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Productive Garden
Workbook

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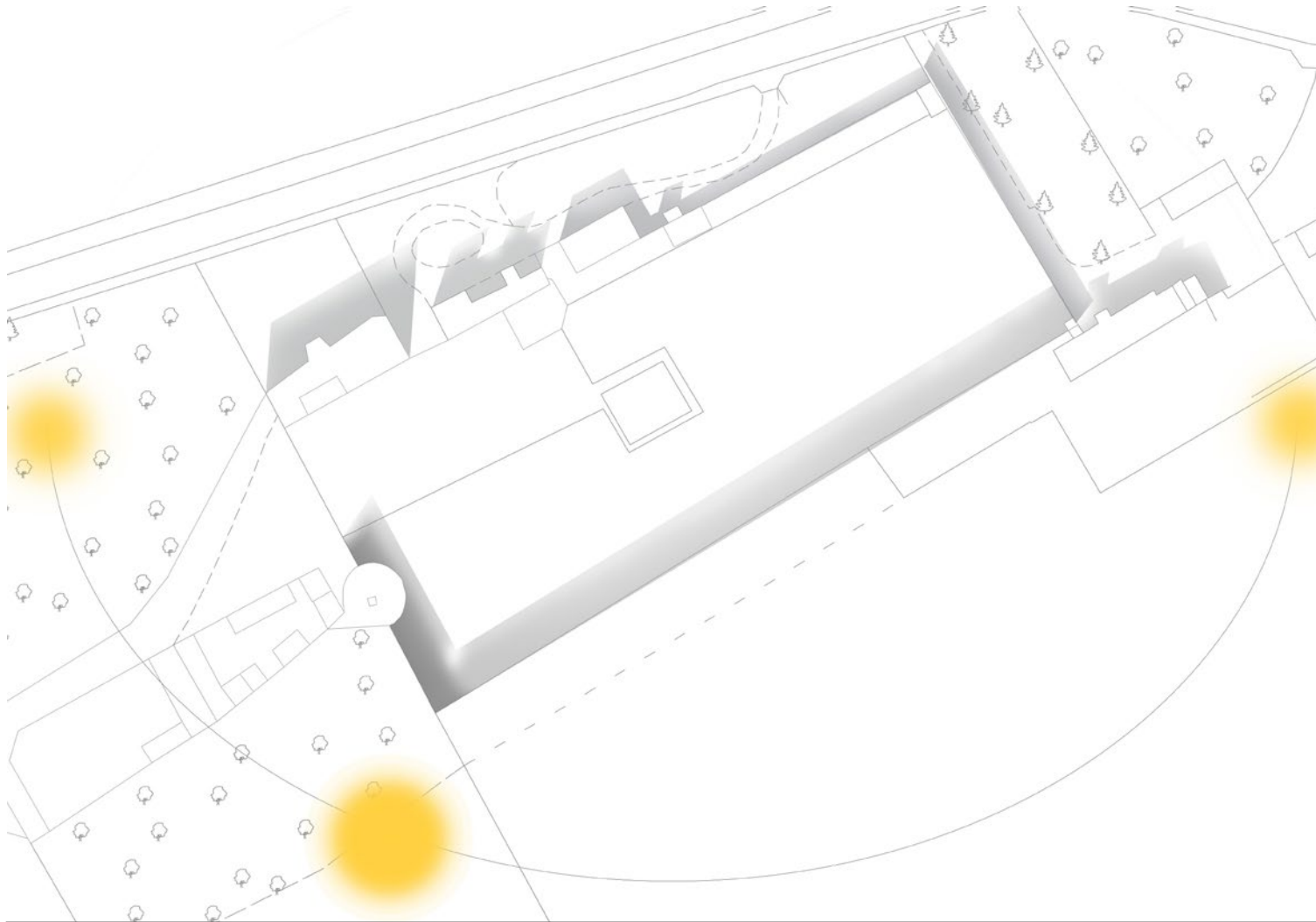
The site



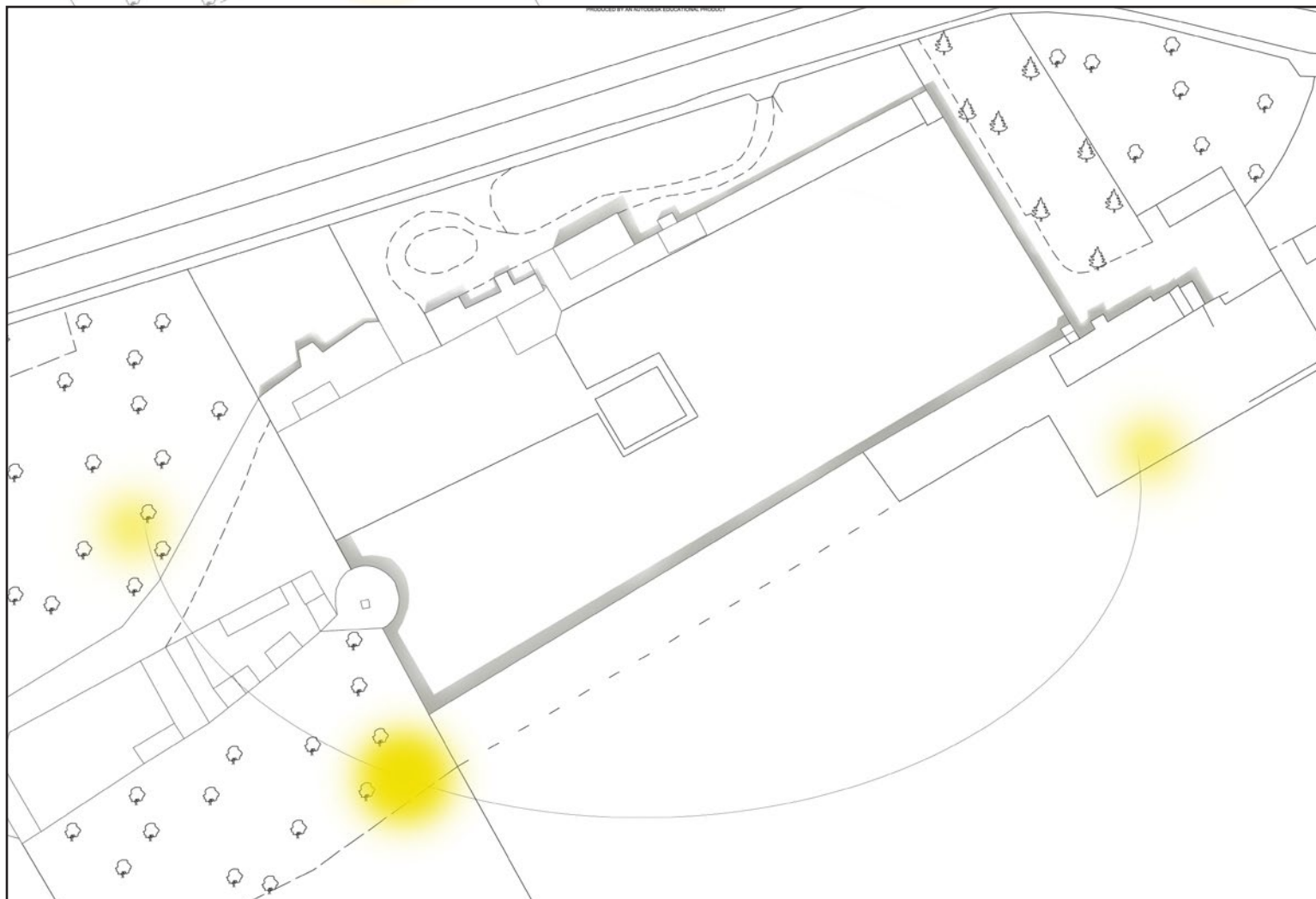
The productive garden is located on the east site of the Delaval's property and its initial function was to produce exotic fruits and vegetables in order to support the lavish dinners of the family.

Furthermore it was acting as a proof of wealth and power.

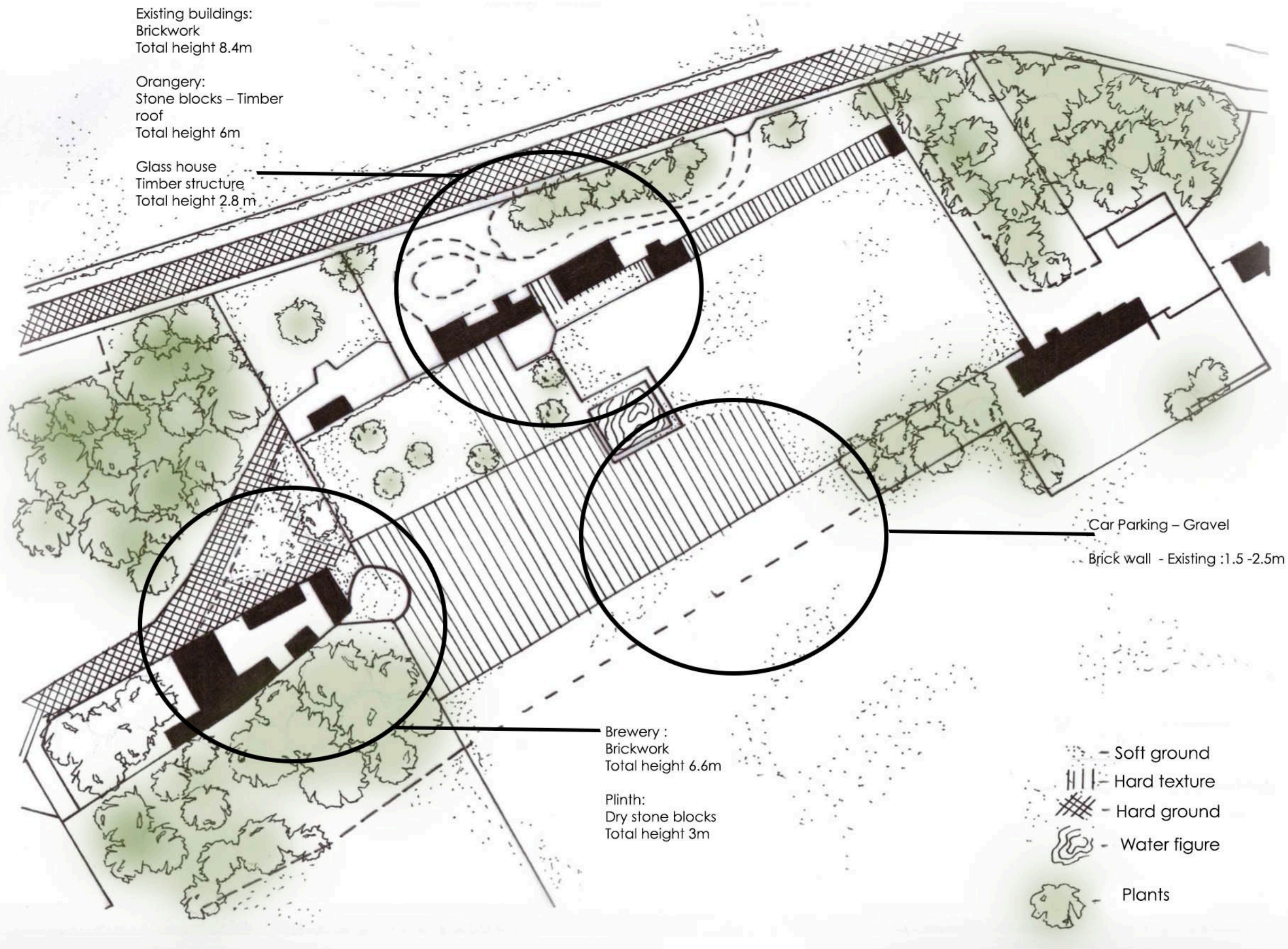
Shadows – Sun path



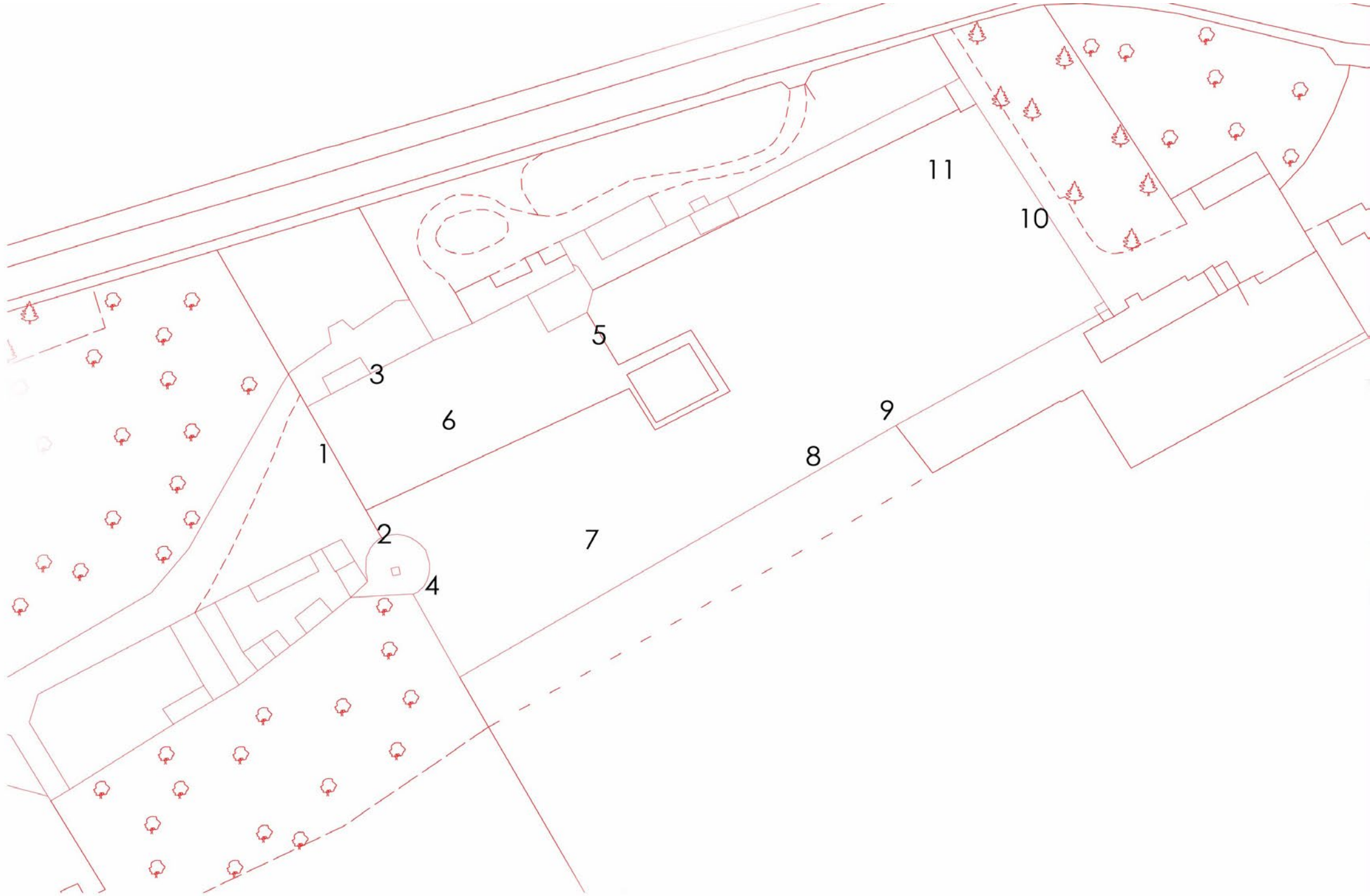
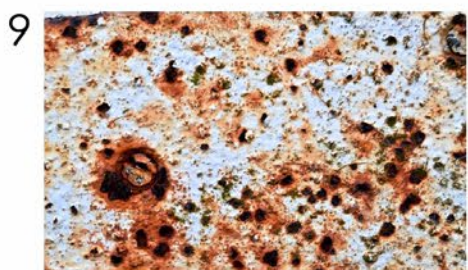
Winter sun path with shadows -
Sun Angle 58 degrees

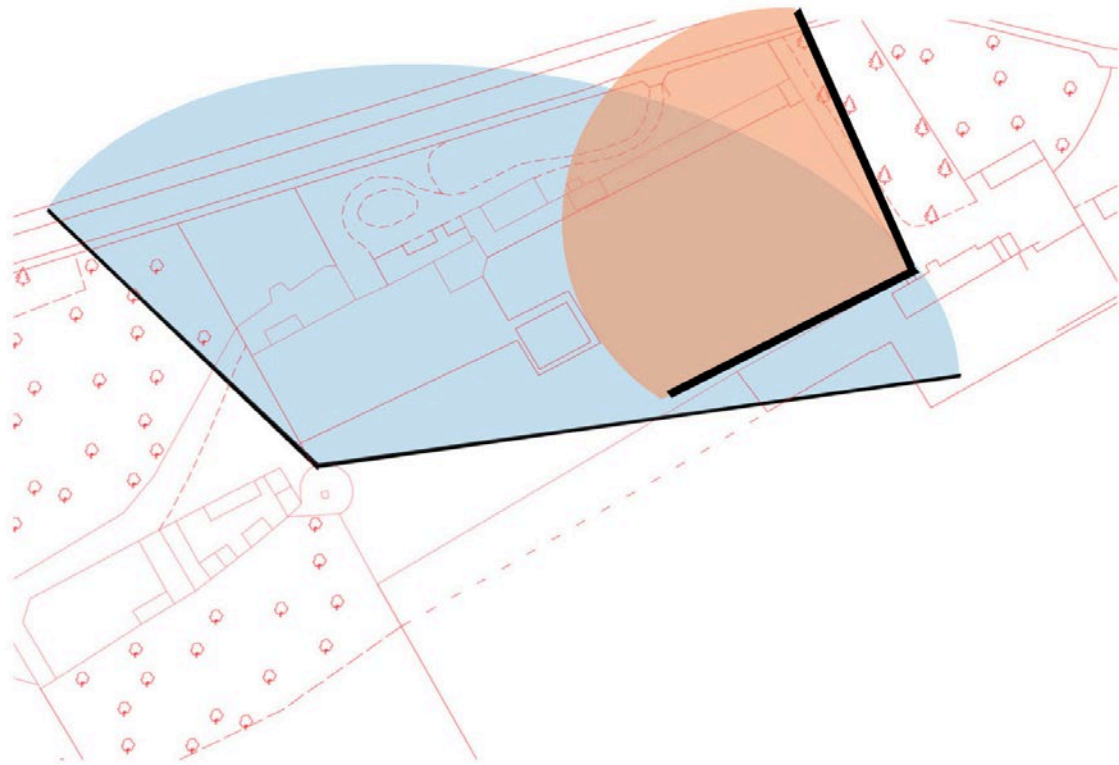


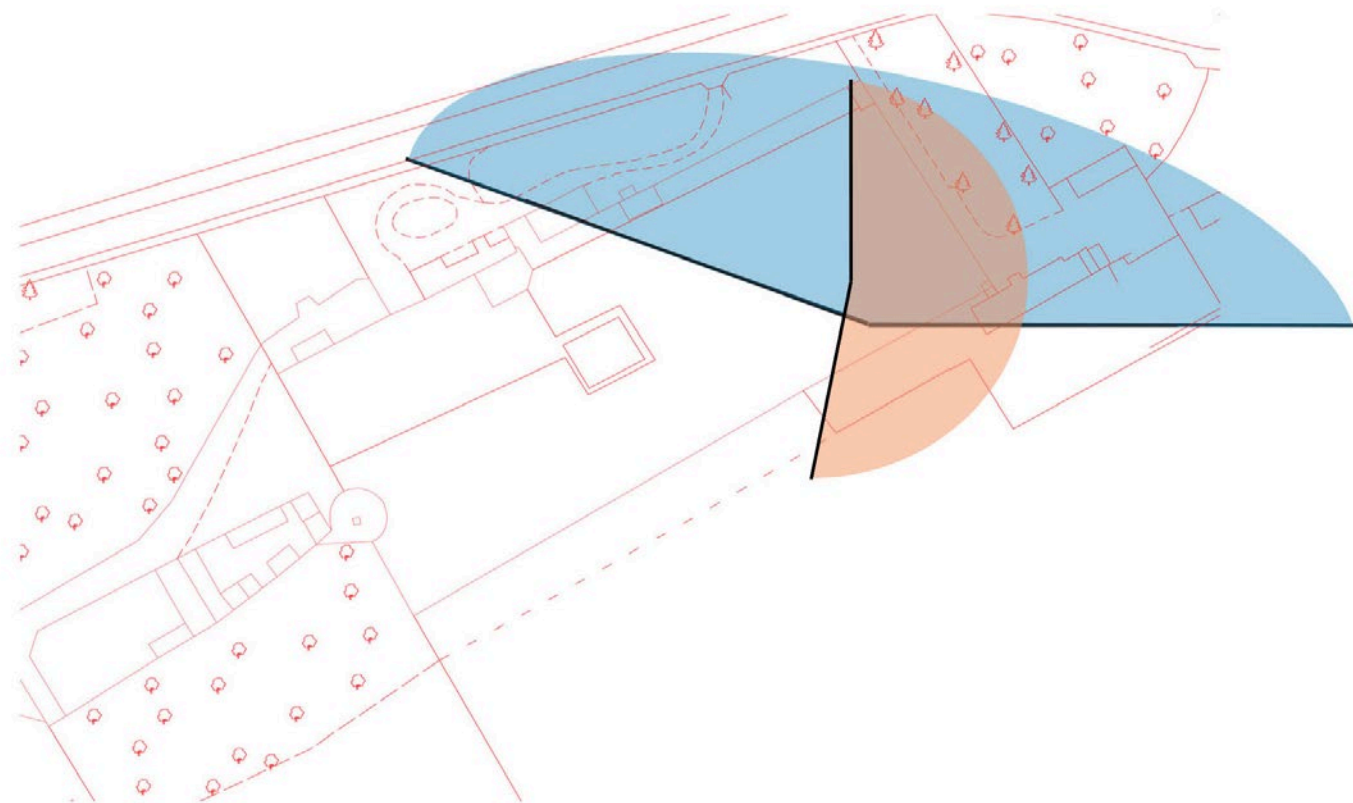
Summer sun path with shadows -
Sun Angle 13 degrees



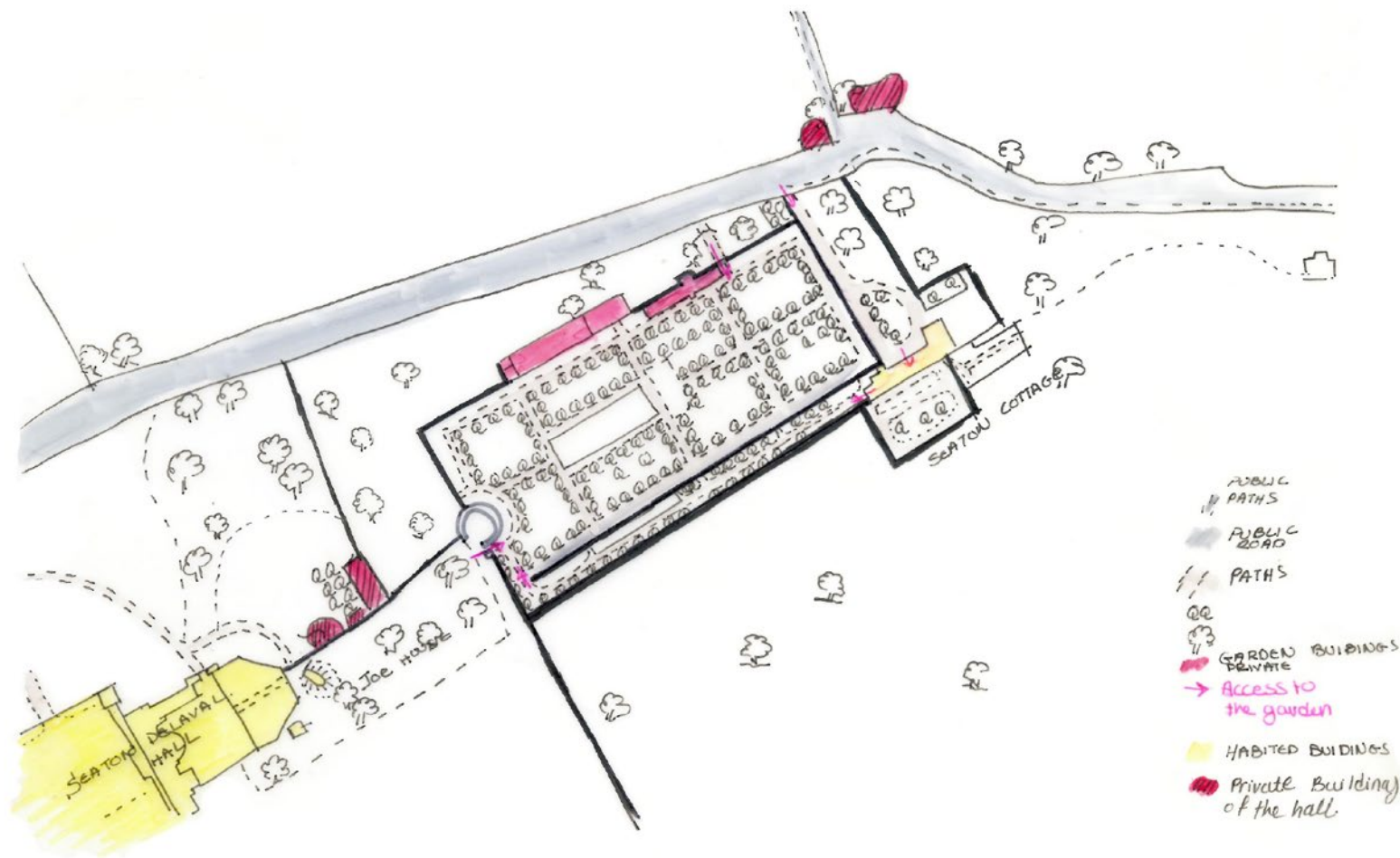
Textures and Materials



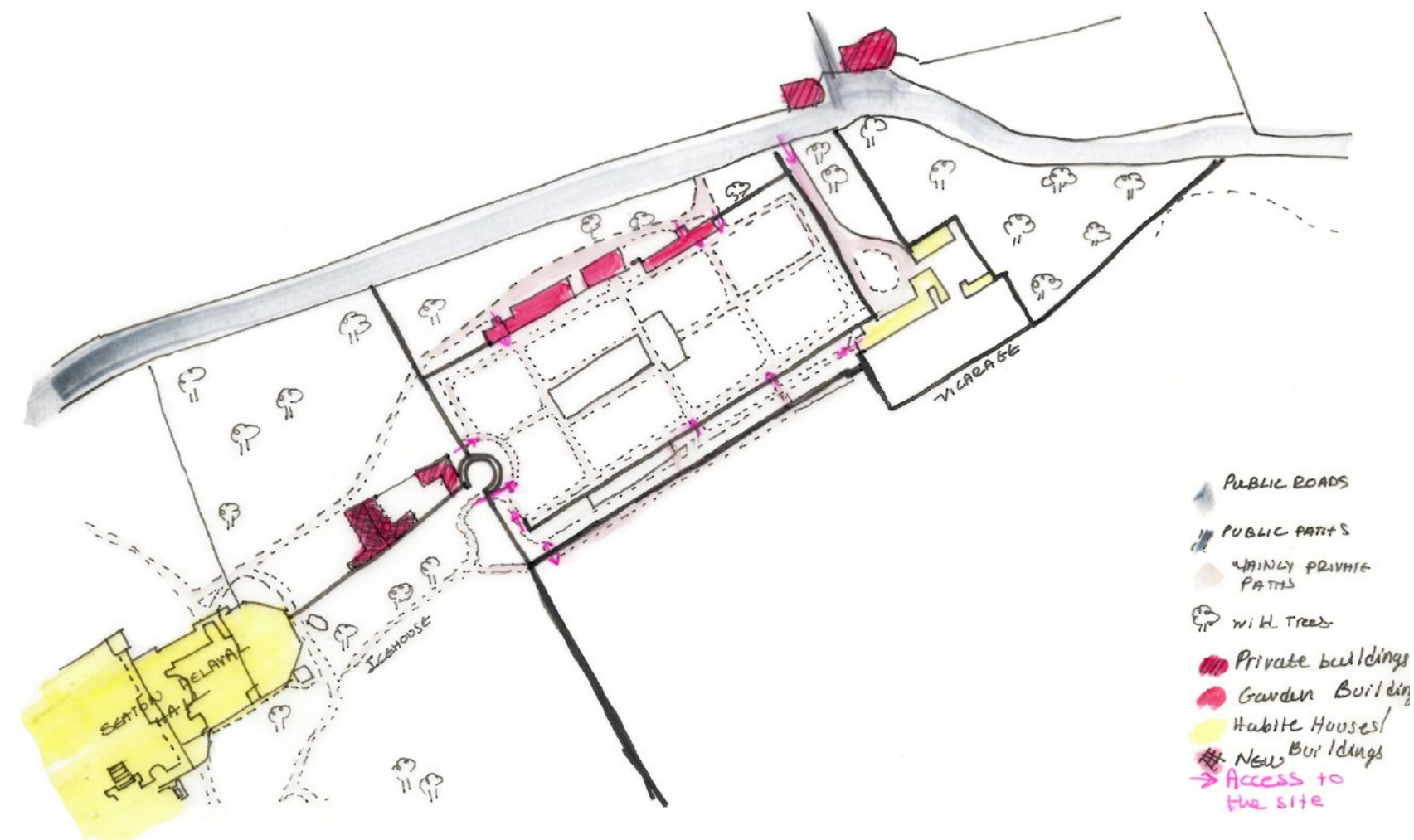




The panoramic views within the site that they highlight key areas of the garden



1890



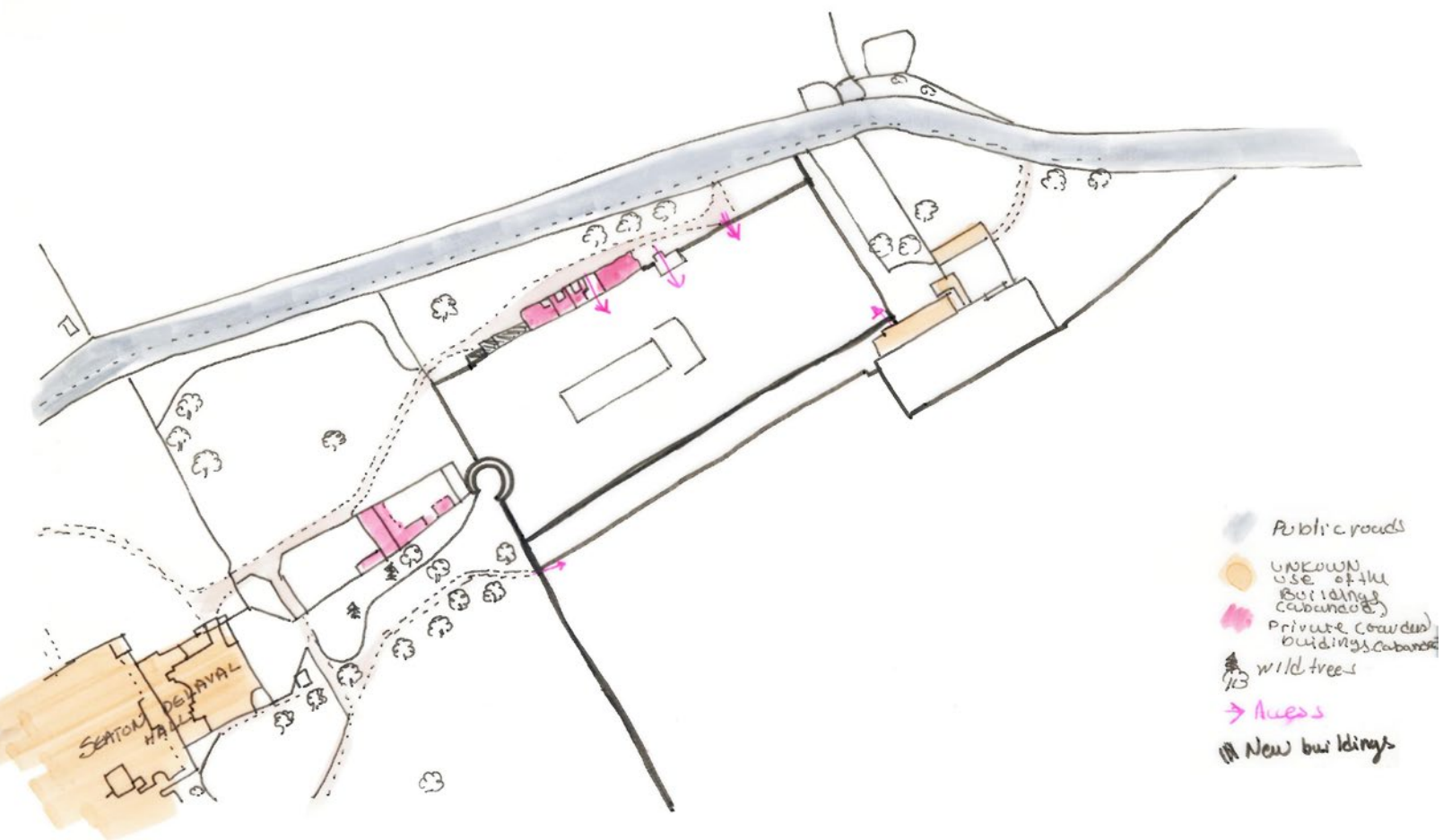
Looking back to the history of the site through the maps.

By studying the history of the hall and the families lived there in combination with the political situation of the country through the years we can identify clear reflections of how the site was used all the way from 1850s until now.

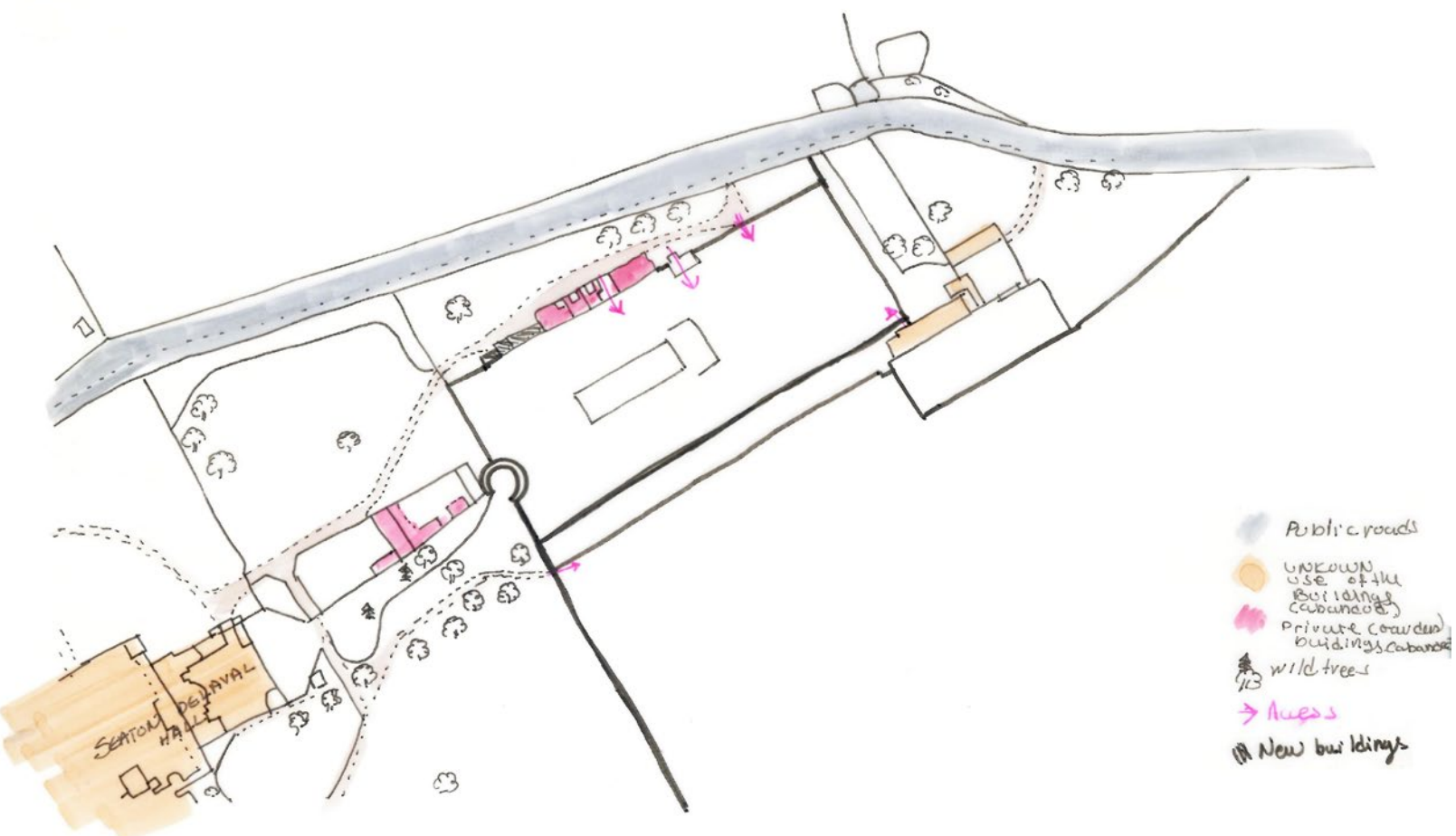
At the beginning of the 1850s the walled garden has been used for growing products for the family and their lavish parties reflecting Delavals' social status.

The map illustrates the landscape design of the garden (small paths within the garden), and the way that the gardeners were using to circulate the garden.

1920



1920



In 1920s it is certain that the garden was abandoned; looking into the history of that time we can see that 6 years earlier back in 1914 the 1st World War has started, so a generation of men went to the war. During that time the gardener of a walled garden of that scale was a family lifetime job so the result of missing one generation of men was that the tradition being cut out and the skills and secrets of how to take care of it were lost.



DELAVAL

1860

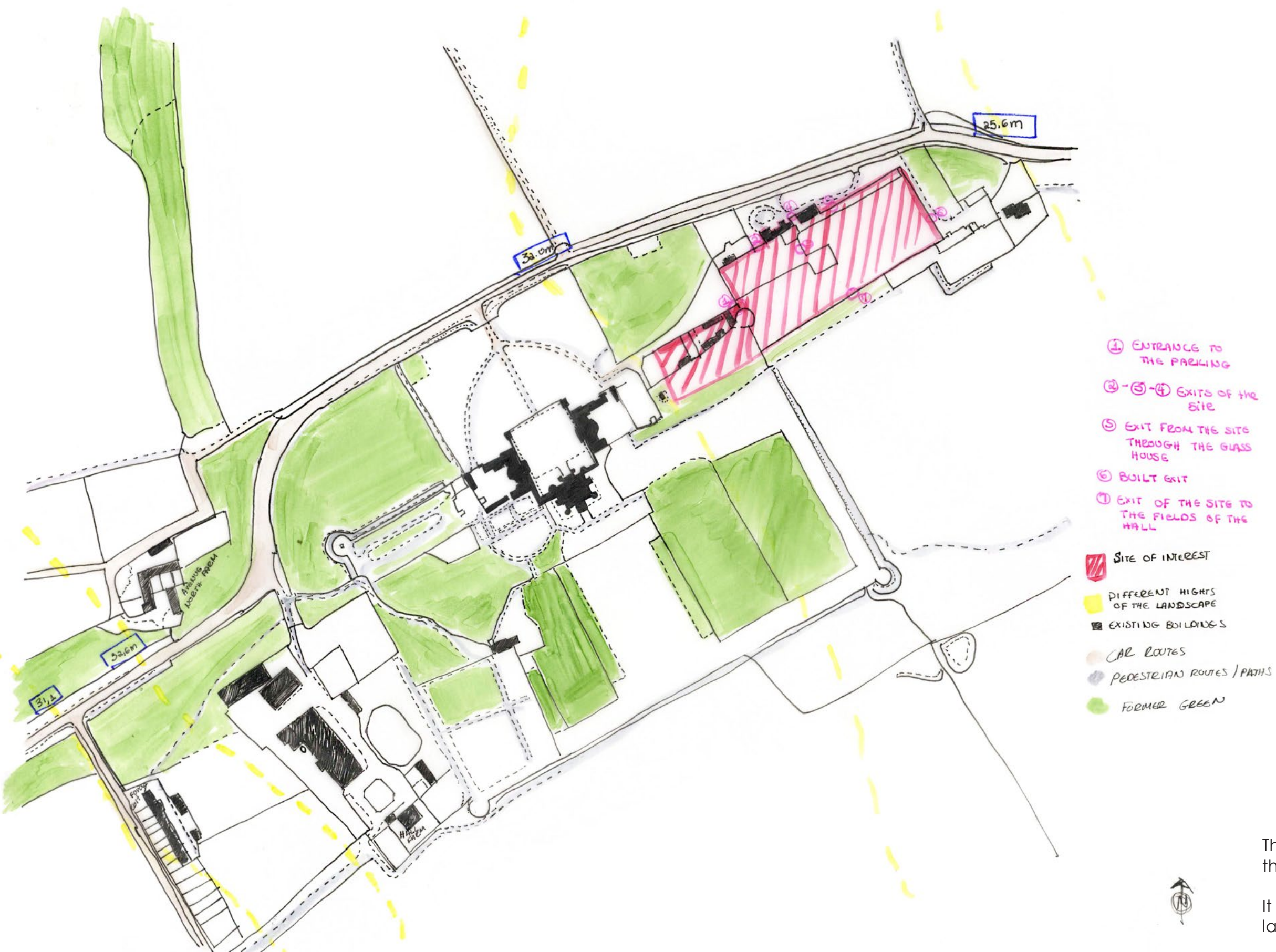
1890

1940

1960

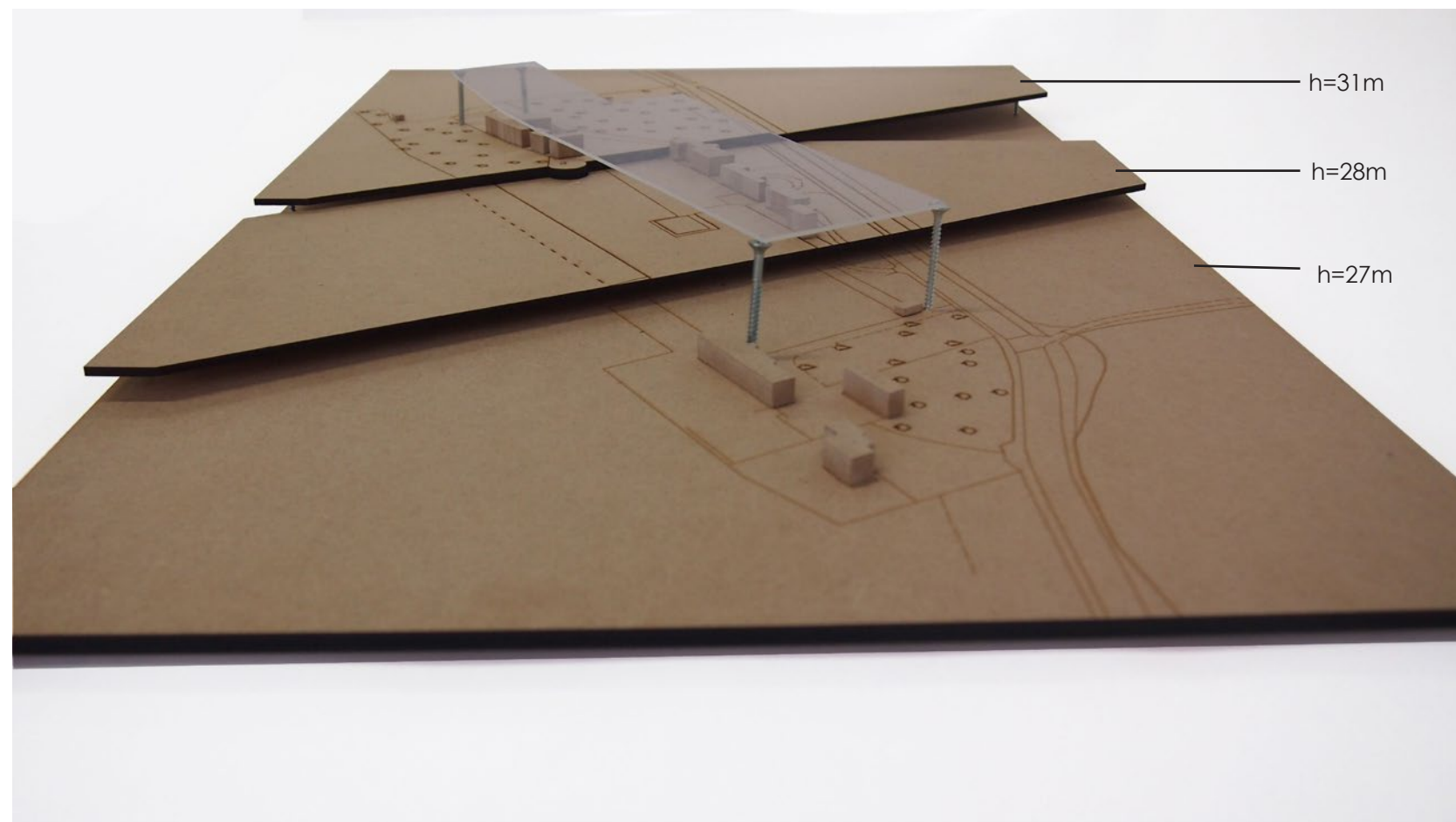
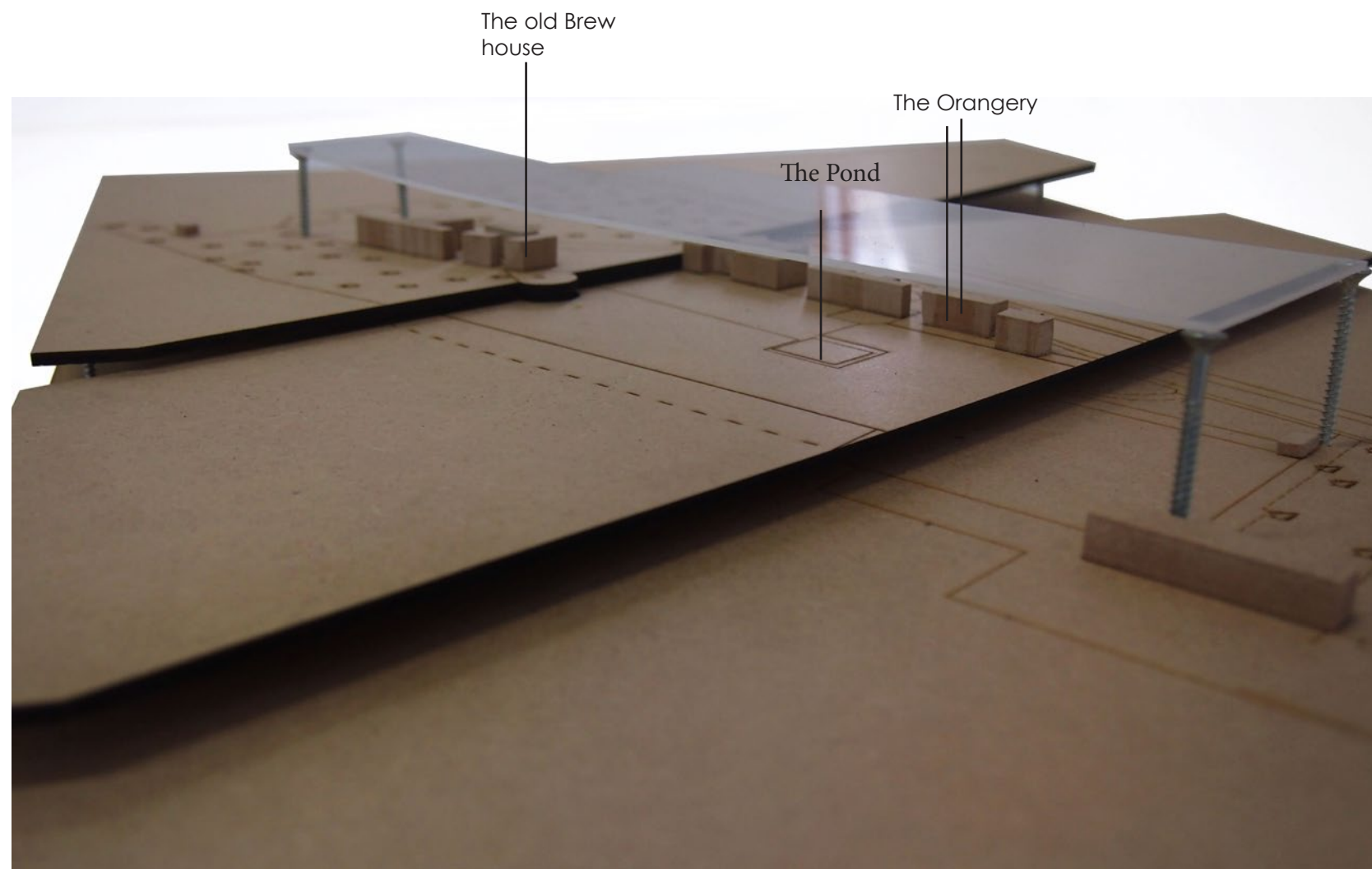
During the 1940s the garden was still abandoned but we can see a clear improvement of the area.

In 1960s the Garden's shape changes as a new wooden wall was constructed, the area starts being improved and the village of Seaton Sluice starts taking shape.



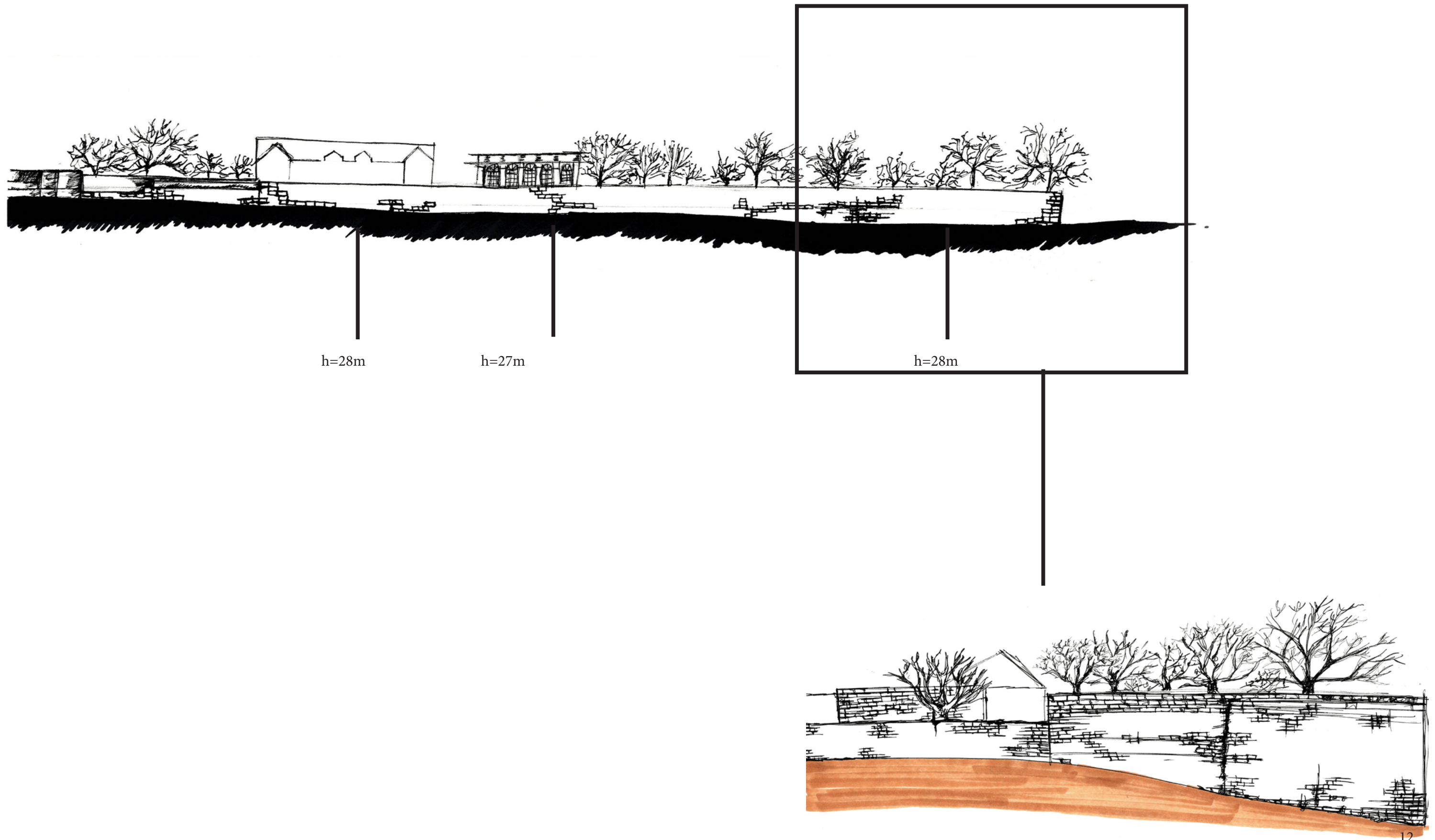
The diagram illustrates main principles of the site nowadays.

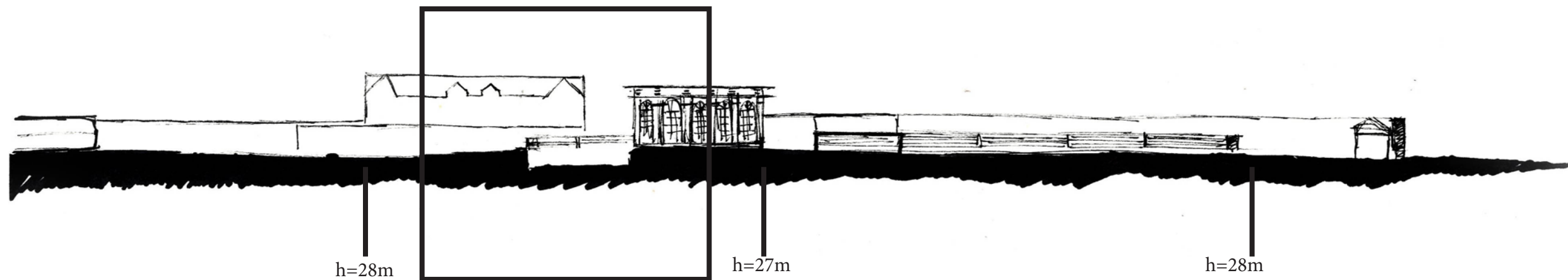
It also captures the main changes of the landscape heights.



The model shows the topography of the walled garden and surrounding area. It also captures the density of changing heights in the area.

Sections of the site





The story of the family started back in the 11th century but it wasn't until the 16th century when the family reached the social status maintained until the 19th century.

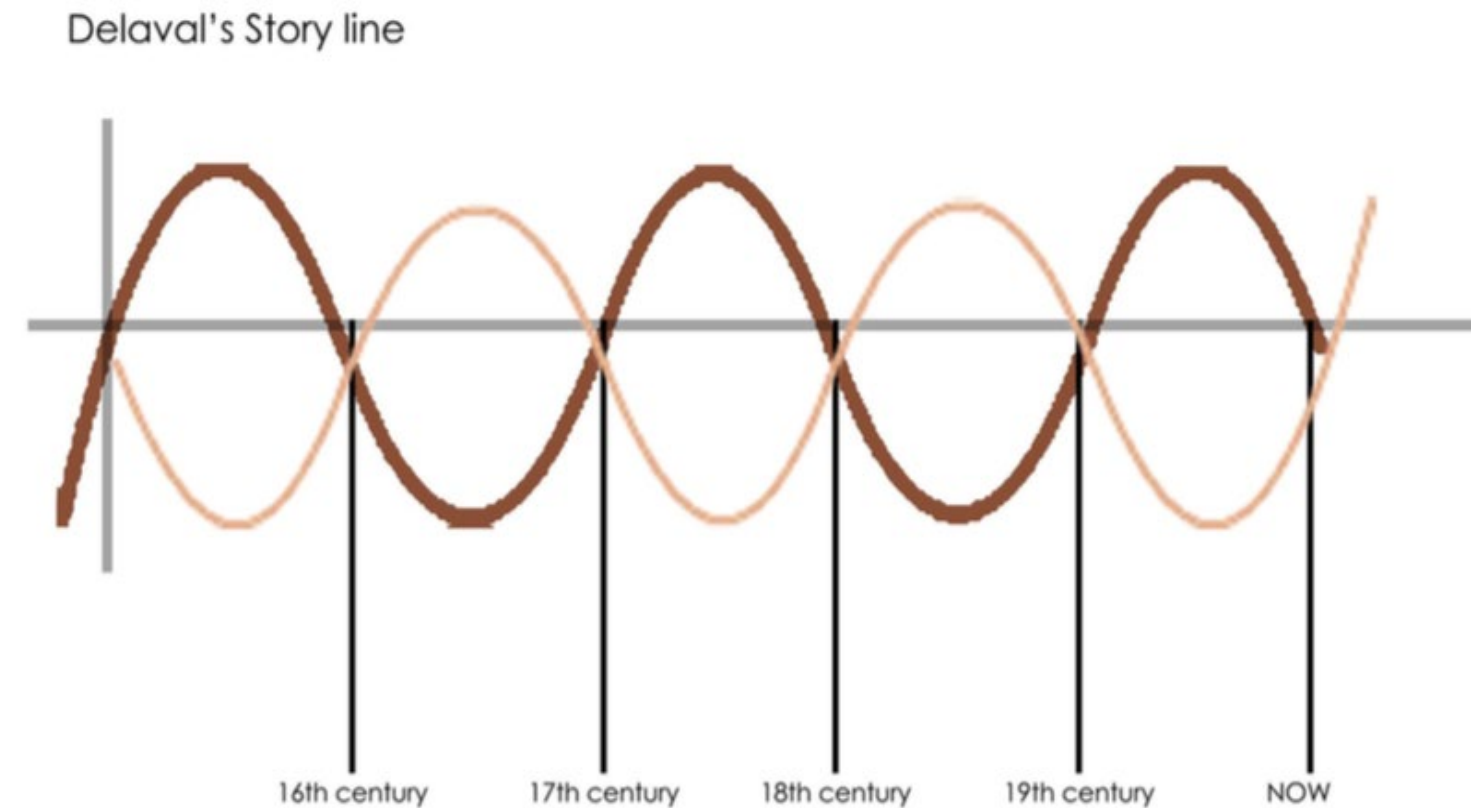
The Delavals granted the land owned in Seaton Sluice as a reward for their help during the Norman Conquest in England. For many generations the Delavals worked hard and they were involved in coal and glass trade.

The story line of the family though is full of "ups and downs" and spans a thousand years. The story of the family reached the bottom many times through the years and for different reasons. Generations like "the Gay Delaval's" of the 17th and 18th century for example were doing thoughtlessly expenses and they were known for their scandalous behavior.

They were though the most productive generation and supported the growth not only of the family's finance but also and the "birth" of the Seaton Sluice village. The village's growth through the centuries was mostly due to the entrepreneurial and engineering skills of the Delaval family.

The family owned many different businesses, and exported many different things. To support those activities a harbor was built.

The family produced concrete, steel, salt glass; they even had a small brewery within their estate.



The graph illustrates the change of the economical background of the Delavals in every generation.

There is a pattern in where the first generation creates the money the next one spends them and then the next one is being called to recreate them.

We can see that the history of the family always finds its way around.

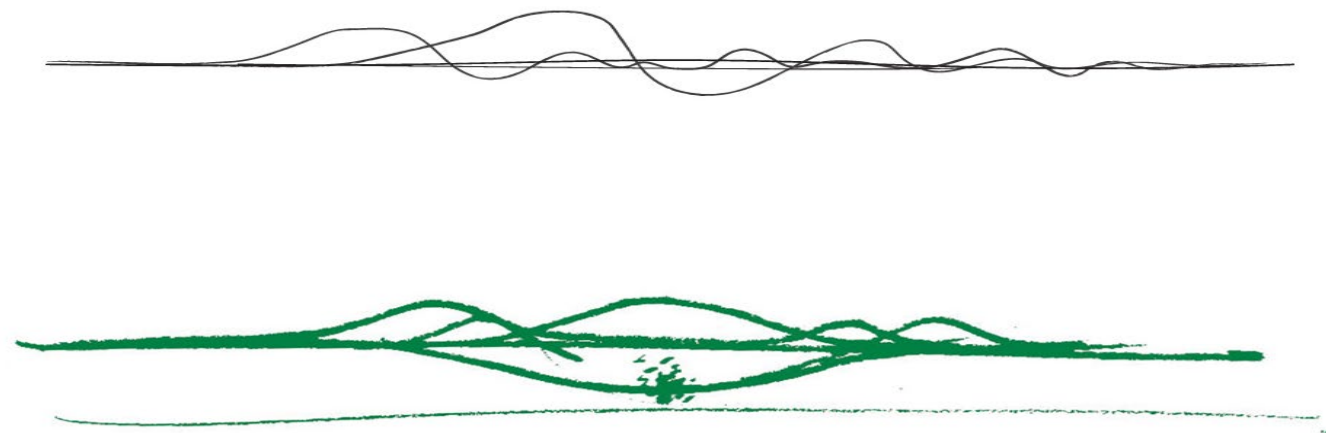


The “ups and downs” in the family's history remind us the concept of the Anselm Kiefer Heaven Earth.

The National trust aims to regenerate the story of the family and expose it to the world. We can find the similarities with the flower on the drawing which is going to reborn through the ashes. In this way the family's story nowadays is ready to be reborn through the exposure of the treasure owned for many centuries.

The drawing on the left is from a distance representation of the burnt staircase of the hall. It is mainly influenced by the ideas of Kiefer's work “Heaven and Earth”. The capture of the stair steps, in the image, attempt to represent the idea:
Upward path: Heaven Downward path: Earth, and sign the reborn of the Delavals history.

Precedent Analysis





Peterhof palace-Russian Versailles

Place: St. Petersburg

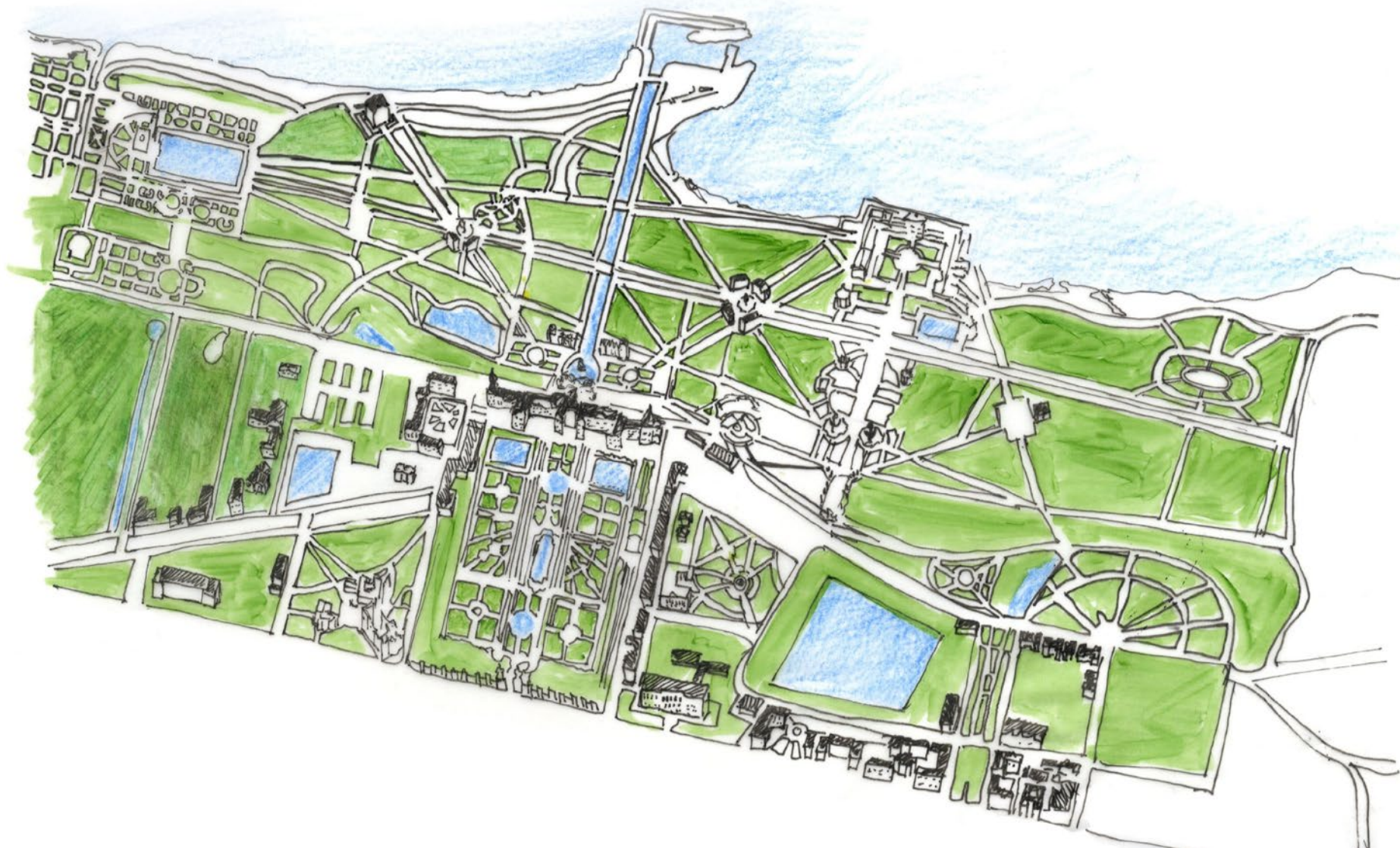
Initial Architect: Jean-Baptiste Alexandre Le Blond

Purpose: Summer palace of Peter the Great

In the image of Peterhof palace we can see a clear example of reborn and regeneration of the Russian culture after the Second World War. The Germans had heavily ravaged the place during the Second World War. Military engineers and over 1,000 volunteers restored the palace and gardens in the years after the end of the war.

Use of Landscape informs about the layout of the Gardens:

The greatest technological achievement of Peterhof is that all the fountains operate without the use of pumps. Water is supplied from natural springs and collects in reservoirs in the Upper Gardens. The elevation difference creates the pressure that drives most of the fountains of the Lower Gardens, including the Grand Cascade. A special aqueduct supplies the Samson Fountain, over four km in length, drawing water and pressure from a high-elevation source.

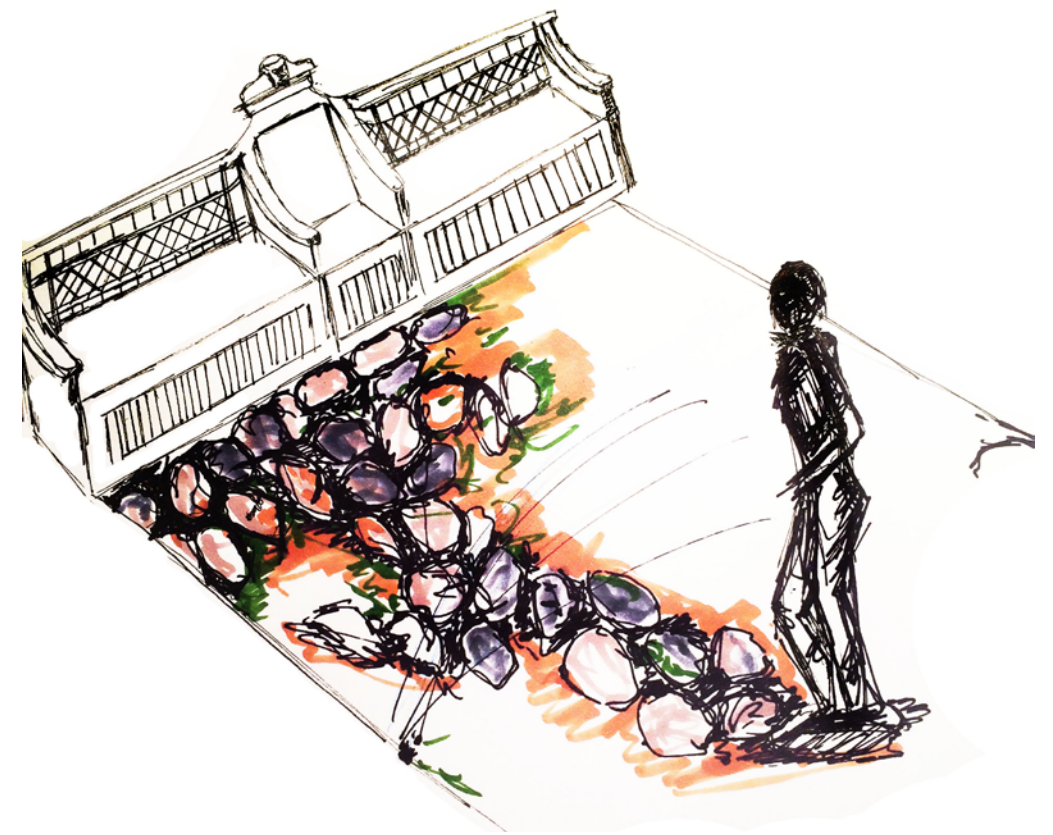




Walking in the gardens you can experience many different types of fountains that will travel you across Europe and generally among the western culture. Example of those: Roman fountains, Pyramid Fountain, Sheaf, Triton, Lion Cascade, and the Golden Hill Cascade.



photo taken during site visit in August 2014



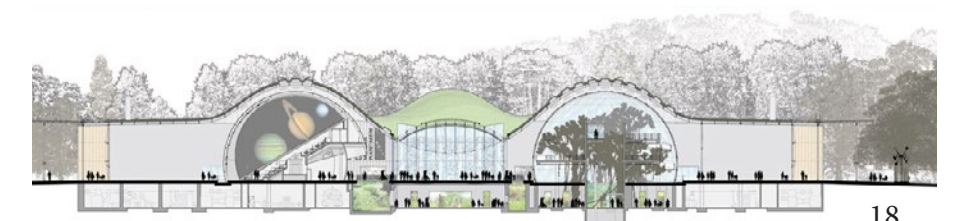
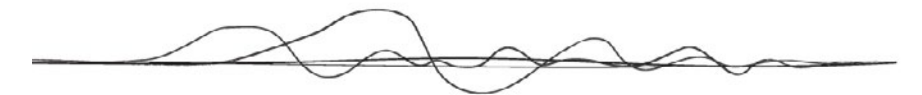
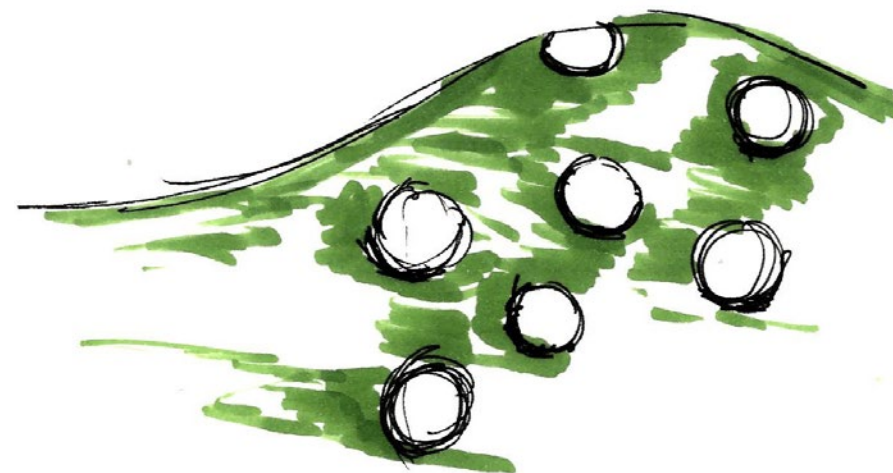
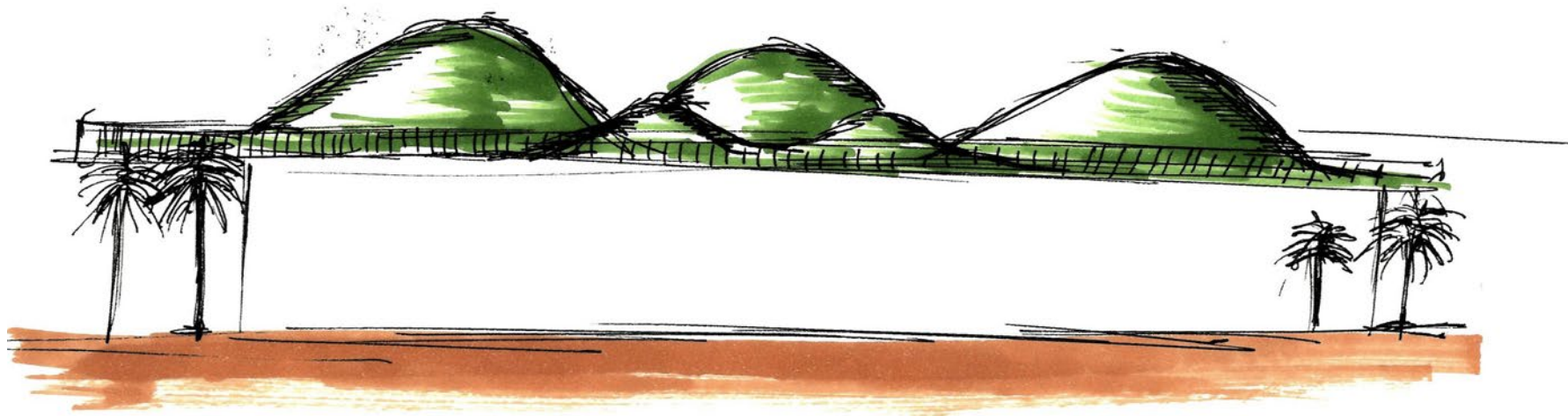
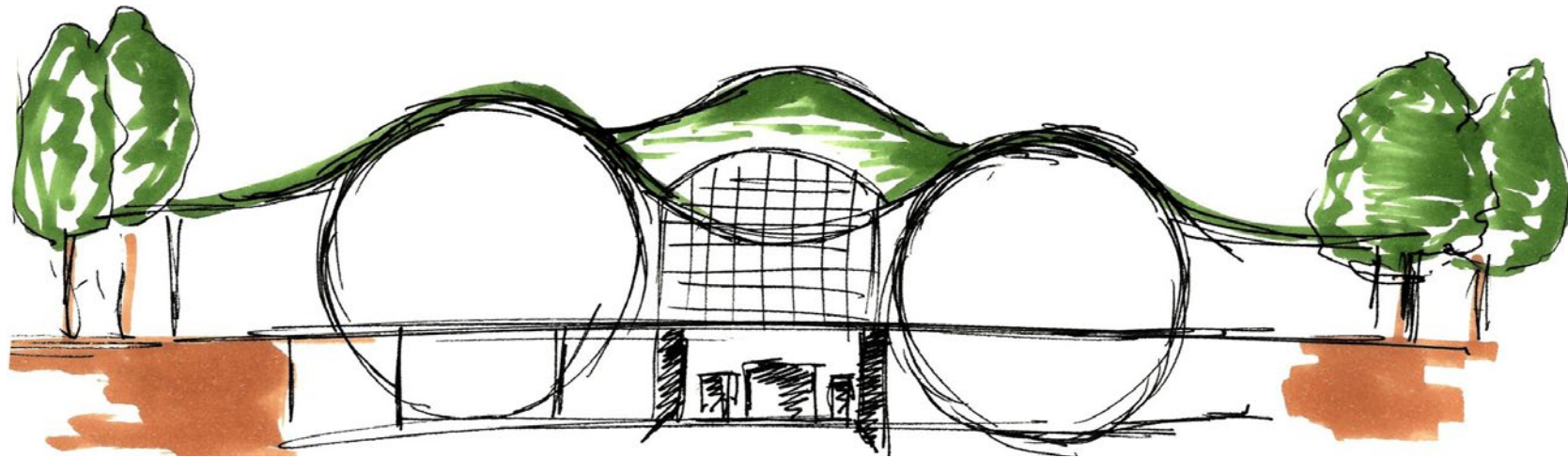
In the park, the range and diversity of fountains is astounding, from further monumental ensembles like the Chess Cascade and the Pyramid Fountain, to the ever-popular Joke Fountains, including one which sprays unwary passers-by who step on a particular paving stone.

California Academy of Science

The Design of the Academy retains elements from the previous Academy resulting to a historic link between the old and the New (African Hall and North American California)

The two spherical planetarium domes exhibit spaces Rainforest Biosphere: those elements represent the Academy: space, earth and ocean are the elements pushing the roof up thus creating the unusual curve shapes of the roof.

The building blends with the landscape around due to the grass roof, creating the illusion of continuity.

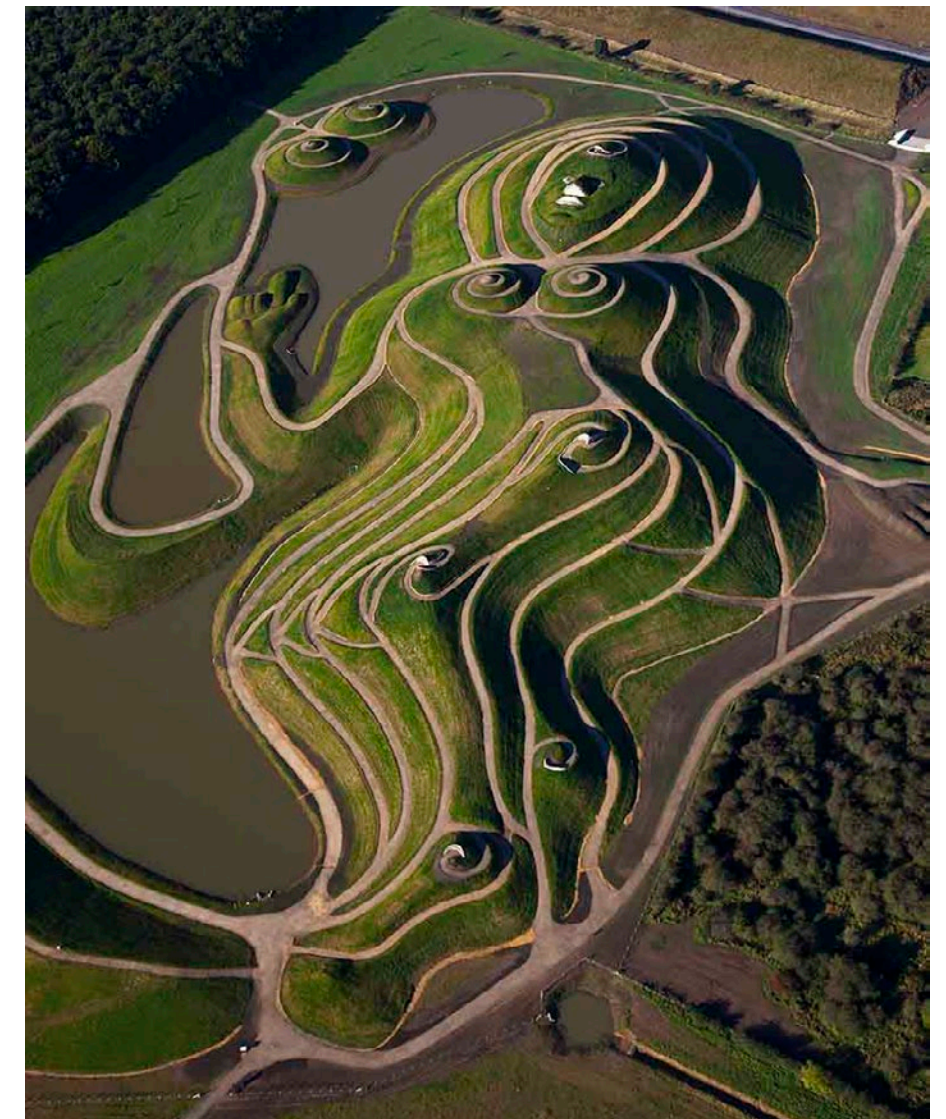


Northumberlandia



"The Lady of the North" is Landform sculpture that the visitors can experience by walking on to. It is a living part of the countryside which is going to mature over time.

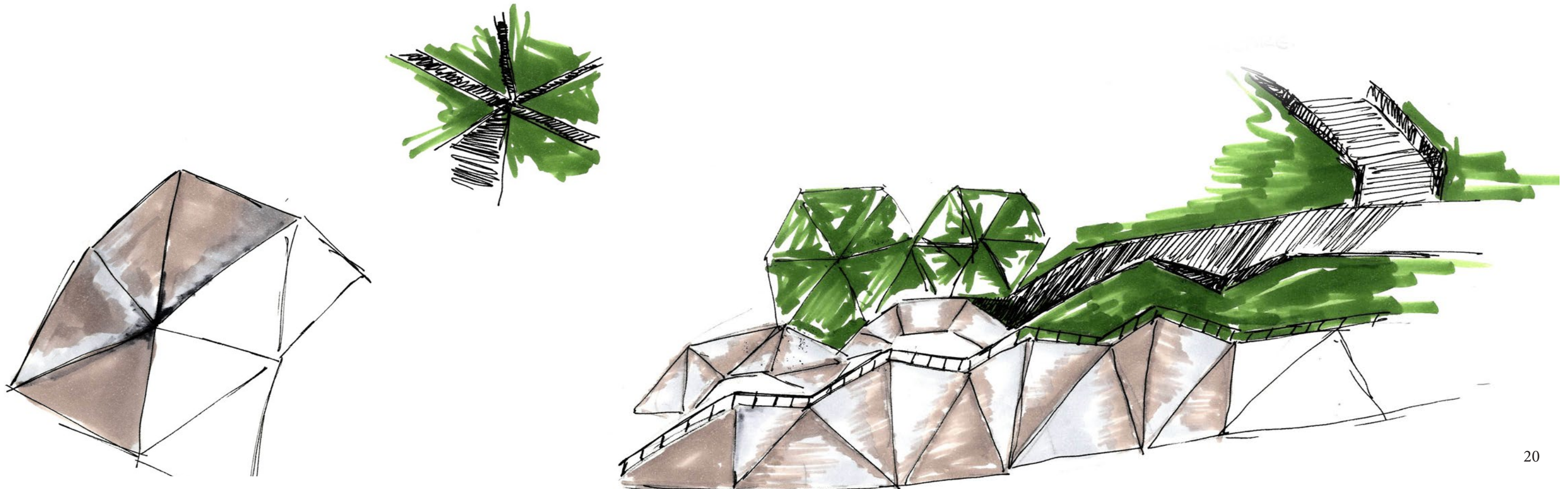
The sculpture changes with the seasons and has the potential to be a futuristic link between present and future.



Galindez Slope and Paul Casals square

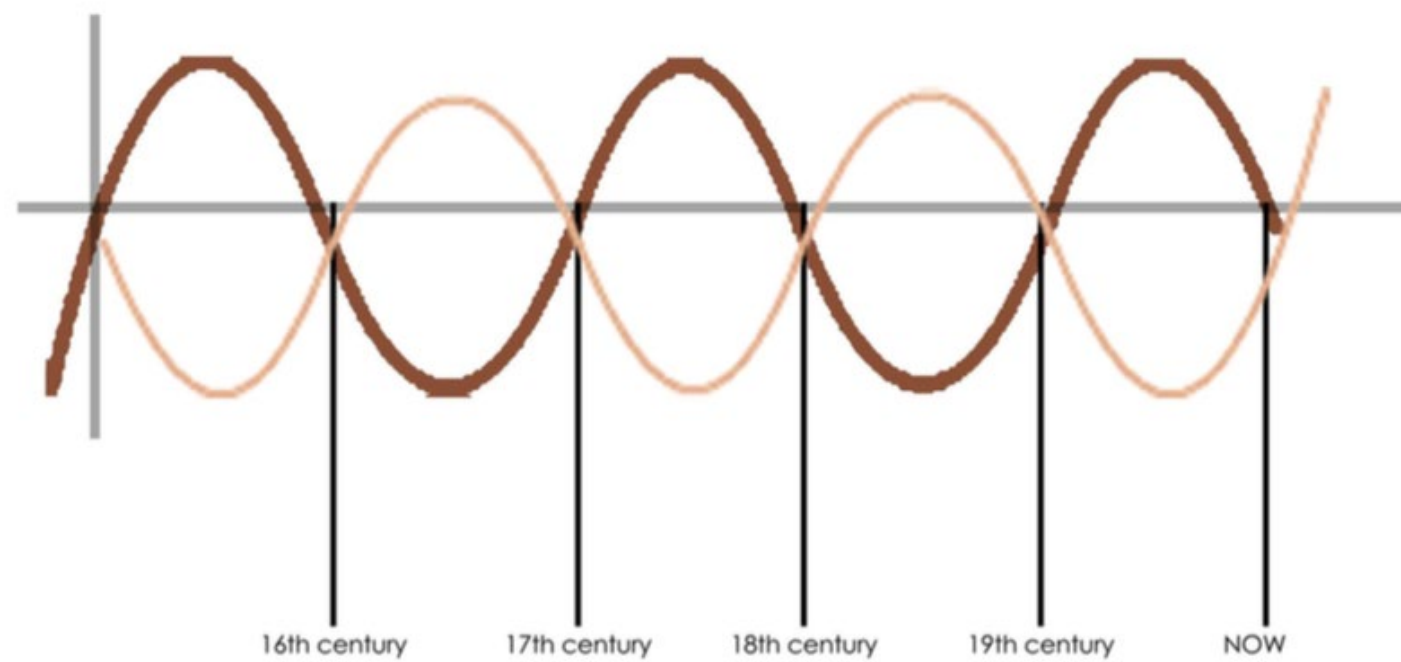
The landscape has been shaped with panels of different materials, mainly from existing rocks and vegetation of different colors. Also they used concrete in the areas that needed consolidation and light to create different effects on night time.

Different geometry of the panels is used to maximize the exposed light and to emphasize more the significant change of levels of the landscape.



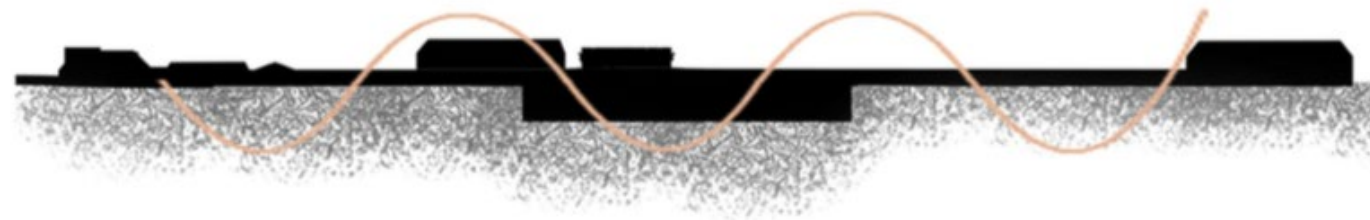
Concept Diagram

Delaval's Story line



The “ups and downs” of the Delavals family will form the landscape and allow the visitor to experience this by moving around the garden and experience the significant change of the land level within courtyards, or by walking the roof of the buildings that will act as an extension of the landscape.

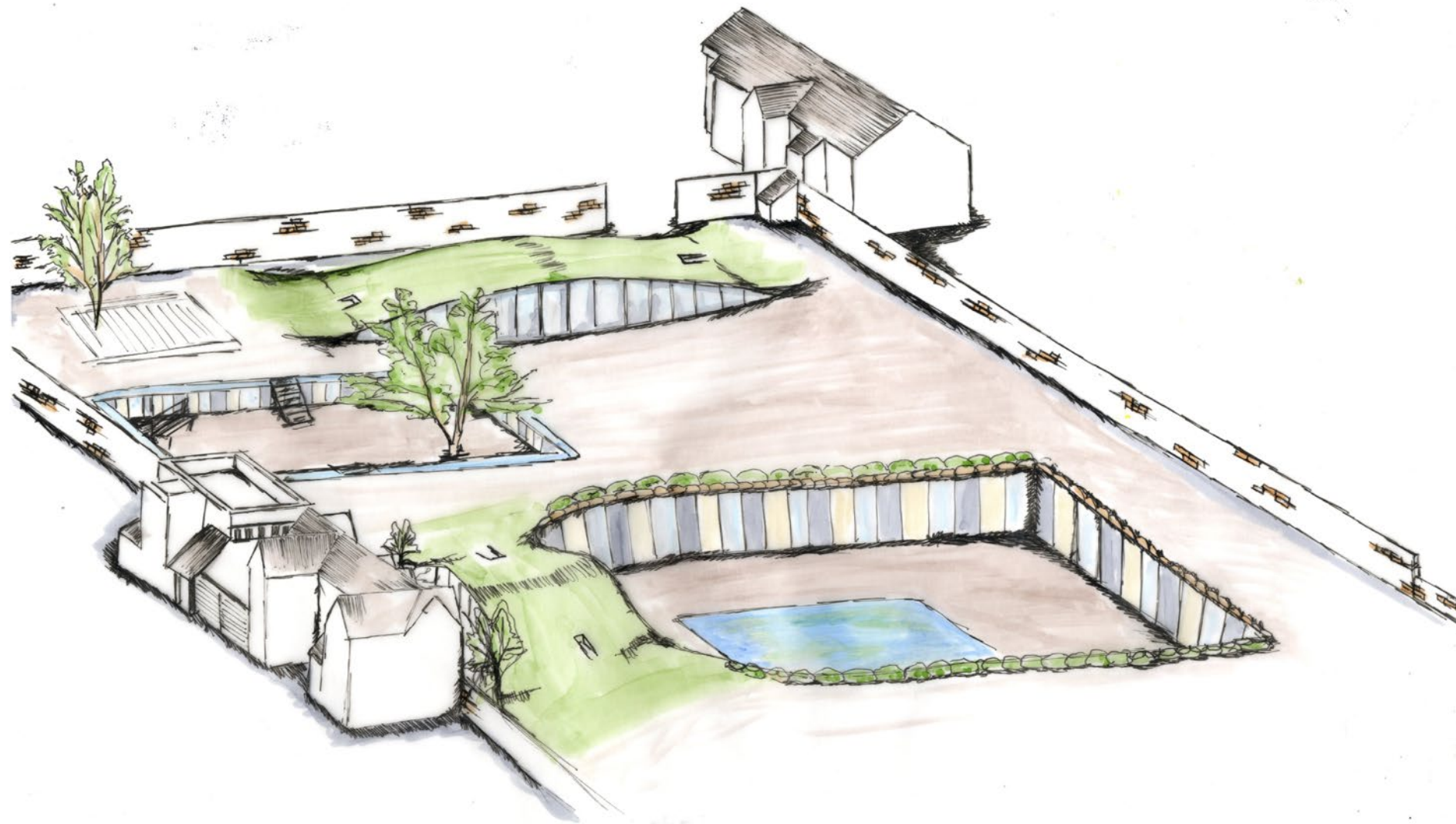
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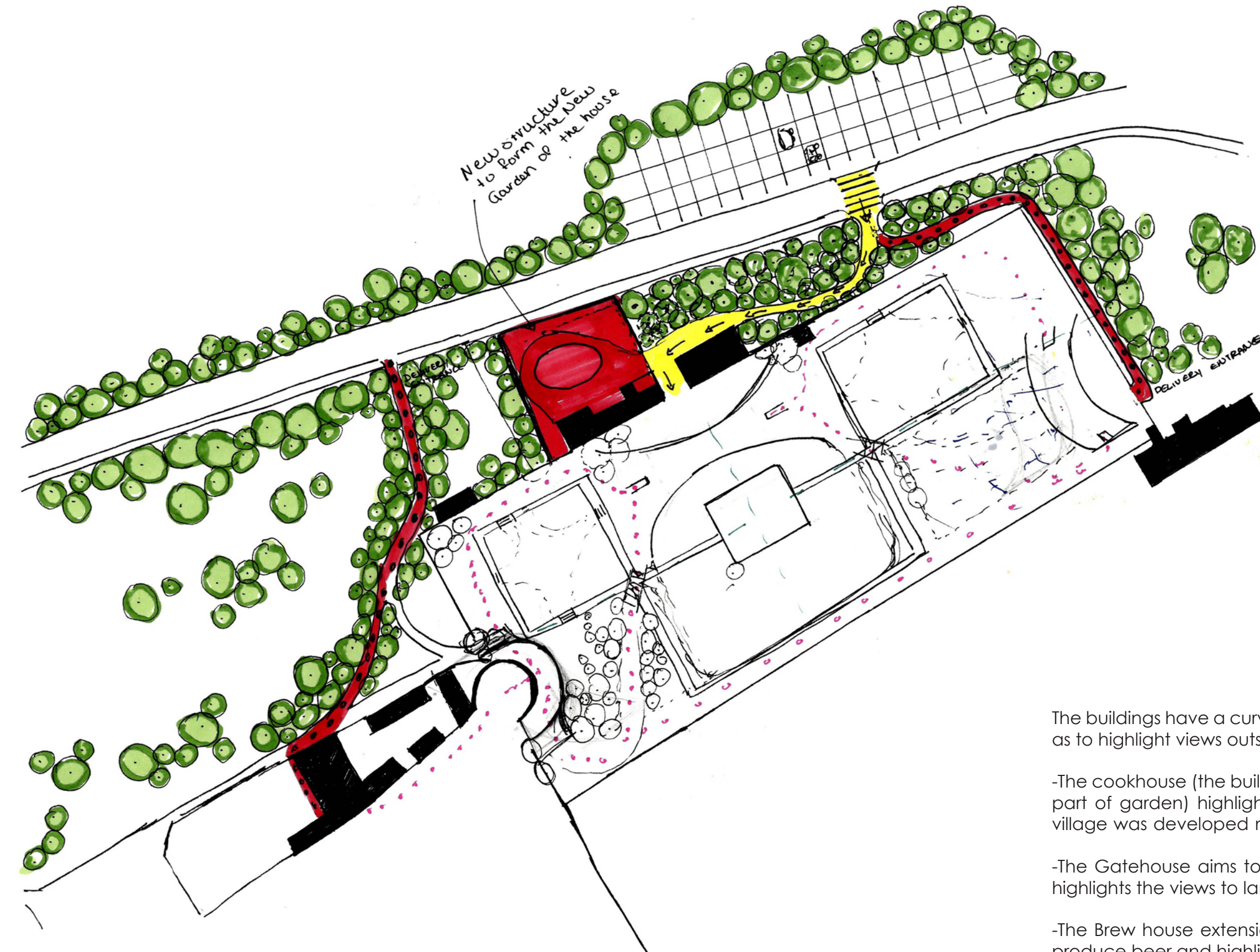
B



The Master Plan



Initial Master Plan

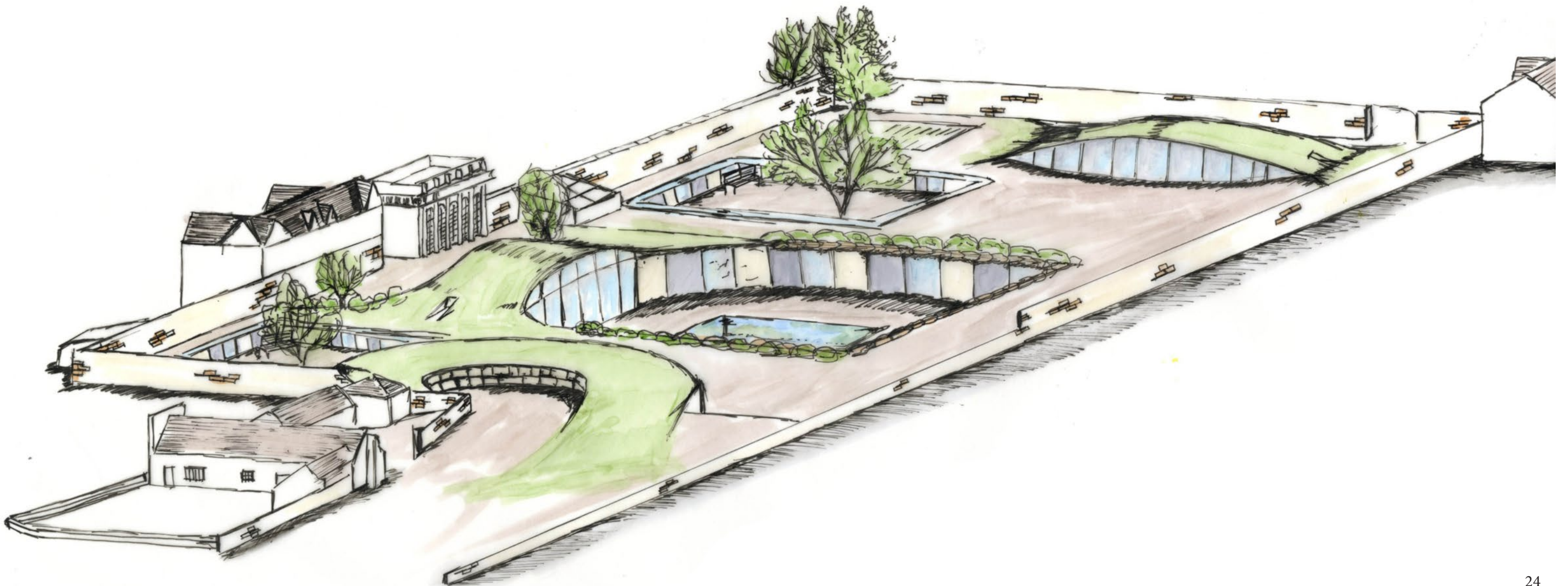
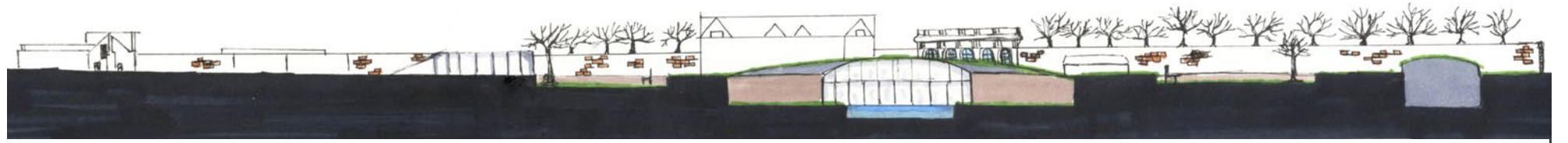
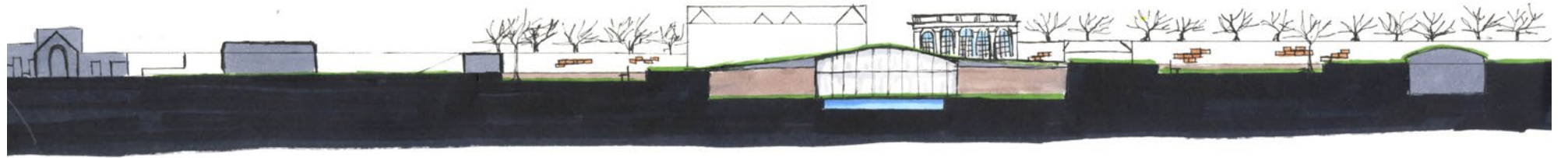
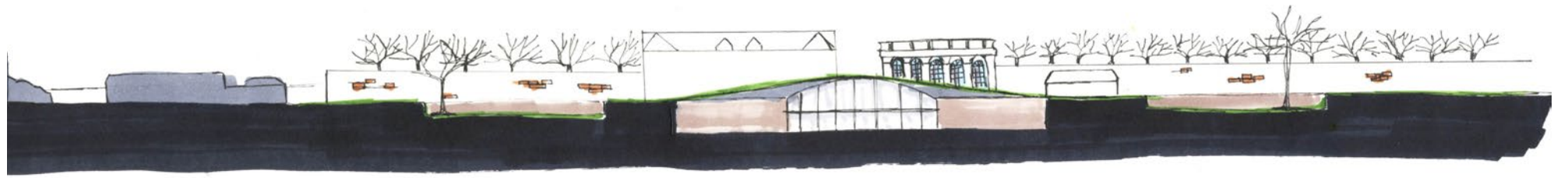


The buildings have a curved shape and they have been placed in the site so as to highlight views outside the garden.

-The cookhouse (the building that relates to the community and the business part of garden) highlights views to the village of the Seaton Sluice – (the village was developed mainly due to the trade activities of Delaval family)

-The Gatehouse aims to inform the visitors about the Delaval's history and highlights the views to land of the family.

-The Brew house extension that links back to the culture of the Delavals to produce beer and highlights views to the estate and the existing Brewery.

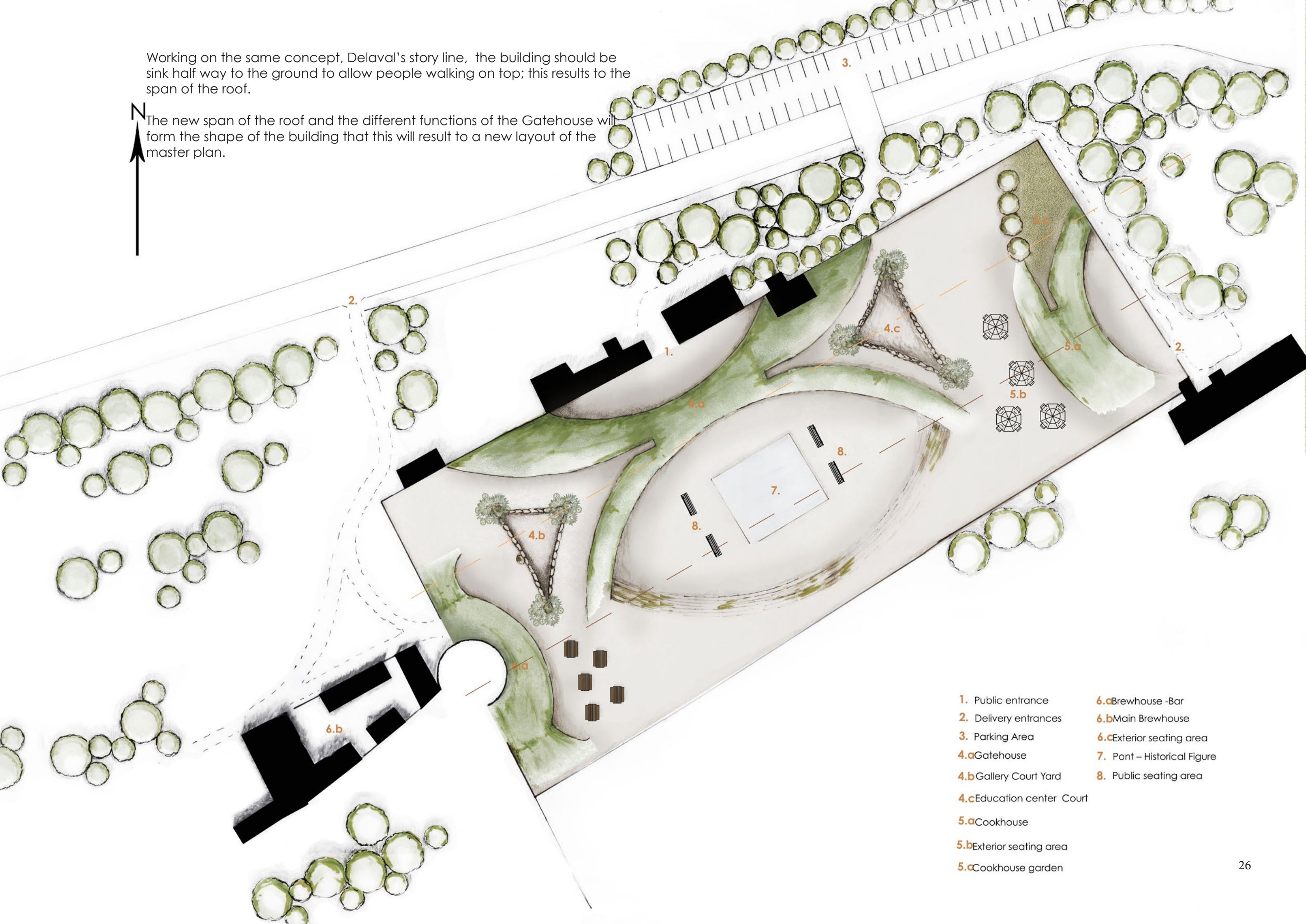


Final Proposal



Working on the same concept, Delaval's story line, the building should be sink half way to the ground to allow people walking on top; this results to the span of the roof.

N
The new span of the roof and the different functions of the Gatehouse will form the shape of the building that this will result to a new layout of the master plan.



- | | |
|---------------------------|-----------------------------|
| 1. Public entrance | 6.aBrewhouse -Bar |
| 2. Delivery entrances | 6.bMain Brewhouse |
| 3. Parking Area | 6.cExterior seating area |
| 4.aGatehouse | 7. Pont – Historical Figure |
| 4.bGallery Court Yard | 8. Public seating area |
| 4.cEducation center Court | |
| 5.aCookhouse | |
| 5.bExterior seating area | |
| 5.cCookhouse garden | |

Archaeolink Park in Scotland

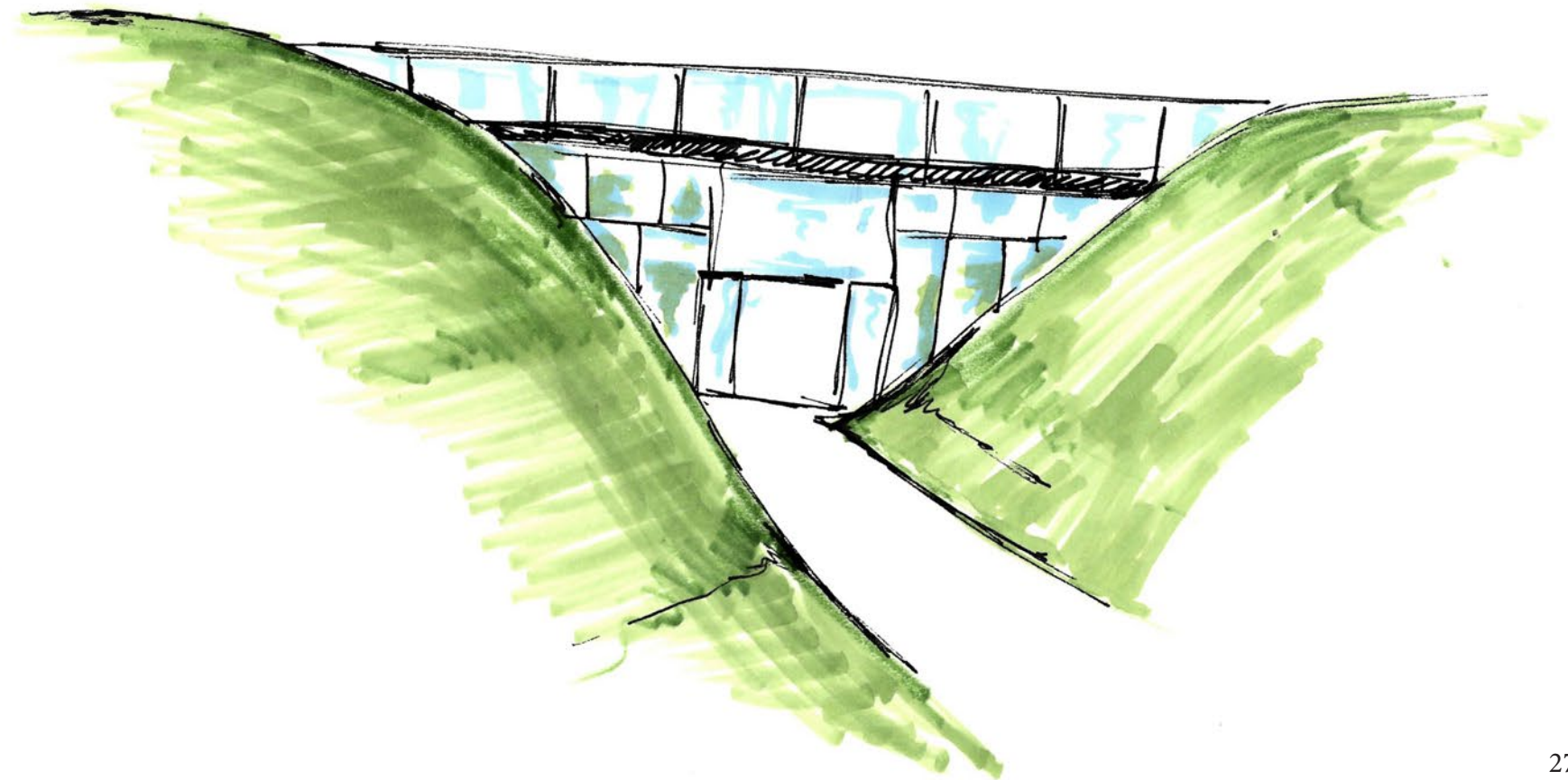
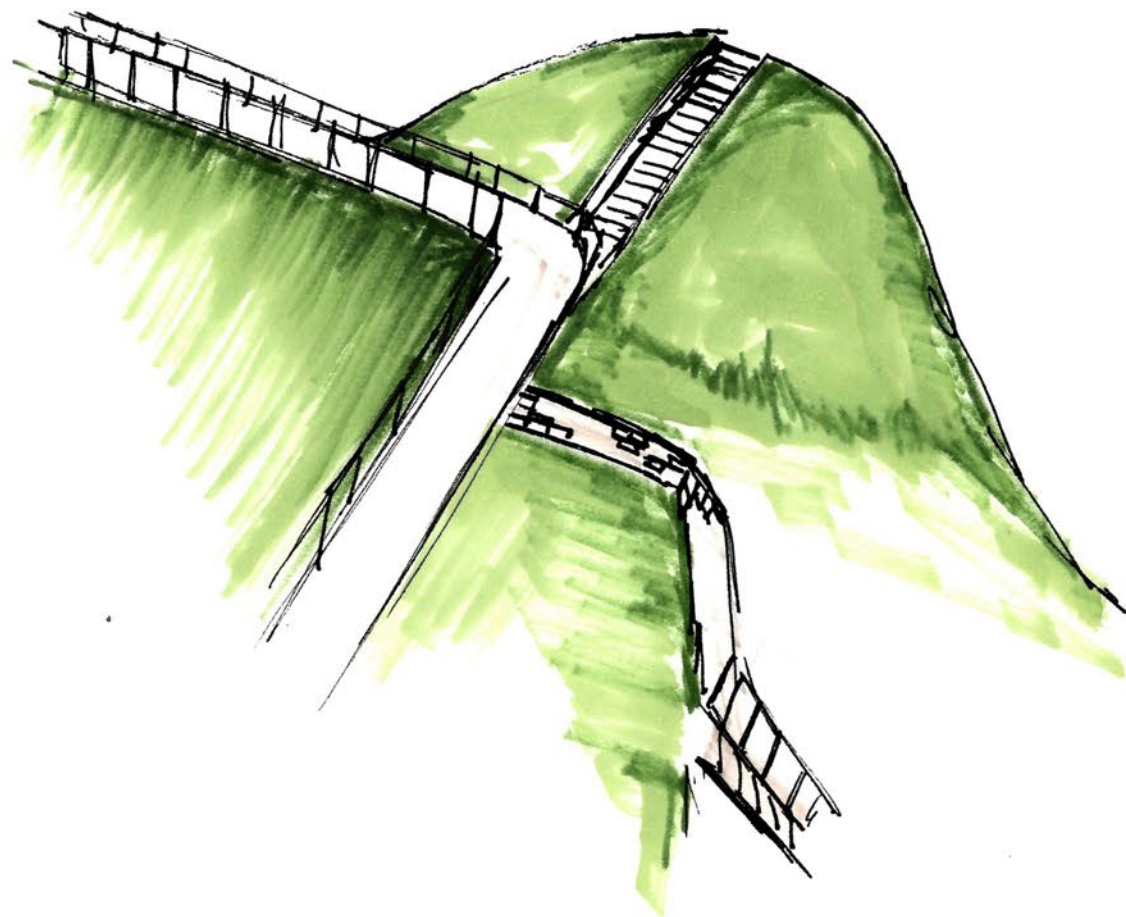


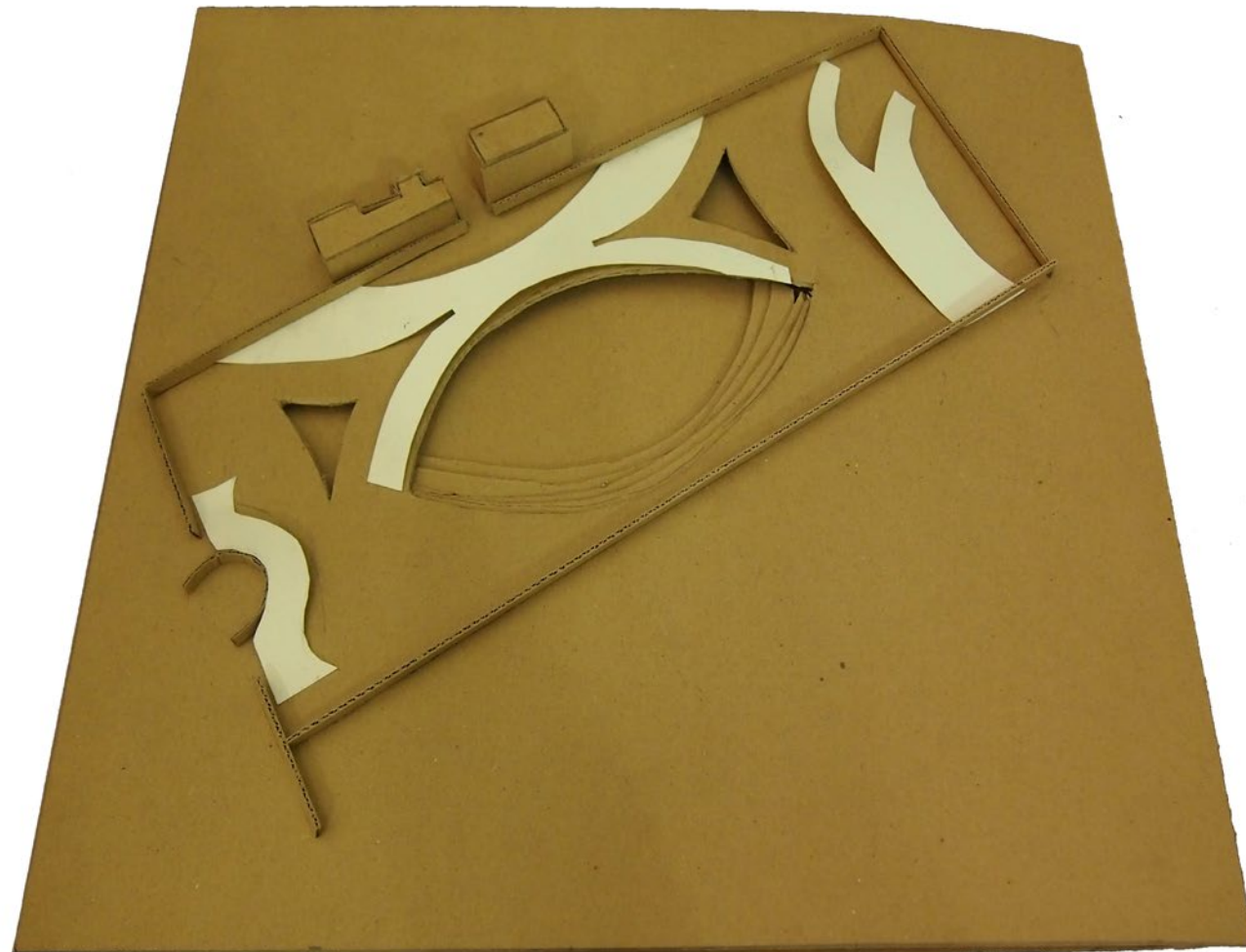
Archeolink Park in Scotland hides beneath a lush Green Mound

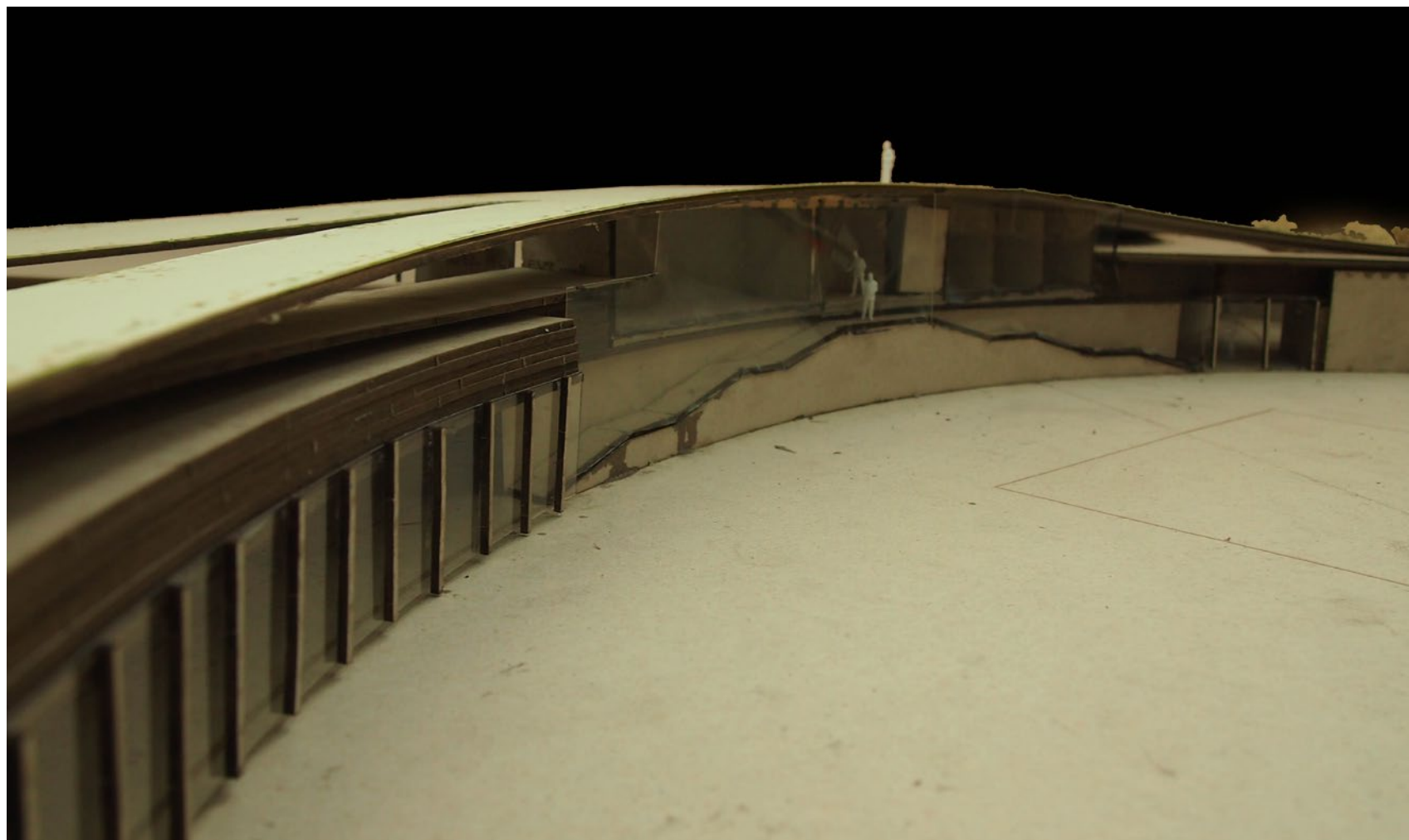
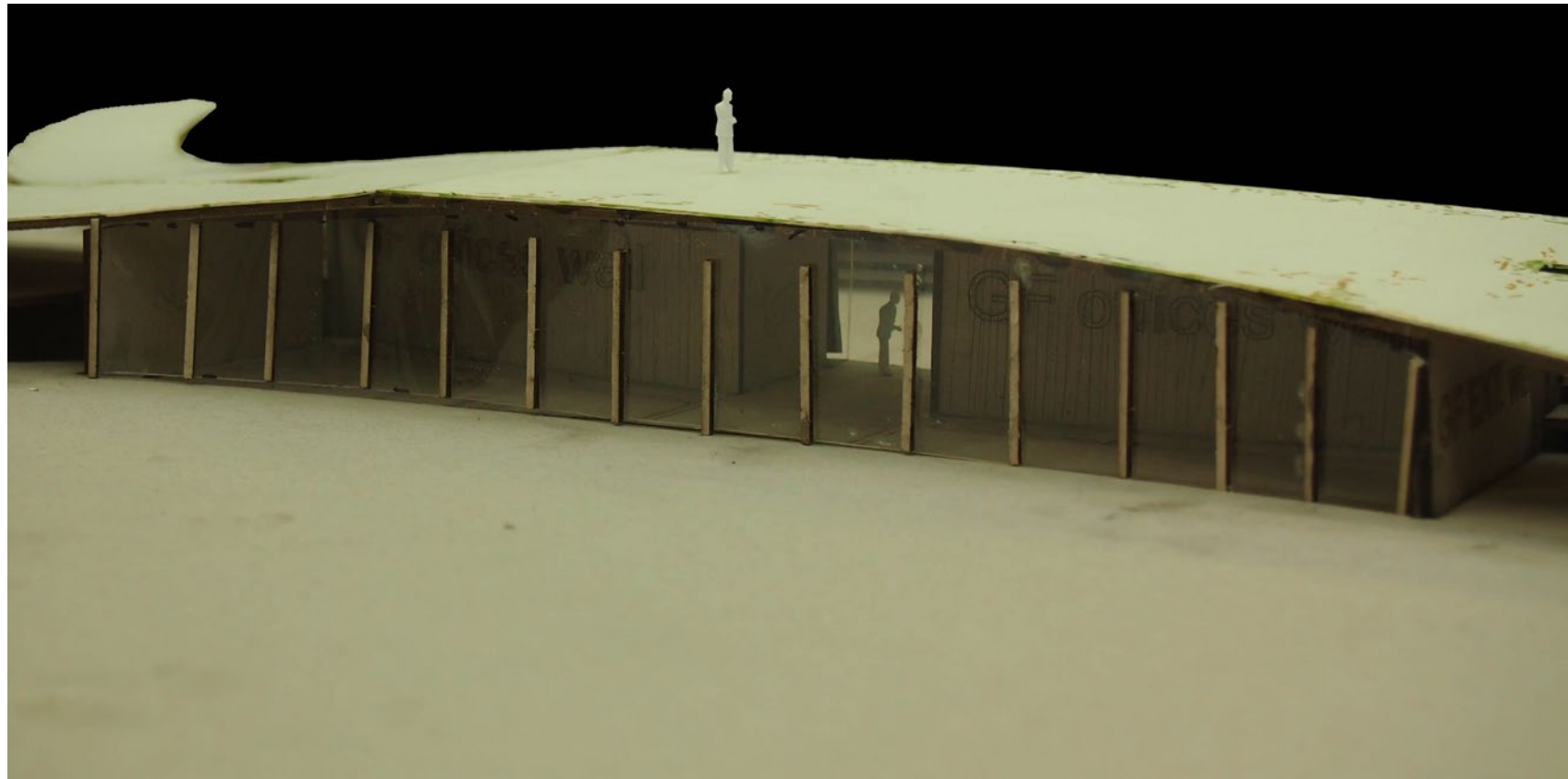
The building is Rising above the ground like a hill, is like the land has folded over from a sunken courtyard and entrances

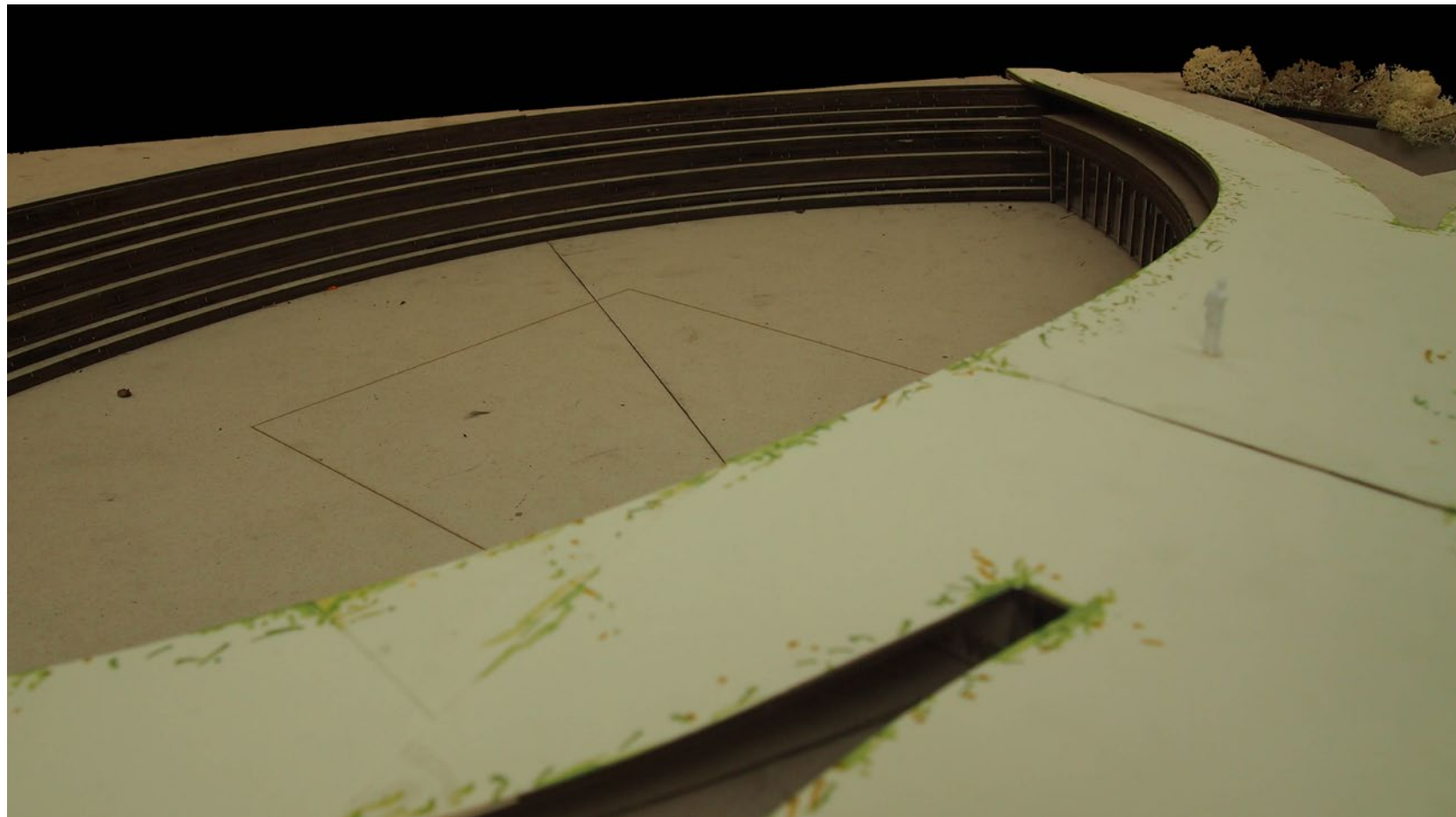
Double-glazing facades allows natural Daylight and heating into the building

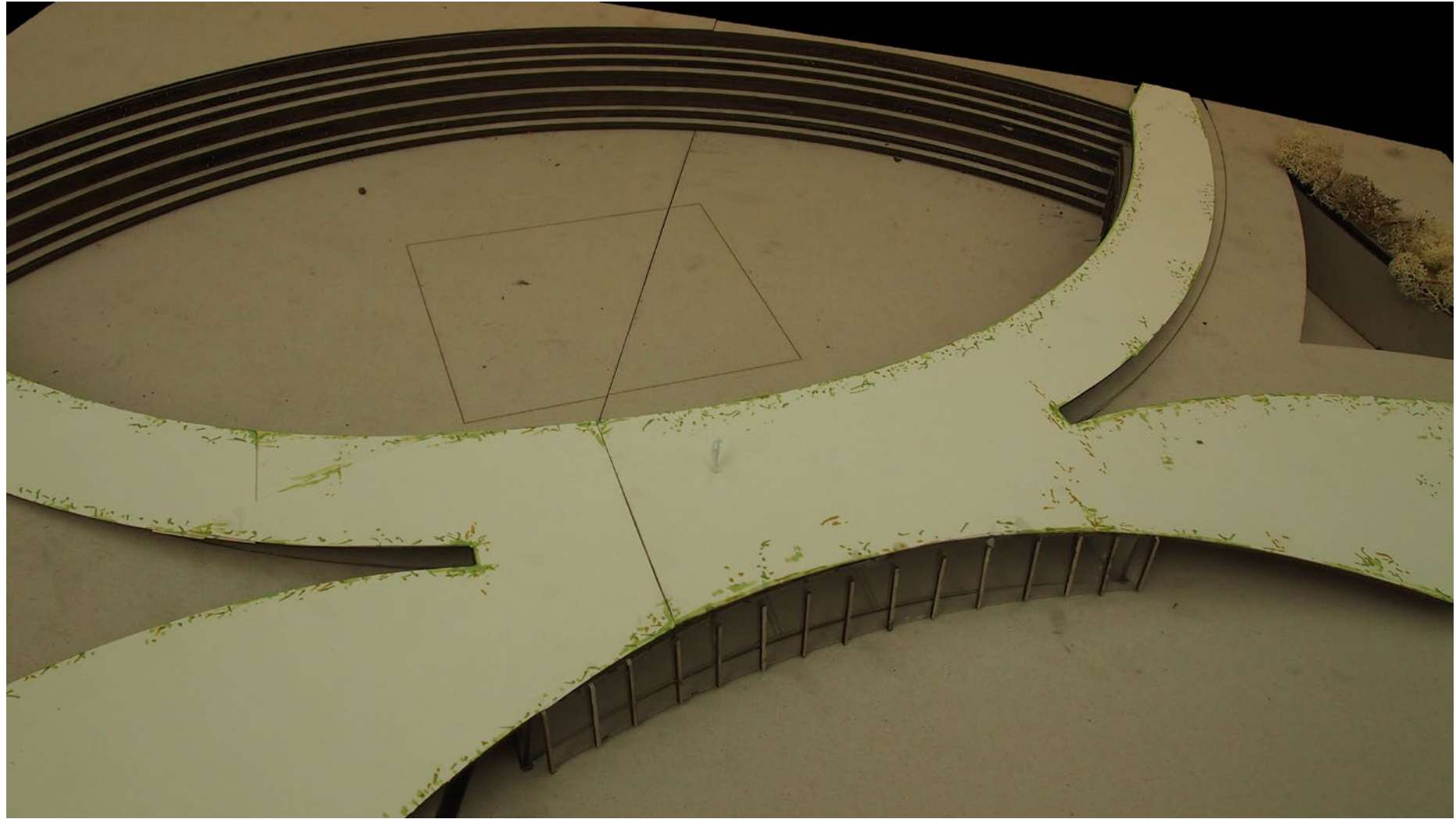
The fact that is sink into the ground allows maximum insulation and minimizes heat loss





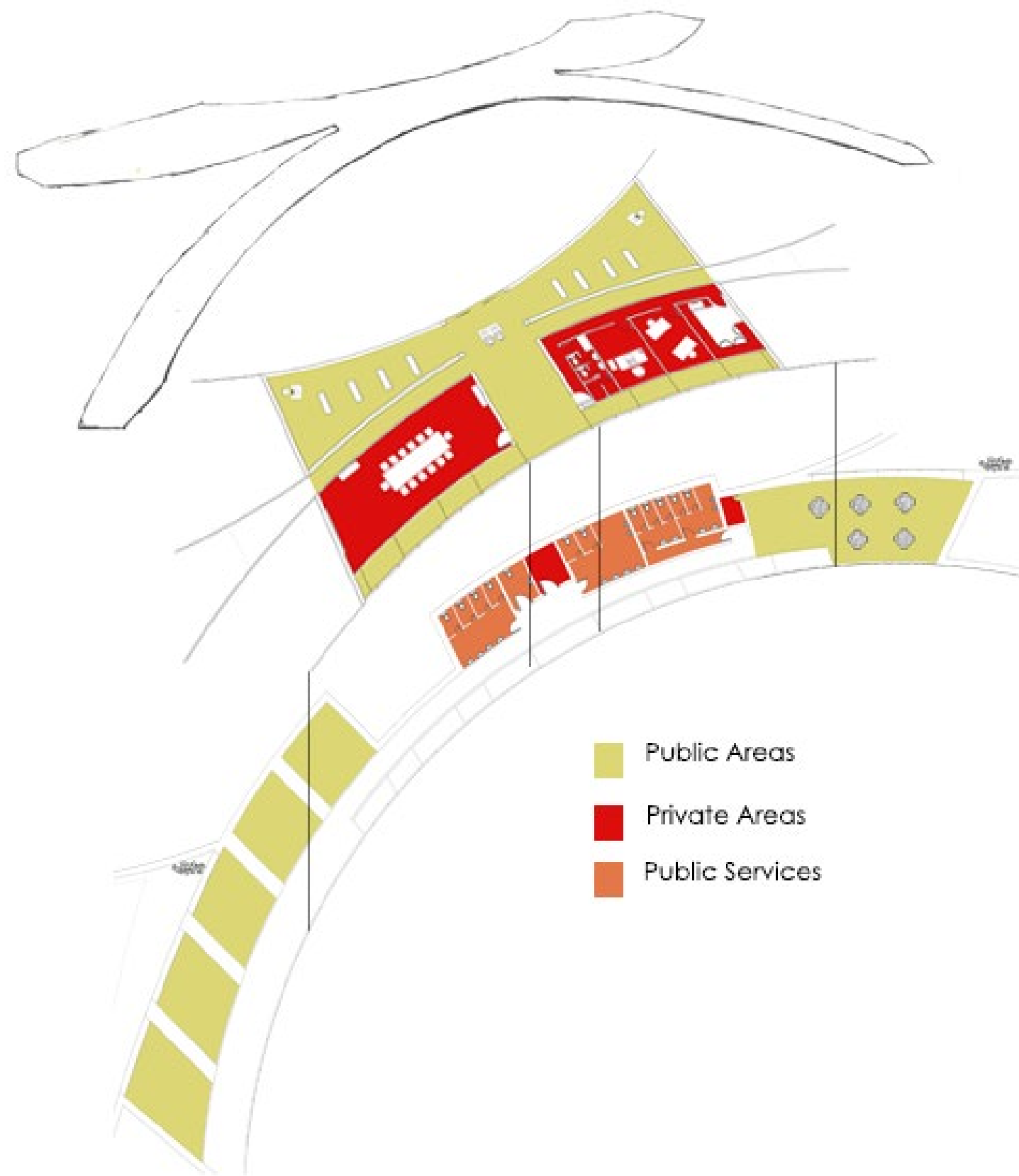


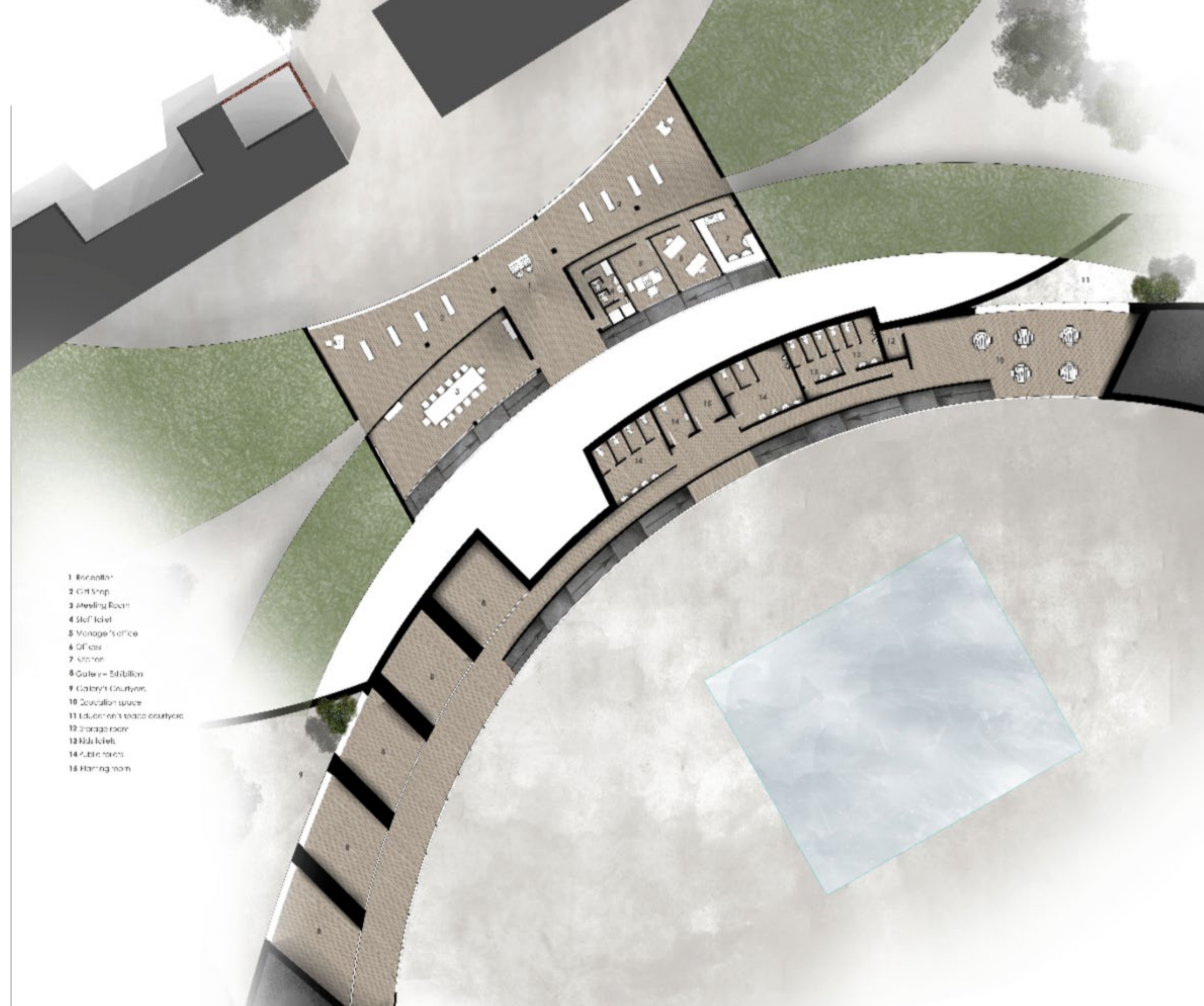


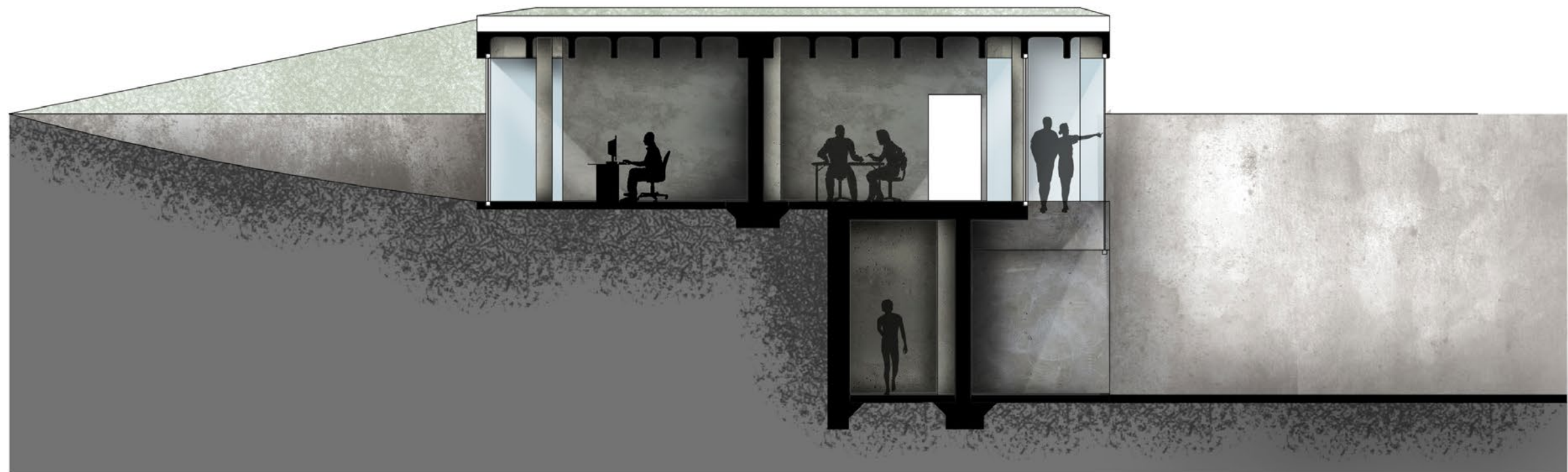
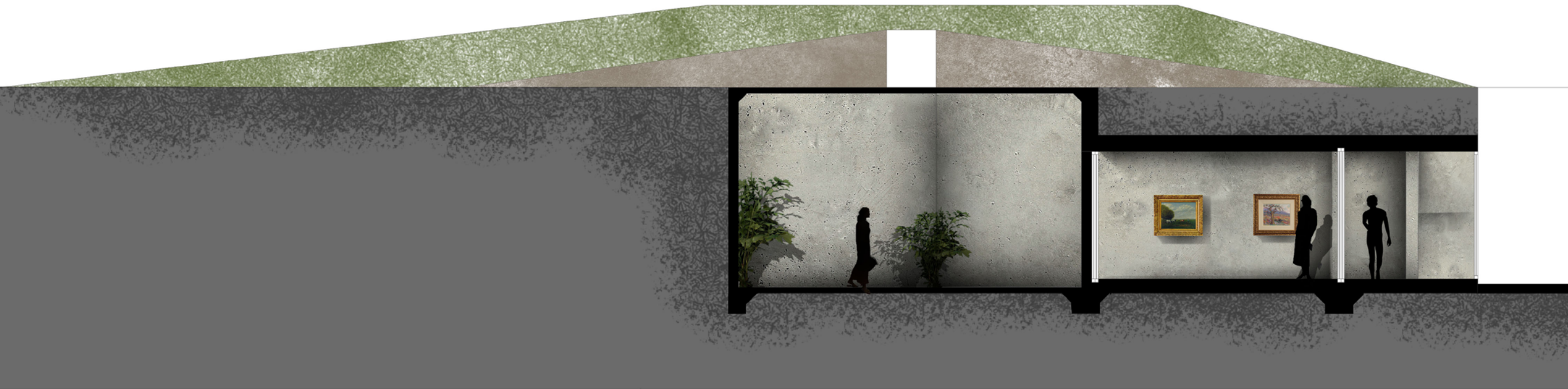


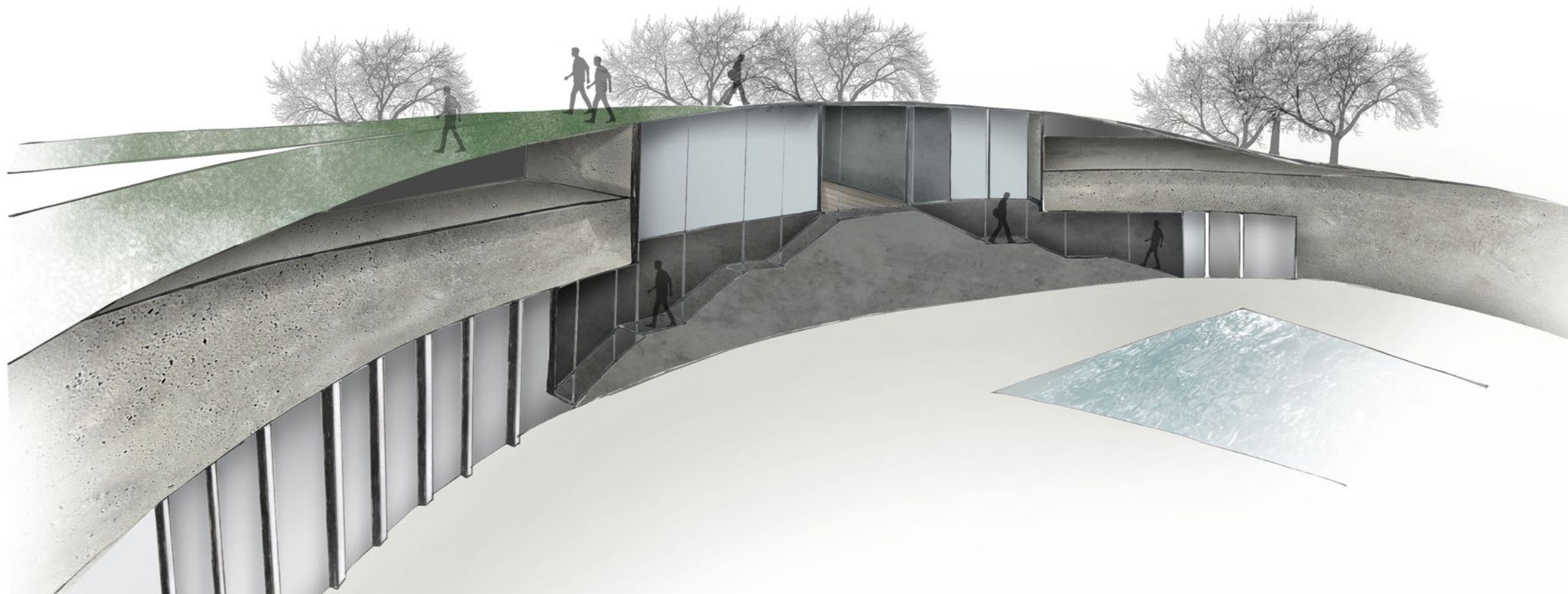
Spatial Diagram

Illustrates the Public and private areas of the building.





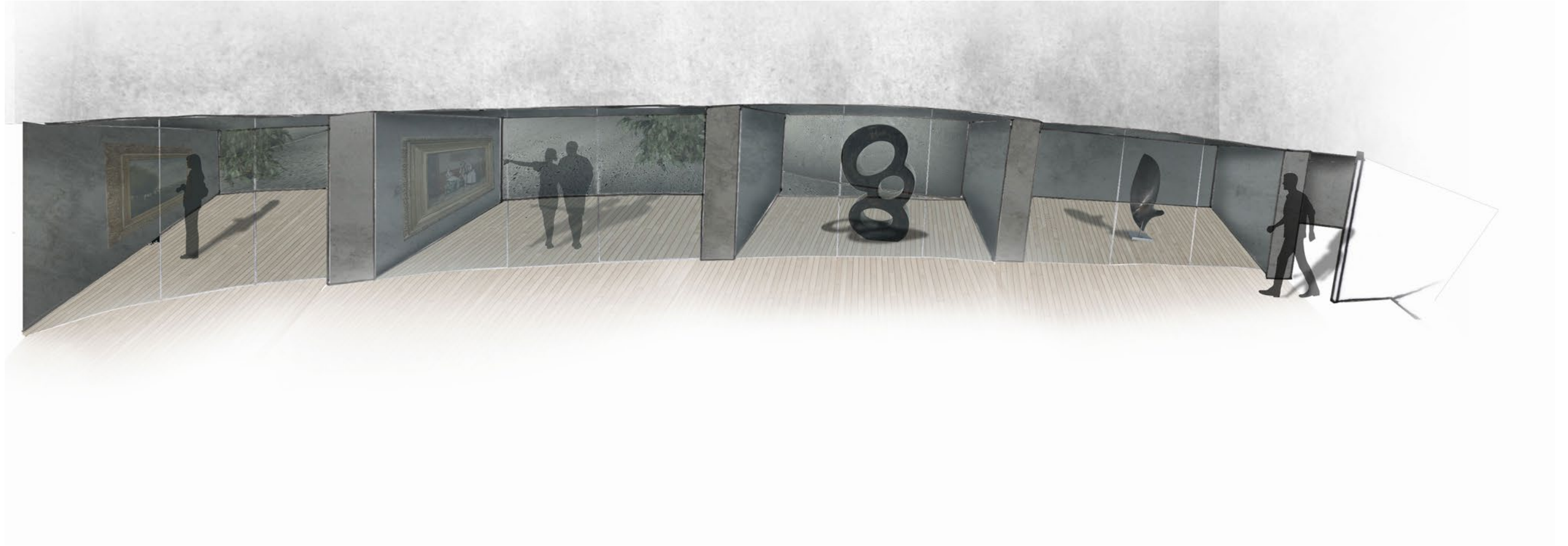




Exterior Perspective

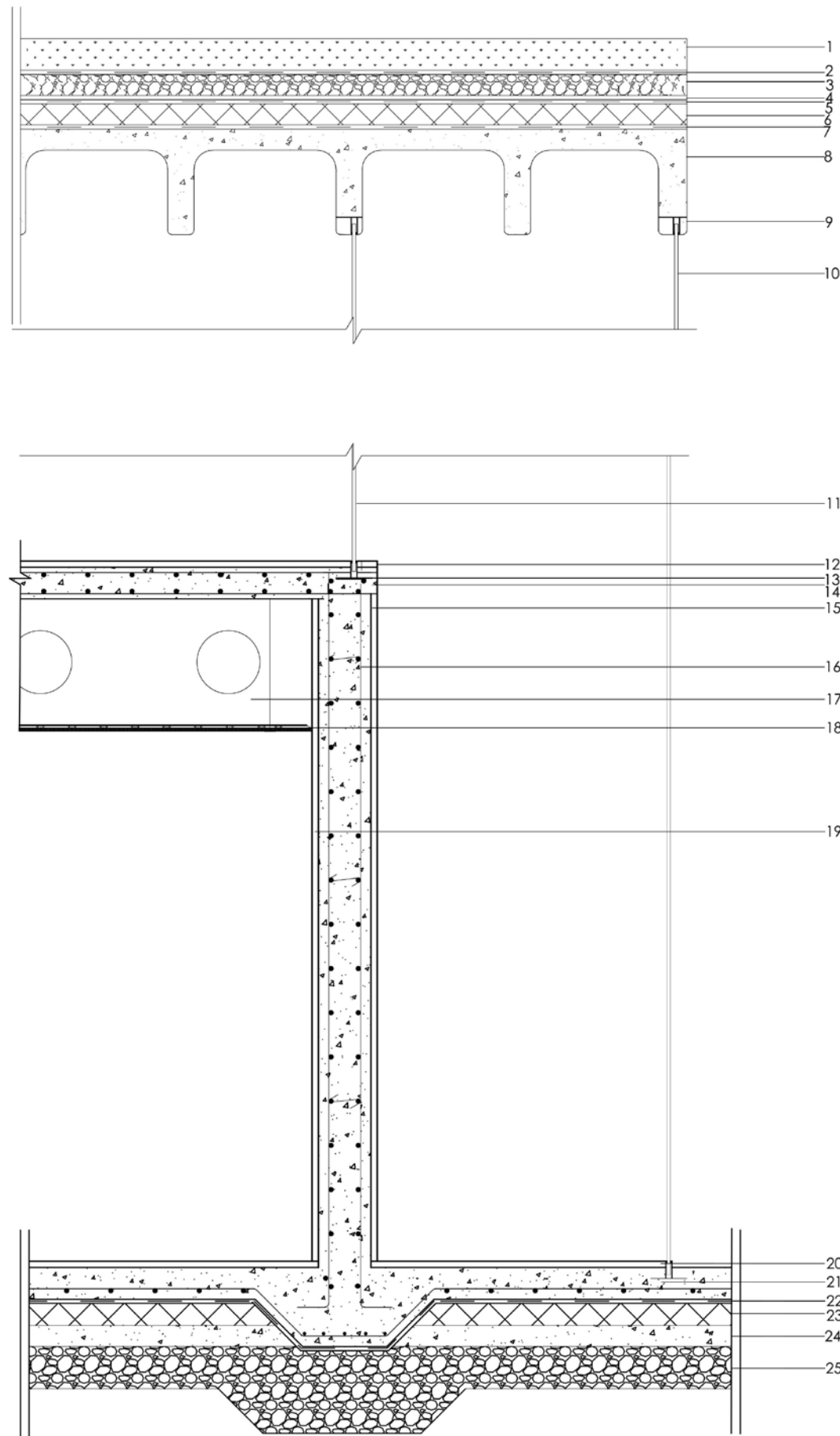
Communicates the south facades of the buildings. It also illustrates the big ramp that allows visitors to get to the underground floor and experience this journey of the changing levels.

The glass facades reflect the site and help the building to blend into the landscape in a smoother way.



Interior Perspective

Communicates the relationship between the galleries, the private courtyard and the public areas. It also captures materiality and textures. The exposed concrete allows a link to the concrete industry of Delavals.



- 1 Growing medium
- 2 Vapor membrane
- 3 Drainage Layer 100mm
- 4 Root barrier membrane
- 5 Water proof membrane
- 6 Thermal Insulation 100 mm
- 7 Vapor control layer
- 8 Roof structure – Waffle
- 9 Hidden Window profile
- 10 Exterior Double glazing window 20mm
- 11 Interior Double glazing window 16mm
- 12 Hard wood flooring
- 13 Hidden Window profile
- 14 Concrete Reinforced floor slab 100mm
- 15 Wallboard 10mm
- 16 Reinforced Concrete wall
- 17 Suspended ceiling void 600mm
- 18 Suspended ceiling
- 19 Wallboard 10mm
- 20 Hard wood flooring
- 21 Concrete Reinforced floor slab 150mm
- 22 Vapor membrane
- 23 Rigid mineral Insulation 130mm
- 24 Blind Concrete or Sand 100mm
- 25 Gravel 150

The Technical Section communicates the construction of the grass roof on a waffle slab structure for the ground floor. This method of construction was chosen because of the flexibility to span long distances without need for extra support. Also due to the flexibility to curve.

The window frames on the ramp and the office will be hidden, to allow uninterrupted views to the site.

Suspended ceiling will be installed to the underground level to hide the installation of services and allow flexibility.

External insulation will be installed to the foundation to maximize thermal mass.