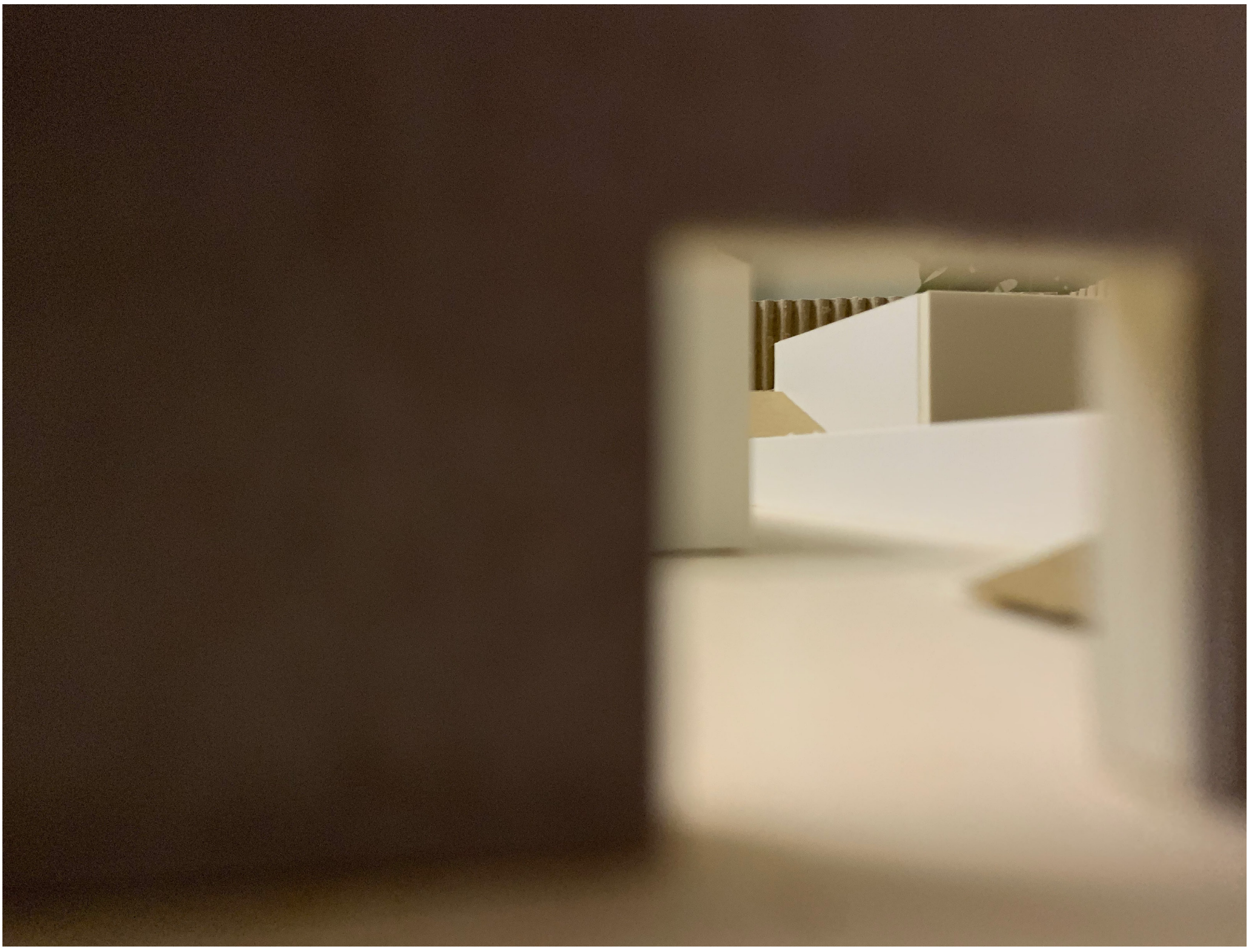
COMFORT STATION



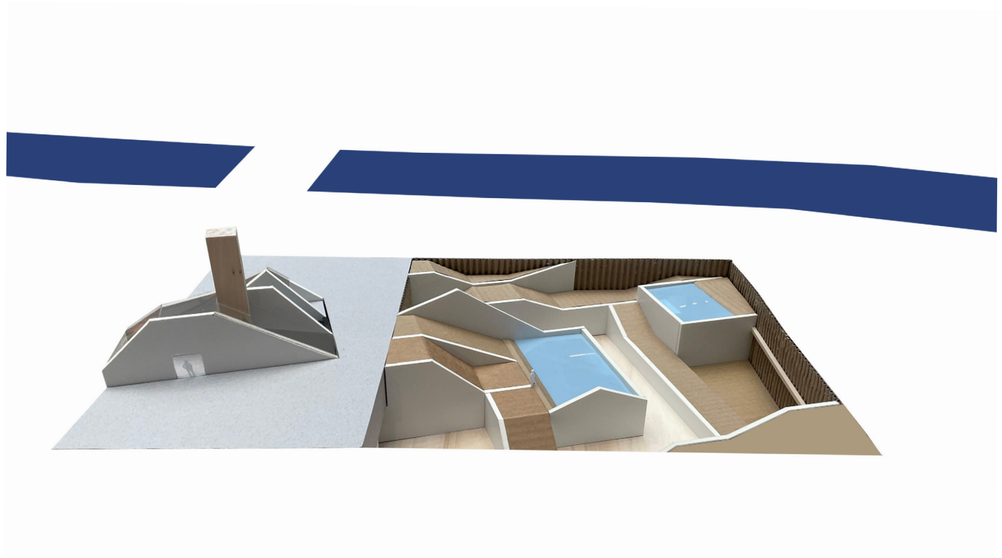
DETAIL PHASE

ALEXANDER ROOS

TEAM E - ROSENLUND

AUSD 22 - ARK128

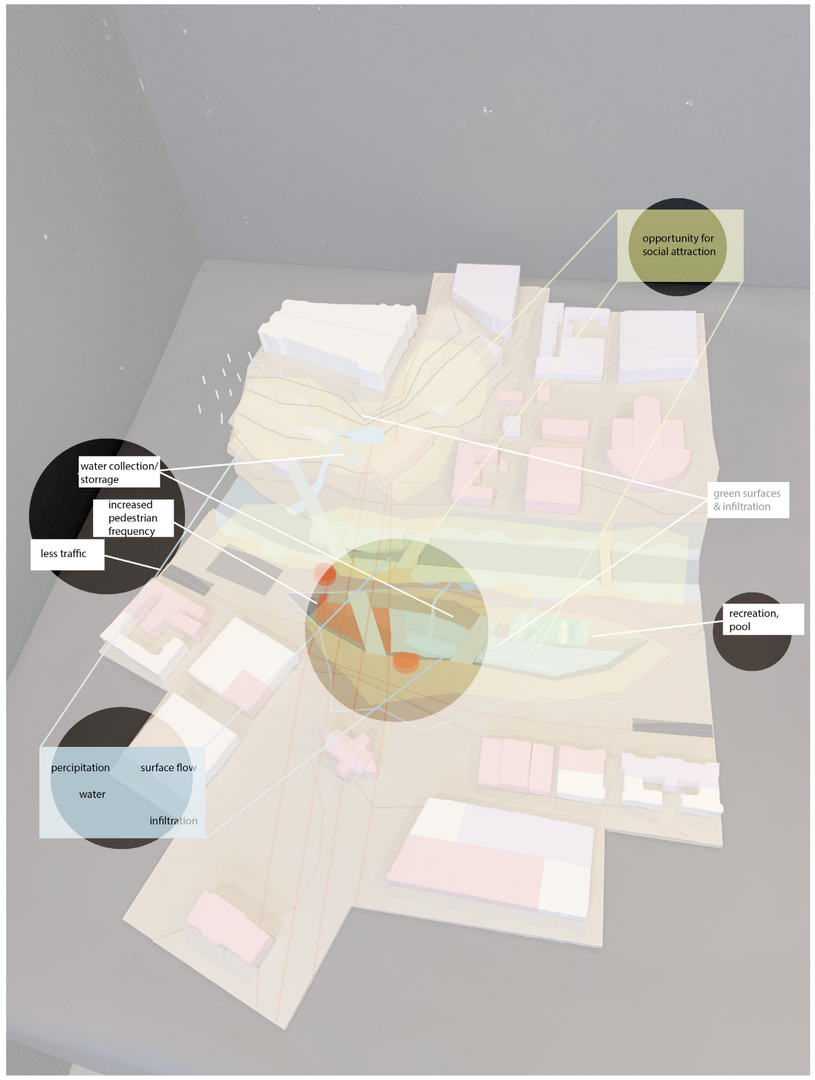
With the arrival of Västlänken to Rosenlund and Haga, officials expect a big increase of commuters due to availability. A scenario that suggests an opportunity to reduce the amount of car dominated roads that until now have occupied the site, leaving little room for people to enjoy and experience the area.

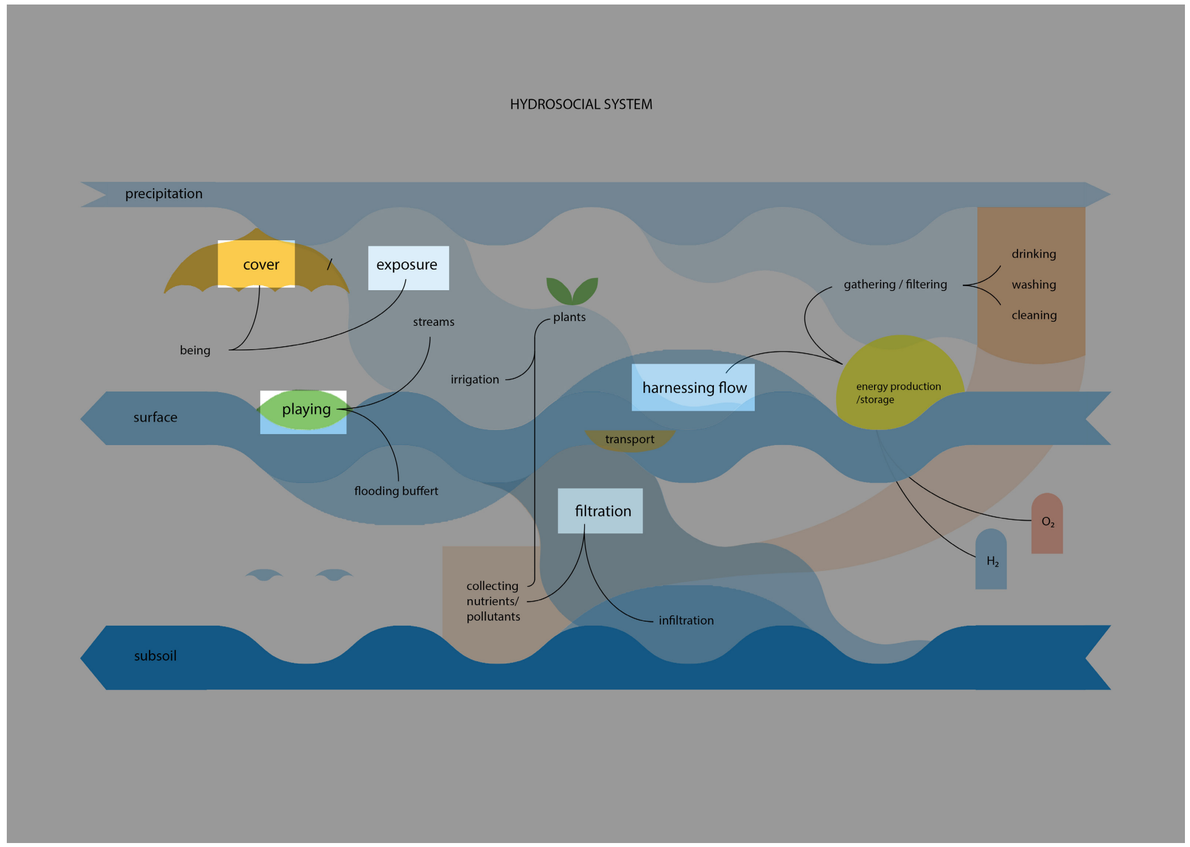


Comfort station aims to keep within the existing dig site, reusing the temporary metal sheet piling and utilizing some of the rock and clay thats extracted from the excavation of the train tunnel.

Having most of the structures below ground level offers a new perspective of the site to residents and visitors alike. While missing some of the visual connection to the canal, the public will be compensated by the opportunity to swim in its filtered water, powered by the flow of the water itself.

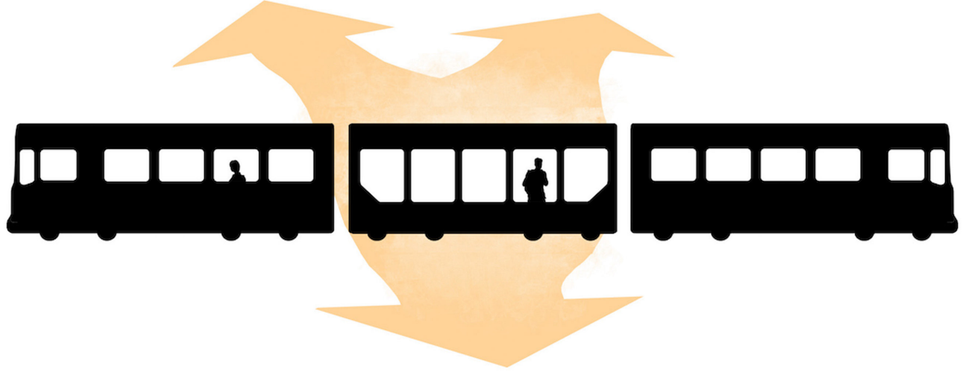
BACKGROUND





Keywords and phrases gathered from hydrosocial system and group model that I wanted to focus on moving forward.

MOTIVATIONS

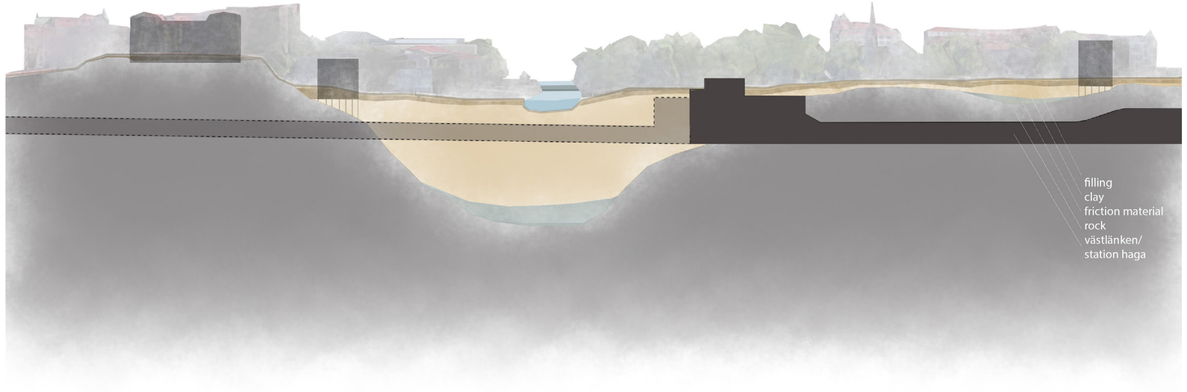


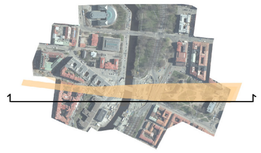
Around 15 000 people, or a 100 full trams are expected the enter or exit the Haga station every 24 h.

Even if Gothenburg is in close proximity to water the access to it and the quality is lacking according to a 2018 survey, that conludes that 50% of residents seems to be willing to pay to have access to cleaner waterways in the future.

A public swimming spot in the city could be part of a sollution and hopefully a welcome addition to the area.

2018 survey by Athesis Enveco AB, of residents relation to water quality in the city:
https://goteborg.se/wps/wcm/connect/e3ca19e1-06f9-46ab-9d59-0101ec166f45/Värdering+av+vattenförekomster+i+Göteborg.pdf?MOD=AJPERES





Ground conditions consists of clay and rock

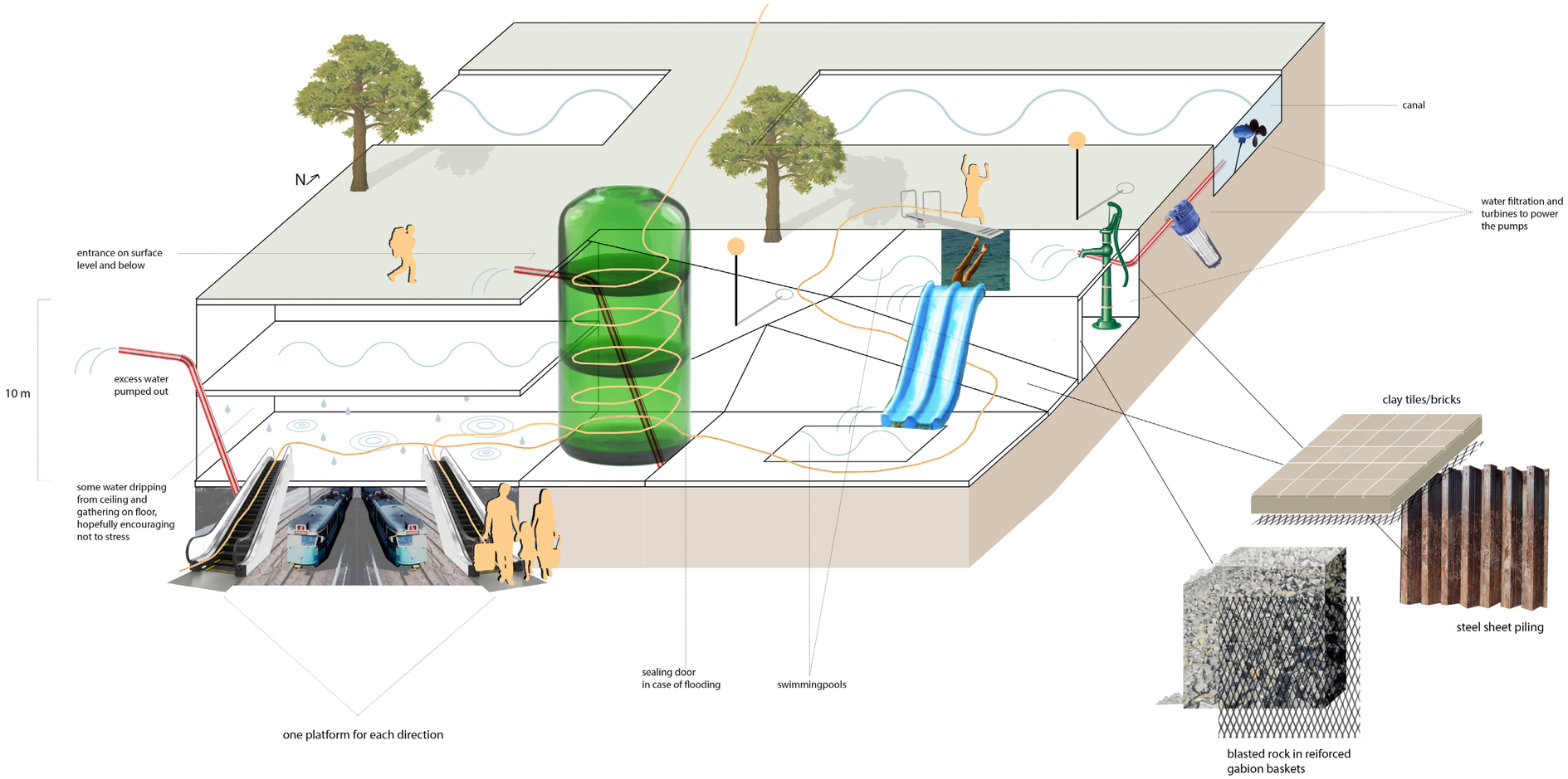
The tunnel in the clay part will be constructed of concrete and the part in the rock will have reinforced walls and cealing.

The dug out materials can with some refinement be used in the entrance structure.

Sketchmodel of casting Leca to explore method of creating caves. This was later abandoned in favor of sticking to straight angeled walls retaining ceilings and surfaces.

Early model showing the method of inclinating walls holding surfaces providing cover below and walkable surfaces on top. The idea is to put the structure within a dug out hole in the ground.

CONCEPT



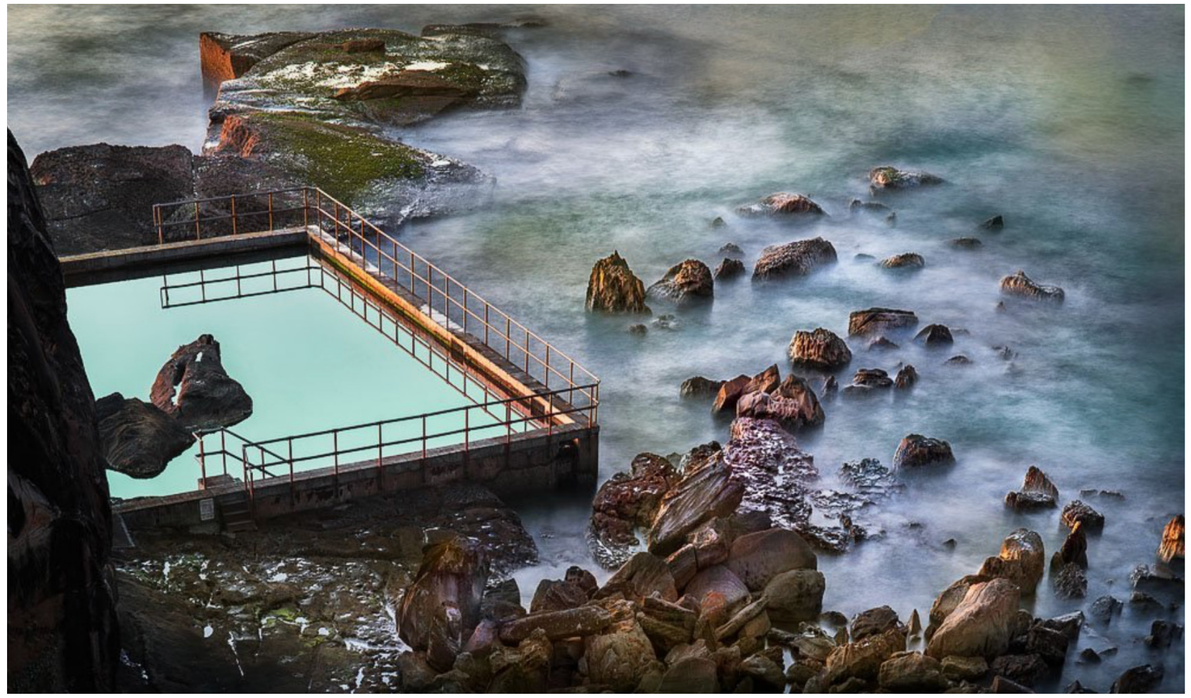
Conceptual collage that summarizes functions, placement and access from the underground station to ground level.

I asked myself how can people meet water in this context, also relating to the previous groupwork.

The construction technique is based on the steel sheet piling lining the walls towards the surrounding ground on all 4 sides.

The walls consisting of reinforced gabion baskets filled with blasted rock provides the structure to hold the roof that rests on beams and horizontal steel sheets. clay mixed with a small percentage of cement lays on top and finally a layer of clay tiles to walk on.

The same principle is used for the pools except added soil filling underneath to hold the weight of the water.

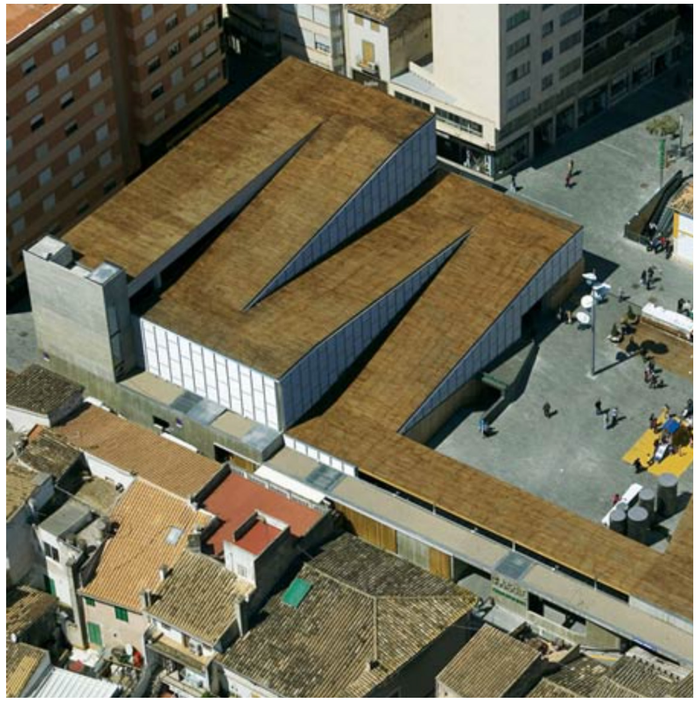


Rock pools are more common in hotter climates with rougher waters and more dangerous sealife. Photo Credit: Ignacio Palacios

NCaved by Mold Architects

Photo Credit: Yiorgis Yerolympos

Steel sheet piling is commonly used in construction. A lot of it is used on the site at the moment and on other parts of the västlänken tunnel. Some of it can be reused permanently in the station.

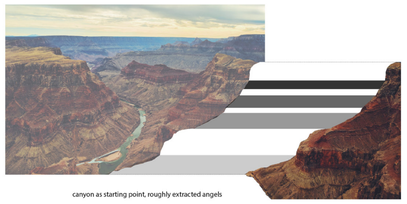


Inca Public Market

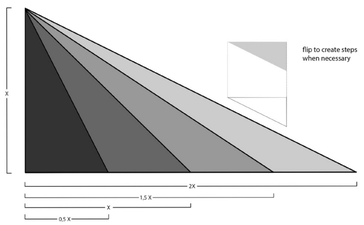
by Charmaine Lay and Carles Muro

TERRAIN METHOD

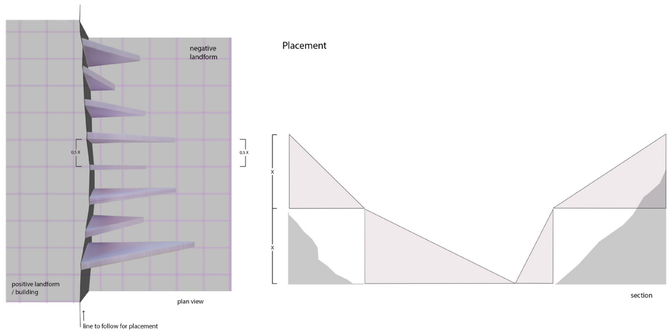
Inspiration



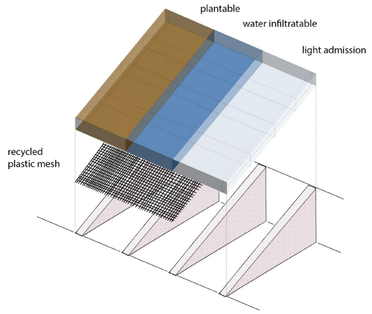
building blocks



Placement



Envelopes



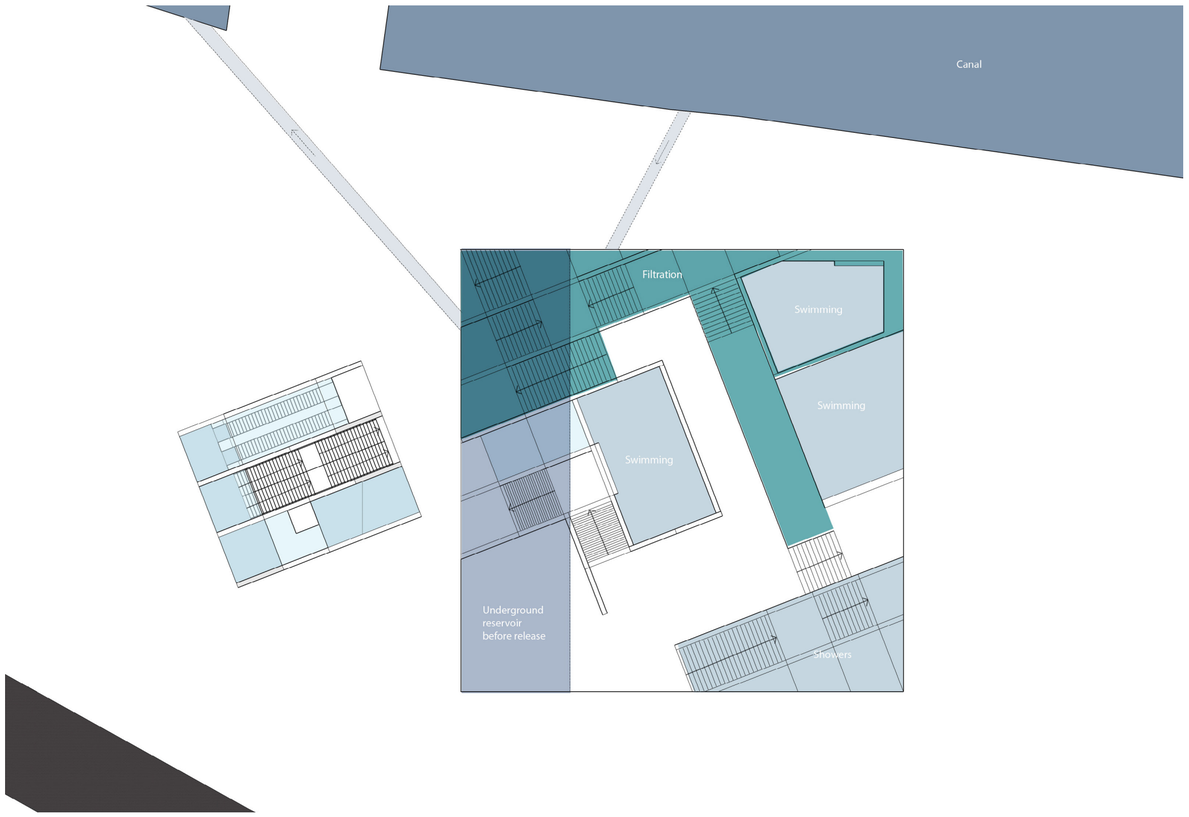
The method of construction had its startingpoint inspired by the different inclinations found in a canyon.

Retaining walls along a fixed grid carry a walkable roof, creating spaces between and above. As well as a very flexible starting point.

Even if the grid is tilted in relation to the pit it still follows a fixed distance of five meters between the walls that are 0,5 meters thick.

The inclinations are allowed to drop 2,4,6 or 8 meters over five or ten meter steps, flat stretches are also allowed.

PLAN & AXONOMETRIC DRAWINGS

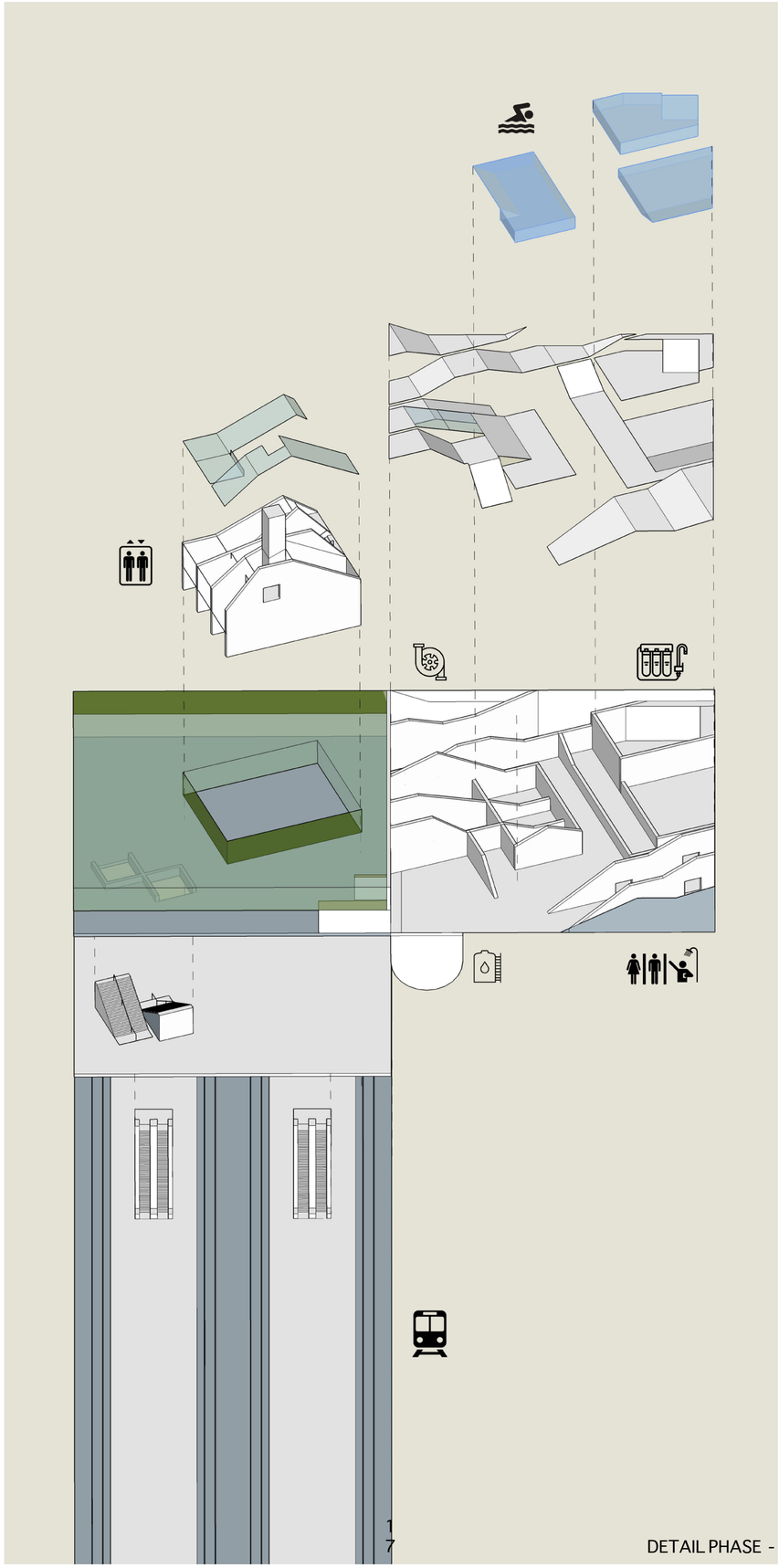


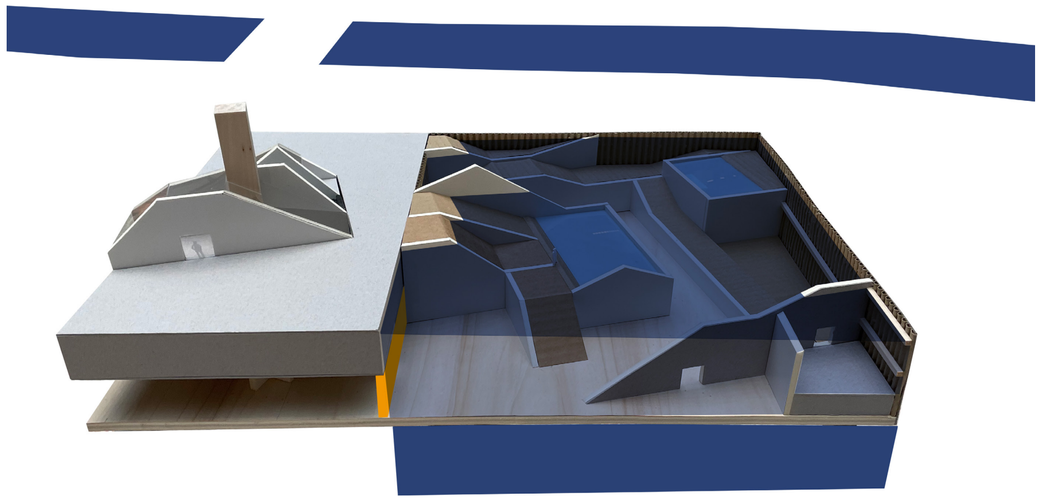
The water cycle

The water is collected thru pipes and filtered in the green area before let out in the pools. Drains lead down beneath the ground to a cistern that doubles as emergency flood tank, before being pumped back out in the canal.

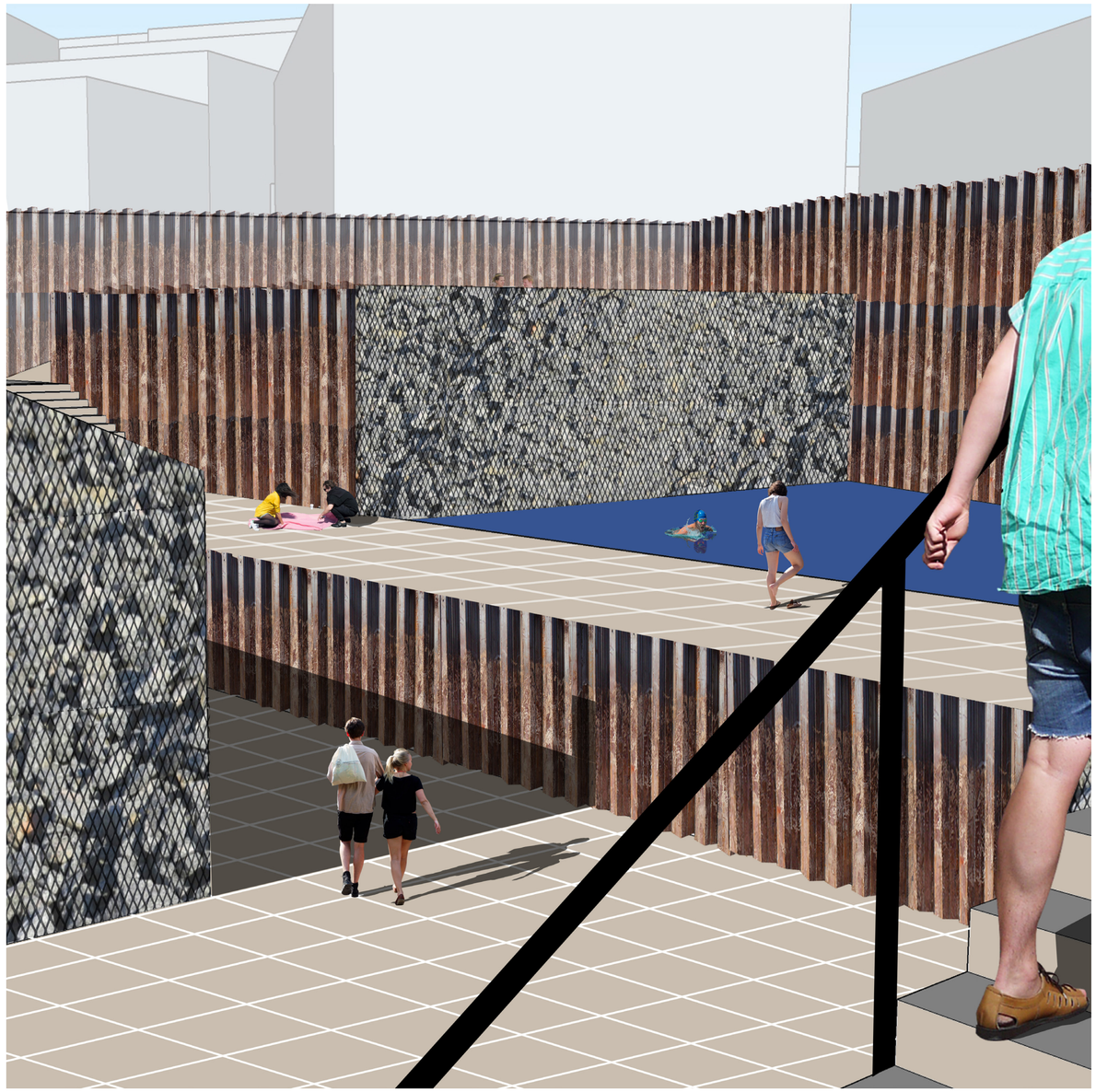
The pumps are powered by turbines in the canal.

Restrooms and showers are connected to the sewer system.



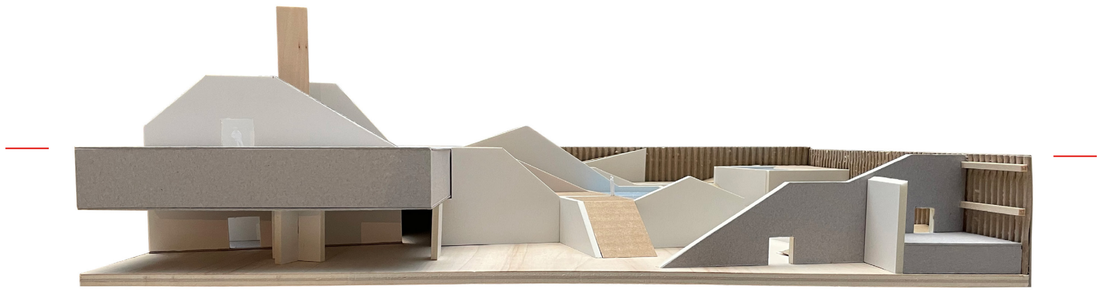


The close proximity to the canal places the station at risk of flooding in extreme weather events. To counter this the entrance will be sealed and water allowed down underneath to the cistern where it can be pumped out further down the canal.



Perspective of the swimming area.

MODEL



The model i s built with the south facing wall missing to allow visibility.

The red dashes represent ground level.