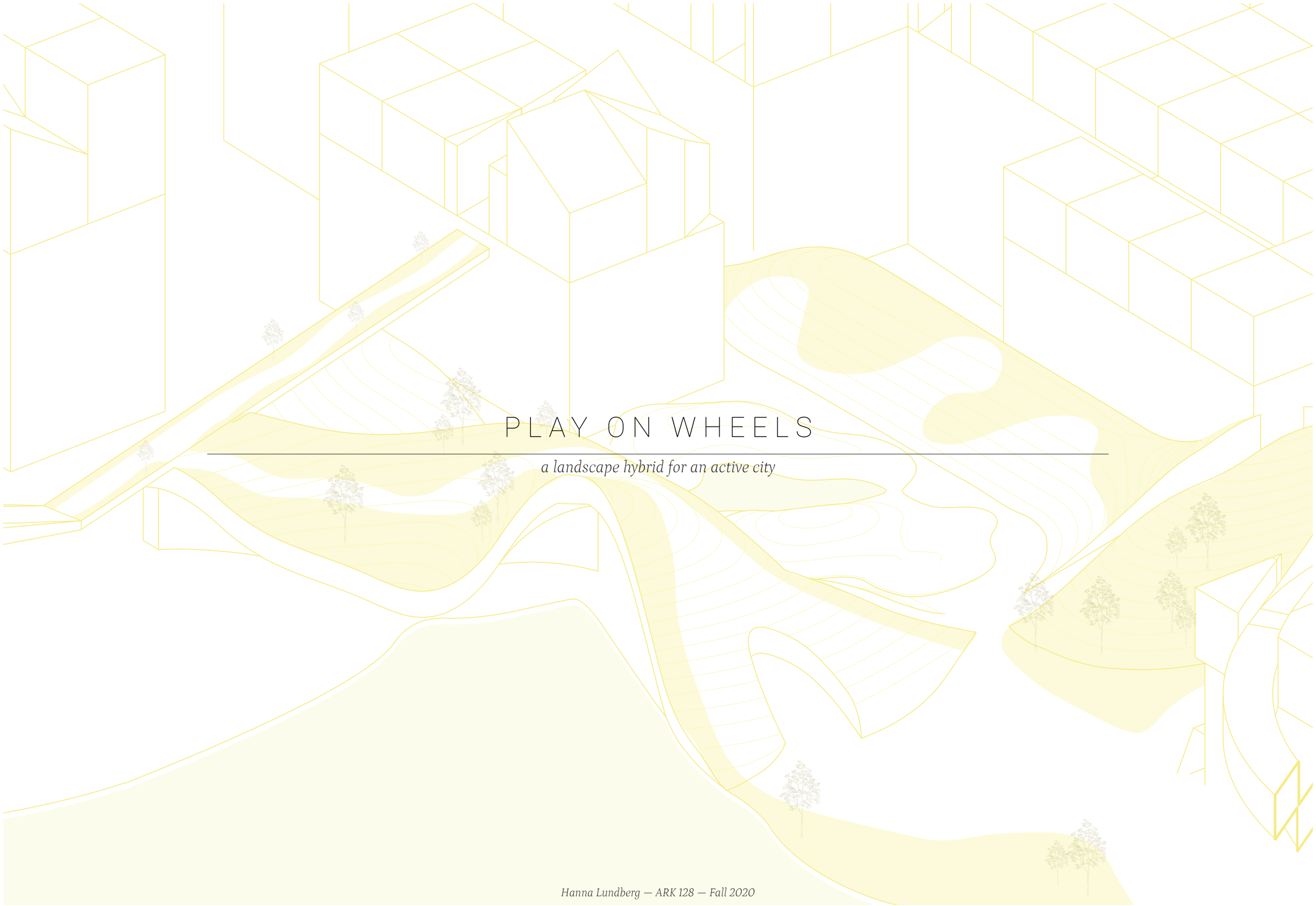


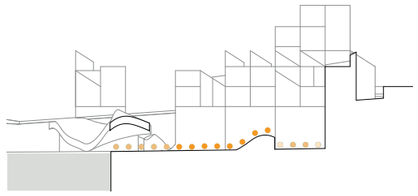
# PLAY ON WHEELS

*a landscape hybrid for an active city*

*Hanna Lundberg — ARK 128 — Fall 2020*

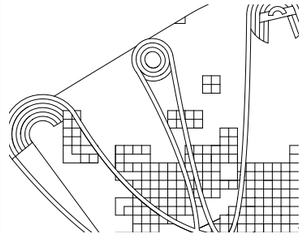
# TABLE OF CONTENTS

*concept development*

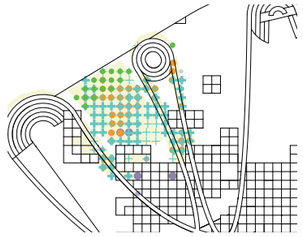


*programme analysis*

*(multiple iterations)*

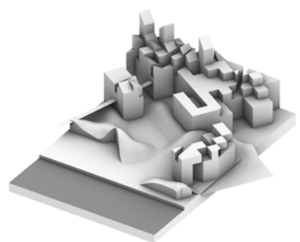


*boundary negotiations*



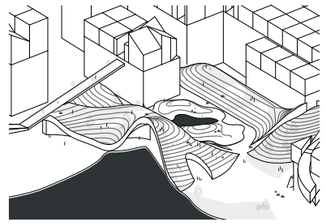
*actant analysis*
*SWOT*

*generating volume*
*(study model and rhino)*



*contextualizing volume*

*boundary negotiations*



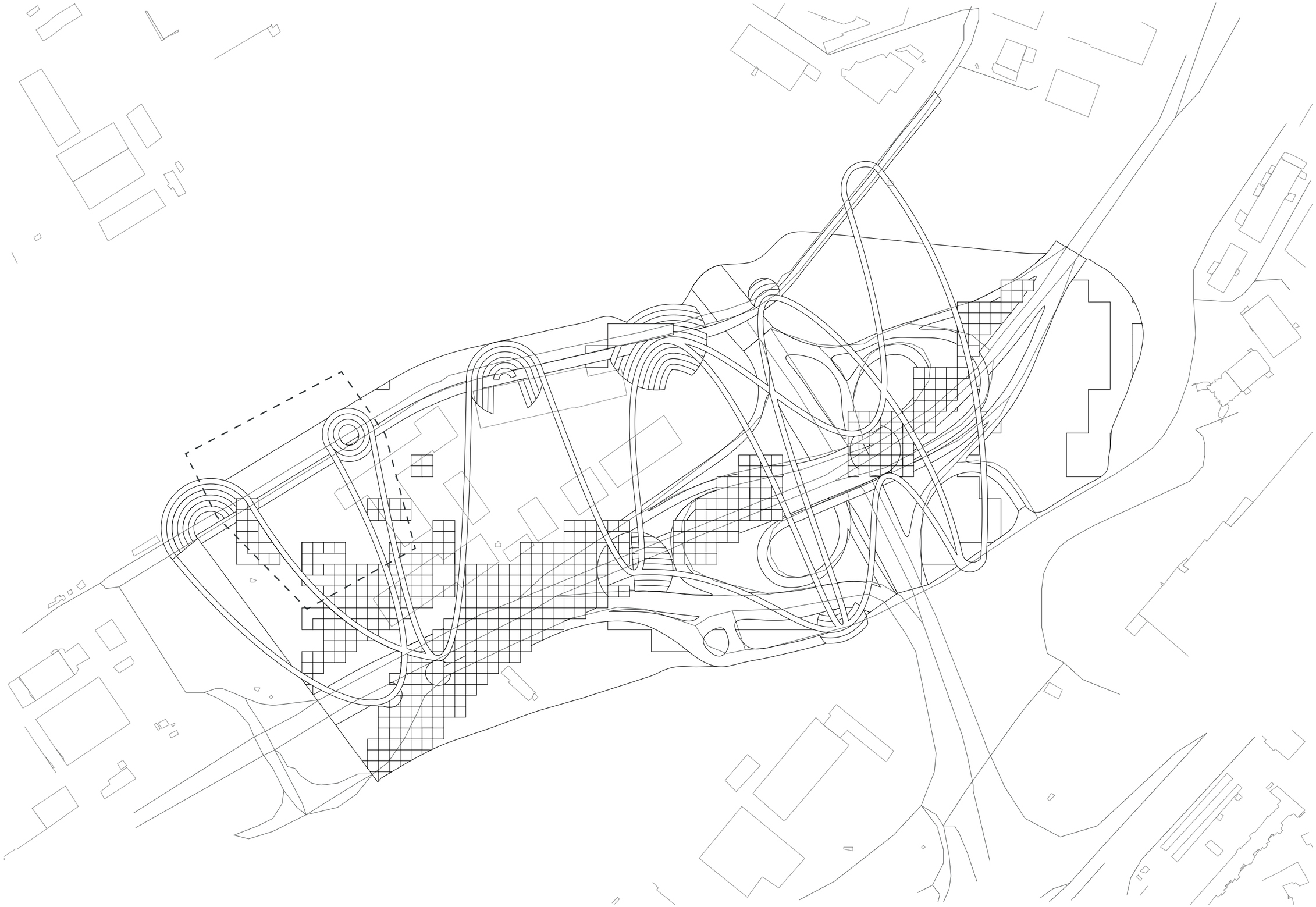
*design proposal*

*actant analysis*

EVOLUTIONARY TREE

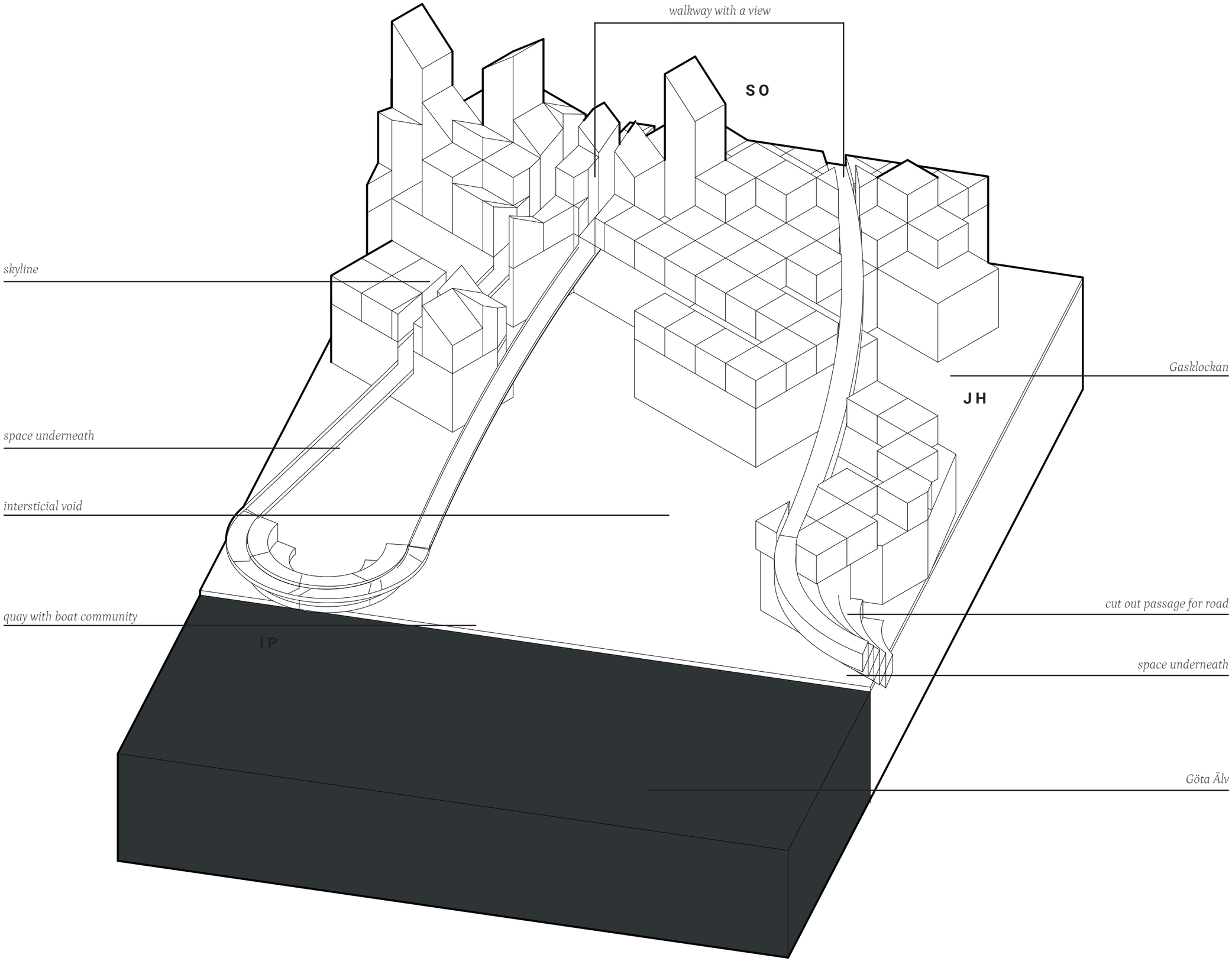
# SCOPE

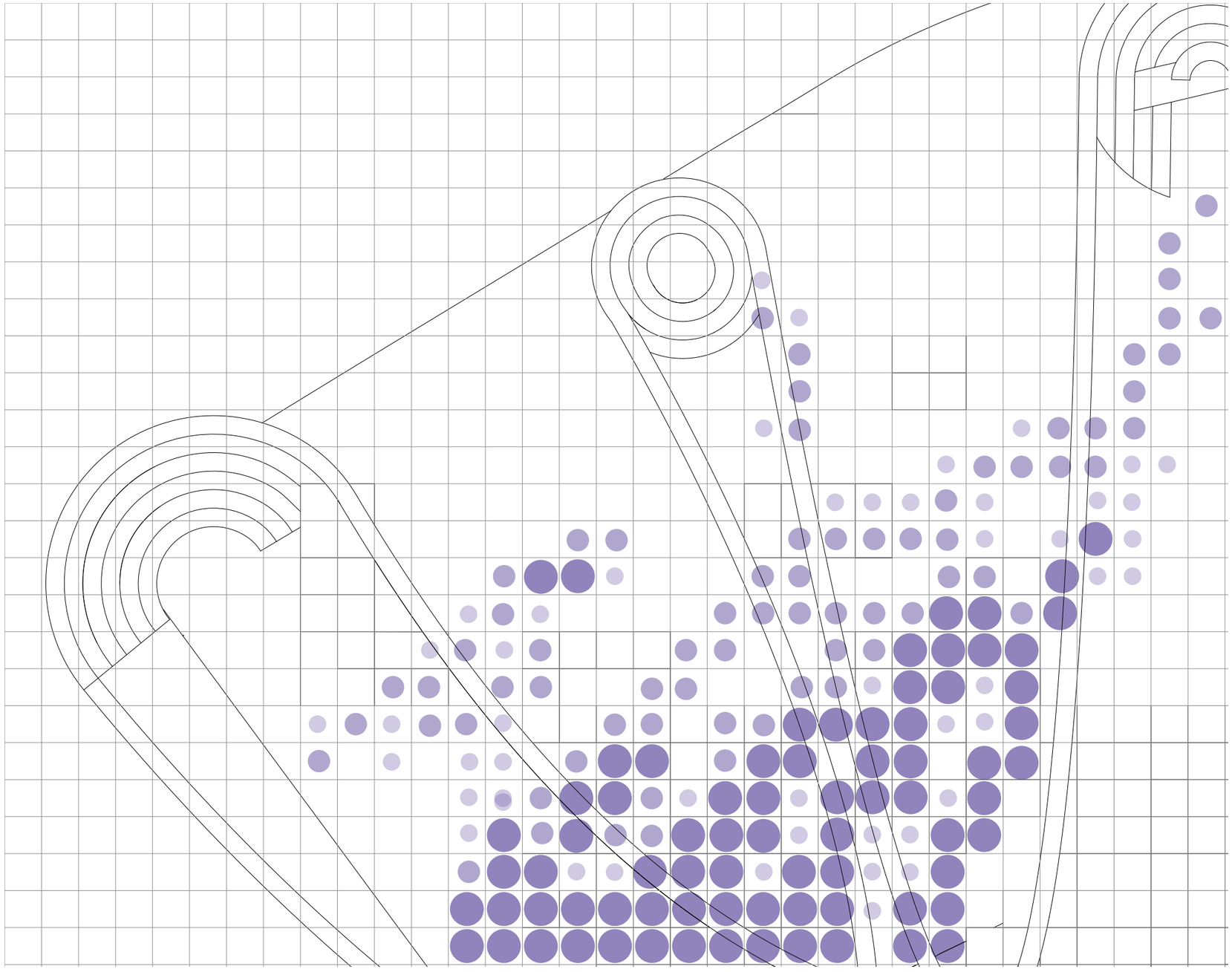
## UNDERSTANDING THE SITE



PROJECT SITE PLACEMENT

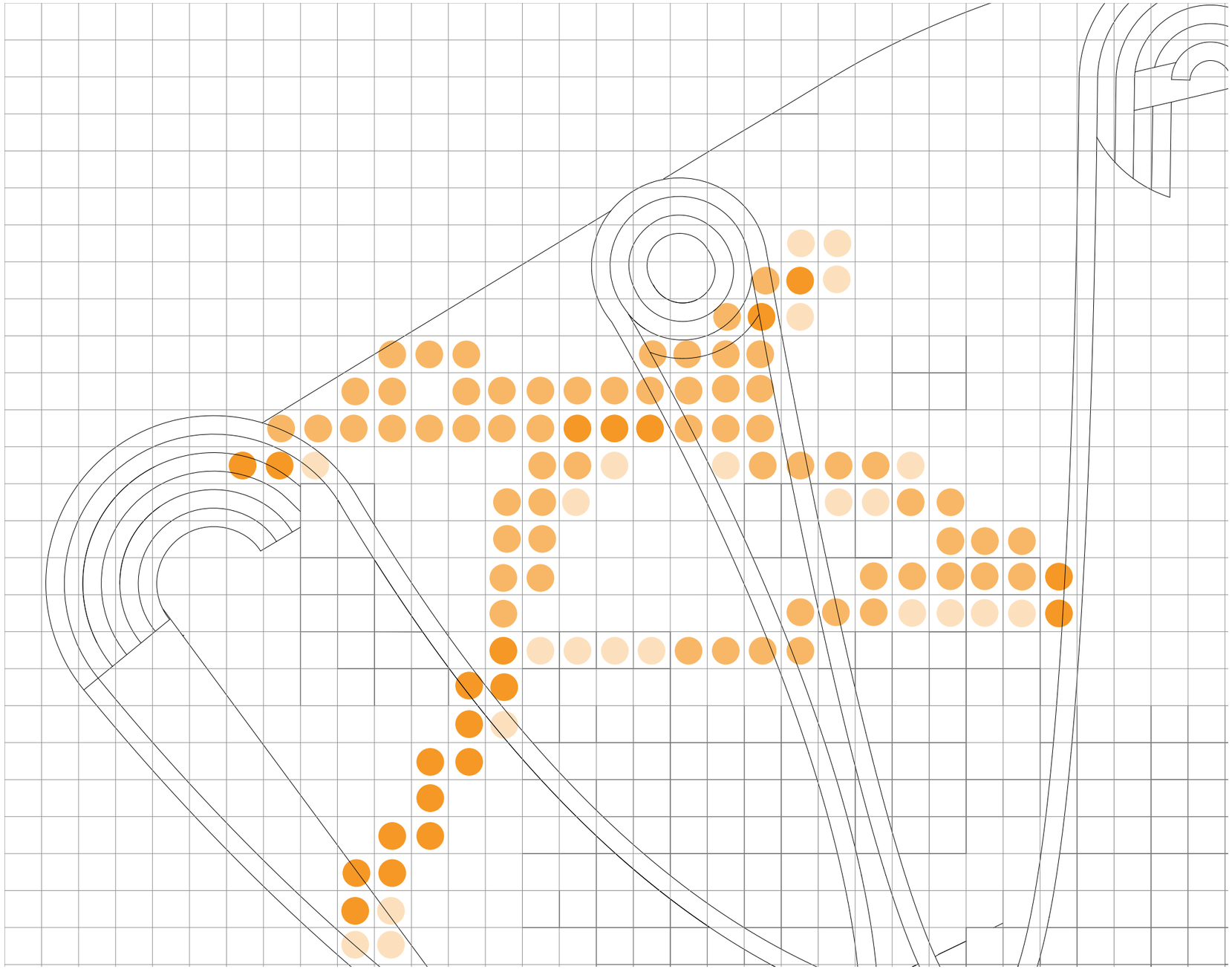
1:3000 (A3)


walkway with a view
SO
skyline
Gasklockan
JH
space underneath
intersticial void
quay with boat community
IP
cut out passage for road
space underneath
Göta Älv



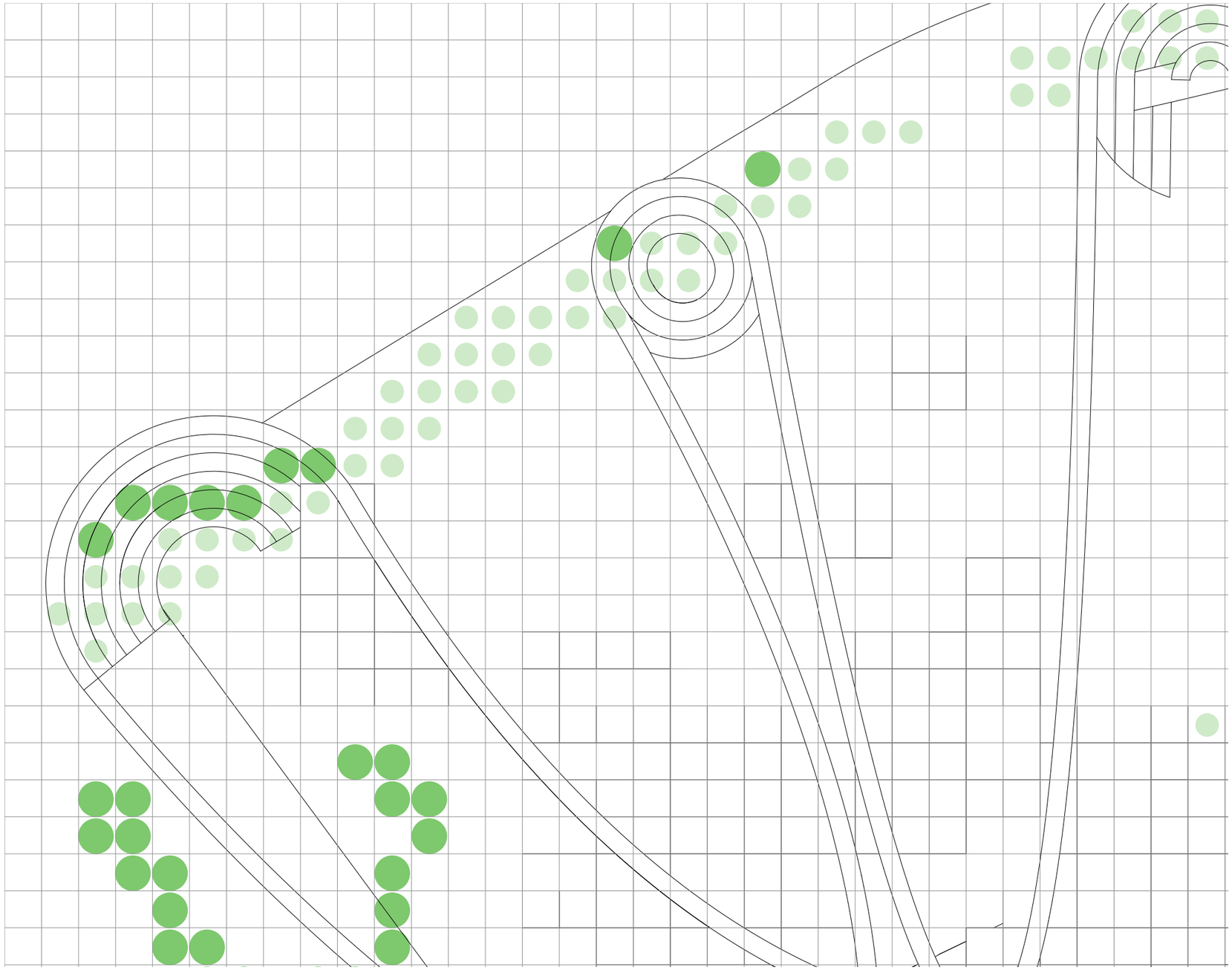
WIND FLOW

most ⟶ least



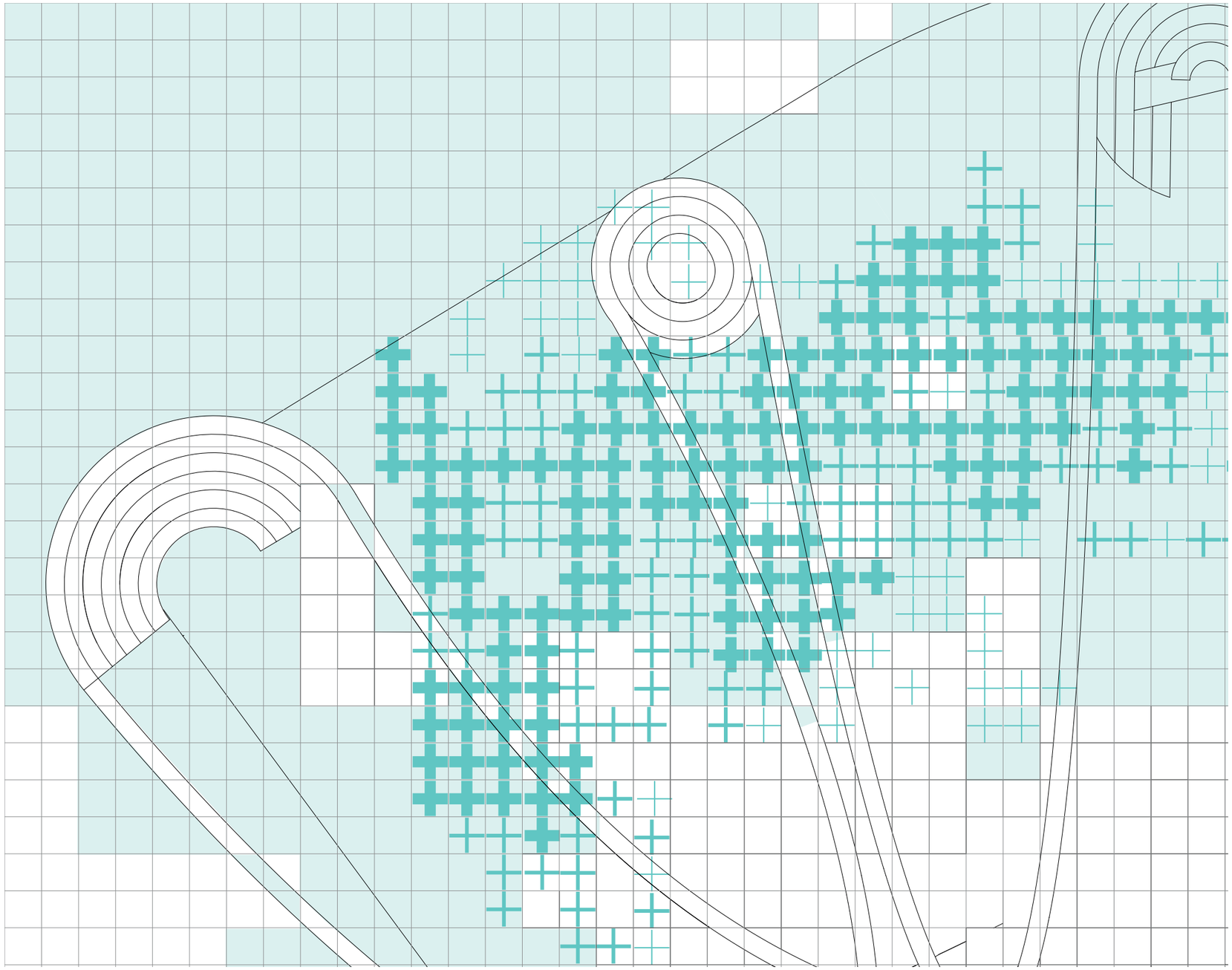
PEDESTRIAN MOBILITY

most → least



GREENERY

*trees* *bushes* *grass*

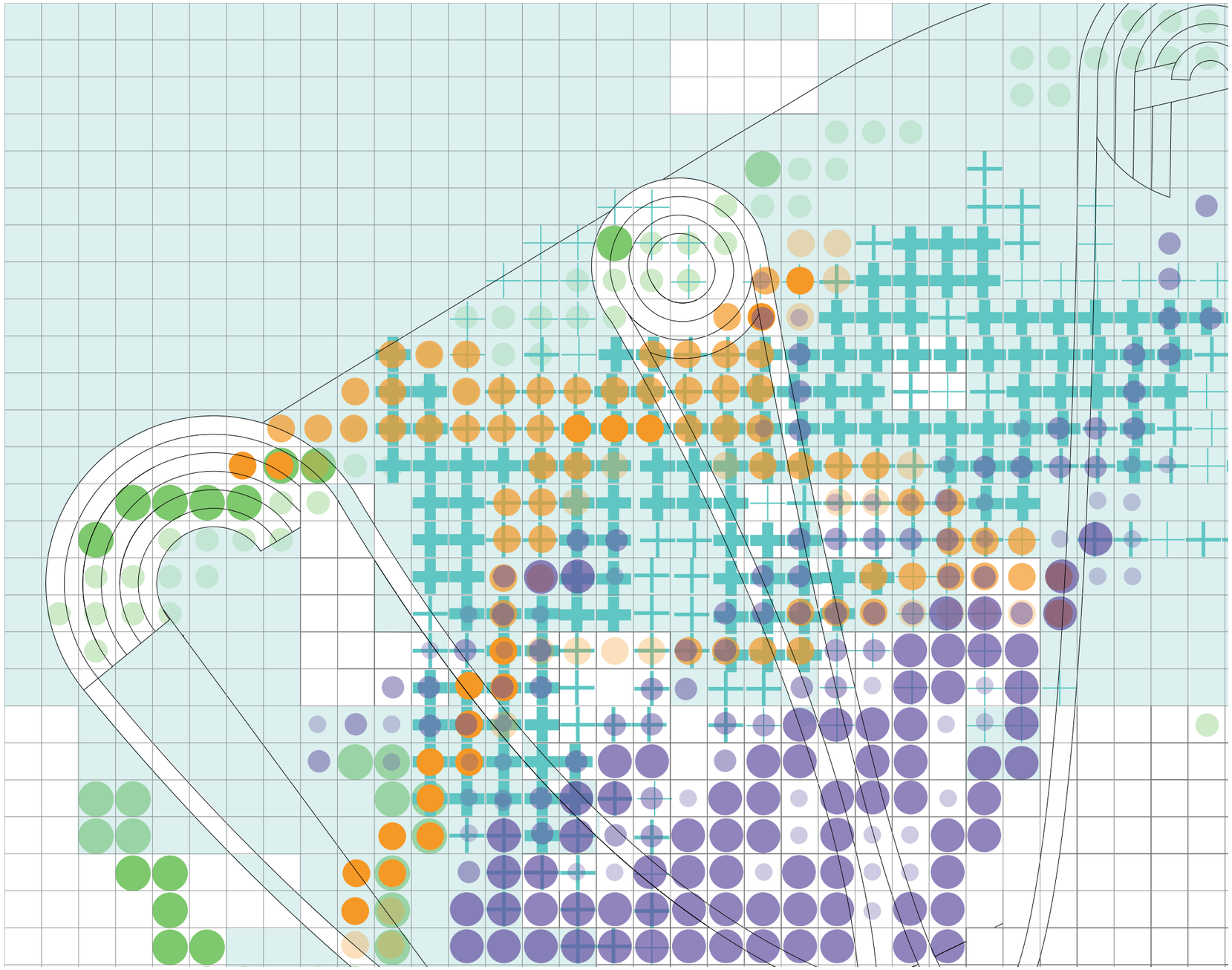


WATER BEHAVIOR

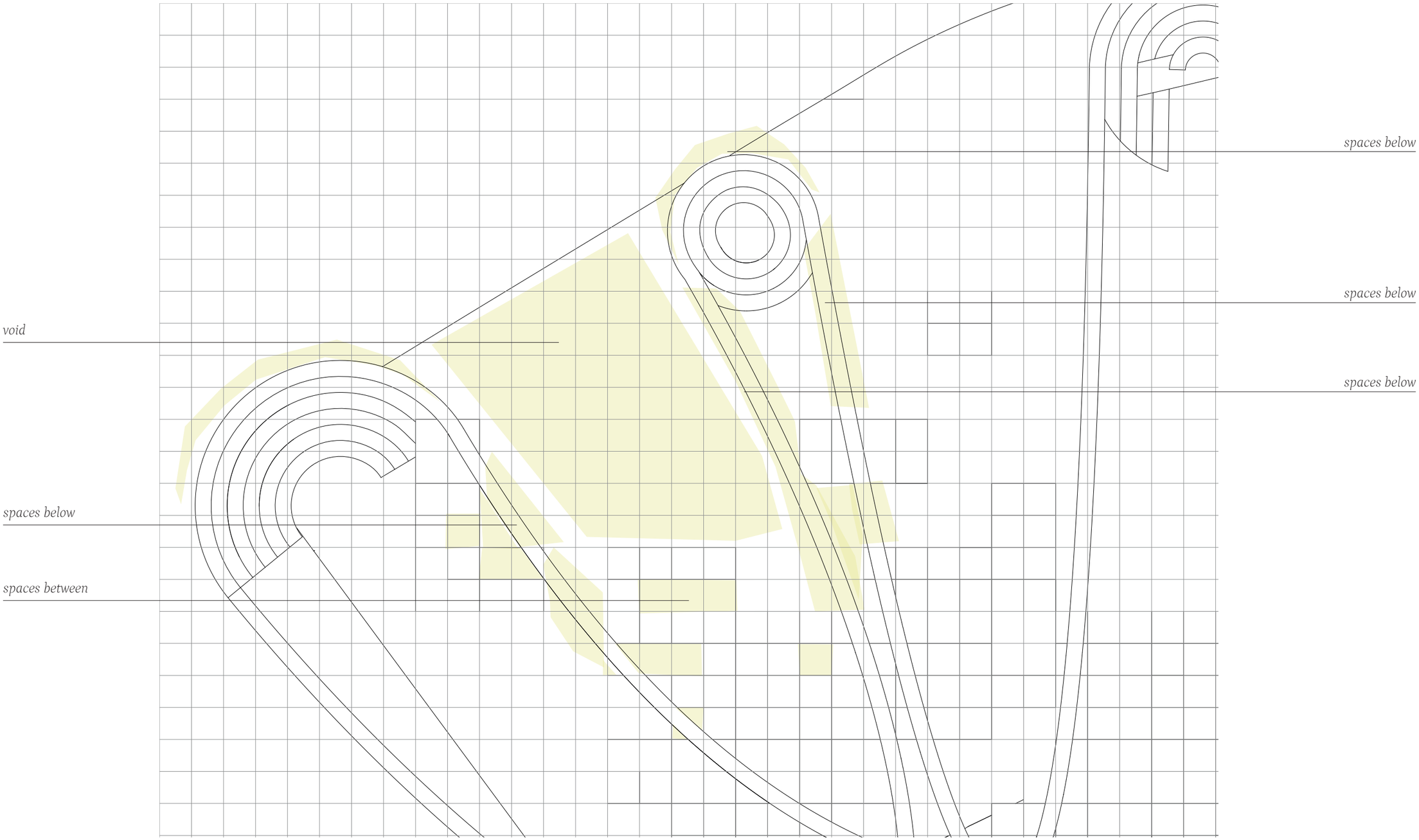
*spread of flooding*

*water run-off*

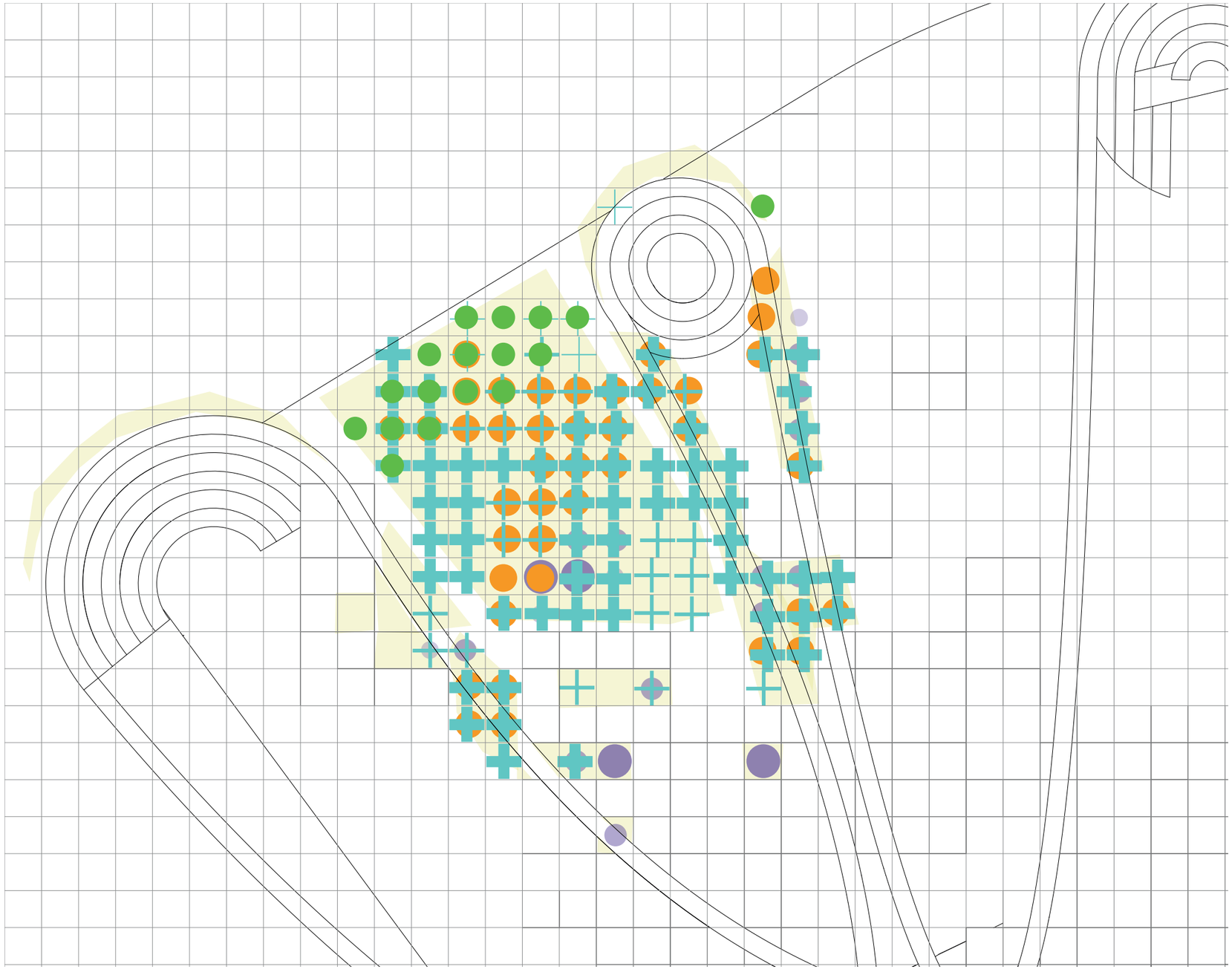
*more* → *less*



SUPERIMPOSED ACTANT BEHAVIOR




INTERESTING INTERSTICIES



INTERSTICIES ACTANT DATA

## DOMINANT ACTANTS IN SITE INTERSTICIES

*water*

*mobility*

*green spaces*

## SWOT ANALYSIS

### STRENGTH

*Geographical position in the city*
*Closeness to water*
*Flat landscape = easily accessible*
*Community at the quay*

### WEAKNESS

*Poorly connected to the city via road network*
*Industrial site lacking reasons to visit*
*Small current target group*
*Difficult to access new walkpath from ground*

### OPPORTUNITIES

*Through new development and connections create an extended city centre*
*Connect the city as a whole to Göta Älv*
*Programme areas for other target groups, such as kids*

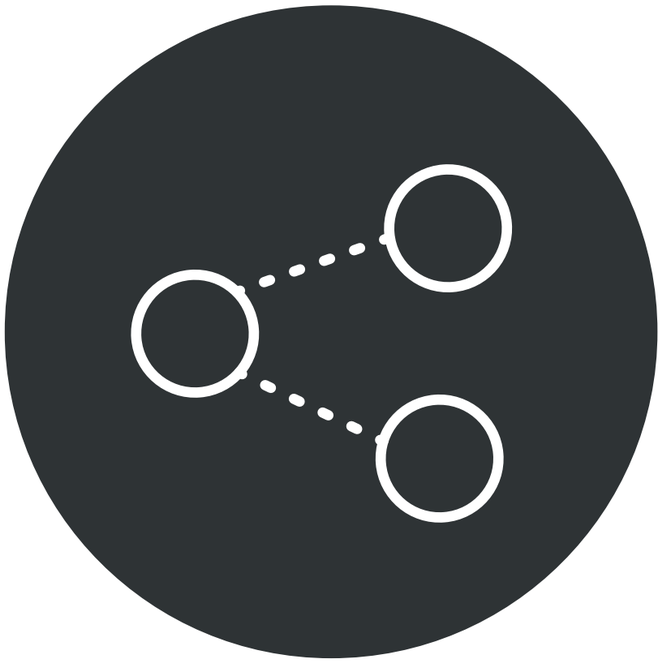
### THREATS

*Flooding*

# CONCEPT

## UNDERSTANDING THE PROJECT

# PROGRAMME GOALS



*Connections*

*Improve connections and utilize  those that already exist*
*Increase connection to the water*

*Target groups*

*Shift target group to those not included today*
*Kids and youths*

*Create activity*

*Bring activity to the area to make it a destination*
*Encourage mobility on wheels*

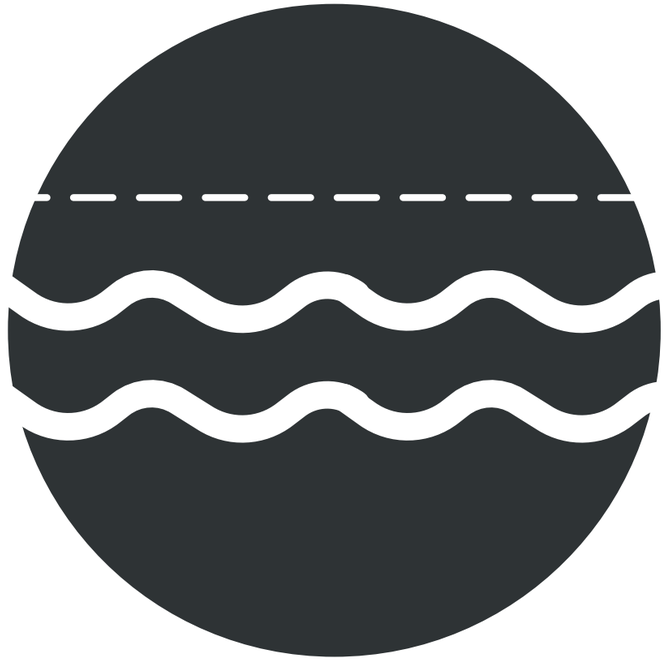
# ARCHITECTURAL GOALS

*Organic landscape*

*Encourage mobility on wheels with challenging but approachable shapes*

*Utilized spaces below*

*Spaces below the organic landscape to be used for GFA needs and public functions*



*Intergrated water management*

*Adapting to flooding and rain water by allowing these element to become part of the design*

*Superkilen - Copenhagen - BIG*

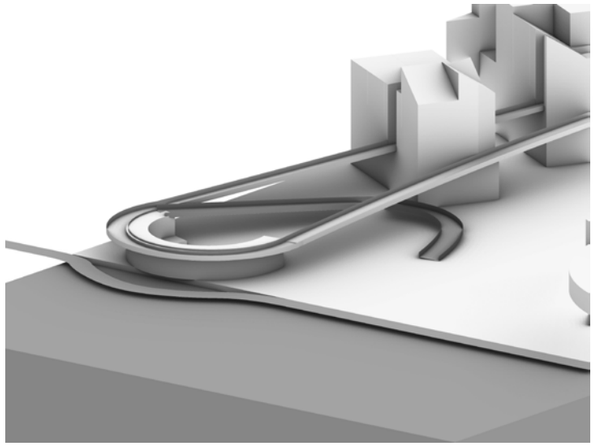
*Bicycle bridge - Utrecht - NEXT architects*

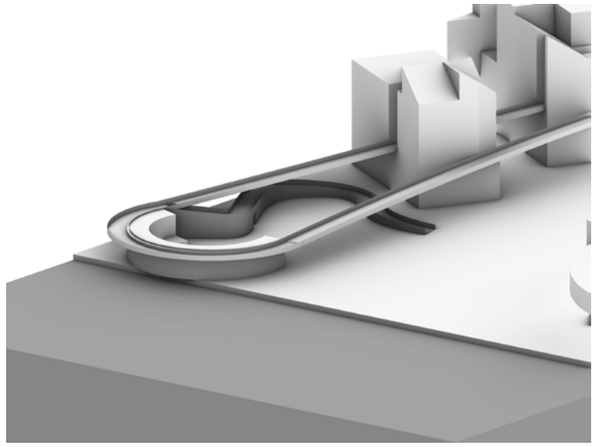
*Sydhavn Skole - Copenhagen - JJW Arkitekter*

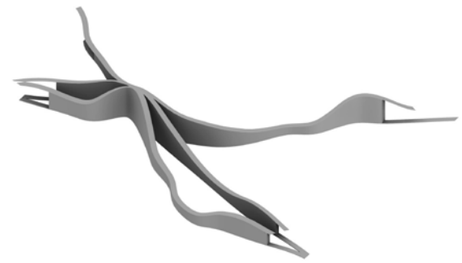
# METHOD

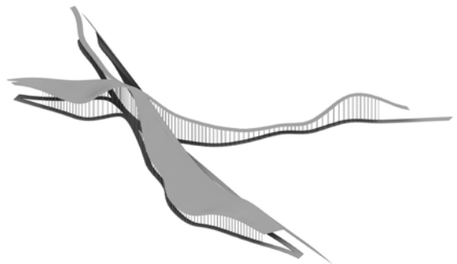
## GEOMETRY WORKFLOW

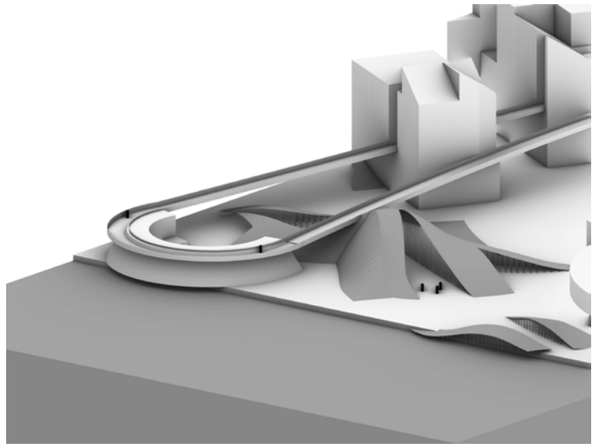
*geometry iterations: the selection process*

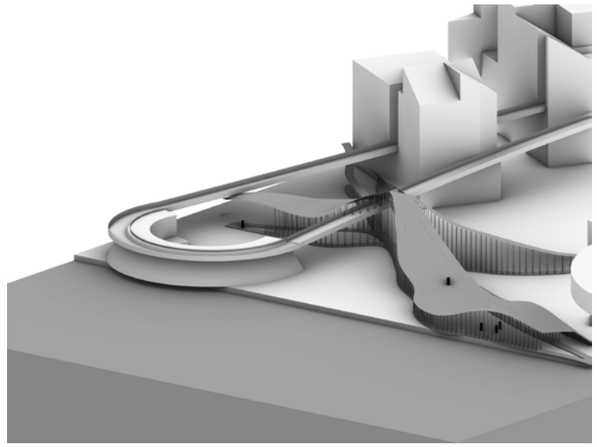


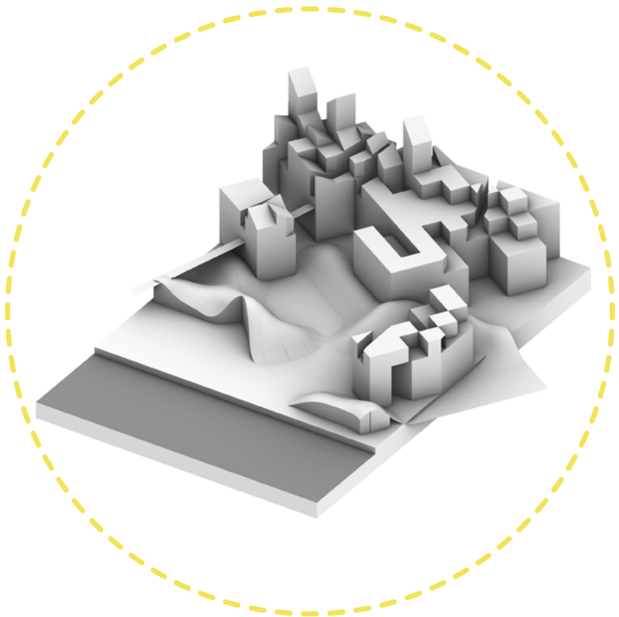


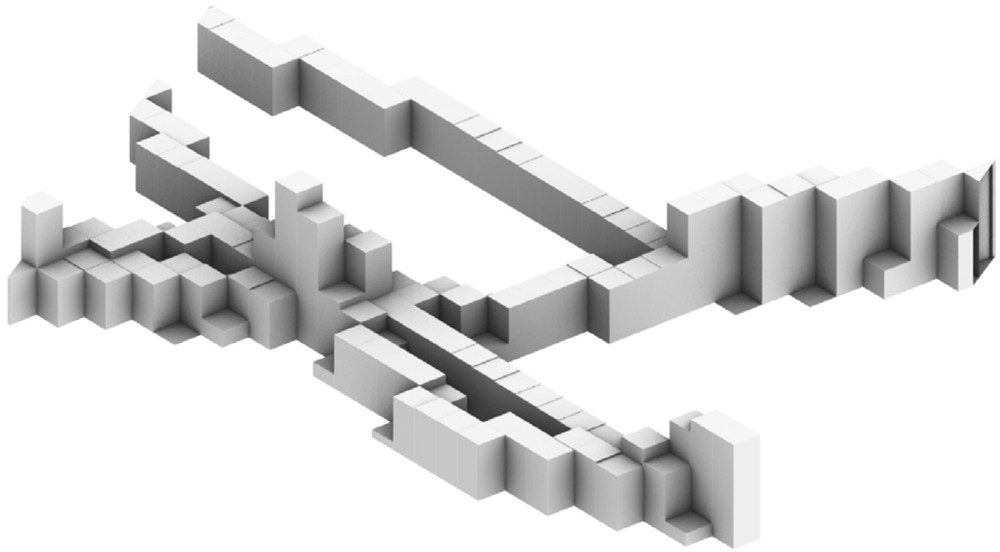




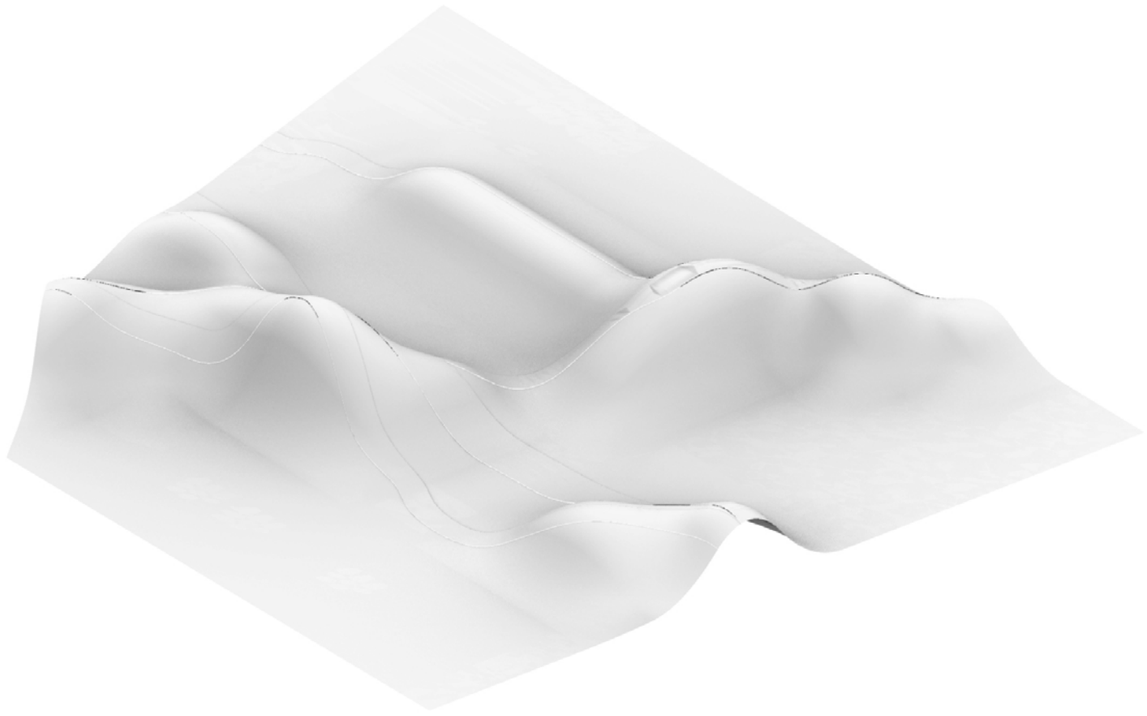




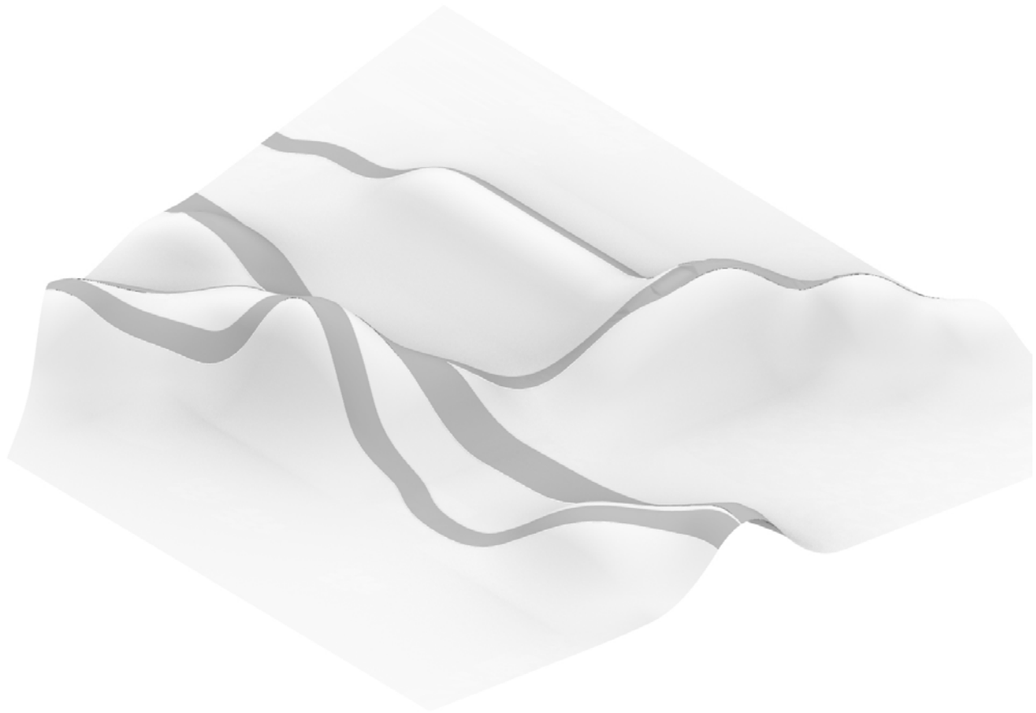




*3D representation of pedestrian mobility analysis*
*(grasshopper + pedsim)*



*turning analysis into organic surface*
*(drape)*



*tracing outlines of paths*
*(curve + offset curve + split)*

*removing path topography surface*

*inserting volume into suprastructure*

*negotiation with neighbours*

*redesigning path on left side + removing stairs (HL+IP)*

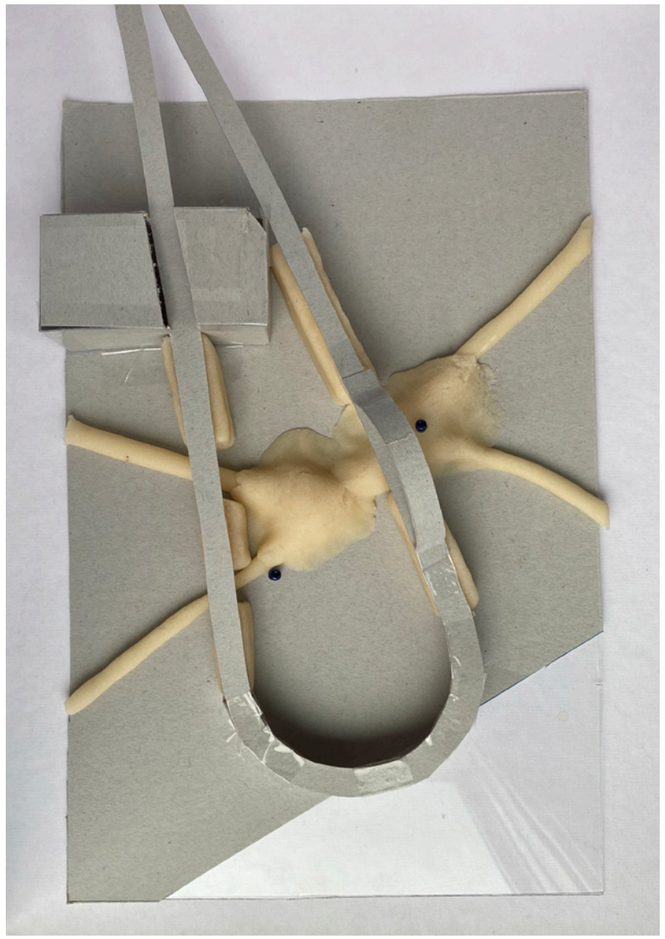
*evaluating spoaces*

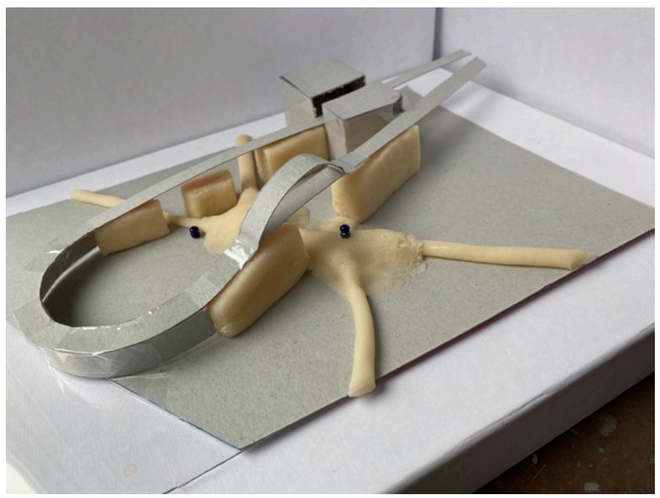
*turning organic surfaces into volumes (buildings and roofs)*
*(extrude + loft + patch + split)*

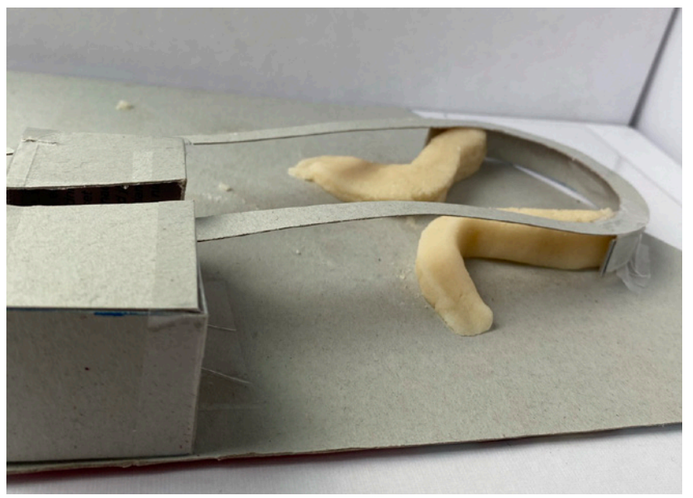
*bringing the water front in*

*(offset curve + split)*

*creating play landscape that also guides rainwater*
*(curve + patch + drape)*



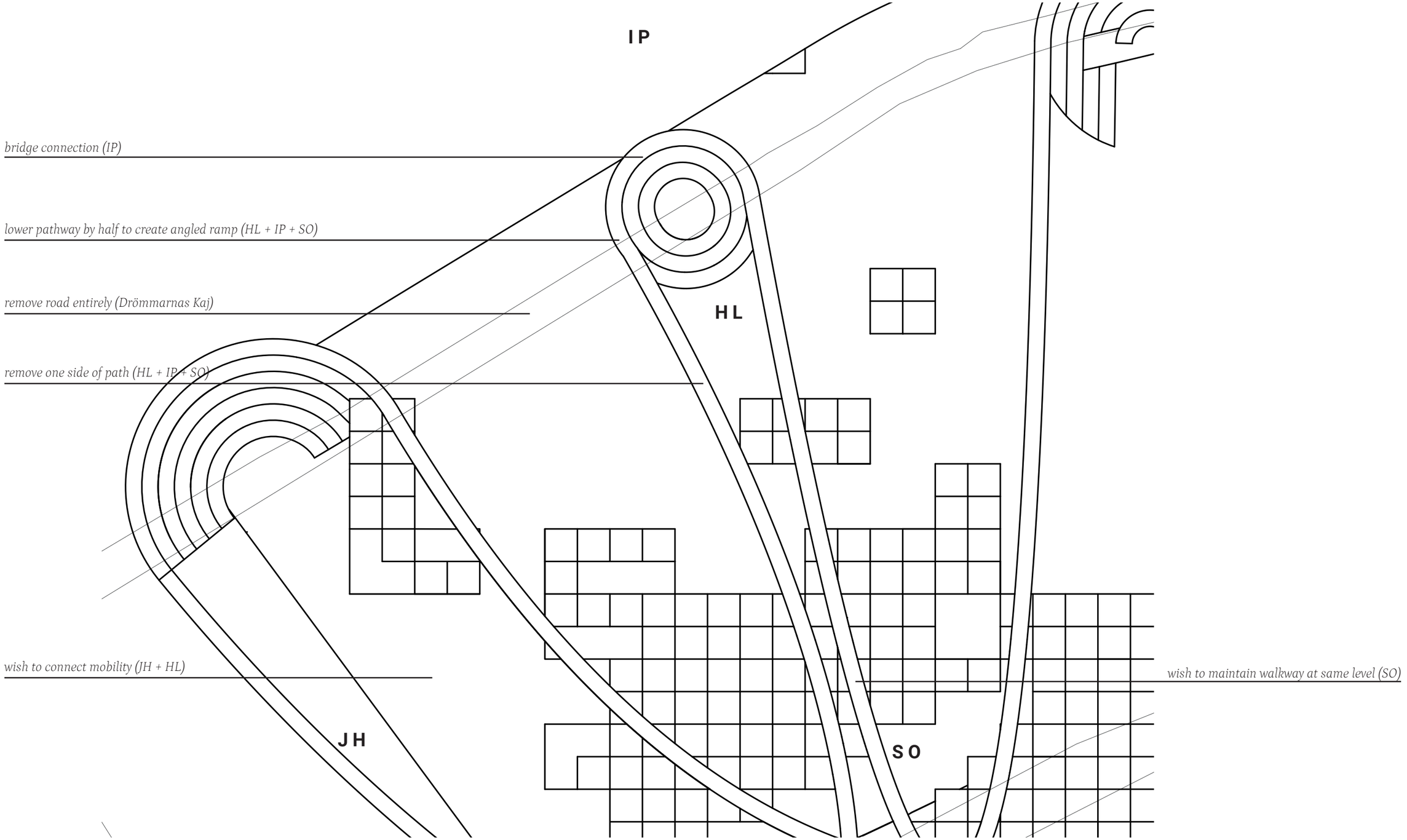




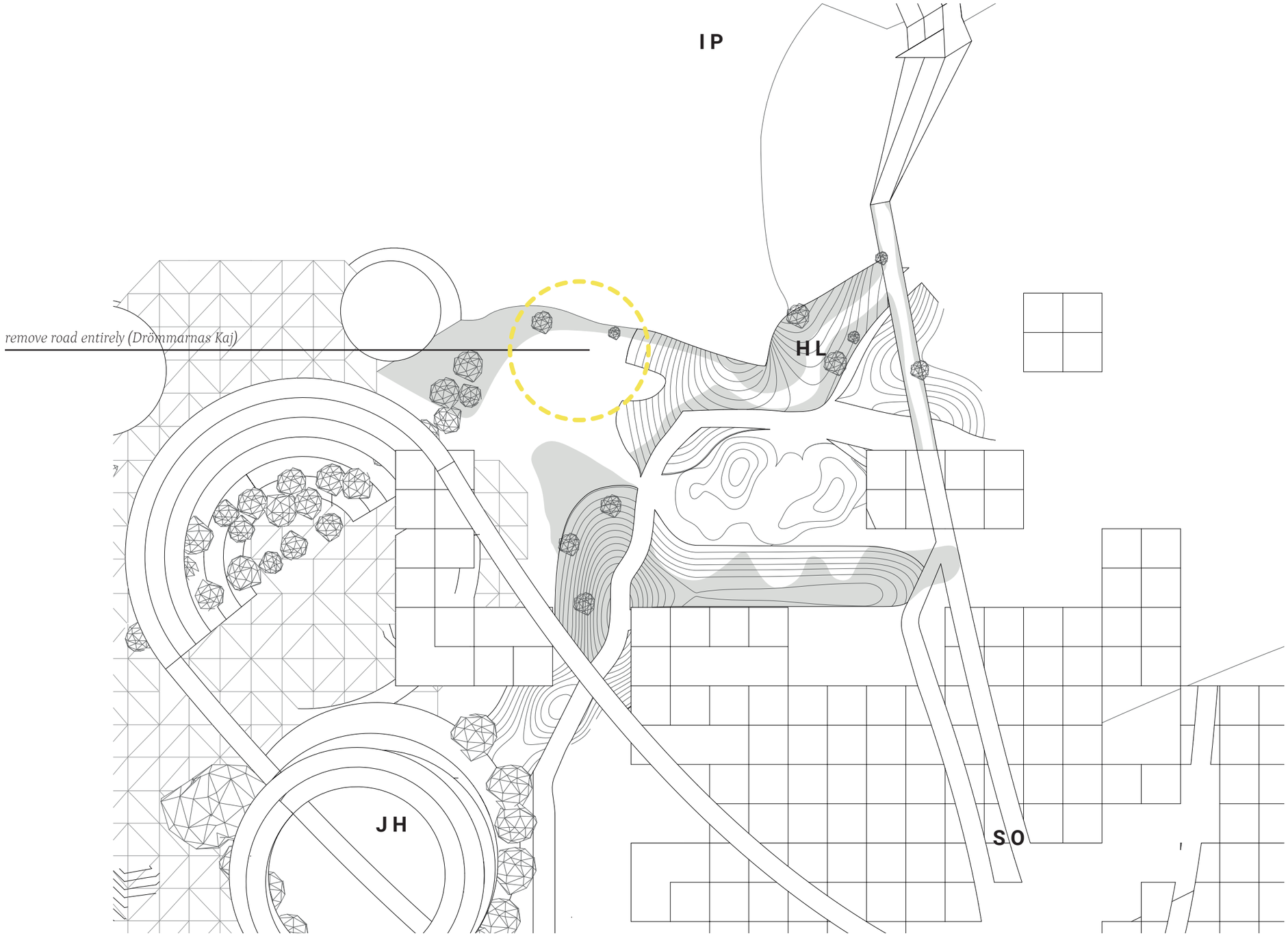
*cardboard + clay*
*scale 1:500*

METHOD

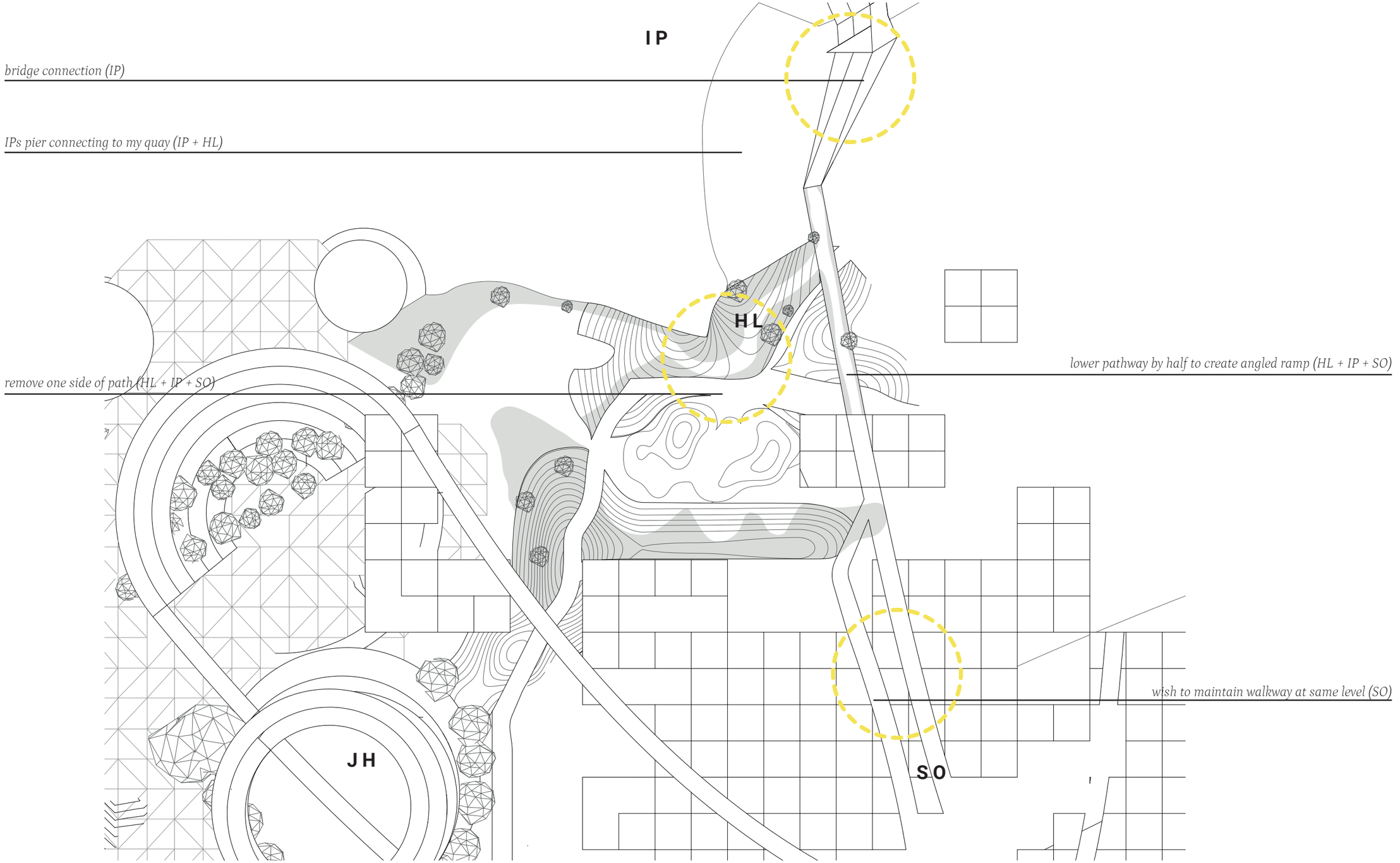
BOUNDARY NEGOTIATION



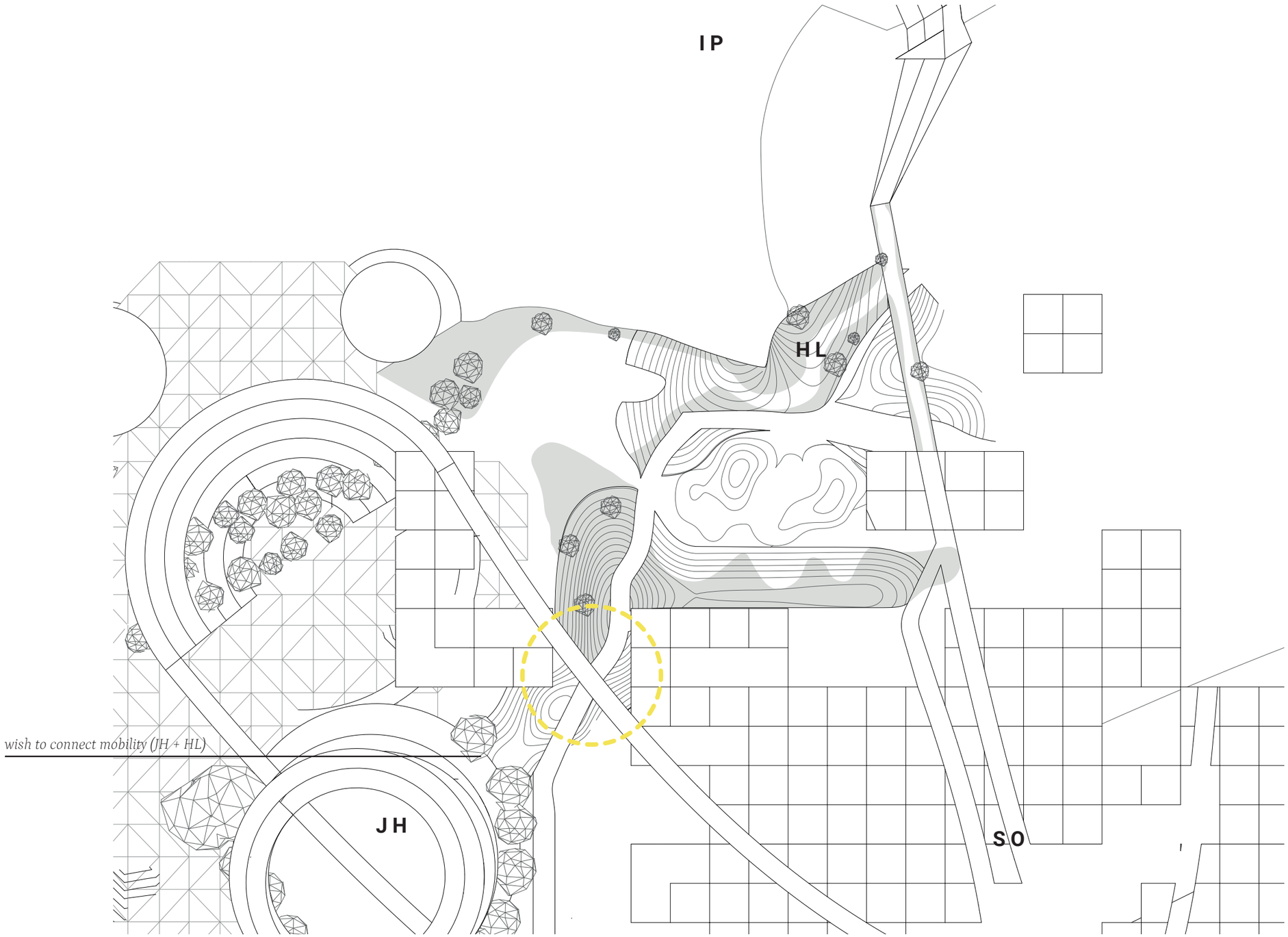

neighbourhood starting pooint




*General wish from both teams to avoid motorized traffic in the area, as well as identifying the road as an unnecessary obstacle without vital connections lead to us removing it completely.*




*Wish from IP to connect Ringön and Gullbergsvass together with wish from me to connect ground level with suprastructure path lead to renegotiation of the design of this connection point. To ensure accessability for pedestriands and bikes, the connection point had to be lowered. We chose to angle the path from SOs area towards me + IP to not disturb SO but still solve mine + IPs issues. To makes space for a larges connection in my project, we also redrew the path stretch, removing parts on the left-hand side.*




*As both I and JH were working with mobility and pedestrian paths, we wanted to ensure that movements were connected across the projects, resulting in a connection between our paths*

# METHOD

## PROGRAMME DISTRIBUTION

*Programme*

# USE OF SPACES

## IDEA

*gradient of speed for activities across area*

## ANALYSIS

*high speed activities is dependent on visual overview for experienced safety*

*high level of visual overview = possibility for high speed activity*

*low speed activities is favoured by more intimate spaces and experienced safety from fast-moving entities*

*high level of intimacy = possibility for low speed activity, given than it does not intersect with high speed activity*

## POSSIBLE ACTIVITIES

***high speed activites***
- *walking*
- *running*
- *biking*
- *skateboard*
- *rollerskates*
- *electric scooter*

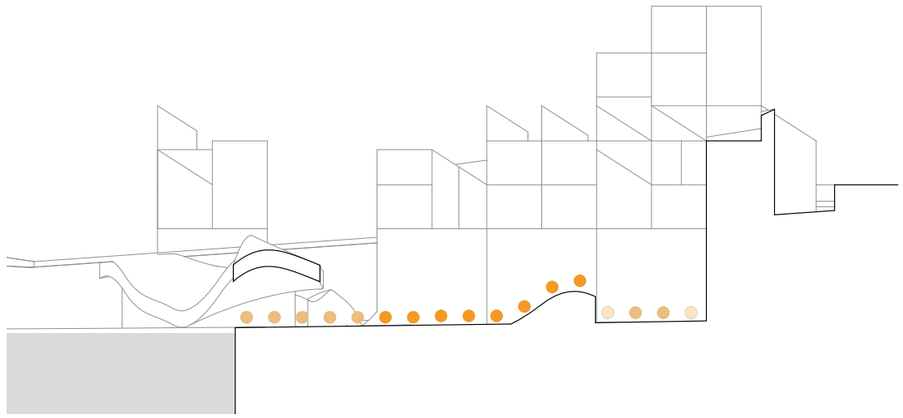
***low speed activites***
- *sitting*
- *standing*
- *eating*
- *watching*
- *talking*

## PHYSICAL ASPECTS OF SPEED

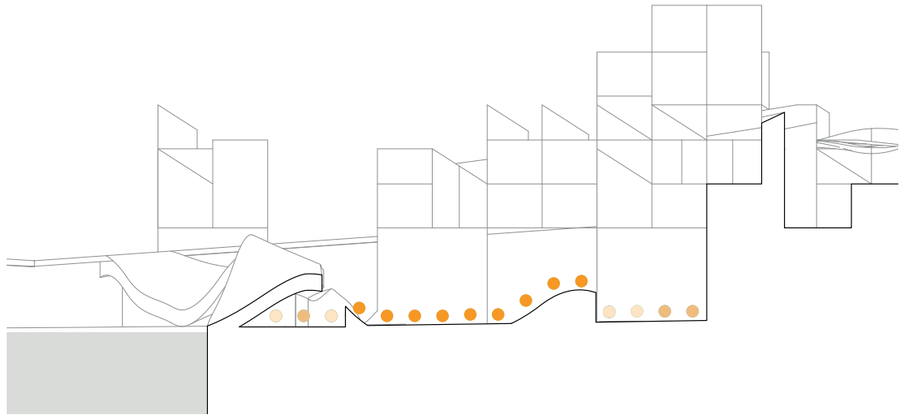
*motion up and down: hills and dips*
*motion sideways: sharp turns*

*mapping of level of visual overview*

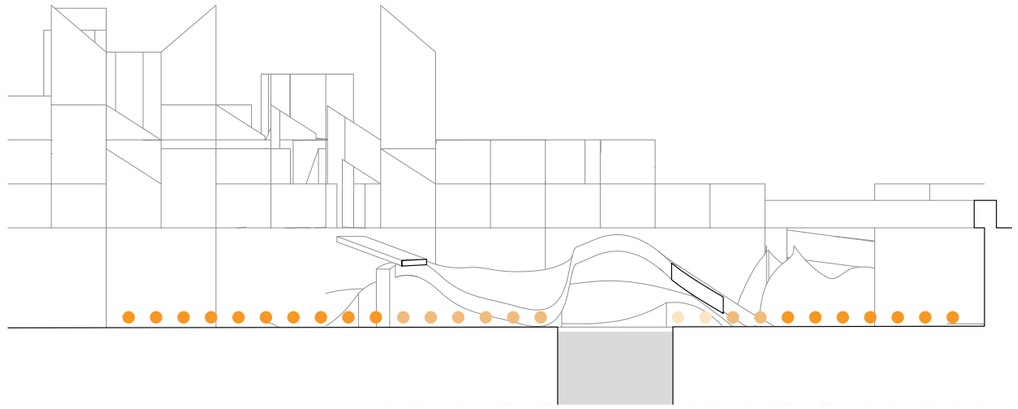
*a*



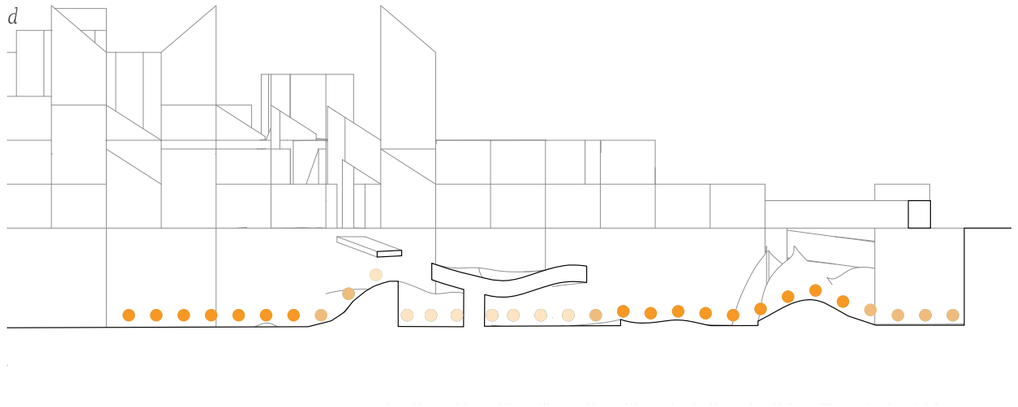
*b*



*c*



*d*

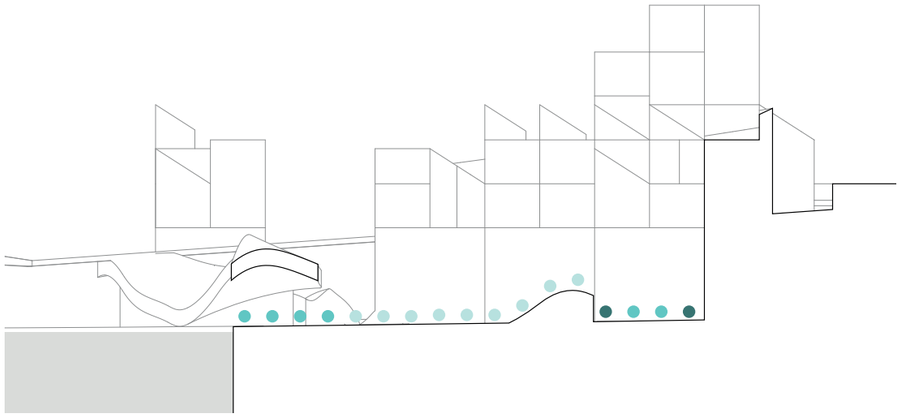


*low* → *high*

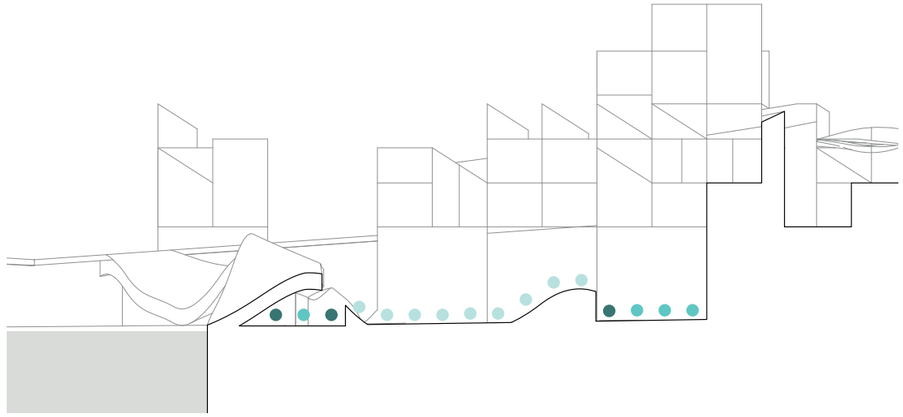

c
d
b
a

*mapping of level of intimacy*

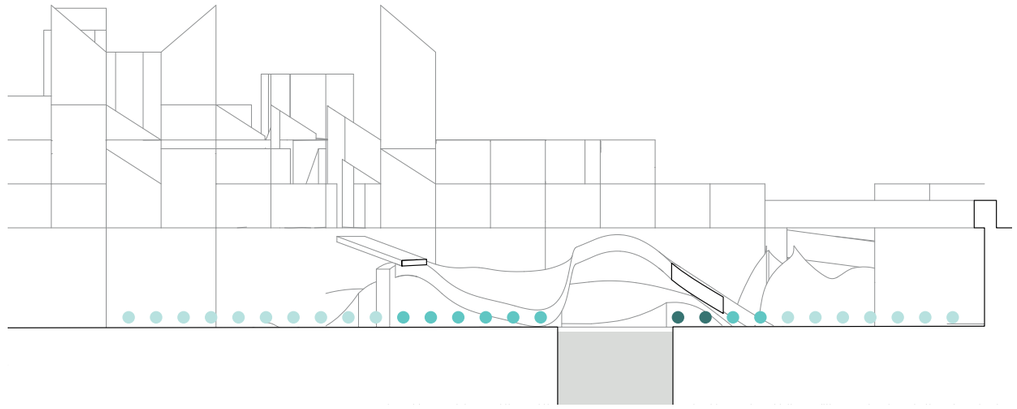
*a*



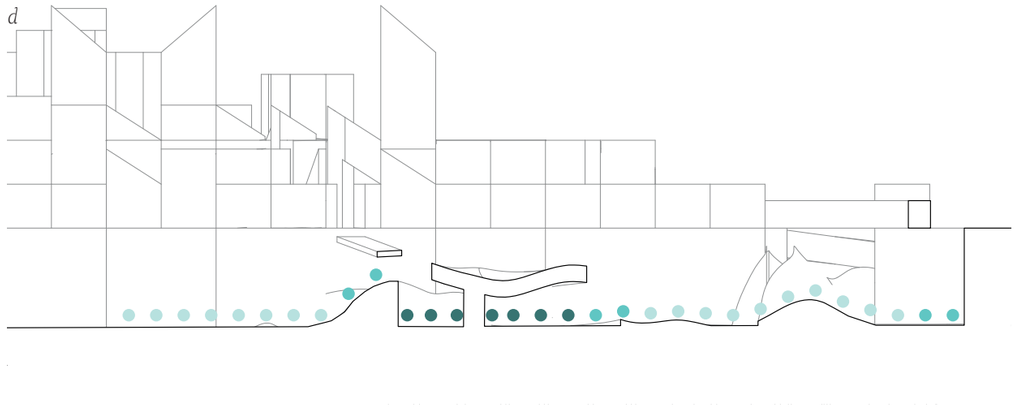
*b*



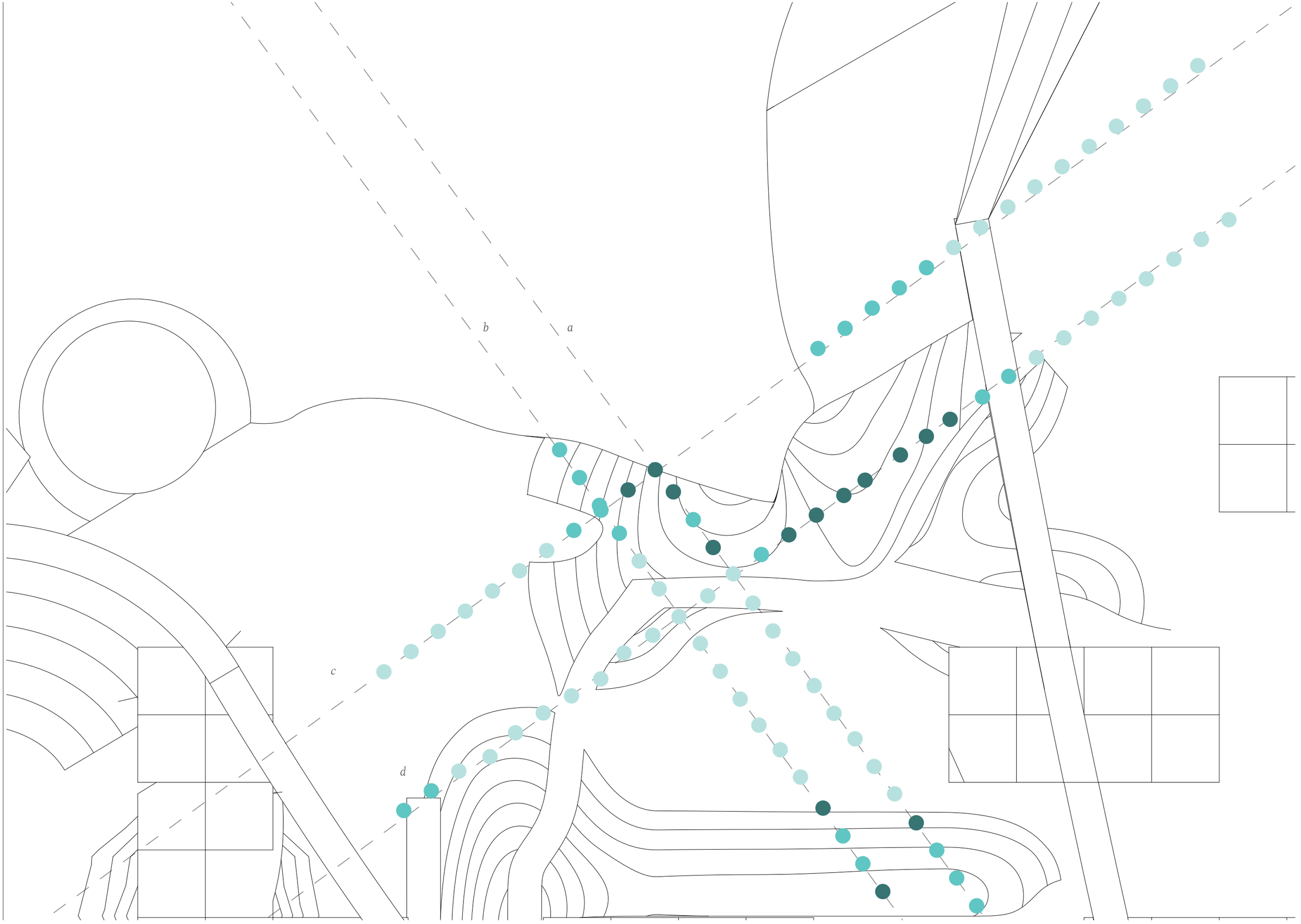
*c*



*d*

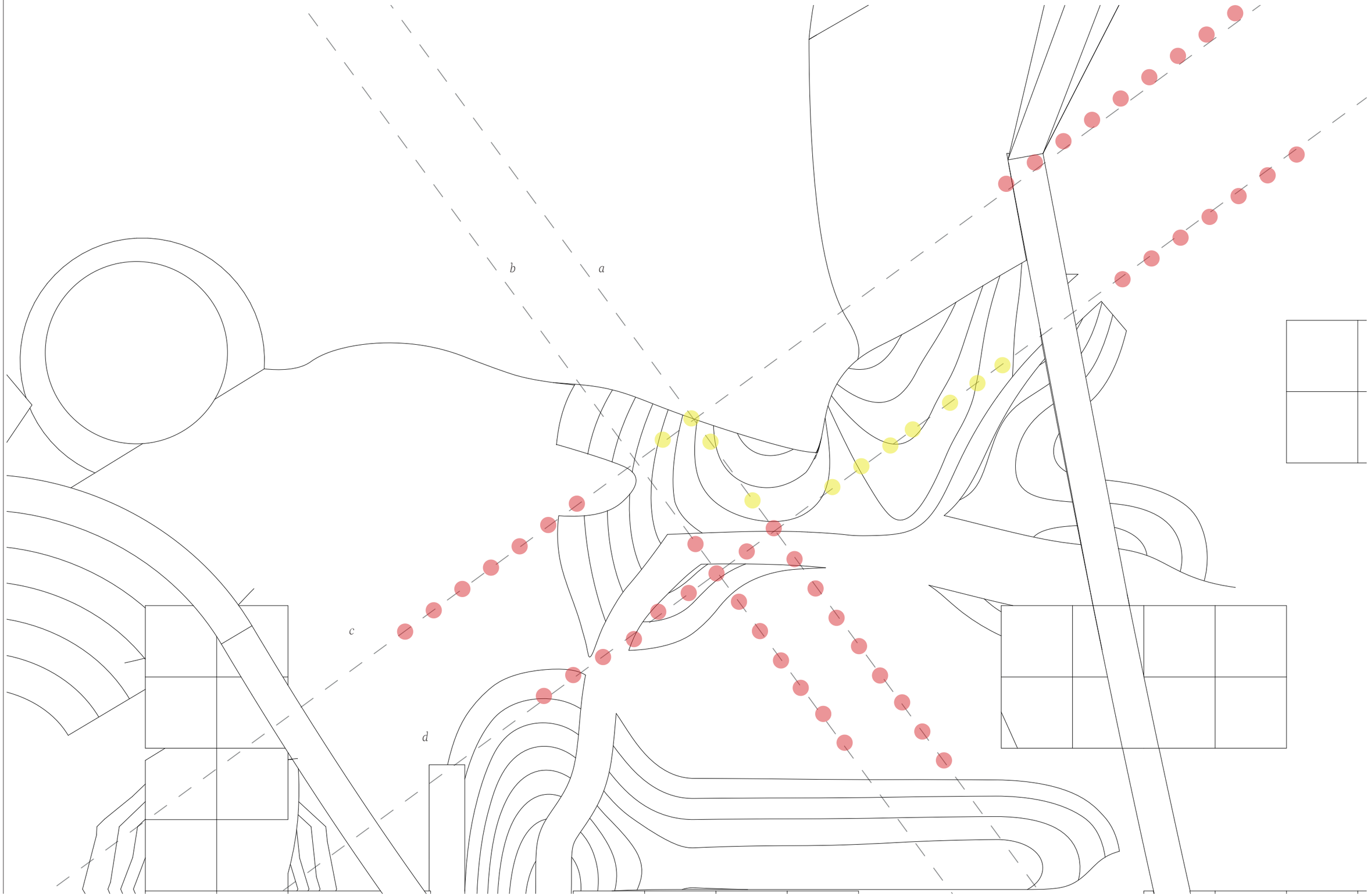


*low* → *high*

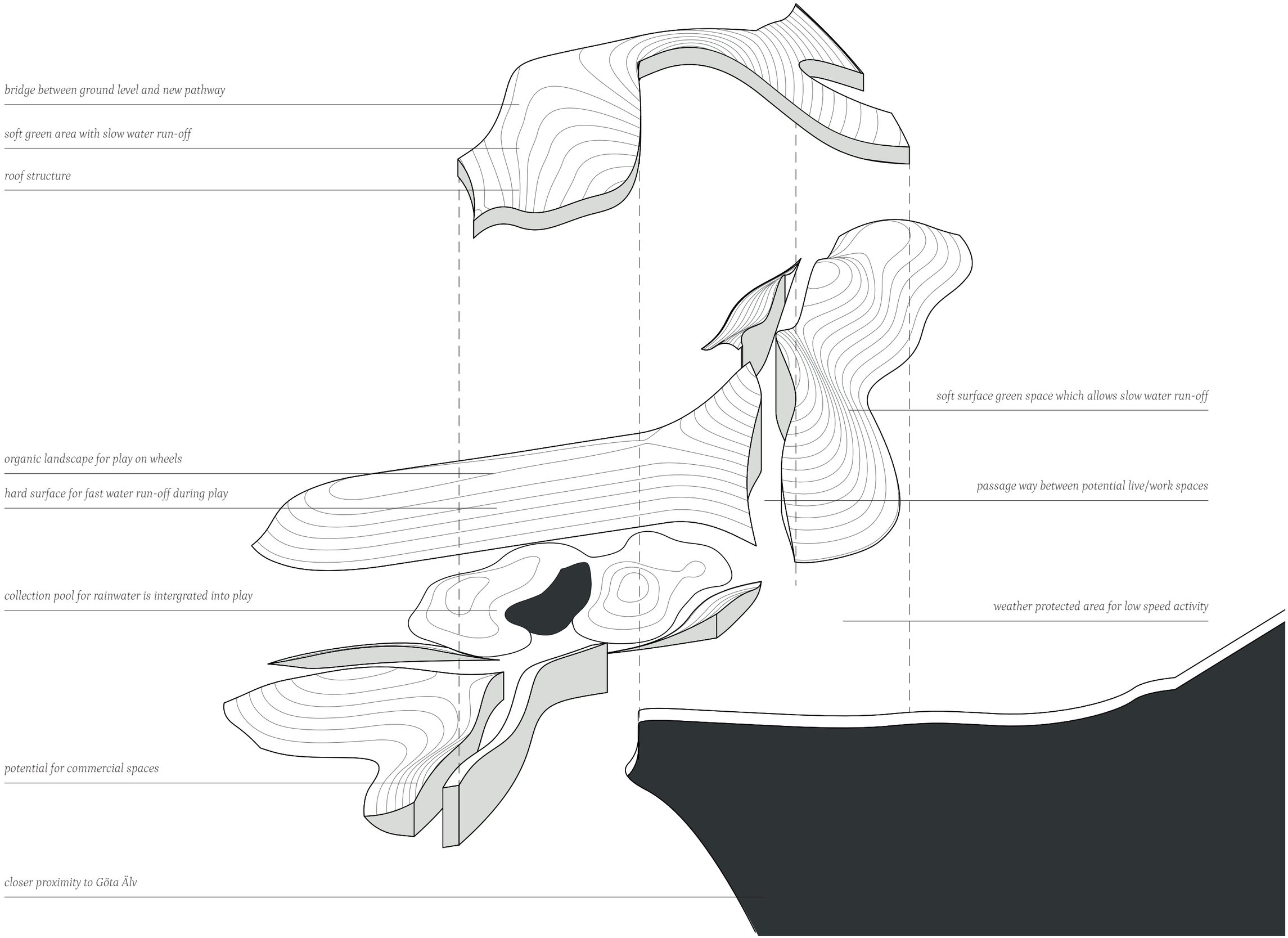

a
b
c
d

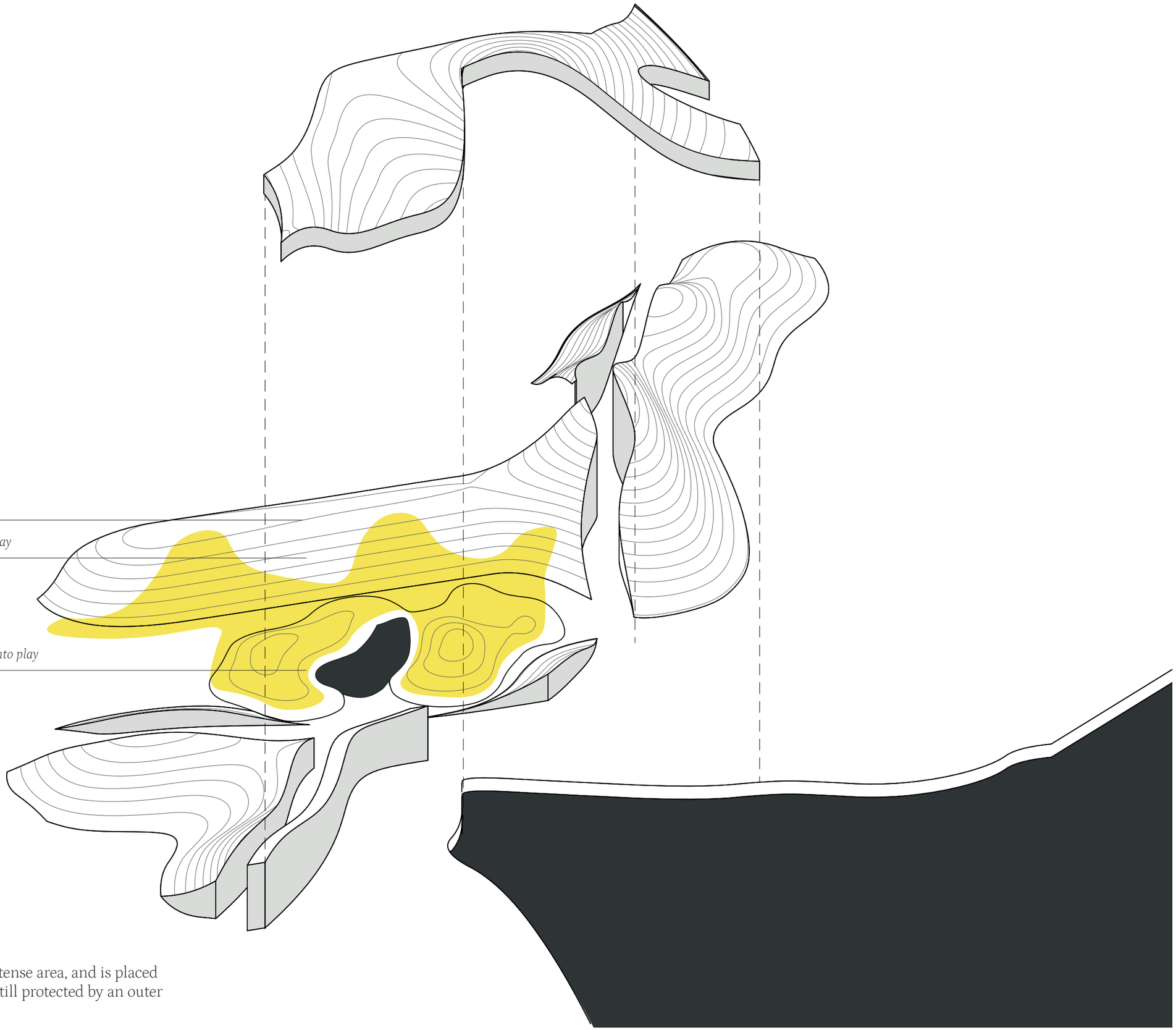
high visual overview + low intimacy = high speed activity

high intimacy - high speed = low speed activity

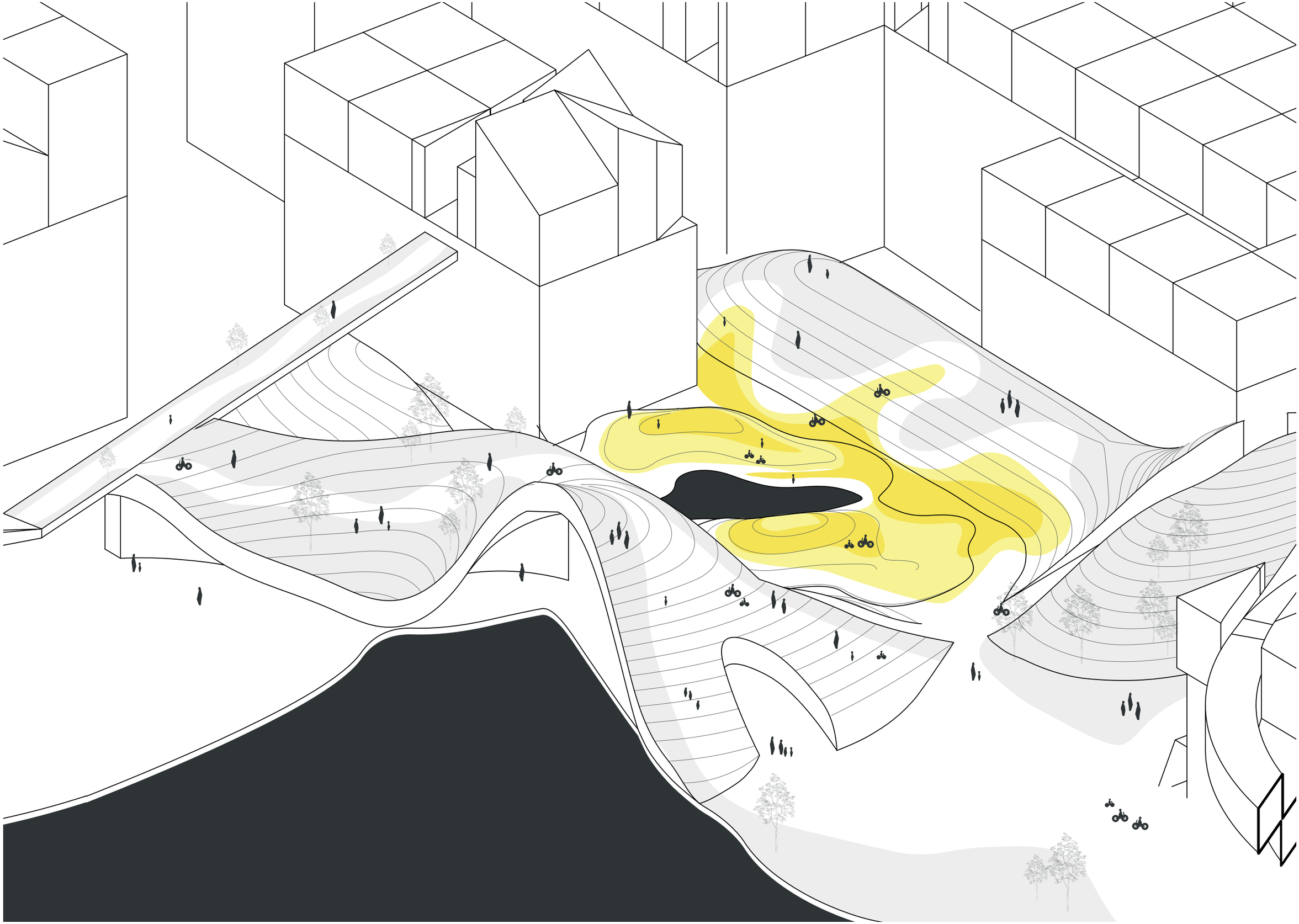


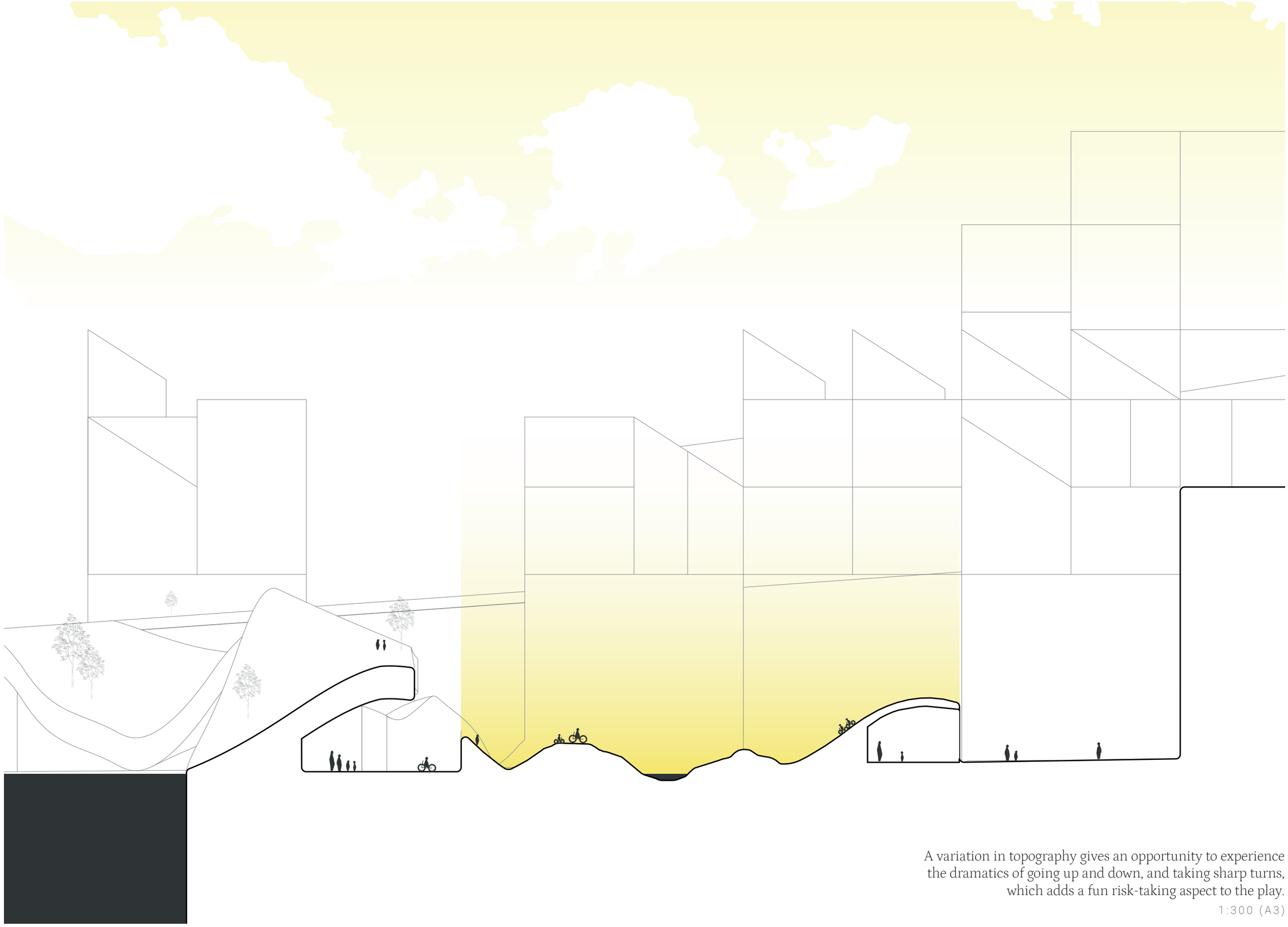
# THE PROPOSAL


bridge between ground level and new pathway
soft green area with slow water run-off
roof structure
soft surface green space which allows slow water run-off
organic landscape for play on wheels
hard surface for fast water run-off during play
passage way between potential live/work spaces
collection pool for rainwater is intergrated into play
weather protected area for low speed activity
potential for commercial spaces
closer proximity to Göta Älv




The play park is the most speed instense area, and is placed where the overview is high, whilst still protected by an outer perimeter of volume.





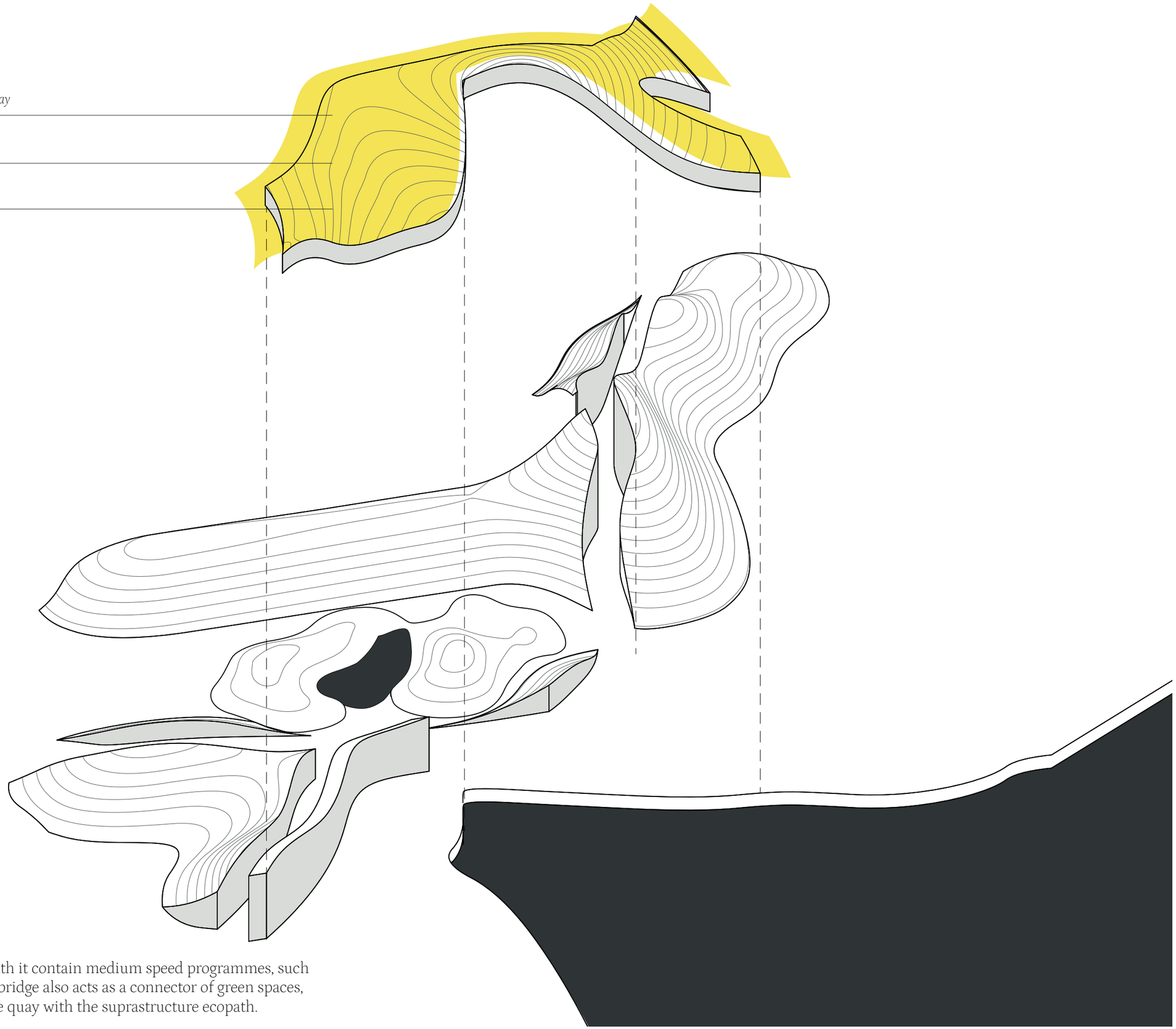
A variation in topography gives an opportunity to experience the dramatics of going up and down, and taking sharp turns, which adds a fun risk-taking aspect to the play.

1:300 (A3)

*bridge between ground level and new pathway*

*soft green area with slow water run-off*

*roof structure*



The bridge and the paths underneath it contain medium speed programmes, such as commuting by bike or foot. The bridge also acts as a connector of green spaces, connecting existing greenery by the quay with the suprastructure ecopath.

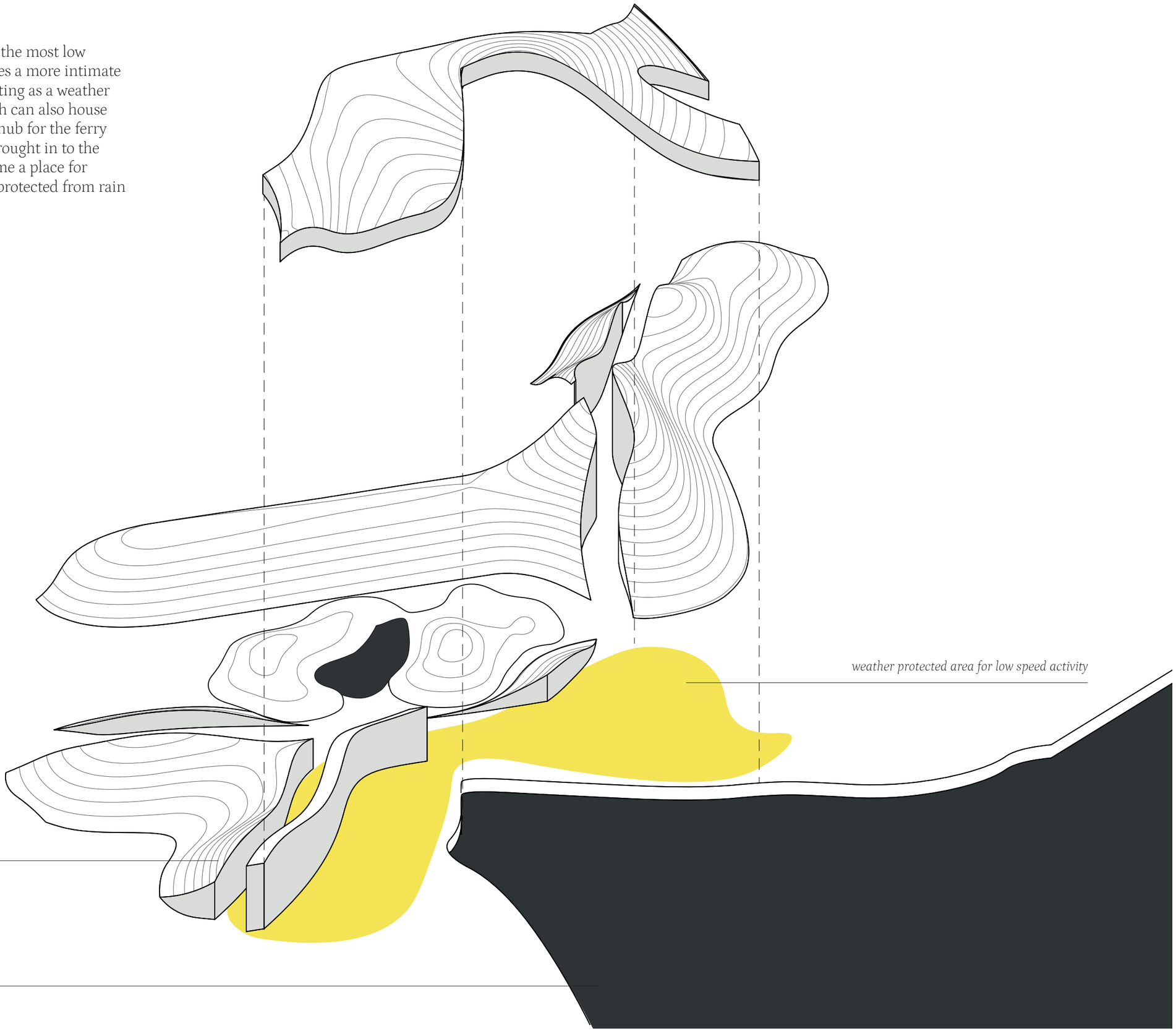
*important mobility connections*

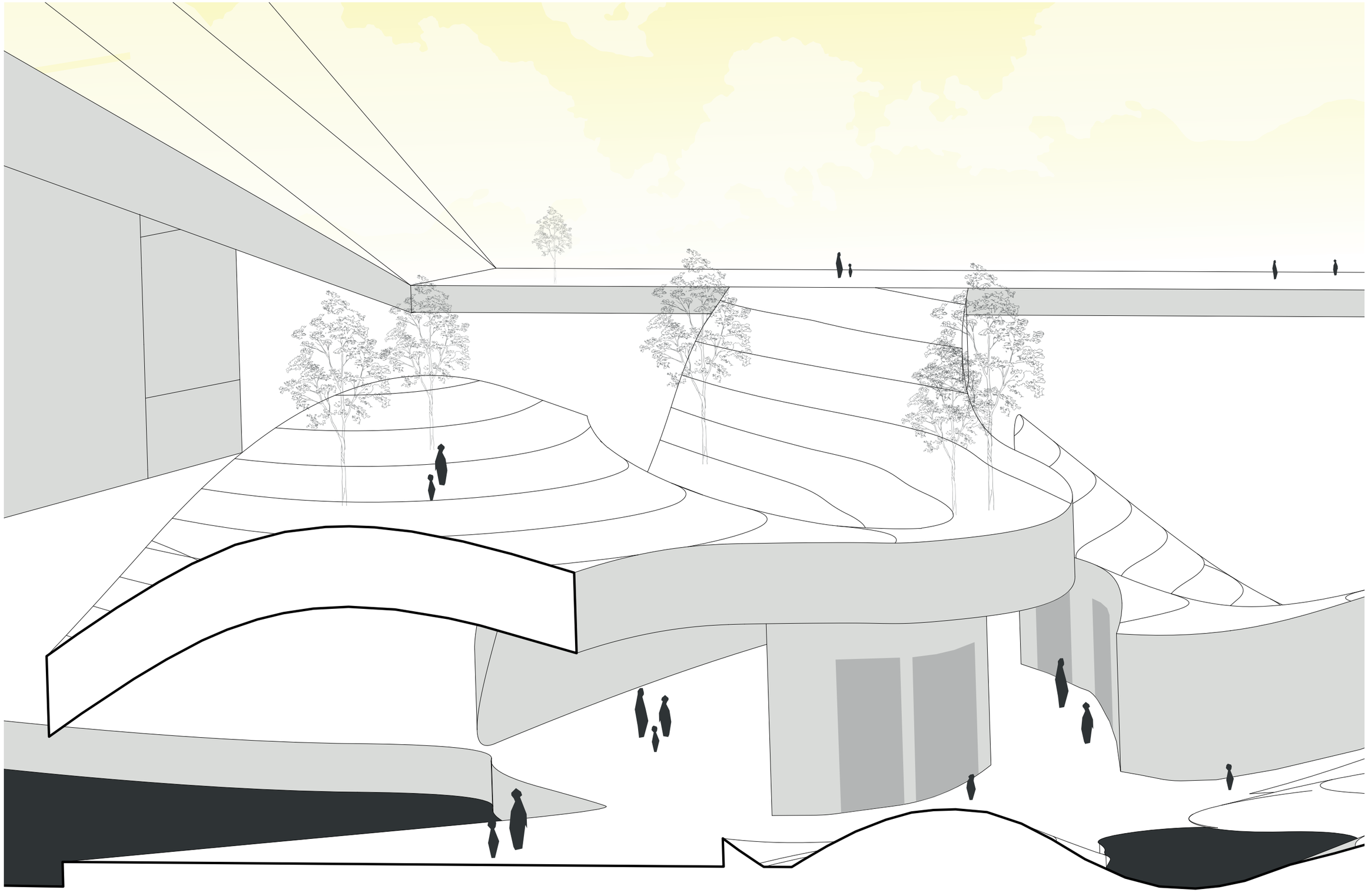
1:500 (A3)

*soft surface green spaces*

1:500 (A3)

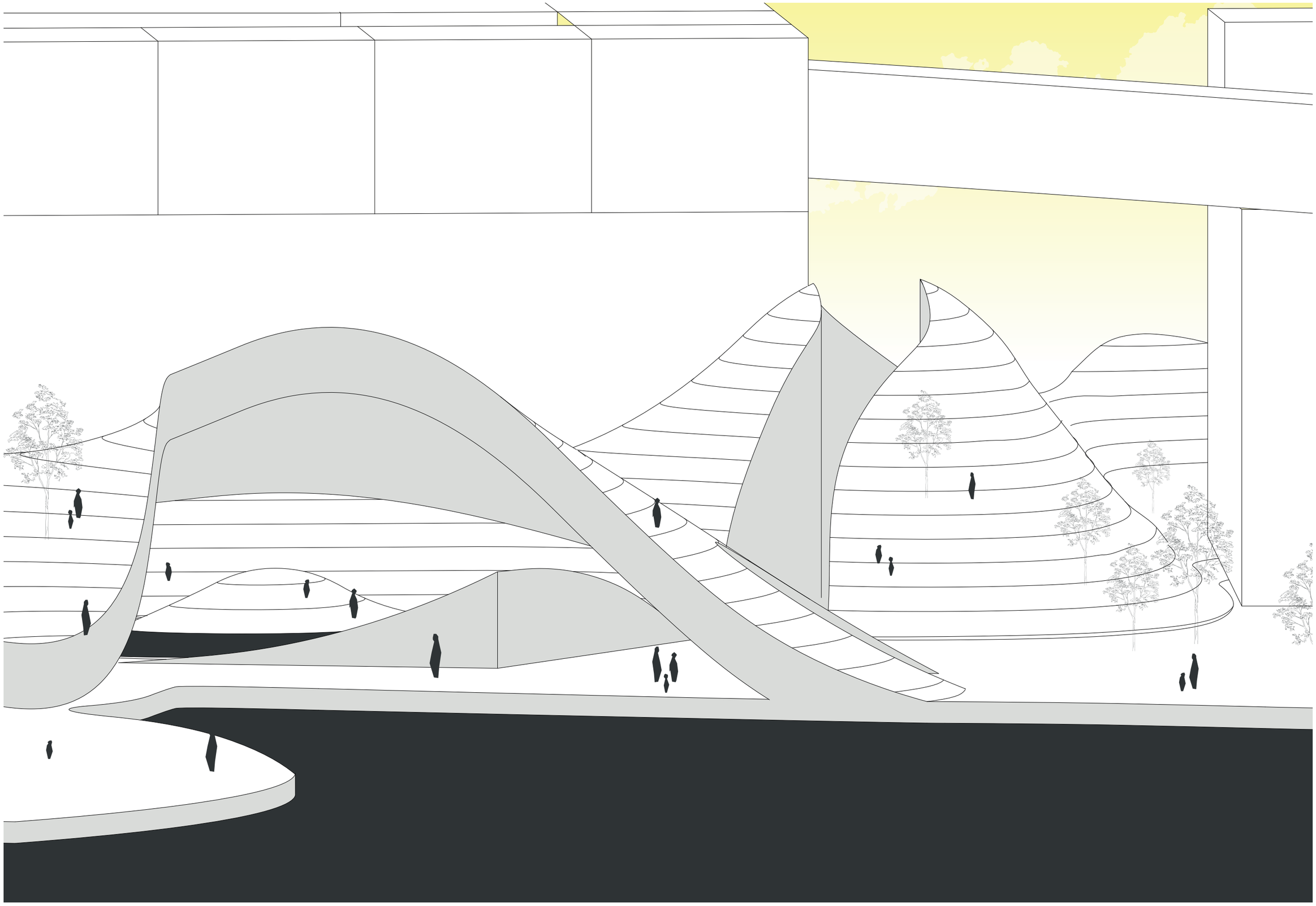
The space underneath the bridge is the most low speed area. The roof structure creates a more intimate space for hanging out, while also acting as a weather protection. The volumes underneath can also house shops or a potential transportation hub for the ferry traffic on the river. As Göta Älv is brought in to the border of the structure, it also become a place for enjoying the water front while still protected from rain and harsh winds.



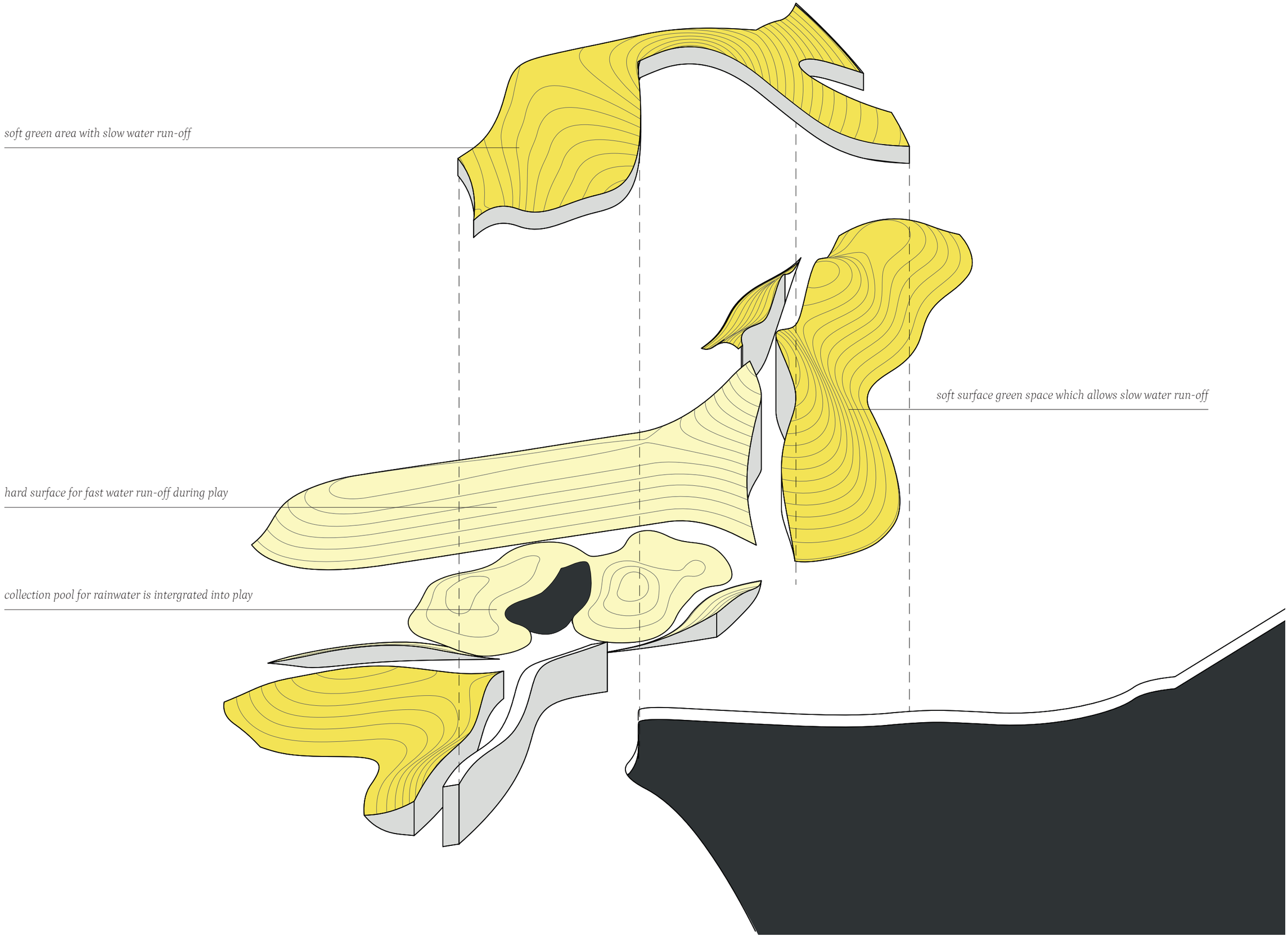


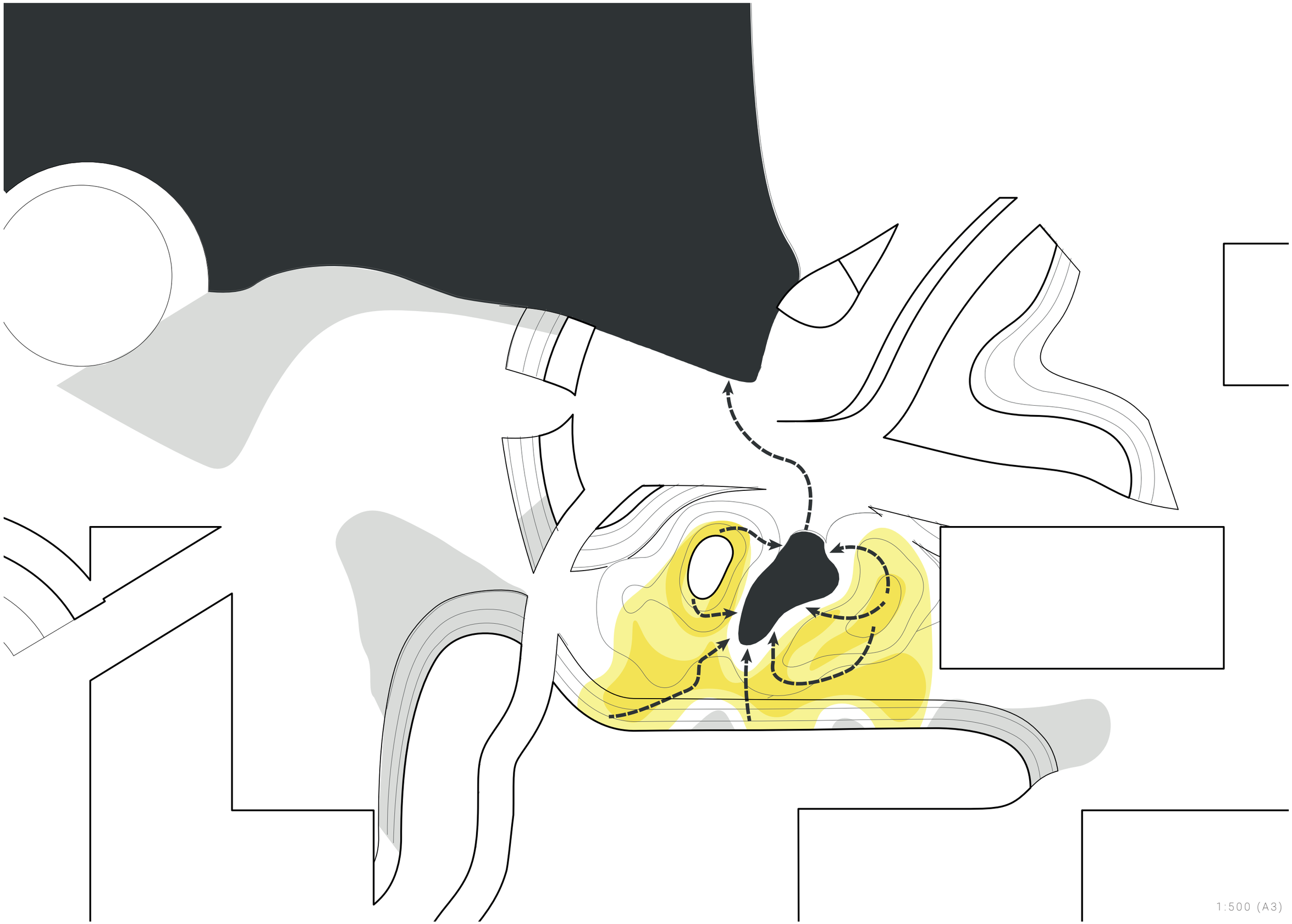
*spaces underneath utilized for protected meeting places and commercial spaces*

1:100 (A3)

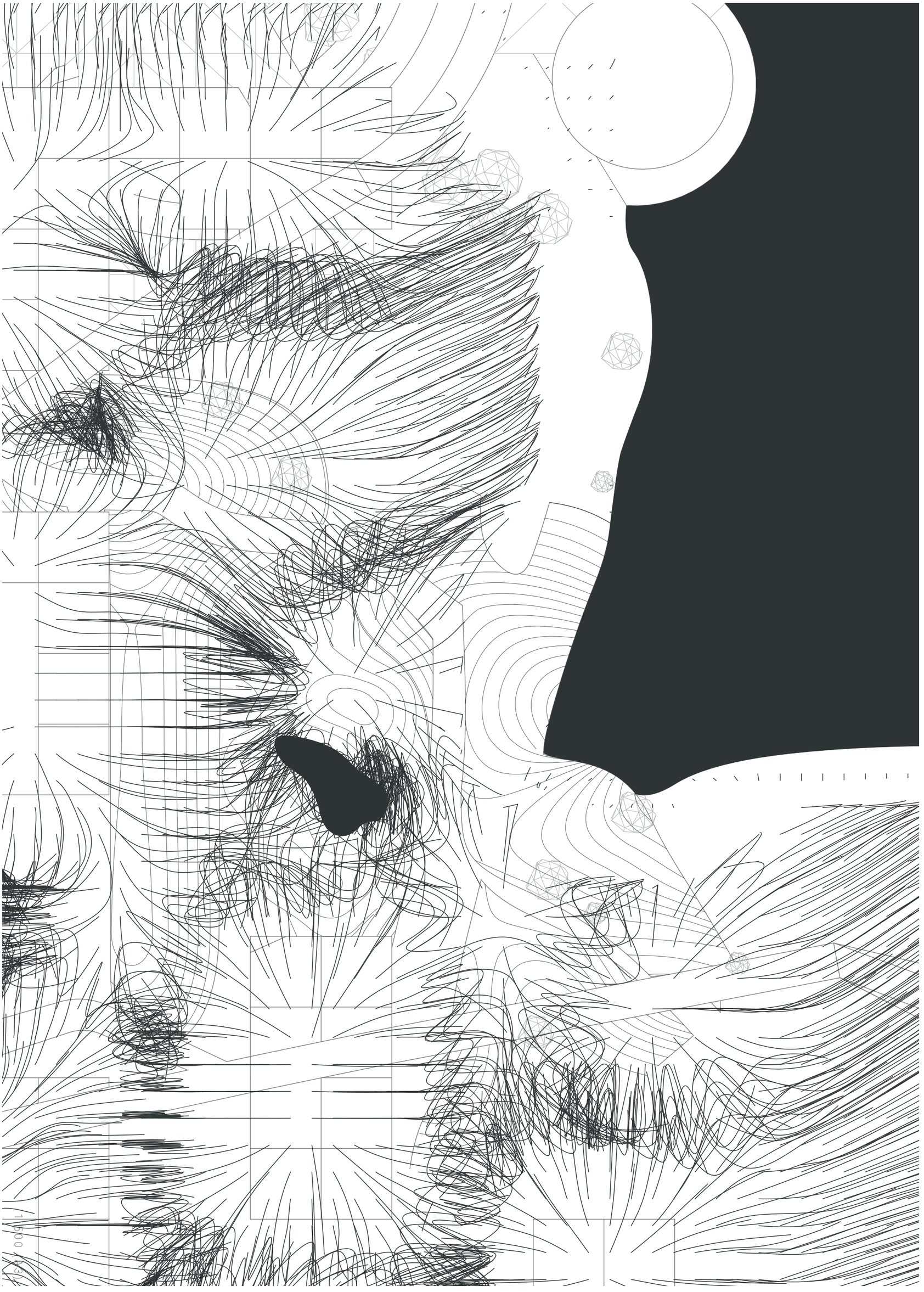


*thanks to the roof structure the water front can be enjoyed with weather protection*

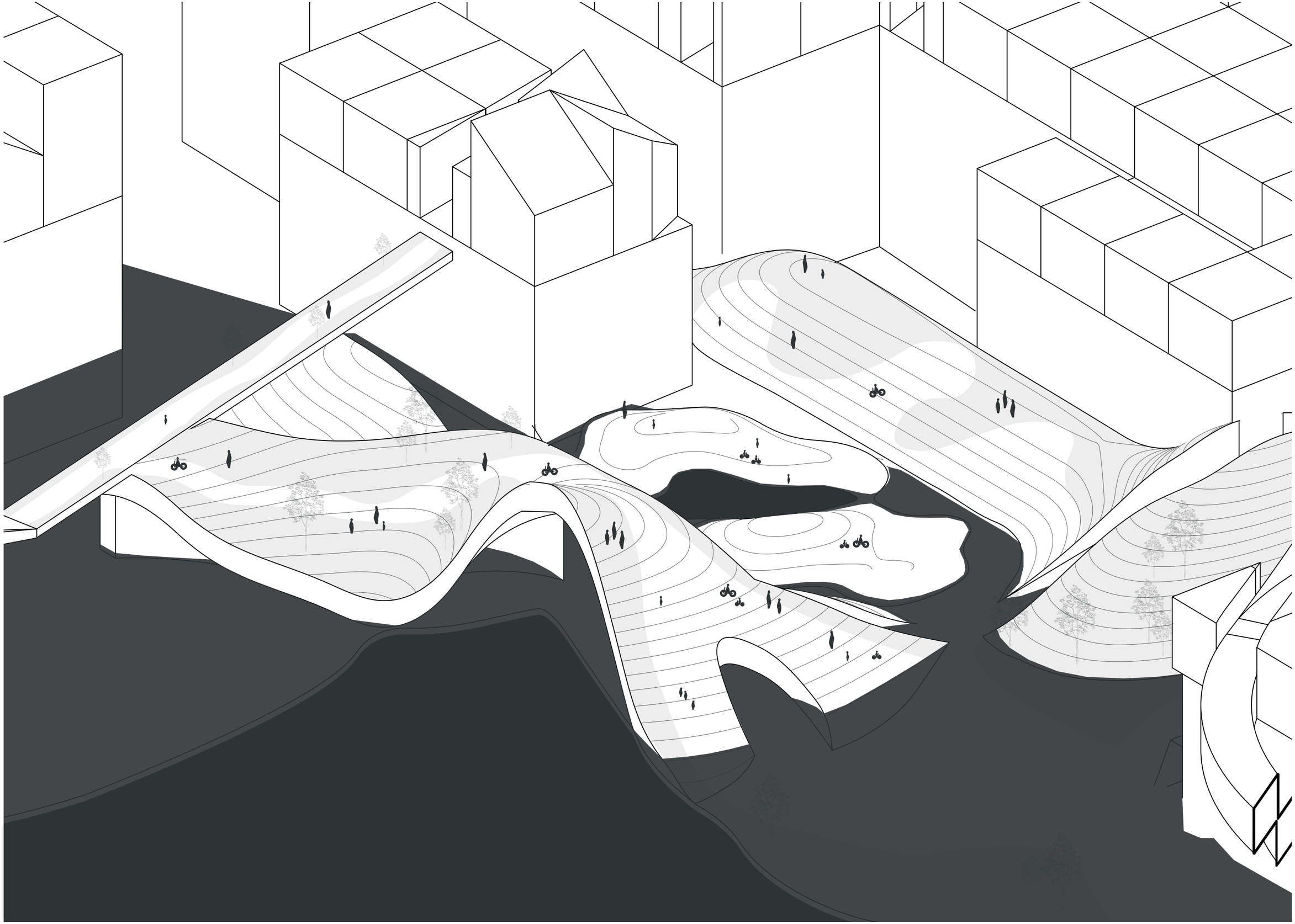

soft green area with slow water run-off
soft surface green space which allows slow water run-off
hard surface for fast water run-off during play
collection pool for rainwater is intergrated into play



1:500 (A3)



*hte topography keeps parts of the site dry during flooding events, increasing the accessability of the area*



Didriksson, L. Stigell, E. (2020). *Planeringsverktyg - stödjande fysiska livsmiljöer* [Brochure]. Gothenburg, Sweden: Author.

Stevens, P. (2018, October 05). New video documents NEXT architects' sinuous bicycle bridge in the netherlands. Retrieved December 11, 2020, from https://www.designboom.com/architecture/next-architects-dafne-schippers-bicycle-bridge-utrecht-netherlands-10-02-2018/

Superkilen: Nørrebro. (n.d.). Retrieved December 11, 2020, from https://www.visitcopenhagen.com/copenhagen/planning/superkilen-park-gdk707822

深圳市建筑工务署. (n.d.). 总投资35亿！深圳自然博物馆建筑设计方案揭晓！. Retrieved December 11, 2020, from https://mp.weixin.qq.com/s/D5cmvghqCS1CKgJCKITxAg