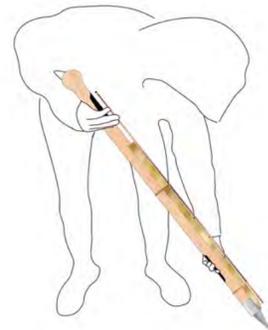
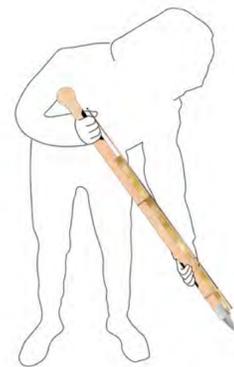
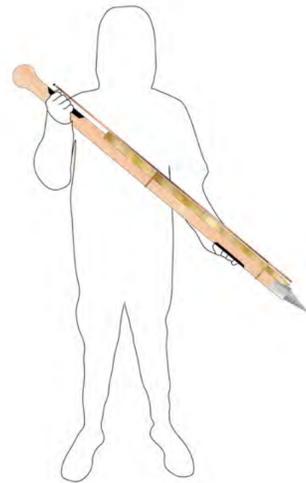
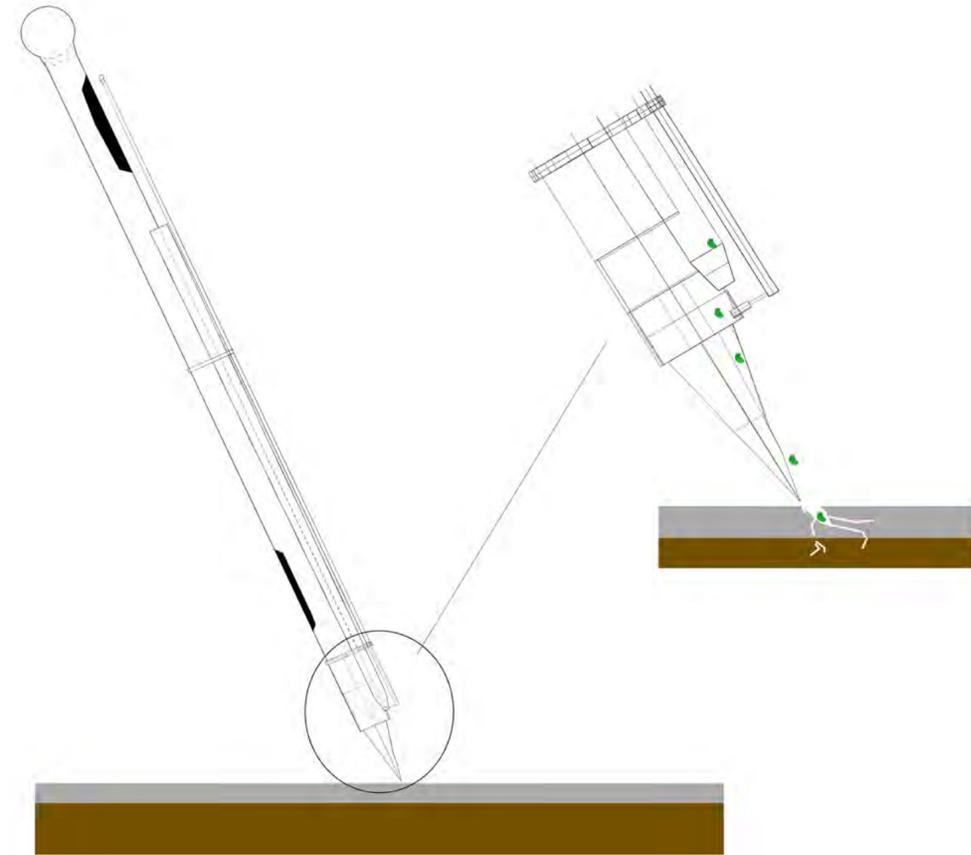


Outpost For Nature

A place for plantlife and other important natural things to be preserved and flourish





Introduction:

Within the first term, I looked at how nature could be supported by letting it grow freely within our environments. The main point taken from this was that in order to help plants and such to grow, some of man's creation had to be destroyed or suppressed for nature to bloom.

This led to the idea of a tool which can be used to break man-made creations, and to further allow the planting of seeds which would be secured within the damage. However, the act of a person using the device to help nature gives the idea that some people wish to assist nature rather than control it. Here, the seeds will then grow out of the destruction and start taking it place back from humanity.

From the device, I have learned that nature can not always be liable to fight back on its own, so a way to save, preserve and protect certain species would be a priority. This led me to start designing an outpost for plants to be looked after by people wishing to also save nature from destruction.



English Oak



Spider Orchid



Ox-eye Daisies



European Larch



Small Scabious



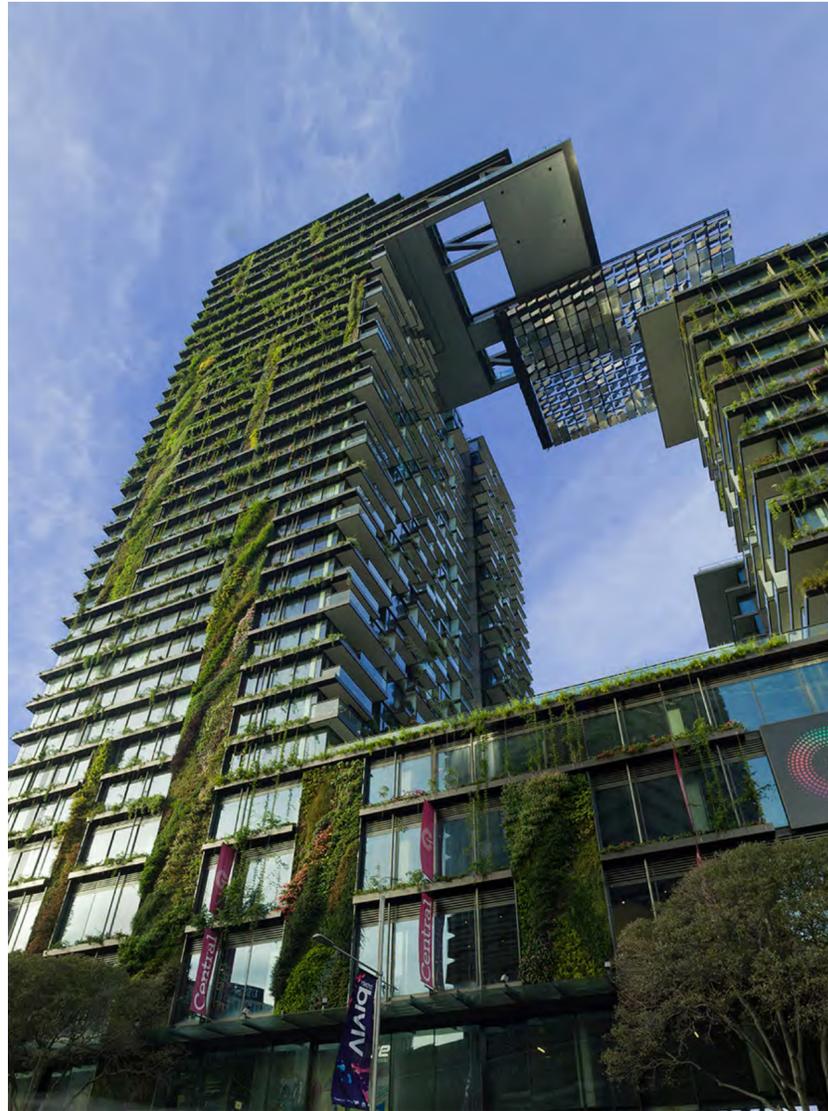
True Fox Sedge



Horse Chestnut

Nature: Plants, Flowers and Trees

A key component to follow in order to create a design to assist nature is to see what types of plantlife will be needed to grow. Here, I have researched the possible plants which have grown around Sussex. Due to the amount of wildlife in Sussex, certain types are starting to suffer, so finding a way to preserve and protect these is a high priority. One place in particular which is struggling is the chalk grassland, which has lost upto 80% of the grassland since World War 2. This is because of how the land has been turned into farmland with the heavy use of herbicides and fertilizers. This changes the soil's compatibility with the species that used to live there, causing them to die out.



Precedent 1:

One Central Park
Sydney
Ateliers Jean Nouvel (Design)
PTW Architects (Gardens by Patrick Blanc)

The appearance of the facade with the plants and foliage growing down on different sections give the building a more natural feel. However, the actual building's functionality does not match the appearance. This still gives a good idea of how a building which takes nature into account could look.

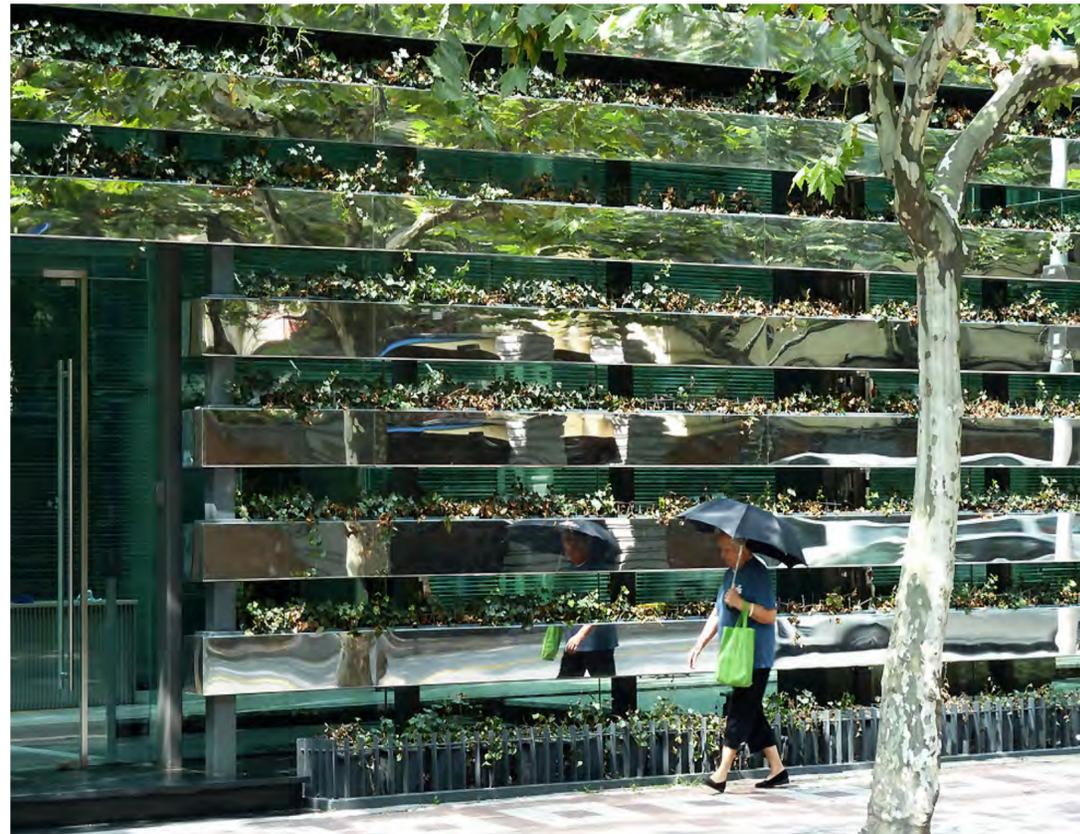


Precedent 2:

Urban farm at Pasona Group Offices
Tokyo
Kono Designs

Precedent 3:

Z58
Kengo Kuma
Shanghai, China



HeadQuarters for a Royal Botanical Society
(Sussex Wildlife Trust)

- An outpost in the City Centre

Areas within the design:

- Offices/ Workspace?

- Meeting rooms, Talk spaces.

- Library of Seeds/ Plantlife, Seed bank

- Possible lab/ research area.

Connect with nature

Research spaces

Lunchspace (Engages with the elements) -

Courtyard?

Something to spread nature - Cannons to shoot seeds over distance.

A way to protect and preserve nature within the vicinity of man-made occupation.



The Royal Botanical Society:

To find a certain audience or company to design my proposal around, I have decided to look at the Royal Botanical Society. This group was founded in 1839 by James de Carle Soweby, with its main purpose to “promote botony in all its branches, and its applications”. This included areas within medicine, arts and manufacture, but due to the time it was set up, has changed in the modern times. With this aswell, the original group has been disbanded and instead replaced. One of the main areas in which the society kept some of its plants was Kew Gardens. To this day, a wide variety of specimens are on show within the building, allowing visitors to come in and have a look at the contents.

For my outpost of nature, the design will be centered around the Sussex Wildlife Trust. Due to this, the design in which I have to go for will need to suit what the Trust’s aims are. This will include ways for nature to be preserved and areas/ offices for workers to keep track and protect nature. The need for a public area aswell may be a handy addition due to how the everyday person may need to be made aware of how nature needs to be cared for in the modern world, much like how Kew Gardens is a public place for a person to view these magnificent things.



Seed Banks:

Seed banks are an effective way of preserving seeds and plants for the future. In a sense, it saves certain species from going extinct and to be planted later on. One seed bank in particular is the millenium seed bank, which contains a variety of different seeds to be planted in case the species becomes less common in the environment or near extinction. A seed bank is possibly one of the best ways of saving different types of flowers, trees and other plants in case they struggle to survive in their climate.

Due to the importance of a seed bank and preserving nature for the future, I will include something along these lines within my design. The courtyards within my design will also be involved in preserving nature, due to how it will be protected within the confines of the building and be upkept by the workers. With the seed bank, it will need to be accessible to only the workers of the Trust and away from the public. However, a way to view into the room where the workers are experiment or recording the plants can be viewable for public knowledge.



Images of Site:

The area I am looking to put my design is the building located by Churchill Square in Brighton. Here, it will take the place of a Costa Coffee cafe due to how the site is right on the corner of a busy area. This is due to how nature is barely seen in the immediate area, such as greenery, The design's idea will be to push the revolution of nature breaking through man's control within an urban landscape.



Possible Site - Empty area North of original site. Larger than site 1 but out of the way of the public.

Possible extension to include gardens/greenhouse. Also possible to be an underground section to not affect road.

Possible Site - Larger than site 1. Has same potential of sticking out to public eye

Site 1 - Costa Coffee Building

Imperial Arcade

Vykehan Terrace

Site: Costa Cofee Building

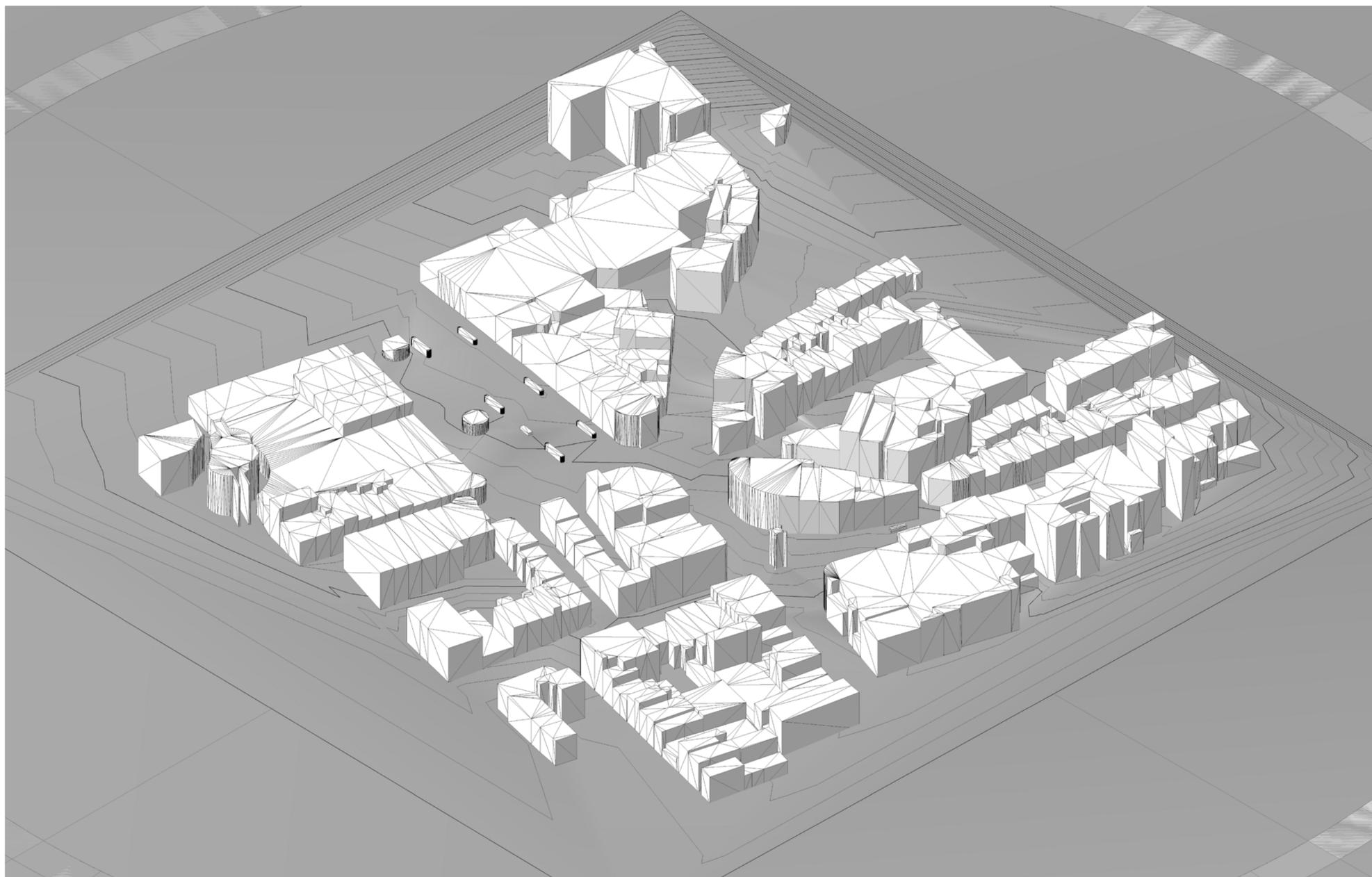
The factors which needed to be considered was where exactly the design would be placed. For example, there were 3 sites in the immediate area which were good for the design's needs. With this in mind, some had more positives than another. In the end, site 1 was the main site to be used, with consideration towards the other possible sites.



Biosphere Map:

Key:

- Mixed Use/ Other Public Spaces
- Sports Facilities
- Burial Ground
- Park or Public Garden
- Ammenity Greenspace

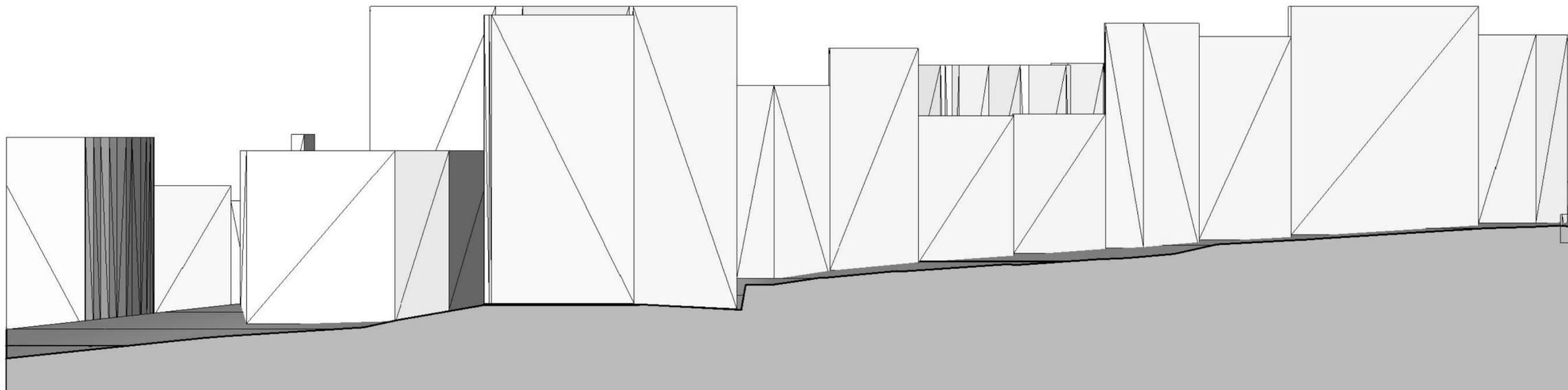


Model of the Site:

In order to get a better understanding, an accurate representation of the site would be helpful. Here, I have made a site model with the buildings in the immediate area, with the land surrounding matching the topography of the site. This allows for a better way to record the site and how my design would later look like when it gets included.



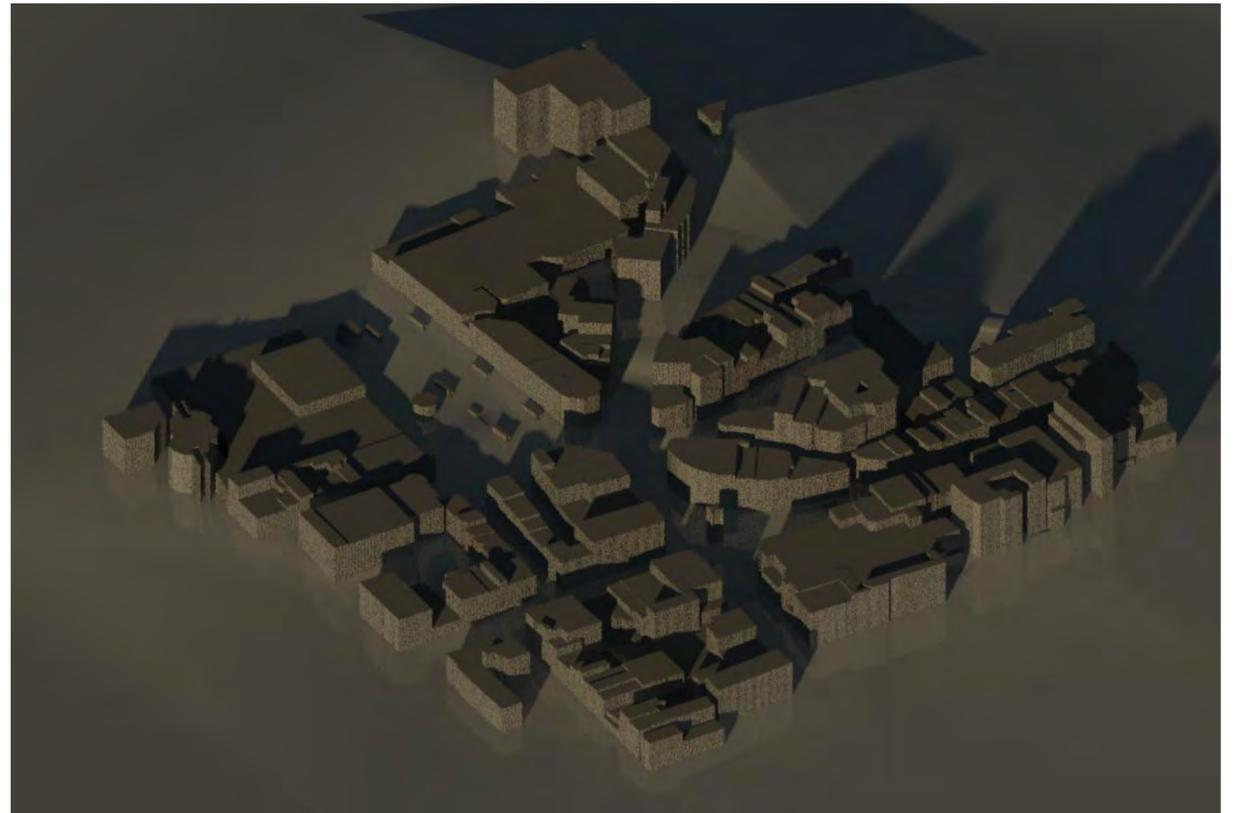
— facades of the
— buildings below.



Section Line through the site

Site Section:

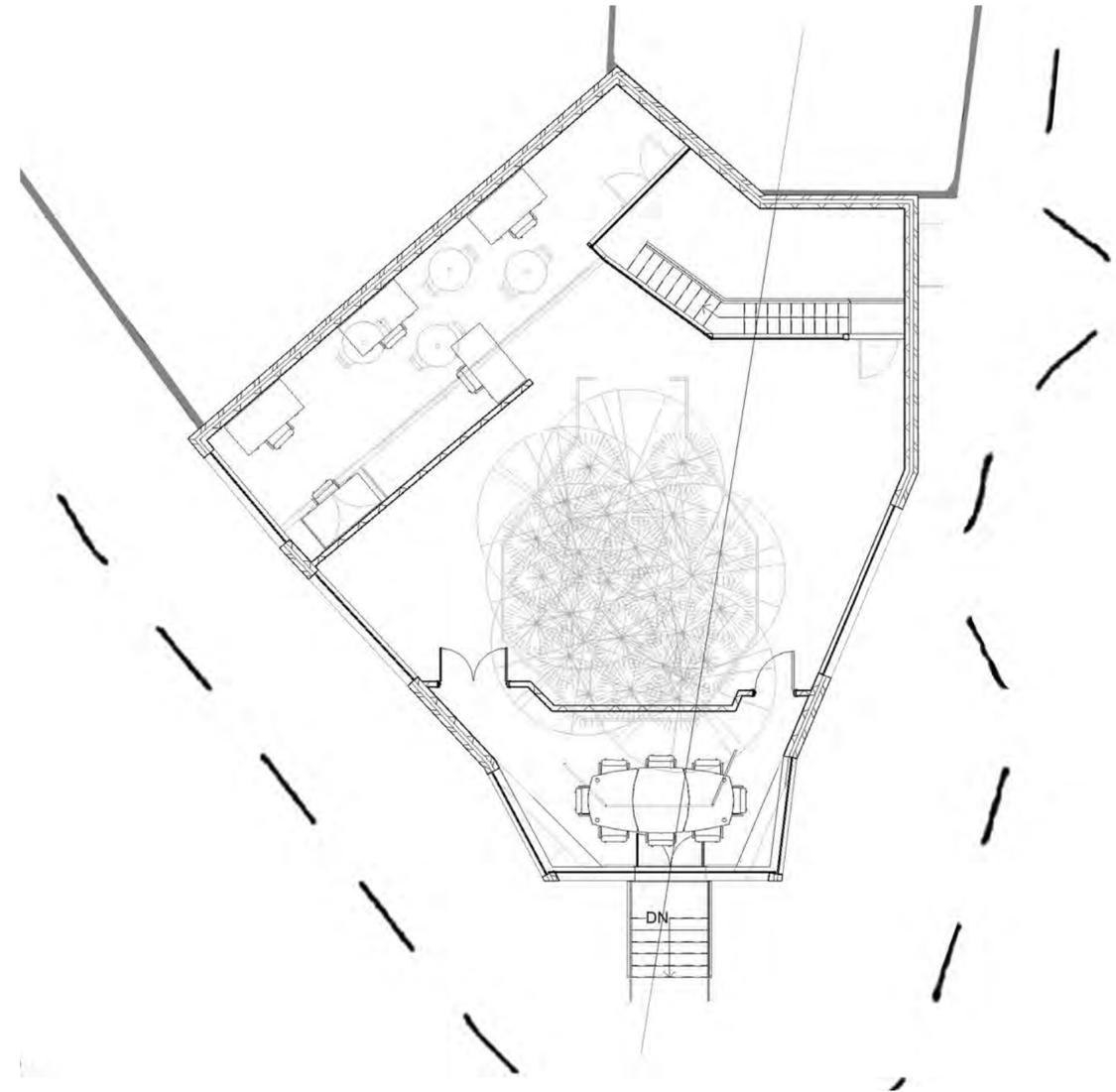
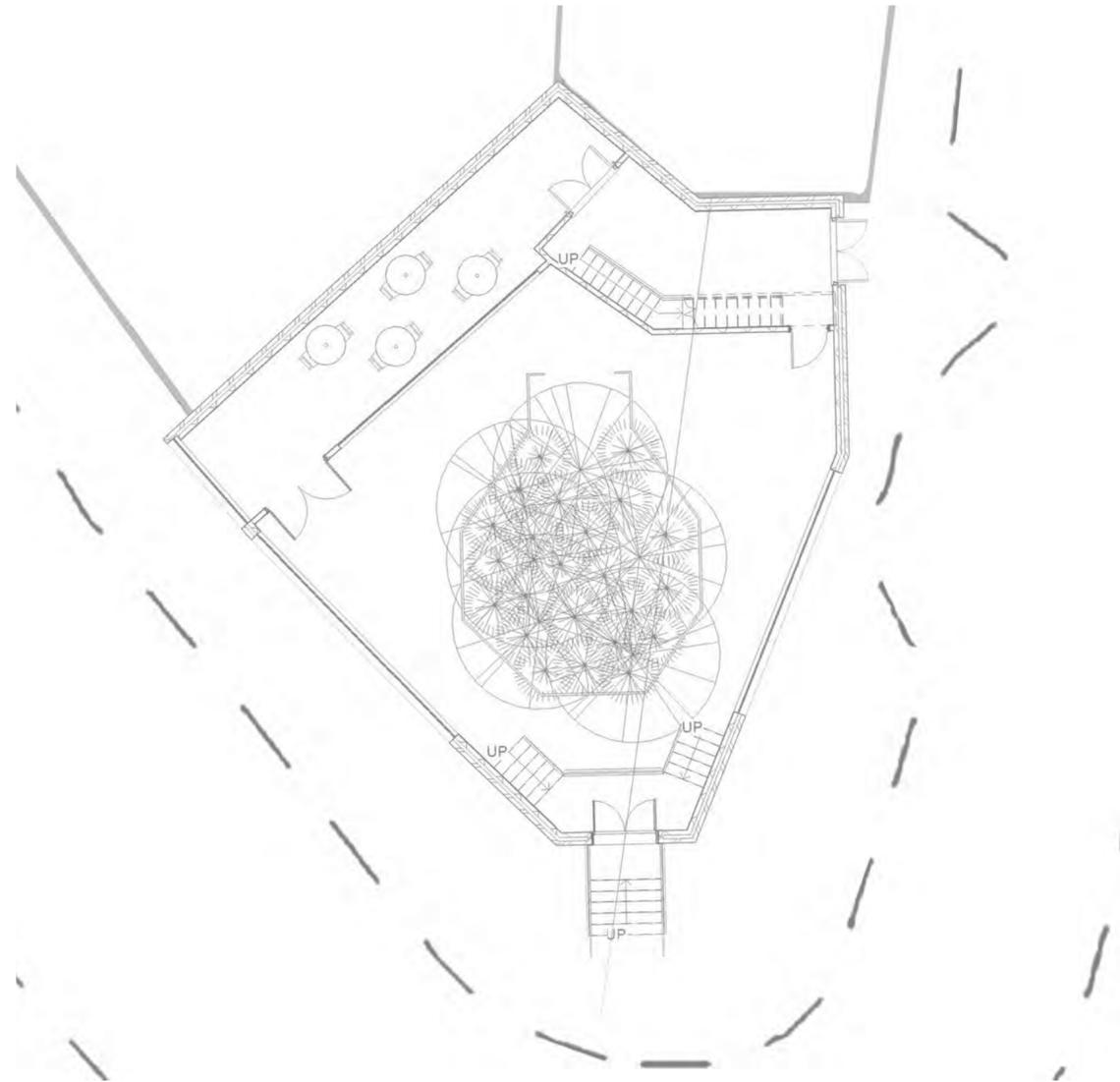
A section of the site where the building will be located. The main model shows the heights and placement for a clear understanding of what is where. The facades have been added above it to show what buildings are which, and if the elevations are being blocked by anything in particular.



Lighting within the Site:

Image 1: The site during Spring Equinox.

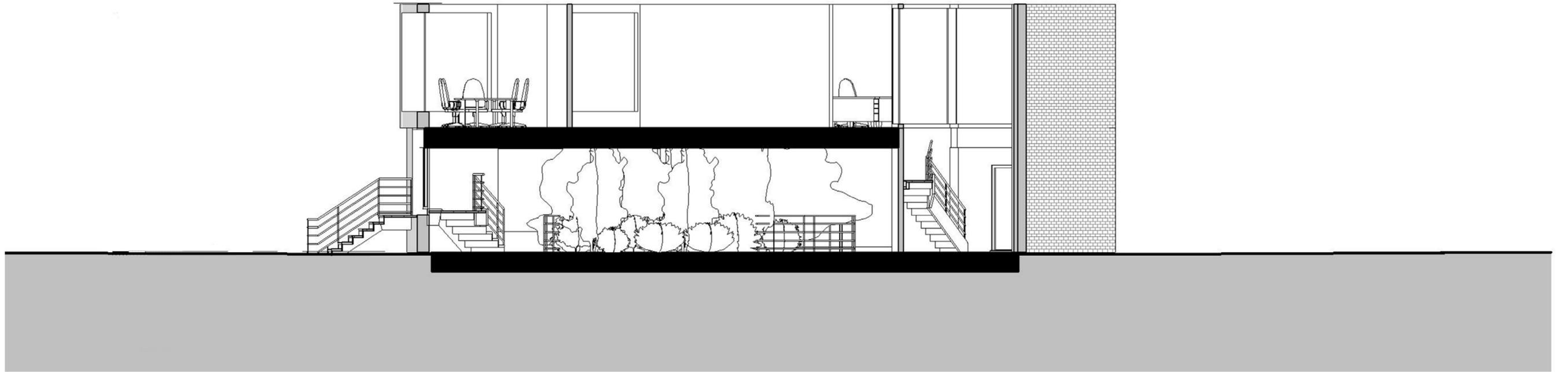
Image 2: The site during Winter Solstice.



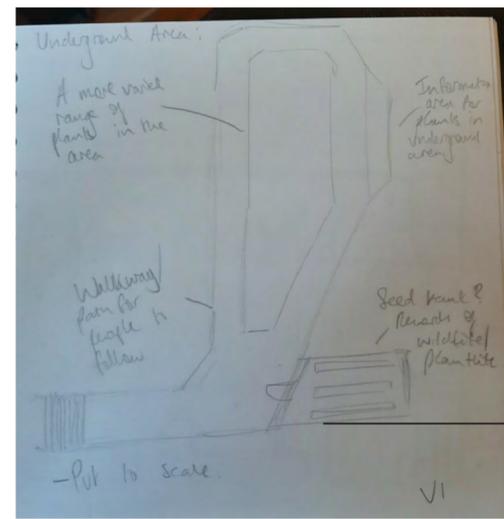
Initial Concept of Design: a quick sketch showing an idea for what the design would look like.

Design Iteration 1:

(Left) - Ground floor of the design. In the middle is where nature will be displayed. There is also a public area for people to meet and socialise.
 (Right) - 1st floor. Originally focused to be an office space. An area is located in the north-west part of the building for the office workers, whilst there is a meeting area in the south of the building over-looking the round about located outside.

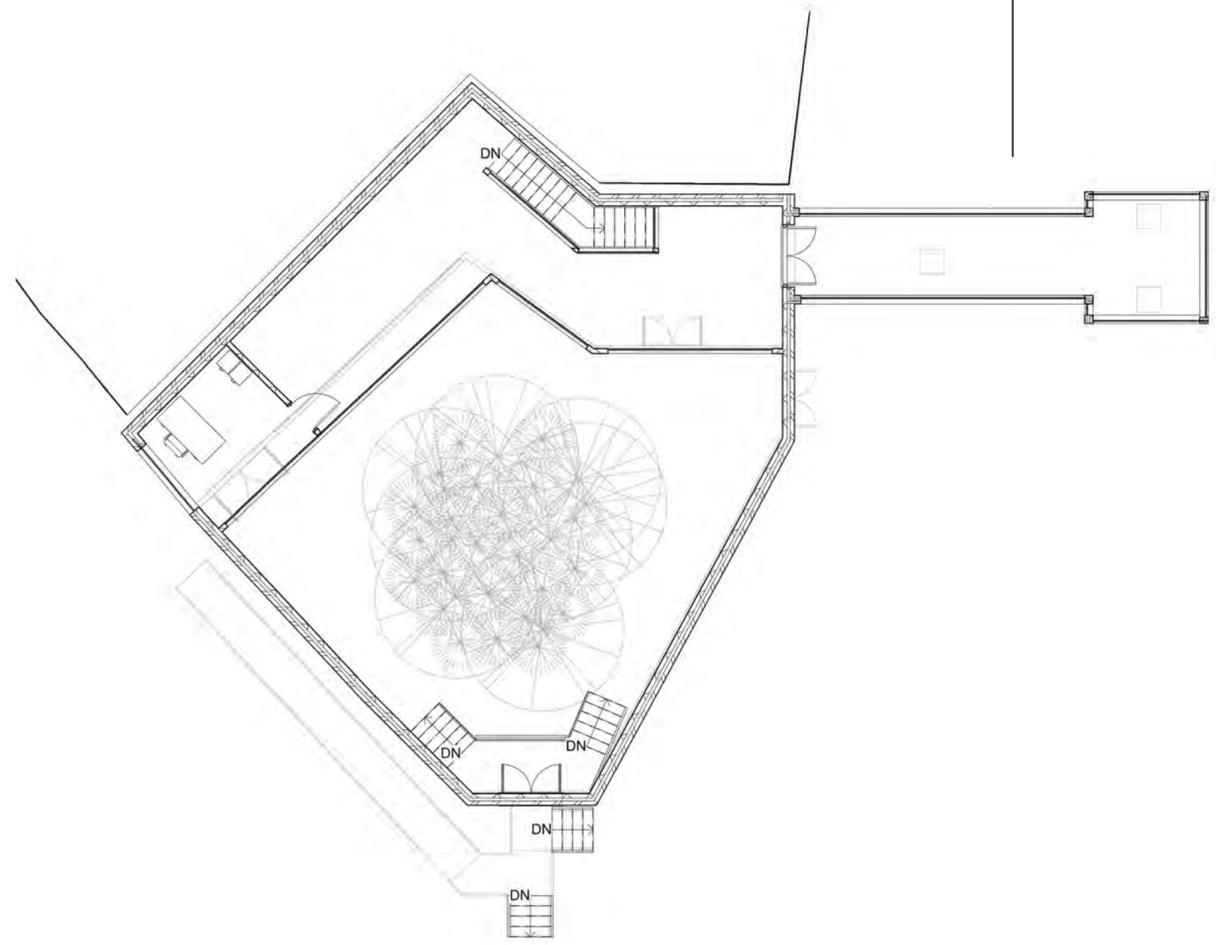
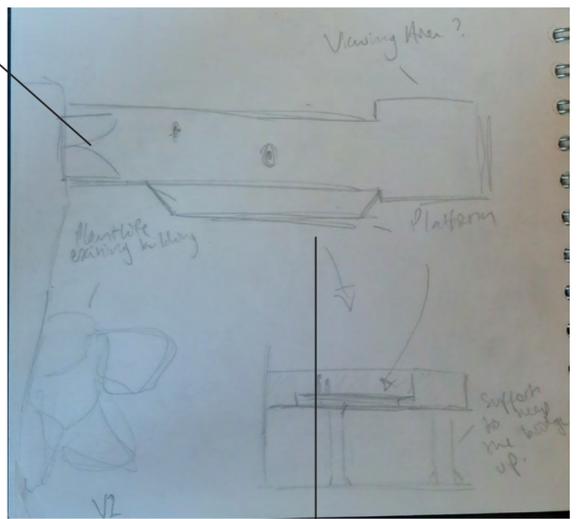


Section of Design Idea 1



Idea for a space which people have to interact with nature to get to.

Sketch Concept for the underground courtyard.



Design Iteration 2:

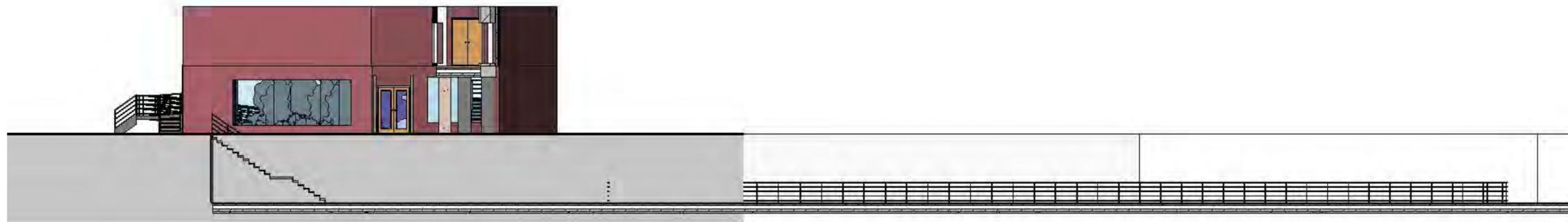
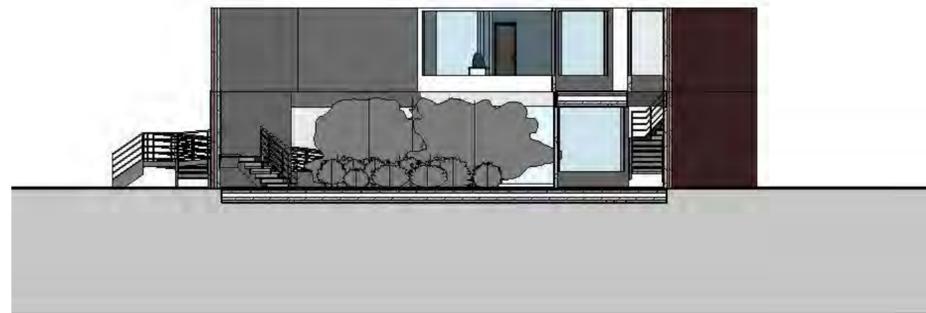
(Left) - Ground Floor of Idea 2 with the underground and buildings surrounding.
 (Right) - 1st Floor of Idea 2. The layout has been changed compared to Idea 1.
 An addition has also been included, where a platform leading outside to view the surrounding area is located.



Precedent 4:

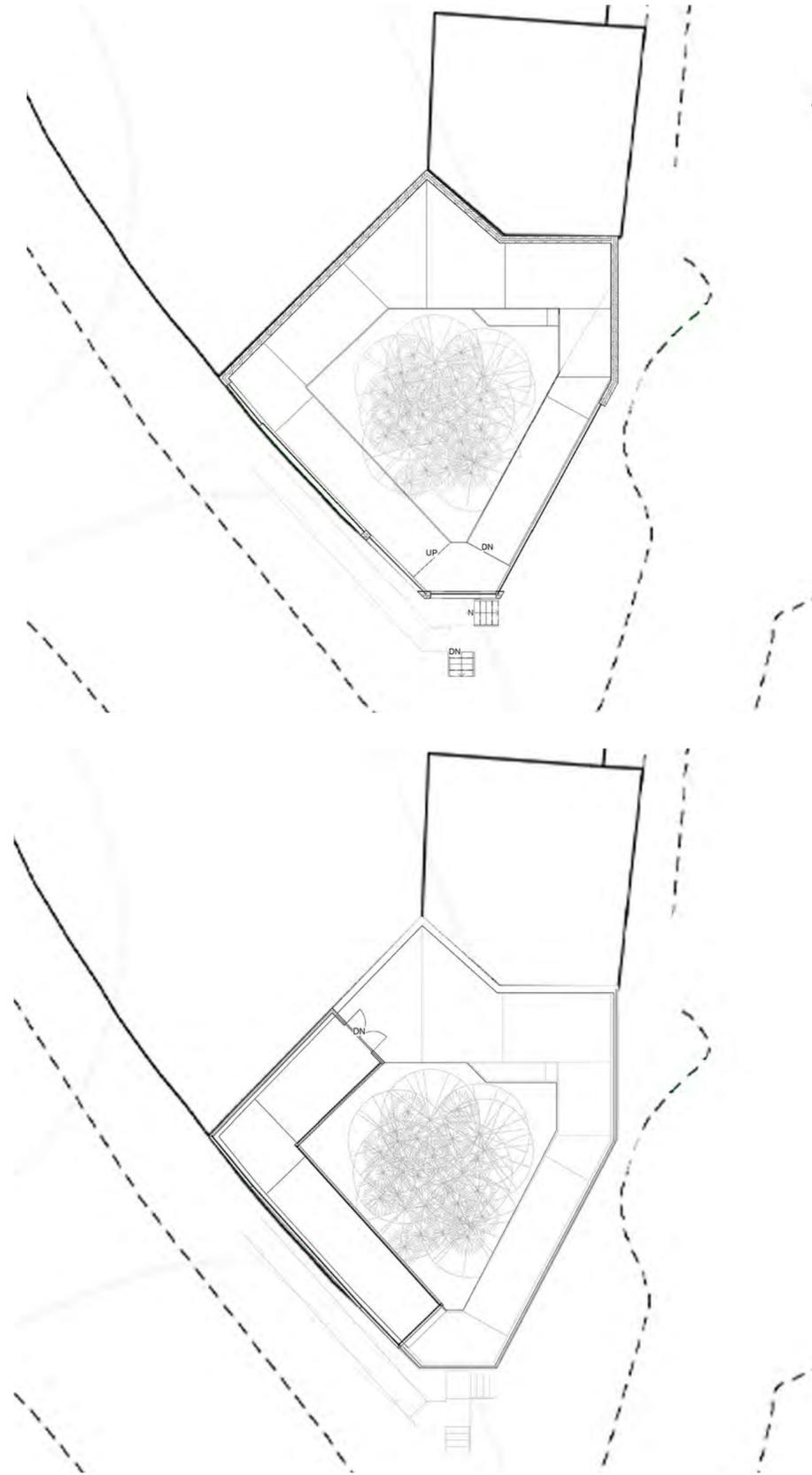
Tadao Ando
Azuma House
Osaka, Japan

Ando creates a space where he makes the residents integrate more with nature. The open area bridging rooms allows visitors to become one with nature, being forced to move through this way. With this, I took the idea of pushing the users of the building to interact more with nature, so the act of them going through certain parts which are open to the elements in order to get to another area within the design started to become a factor.



Section of Design Iteration 2:

Compared to previous design, the section gives a clearer view of the underground area in which plants and trees will be planted.

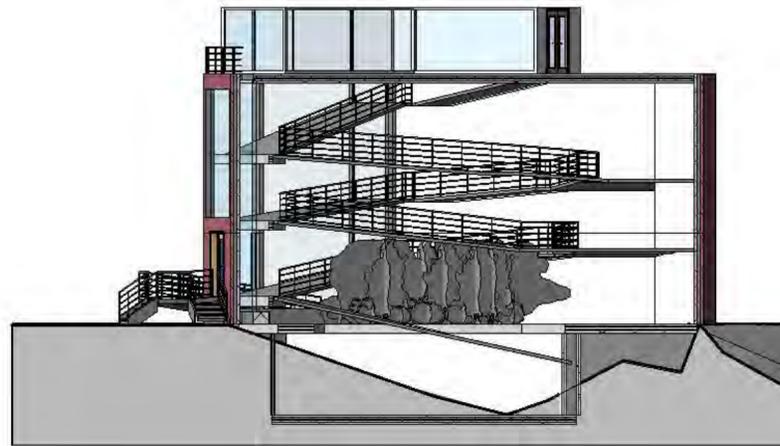


Design Iteration 3:

(Left) - Developed plan of the Main Building and Underground Section, with offices rooms being relocated.

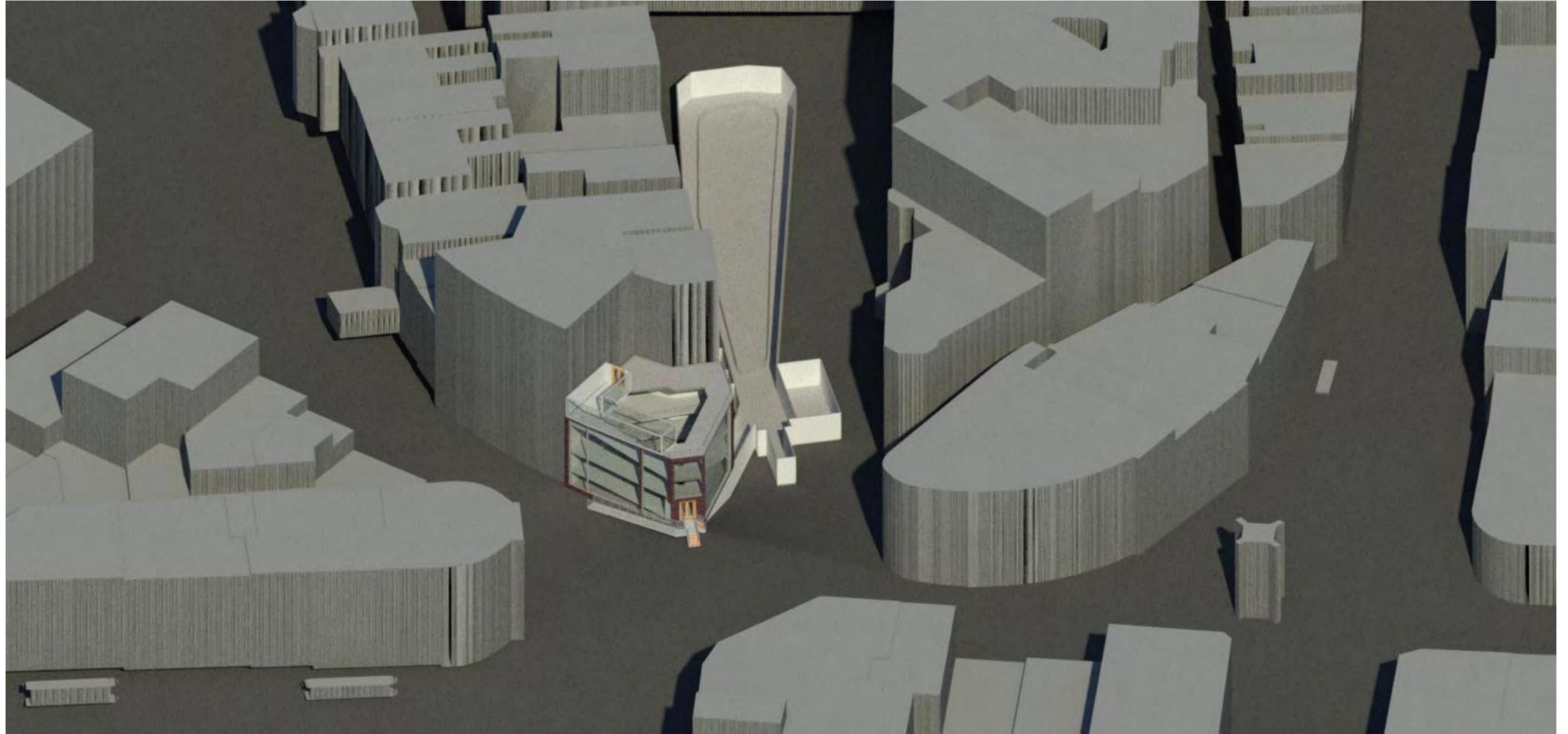
(Middle) - Plan of 1st floor, where a continuous ramp system has been included to allow for a flow of movement within the design. This system also wraps around the natural foliage in the centre to give the public and workers a constant view of the plantlife.

(Right) - A continuation of the ramp to the roof, where a transparent surface has been added for the plants to get more sunlight and for the public to look down into the foliage.



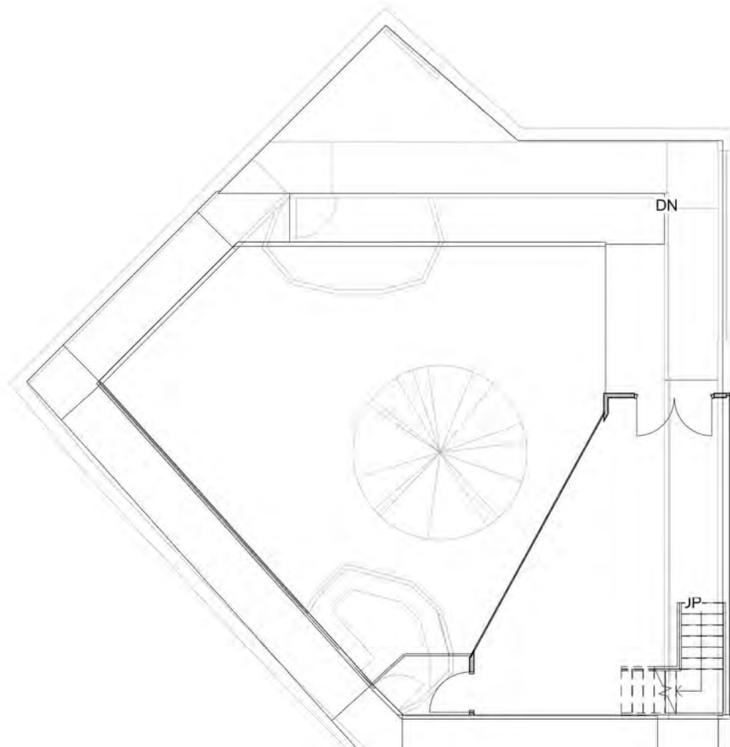
Section of Design Iteration 3:

Due to the building having two area which a significantly different, I have included both versions of sections to show what is included within these spaces. As one of the areas is underground, a long section is needed for that part. From this iteration, it shows the path from the main building to the secondary underground area.

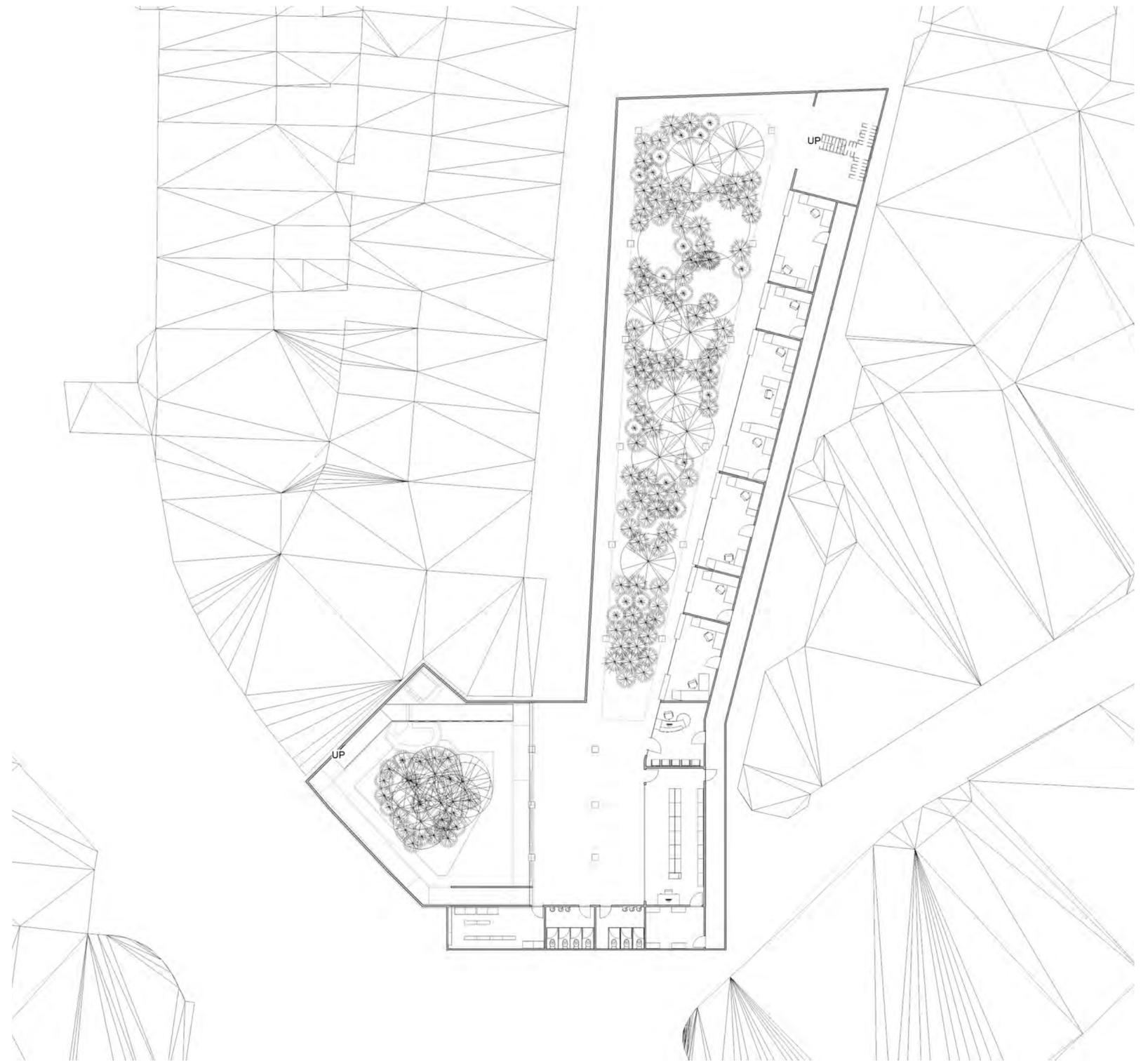
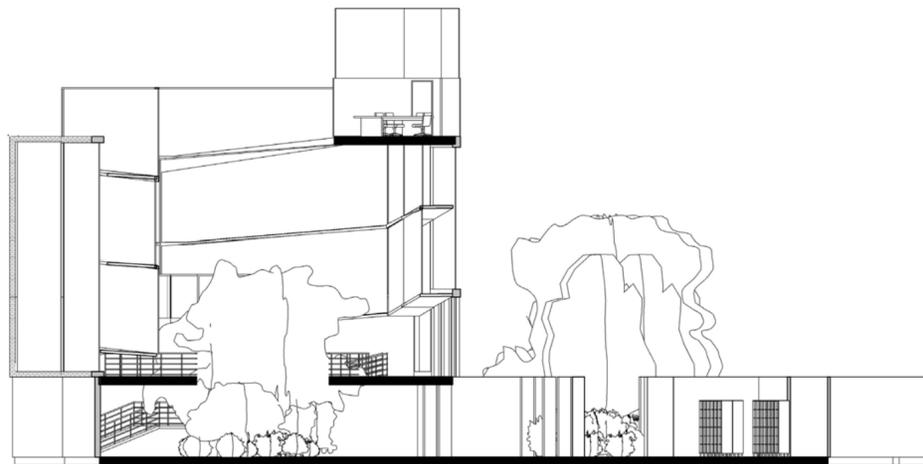


3D View of Design 3 on Site:

At this point, I had found a partially solid form for my design. Due to the spacing of the buildings and the heights that they had, I managed to create a model of how my building would fit into the landscape. Here, the building fits smoothly into the space due to how it uses the same form as the Costa Coffee building before it.

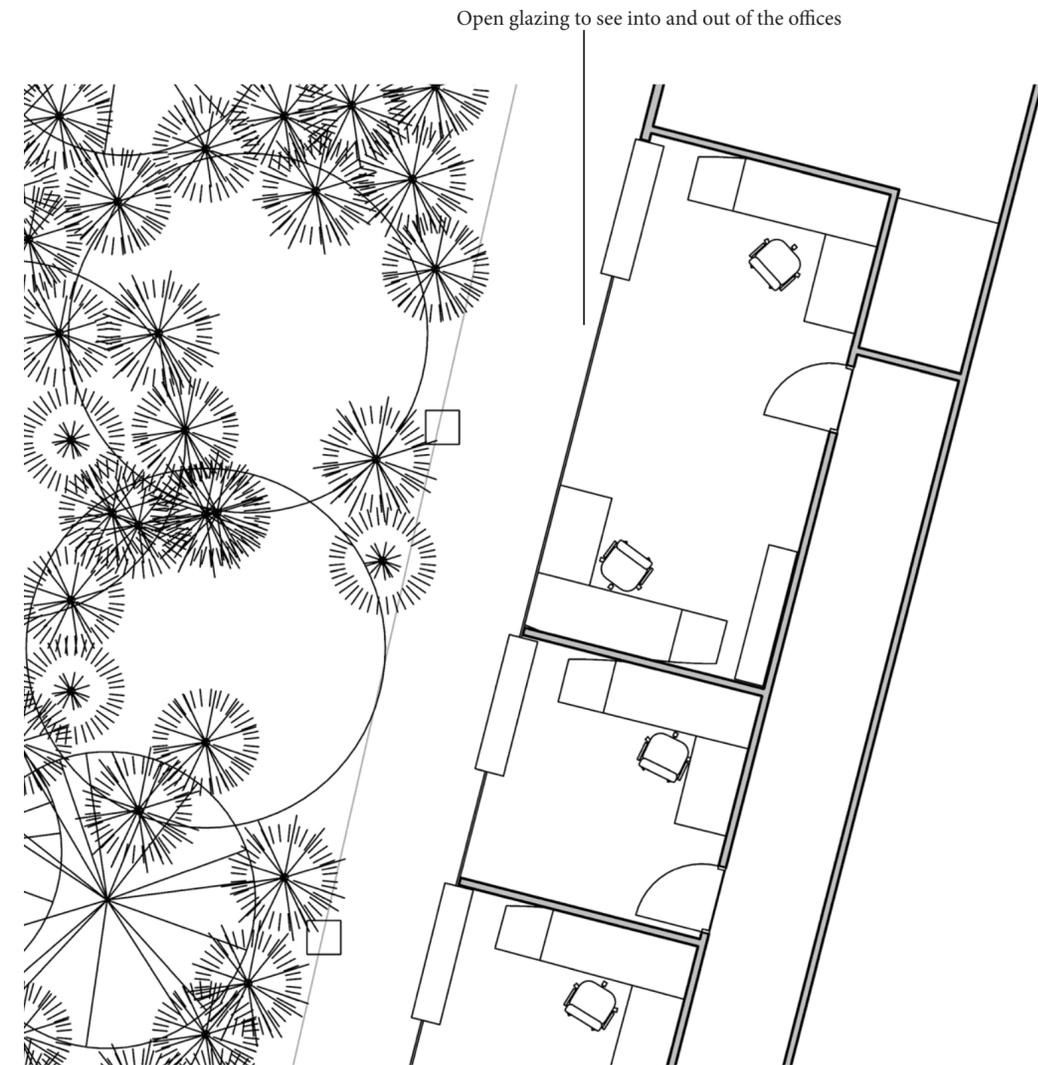
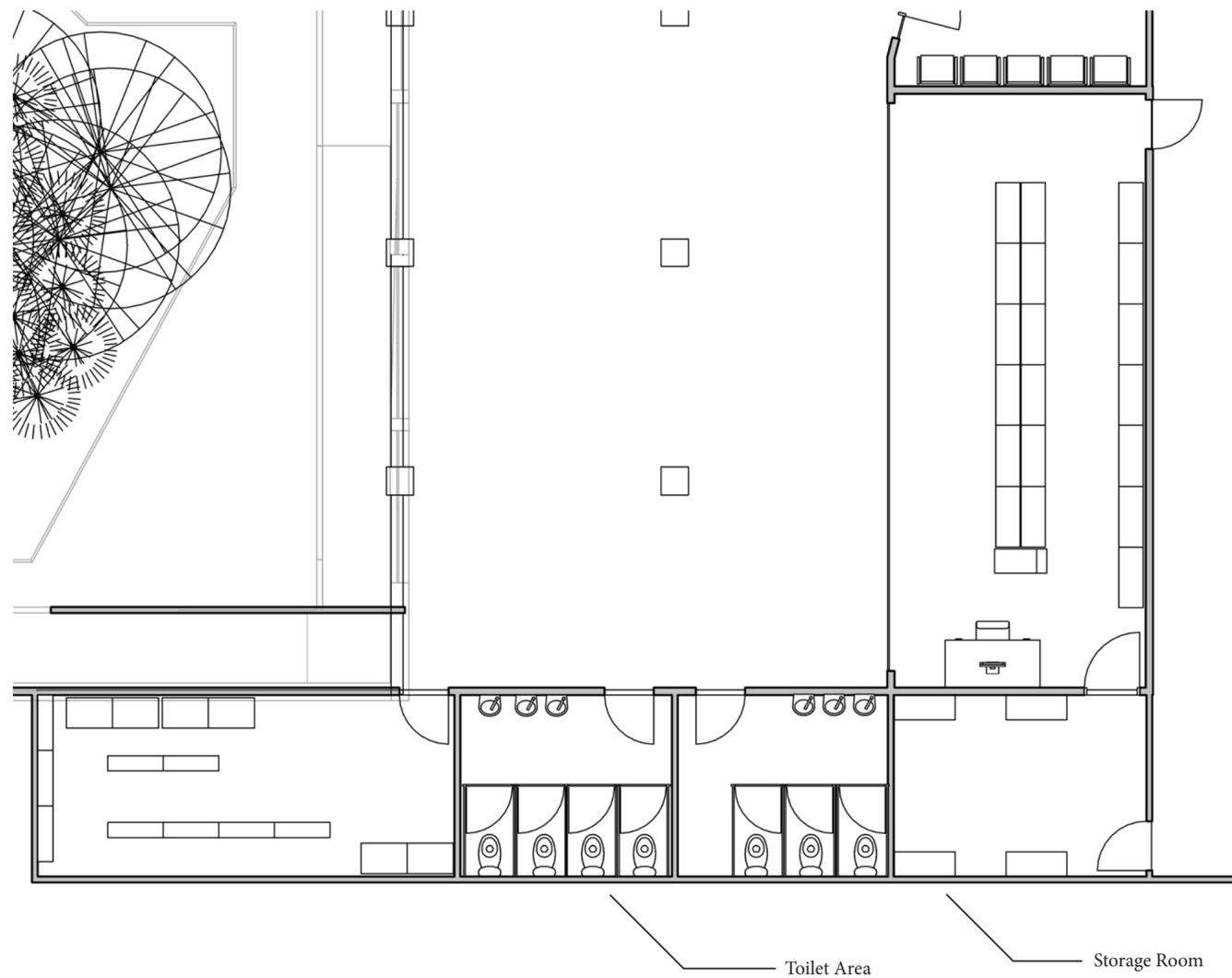


A key change in the building's design is the extension of the south-east corner. Due to how it now has been pushed out a bit, the ramp can now be extended as well, giving it more space to flow around the interior of the design. The extension also gives a more solid way of entering the underground section, where the ground has been cut into. This allows the trees and foliage to be put on the level below, but still allow people to see it from the upper levels.



Design Iteration 4

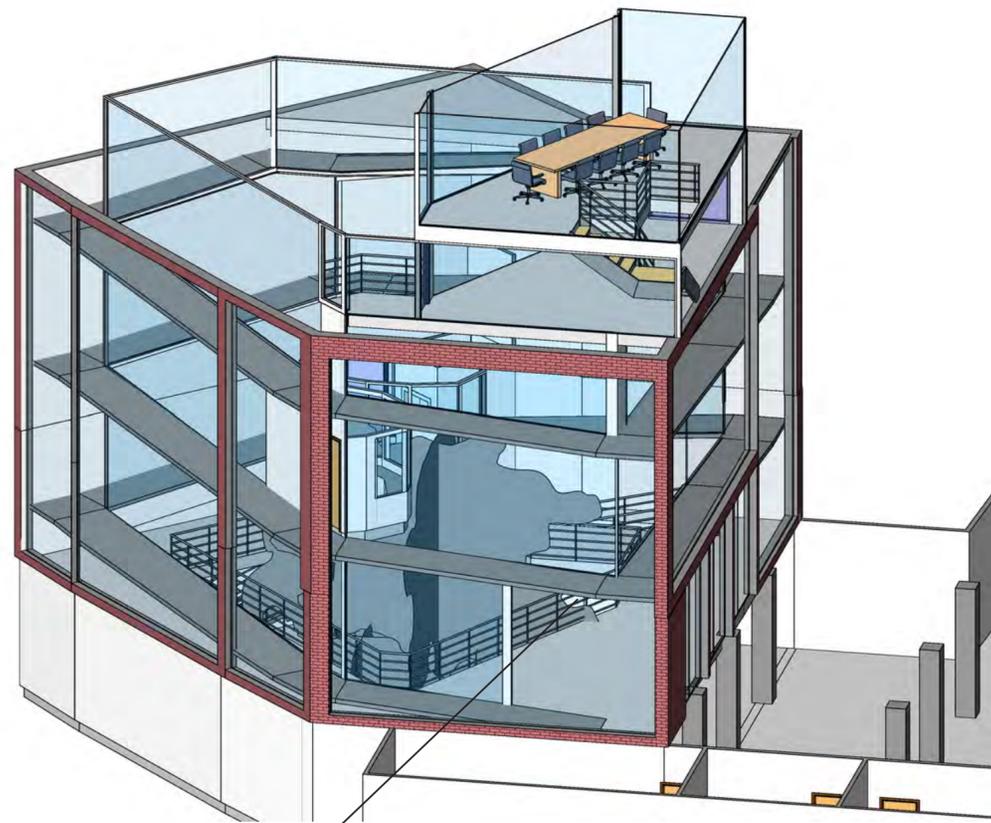
In this iteration, the ramp system has been completed in a way so it can raise to the top, allowing wheelchair users to freely move up without much problem. Within the underground area, the offices have been moved to the east side of the building, coming in line with the lab/ research area near to the bottom. These rooms also have a view of the courtyard and are freely able to move from office to office due to a corridor being included which links all of the private rooms.



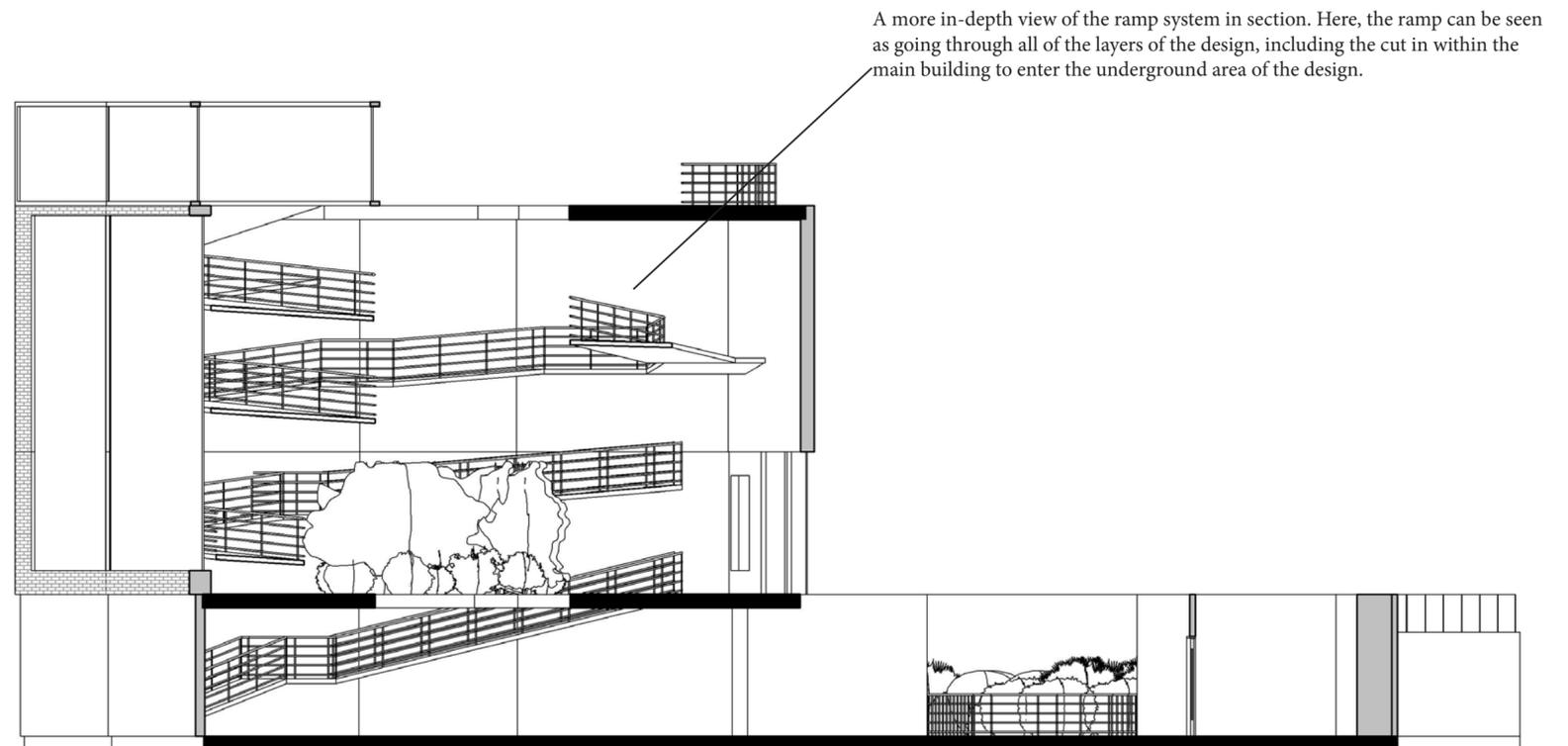
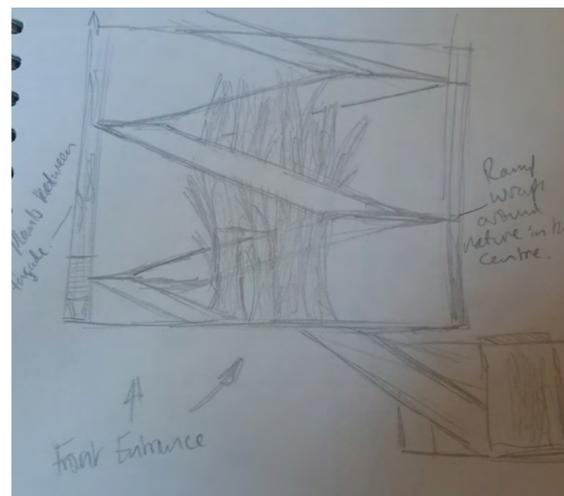
Underground Area:

A major change from the last design was the location of the office spaces. Here, they have been shifted from the west side of the underground area to the east side. Here, a corridor has been included to allow the flow of movement between the separate office areas. A reception has also been added in order to separate the public from the private, having its own access area into the corridor.

The inclusion of a toilet is an important introduction to a public/ private space, and are located next to the research lab where the workers will keep records of nature in the area and other important activities. There are also storage areas, one for tools and such and the other to preserve a range of plantlife.



This image shows the main building from the exterior. From here, the ramp can be viewed through the glass facade and it is able to flow smoothly around the whole of the building's design.



A more in-depth view of the ramp system in section. Here, the ramp can be seen as going through all of the layers of the design, including the cut in within the main building to enter the underground area of the design.

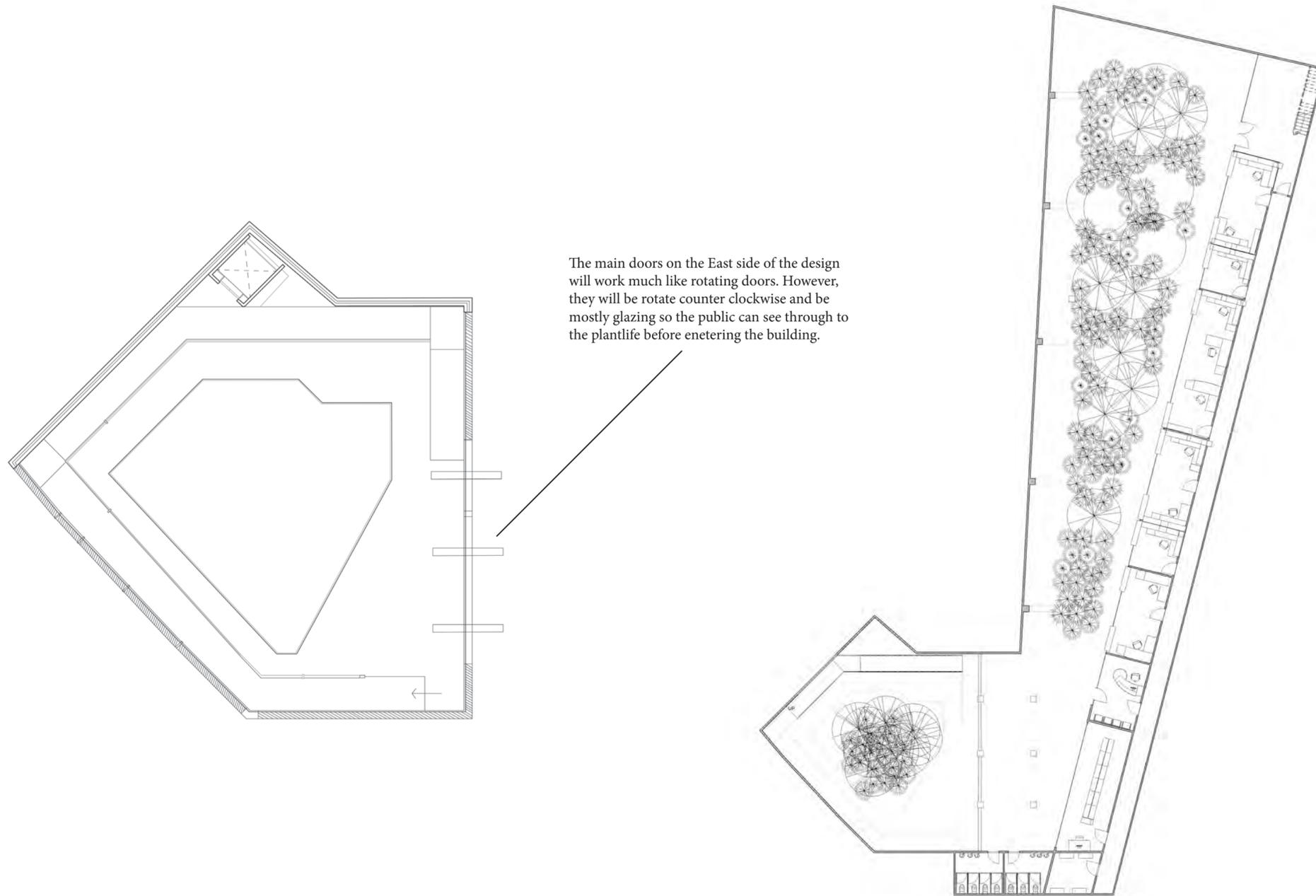
Ramp System Throughout Design:

As a way to successfully admire the nature in the main building and for a way to get to the higher levels, I have designed a ramp system which goes throughout the structure to the top. With this, it keeps on a constant flow with little breaks in the form of flat platforms and meeting rooms included within the ramp. The ramp is located within a facade which goes through the whole structure, both on the exterior and the interior.



Precedence Study 5:
Peter Zumthor - Bregenz (Facade).

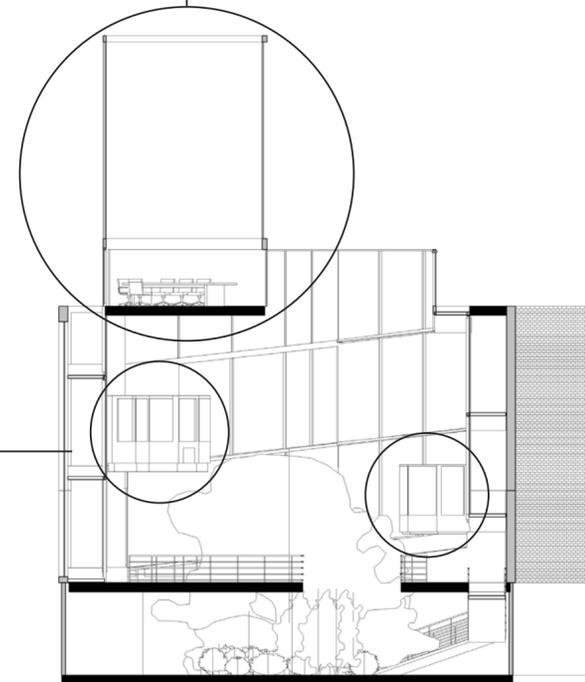
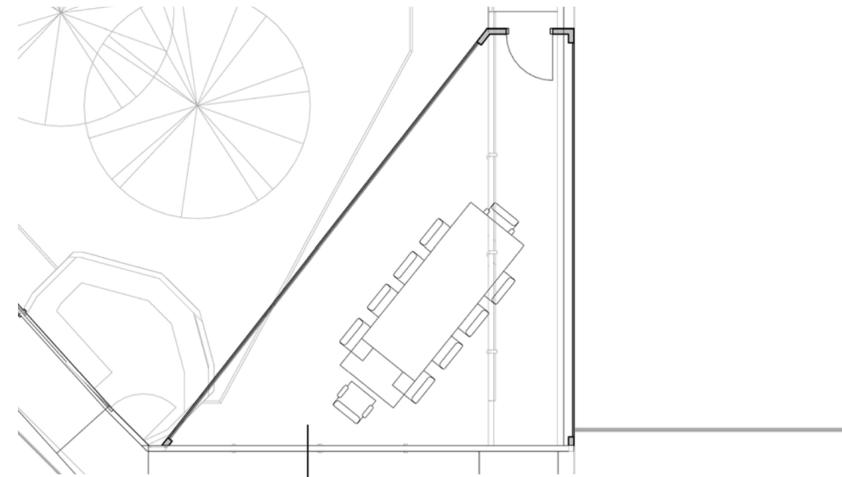
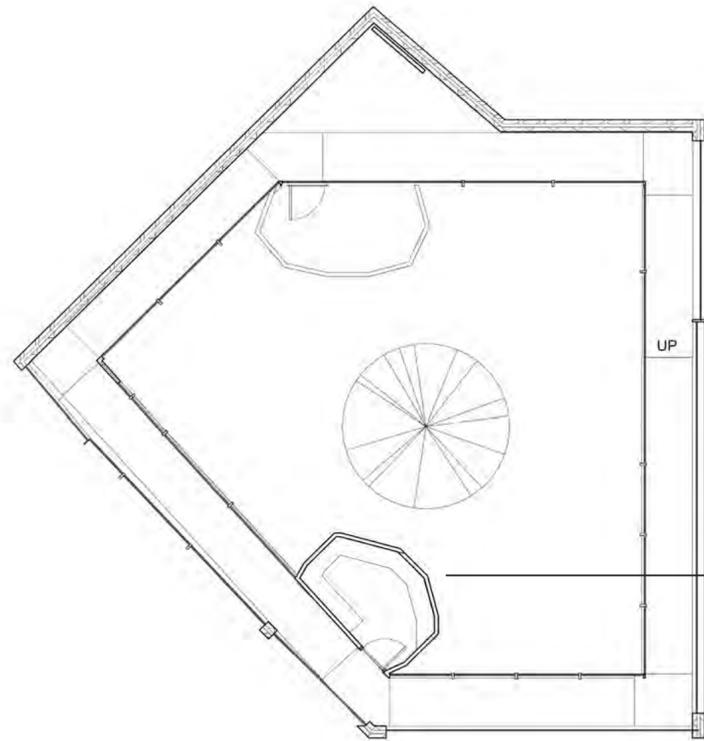
A facade within my design is quite important with how I wish for the building to develop. With this, I looked at different architects developed ideas and this led me to Peter Zumthor's Bregenz. The facade is not too similar to my own design, but has a surface with some transparency, allowing for some shapes and figures being viewed through it.



The main doors on the East side of the design will work much like rotating doors. However, they will be rotate counter clockwise and be mostly glazing so the public can see through to the plantlife before enetering the building.

Design Iteration 5:

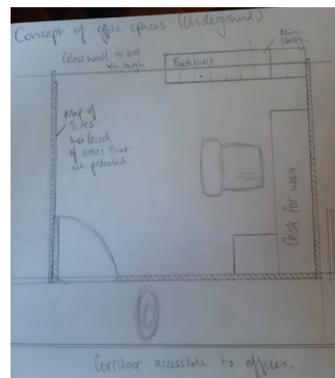
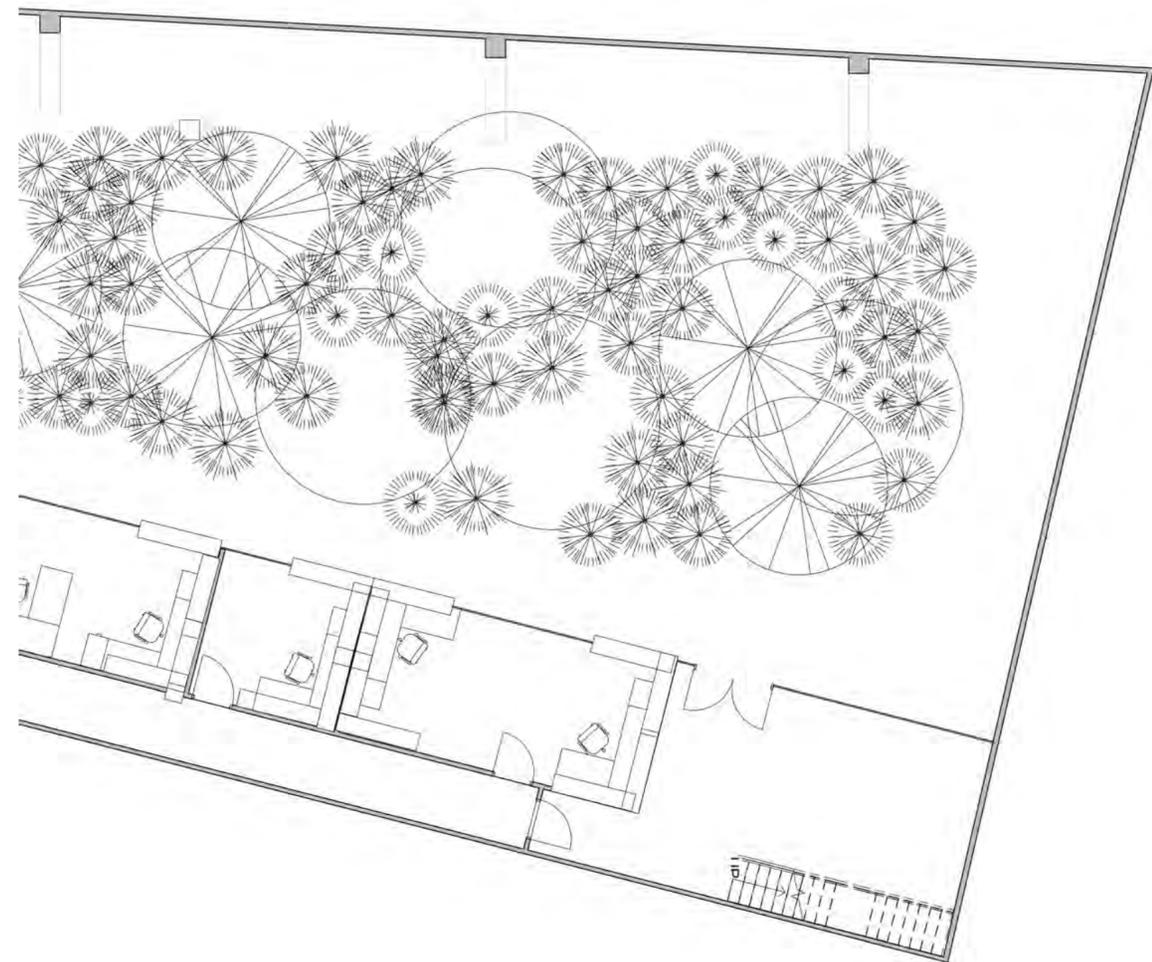
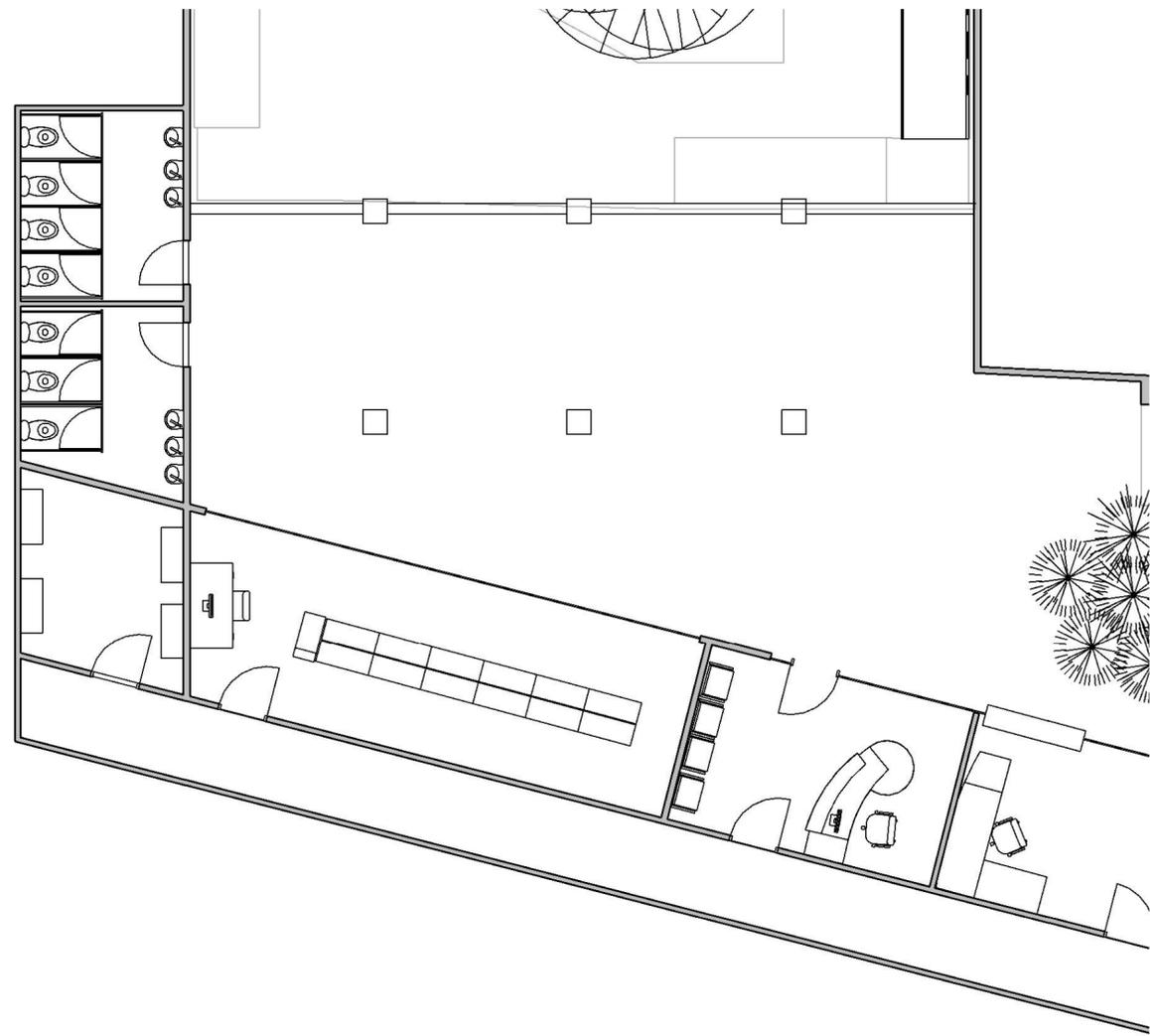
In this iteration, there has been more design refinements than anything. For example, instead of the underground section having an abrupt part which stuck out on the south side of the design, it has been altered in order to continue smoothly from the main building. In this aswell, it is made more clear in where the double skin facade runs, which is the south-west parts of the building continue to the end of the east of the design. It also shows the change in direction in the underground area, instead of having two angles it now stays on a singular course.



Meeting Rooms:

The rooms in the building are designed to come directly off of the ramp into their own separate space. Here, only a small group of people can meet and socialise. They also have open roofs and large windows so that they are susceptible to different types of nature, including the trees and such in the centre of the room.

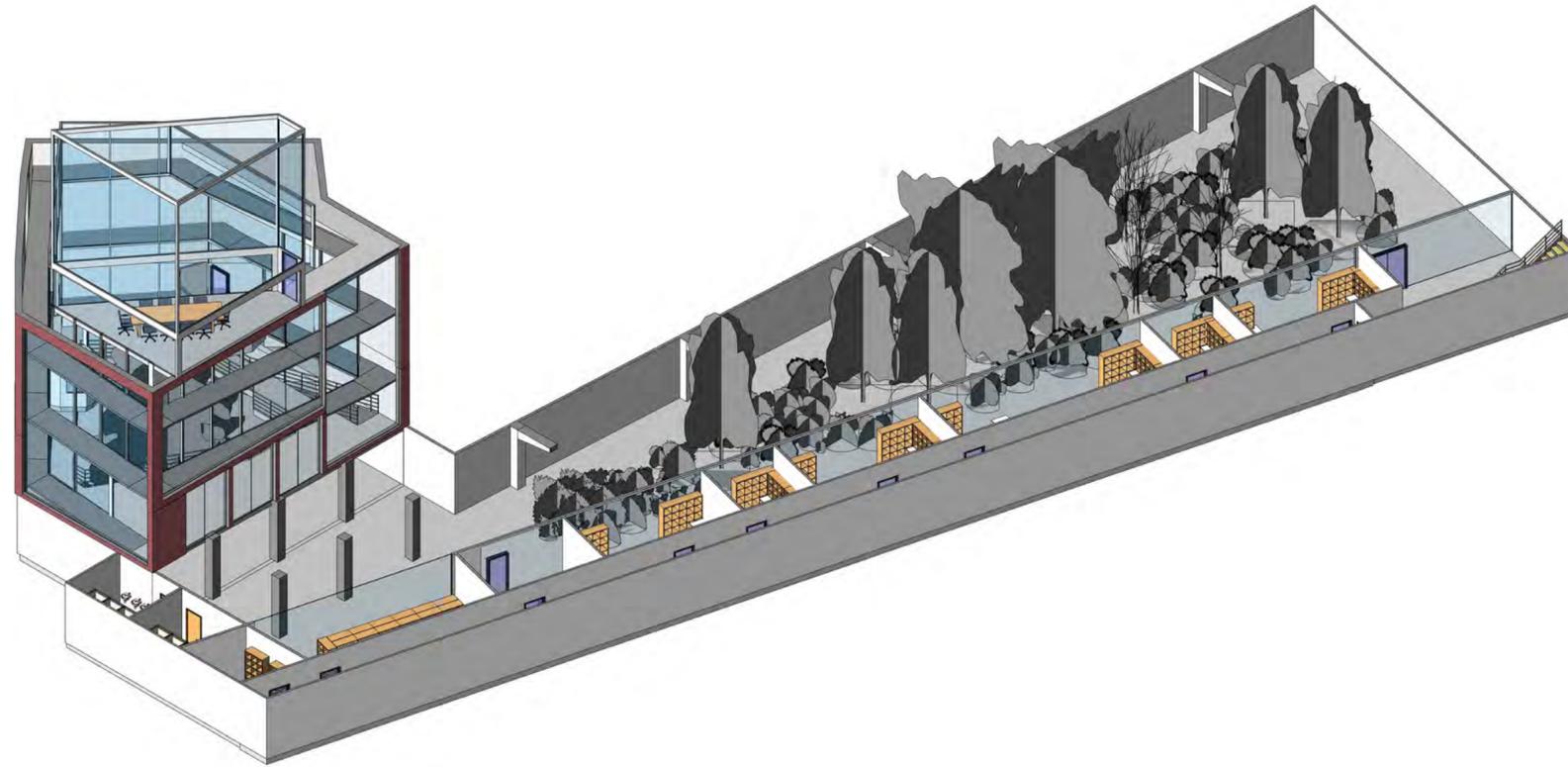
The meeting room on the top of the building was a two storey building with the meeting area on the second floor. However, it has now been changed to be one single room but with its height matching the buildings next to it, so it does not appear to be small and condensed compared to its surroundings. This room will later include plantlife within, ranging from small scale such as flowers to taller foliage like trees which will use the facade as a support to rise.



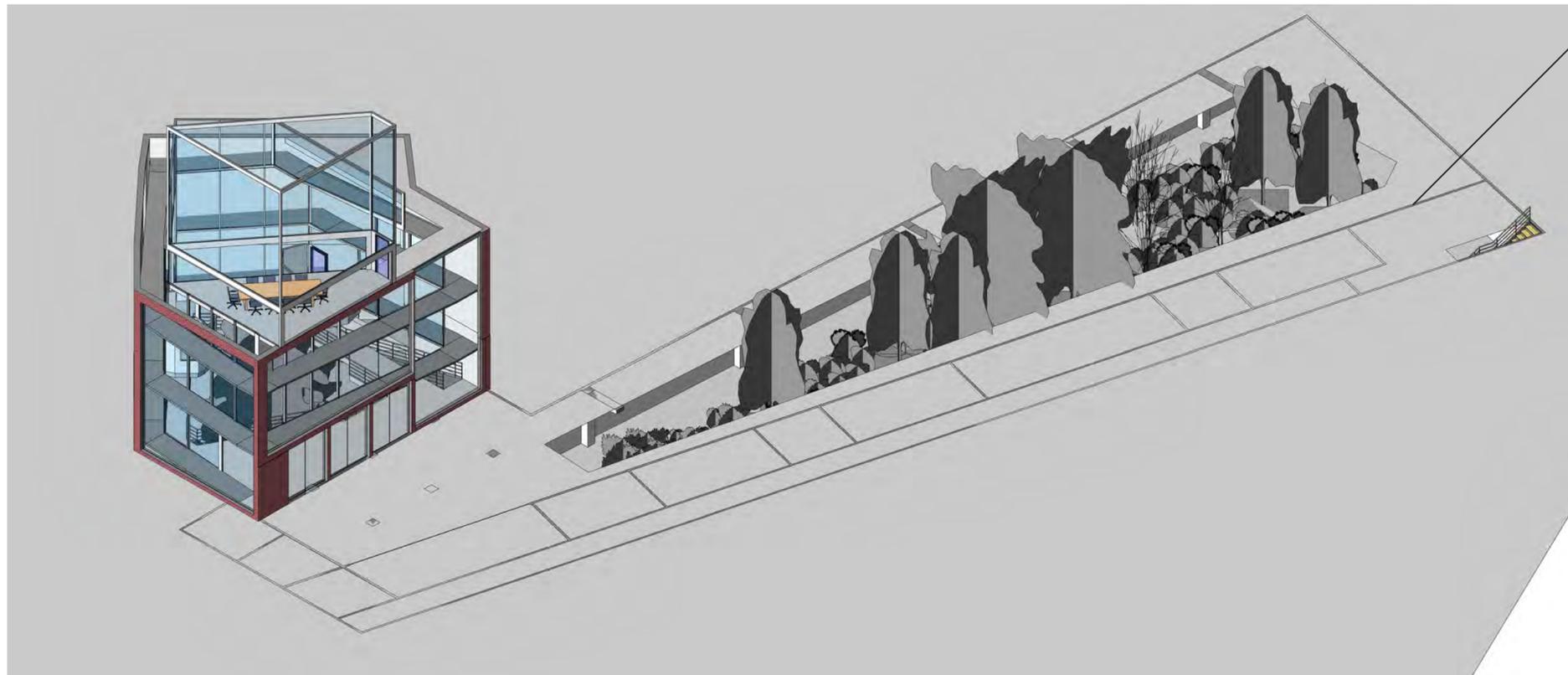
Underground Area:

The underground area has also been updated and changed in order to fit the form of the design in a more fluid and stable design. Here, the east side of the building where the corridor and office spaces are located, have been angled all the way to the south of the building. This makes the lab/ research area continue in the same pattern rather than abruptly go further down. With this, the storage room has also changed, where it continues the same way. Then the toilets are pushed slightly to the west, allowing room to still be available.

Within the main office spaces, a u-shaped form of shelves are pushed into the areas where workers are located. Some of the rooms allow for multiple people to work, which allows for work to be either independent in team form. At the end, there is also a separate room where a set of stairs is located. This is a possible exhibition space for people to become aware of what the Sussex Wildlife Trust is doing and their aims. It could also be used to host events if people wish to host anything.

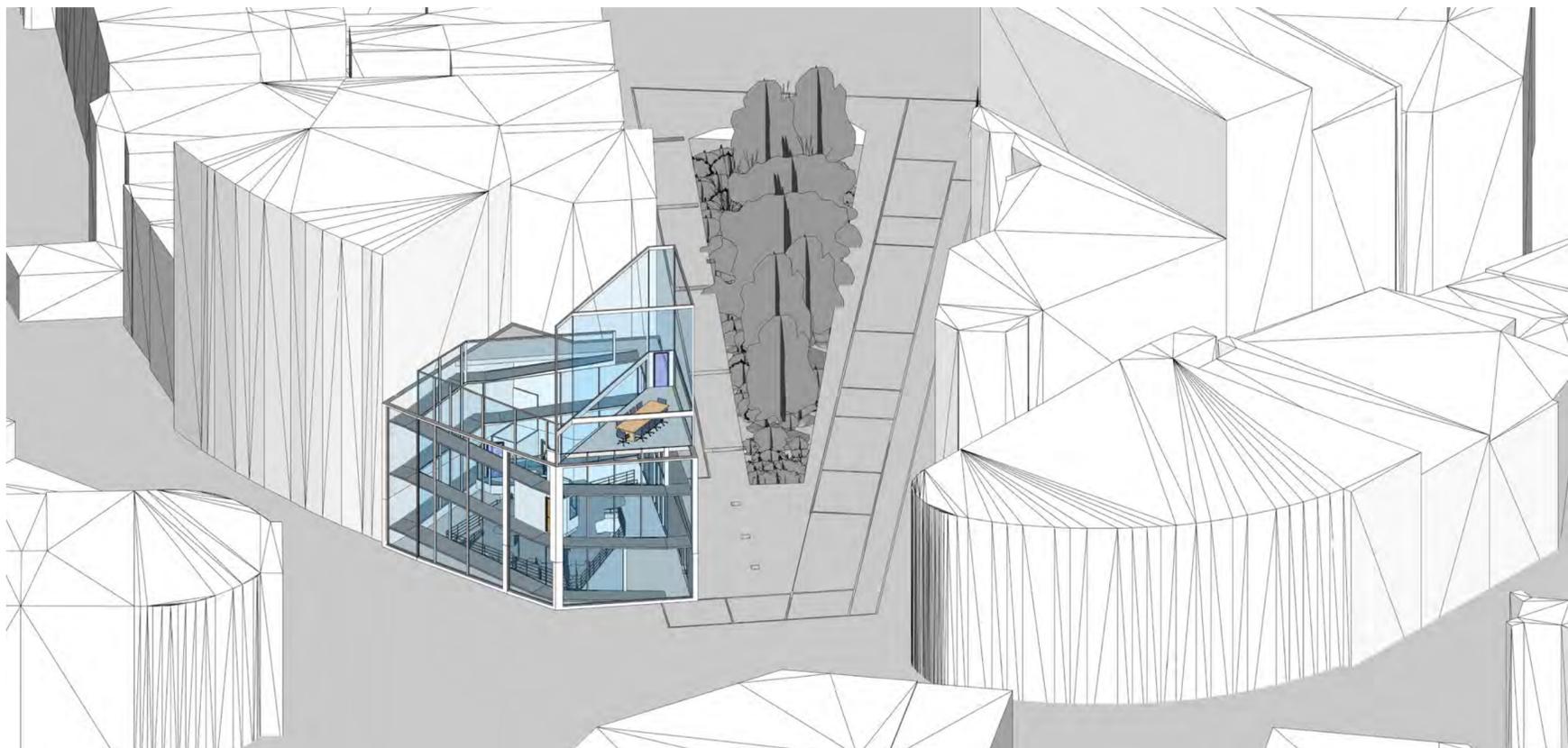
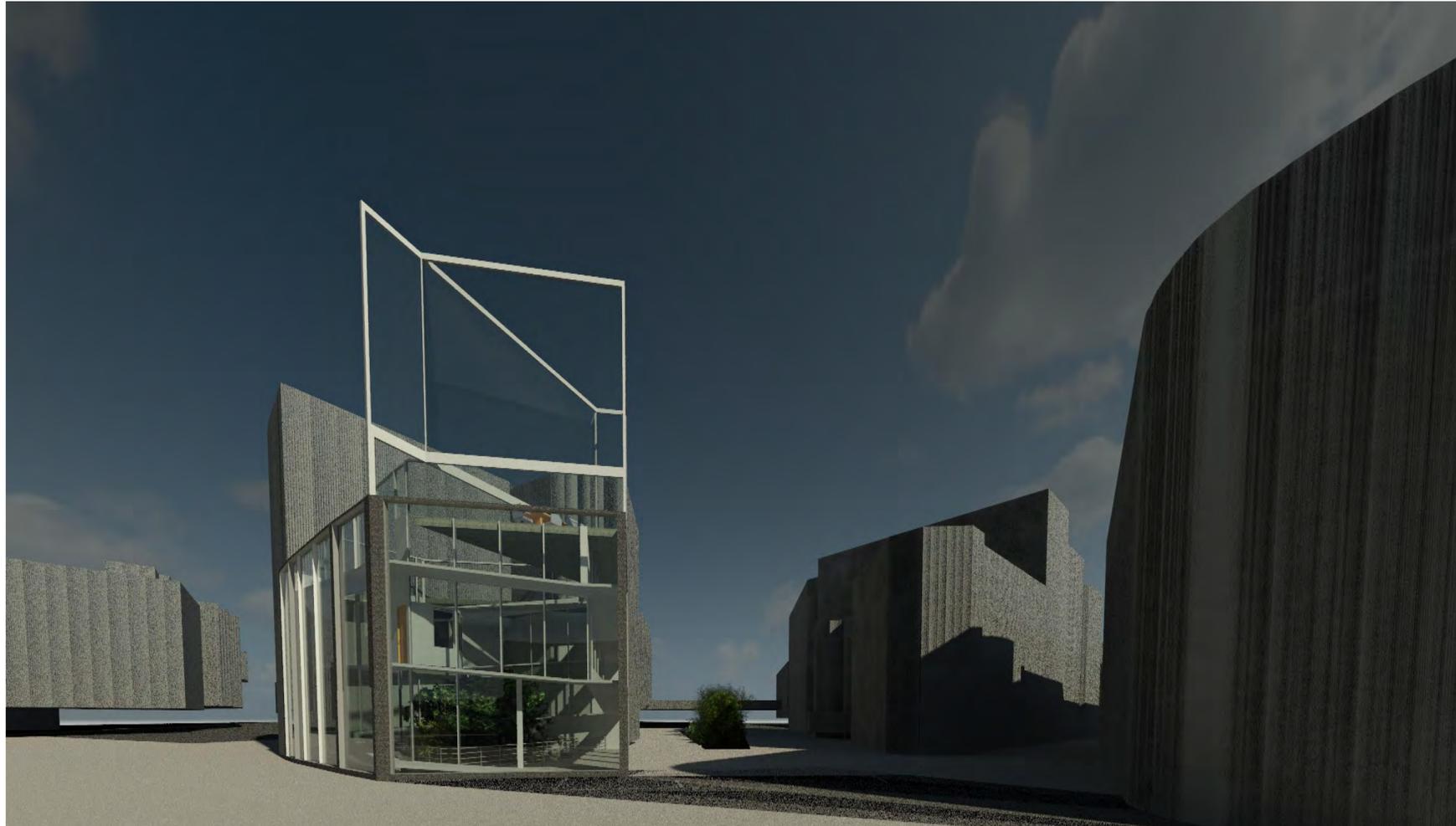


An idea of what the design may look like when above the underground. Here, the only real thing that can be seen if the opening to allow the plantlife a way to grow. This also allows people to look down into the courtyard below.



Design Iteration 5 3D:

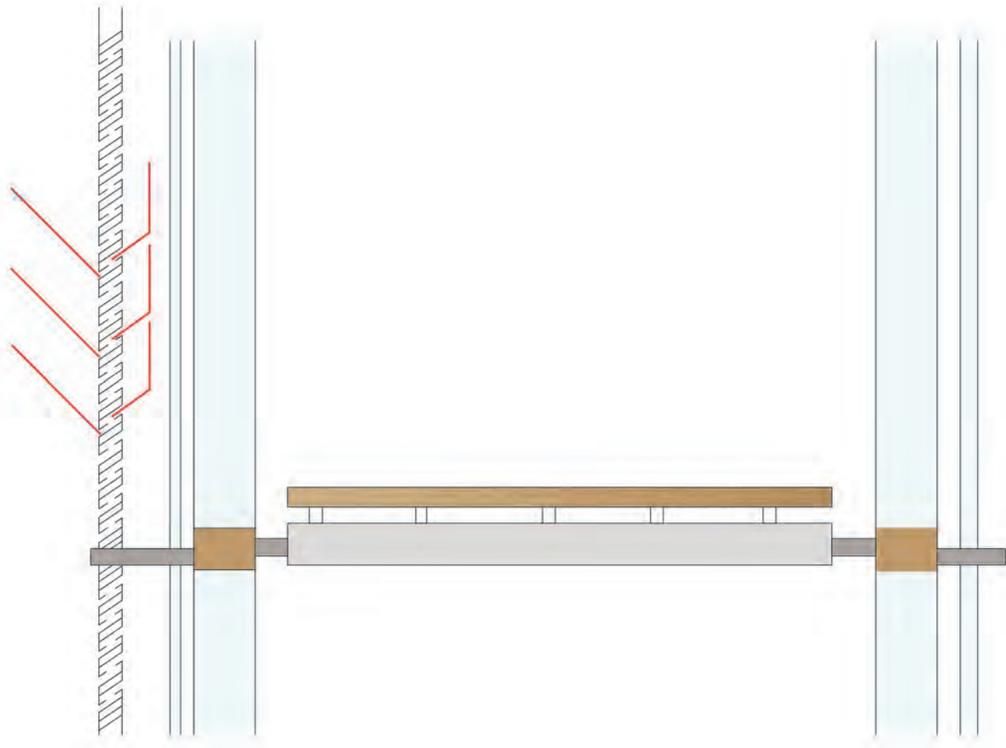
The 5th design shown here can be seen at some of its potential. These images are to show what it looks like in and out of a part of the site. In the top image, the design has no restrictions, so it can be seen fully. In the bottom image, the ground layer has been added to show how the underground part of the design would show as. Here, the entirety of the underground is covered except for the middle area where the trees and foliage are able to gain sunlight from above. This also allows people who are passing or who do not want to enter the building to see this nature from the surface.



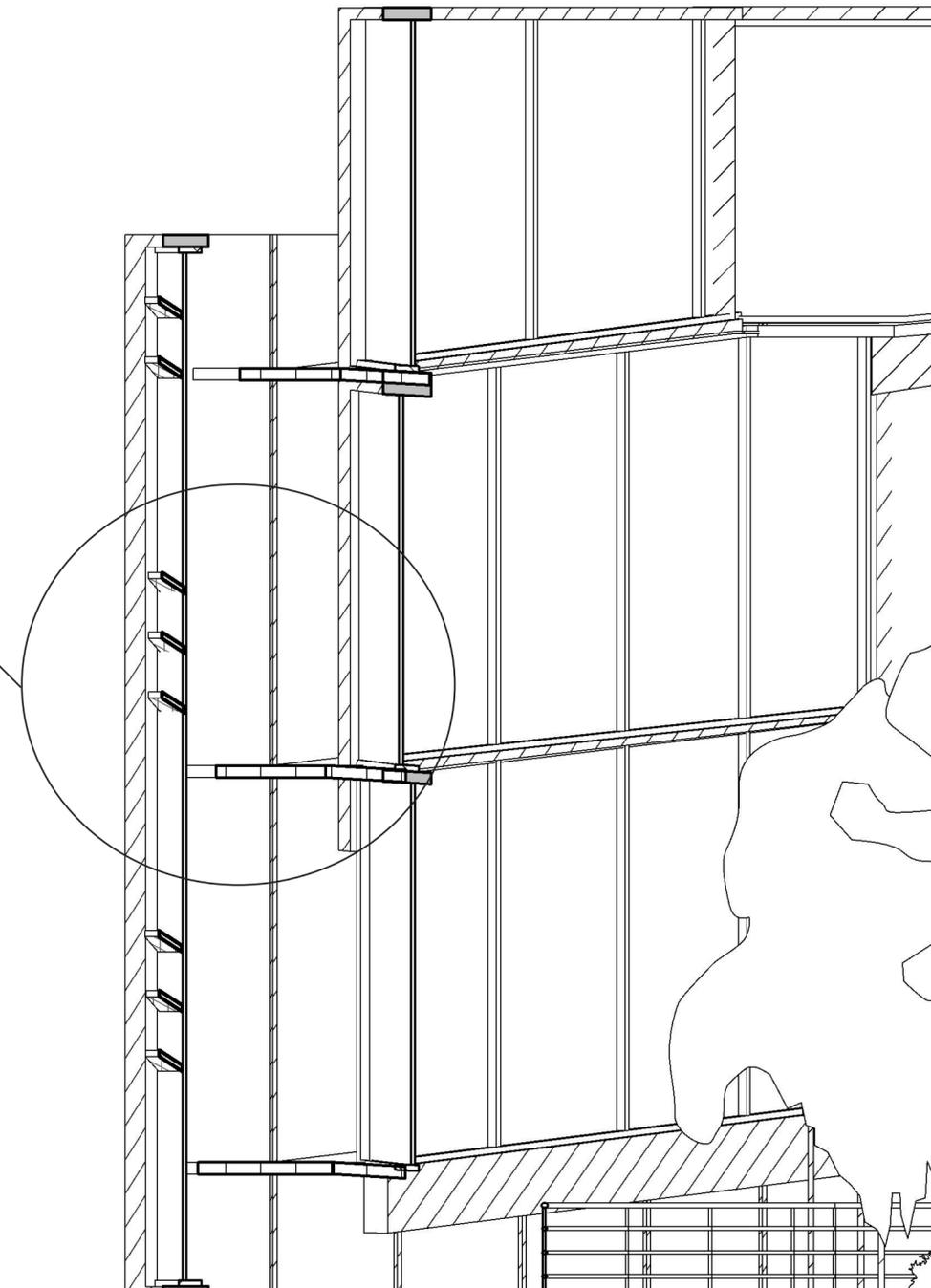
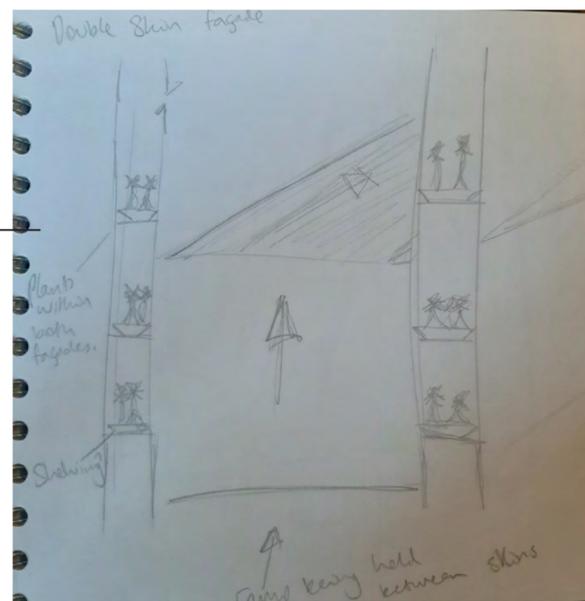
Design Iteration 5 In Site:

These images are able to show the design within a 3D context. Here, what is viewable is mostly how the design fits within the site. In both it is clear to see the trees from the underground area appearing within the street view and how they are able to rise above the main road.

(Top) - The design rendered from a street view from south of the building.
(Bottom) - The design within the site from an angle looking down towards it.



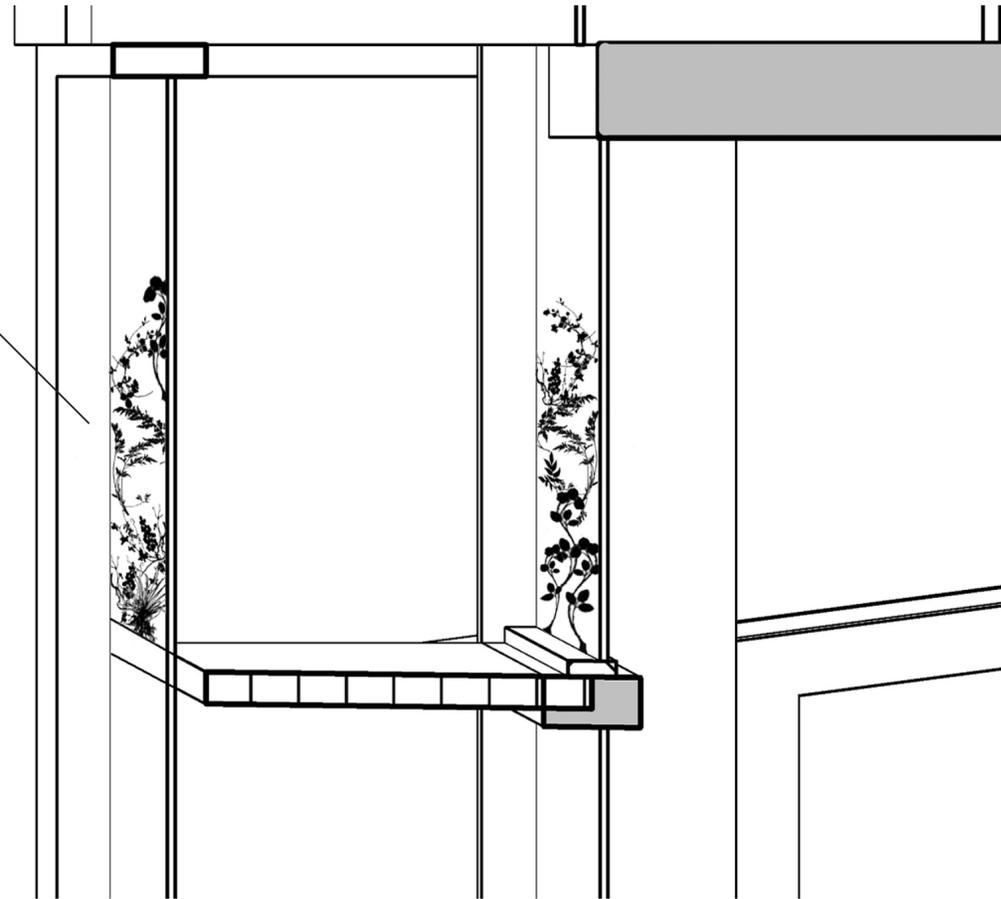
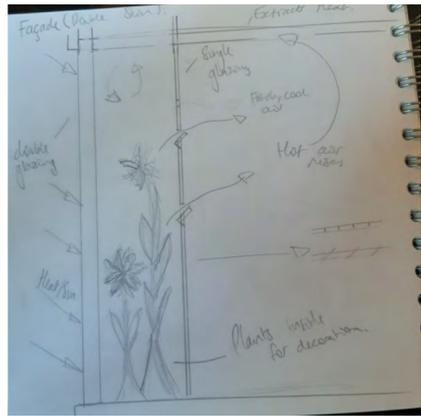
Glass facade to contain shelving of plants and flowers. Due to the position they are in, a viable way to water them will be needed to ensure that they can grow up the facade.



The Ramp and the Facade:

The ramp runs throughout the majority of the facade. With this, it makes the person walking through it seem like they're within the design. The louvres on the exterior allow for shade for the people within, and the glass contains plants and flowers within it so people can admire nature whilst ascending or descending the ramp.

Growth on the exterior of the facade facing south:
Allows most sunlight to be taken in.



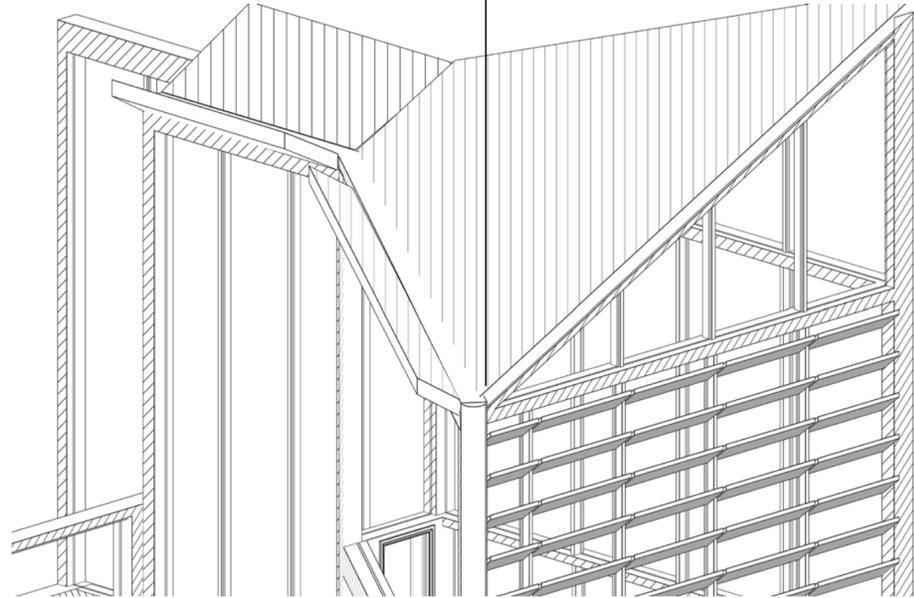
Moss could be a sufficient plant to grow due to its needs being limited, only really needing a damp area.

Plantlife within the facade:

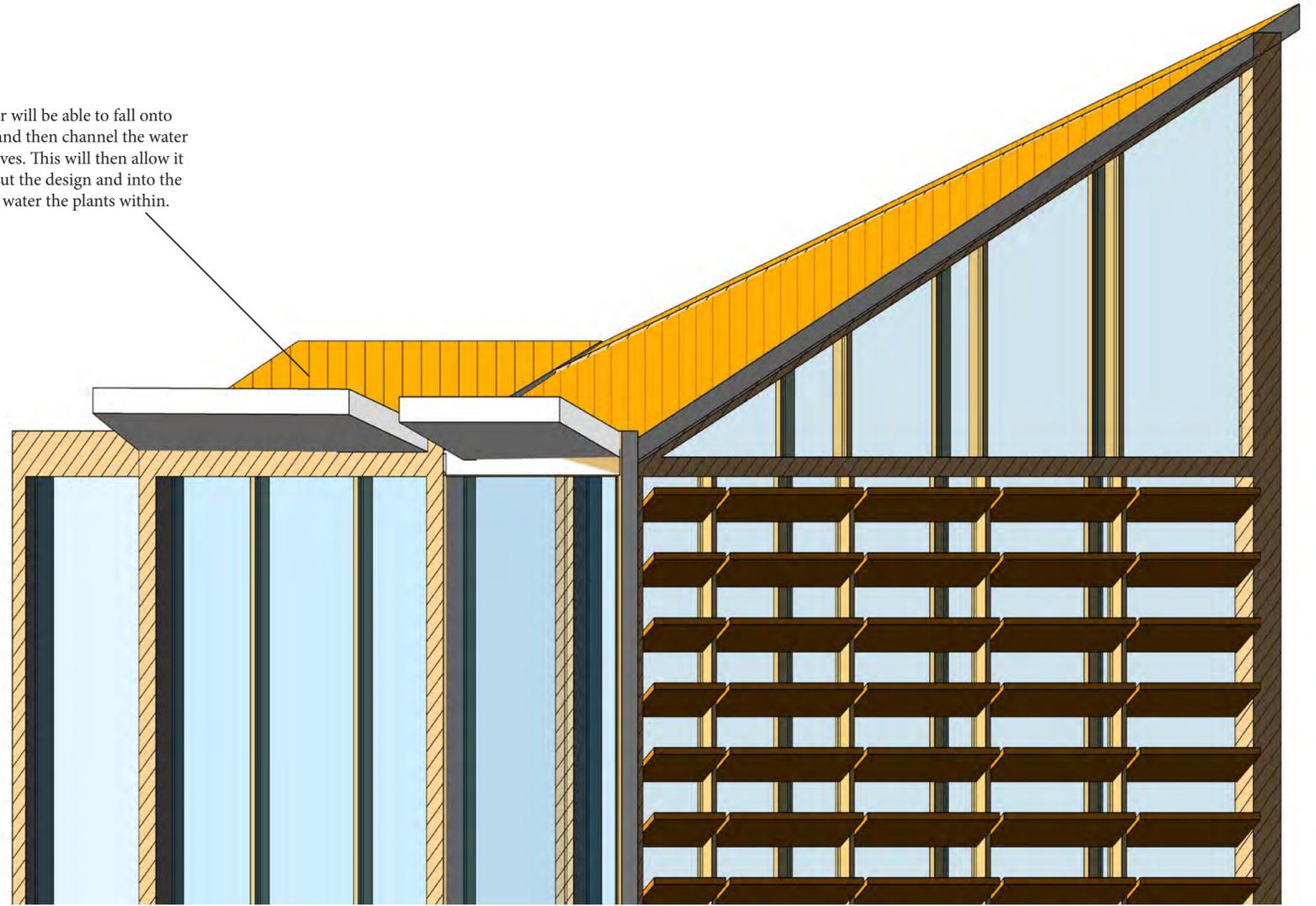
Due to the nature of my design, a way to show the growth of plantlife is important. Here, an example of what some flowers or plants growing within the facade may appear to look like. With plants growing here, they will be getting sufficient sunlight in order to grow. For this particular bit, the facade will include different types of plants and nature, like moss and vines .



A pipe has been included within the end of the design so that the water that is led to the south of the building can then be sent to different parts of the design.

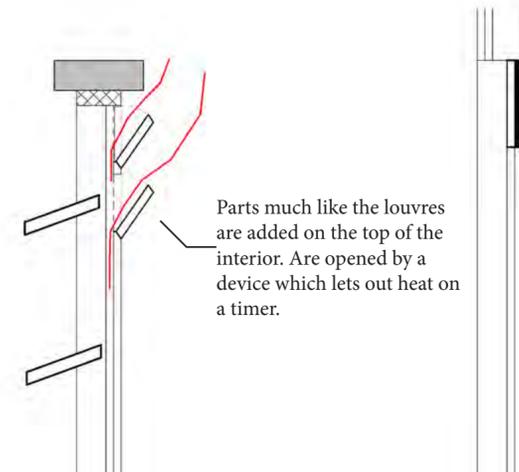
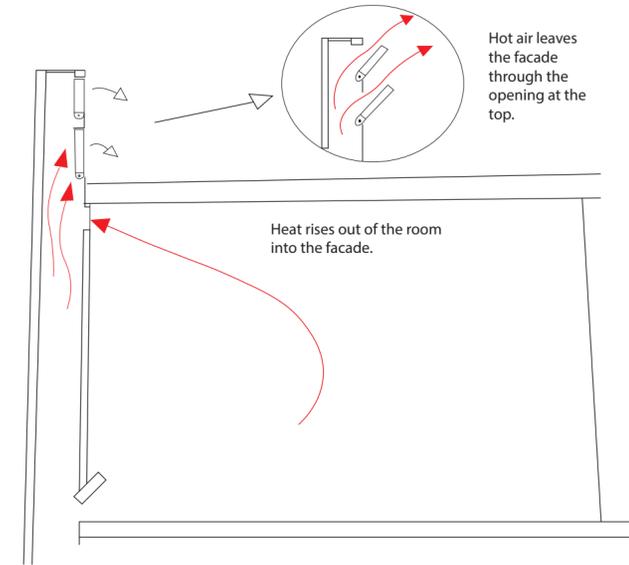
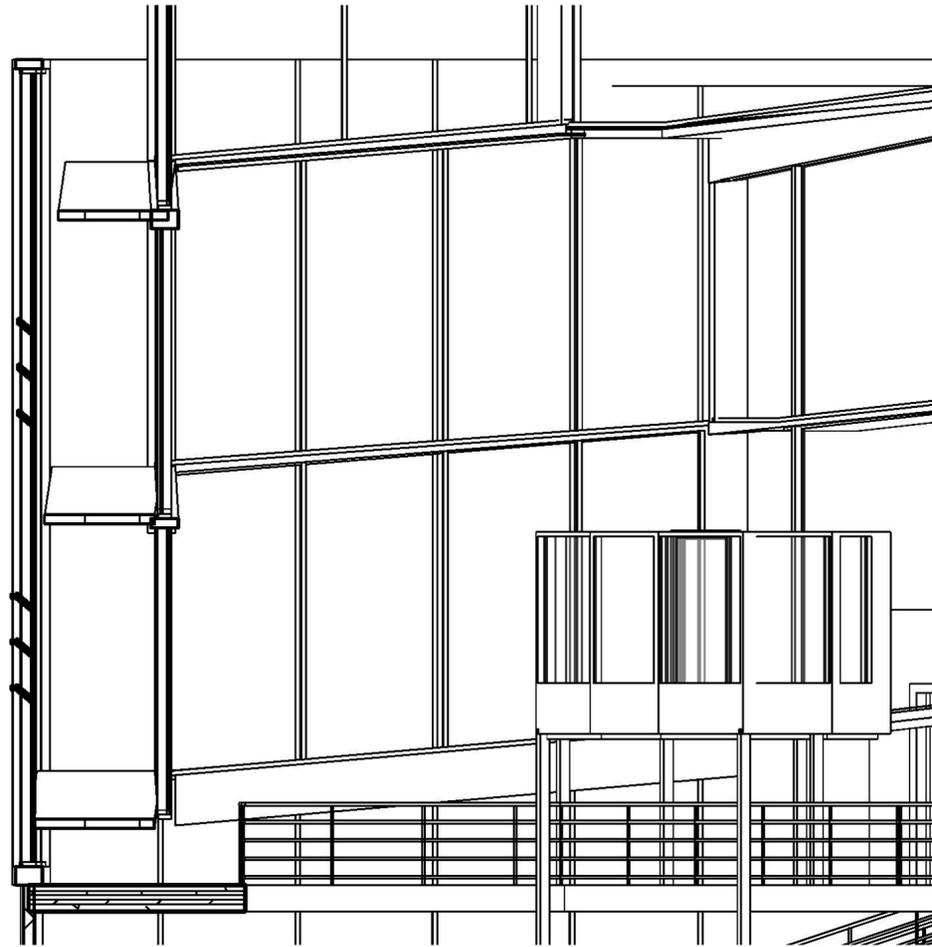


Rainwater will be able to fall onto the roof and then channel the water into grooves. This will then allow it to go about the design and into the facade to water the plants within.

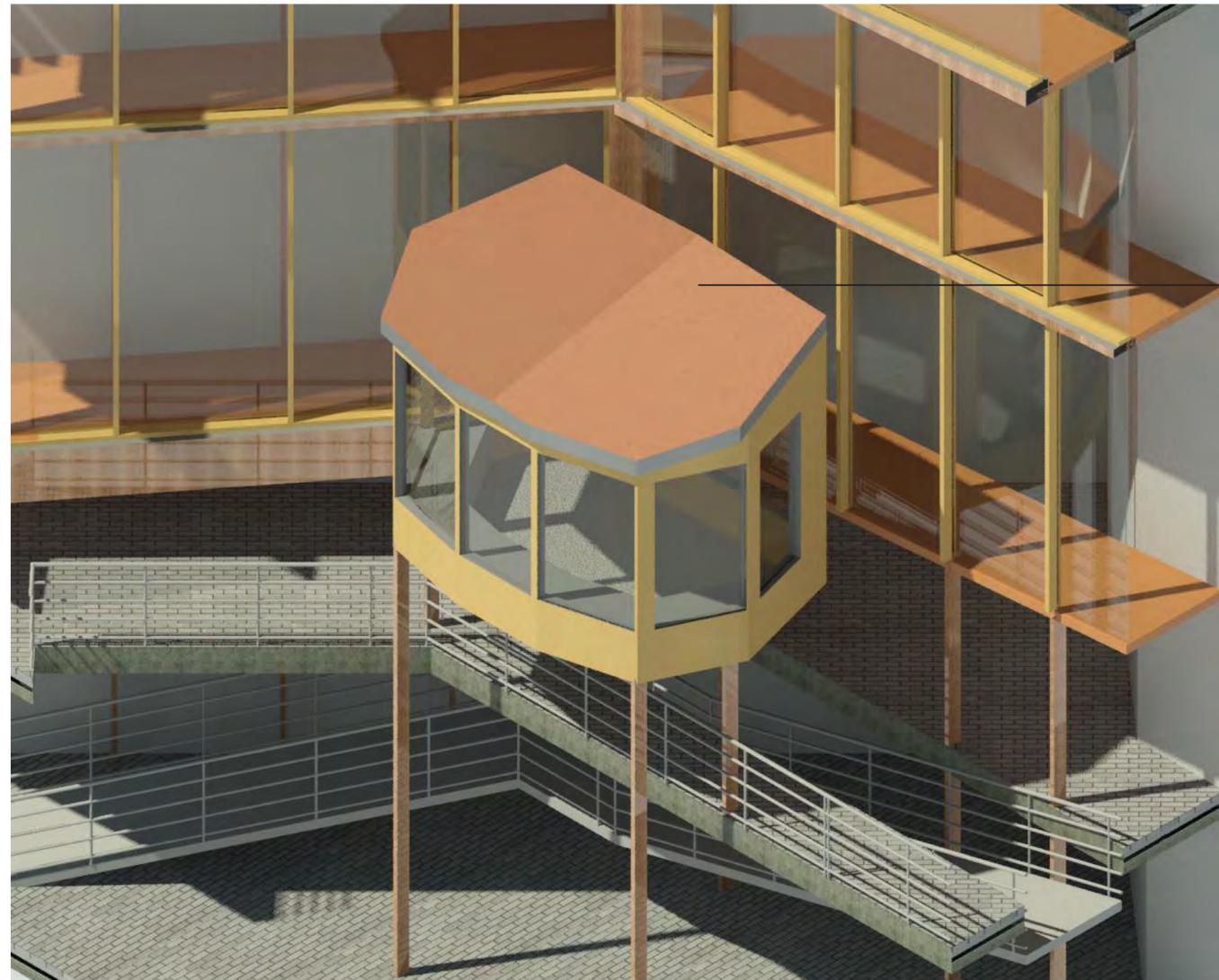
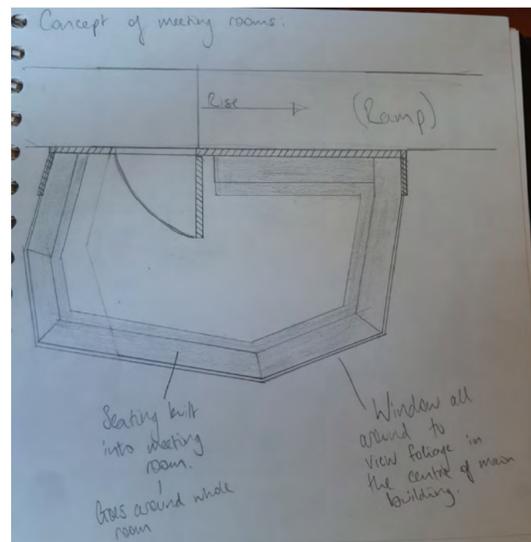
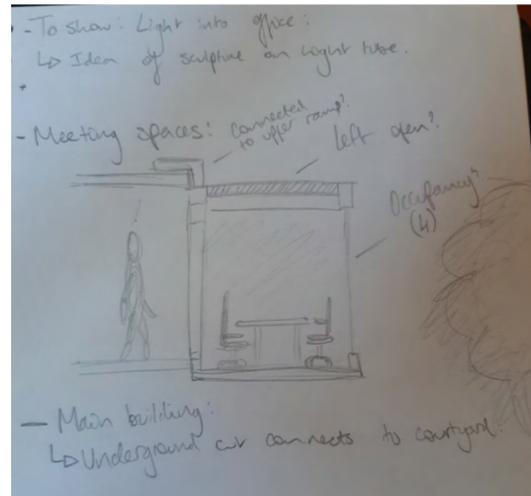


Water within the design - The roof's slope and how it can help the plantlife within the design:

As the sun hits the south side of the building, the windows will start to heat up the interior, so a way to cool it is handy. Here, an opening will be located on the top of the facade in order to release unwanted heat from the design.



Cooling the Design's Facade:

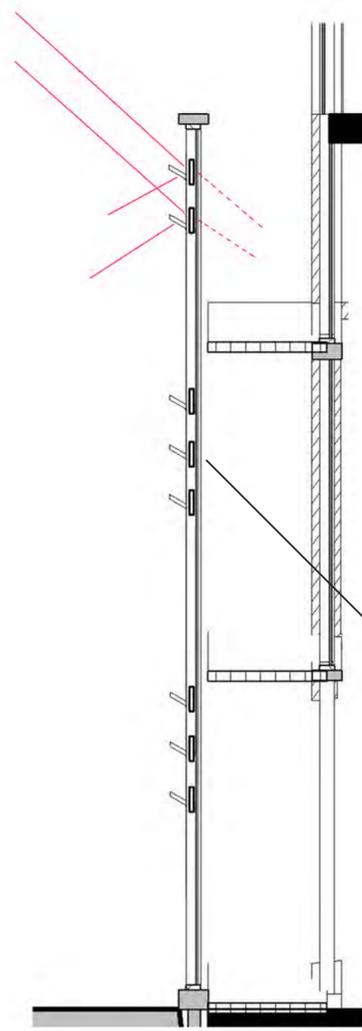
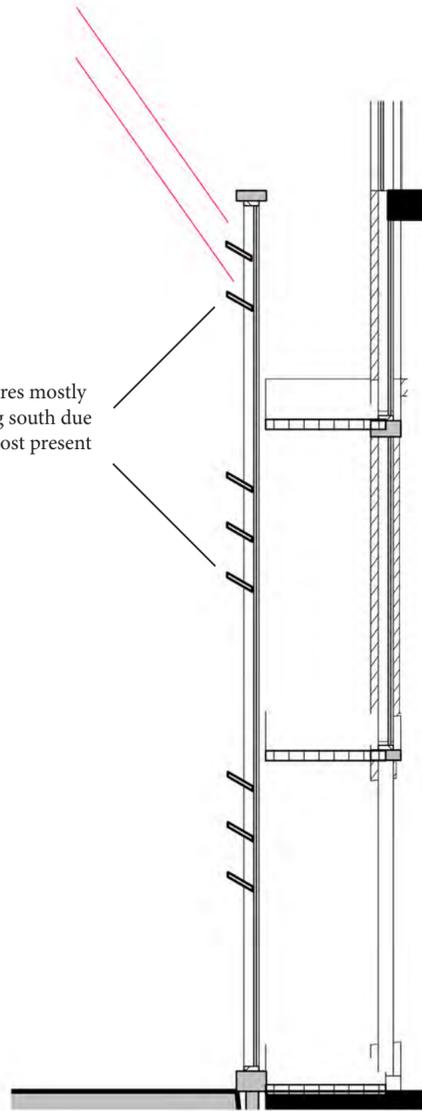


Pods within the design were made in order to serve as a meeting area. Here, they are compact for only a small group of people. They hang out over the edge as a separate structure to the facade, and overlooks the nature below it.

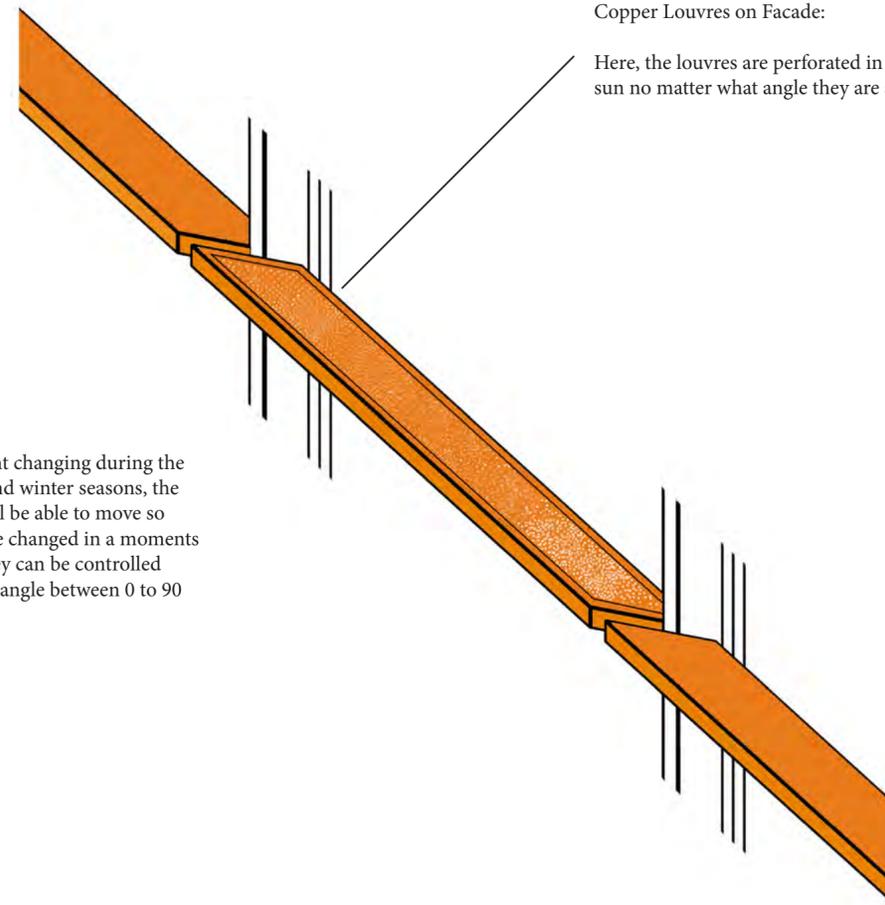
The pods use supports of glue laminated timber in order to stay supported and stable. Due to the materials of the pod, being timber and copper (Roofing), it is fairly light, allowing the columns and the facade to support it.

Pod Meeting Rooms:

The facade has louvres mostly on the facade facing south due to how the sun is most present in this area.



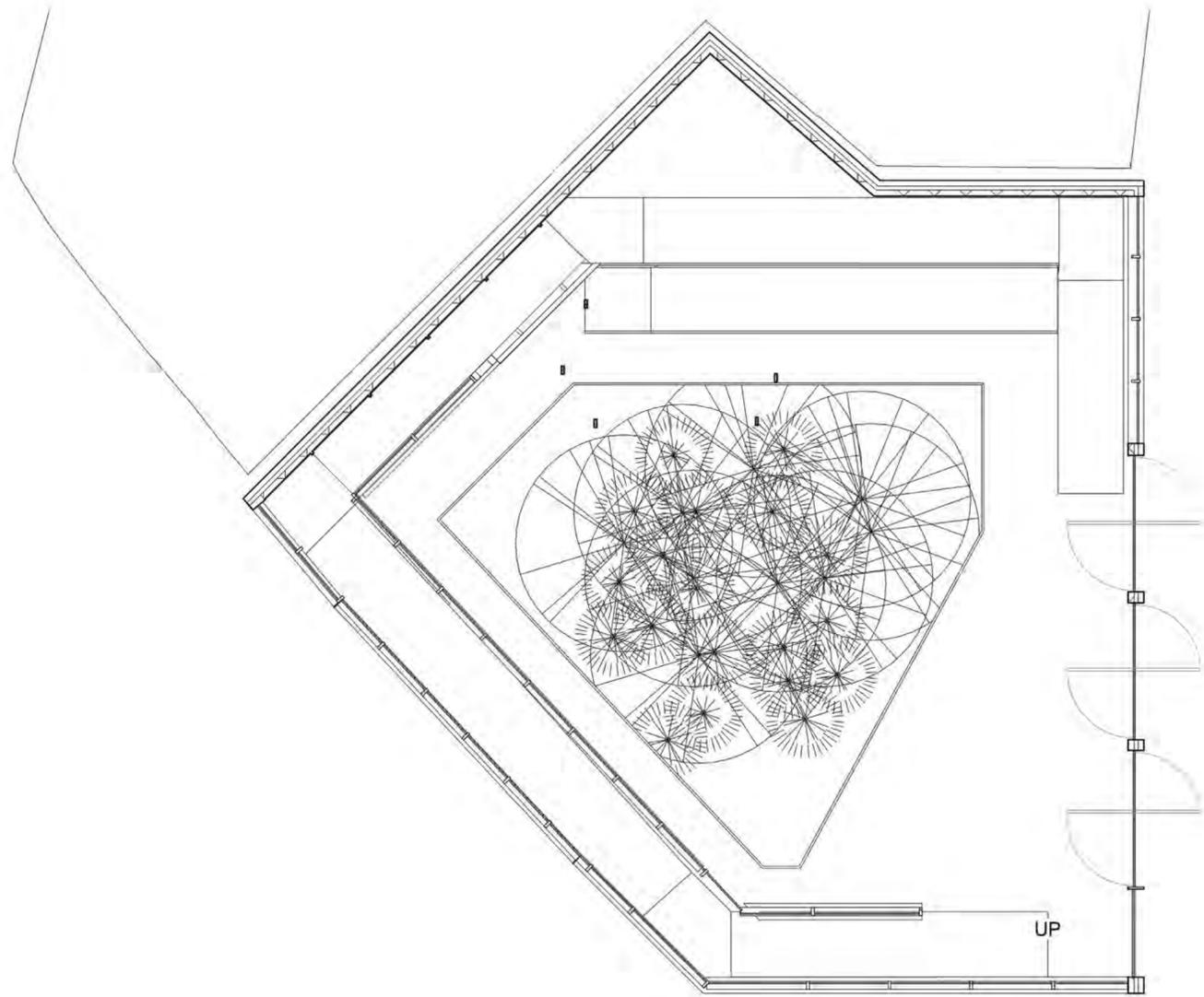
Due to light changing during the summer and winter seasons, the louvres will be able to move so they can be changed in a moments notice. They can be controlled to be at an angle between 0 to 90 degrees.



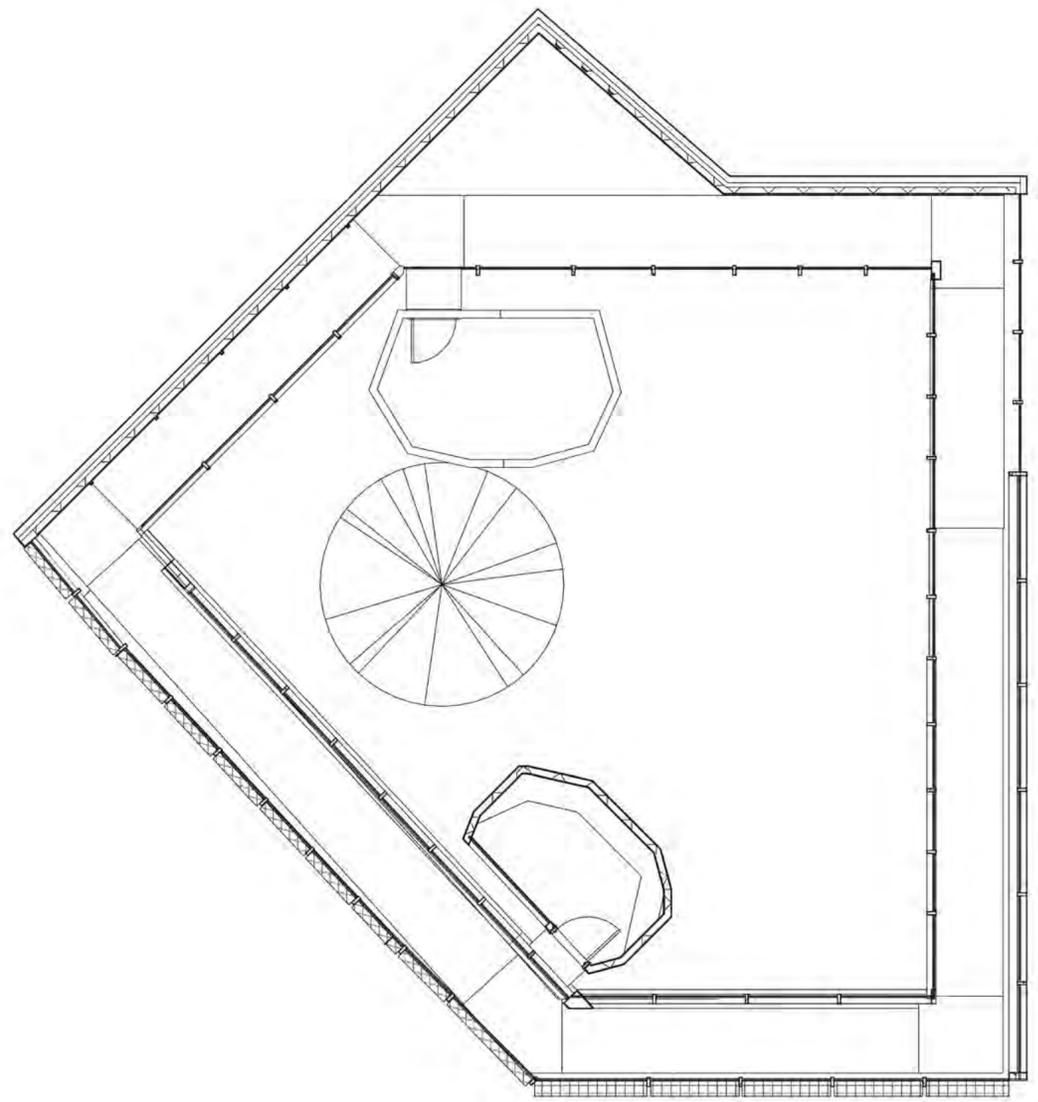
Copper Louvres on Facade:

Here, the louvres are perforated in order to let in sun no matter what angle they are at.

Louvres on the facade:

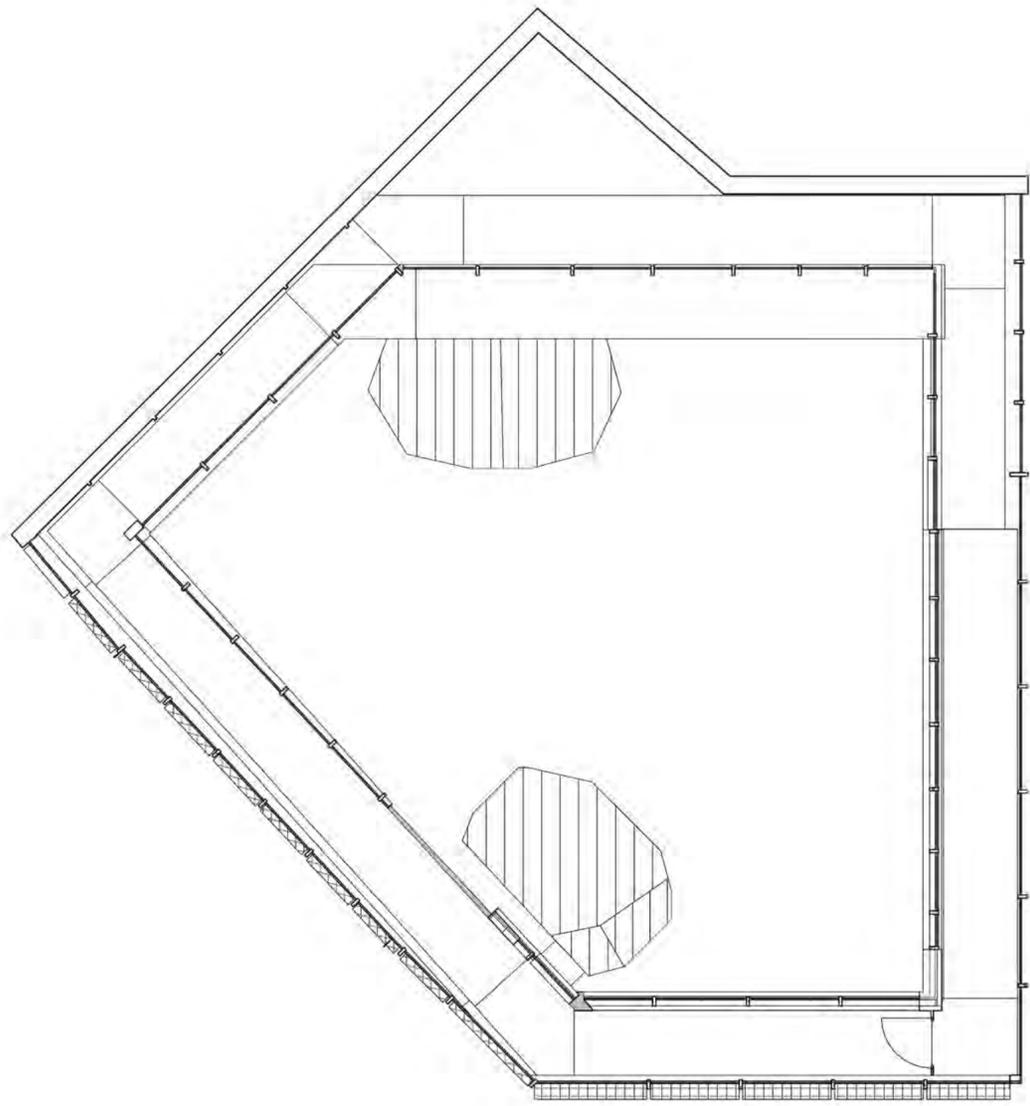


Plan Level 0

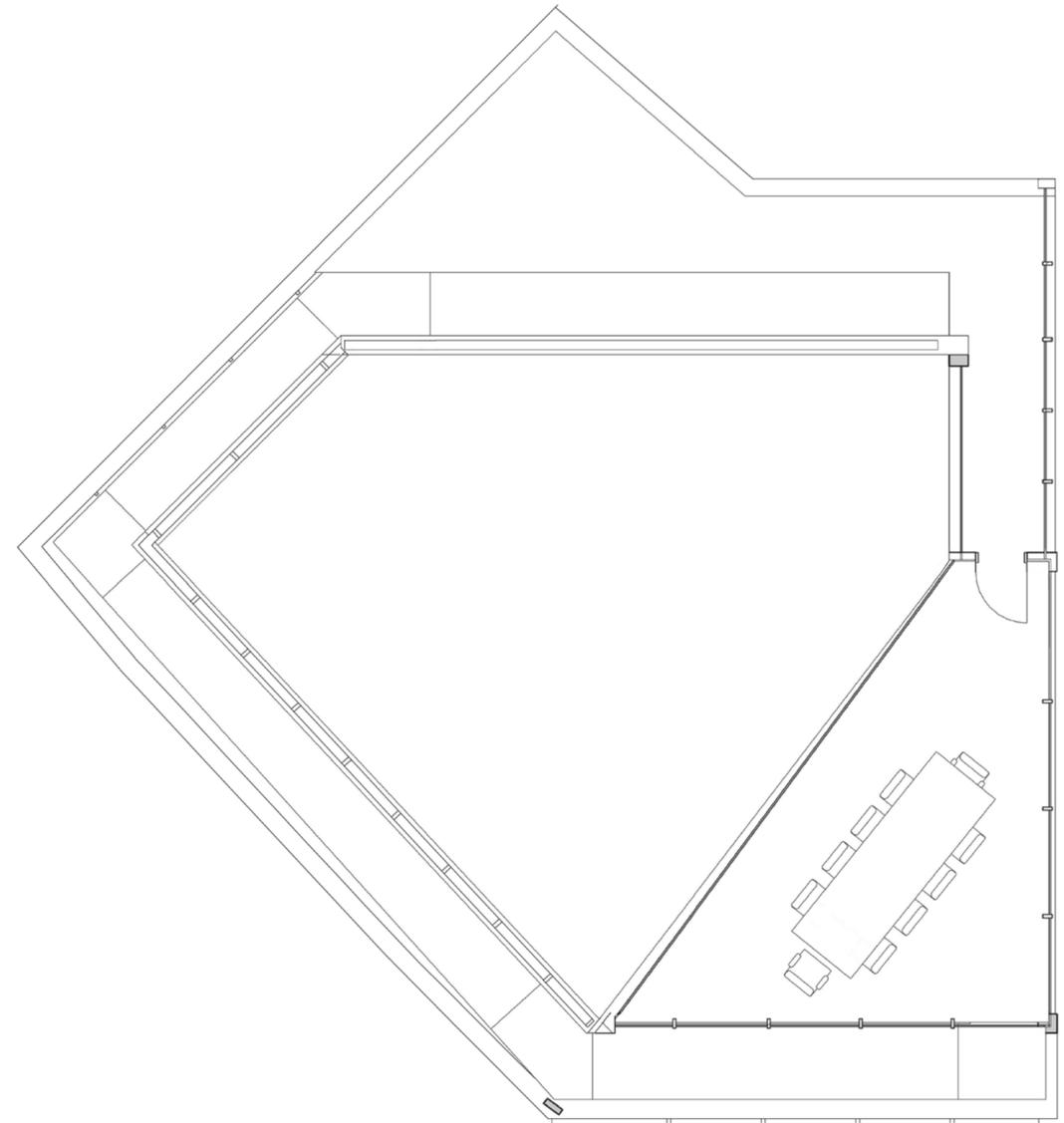


Plan Level 1

Final Plans



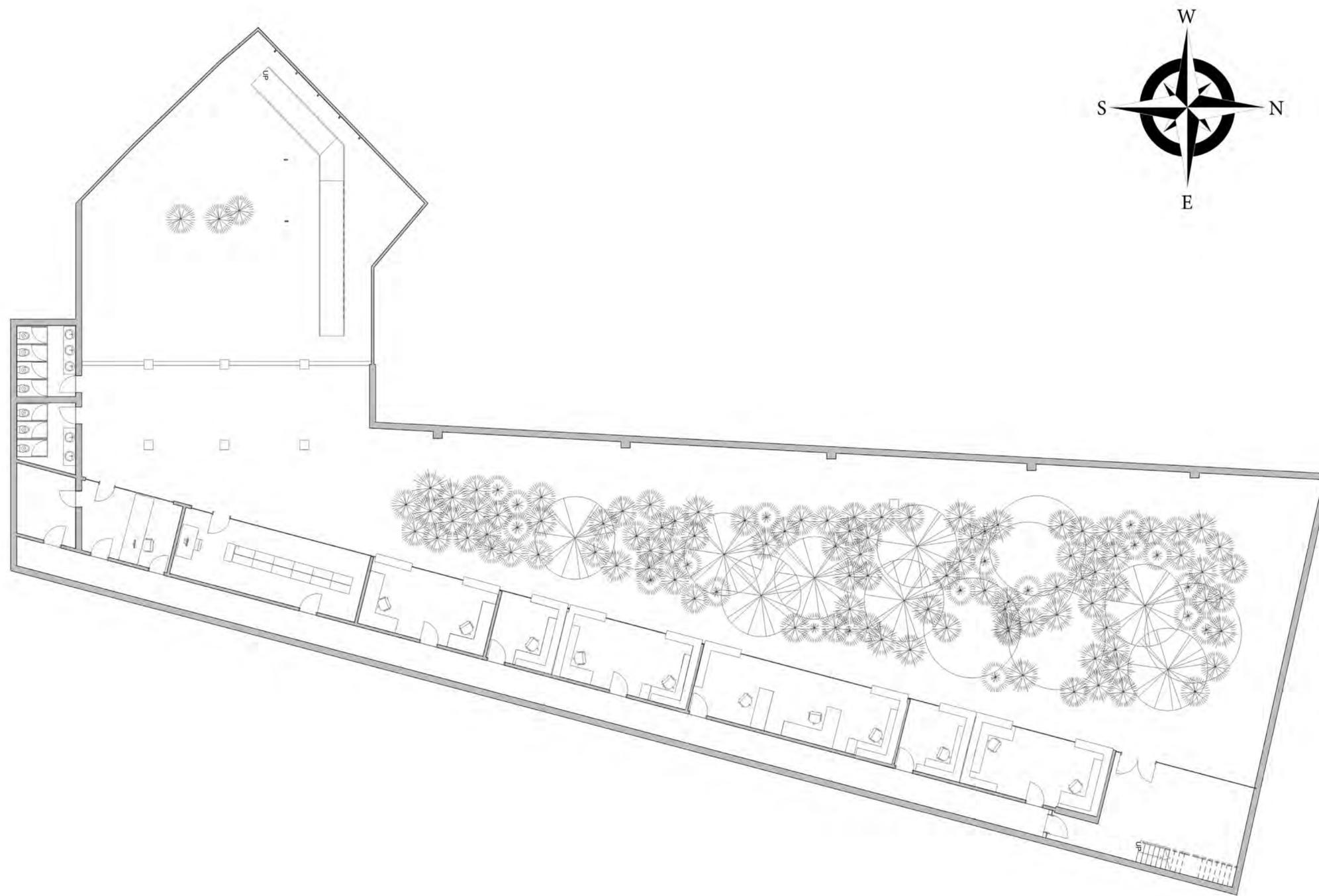
Plan level 2



Plan Level 3



Location Plan

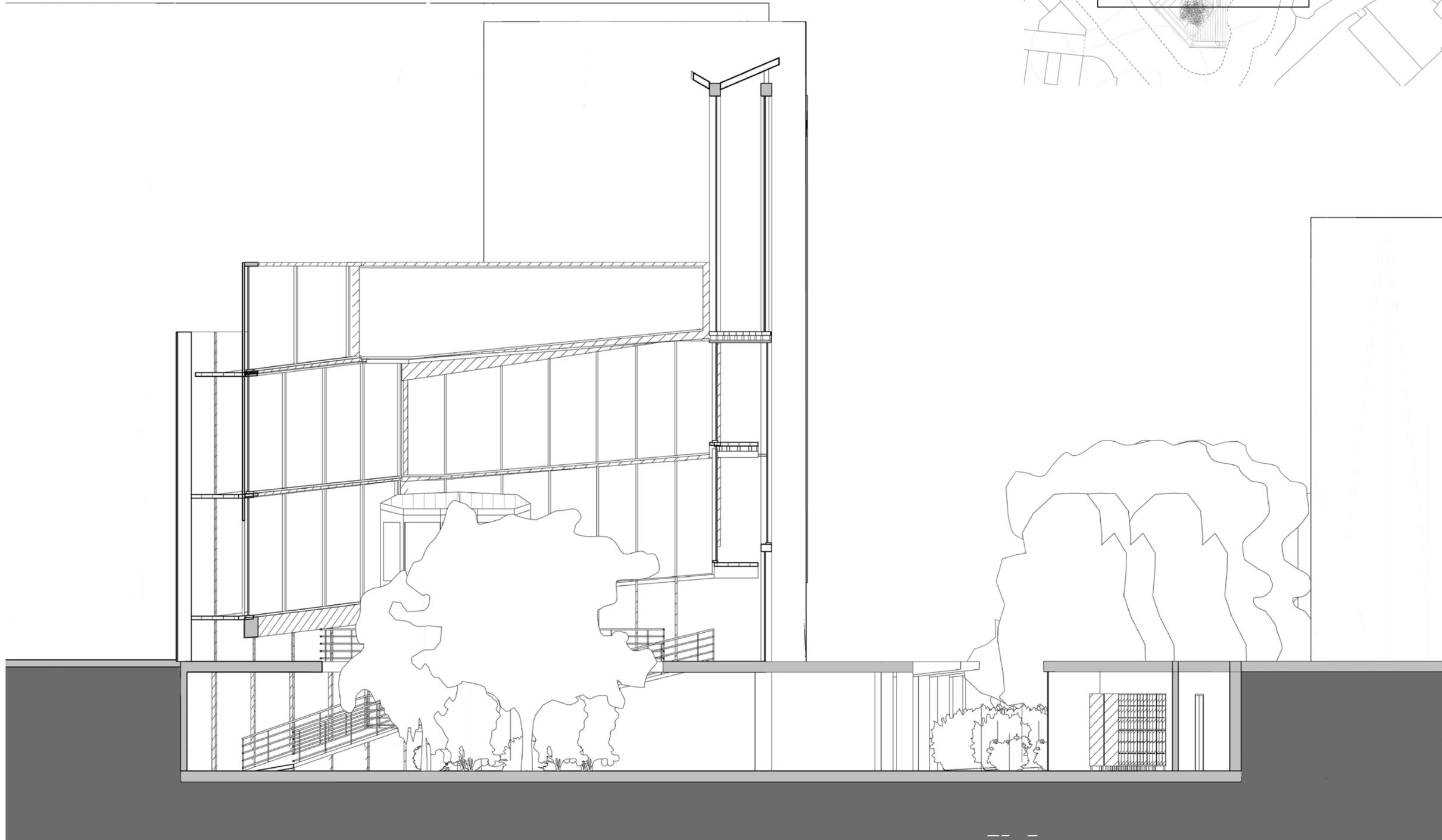


Underground Plan

The design within the site, where the pre-existing buildings are to the scale of the design's height.



Section facing West:



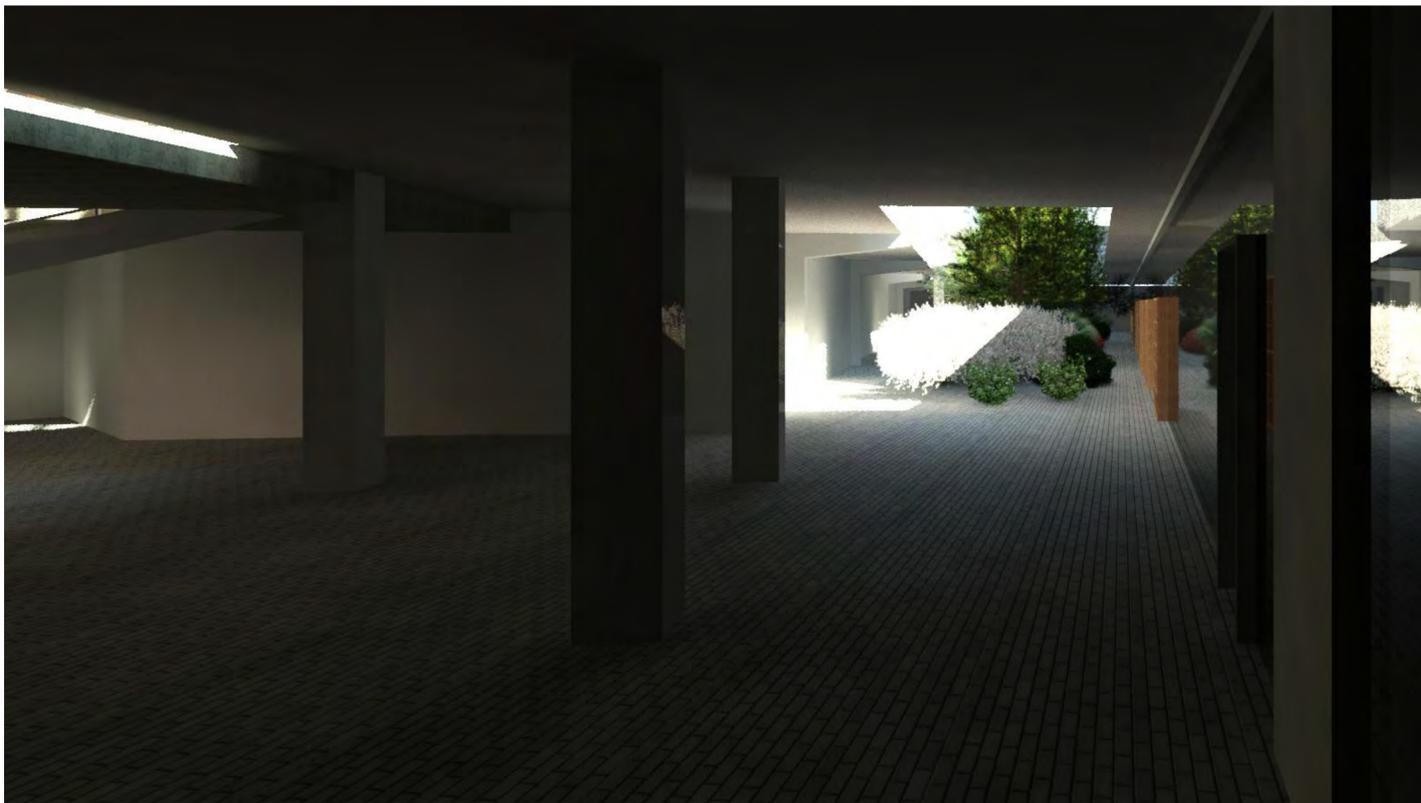
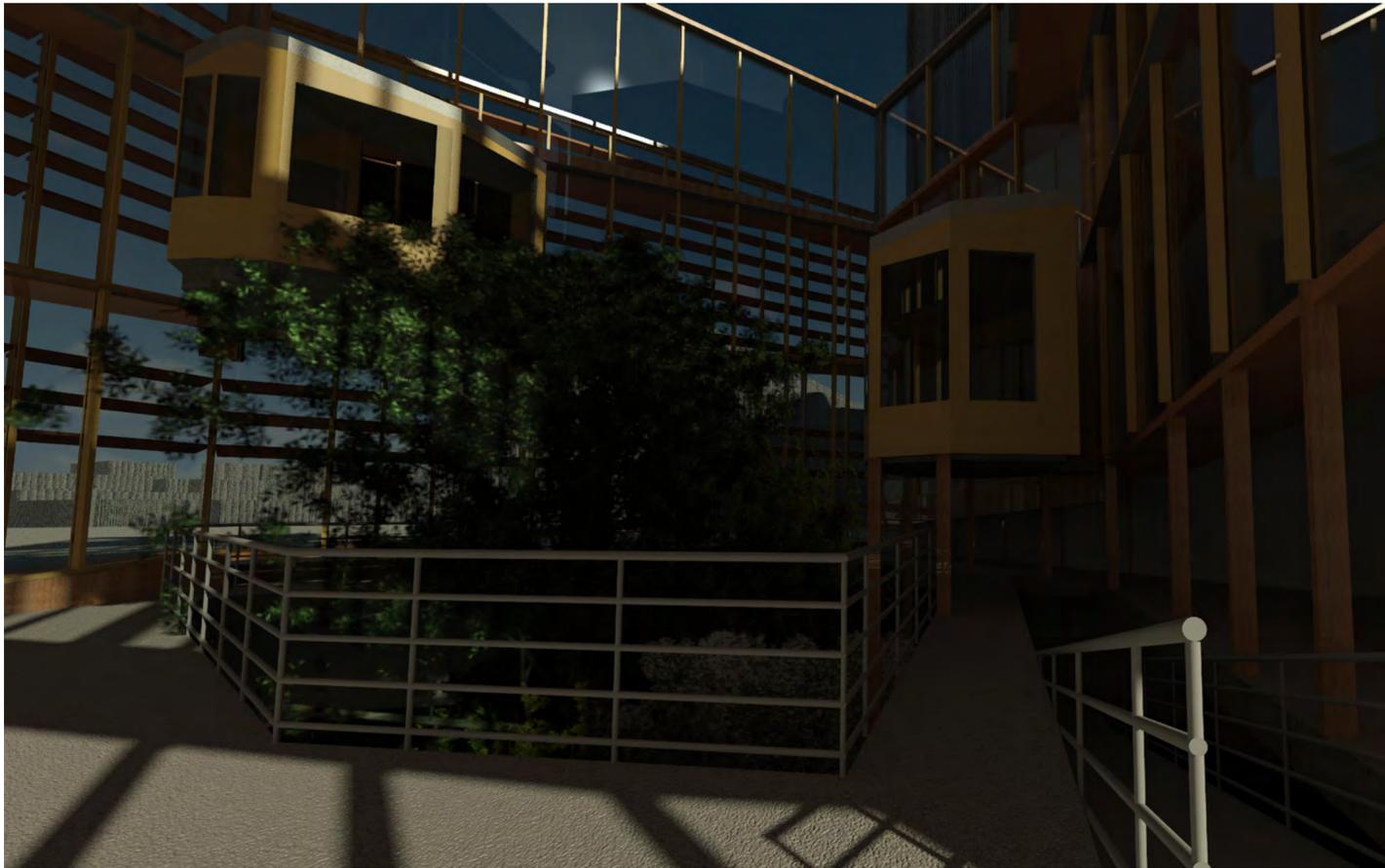
North Facing Section:



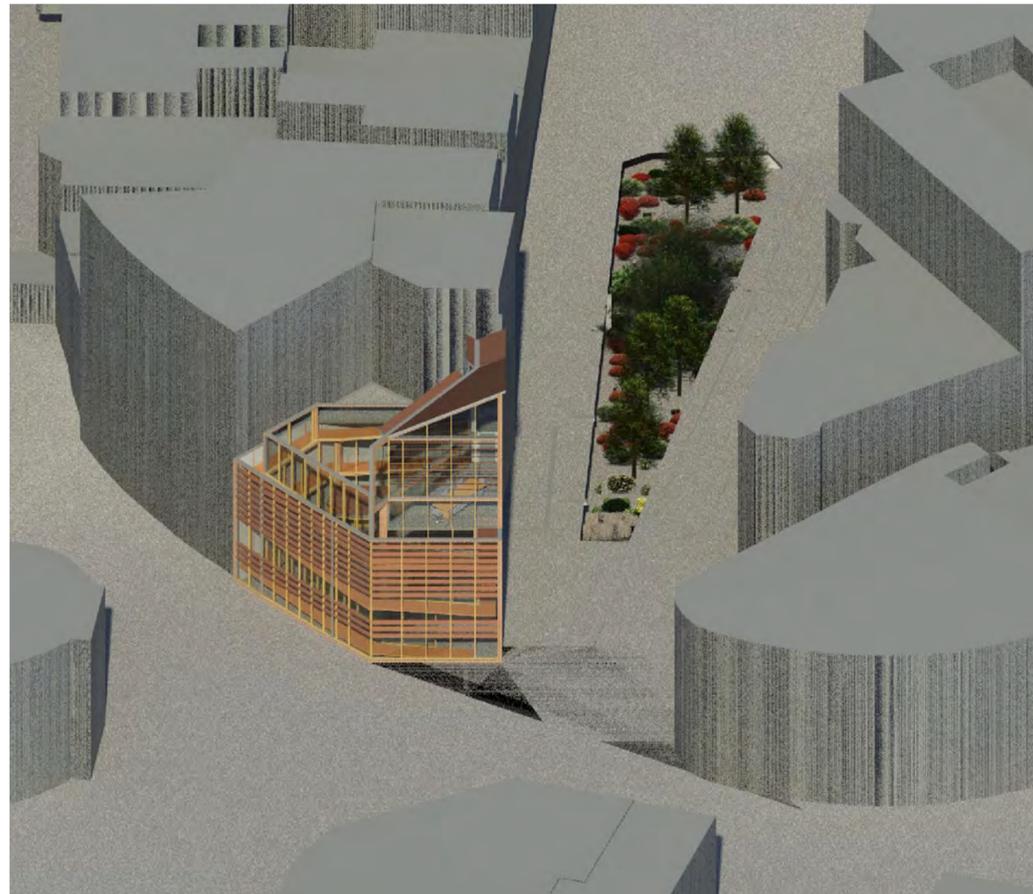
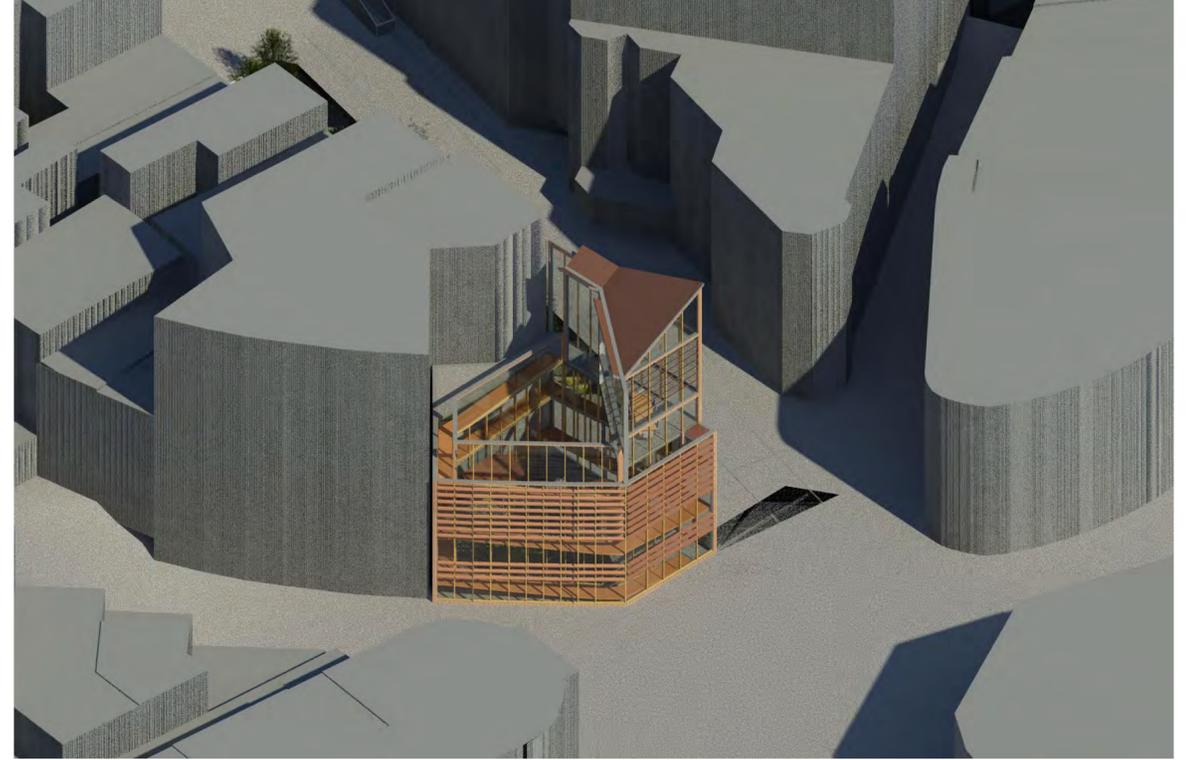
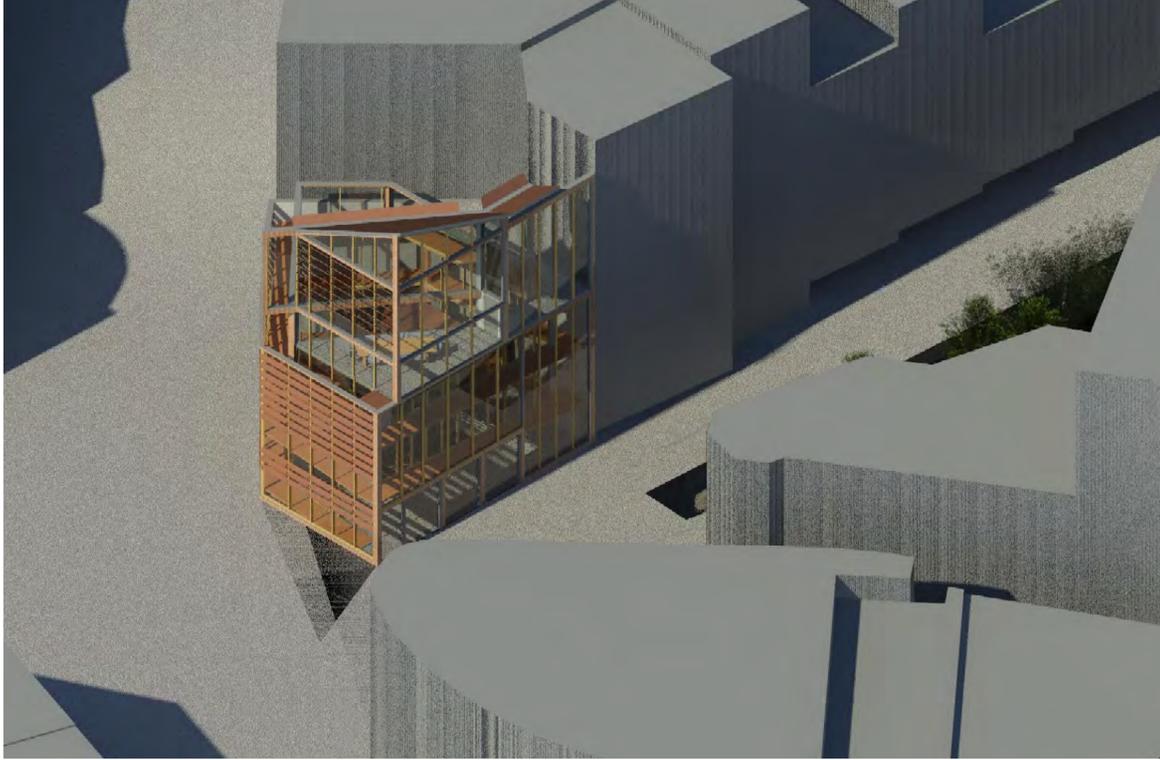
External View: Design in Site



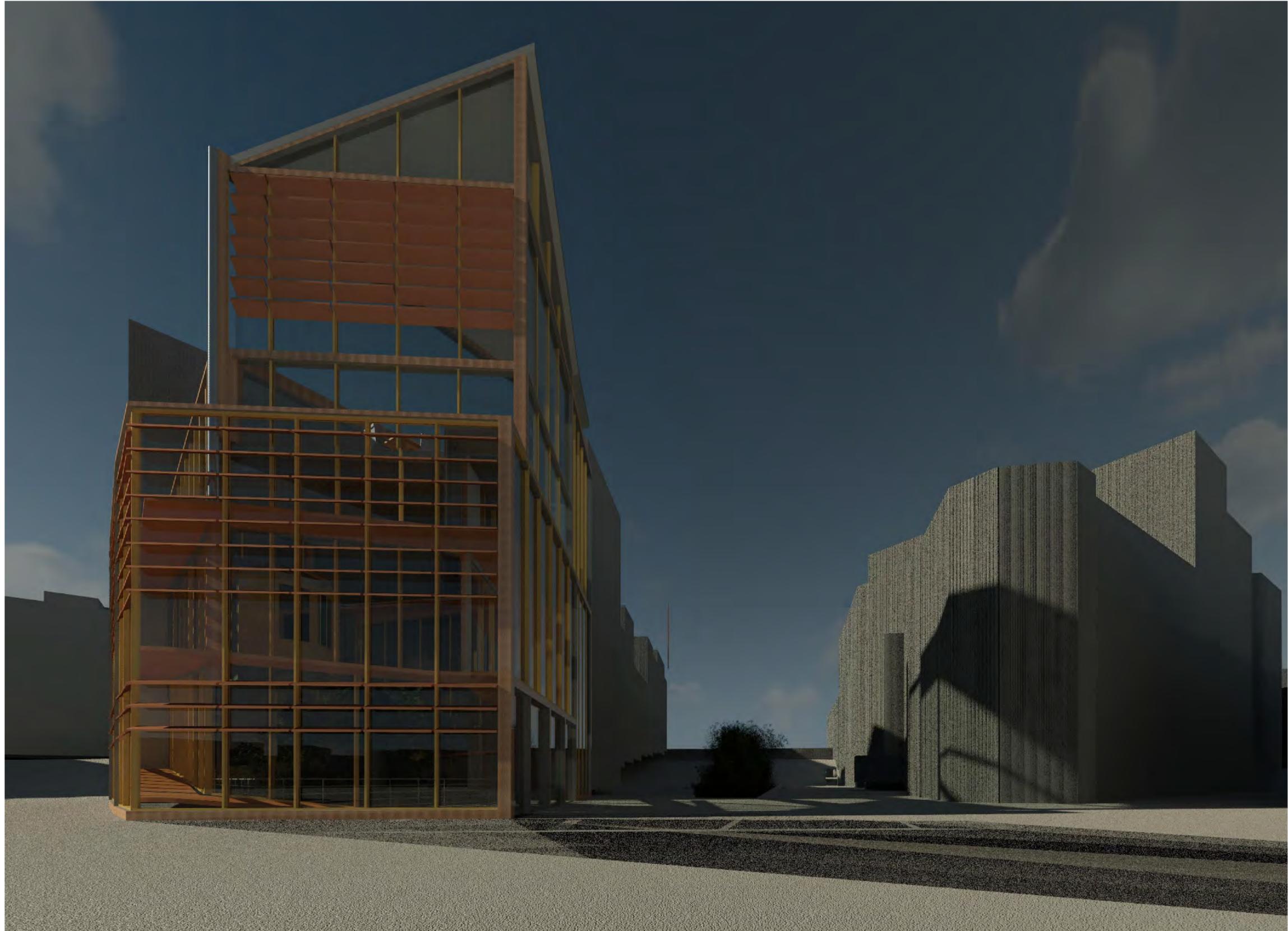
Interior View Rendered:



Design Interior sequence



Aerial Views:



Final Design