



Experience path

- Connect nature and people

Tyra Wingren Bergman | Booklet
Architecture & Urban Space Design | In-depth project | 2020-12-11



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Scope

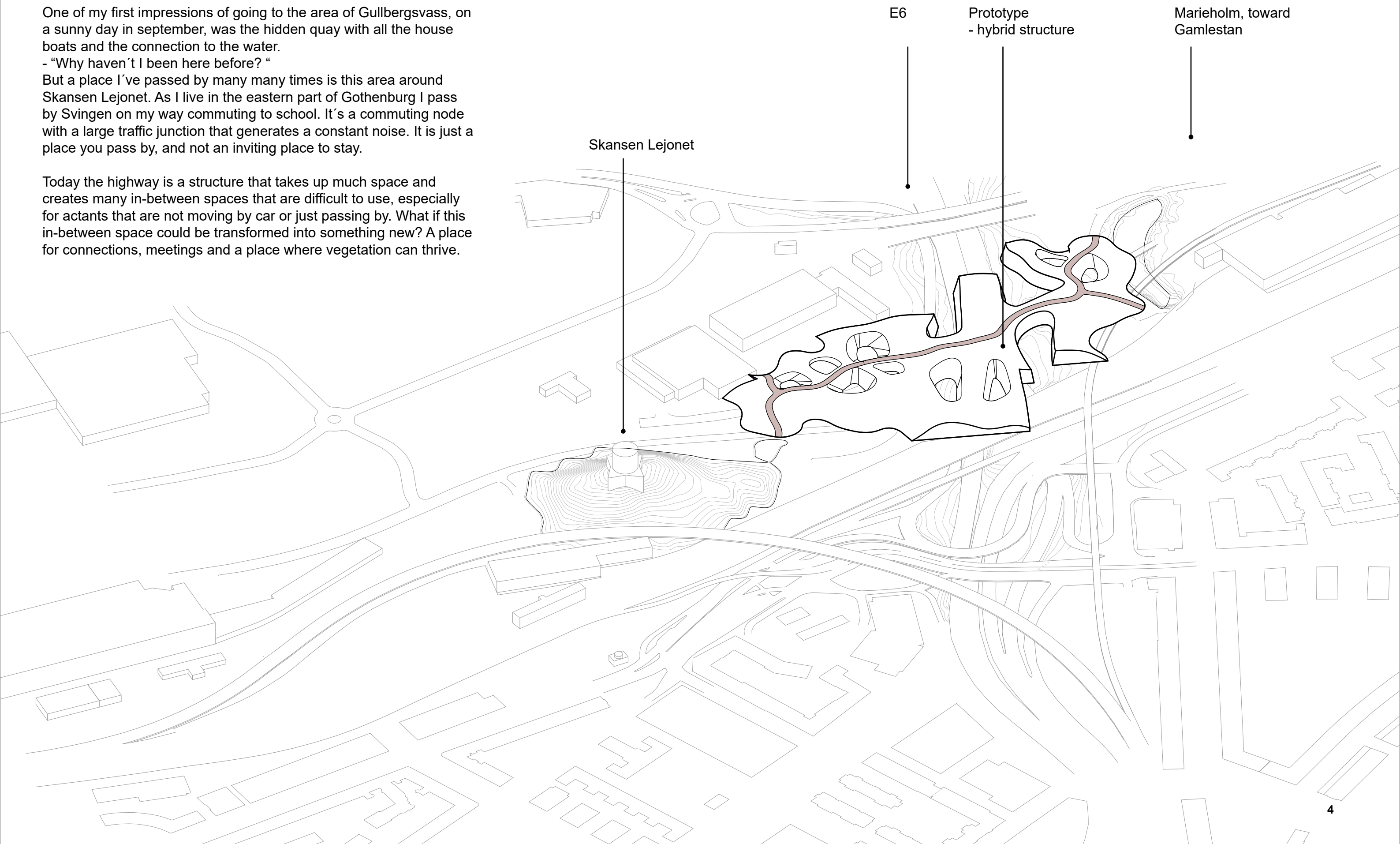
Aim and short about the project

One of my first impressions of going to the area of Gullbergsvass, on a sunny day in september, was the hidden quay with all the house boats and the connection to the water.

- “Why haven’t I been here before? “

But a place I’ve passed by many many times is this area around Skansen Lejonet. As I live in the eastern part of Gothenburg I pass by Svingen on my way commuting to school. It’s a commuting node with a large traffic junction that generates a constant noise. It is just a place you pass by, and not an inviting place to stay.

Today the highway is a structure that takes up much space and creates many in-between spaces that are difficult to use, especially for actants that are not moving by car or just passing by. What if this in-between space could be transformed into something new? A place for connections, meetings and a place where vegetation can thrive.



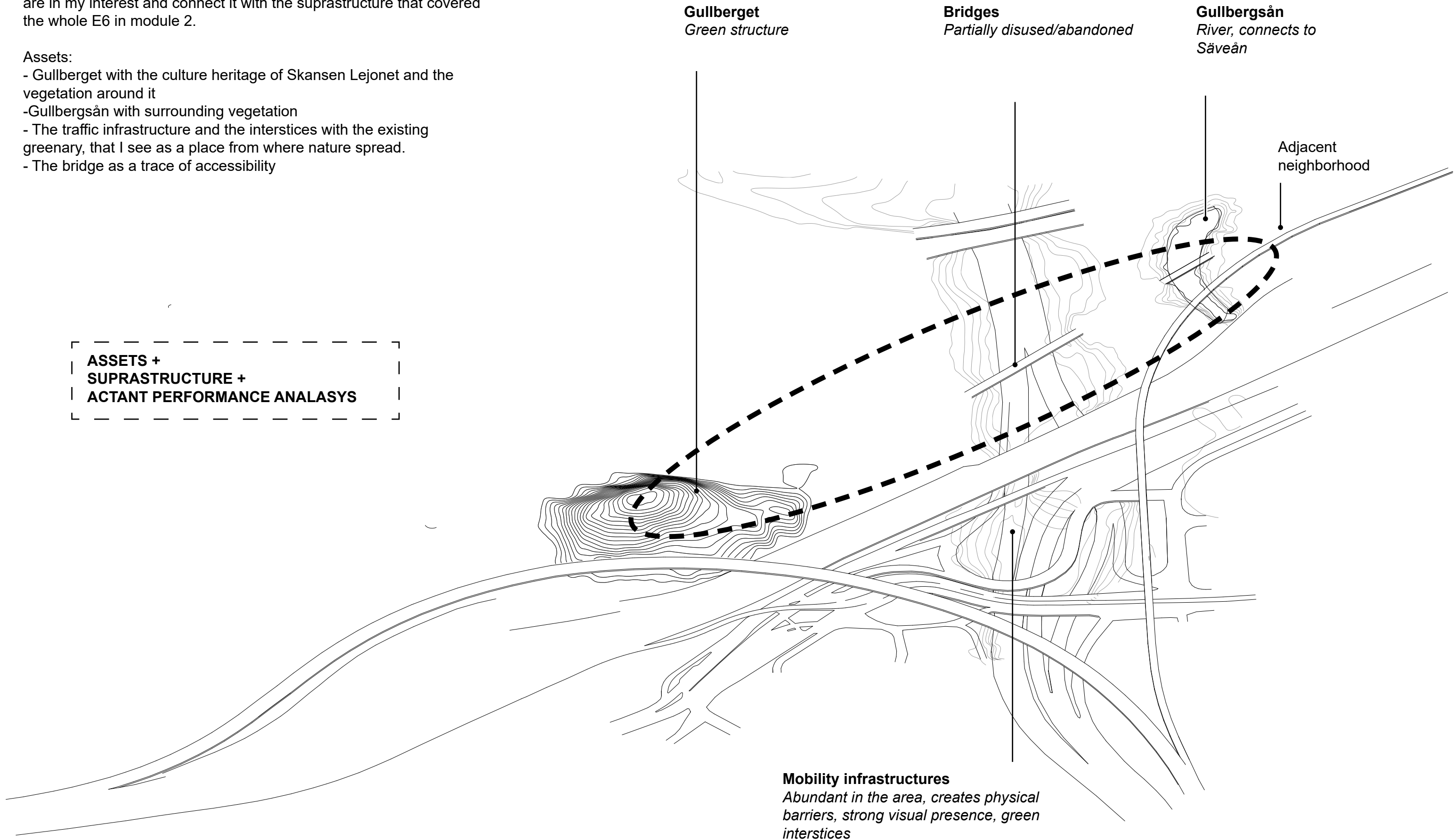
Neighbourhood overview

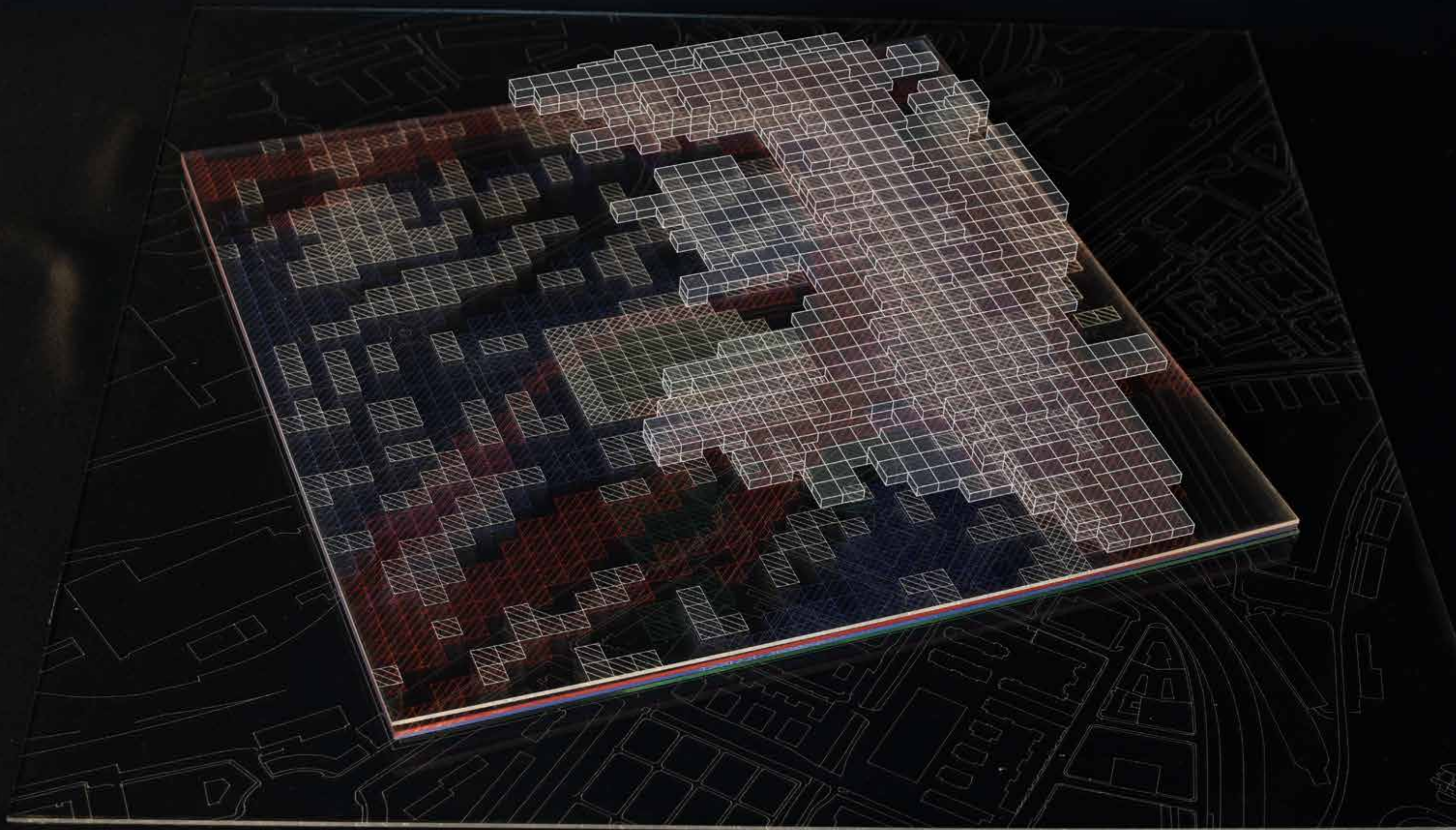
The in-depth project takes place in an edge condition between the neighborhood Gullbergsvass and Marieholm/Olskroken. The aim in this module has been to depart from working with some assets that are in my interest and connect it with the suprastructure that covered the whole E6 in module 2.

Assets:

- Gullberget with the culture heritage of Skansen Lejonet and the vegetation around it
- Gullbergsån with surrounding vegetation
- The traffic infrastructure and the interstices with the existing greenary, that I see as a place from where nature spread.
- The bridge as a trace of accessibility

ASSETS +
SUPRASTRUCTURE +
ACTANT PERFORMANCE ANALASYS





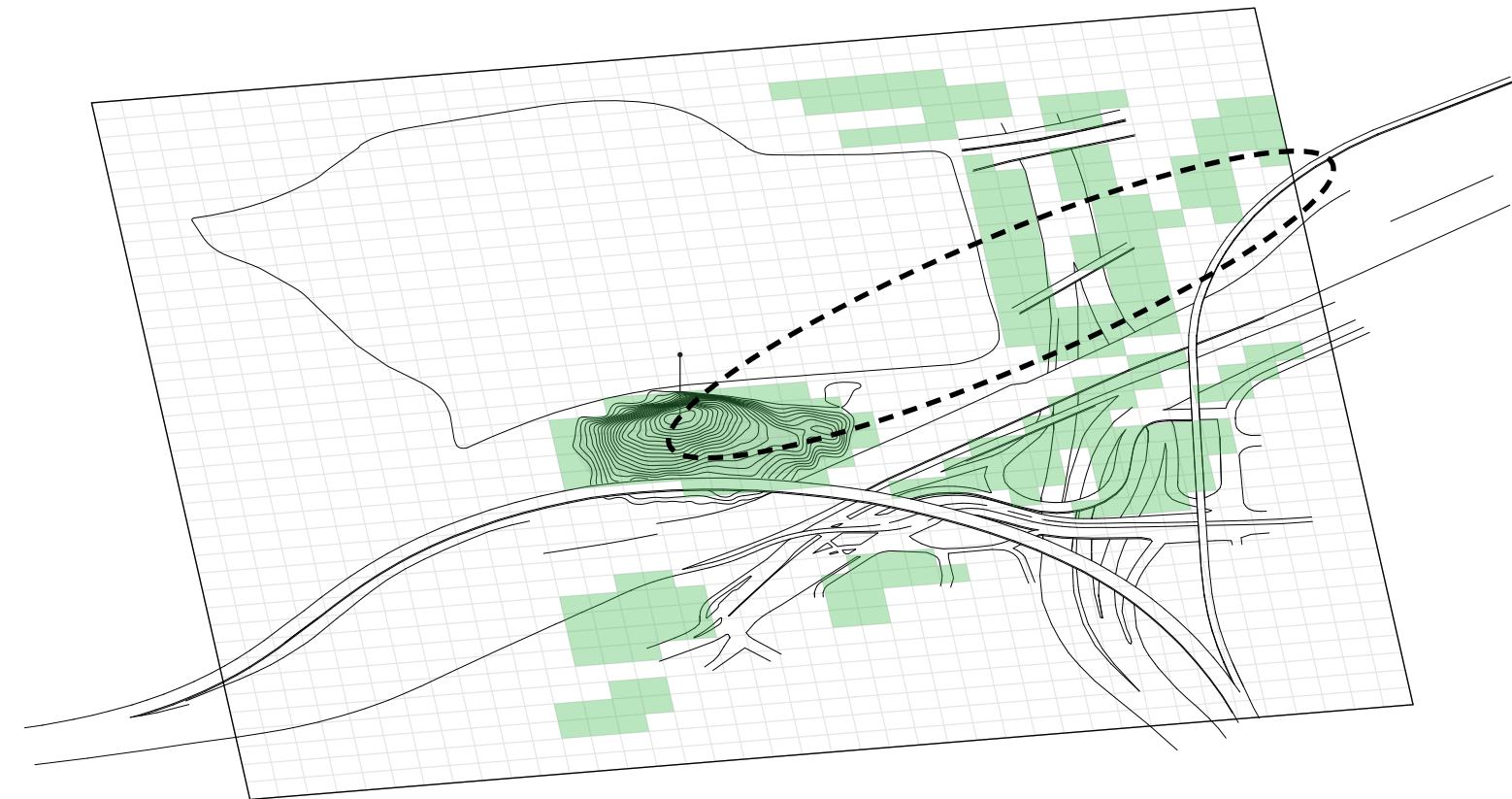
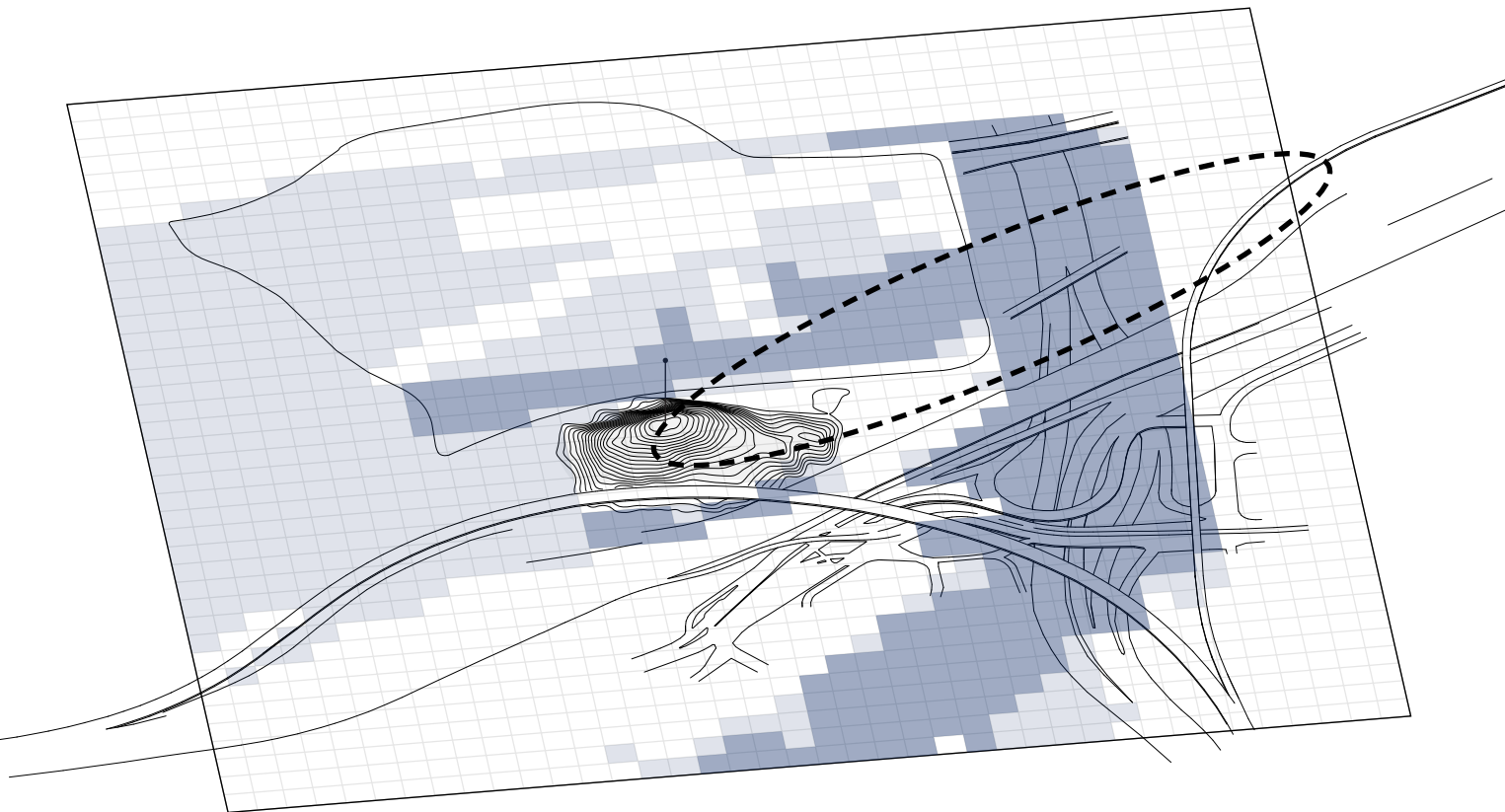
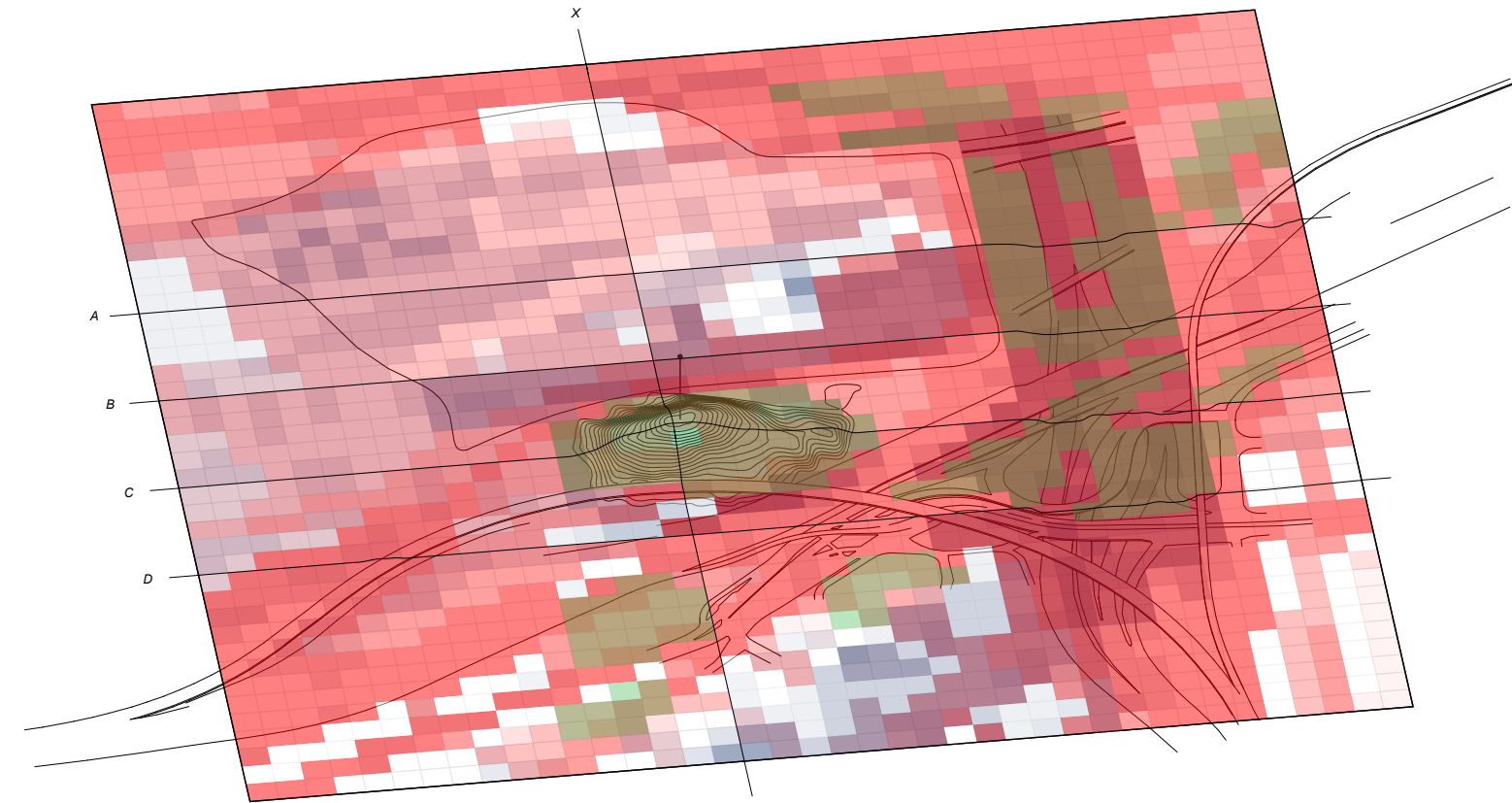
Suprastructure - if departing from node



Actant analasys - Water and Green structure

By analysing how diffrent actant performs in a context can inform the design and make it possible to create good microclimates and spaces that suits different activites.

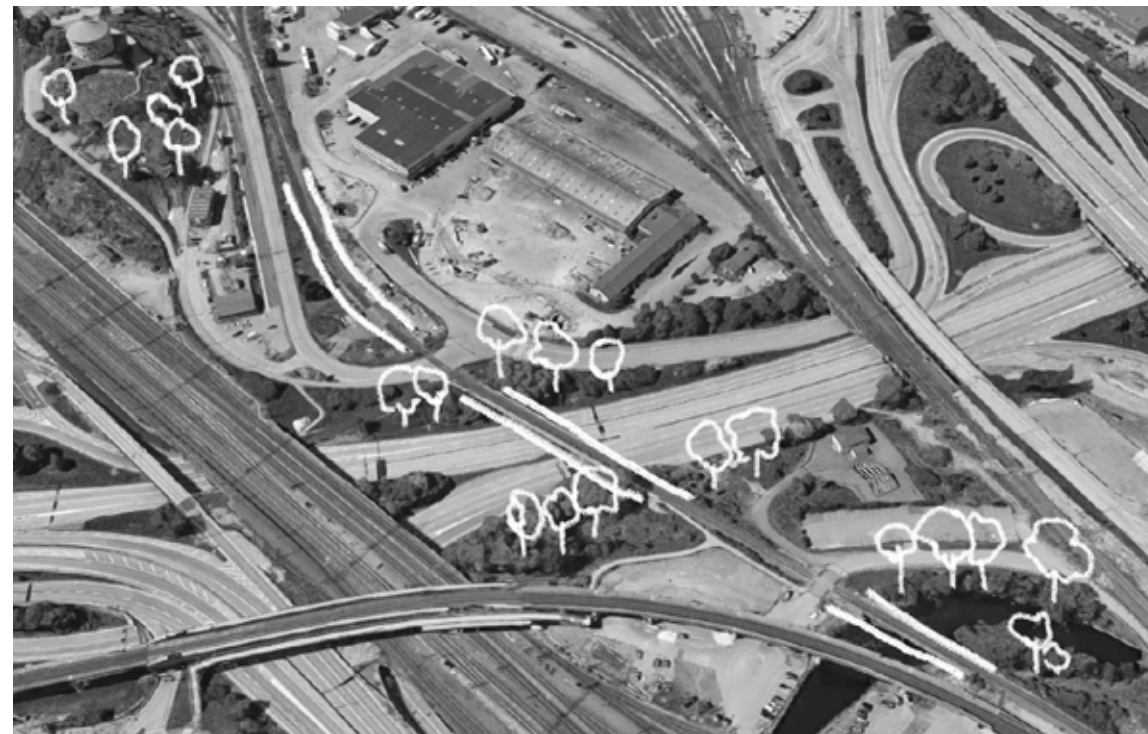
These illustrations, from module 2, show the overlay of our actant analysis of the exising context of gullbersvass, including noise, rain, flooding and vegetation and In the in-depth project I have identified the actant of rain, wind, sun and inclination as important when working with vegetation as the key actor.



Photos from site



Vegetation around Skansen Lejonet



Skansen - Bridge - Water

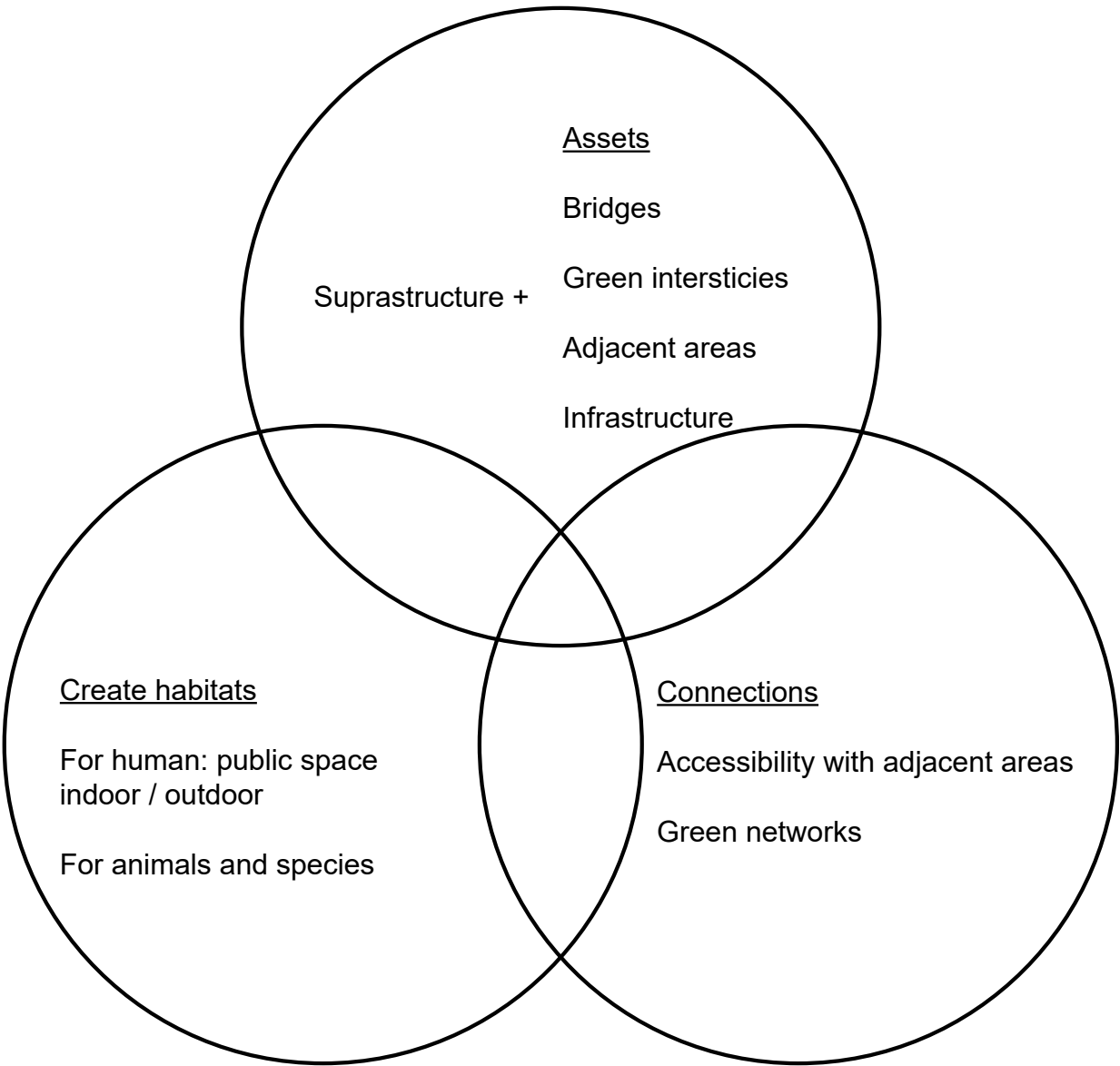


Vegetation - interstices - verges

Concept

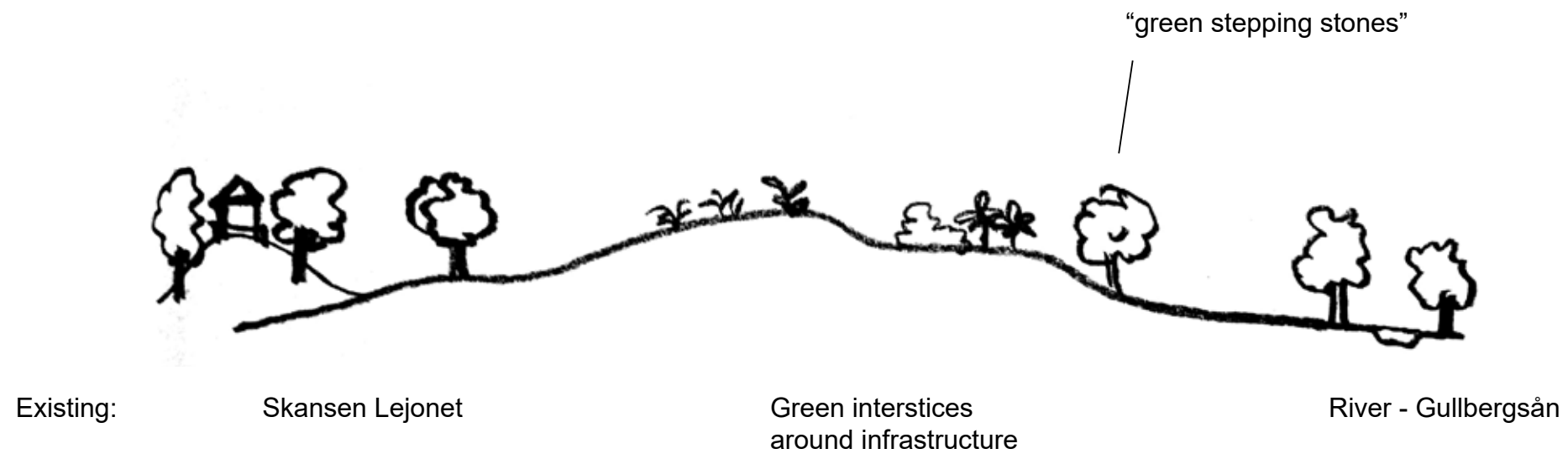
Concept

The aim has been to create a hybrid structure that departs from preconditions with the suprastructure and the identified assets and create habitats for both human and nature. Human habitat as public space that houses both indoor and outdoor activities and habitat for species. The new structure also tries to provide new connections with adjacent areas and to connect green networks in the city.



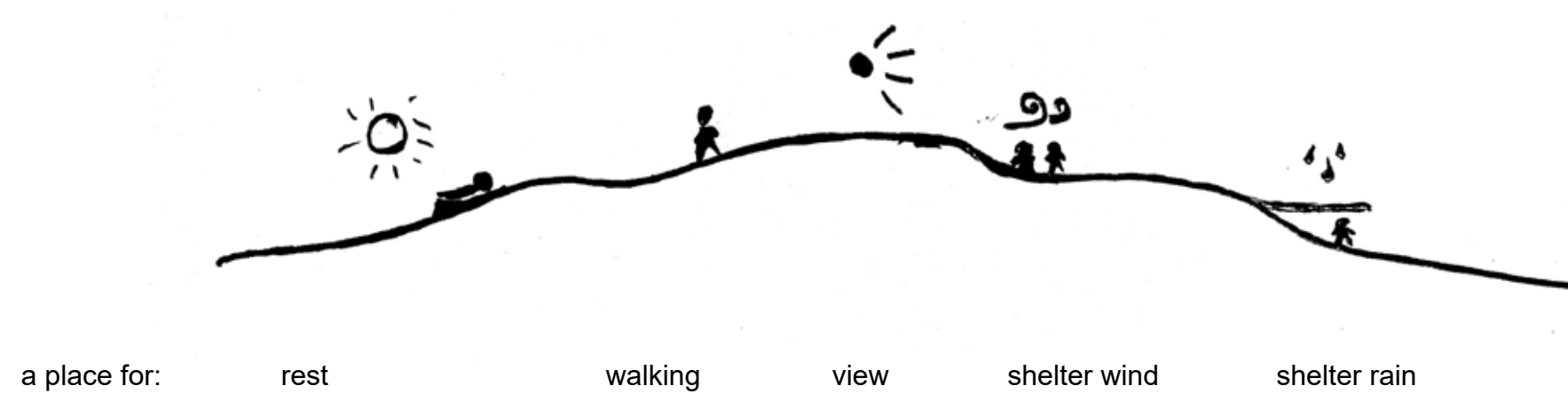
Concept of connectivity

- the structure supports and connects the green network in the city.



Concept of journey- path as experience

- To see the topography as a place for a transition between different activities. This connects to what you need when you're out hiking and exploring landscapes. A place for rest, walking, view, shelter.



Concept: Landscape + vegetation + wind

Photos: Gothenburg archipelago - Brännö

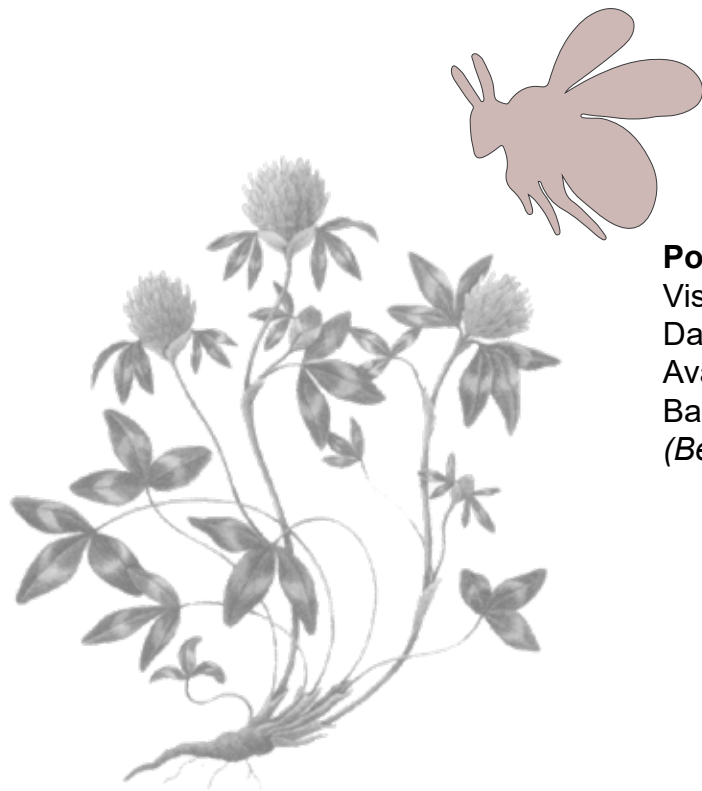
In this landscape the relation between vegetation, topography and wind is visible. The vegetation seek protection from wind and where there are lower points more water accumulate and allow for more vegetation and other types.



Concept - vegetation and pollinators

Hard surfaces and logistic infrastructure dominate the area today and there is a lack of green areas. Both for human and other species the proximity to a green area is important for their presence. Also having connection between different green areas, green networks, to make species able to move have an impact on working ecosystems.

Pollinators are one example. They need a visual distance of about 50 m in between green areas to be able to move in between. Even buildings can be a vertical barrier as so highly trafficked roads. I therefor see the suprastructure as an opportunity to connect over barriers.



Pollinators - bee
Visual distance: about 50 m
Daily journey: about 400-800 m
Avarage height above ground: 2 m
Barriers: Hard surface, building, open water, heavy trafic.
(Bee connected, 2017)

Vegetation
Biodiversity
Variation
Season



Meadow
- habitat for pollinators and tactile for human

Suggested spieces - season

Vår
Vintergäck
Vårkrokus
Skilla
Sälg

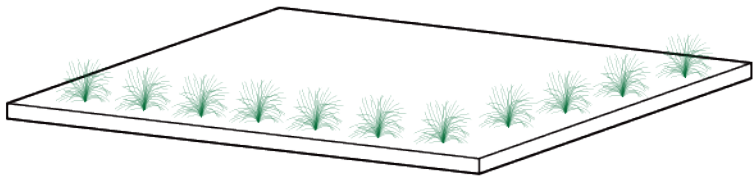
Sommar
Smultron
Klöver (i princip alla sorter)
Lavendel
Mynta
Citronmellis

Höst
Kungsmynta
Kärleksört
Ljung
Höstaster

Vegetation and soil depth

Concept
Productive Landscape

The new topography will generate a various soil depth which makes it possible for diffrent plants to grow.



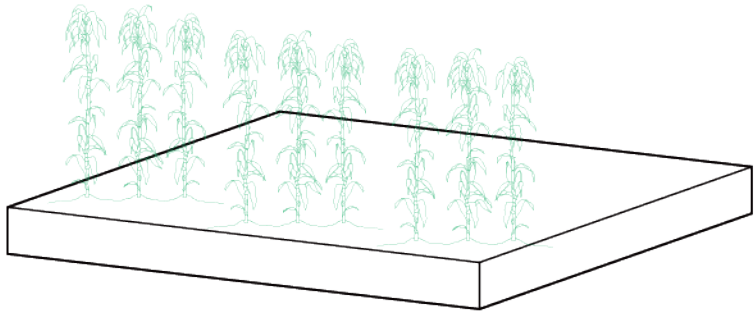
100-400mm

·Lawn

- Flowers
- Lavender
 - Orpine
 - Crocus

- Vegetables
- Spinach
 - Sugar snap
 - Rhubarb

- Herbs
- Rosemary
 - Tarragon
 - Chive

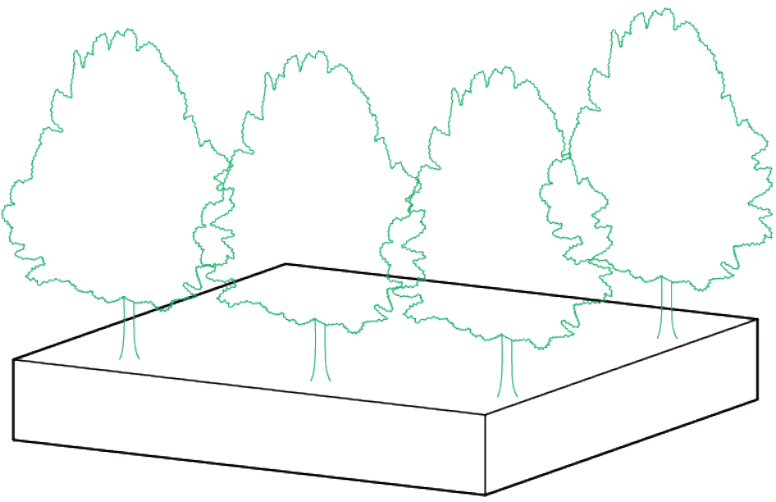


400-700mm

- Bush
- Blackberry
 - Pine tree
 - Mock-orange

- Vegetables
- Tomato
 - Zucchini
 - Rocket

- Crops
- Carrot
 - Potato
 - Kohlrabi



700-1000mm

- Fruit trees
- Pear tree
 - Apple tree
 - Sweet cherry

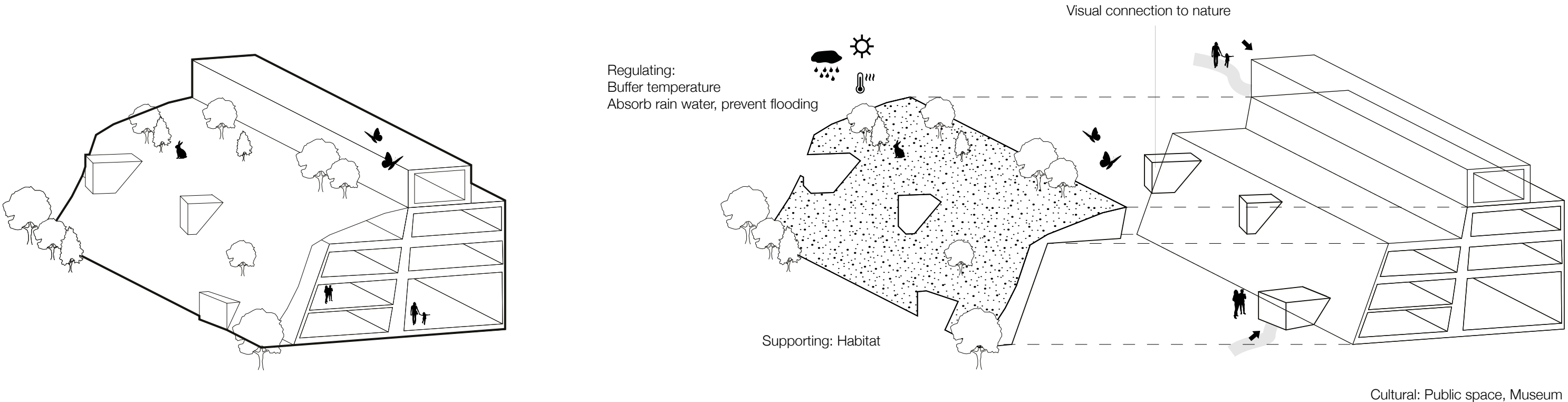
·Arbor

Gothenburg - Vegetation zone 2
Our site is situated close to the water and located in the centre of the city where microclimate has a higher temperature than outside Gothenburg.
Pick vegetation that can grow in zone 2 and zone 1

What type of soil do we have? What vegation is sutiable?
Industrial area, contaminated, is it possible to grow food?

Concept - reference case study

The Gallo Romain museum in Lyon is a good example of a hybrid structure that works similar to my proposal. You enter the museum from a street on a higher lever. Then moving down the exhibition halls and leave the museum by entering the park. A cover of earth and vegetation provides several ecosystem services.




Gallo Romain Museum
Separating human activity from animal habitat
Architect: Bernard Zehrufuss
Where: Lyon, France

Concept - reference case study

The site of the Olympic Sculpture park used to be a former brownfield with traintracks that worked as a barrier between the water and the city. The hybrid building provide coexistence between people, nature and infrastructure and makes the waterfront accessible.



<http://www.weissmanfredi.com/project/seattle-art-museum-olympic-sculpture-park>

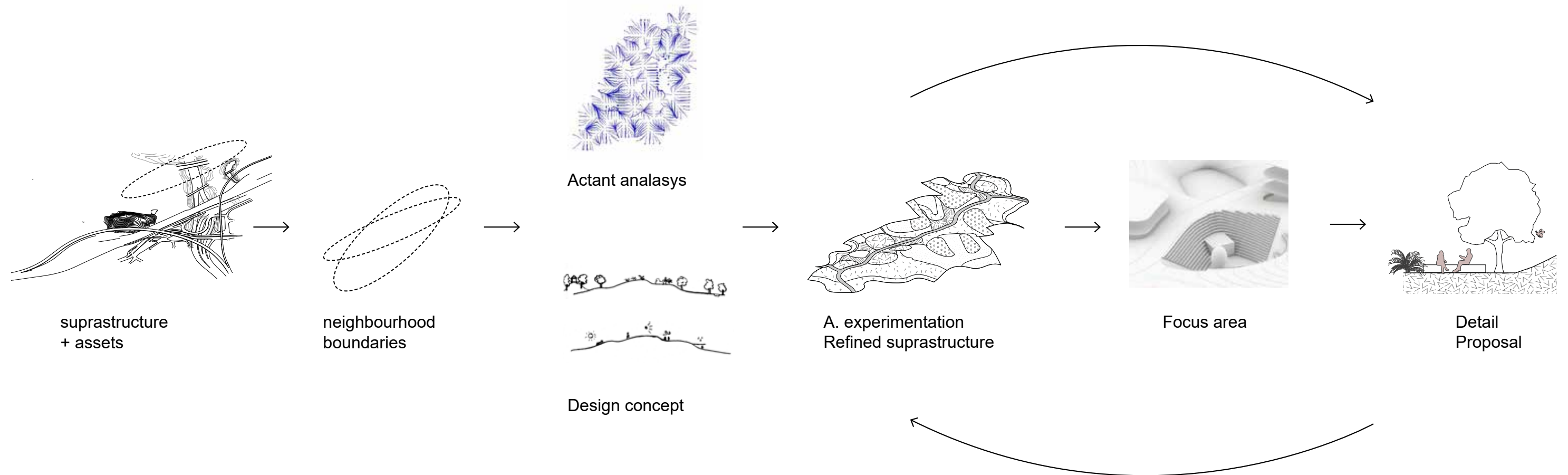
Olympic Sculpture Park / Seattle art museum

Architect: Weiss Manfredi

Coexistence of Art, nature and infrastructure

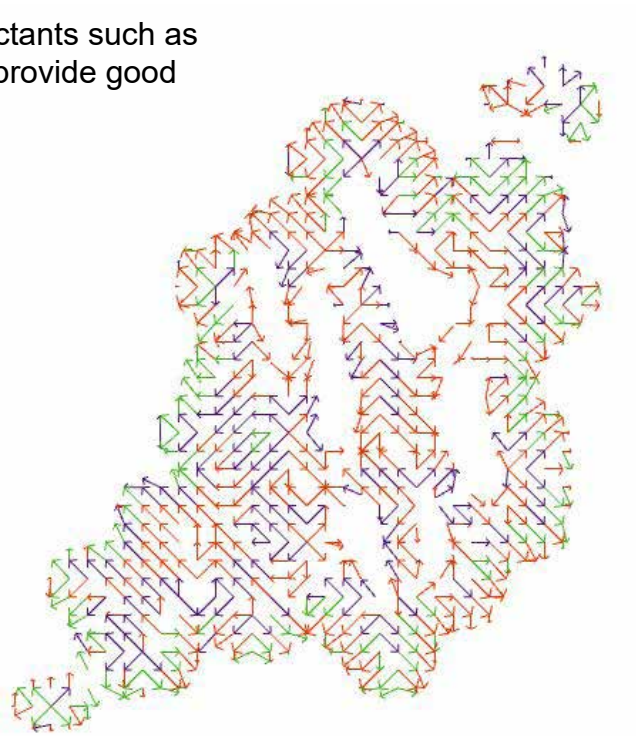
Method

Flow chart of process

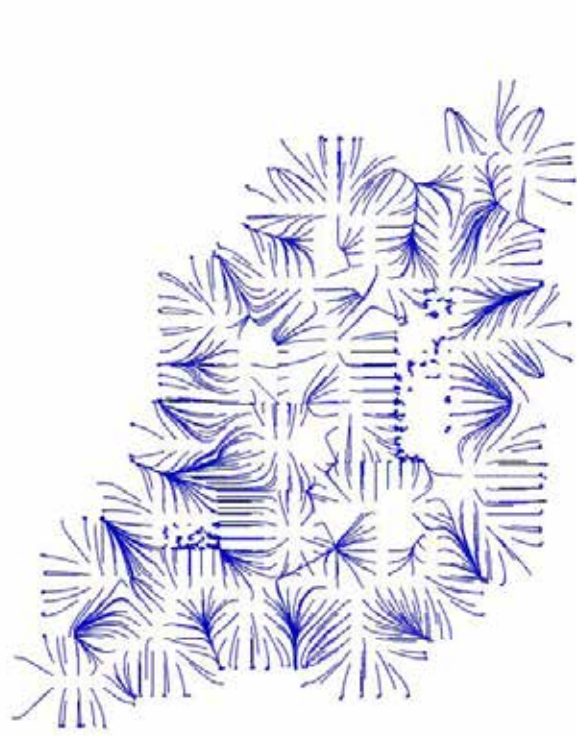


Actants performance analasys

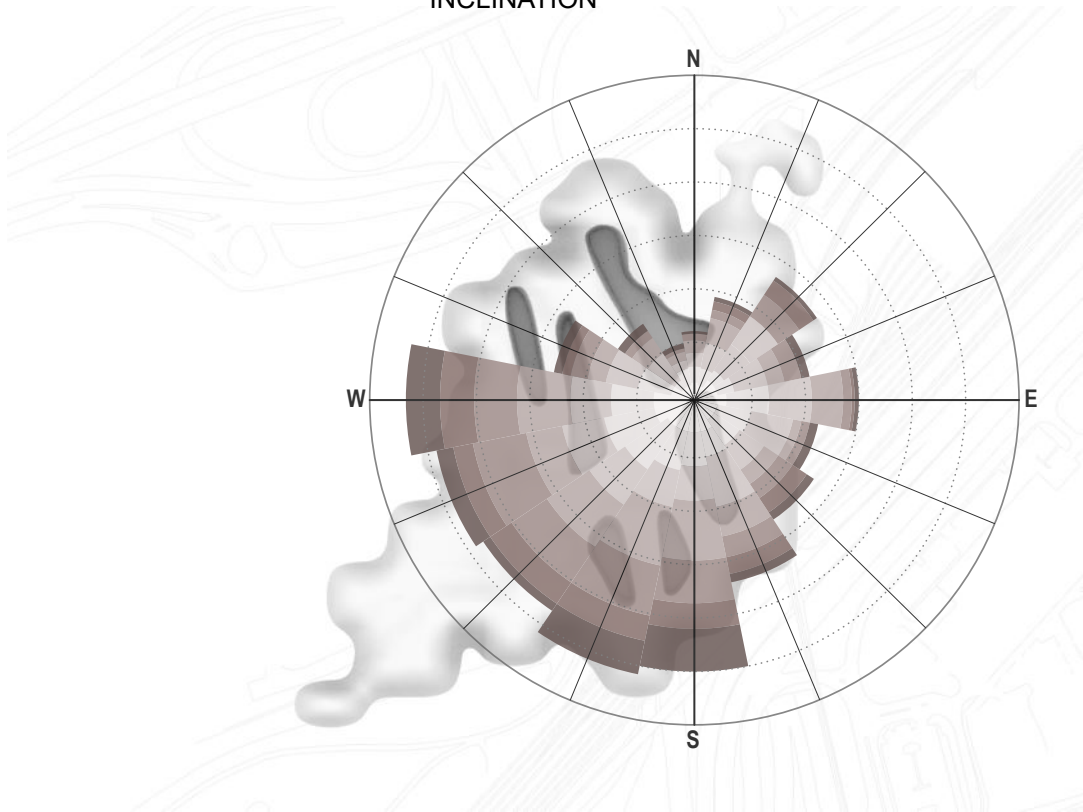
Vegetation has been the key actor in this project. Actants such as rain, wind, sun and inclination has been studied to provide good microclimate along the topography.



INCLINATION



RAIN

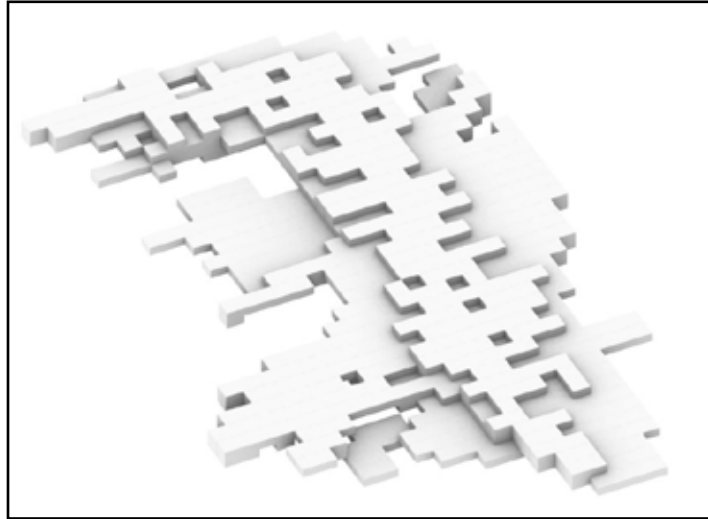


WIND

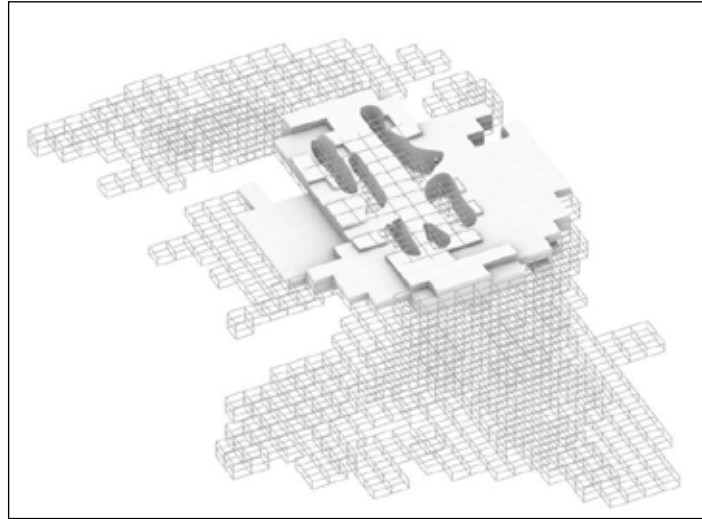


SUN

Evolutionary tree



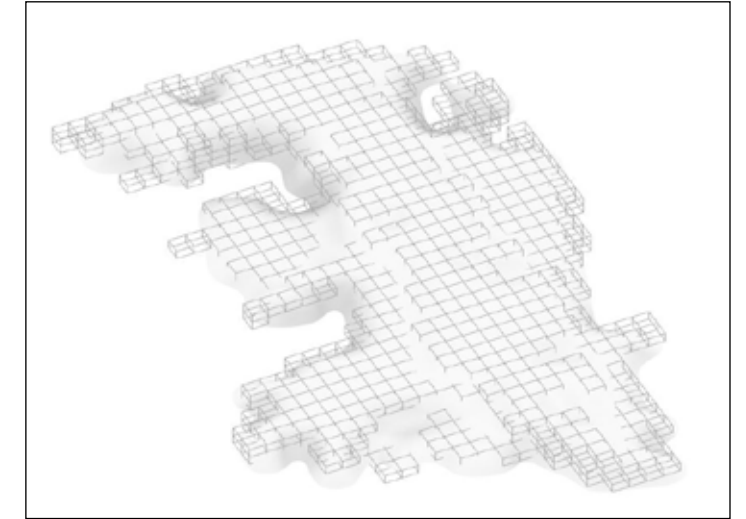
1. suprastructure = opportunities



2. depart from node, interstitial space "where nature can spread"



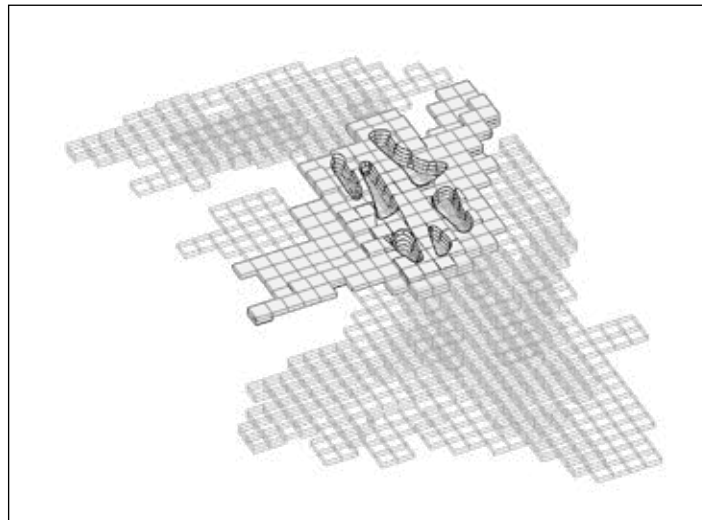
3. connections



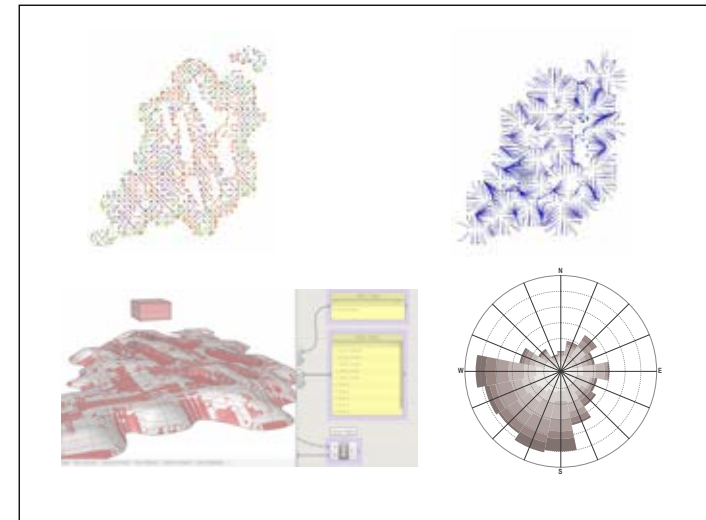
4. softer shape - how to work with contrast to grid



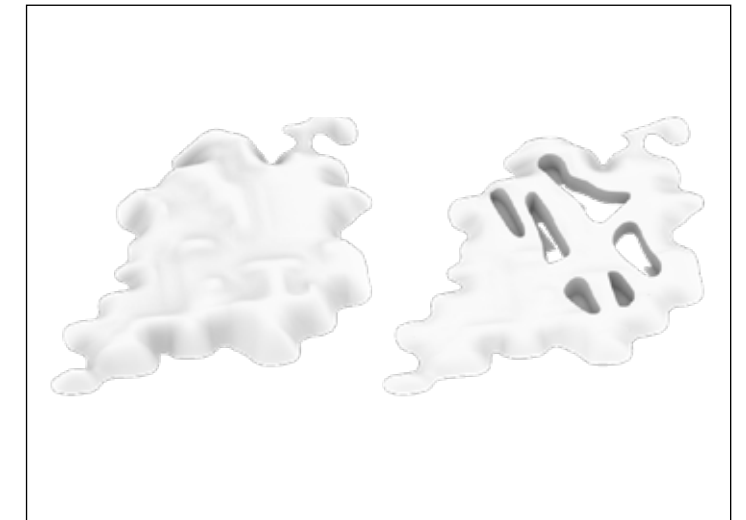
5. negotiation boundaries



6. use boxes between connections/assets



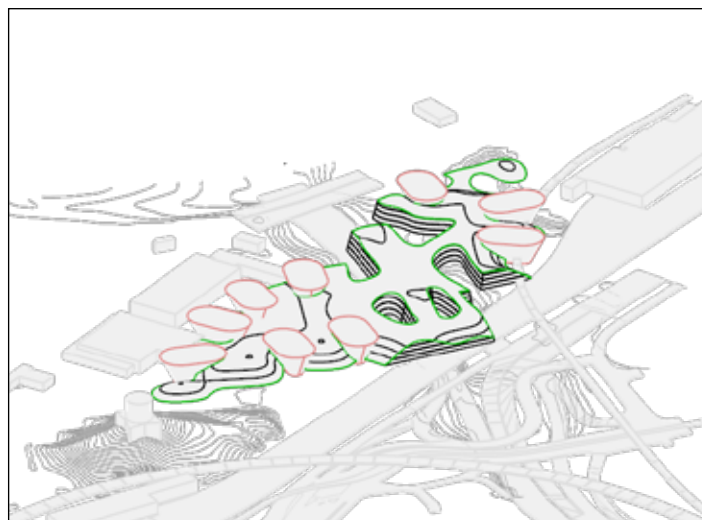
7. run simulation for analysing actants performance



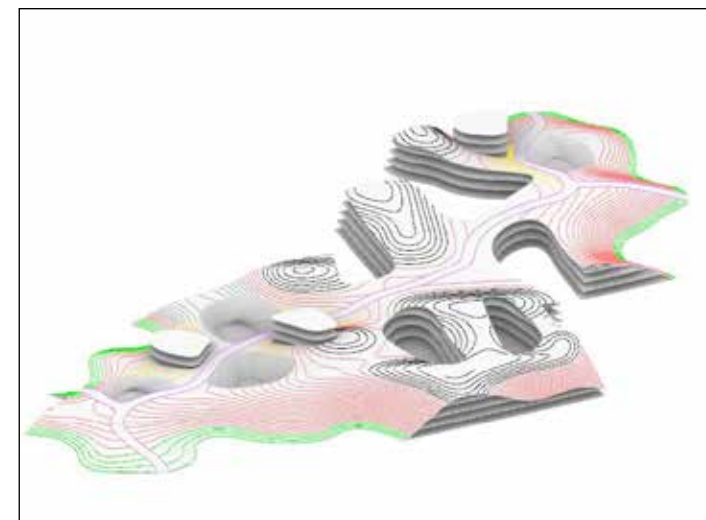
8. scale of structure, avoid barrier features...



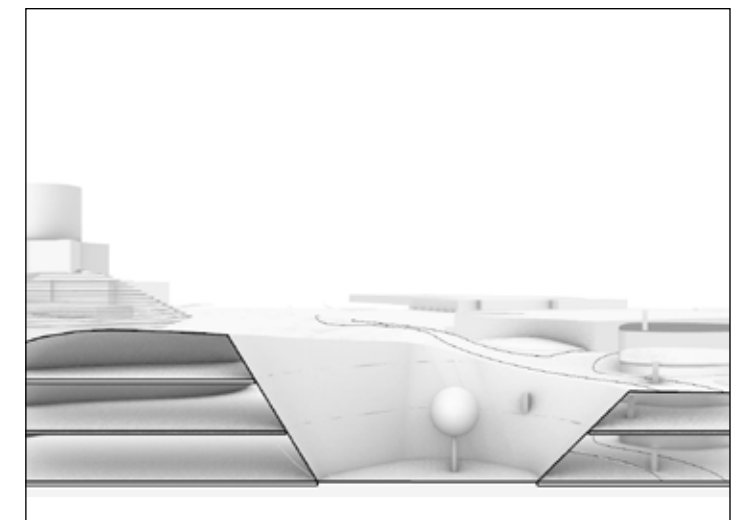
9. focus around walkable path



10. detailing, path, yard.....



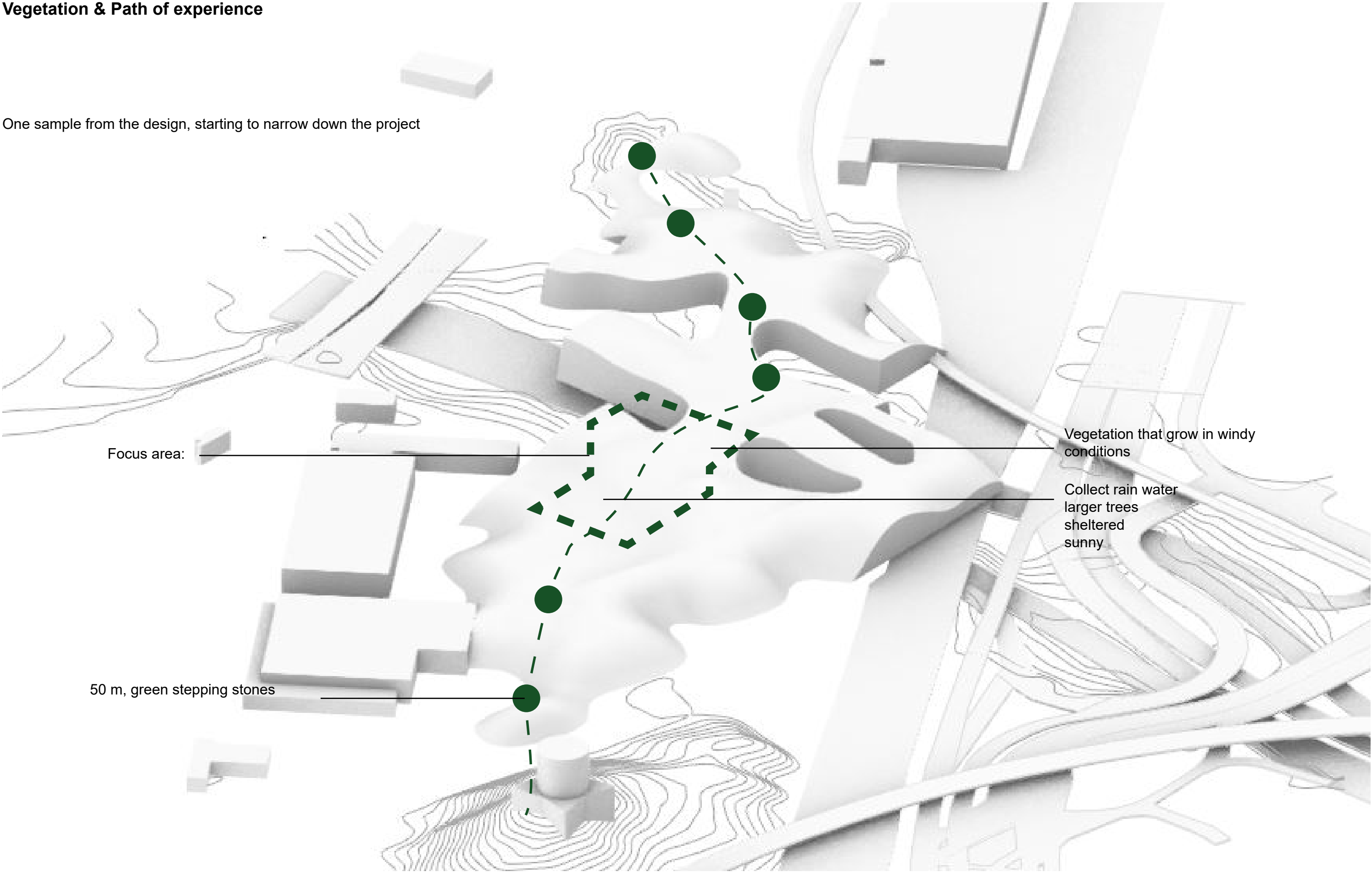
11. vegetation types + structure



12. yard design

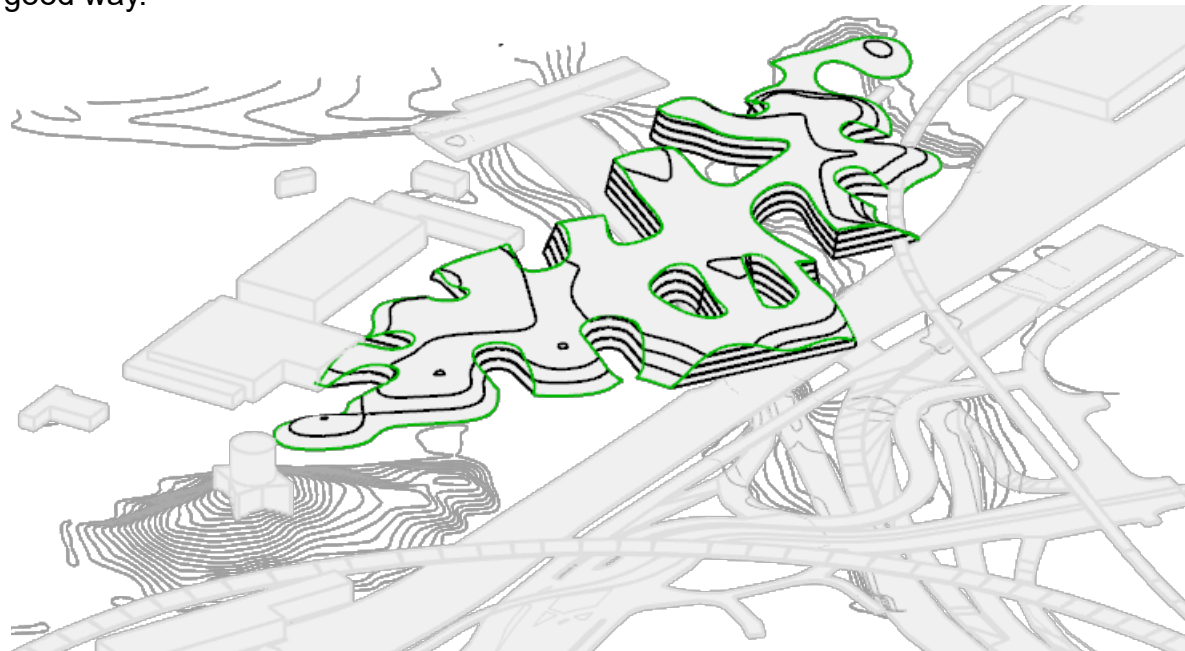
Vegetation & Path of experience

One sample from the design, starting to narrow down the project

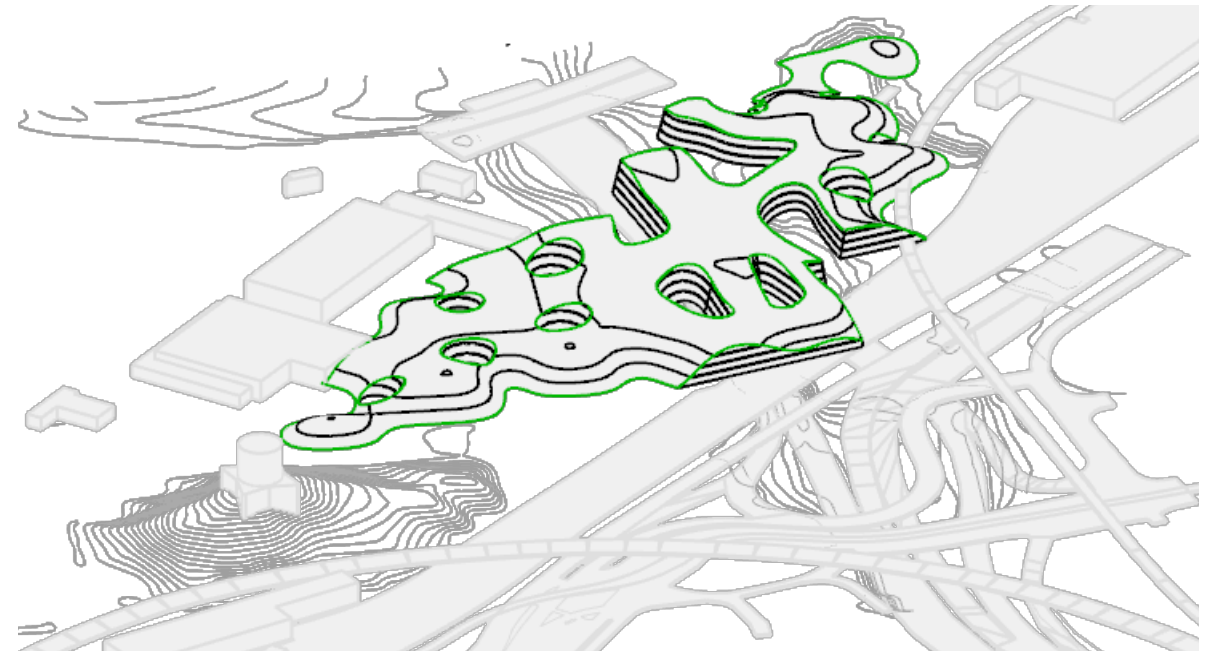


Porosity - size and shape of yard

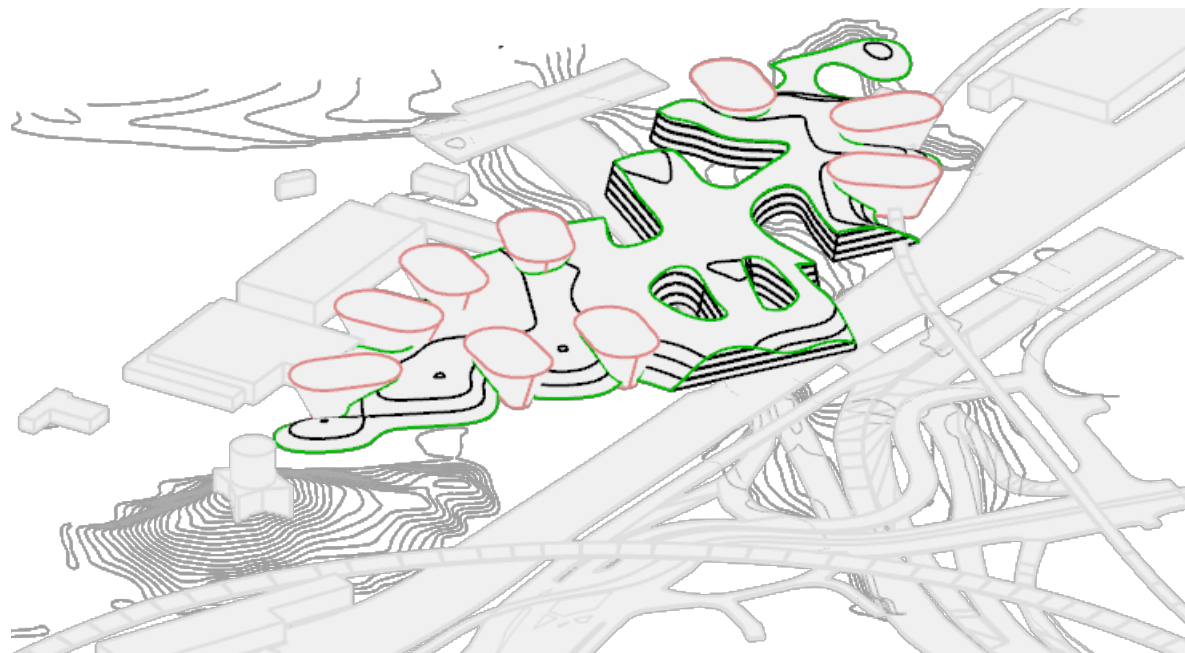
Some reflection about the concept about creating new connections and the large suprastructure almost becoming more of a barrier than the existing infrastructure, adjusted the height and borders of structure and adding more porosity to let in daylight to use the indoor space in a good way.



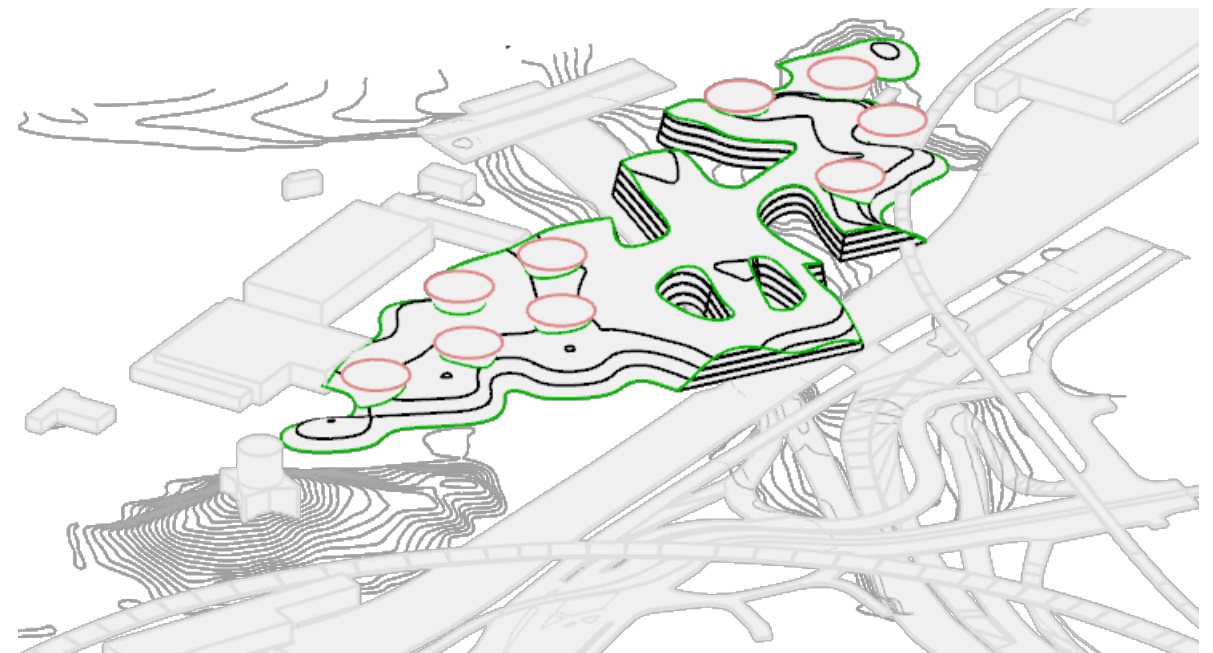
Yard with ellipse shape at edges



Yard with circular shape within landscape



Yard with ellipse shape at edges



Yard with circular shape within landscape

Square study

The yard works as a square.

This short study shows different sizes of squares that i´m familiar with.



Trätorget, Göteborg

18*34 m



St knut, Malmö

38*81 m



Kungssportplatsen, Göteborg

41*74 m

Square study



Artilleri, Göteborg

25*36 m



Artilleri, Göteborg

76*98 m



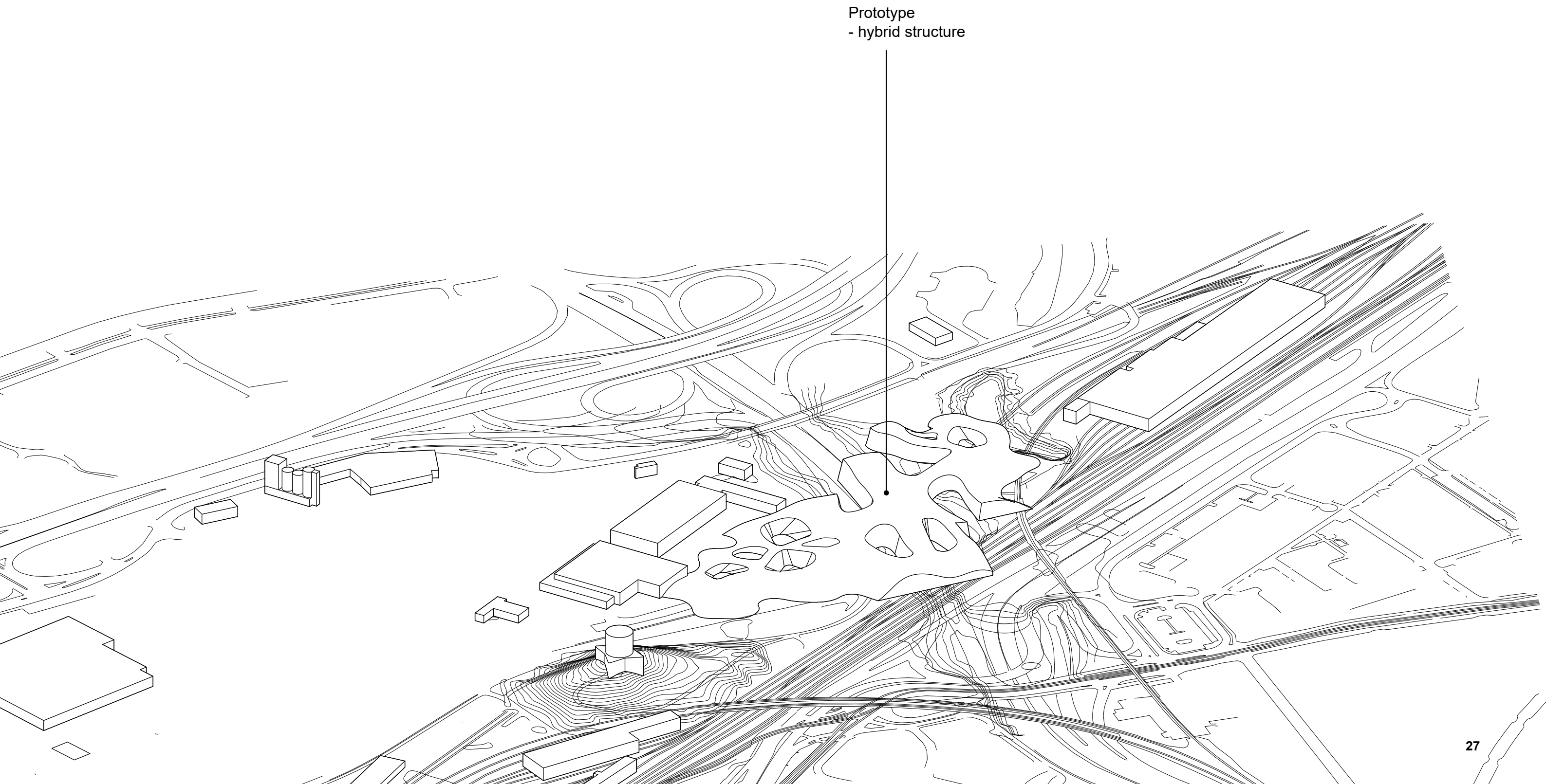
Tallriken, Malmö

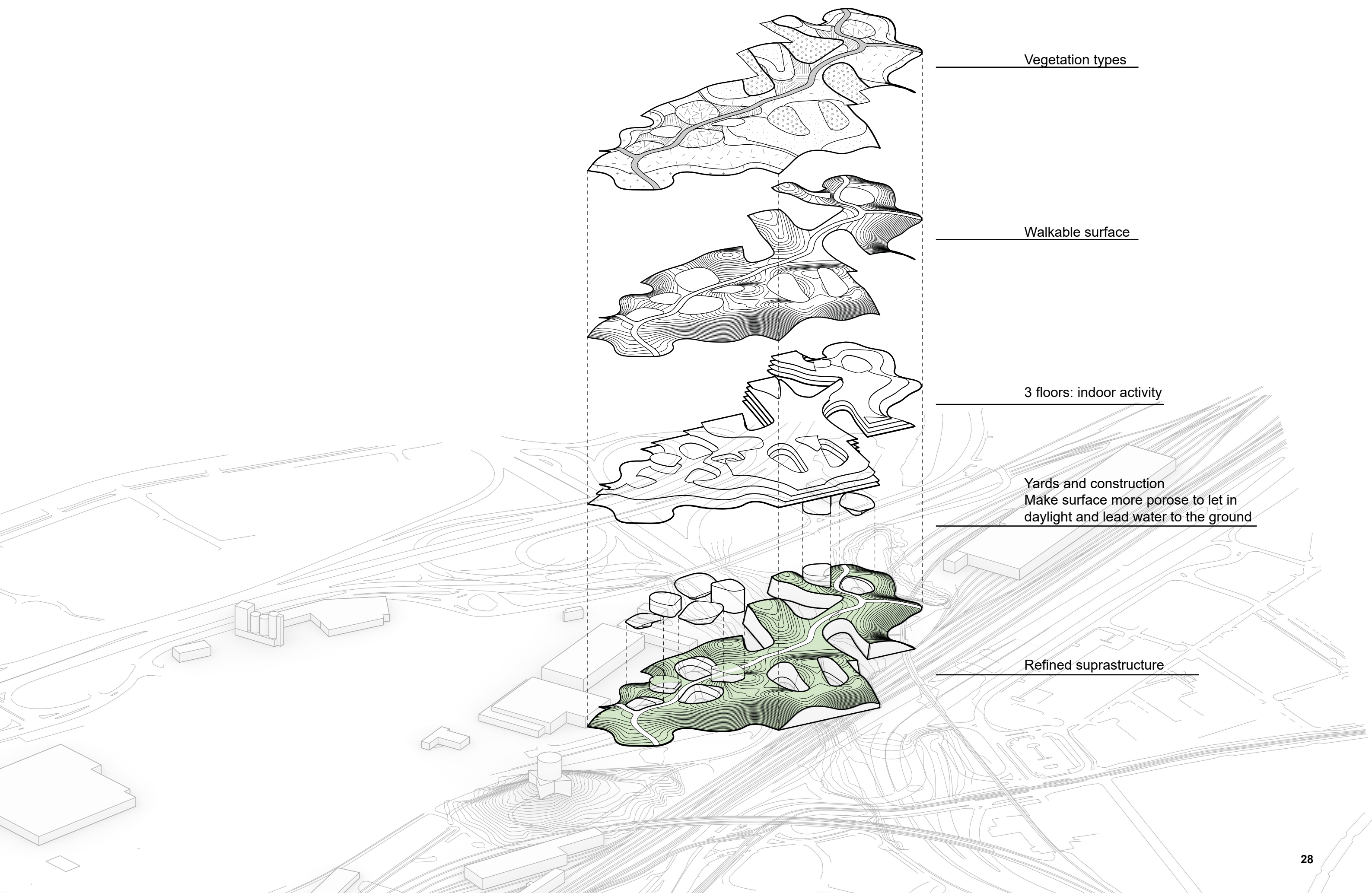
150*150 m

Prototype proposal

Prototype proposal

Hybrid structure stretch from Skansen Lejonet to Gullbergsån and creates new connections and support green networks in the city.





Vegetation types

Walkable surface

3 floors: indoor activity

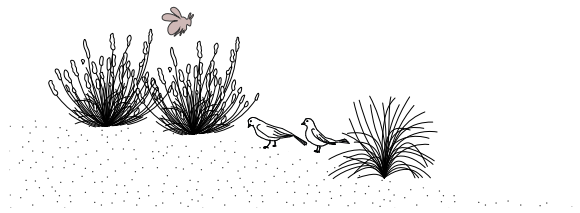
Yards and construction
 Make surface more porose to let in daylight and lead water to the ground

Refined suprastructure

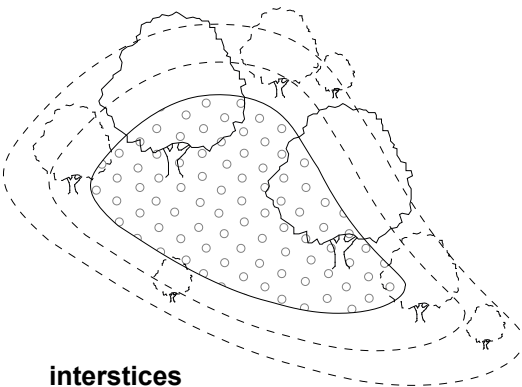
Prototype proposal - vegetation types



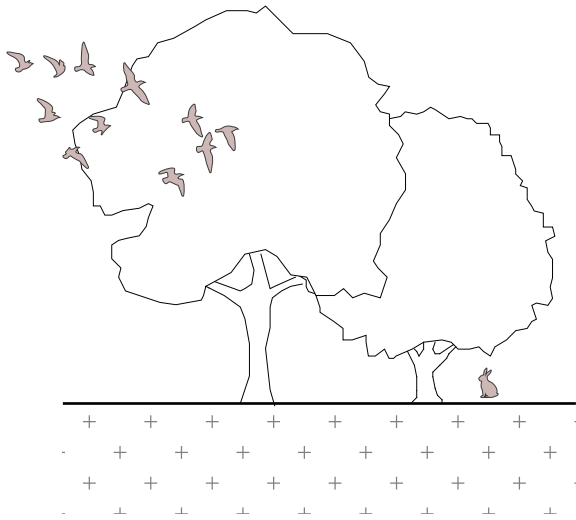
Hard surface
 transport



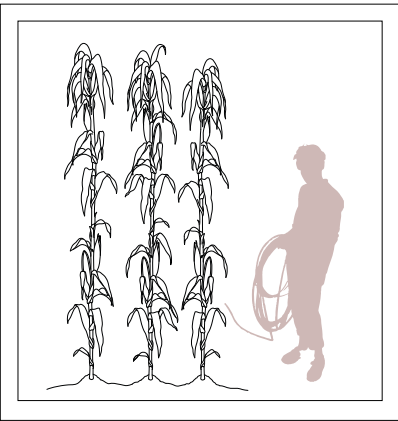
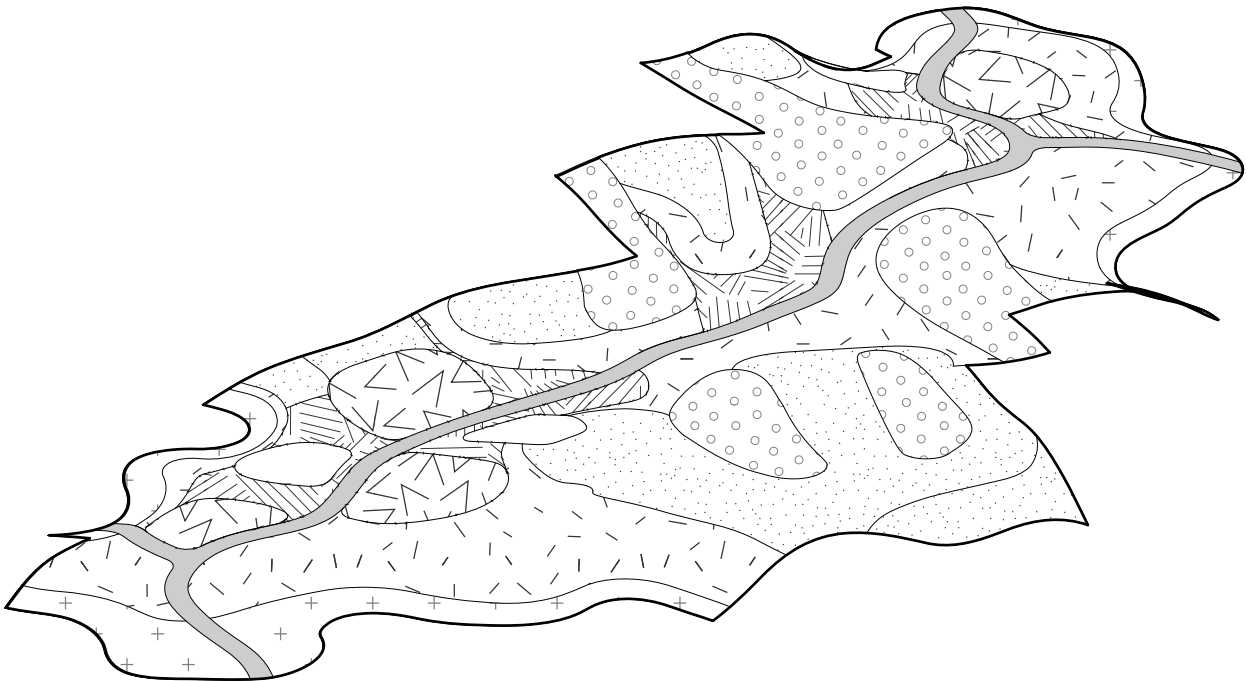
Resist wind
 Example: heather, stands wind, require little soil depth



interstices
 "where nature spread"



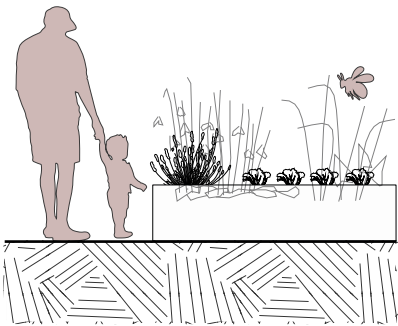
Trees
 Soil depth. Water accumulation. Wind/ less wind.
 Example: Birch, Pear



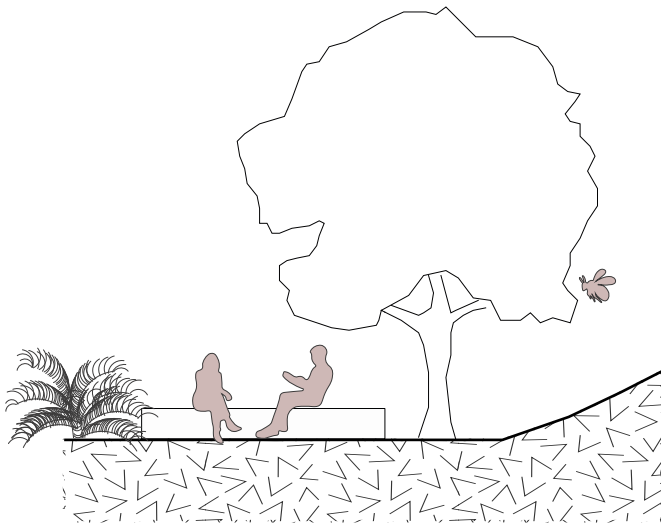
Greenhouse - atrium



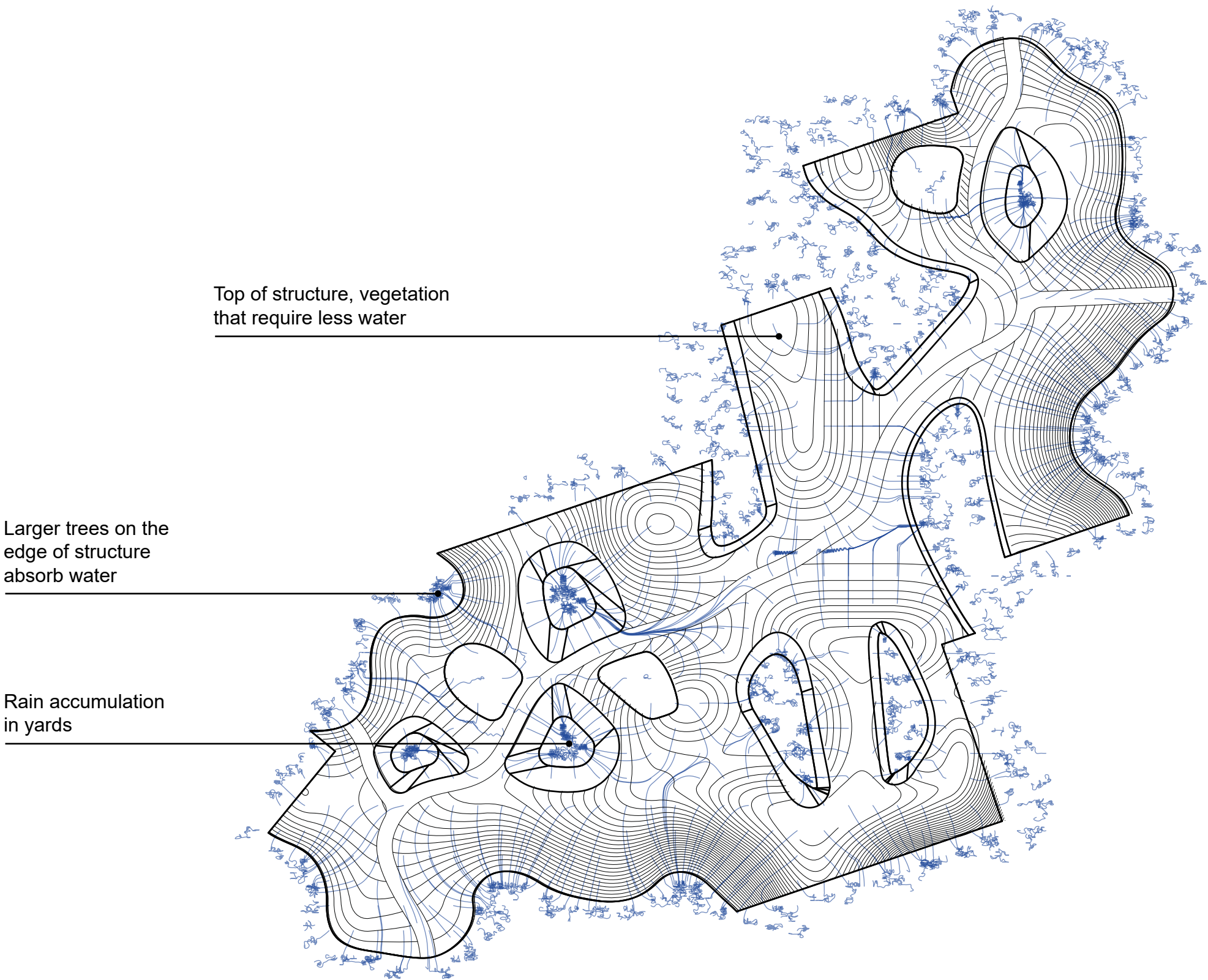
Meadow
 More wild, tactile, low maintenance.
 less soil depth, sunny, some resist wind, other drought
 Example: heather, mix for different season,



Semi hard surface
 Combined to be able to walk, soft border to other vegetation type
 example: herbs, bushes shape room, edible

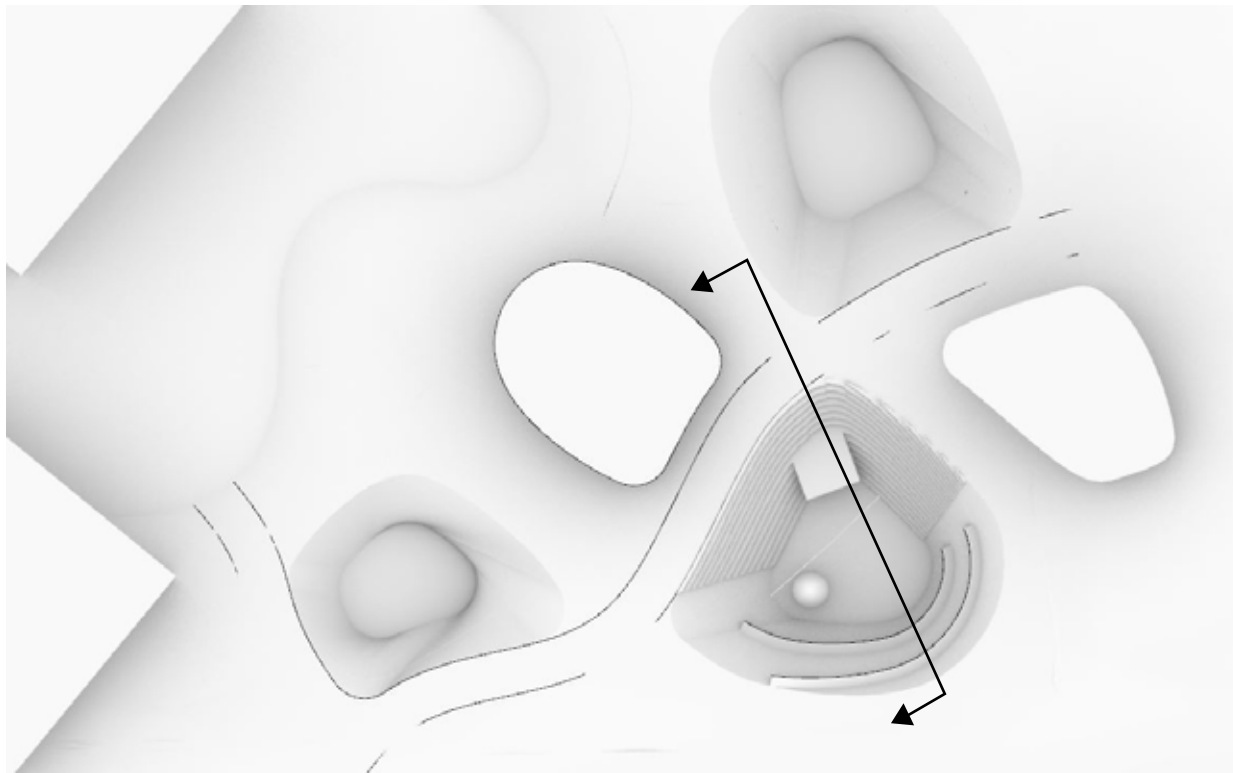


Yard
 Larger trees, mix of vegetation

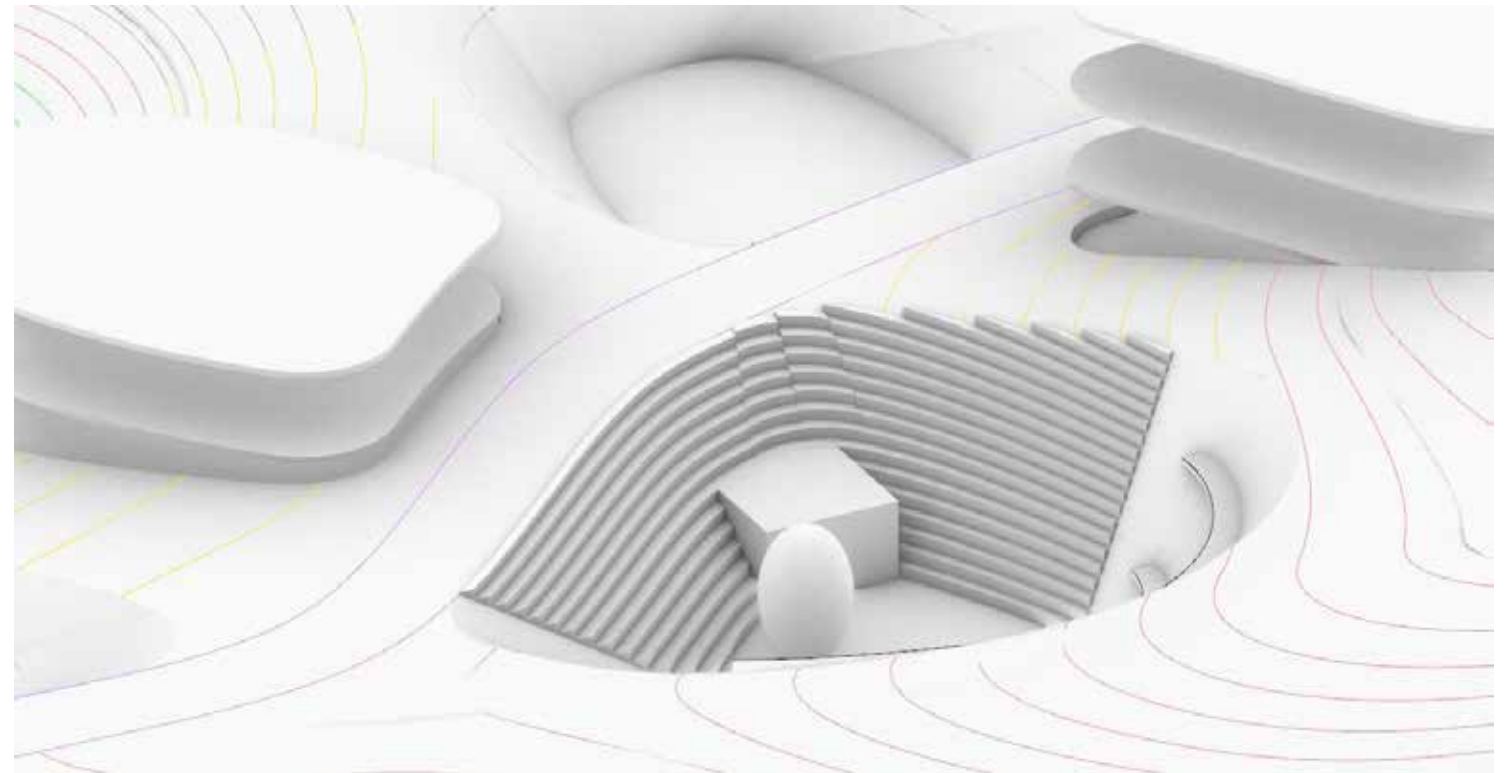


Prototype proposal - top view

The new topography is a large structure and to show the relation between the topography and the massing volume beneath it. How the hybrid works and the coexistence between nature and people.



Top view- section cut

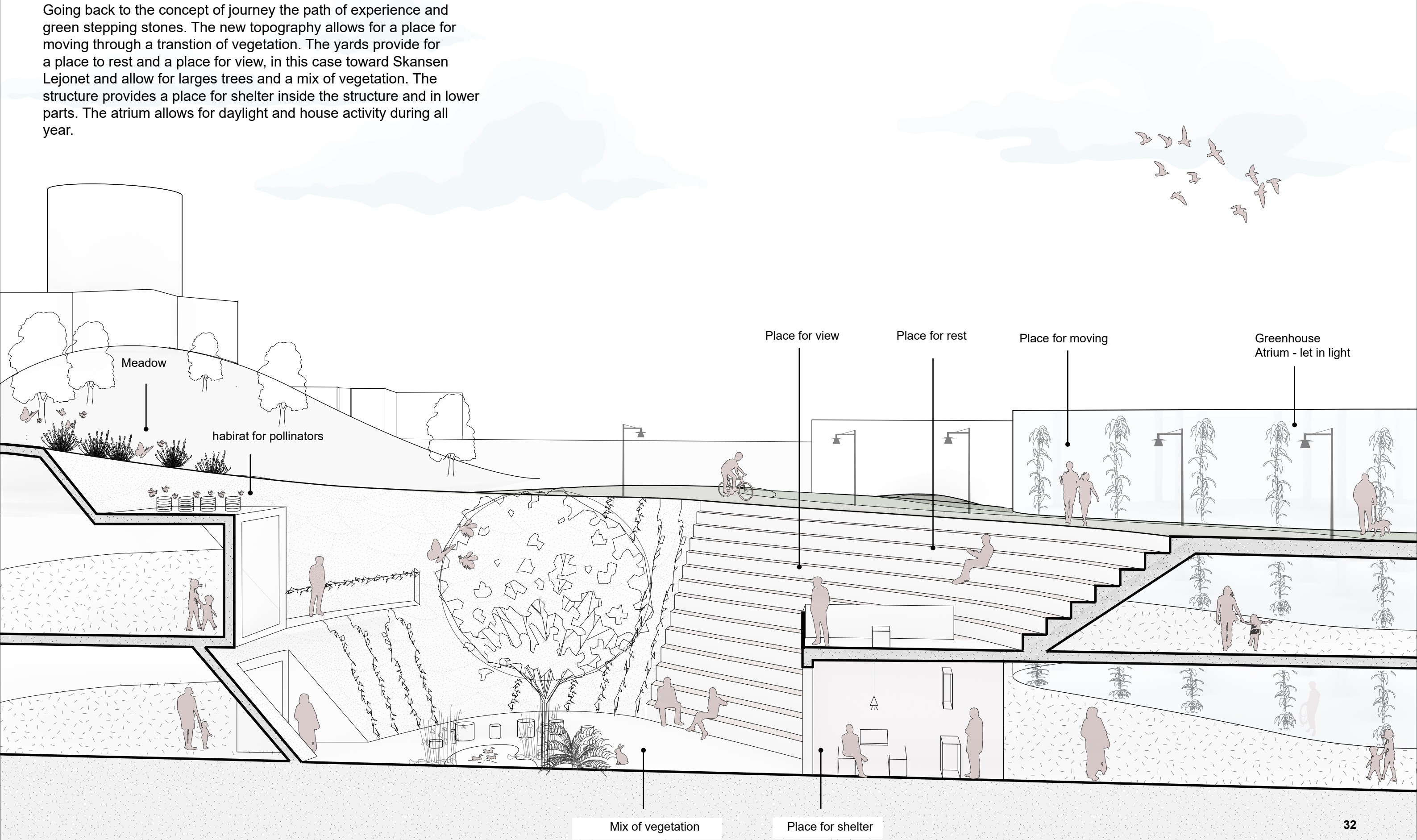


refine yard

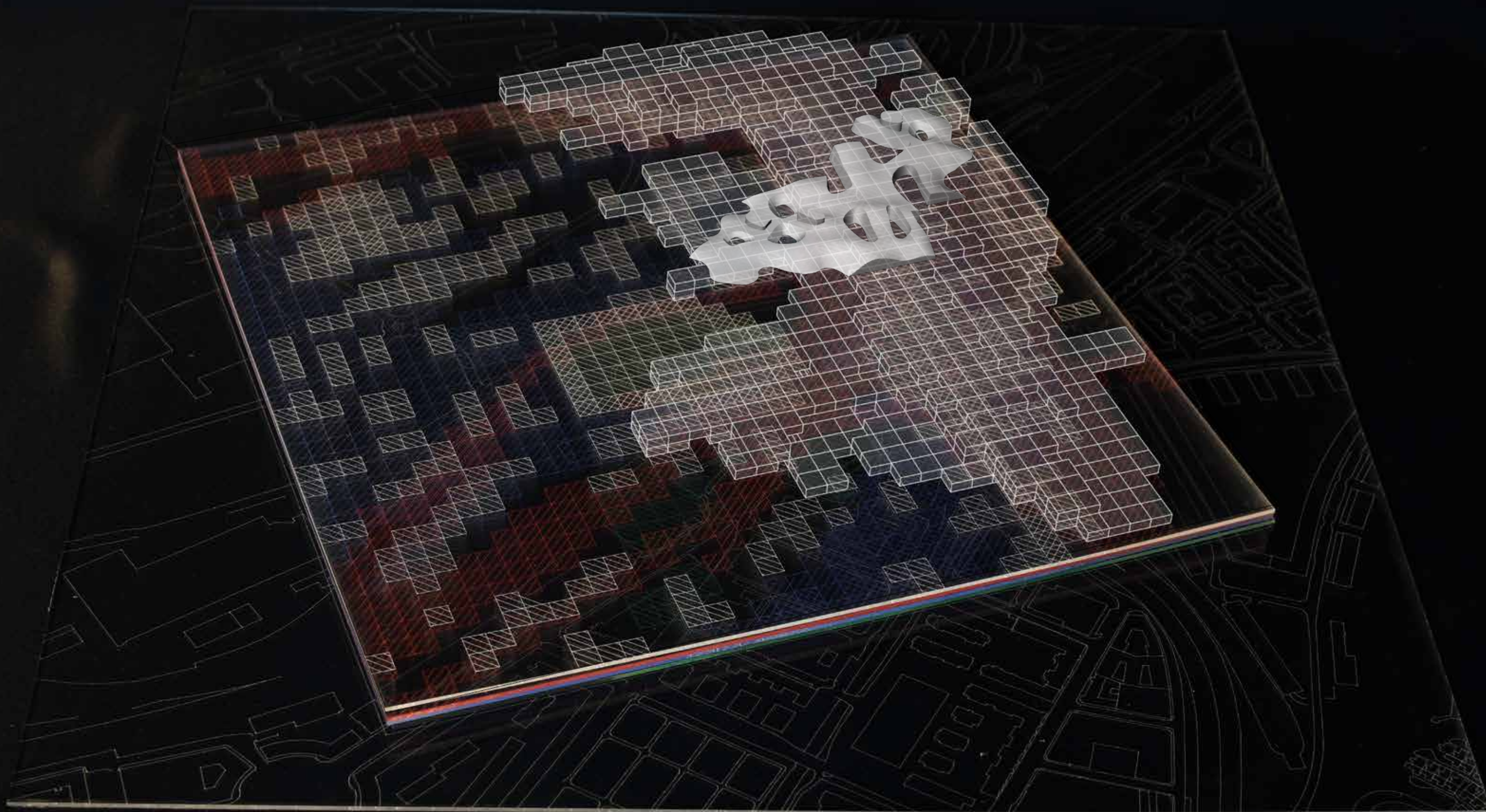
Section perspective - Relation yard & surface

Hybrid structure and the realtion between yard and surface:

Going back to the concept of journey the path of experience and green stepping stones. The new topography allows for a place for moving through a transtion of vegetation. The yards provide for a place to rest and a place for view, in this case toward Skansen Lejonet and allow for larges trees and a mix of vegetation. The structure provides a place for shelter inside the structure and in lower parts. The atrium allows for daylight and house activity during all year.



This is the answer to how I have translated this wireframe of opportunities into design.



Bibliography

Meta Berghauser Pont et al (2017) Bee connected, Gröna kopplingar för resilienta städer. C/O city

Guallart, V. (2008). Geologies : geography information architecture. Actar.

Jauslin, D. (2015). Infrastructure as landscape as architecture. Research In Urbanism Series, 3(1), 229-251.

Beeurban.se

Ekosystemtjänster i stadsplanering - en vägledning - C/O city

FIGURES

Figure 1

Olympic sculpture parc

<http://www.weissmanfredi.com/project/seattle-art-museum-olympic-sculpture-park>, retrieved 20201120