



Term 1 Manifesto

My first term project was located at 87 Western road. Consisting of exploring history and change within the site. By understanding that my site used to be a flower shop in the 1870's I wanted to provide a tribute towards the success of the shop. Furthermore, my Dutch heritage.

As there are a few Dutch florist designers seen as pioneers in the industry I wanted to collaborate these elements and bring back traces of history into the modern day.

Throughout Term 1 I investigated how the site has changed and how it will continue to do so in the

future. This allowed me to create a conversation towards the acknowledgement of time and the layers which are held within it. Therefore, it is only right I continue this into Term 2.

Dear Voogt.Architecture,

I recently stumbled upon your online portfolio and realised you made a project which represents time and heritage. I was wondering if you could help create a project for me?

I am an archaeologist who has spent a lot of time travelling the world, learning about the history of architecture. I have developed a huge passion within the study of anthropology and sociology along the way.

Now that I have travelled for much of my young life, I am looking to create a home which will be able to display my work and to also have a workspace which I can use. I have found a location at 56 Western Road, Brighton. The house has much potential but there are a few adjustments I would like to be made. I am very enthusiastic about sustainable design and therefore wish for the house to have a very low carbon footprint and use natural energy sources. It would be great if the building were to react to its environment and provide a sense of change/evolution as this will be a nice way to represent my work and lifestyle. Alongside this, I am considering having a public realm within the lower area of the building. I would love to show off my experiences and create a sense of connection within time and history, allowing the occupants to embark on a unique experience.

I hope this is a possibility,

Yours sincerely,
Paul Diggerfield

Client Introduction

The beginning of term 2. For this project we had to create a client who has a profession which would lead on from our term 1 project. It was also important for us, as third years, to create a workspace for our client.

Creating a fictional client who is an archaeologist has allowed me to continue the same theme of design from our first term. The expectations which need to be met include providing a design which will represent change, time and heritage. Alongside this it will be very important to reduce the carbon footprint.

Dear Paul,

Thank you for getting in touch and hope you are well. I have mentioned the project to the team and we are all for it.

We have some free time at the moment so I will look over the existing plans and construction, from there we will contact you on zoom? This will be a good way for us to have a discussion about the specifics and how we intend to move forward.

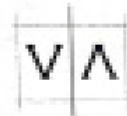
The use of light can be a great place to start as it can provide a unique way of displaying your artefacts. It will be important to know how fragile these are to ensure we can keep them in good condition. It will also be important to understand the types of people you wish to attract as different techniques can provide different compatibilities.

The ambiguity of time is something which will be very interesting to explore and will need several different design experiments to ensure success. It will be important to see whether aesthetic illusion will be appropriate or whether your collections will create a timeline.

If you come up with any other preferences in the meantime please let us know and we will try our best to do this for you.

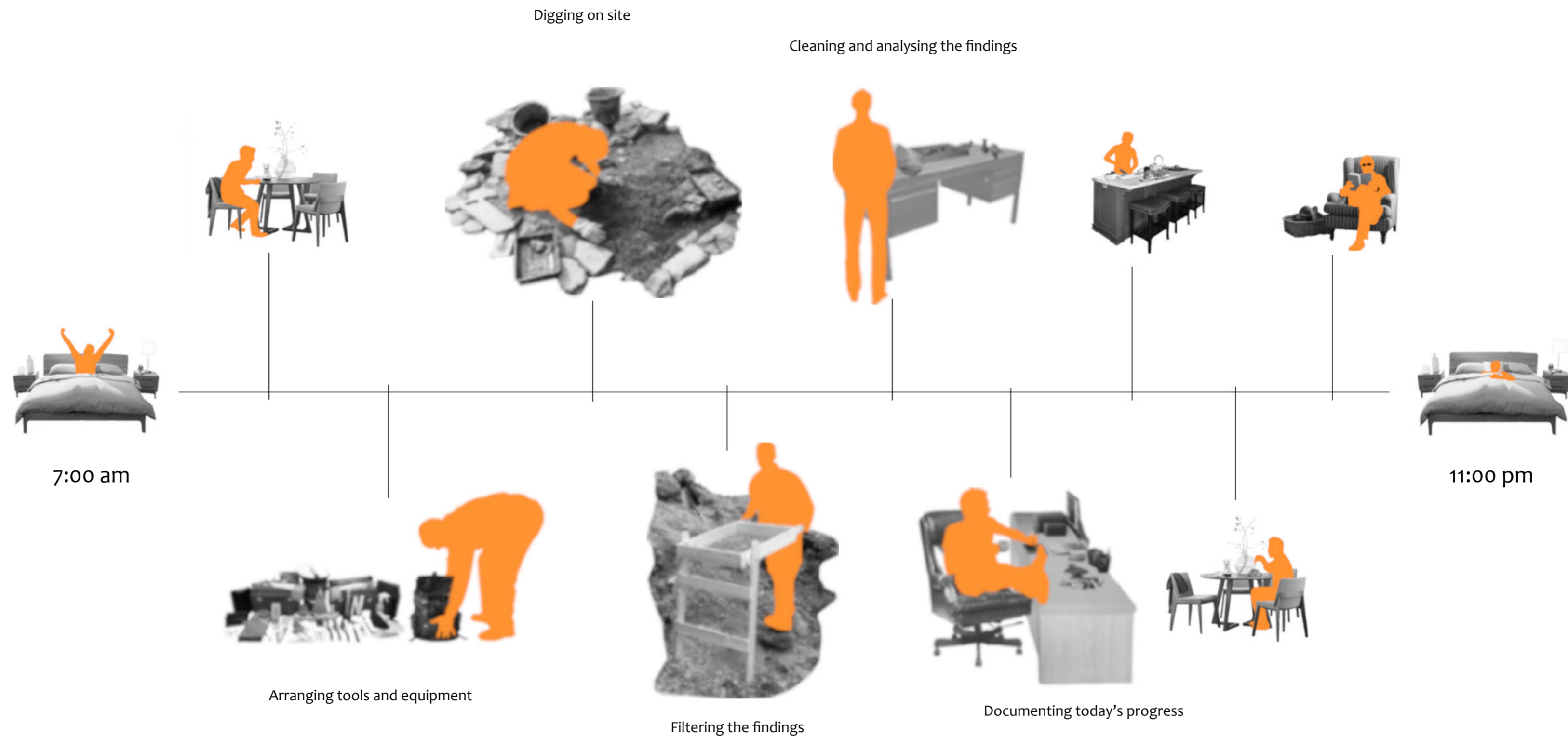
I will email back later to arrange a meeting time.

Many thanks,
Voogt.Architecture



Practice Response

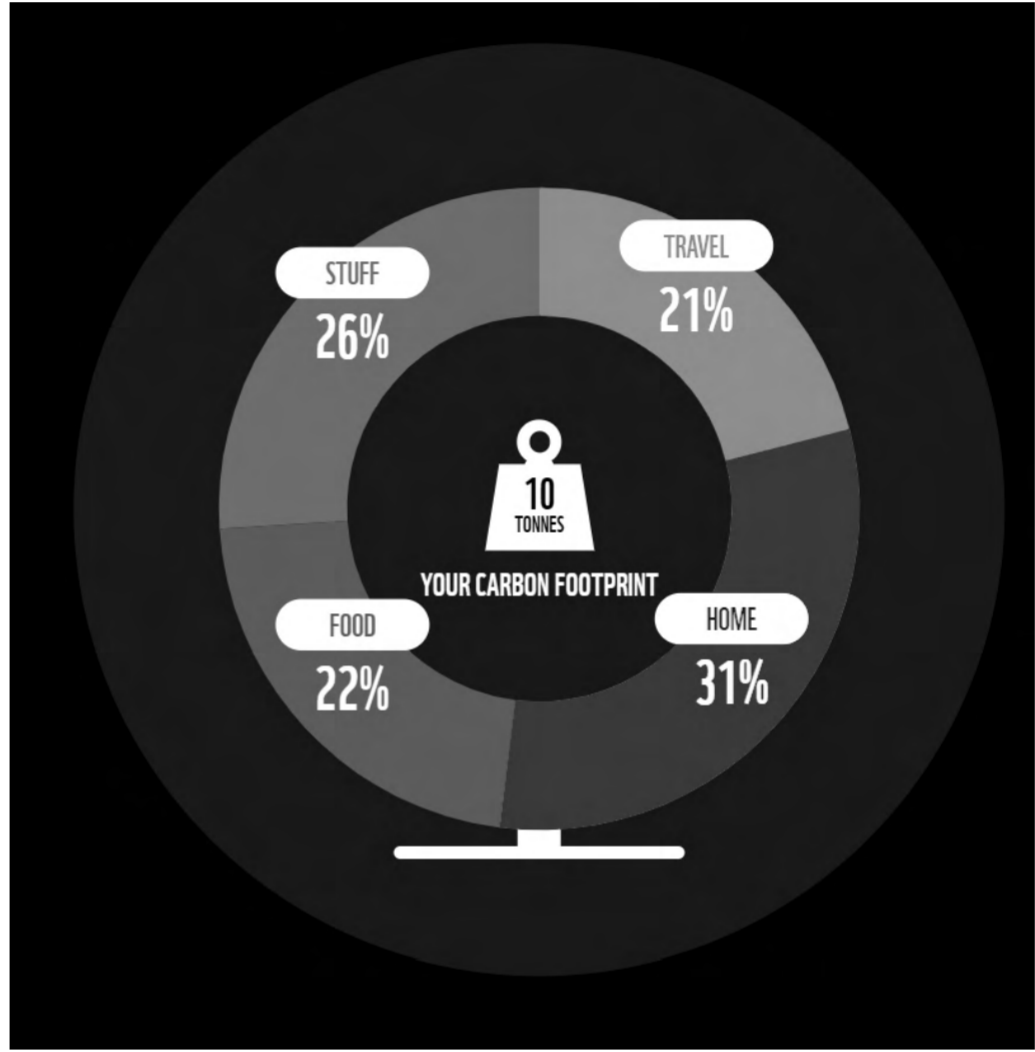
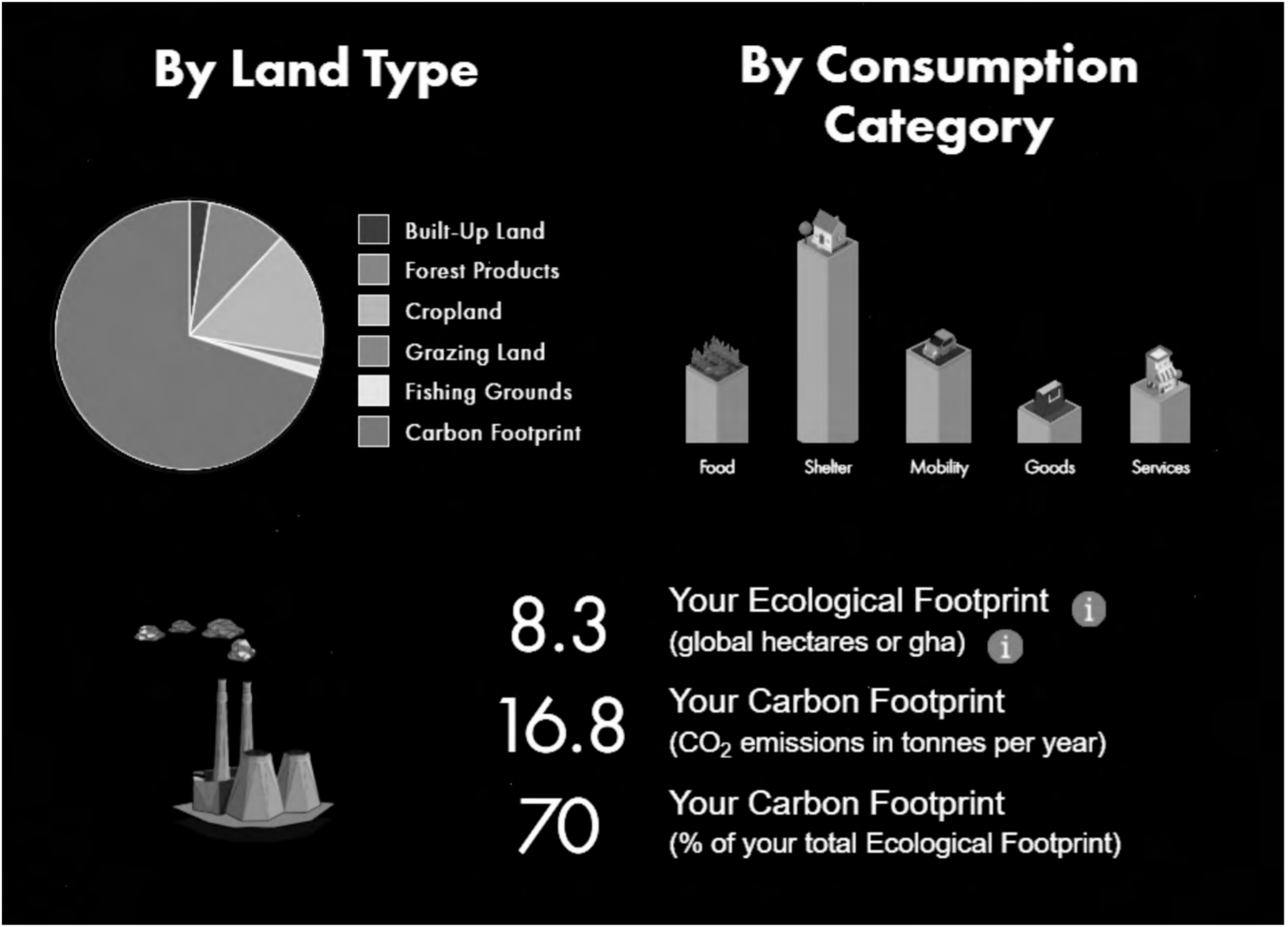
The reply starts to narrow down how the design will be done to insure the client is satisfied. Therefore amenities such as light are mentioned to determine what the experience will be like within the space.



A Day In The Life

In order to determine what is needed within my proposal it is essential that I get to know the client's characteristics and lifestyle routine. Paul is someone who has a great passion for his work and therefore the building will need to reflect this. An archaeologist will spend his morning preparing his equipment to then bring onto site. Once he has reached his site, he will begin a day of excavating and analysing his surrounding environments.

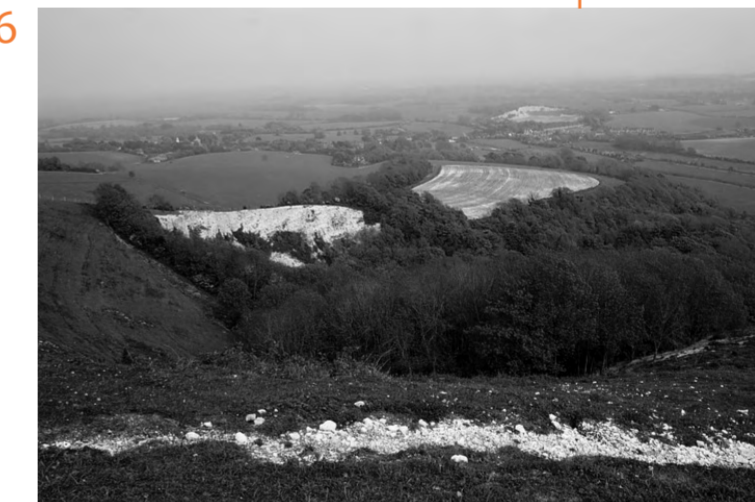
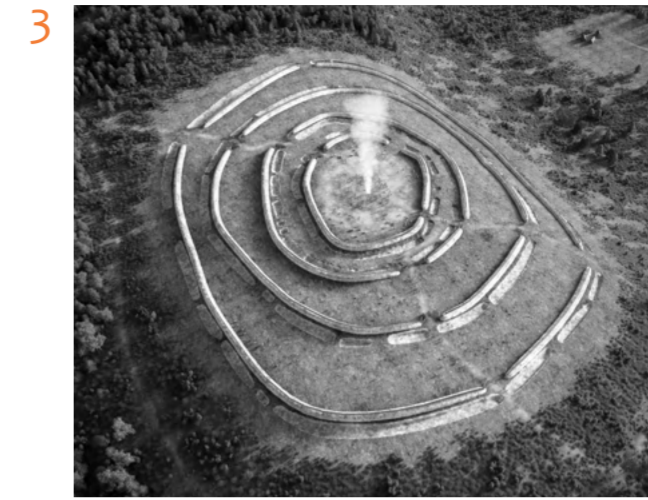
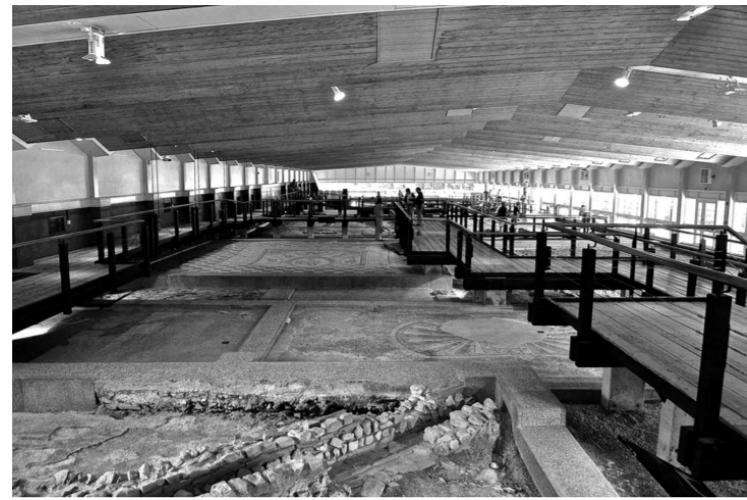
Therefore, it will be essential for him to have two workspaces. One which will allow him to lay out his findings and analyse them, the other will be to document the information digitally.



Lifestyle Analysis

By using a website called it was possible to create a profile of the client's lifestyle, which analyses his overall carbon footprint. A decision was to make Paul a man who lives a very average lifestyle, occasionally eating meat and aware of his electricity uses etc. this would provide a challenge towards making the house zero carbon. It also relates to most people within society.

The results show that his main attribute towards global warming is his housing lifestyle. The smaller issues include his mobility and food, which concludes that the role of the architect is crucial in order to help towards reducing the carbon footprint.



Sussex Archeology

1. Fishbourne Roman Palace
The roman palace was located in Fishbourne and is the largest residential roman building discovered in Britain, dating back to 75 AD. The Roman remains were systematically excavated in 1960. The 33 metre long building was used as an army base and later a residency. It had many different alterations, until it burnt down in 270 AD. The site is now a public museum.

2. Ditchling Beacon Hillfort
Located in Ditchling, the hillfort was excavated in 1985 and was calculated to date back as far as 902-340 BC. The pottery discovered showed evidence of it being within the early iron age period. The evidence found illustrates that there would've been large round houses within the fort.

3. Whitehawk Camp
Located on Whitehawk hill, the camp has evidence of use as far back as 3479 BC. It was first discovered in 1929. The Neolithic causewayed enclosure was seemed to be used as a ritual monument exposed chalk rings of the monument would have reflected both sun and moonlight, drawing people towards it.

4. Hove Barrow
The barrow was found during the construction of Palmeira Square, Hove, in 1856. The mound was cut into and a huge burial was found, discovering an oak coffin with several different valuables. The most famous being the amber cup which provides evidence of being made in 1650-1450 BC.

5. Hollingbury Camp
The Iron Age farmstead was built on Hollingbury hillfort in 570 BC. Field investigations in 1972 found it surviving as an earthwork with rounded corners and sides 50 metres in length. The fort was used for community gathering and due to its size of 300x400 metres it was clear that they took pride in their land.

6. Mount Caburn
This Caburn Iron Aged hillfort travels back as far as 2000 BC and it may have the most excavations per site in Britain, with 170 trenches. The hillfort was first excavated in 1877 and carried on till 1998. The evidence collected has provided two potential uses. It was first seen as an army camp, but further research has lead to the idea of it being as religious space.

1



2



3



4



5



6



Sussex Ruins & Historic Architecture

1. Cowdray Ruins

The original fortified manor house was built east of Midhurst between 1273 and 1284. The building was seen as one of England's great Tudor houses. It was largely destroyed by a fire on 24 September 1793 but has been Grade 1 listed ruin nevertheless.

2. Lewes Priory

Located in Lewes, the priory was the first Cluniac house in England, built in 1081. Excavations carried out in the 1840's showed that it was mainly used for sacred and temporal purposes, with up to 50 monks living on the site in the 12th and 13th century. Surrendered to the crown in 1537 it was soon destroyed by order of the king's secretary.

3. Battle Abbey Crypt

Excavated in 1817, the Crypt at Battle Abbey stands out as one of the original monuments left after the great battle of Hastings in 1066. The space would've been a stone chamber underneath the a church or religious space which could contain coffins, sarcophagi, or religious relics.

4. Bignor Roman Villa

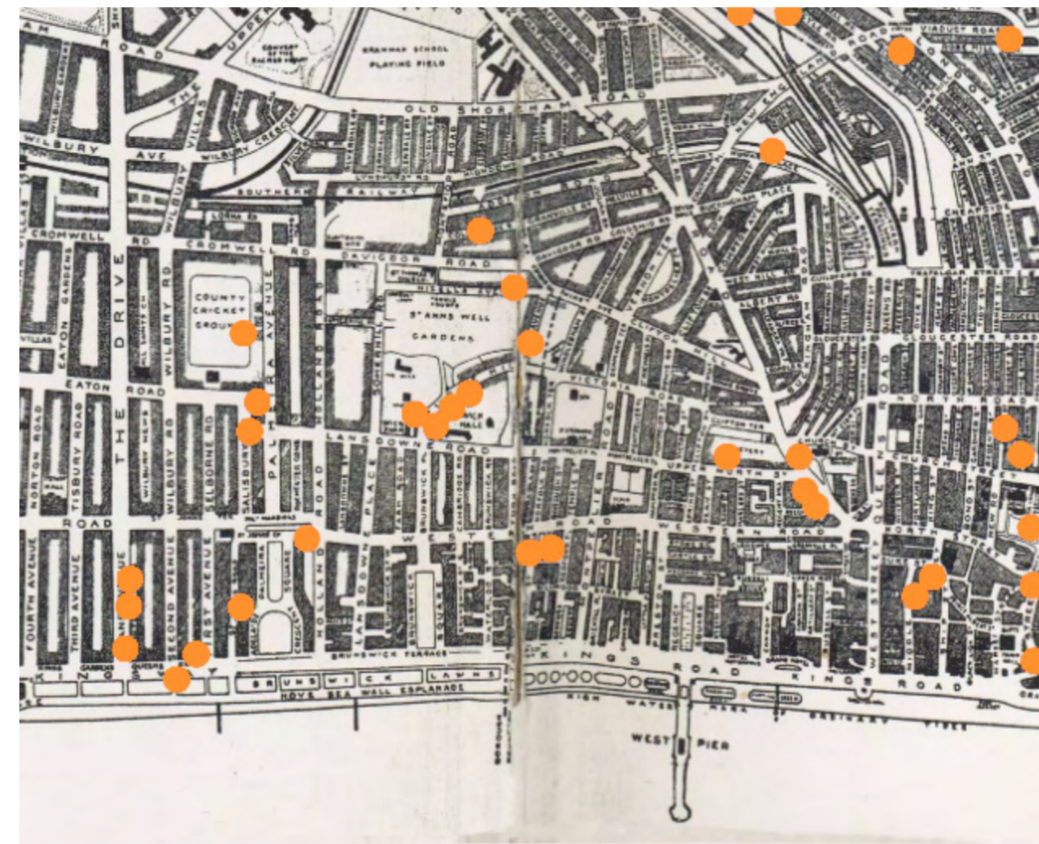
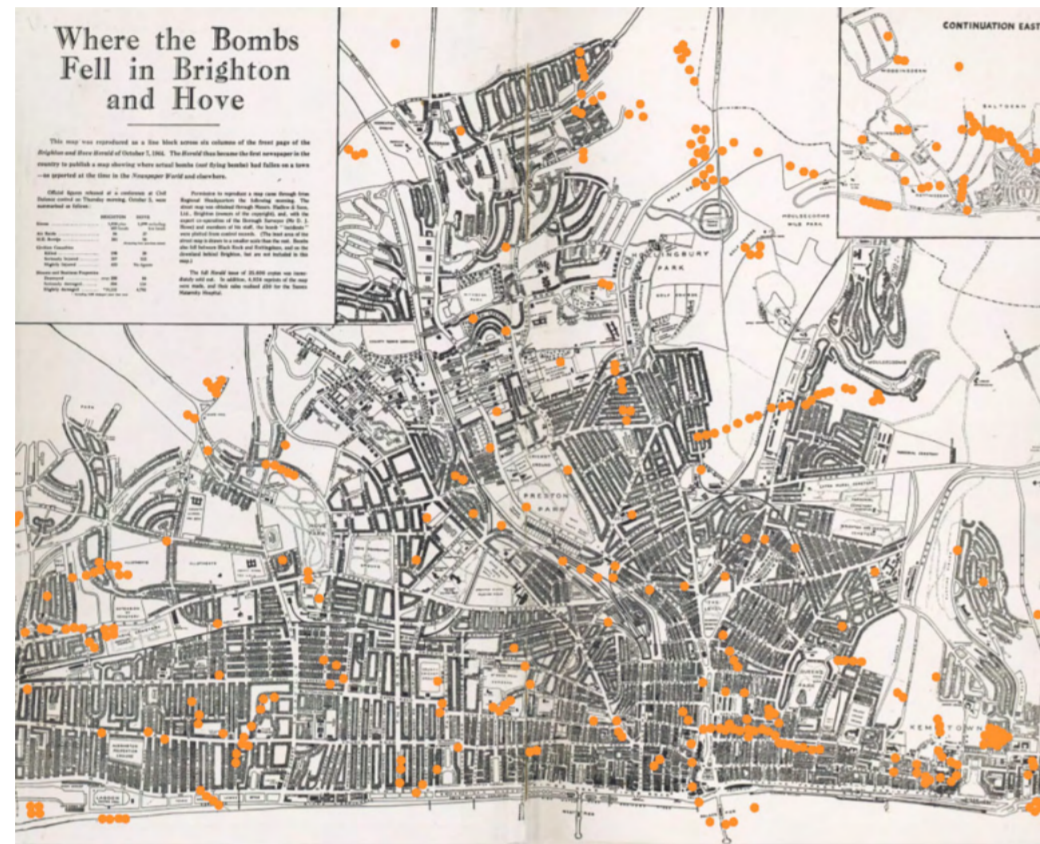
The large roman courtyard in Bignor was excavated and discovered in 1811. The earliest remains on the site include simple timber farm structures dating back to 190 AD. Further excavating showed several pieces mosaic flooring and other residential spaces.

5. Pevensey Castle

The medieval castle and former Roman Saxon shore fort was built around 290 AD. The first archaeological excavation took place in 1710. The castle was used as a roman fort under the name of Anderitum, containing 'elite troops' but was taken over by the Saxons in 410 AD. It had several uses and owners over time but eventually was demolished in 1945.

6. Langley Priory

The 11th century building is the oldest in Eastbourne, made in 1121. The house was very well known due to many people wanting to knock it down and claim the land, but the locals and Eastbourne priory have managed to keep it in use. the land consisted of farmhouse, large barns, a dove-cote, animal sheds, fishponds and a mill but is now just the singular building.



WW2 Bomb Distribution

After World War 2 the bombs were recorded, identifying the flight path of the planes which would have flown over the town. The third picture shows two bombs which had been dropped directly onto the site (56 western road). Although there is no evidence of the change in design around this period, it is clear that the building would have been reconstructed.

Although this was the case the structure of the city continued to be the same and has left no further evidence of this incident. Due to my client having a strong interest in history, this may be a suitable form of remembrance which could be incorporated into the design.

RUIN

Noun

Ruins, the **remains** of a building, city, etc., that has been **destroyed** or that is in **disrepair** or a state of **decay**.

Verb

To reduce to ruin; devastate.

To **fall** into ruins; fall to **pieces**.



56 Western Road

The site for this project is currently vacant and therefore the aim of the project will be to bring life back to the location. It's latest programme consisted of a bookers which was shut down in 2016.

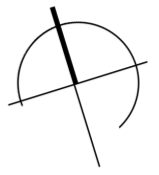
The site used to be split into two separate buildings, known as 55a and 56. The space was occupied by 2 different owners up until 1901.



Site Photo's

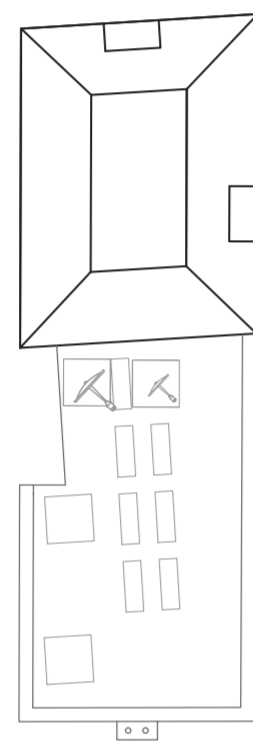
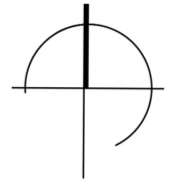
When further analysing the site the amount of people who would venture past the site became very apparent. With a neighbouring pub and other historic architectural features surrounding the site it became clear that this would be an interesting challenge. The appealing design elements of the site include the windows above the ground floor, the balcony roof top and the extended height of the party wall.

The bottom set of photos represent the view from ground level, whereas the top pictures represent the view of the building higher up which may also be the view from a distance.

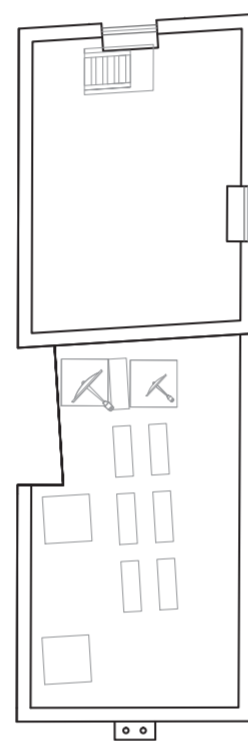


Site Master Plan

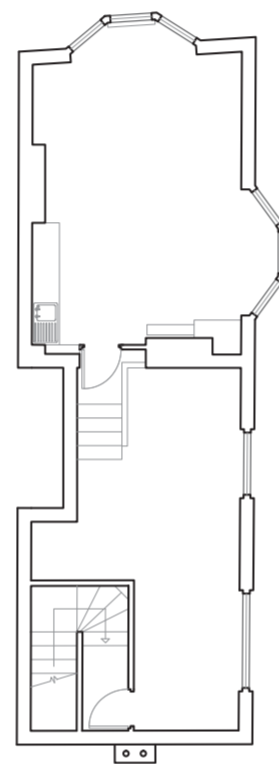
The plan shows the site and the dense surroundings. Being on the corner of the street means that whatever is design will be viewed from several different angles.



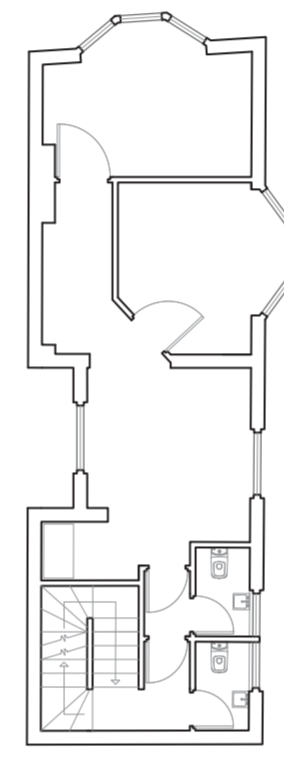
R



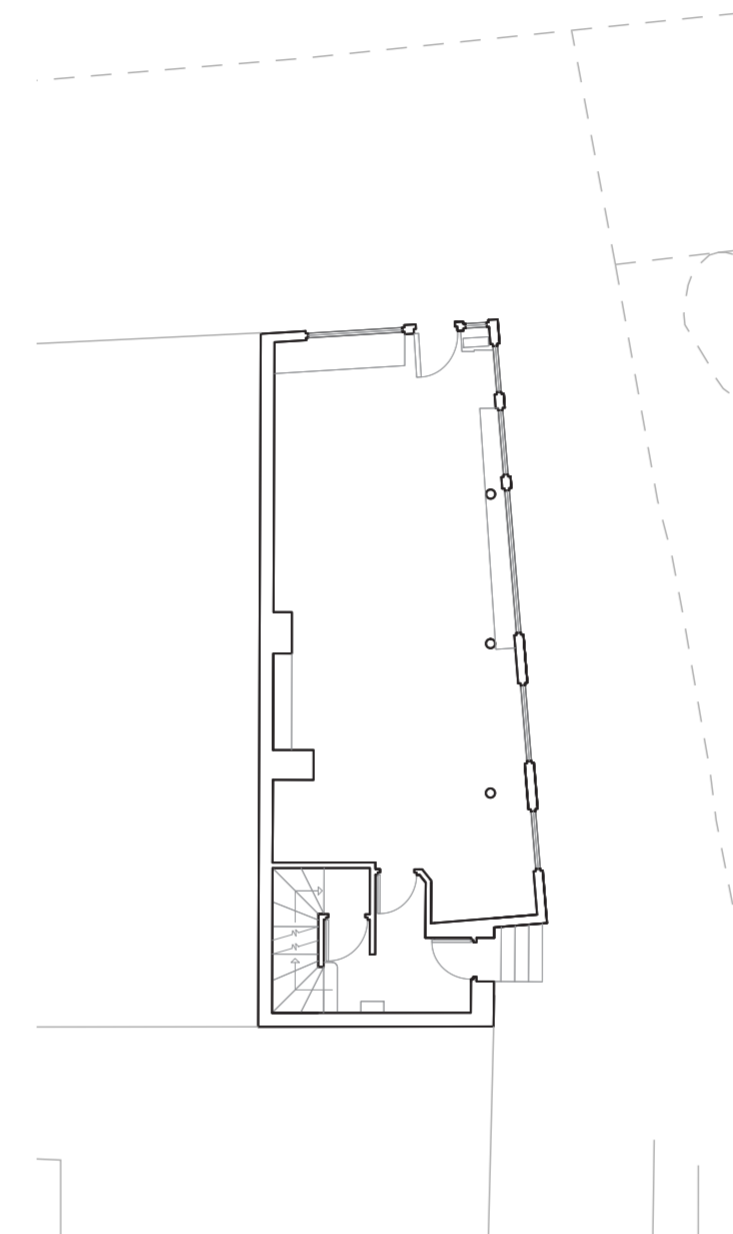
F3



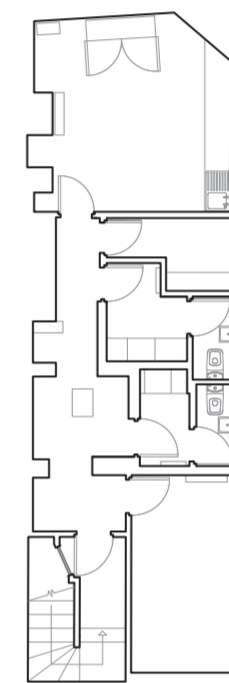
F2



F1



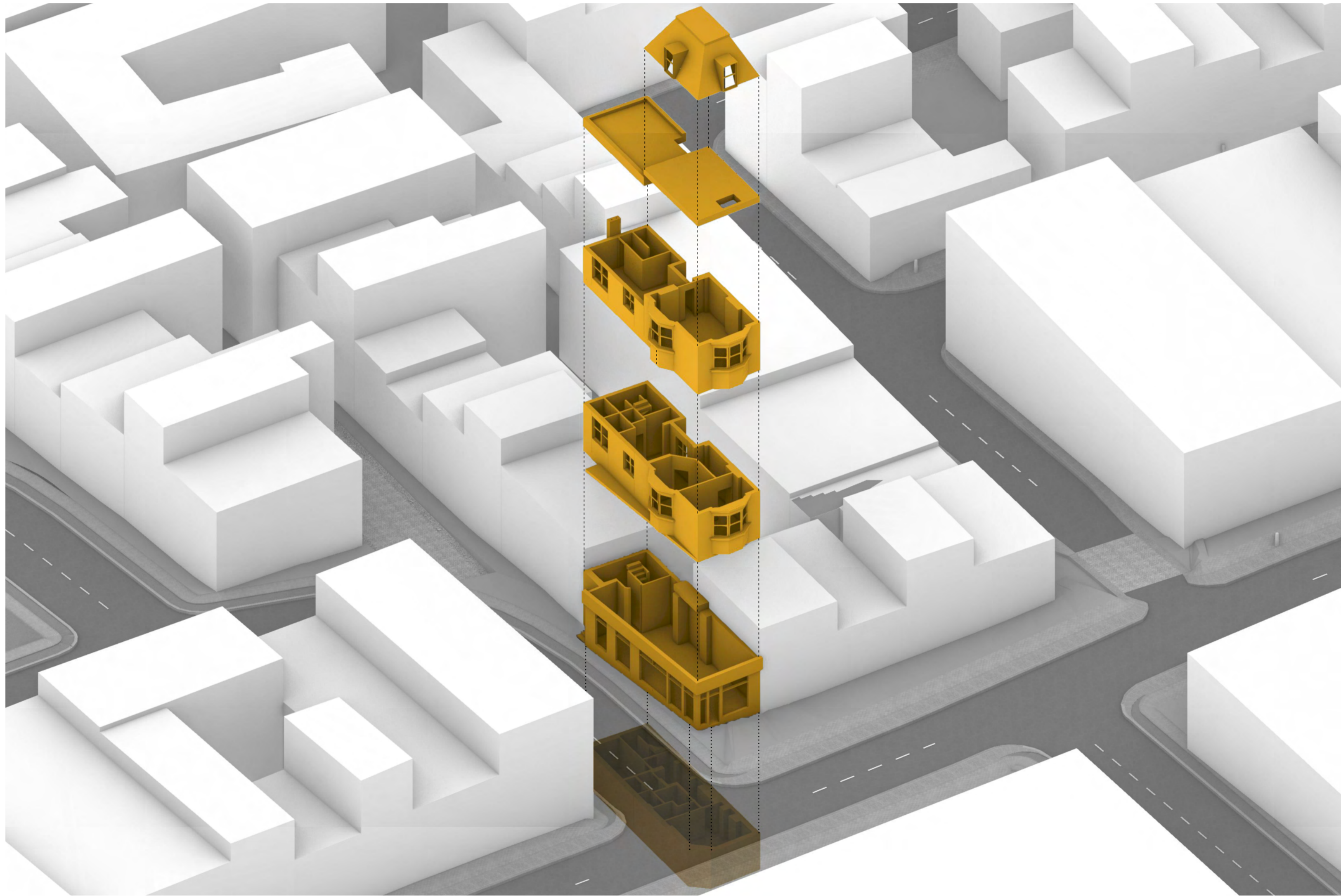
GF



B

Existing Floor Plans

Due to the building having several different programmes over its lifetime it has therefore resulted in an incohesive display within each floor. This displays as an interesting form of creativity, although this is the case it has resulted in some of the framework to be inconsistent and therefore will be weaker in some areas such as the connection from the GF to F1.



Exploded Axonometric

Creating a 3D model of the site has provided a clearer understanding of the height of the building and how the relationships within each floor may feel. Many of the spaces seem to be narrow but tall which can very easily restrict the amount of light which can be exposed in each room. This is something which will be looked into later.



“Time is more like the vehicle I use to arrive at images and photos”

Michael Wesely - Potsdamer Platz in Berlin

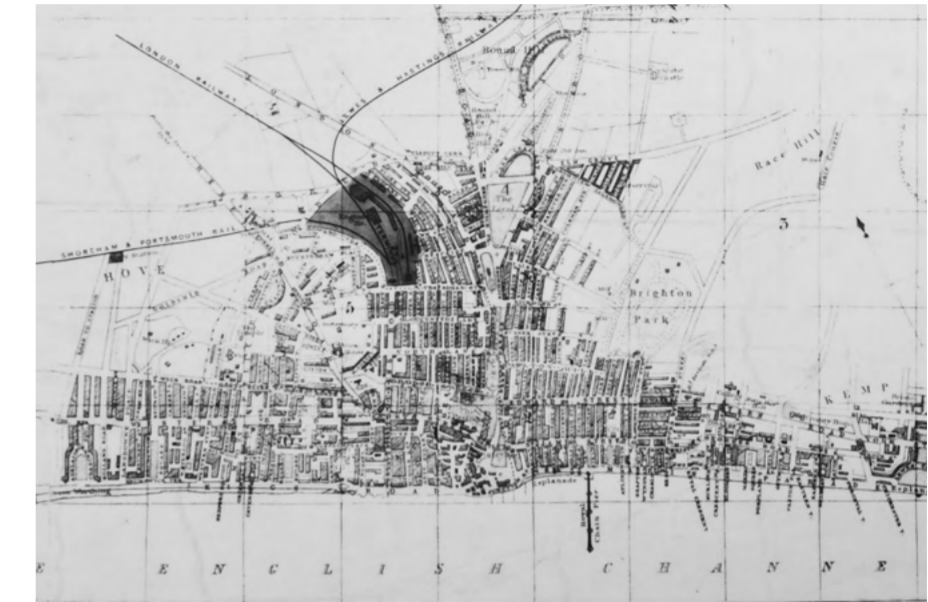
Through the use of photography, Michael Wesely is someone who successfully depicts the role of time within the location of his work. As an archaeologist is someone who works with the analysis of change, capturing this within my site will becoming very relevant.



1792

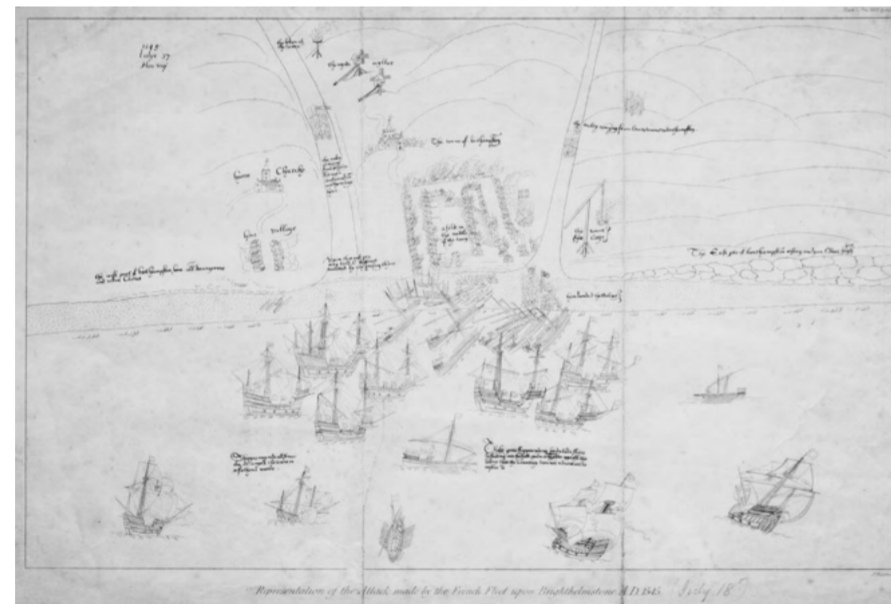


1822

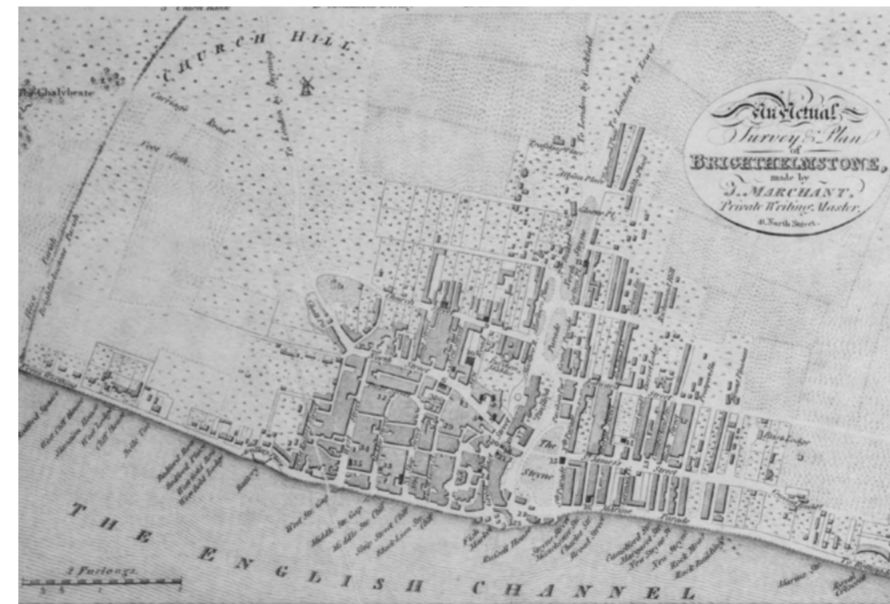


1861

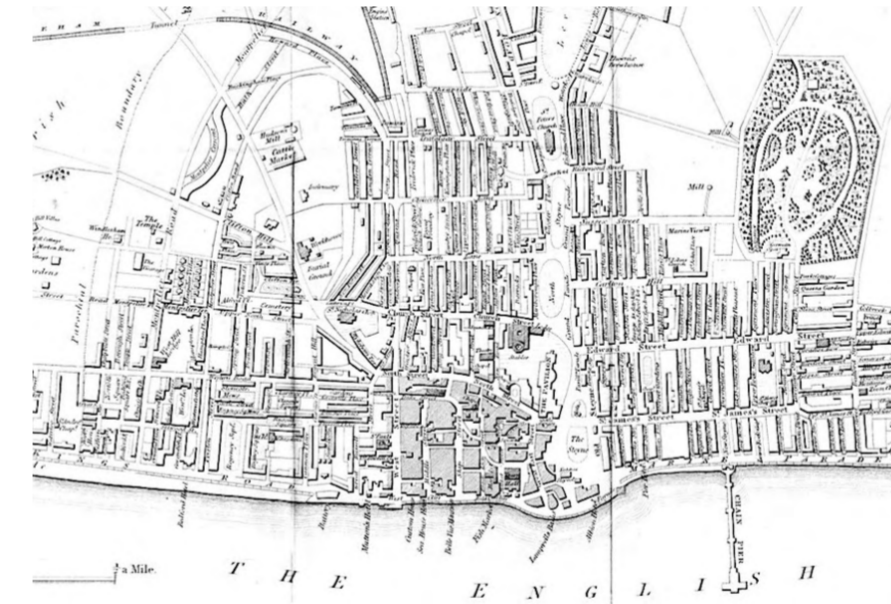
1514



1809



1850



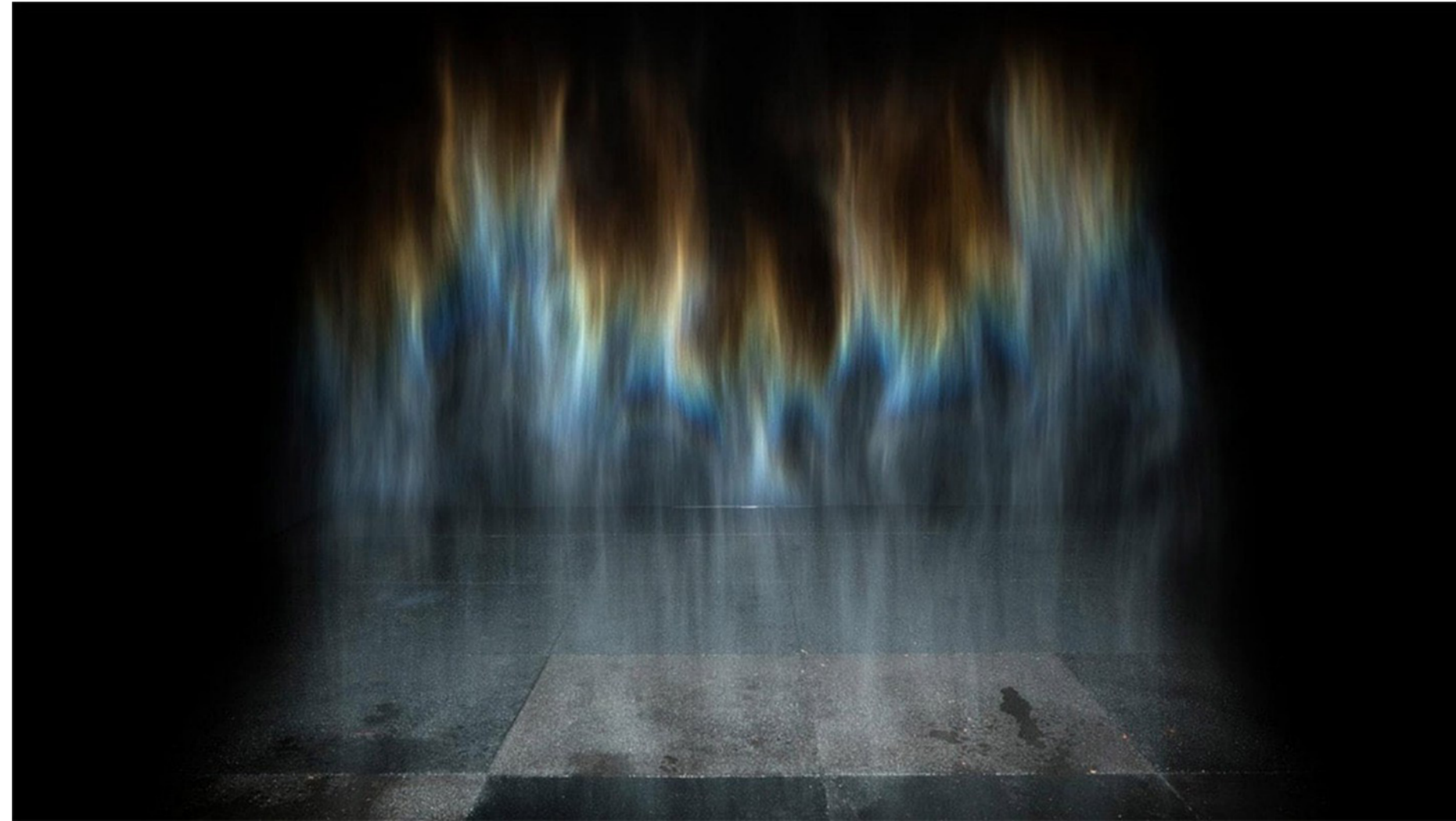
Landscape Timeline

The landscape photo which is dated to June 1514 is the first recorded illustration of the Brighton landscape. The illustration represents a fleet of French raiders attacking the village of Brighthelmstone, where most of the town was burnt to the ground. 1792 shows a gradual development within the landscape where the local farmers have individual plots of land where they could grow their vegetables.

1809 begins to show the increase in population and therefore more buildings were built. In 1822 there was a continuation of appeal to live by the sea and due to the connection to London there continued to be an increase.

The area continued to grow and eventually Western Road was created in the 1860s, named after Thomas Western who inherited the land through his family. The landscape consists

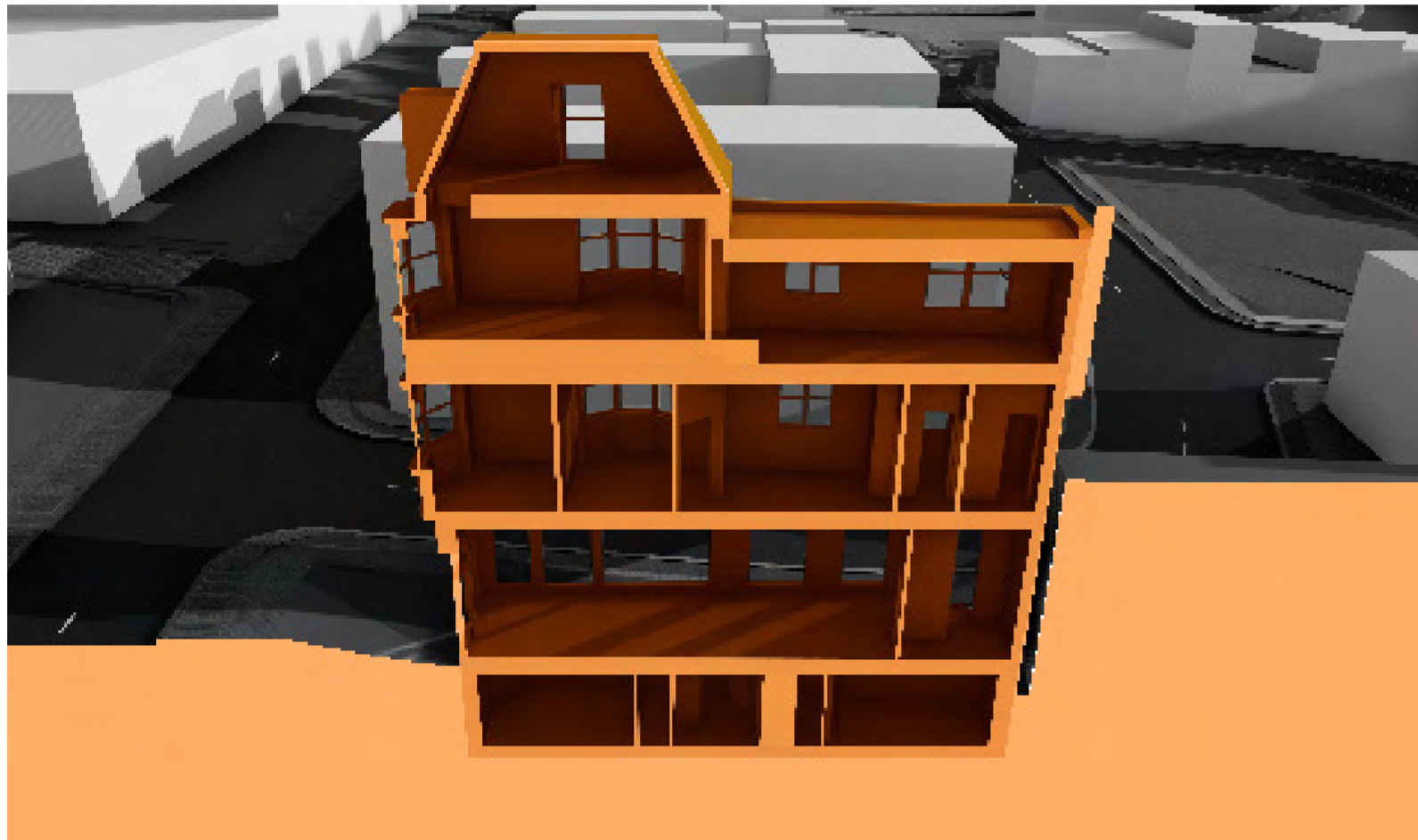
of clay and chalk which has allowed the topology to change over time. This allows for ease of construction and excavation due to the ground's malleability.



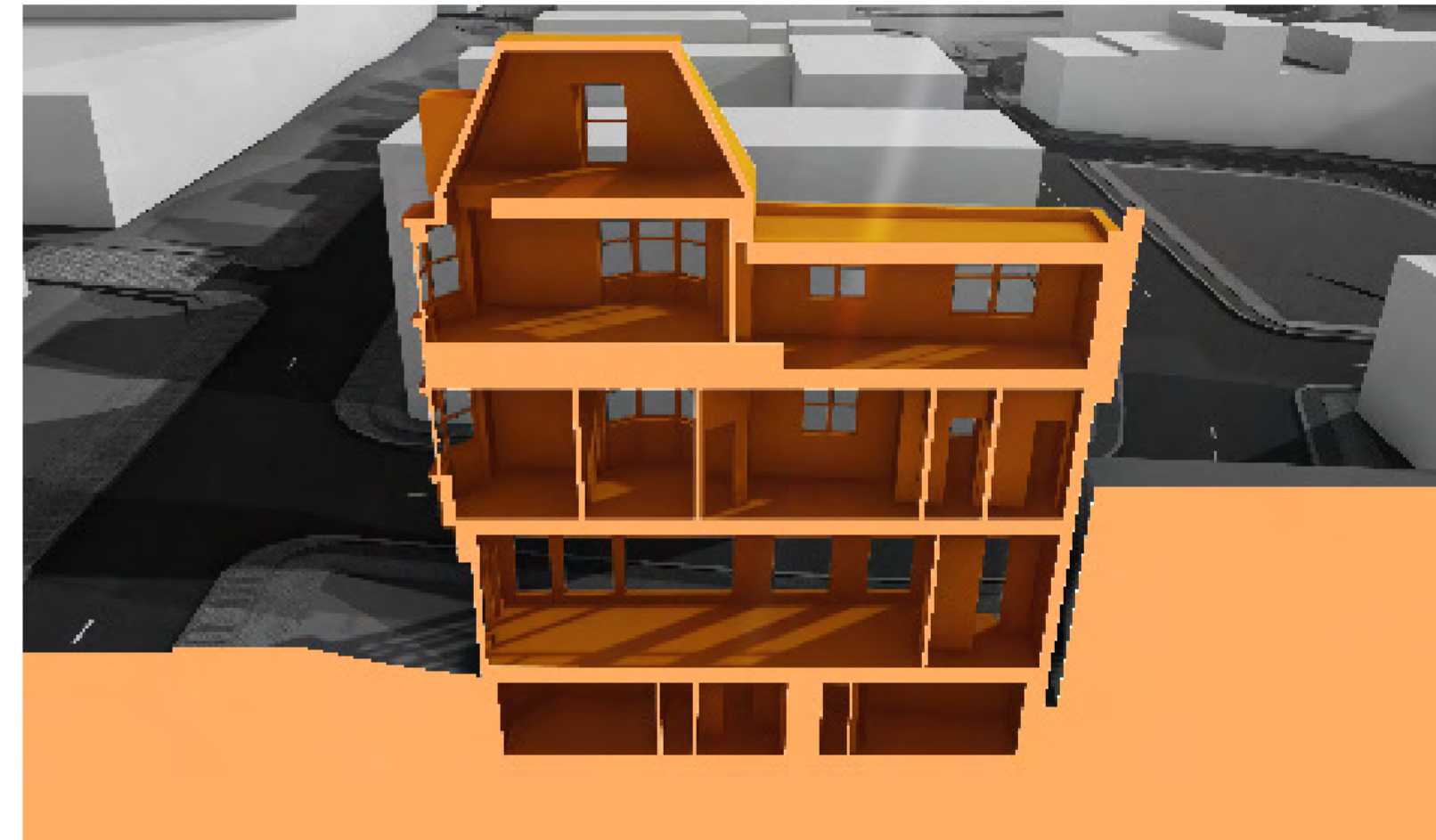
“Museum without walls”

Olafur Eliasson - Virtual Reality Museum

With the use of softly falling rain the light display is able to refract and therefore displaying a continuously altered display of colours. With the use of natural elements and virtual reality, the rainbow provides a display which can host many people at the same time. Therefore, creating a social aspect to the display, allowing the presence of others to impact the experience of the space.



Winter
January 15th
9am.12am.3pm.6pm.9pm



Spring
April 15th
9am.12am.3pm.6pm.9pm

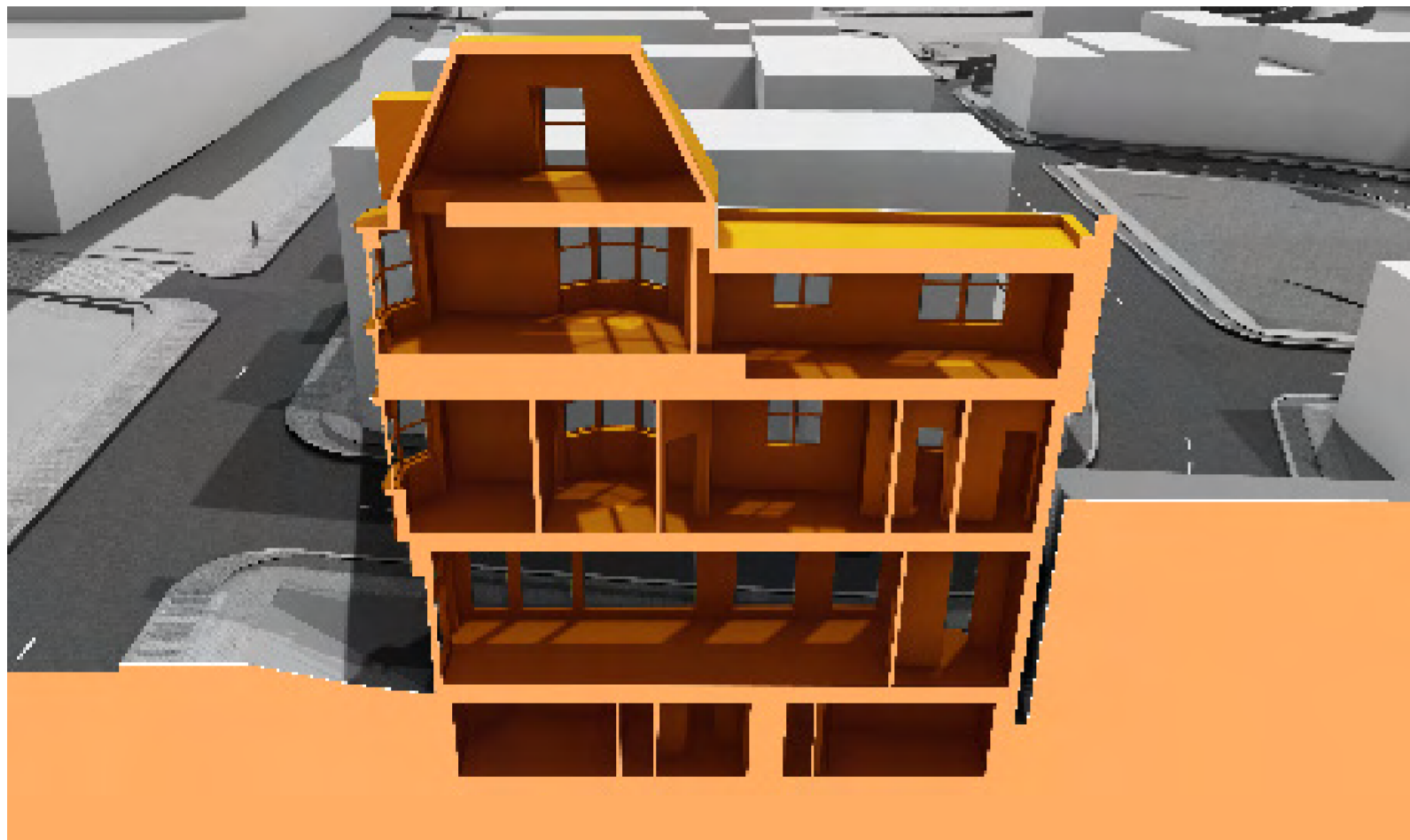
Interior Sun Study - Winter & Spring

The combination of different moments within the day, layered upon each other, created a drawing which represents different moments of time in the site. Analysing the light inside of the buildings showed the areas which are satisfactory and the areas which are in need of more light.

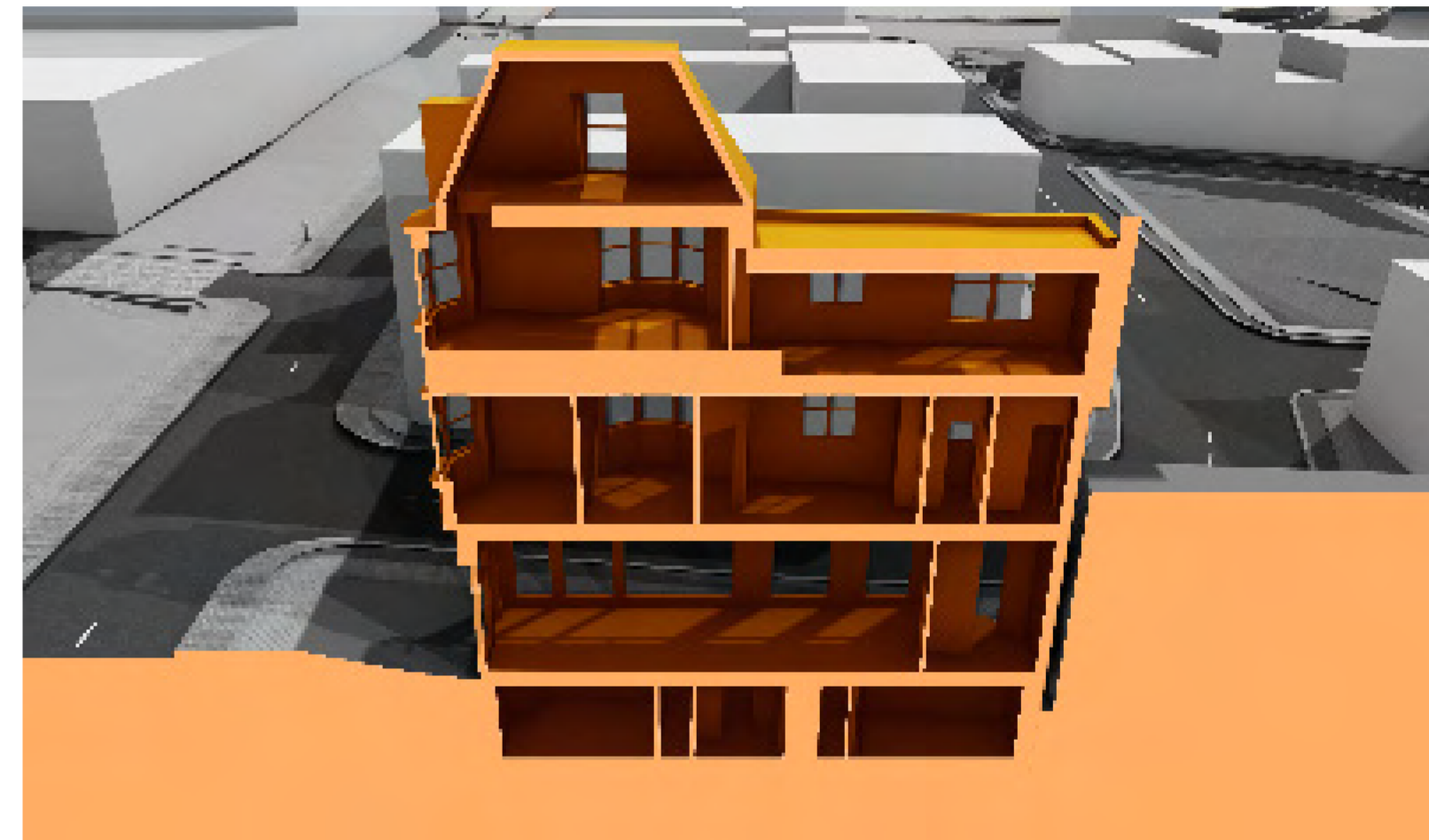
In the winter there seems to only be some light on the ground floor and the second floor throughout the day. This

is understandable due to the time of year but if there were more windows on the west face of the building there would be a lot more exposure to sunlight.

The spring provides a much more vibrant atmosphere in and around the site, creating a warm glow throughout the day. Although the basement is still very dark, making this an area which is in need of redevelopment.



Summer
July 15th
9am.12am.3pm.6pm.9pm



Autumn
October 15th
9am.12am.3pm.6pm.9pm

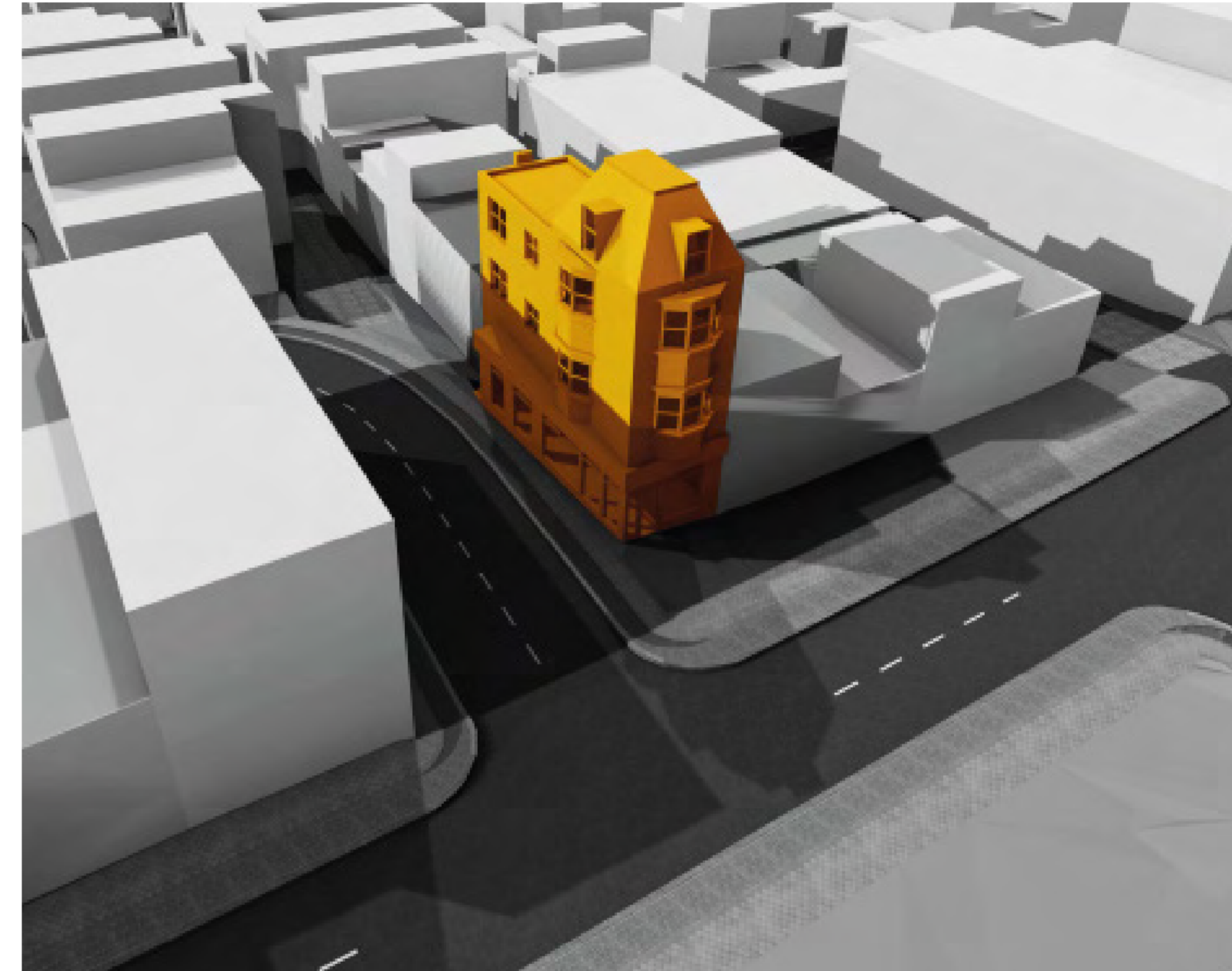
Interior Sun Study - Summer & Autumn

The illustration created for the summer shows a much sharper outline of shadows, specifically the floor 1 2 and 3. The roof platform is also considerably brighter, which can lead to potential of using this platform as a way to bring light into the building.

Autumn begins to create a darker but more consistent display of light. Due to this it may be one of the more comfortable times of the year to be within the site.



Winter
January 15th
9am.12am.3pm.6pm.9pm



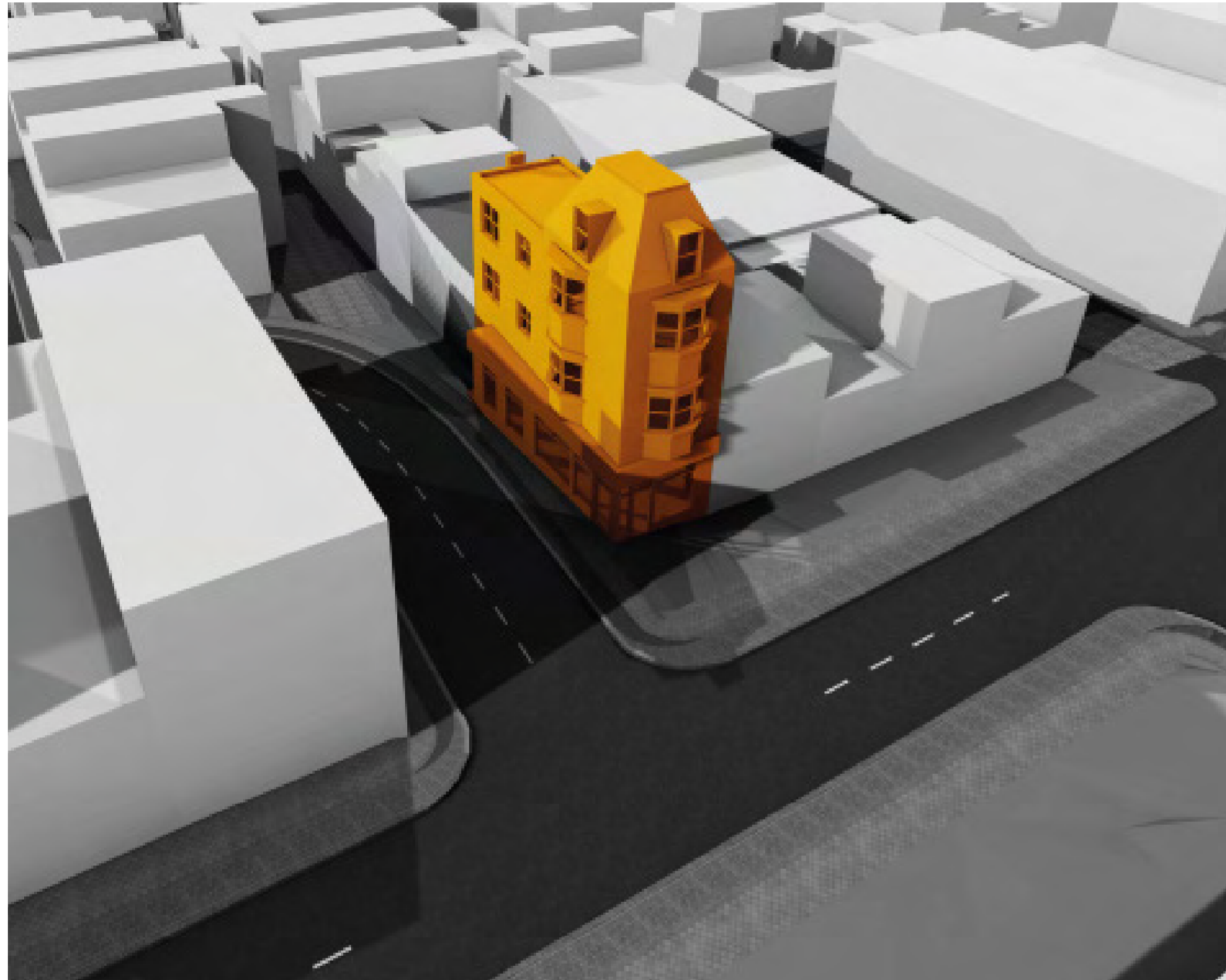
Spring
April 15th
9am.12am.3pm.6pm.9pm

Exterior Sun Study - Winter & Spring

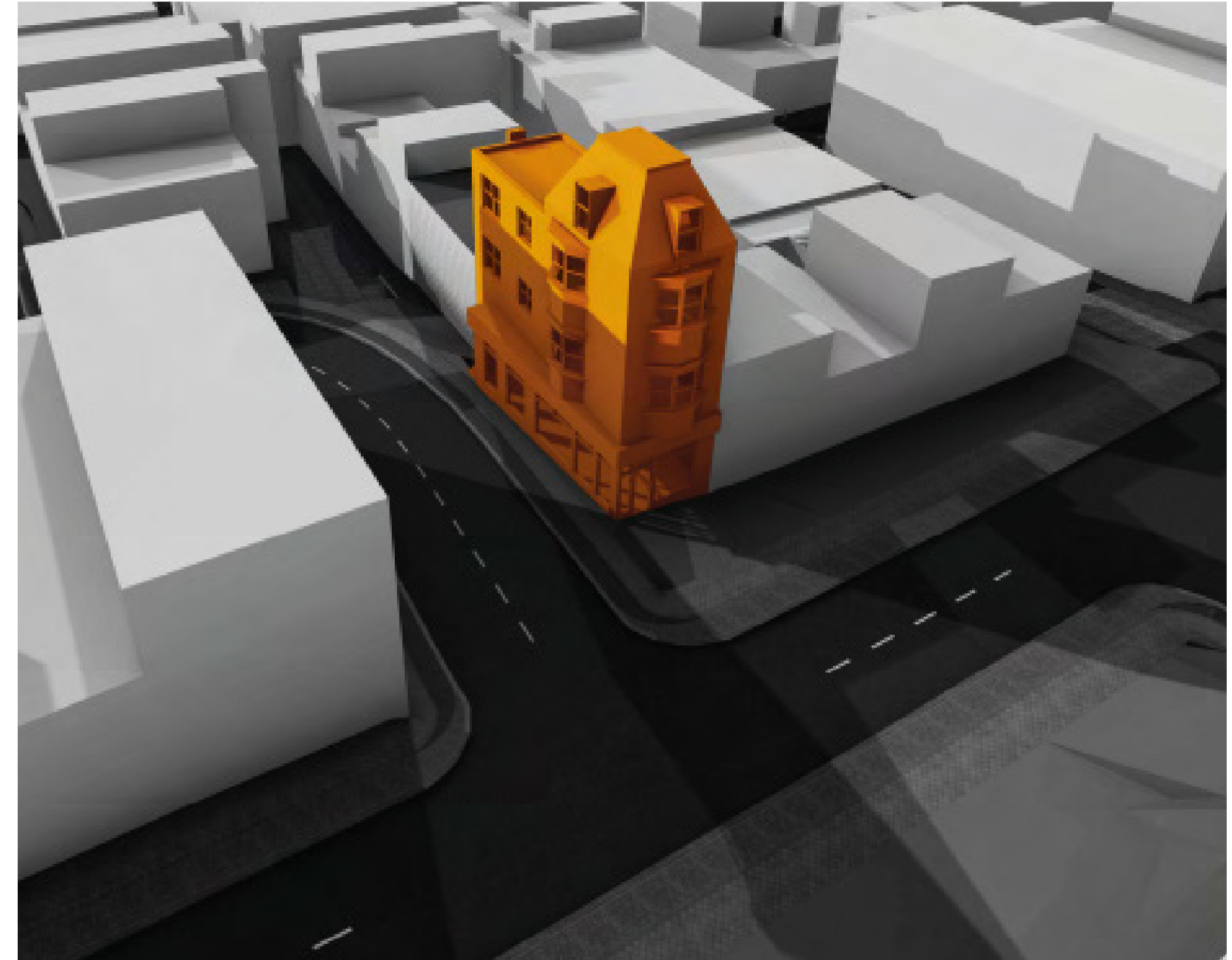
The next step was to investigate the buildings scale in comparison to its surrounding environment, analysing the overcast it may project at different times of the year.

Due to the site being several metres above the neighbouring buildings there is a lot of light which is selfishly taken away from them. Although this has allowed for the site to maintain a connection to the sunlight even throughout the

winter. As the building is situated on the corner of the street this has also provided more exposure to the sunlight. This will become very beneficial when looking at how natural light can be used. With this in mind there may be great opportunity to share the light by creating cuts through the building which will project sunlight onto the neighbouring buildings.



Summer
July 15th
9am.12am.3pm.6pm.9pm



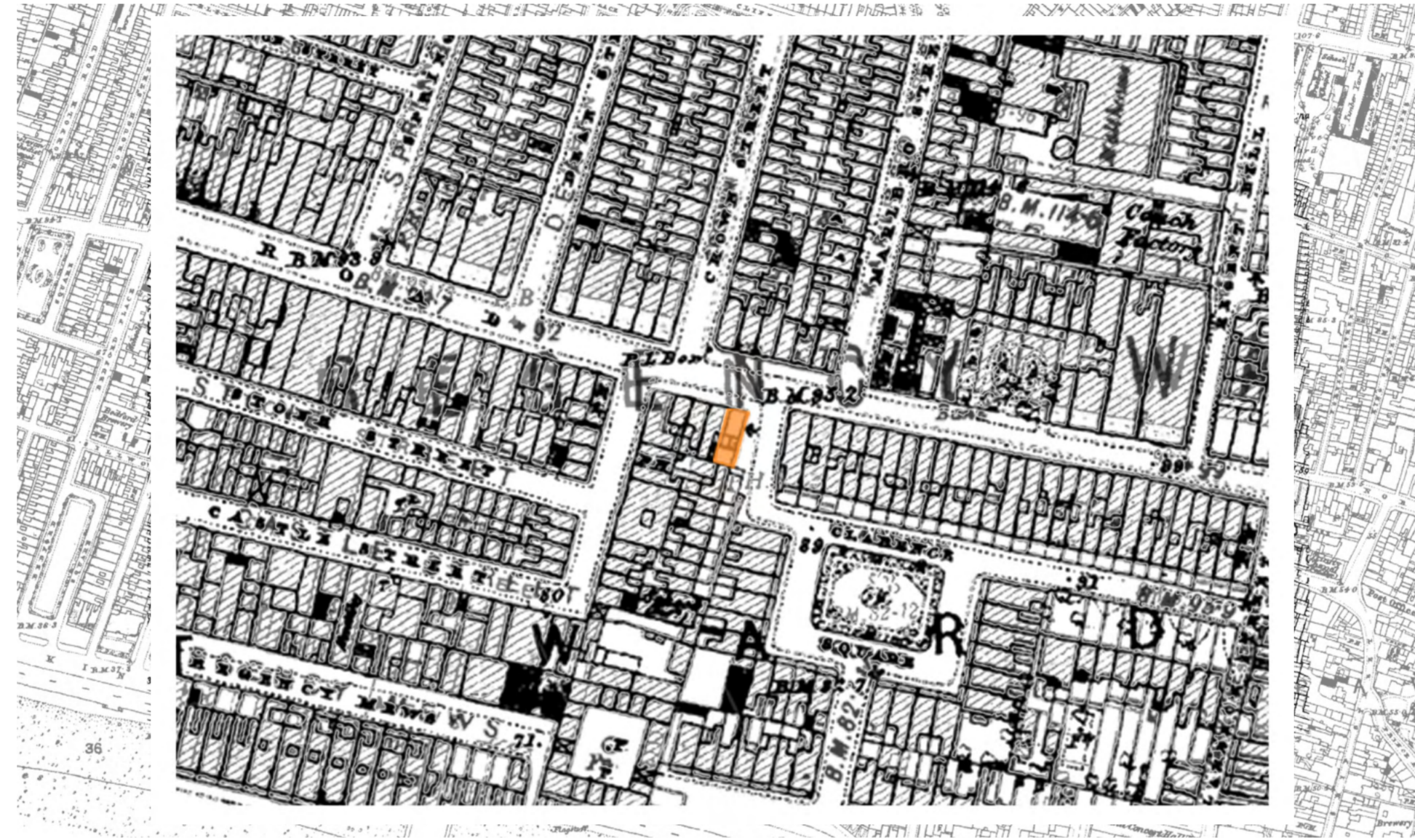
Autumn
October 15th
9am.12am.3pm.6pm.9pm

Exterior Sun Study - Summer & Autumn

The summer displays a bright exterior but it is also clear that the ground floor is the darkest area which is exposed to light. Therefore the use of glass will be something which may be kept as it will make the most out of the light which is provided at this level.

By creating these sun diagrams it has become clear that introducing windows onto the roof platform will become very useful when creating a more even distribution of light.

My intension with these drawings was to see how the site changes over time and through the different seasons. Through analytical judgment of the site's solar patterns it has been revealed that the site has a large exposure to sun. Therefore use of light will continue to be an experimental factor in future reference.



Trip Down Memory Lane

Displays a collection of historic photographs from around the site, the above is western road and the bottom is regency square which sits directly south of the site.

The central photo is a collection different eras, layering a plan of the 1870, 1910 and 1930. Over the course of this time it is evident that there has been very little change to the landscape.

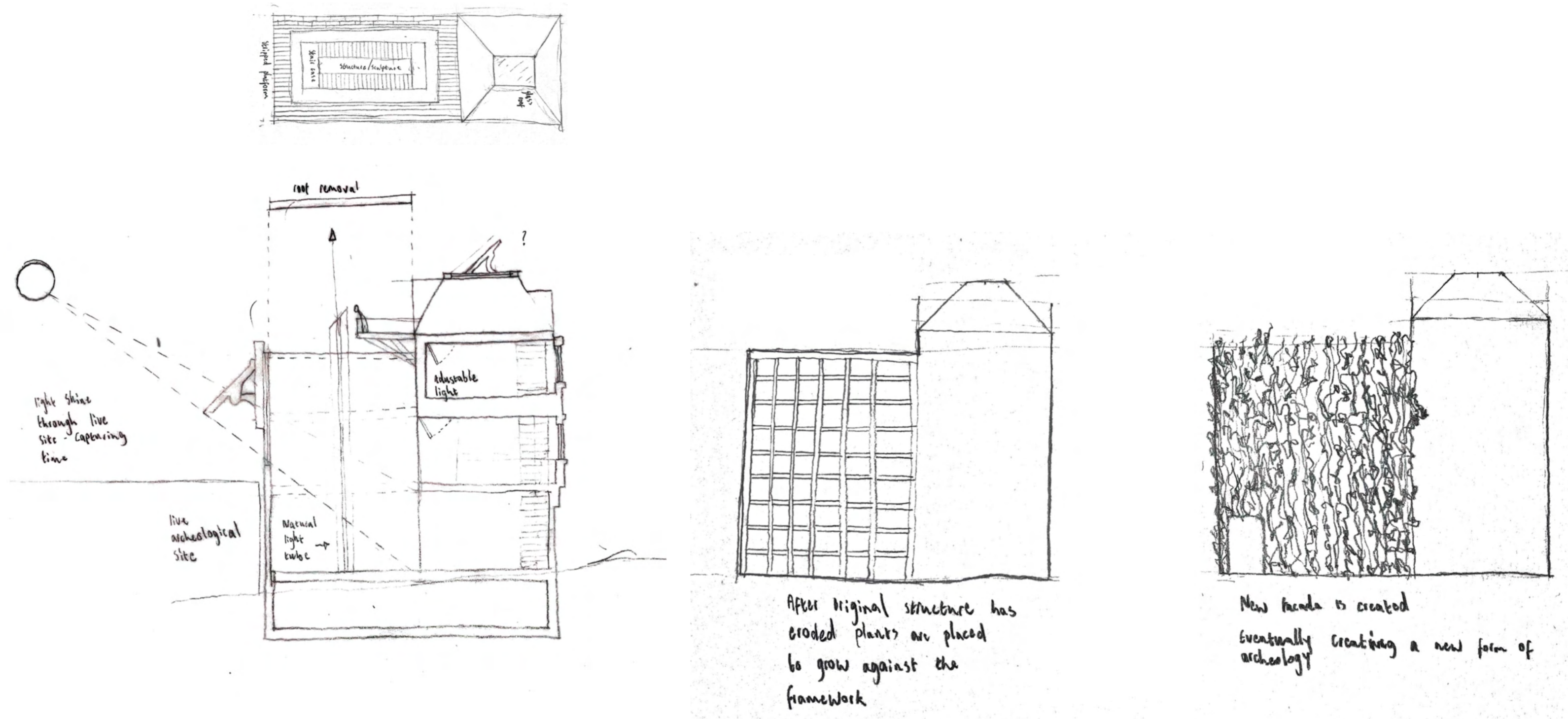
The Landscape of Western Road, as it is seen today, was made finished in 1860. Although the land has been in ownership since 1060. Due to the areas extensive history the project will benefit from highlighting the past and symbolising this in the future.



“It comes from ruins and now it’s really a ruin”

Template / Ai Weiwei

Like many of Ai Weiwei’s work, Template relates to change in China. It is composed of wooden doors and windows salvaged from Ming and Qing Dynasty houses which had been demolished to make way for new development. The structure fell down not long after it was built due to being exposed to the wind and rain. Although this added a new interest within the aesthetic and soon became a symbolic representation of history and time.



Sketches - 1

After gathering information and developing an interest in ruins I decided to create a design which would allow the site to eventually become a ruin. Removing the roof would be an easy way to allow the rain and air to get into the original structure. This would allow the site to become a live and ongoing archaeological site for the client.

The left hand picture depicts the use of a sun dial which would allow for the building to have a representation of time

and light within the structure. Due to light being something very difficult to capture or objectify using methods of storing light may create a new form of artifact for the archaeologist.

The two elevations on the right show a structure which will be building on the inside of the façade and will eventually stand on it own. Plants could then be provided with the opportunity to grow in and out of the structure, creating a

new façade. The use of plants will create a seasonal aesthetic and therefore will continue the representation of time and our life cycle.



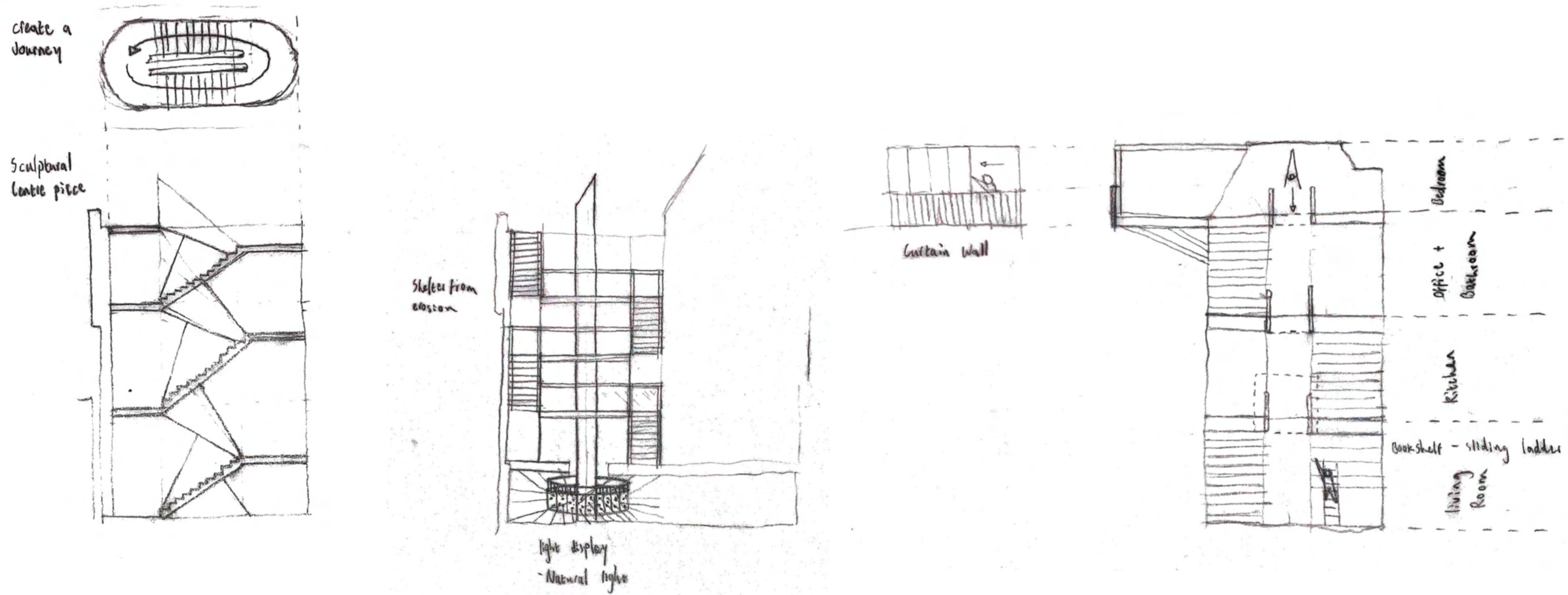
”mottled light shifts and plays across the ruins”

Kolumba Museum / Peter Zumthor

The buildings has been built to symbolise parts of the city which were completely destroyed due to World War 2. The museum houses the Roman Catholic Archdiocese’s collection of art which spans more than a thousand years.

Zumthor’s design delicately rises the ruins form of a late Gothic church, respecting the site’s history and highlighting the beauty within our past. This is done with the

use of contrasting materials such as the grey brick with the original brick work used when it was first built.

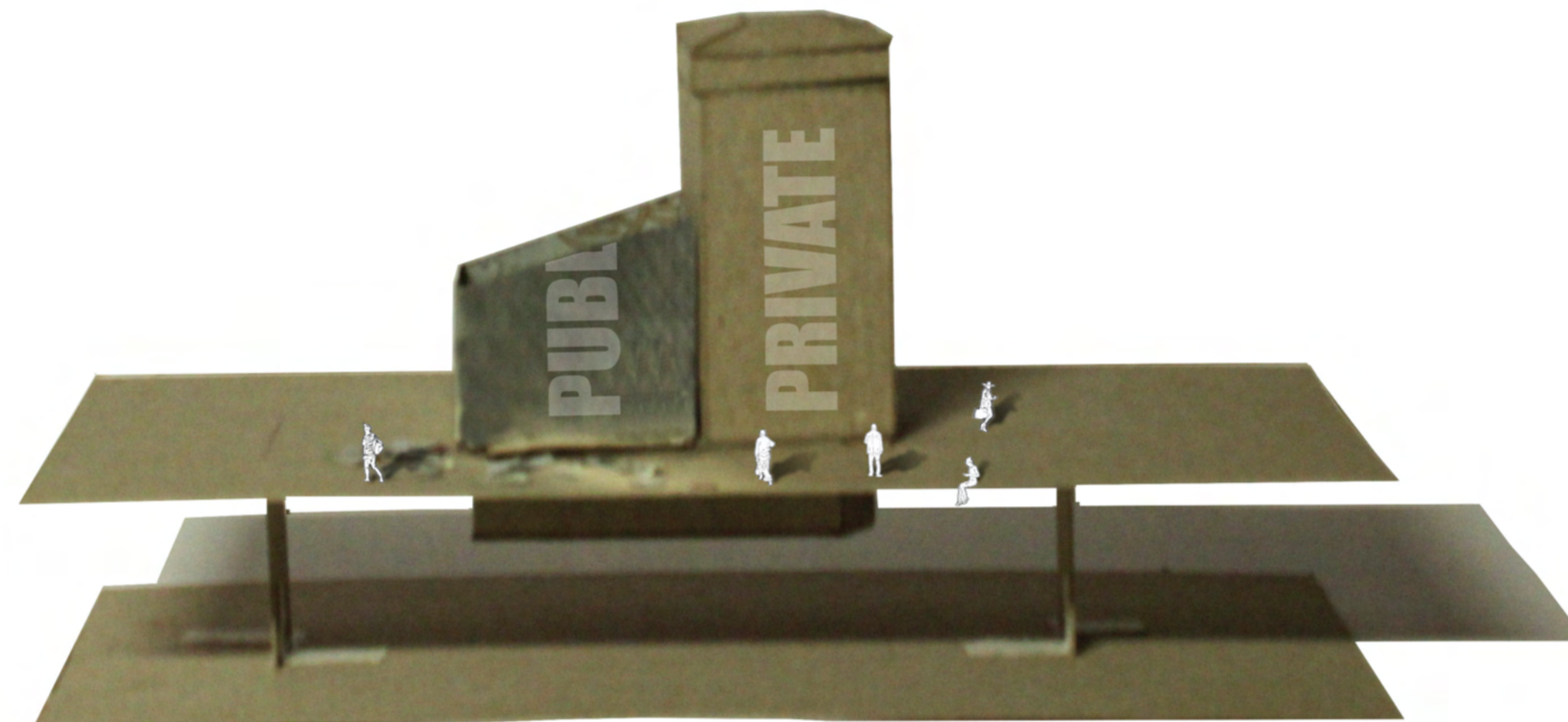


Sketches - 2

This collection of sketch continues the idea of splitting the building into a private and public space. This will therefore allow the client to have his own space but will also create a relationship to the public if he wishes to. The sketch of the left is an imitation of the staircase made within the UNESCO Headquarters in Paris. The idea of creating a sculptural form within the centre of a staircase which can be used to an aesthetic alongside walking around the 'live archaeological site' could create several forms of interest.

The central picture focusses on having a staircase which goes around a light tube. This is a mechanism which reflects natural light and will allow the light to be transported along the length of the tube. Due to the basement being so dark, creating an alternative light source will create a completely different atmosphere. The drawing within the basement is of a shell which will centre around the light tube and create a display in the darkest area of the building.

The picture on the right focusses on the private space. Due to the space being relatively small there will be a need to create a counter lever on the top floor to provide extra space for a potential office. This would also allow for the client to view over the public space and creates a view point towards the sea.



Erosion Model

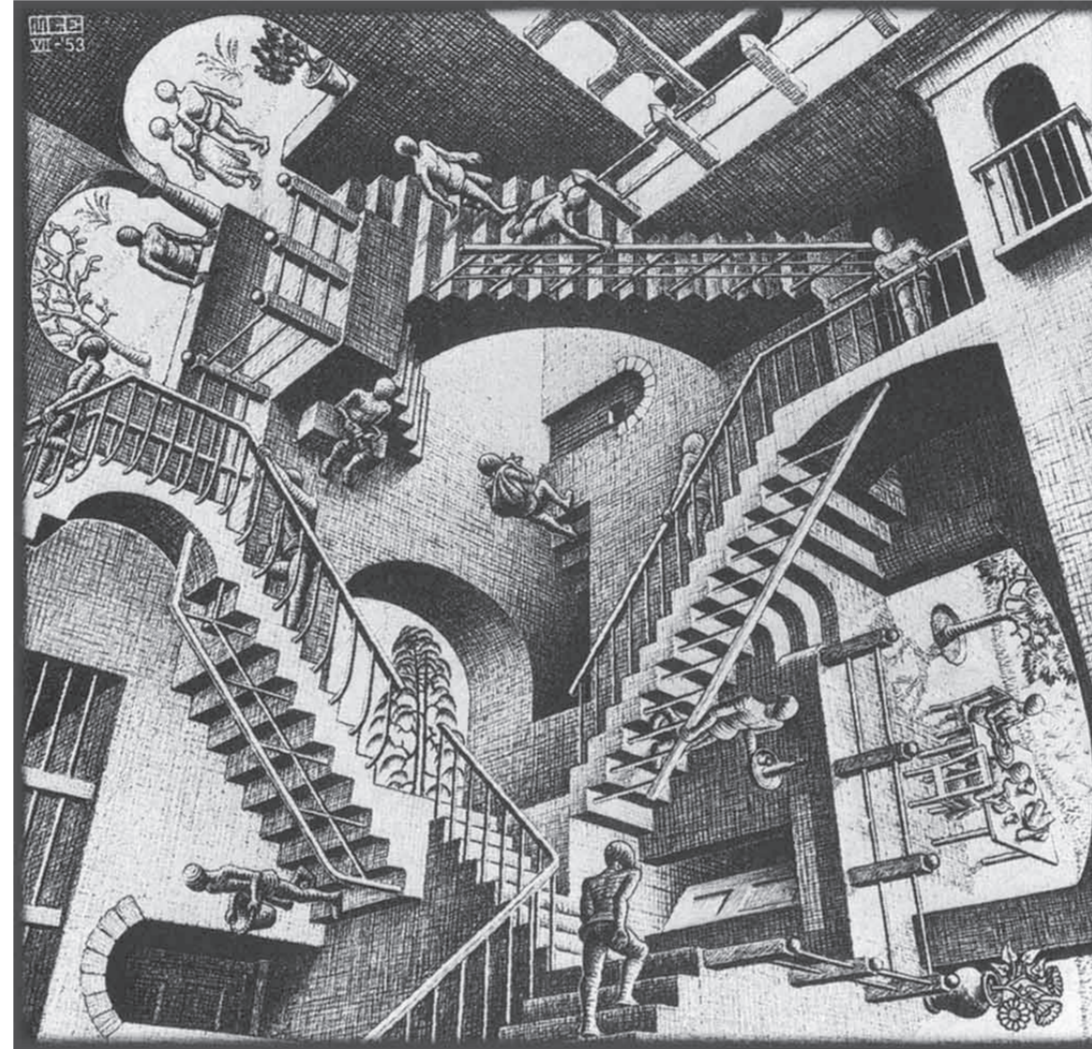
Due to the live archaeological site becoming the primary focus of the project so far, creating a model which could give a clear story as to how the site may change over time became very suitable.

This allows the questions to be asked of how the public will be able to safely explore the site and how the private space can continue to live on. Creating an inner layer of the original

site will allow for the building to be stable and also durable, which can lead to the site ending up with a completely new structure.

Please click on the link or paste it into the URL search bar so that you can view the full video.

<https://youtu.be/3dbFxy-LJKo>



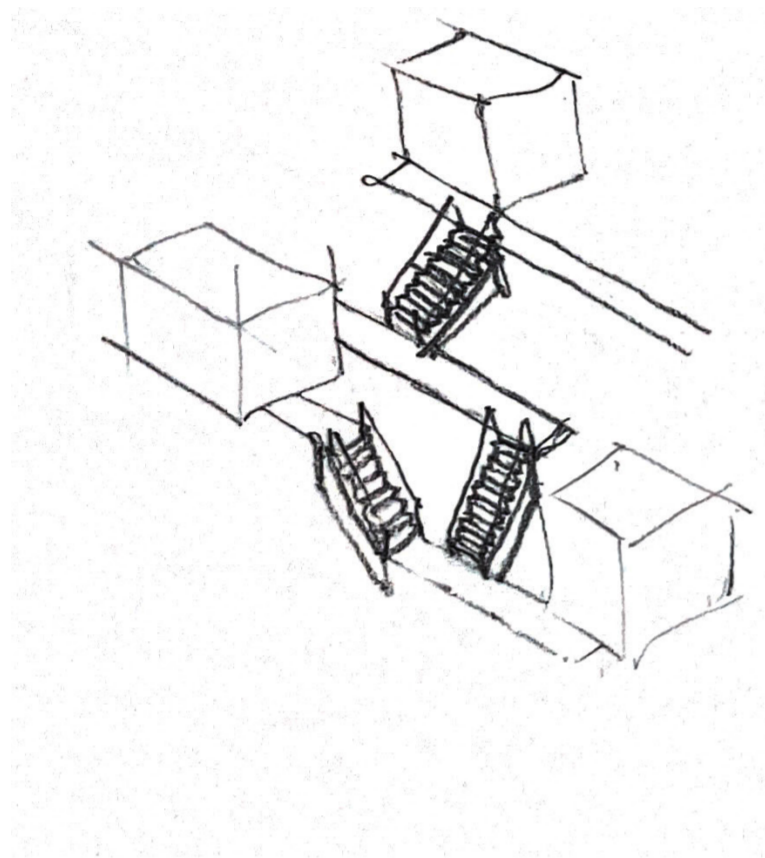
“The black magic of the artistic illusion”

House of Stairs / M.C. Escher

M.C. Escher was someone who illustrated his work in a way which can allow you to view the drawing in different ways. His work consisted of operations including impossible objects, explorations of infinity, reflection, symmetry and perspective. The drawings he is known for were made from his imagination and provided a different perspectives within the meaning of life and how everything will continue to progress as long as we live.

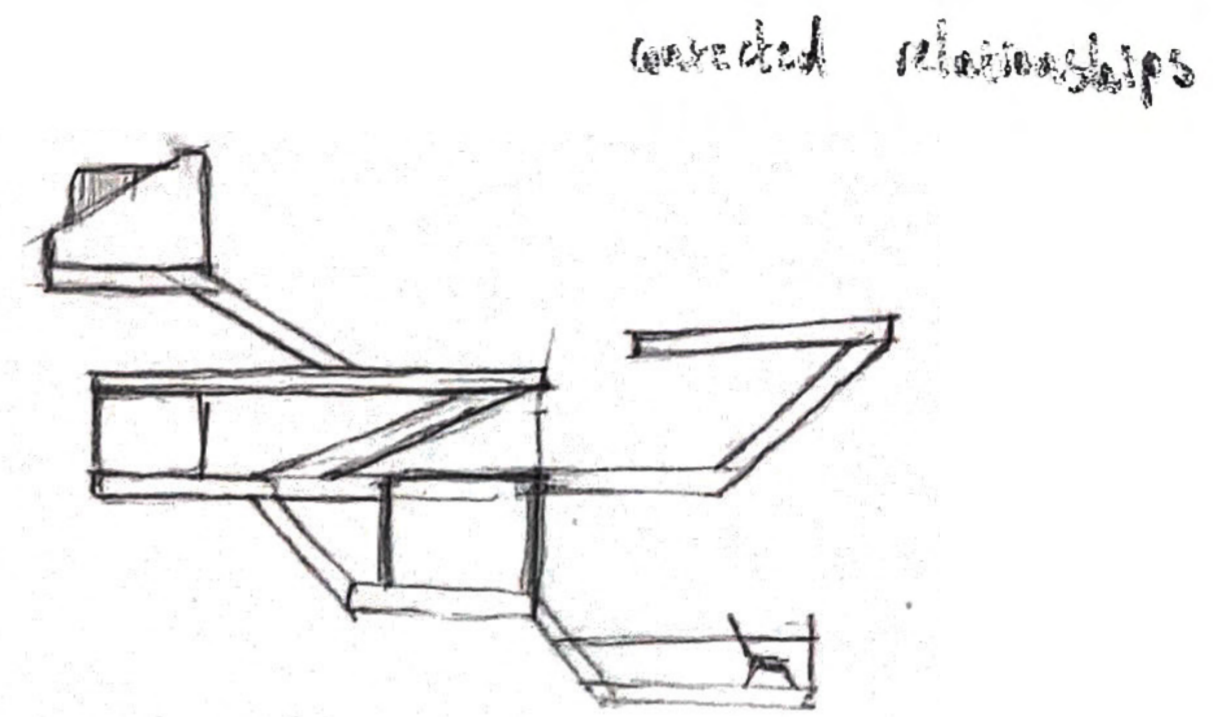
His work has been greatly influenced by the creator of the continuous staircase (Professor Elis Penrose).

By incorporating this into architecture there can be a questionable purpose if there is no function towards the design. Although if this is done in a way which could create an experience that represents the idea of infinity there will be a very suitable relation towards the archaeology of the past and present.

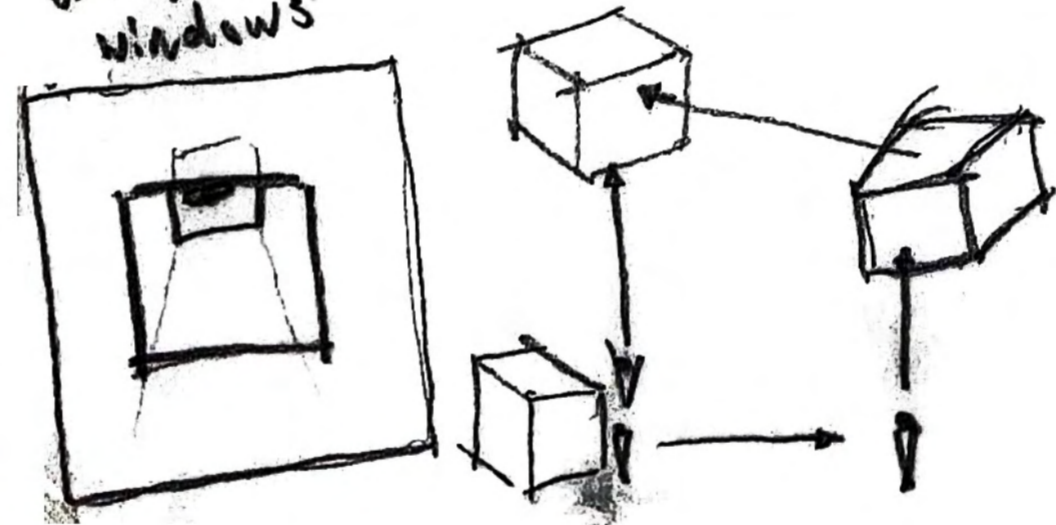


M.C. Escher
Möbius strip
↓
Continuous loop
Advisory travel
routes

Design
which
encourages
you to
view the
environment



overlapping
windows



View activities

Sketches - Room Placement

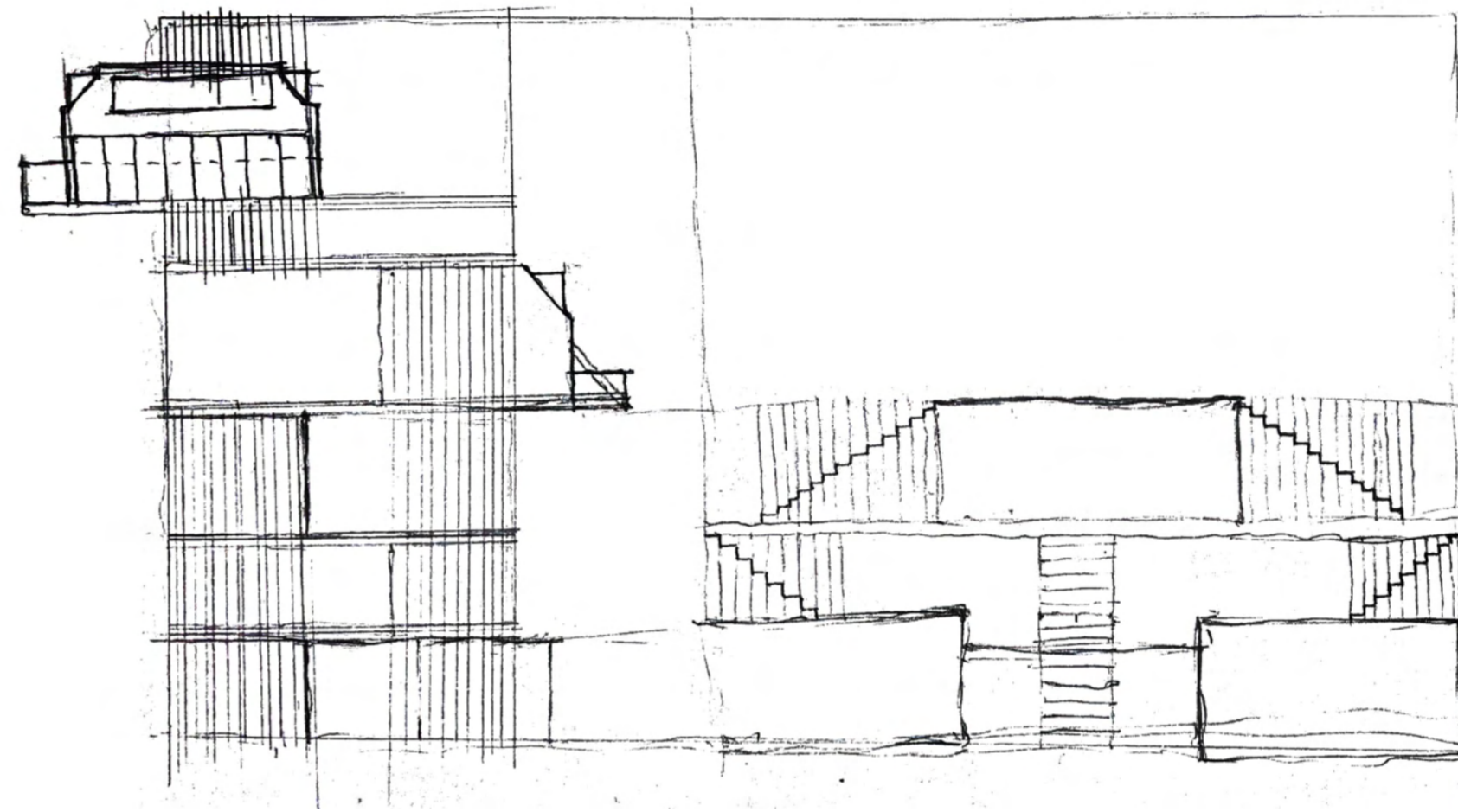
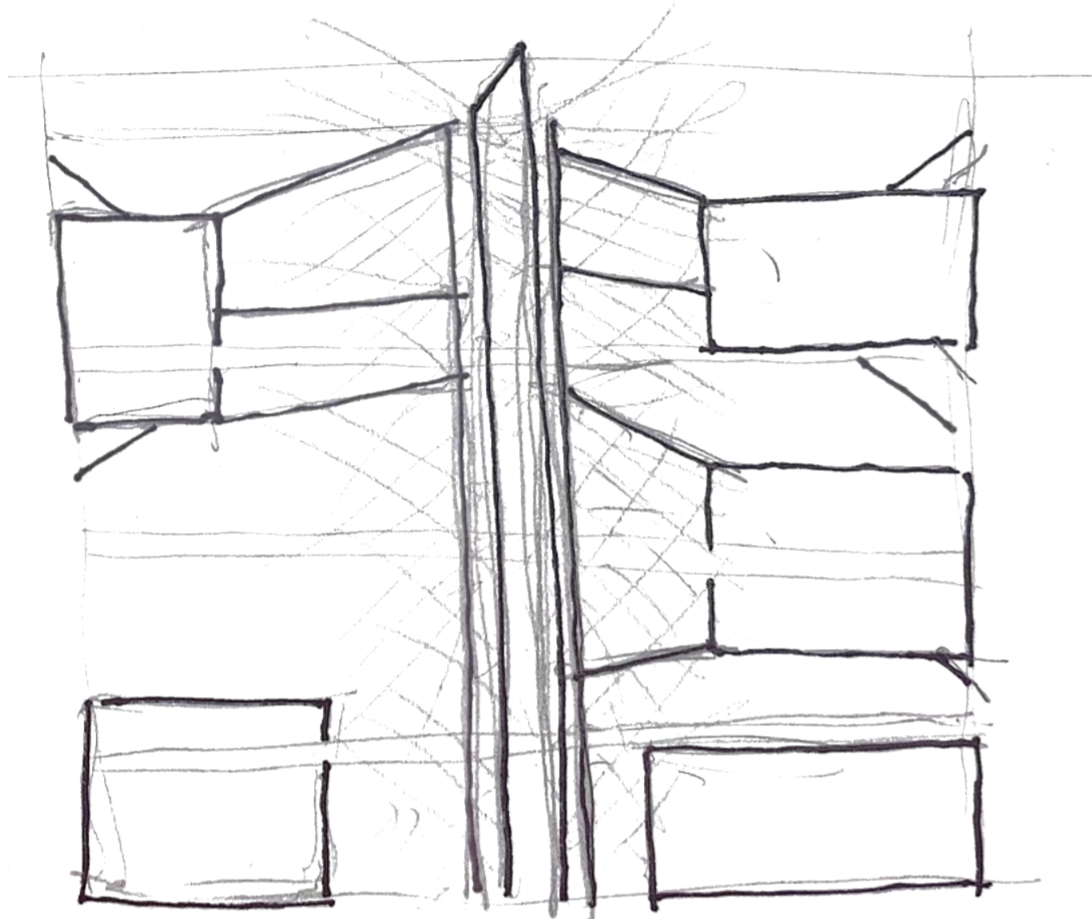
As there became an interest towards the way M.C. Escher displayed his ideologies, I wanted to take this further. Beginning a process of how the spaces may connect with each other, with the idea that you will be able to view several different activities depending on where you stand within the building.



“You are too much of a painter, my friend, to be an engraver.”

Giovanni Battista Piranesi

Piranesi is also another artist who has created drawing directly from his imagination. His influence of technical drawings in antiquarian publications is often overshadowed. He left explanatory notes in the lower margin about the structure and ornament. Most ancient monuments in Rome were abandoned in fields and gardens. Piranesi tried to preserve them with his engravings. To do this, Piranesi pushed himself to achieve realism in his work.



Sketches - 3

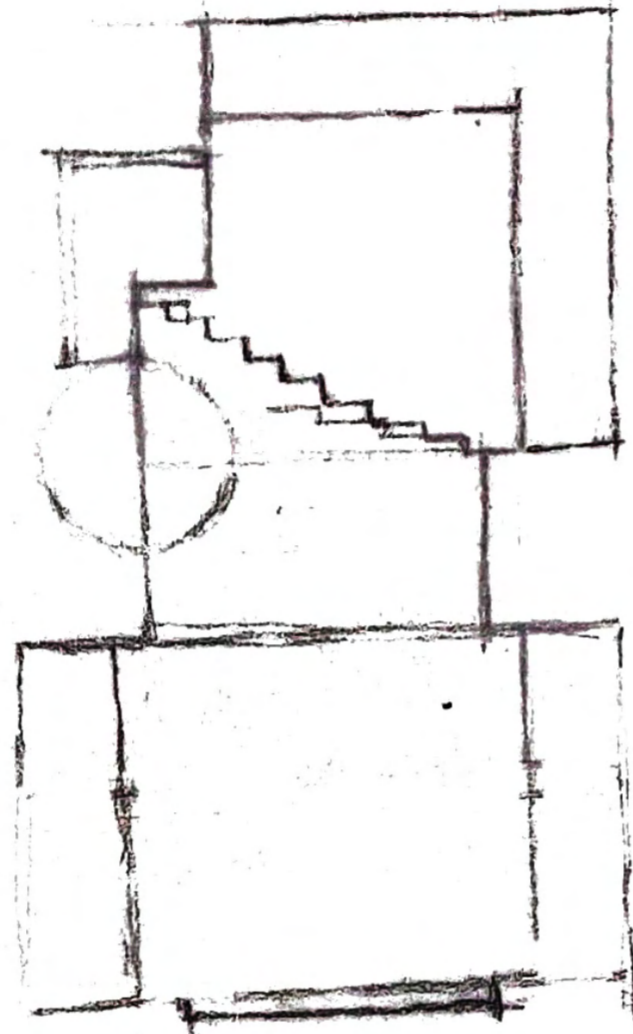
After looking into M.C. Escher and Piranesi I wanted to continue experimenting with how I could create different levels within the building and how they could be connected. The left hand sketch leads on from the last group of sketches and how the rooms could be stabilised by a secure structure in the centre. This would be done through the pods being attached by wire framework, connecting to the centre and the outside of the building.

The precedent drawings also inspired me to see if I could disperse the public and the private around the building and how I could make a closer connection between the public and the client.

The drawing on the right continues to experiment with what type of staircase which could be used and how the pods may be able to extrude out of the building.

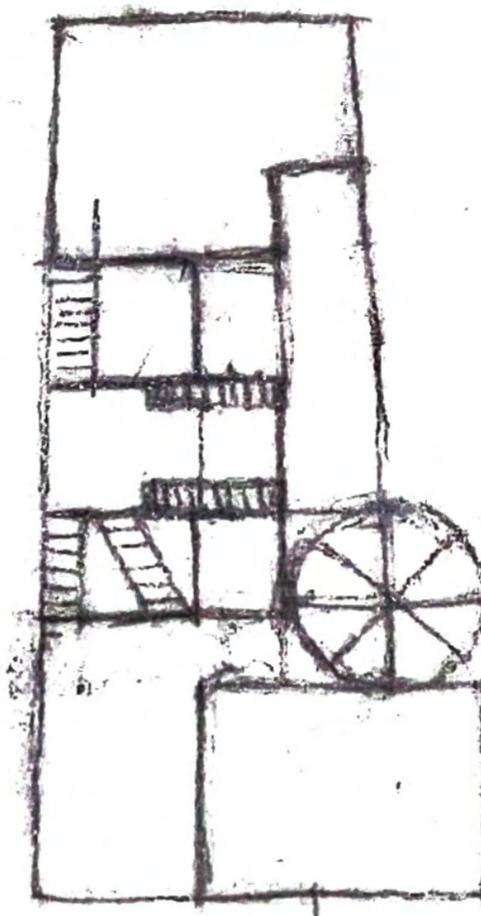


F3

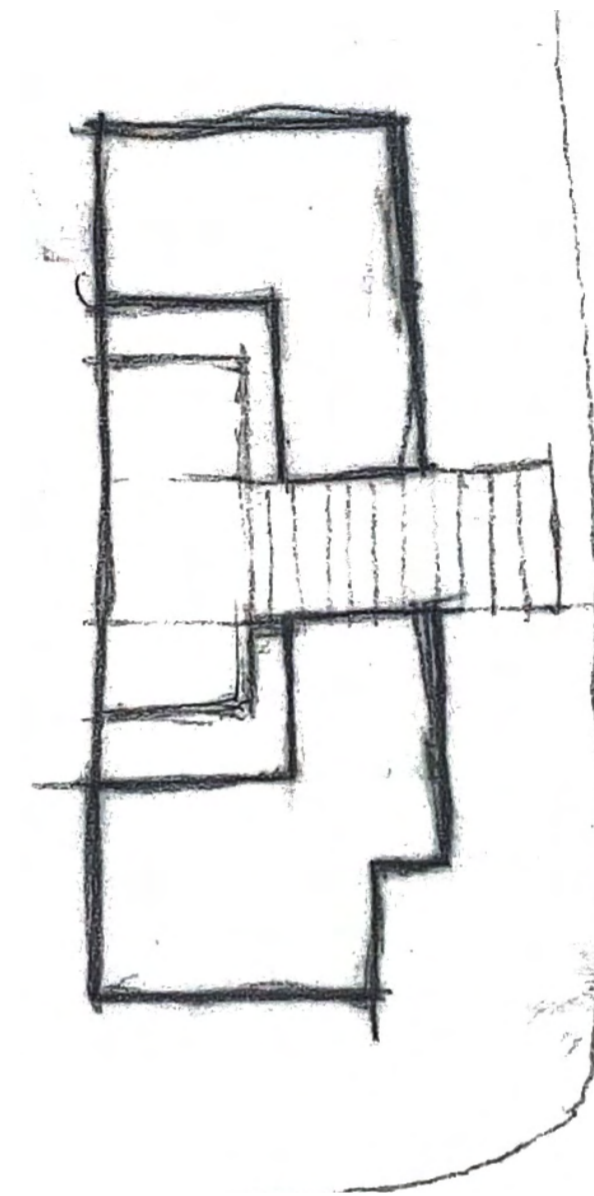


F2

counter level limitations



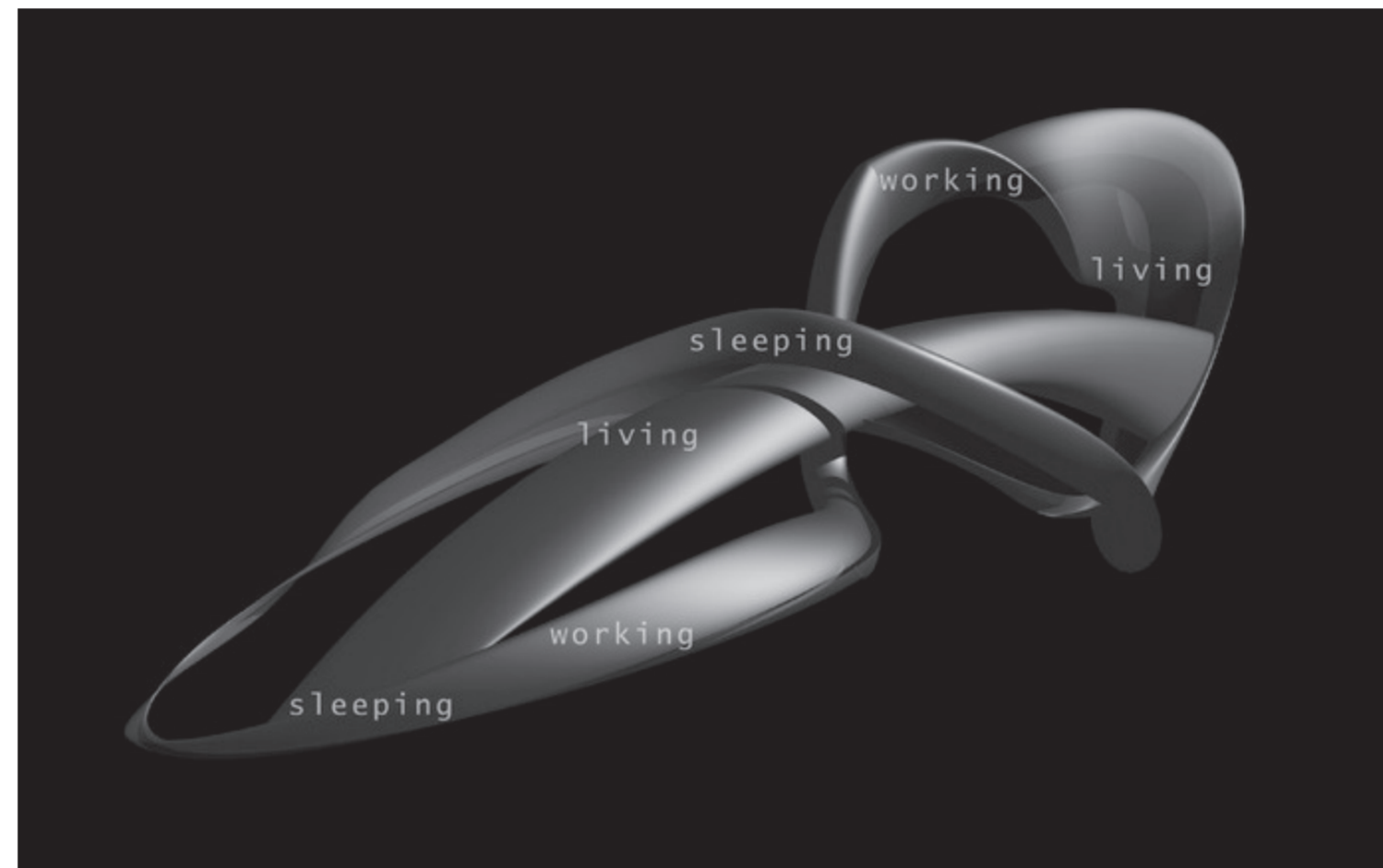
F1



GF

Sketches - 4

This collection of sketches represents an ideology for what could be from the ground floor up. Which I again try to experiment with the different form of entry points for each floor and what type of relation each floor will have with each other.

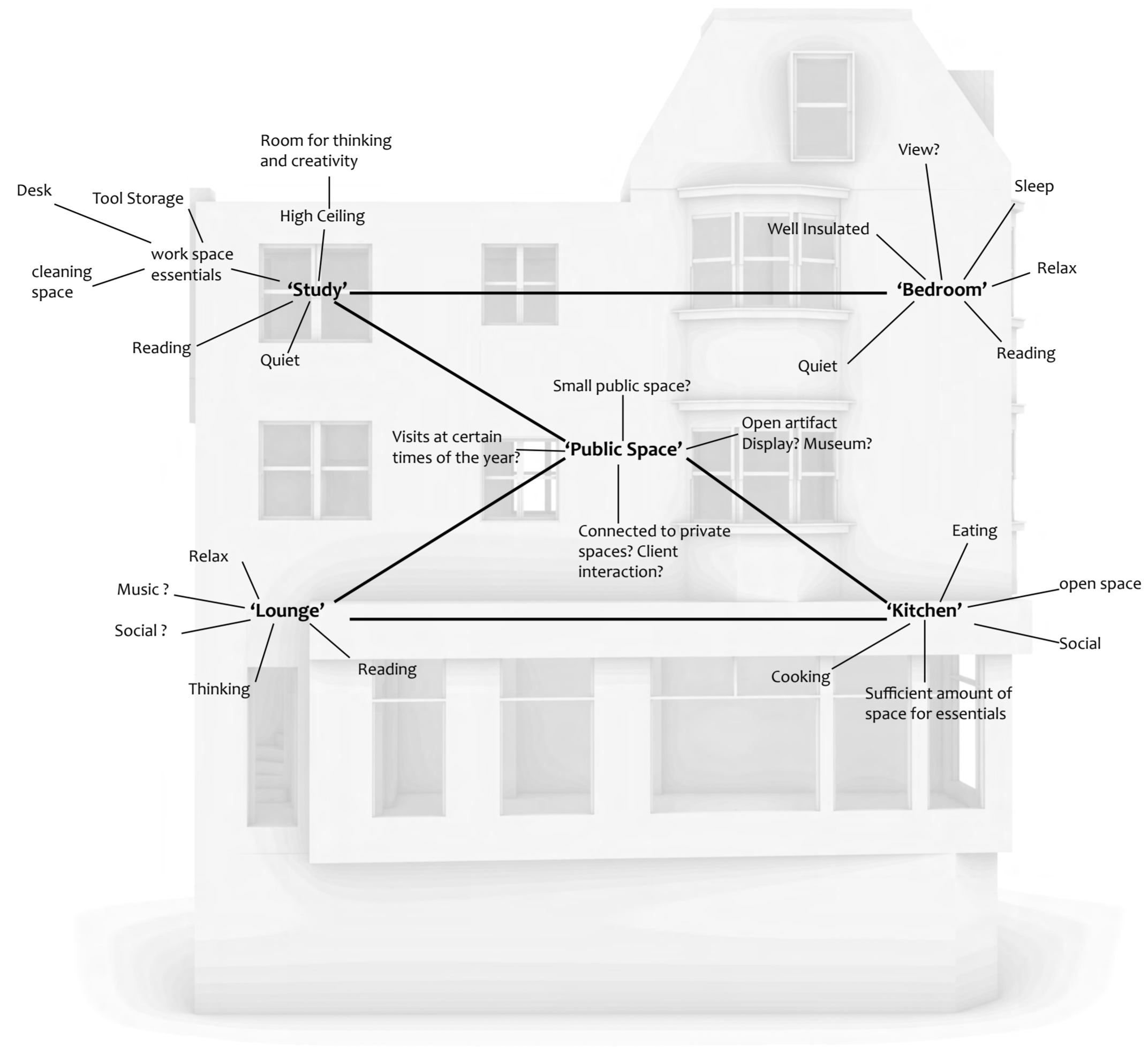


“Continuity within a finite entity”

The Möbius Loop

This illustration is extracted from the mobius house where they have two paths which run through the building and become shared spaces. the idea is to provide two entities which run their own trajectories but share moments within the building and possibly reversing the roles of each destination. This leads into the building design having a very close relationship with the surrounding environments.

The mathematical model of the Möbius is not literally transferred to the building but is conceptualized or thematized and can be found in architectural ingredients, such as the light, the staircases, and the way in which people move through the house.



Word Diagram

After collecting research about the mobius strip I wanted to see how the spaces within the proposal will interact with each other. In order to display the possible idea of how this may work I began with the method of connecting the activities. This was done by labelling some generic uses within a house. Although, the purpose of this was to create an extension of what the spaces could bring by collecting the desired programmes.



“rest and retreat”

Kubus / Sturm Und Wartzech

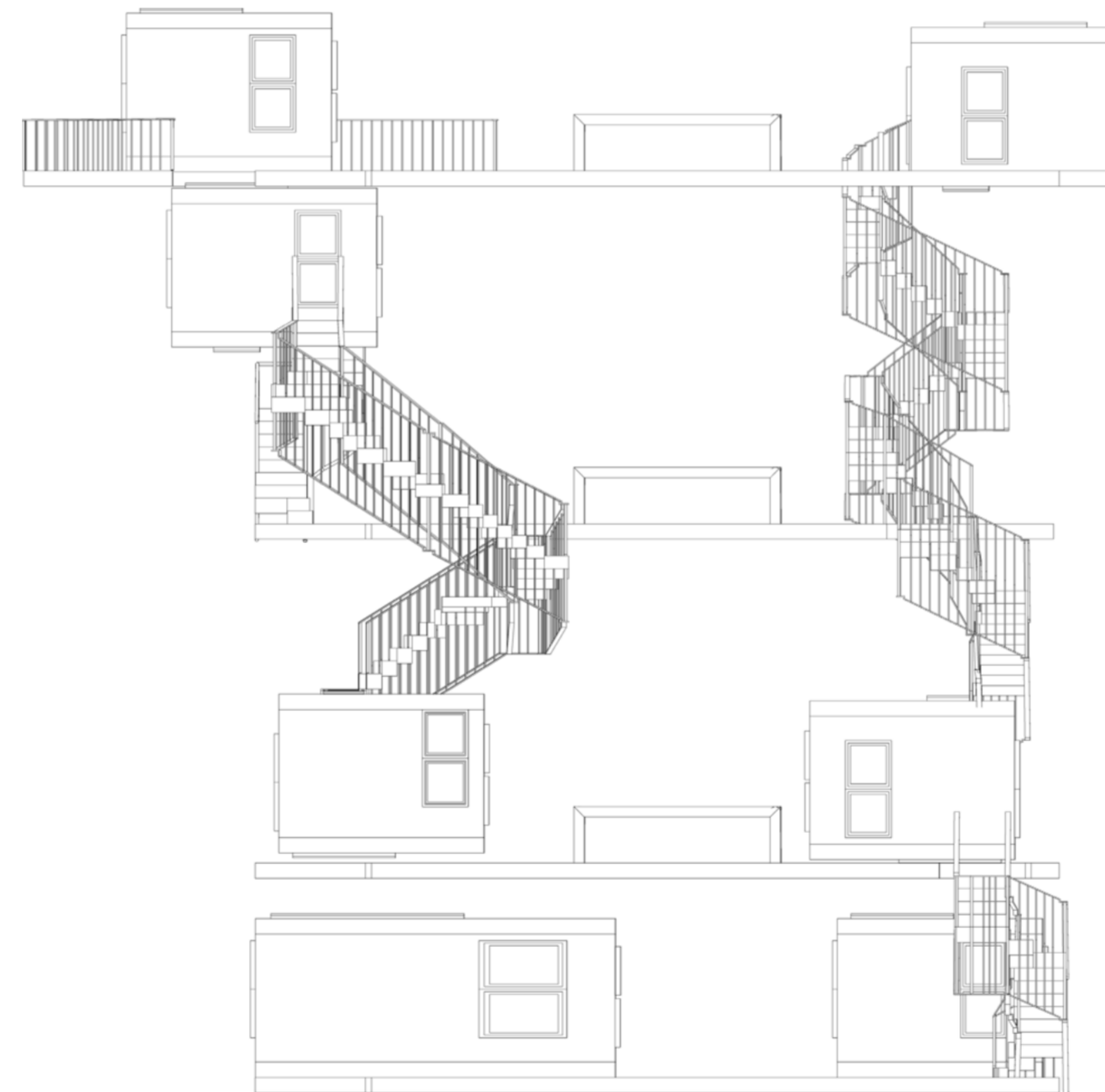
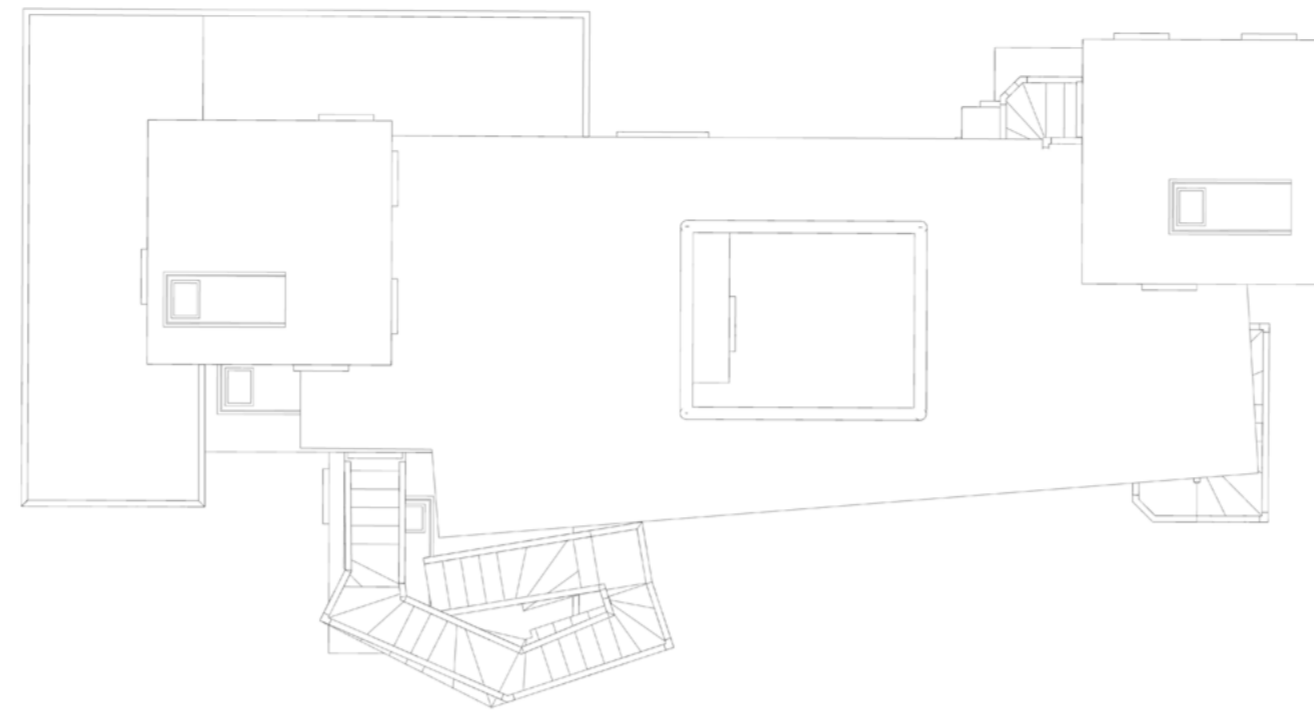
The cube is known to be energy self-sufficient and to create an adaptable layout. The seats and table are all able to be used when necessary and allows the room to be completely empty when requested. The cube stands on a ball bearing which can allow for it to rotated accordingly to the time of day. High thermal insulation, passive solar use, an integrated ventilation system with heat recovery and a PV roof allows the cube to be very energy sufficient.

As shown in the first picture, on the left, the walls can be constructed off-site and then placed together on site. This can allow for easy repair and a comfortable way to adapt the cube's layout.



Existing staircase

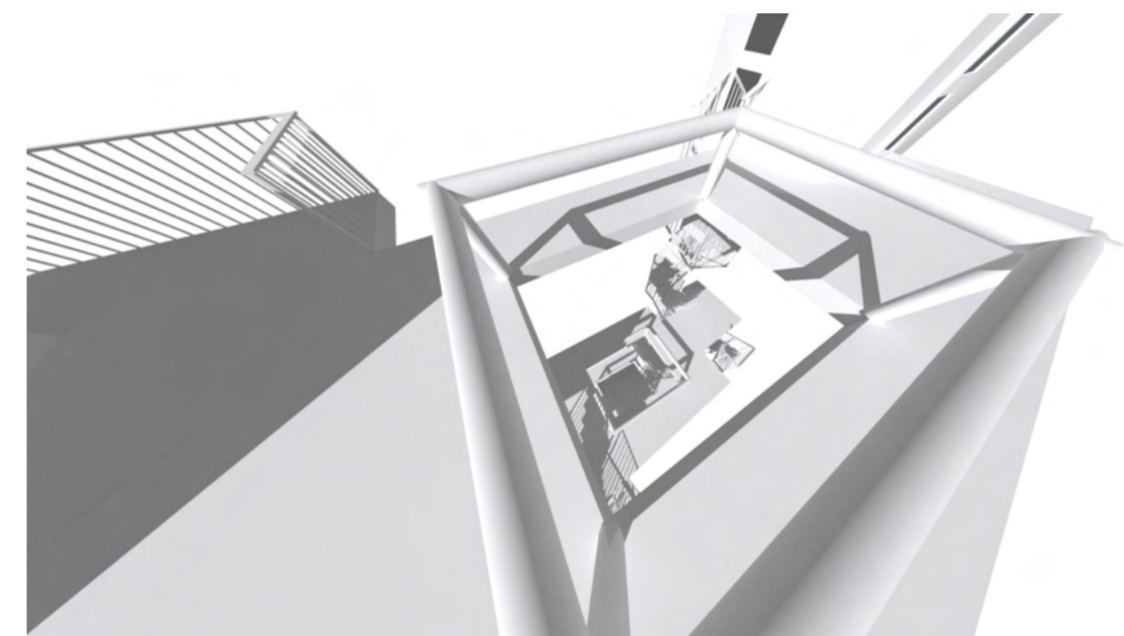
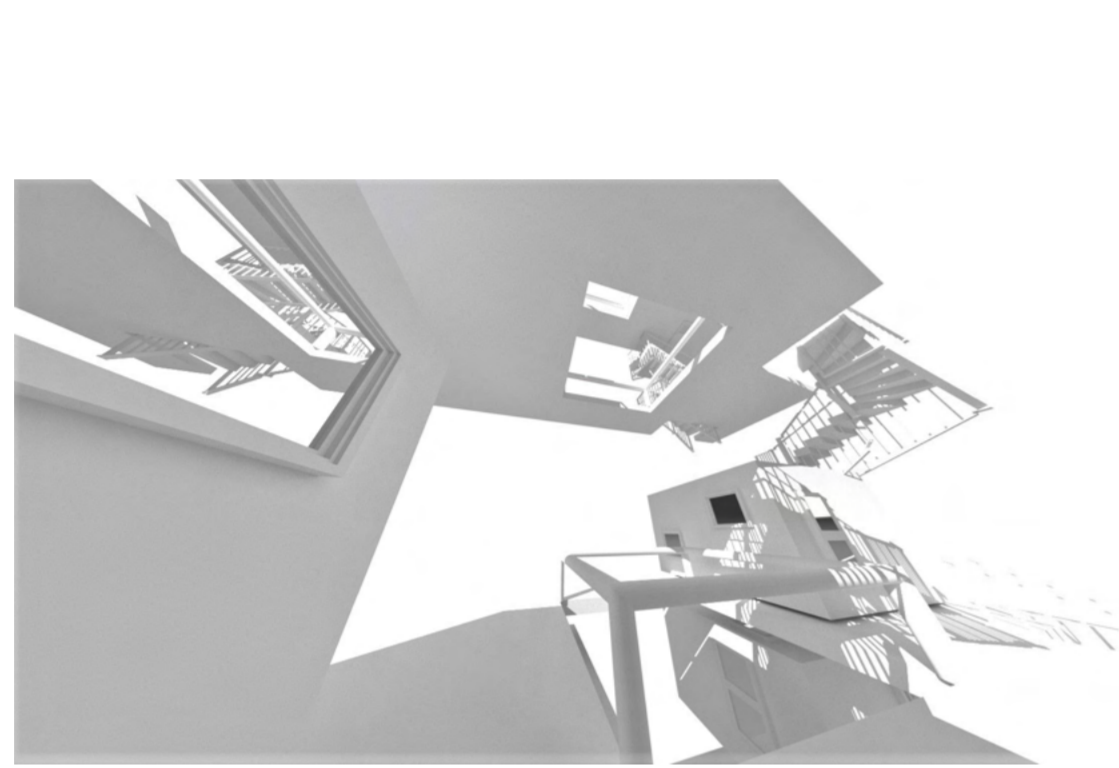
As I wanted to create a design which would still highlight the beauty within the original site and at the same time bring something different, I chose to start with the original staircase for inspiration. Due to it having passed the rules and regulations of Approved Document K I wanted to see how I could push this to the limit.



Concept Design

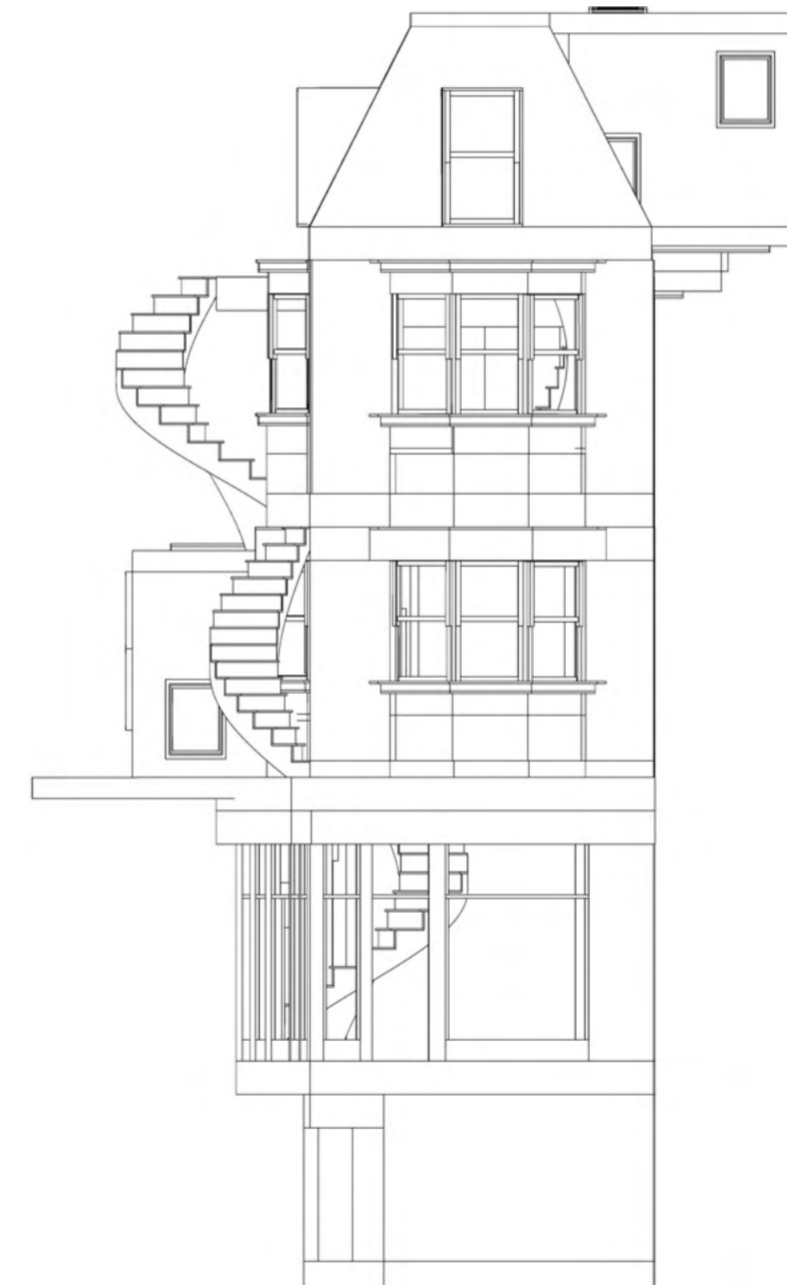
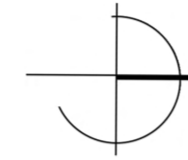
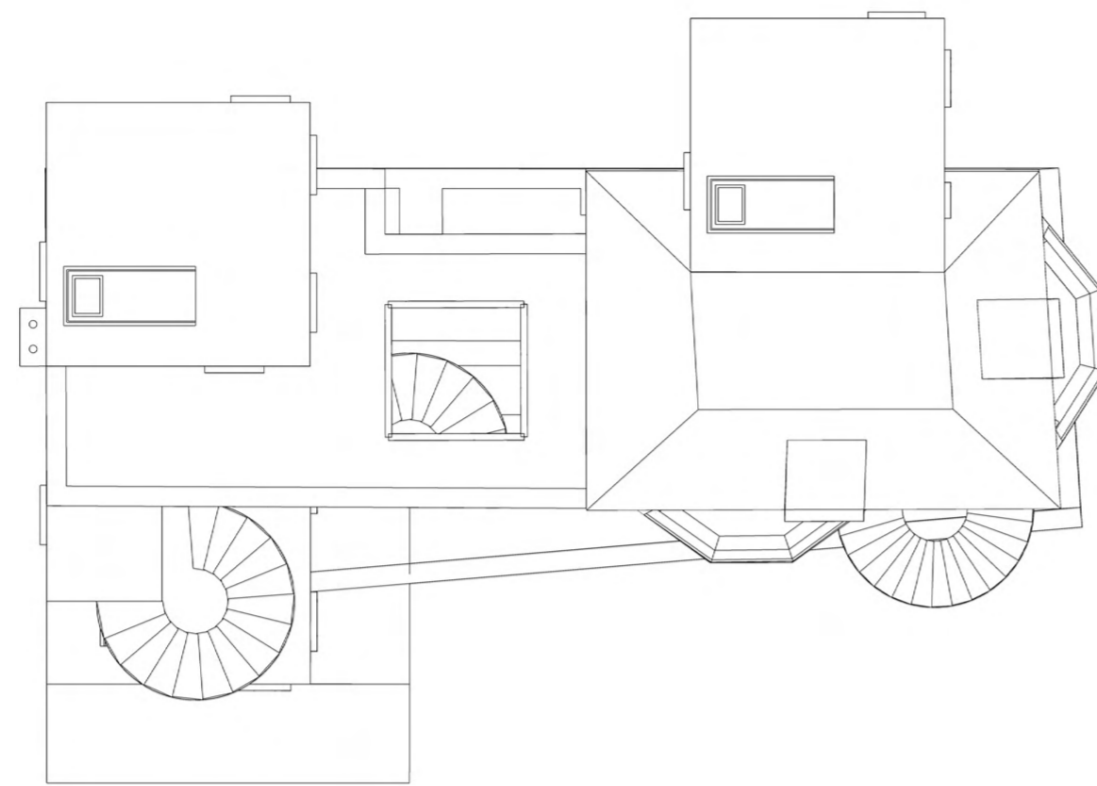
This design has been made from my collection of sketches, introducing staircases which flow in and out of the building. The staircase consists of two handrails and 'miss placed' doors and windows which I hope to create a small form of confusion, but also to allow the occupants to look into further detail of the building's purpose. With recycled windows and doors there will be traces of time and different stories placed throughout the building.

annotate how the positioning of spaces will inform the use of light



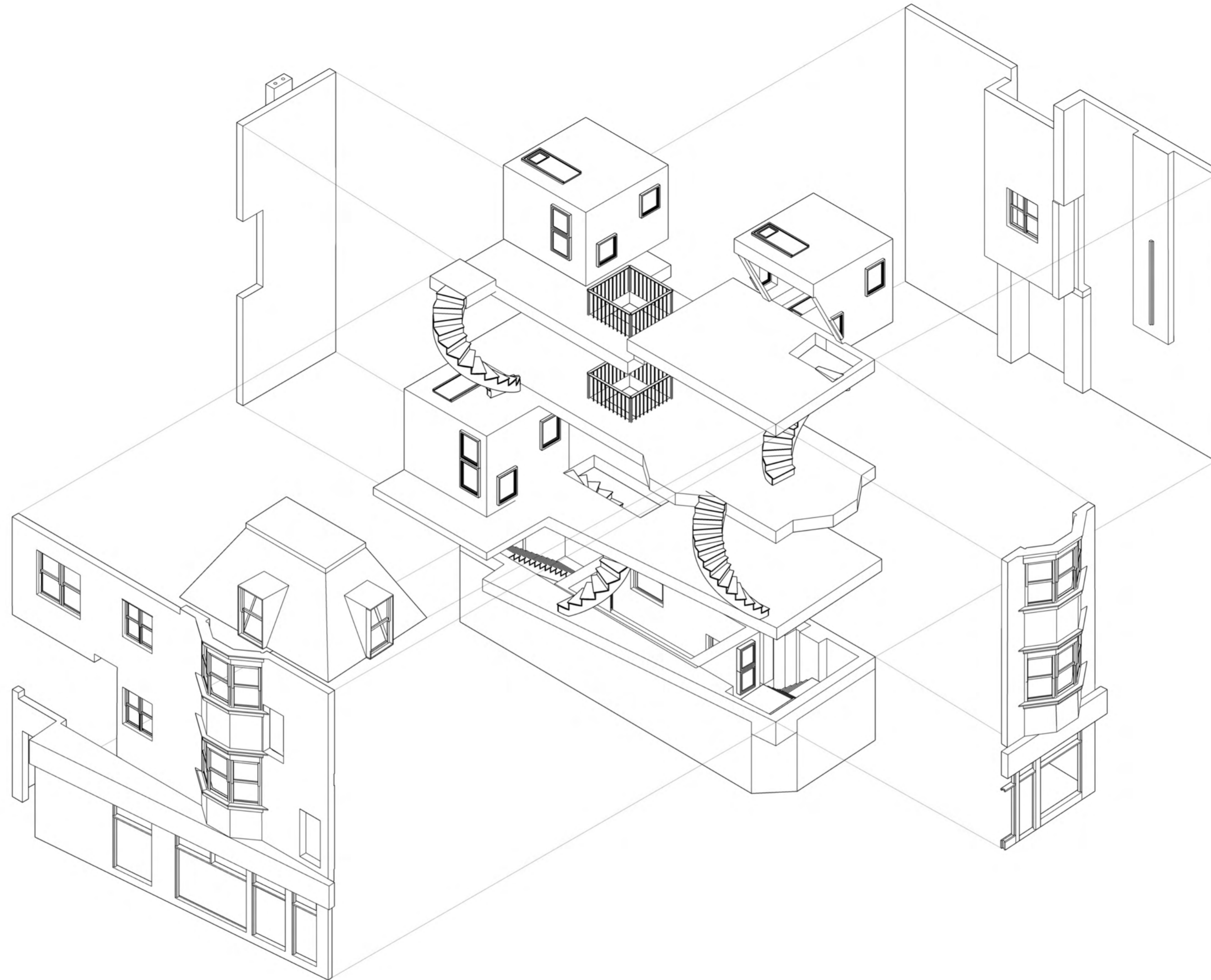
Fisheye Lens

Combining yet another feature which M.C. Esher which he uses in his drawing, the fisheye lens allows certain angles of the building to stand out and illustrates views people will have within the space.



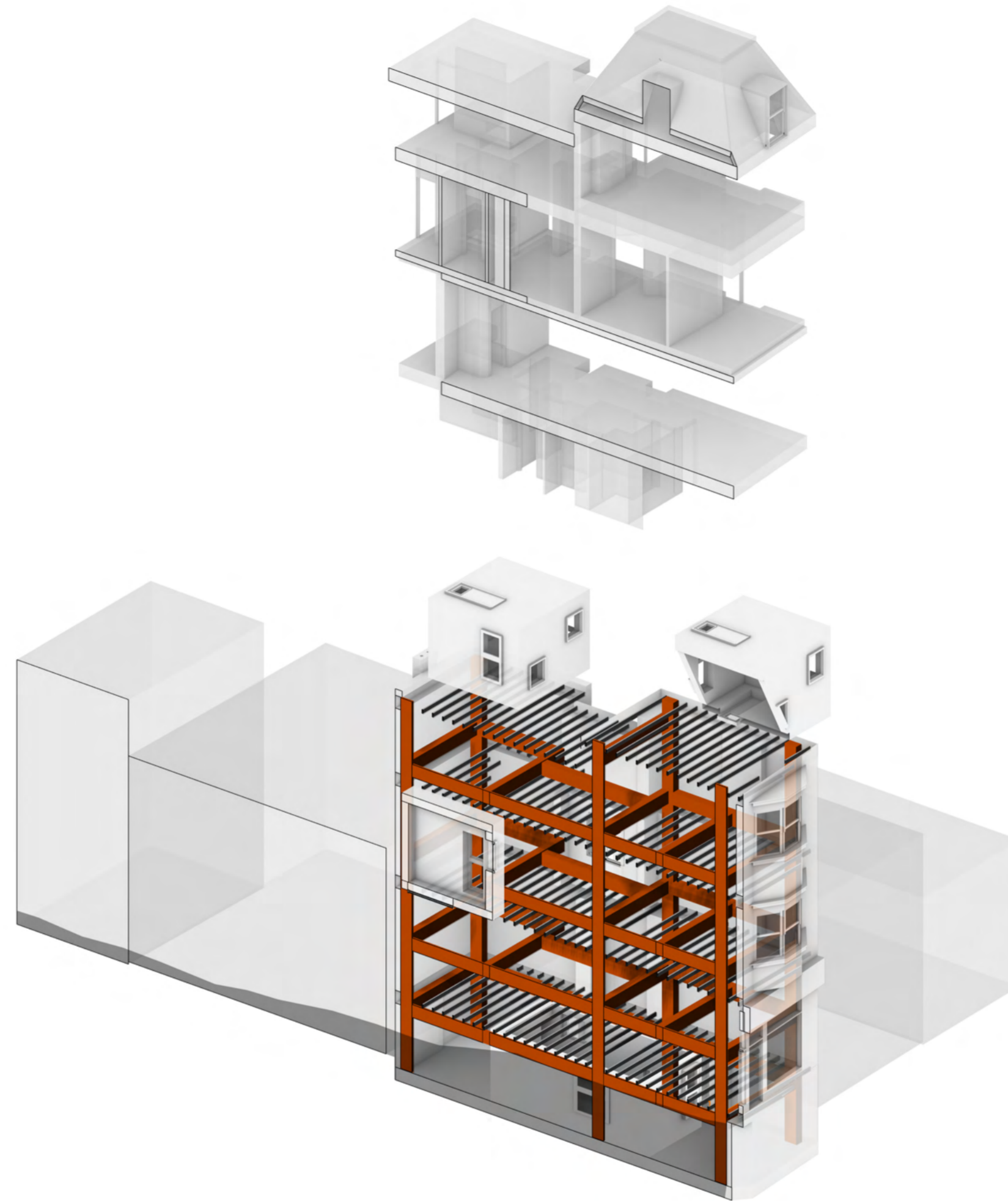
Concept no.2

This concept consists of the pods being placed to scale within the existing site. Unlike the first concept I decided to look at how spiral staircase may look. Allowing for their journey to travel in and out of the site's façade. This proved to be efficient when reducing the amount of space needed on each floor. Although this is the case, it creates an aesthetic which does not suit the existing as much as id hoped. This has still proven useful to see what the building may look like if cut outs are made.



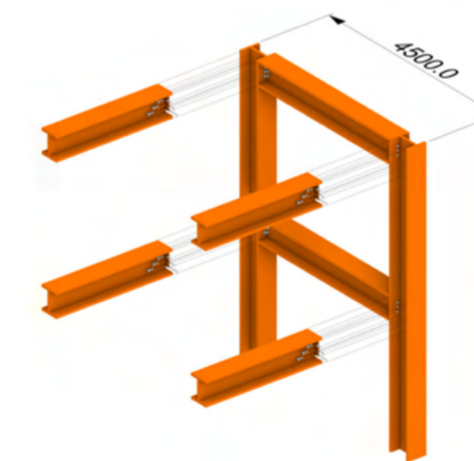
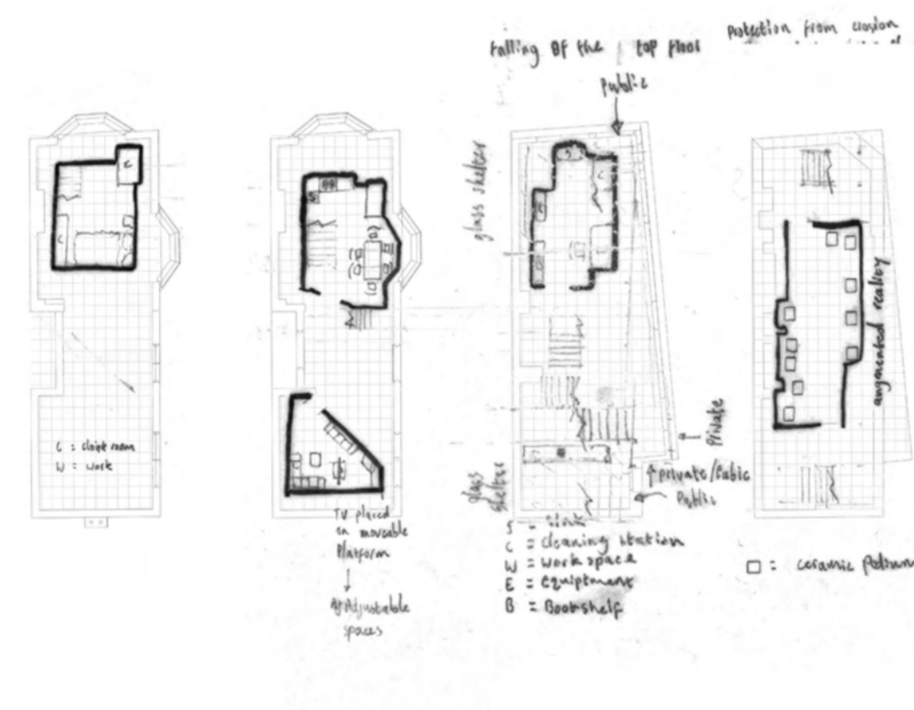
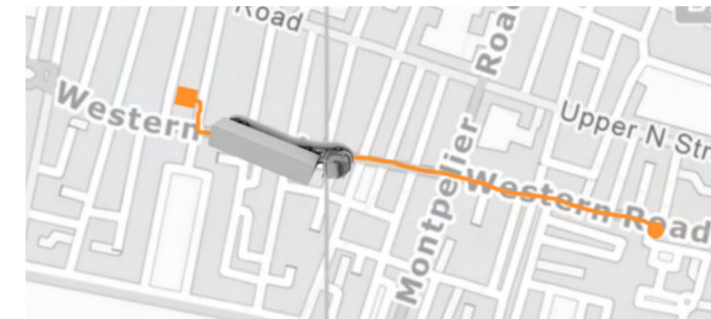
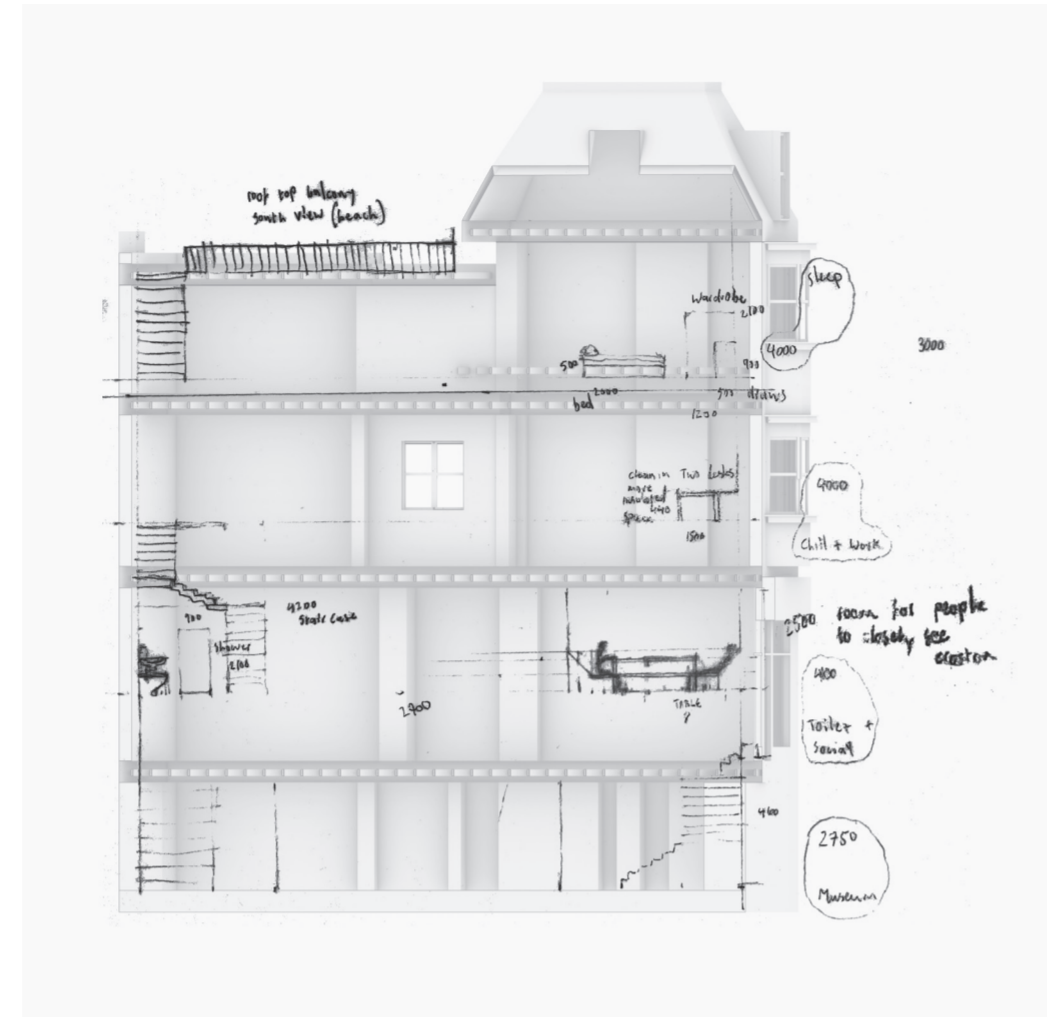
Exploded Axonometric

This exploded Axo begins to show what the finished product may look like once the existing facade is to erode. The design provides an interesting language which could be very interesting when considering the neighbouring buildings. Although it is becoming evident that floor surfaces may need to be reduced to improve the visual experience at lower levels.



Structure Strategy

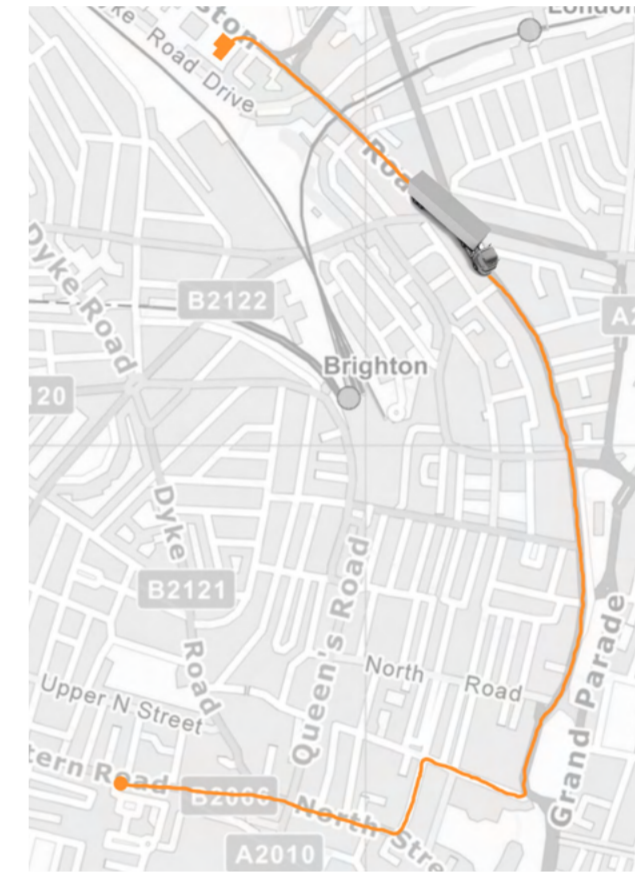
When looking at how the proposal could be structurally sound, a steel framework which supports the spaces and platforms became very suitable. The strategy will consist of taking out the existing floor plan, then the steel frame will be placed into the site which will be bolted together to allow for it to be deconstructed after use.



Structure Strategy Continued

The sketches represent experimenting with the suitable heights of the platform and how they could sit with the existing floor beams. Alongside this there is a continued alteration of the parameters of each space, concluding that the bottom space will be a museum for the client to show his findings. The additional spaces include a 'social space', 'toilet', 'chill zone', 'workspace' and 'bedroom'.

The diagram on the right represents the process of construction that the steel framework will consist of and how it will be brought to site.



Anston House Demolition

Continuing the selection of aesthetics, the proposal will also contain the use of windows which will be extracted from Anston House. Due to it being demolished there will be an opportunity to create a live archive within the site which will leave other traces of time and history within the site. Creating a different collective of stories which will be placed throughout the building.



The Vacant

To further incorporate the idea of a live archive within the site there are four other location which the windows and doors will be extracted from. Due to these buildings being vacant for several years, they are soon to be demolished. Their parts within history and time will be relocated and given a new life at 56 Western Road.

A large orange triangle pointing downwards, with the word 'LIGHT' written inside it in a bold, dark grey serif font.

LIGHT

Noun

The **natural agent** that **stimulates** sight and makes things visible.

Verb

Provide with light or lighting; **illuminate**.



“The Kingdom of God is the Kingdom of Light”

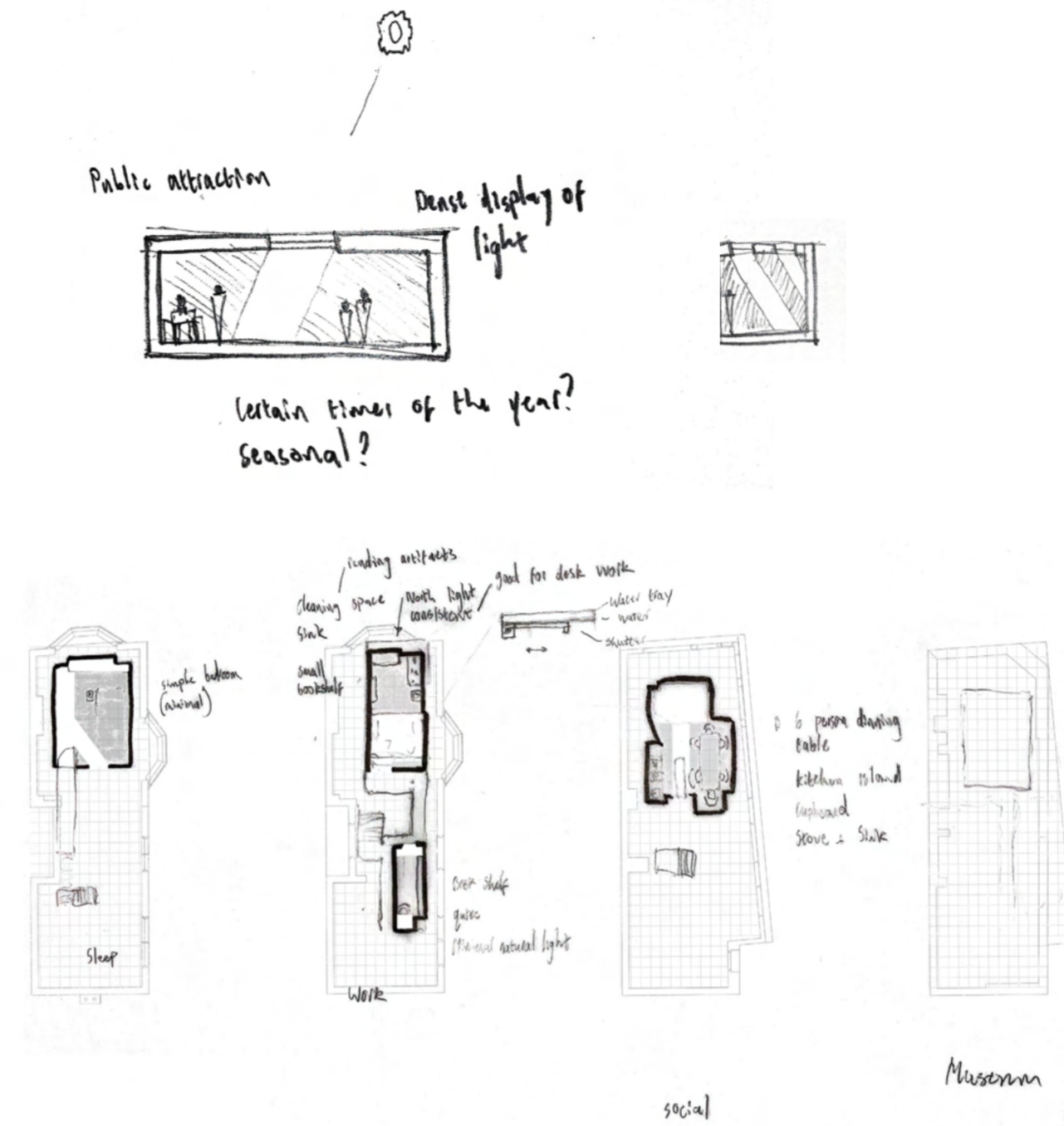
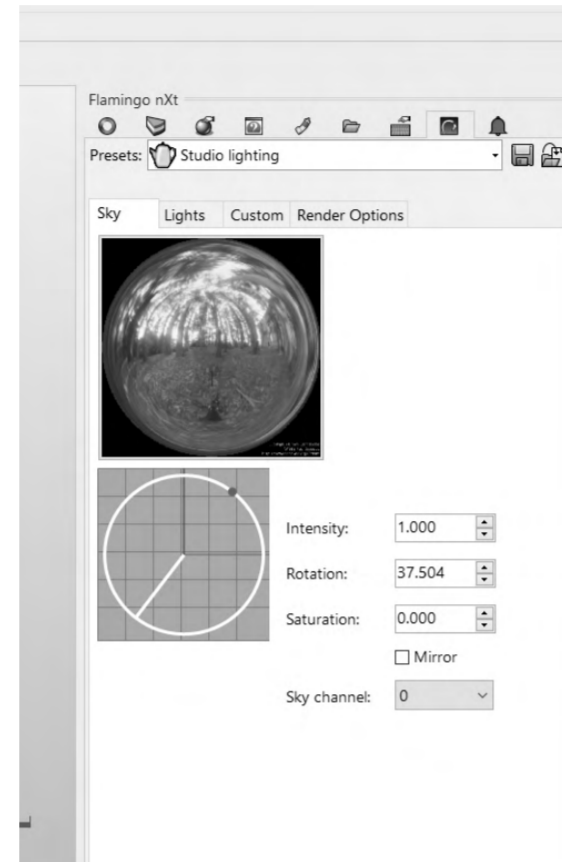
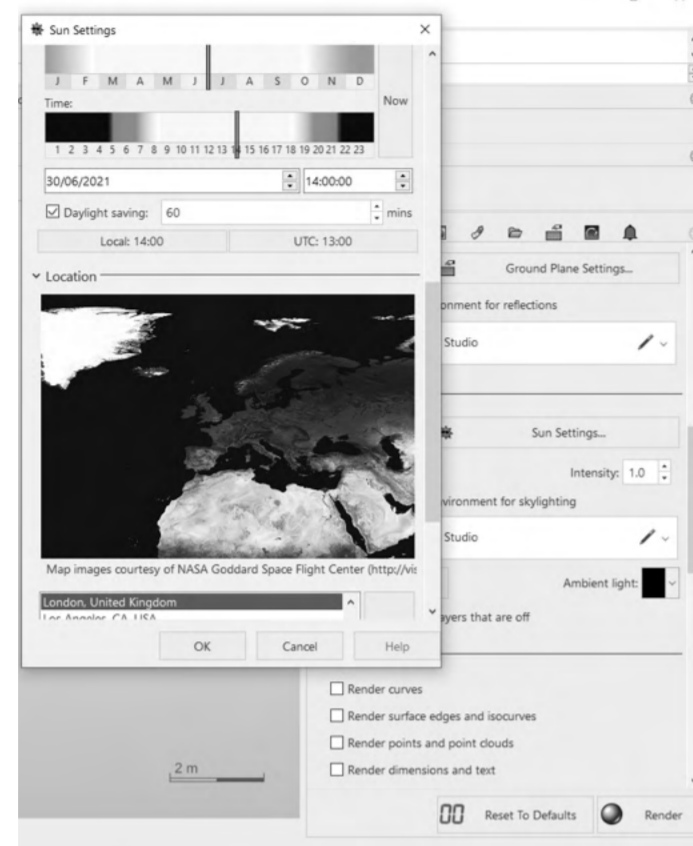
The Pantheon

The Pantheon in Rome is the finest example of a circular building dating from ancient times. At its centre is a huge 30ft opening or oculus to the sky, the only light source in the entire building. The true function of this opening, however, remains uncertain. According to the Italian Astrophysicist Giulio Magli, the sun and time were both linked architecturally in the ancient Roman period and they were used as a form of cosmological signpost for them. Within the dark winter months, the dome is illuminated but at noon on

both equinoxes the light reaches the floor.

The intensity of the light at a specific time would thereby create an association between the sun and the power of Rome and thus would reinforce the Emperor's right to rule. At this time, the light creates a bright circle in the dome, contrasting sharply with the surrounding dark and so promoting response in the worshipper.

By create a sun dial this will allow the client to almost feel in control of the light, allowing it to be captured and relatable to one of his archaeological findings. Due to light be something which cant be seen as materialistic this will be perceived as great achievement and a respectable prize for him and the public.



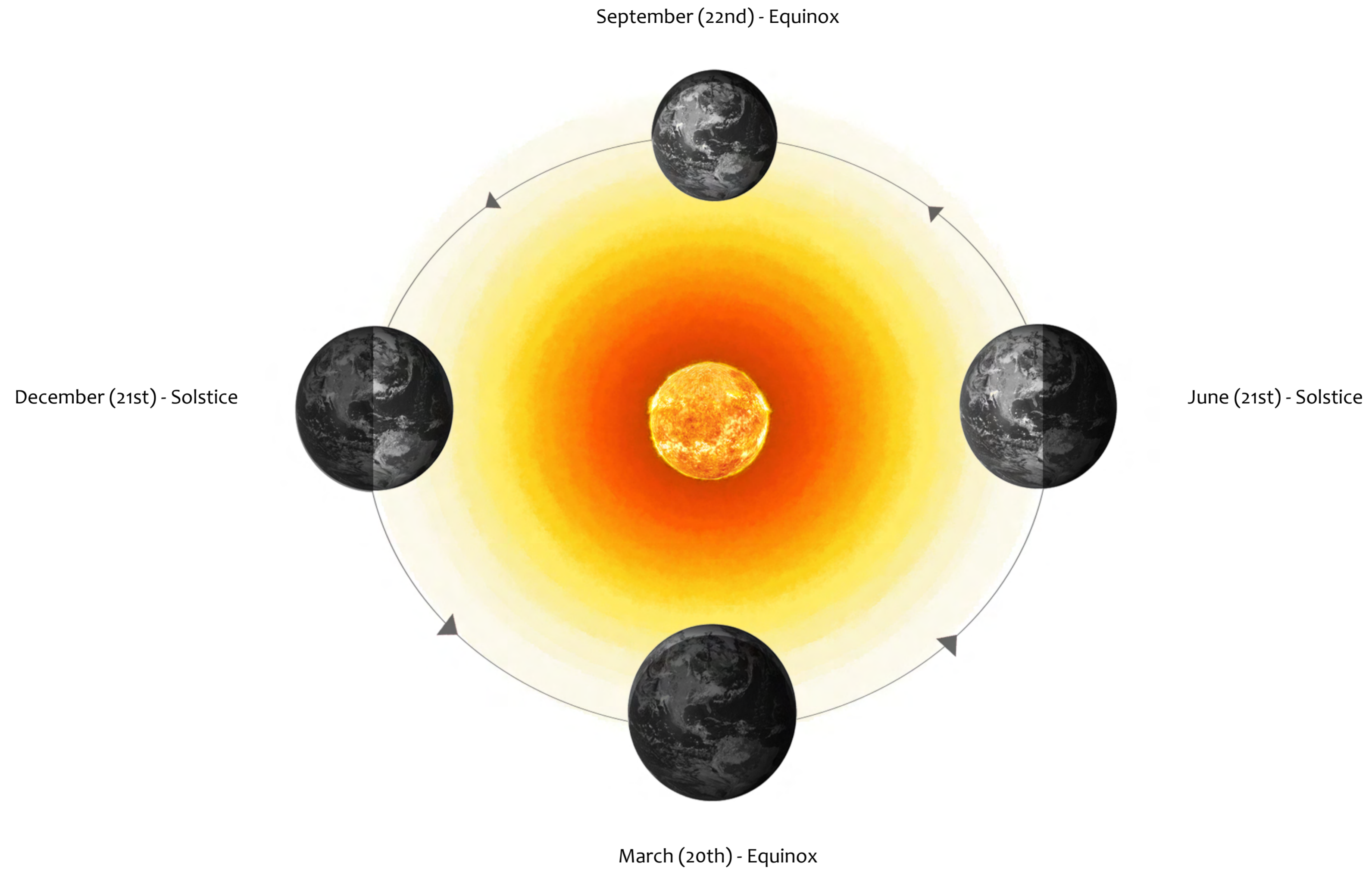
Software Sun Studies

From the beginning of this project, it was clear that light will become a key amenity for the client. Therefore, the study of light in and around the site is something which will need to be understood. By creating a clear idea of where the light falls will allow for the design to be adapted to the sun.

The next step was to figure out how I could make these accurate studies of light. This led to me experimenting with the software Lumion and also Rhino, the plug in Flamingo

was also used. The experiments showed that to create to most accurate result they will have to be combined as each software had strengths in different areas.

Alongside this experimental sketches were made to see where the light may fall within the spaces.

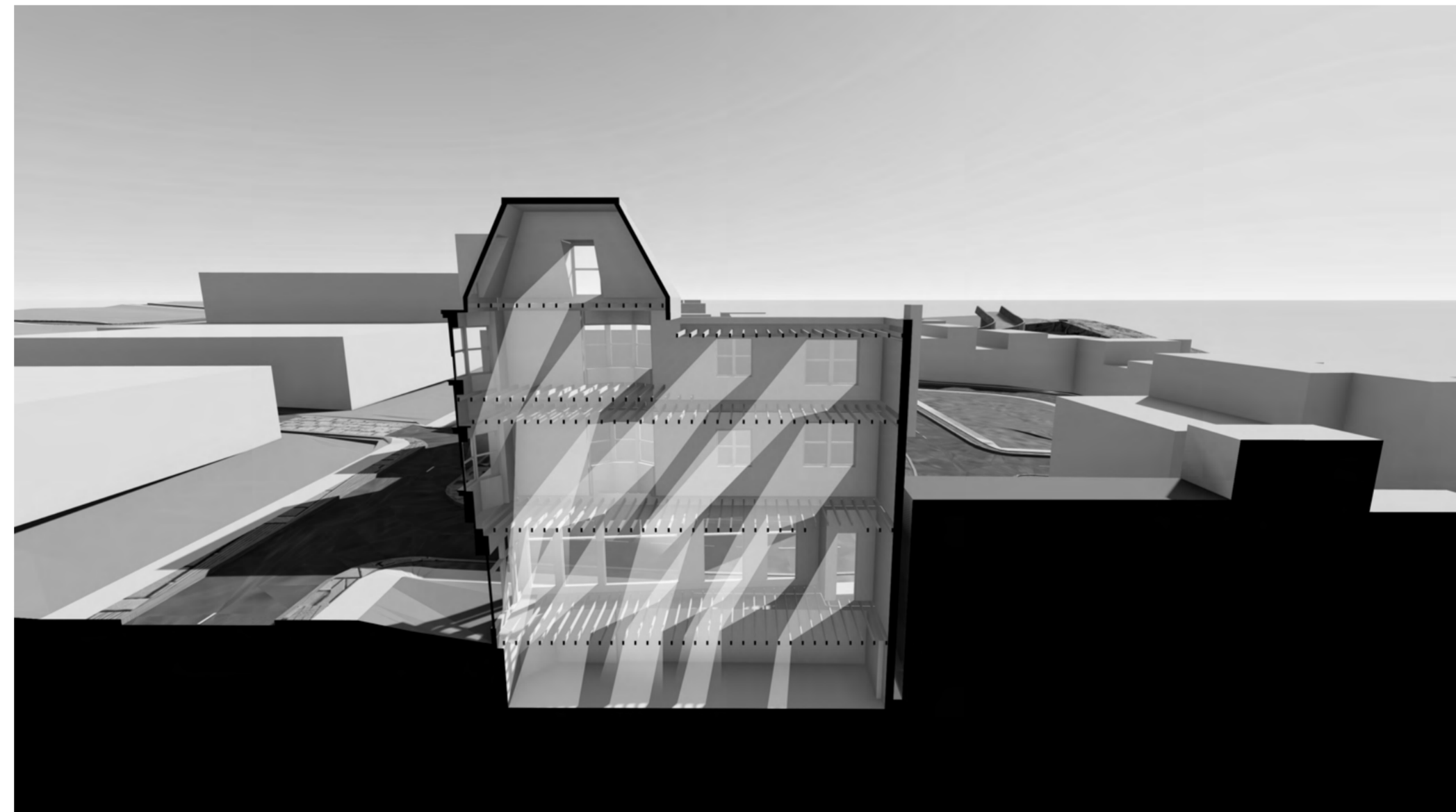
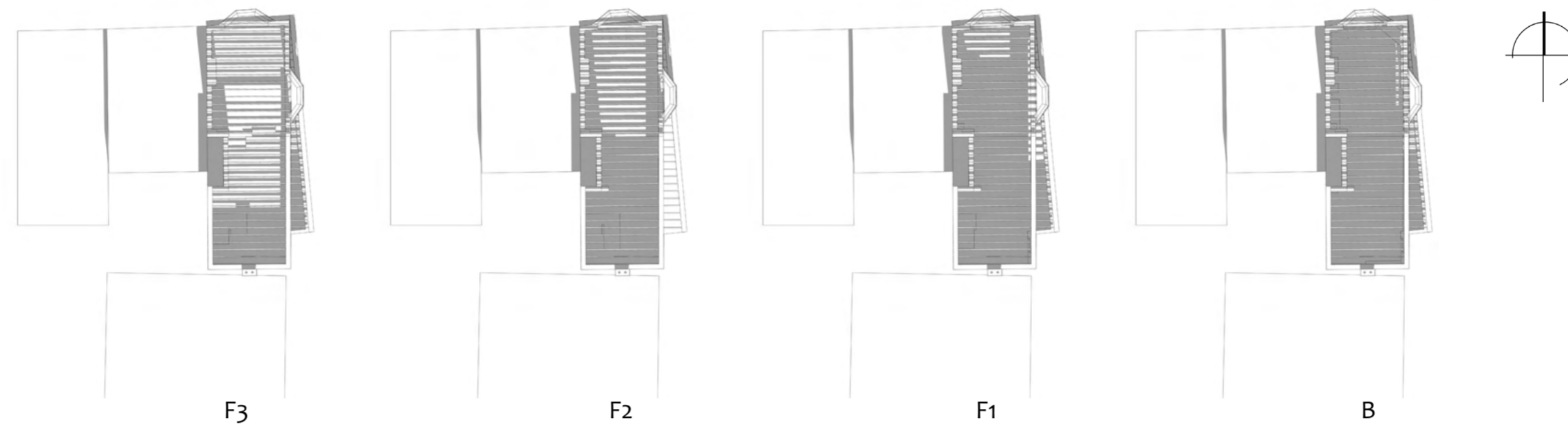


The 4 Moments

As it became increasingly important to create a connection to the client's request for natural light and with the further influence of the Pantheon, the idea of allowing the building to react to these four times of the year will become very suitable.

This will require a sun study in order to create an analysis of how and where the proposal may illuminate at these times of the year.

The equinox takes place when the sun is at the most northerly and southerly points in relation to the earth. The solstice is activated in the westerly and easterly points.



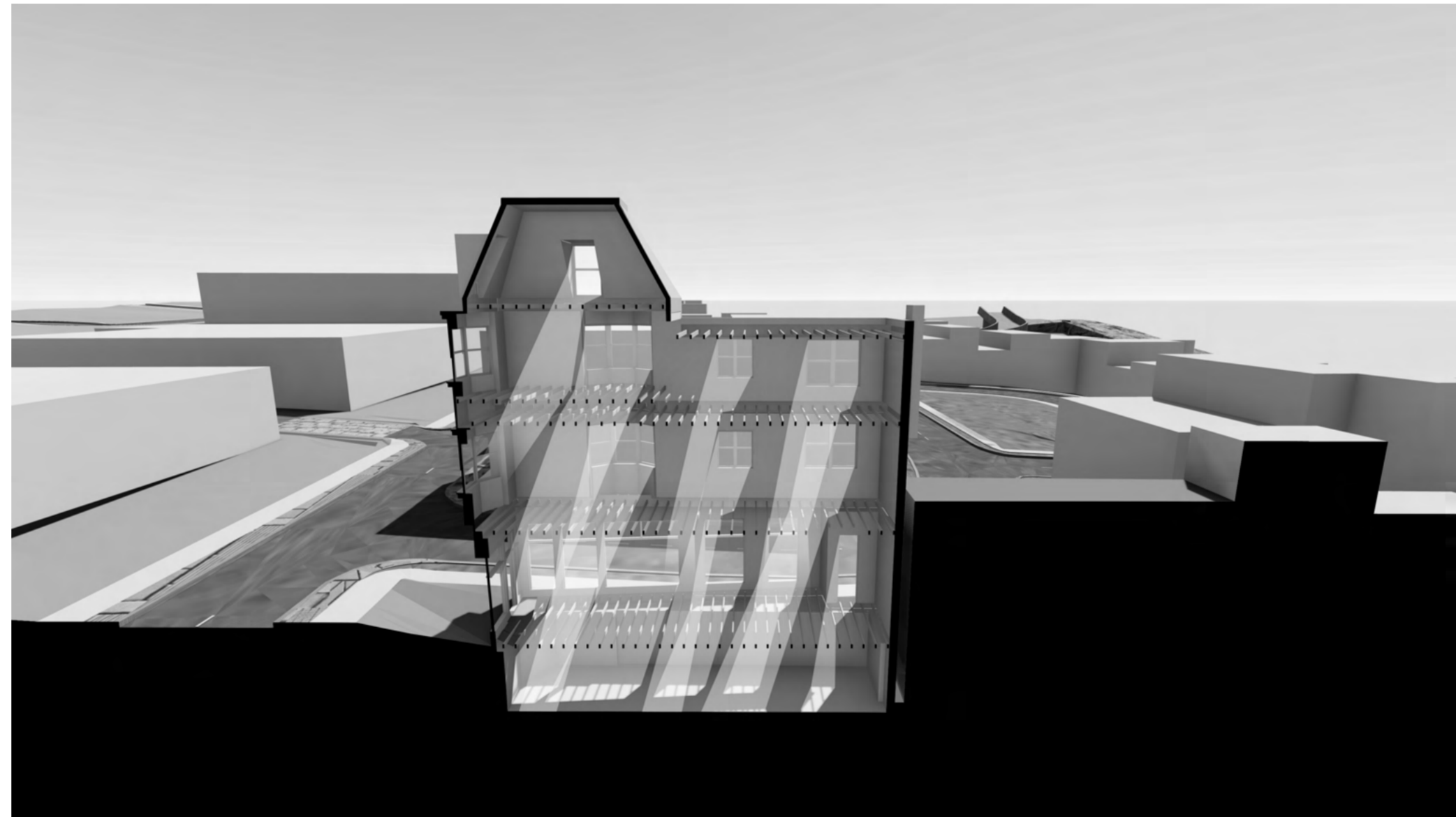
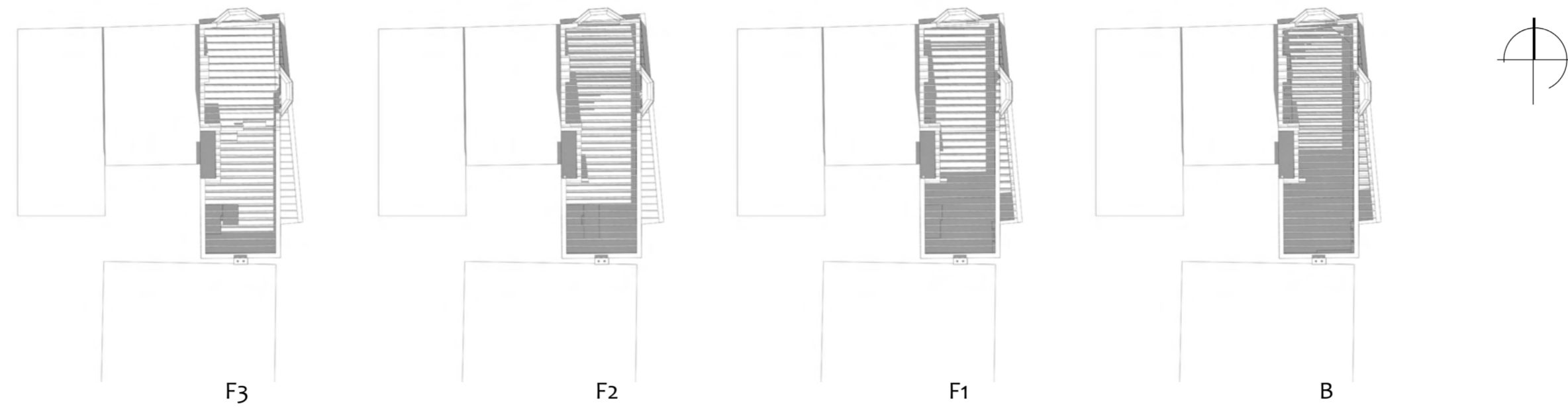
March (20th) - Equinox

For the public to benefit from these activation points the sun studies have been made for the day of the solstice at 12:00pm, rather than the exact time. This will provide convenience for the client and the public as it will become an attraction within the site at four different times of the year.

The first of the four light displays will happen on the equinox of March 20th, being the closest to the new year.

As I wanted to make the existing building into a live archaeological site, allowing the building to erode around the proposal, leaving the existing floor beams will help create further erosion but also a unique light display.

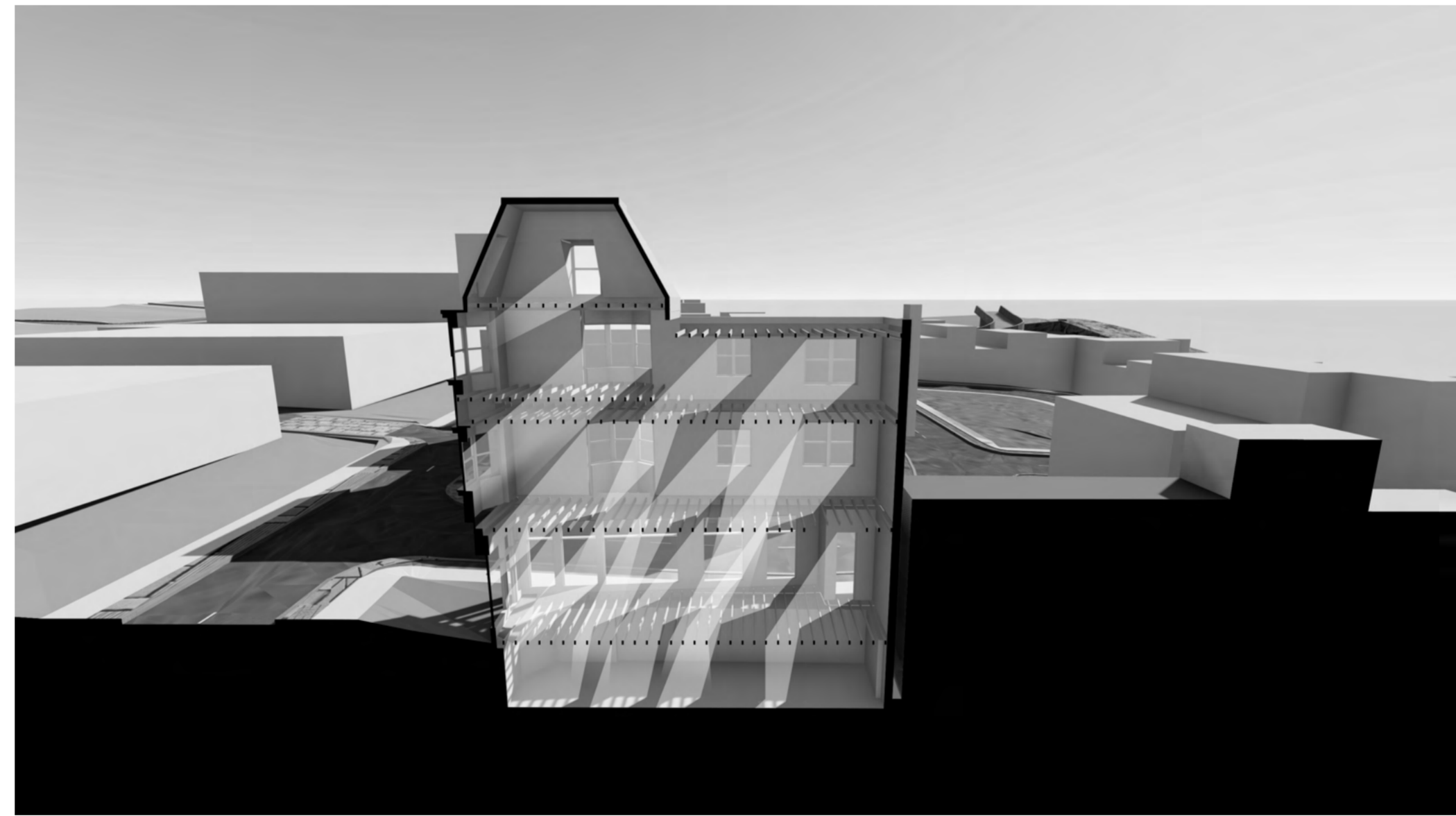
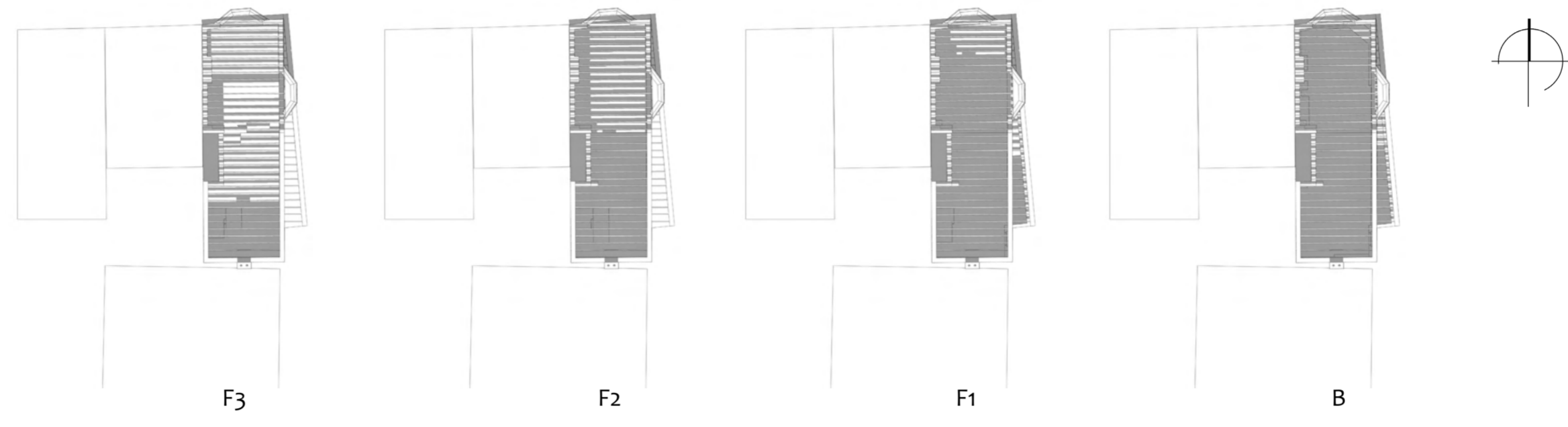
The plans show a much higher lux level within floors 2 and 3, projecting on the north of the interior. The section creates a much more vibrant result, showing the light focus to be at the ground level entrance.



June (21st) - Solstice

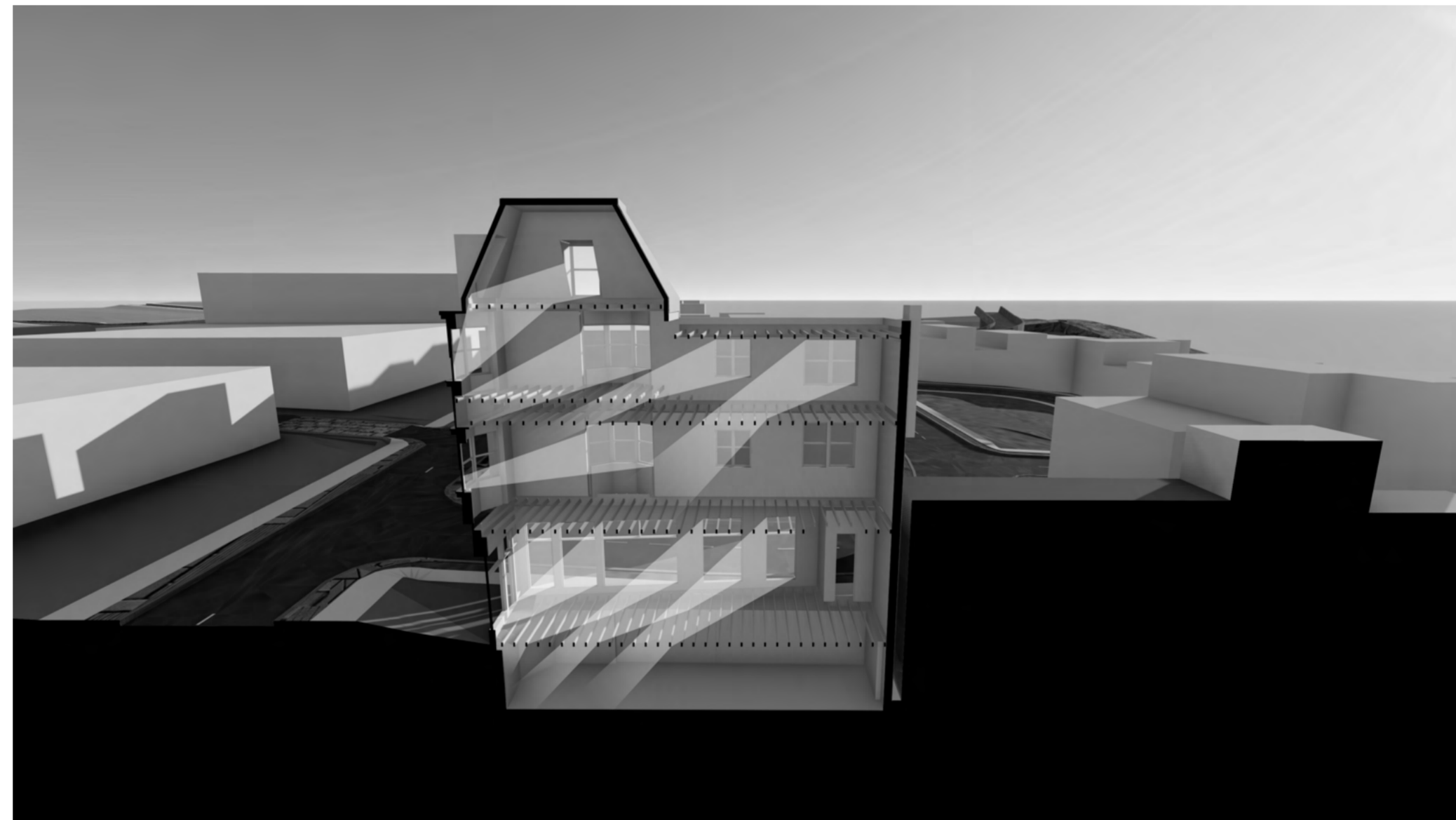
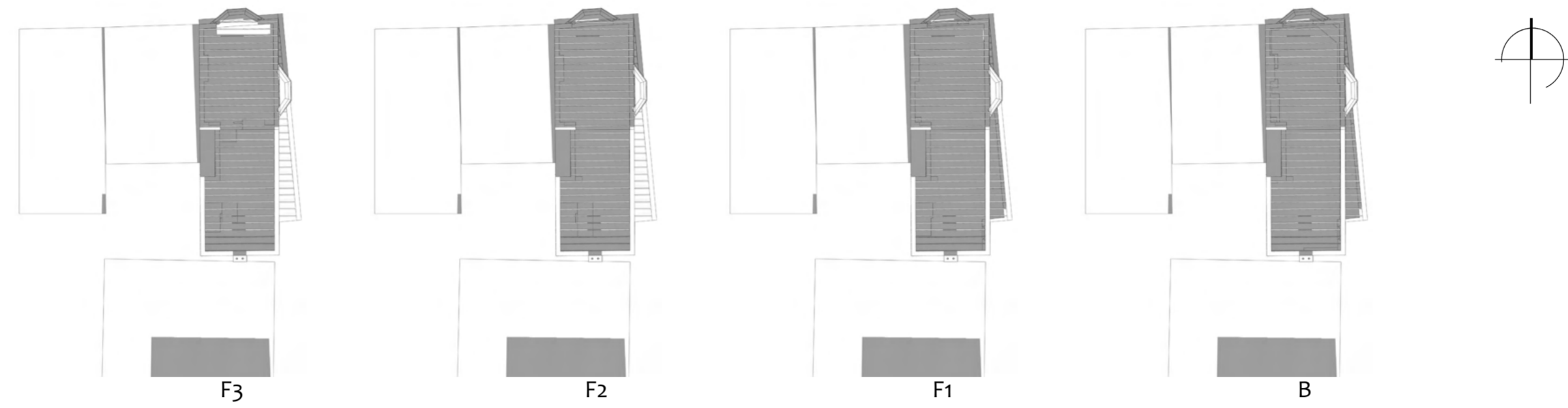
The June light display shows a much sharper pitch of light travelling through the building, which will provide a much sharper light display at the basement, compared to other times of the year.

The diagrams show a clear representation of how much light there is to work with at this time of year, allowing clear light on each floor level.



September (22nd) - Equinox

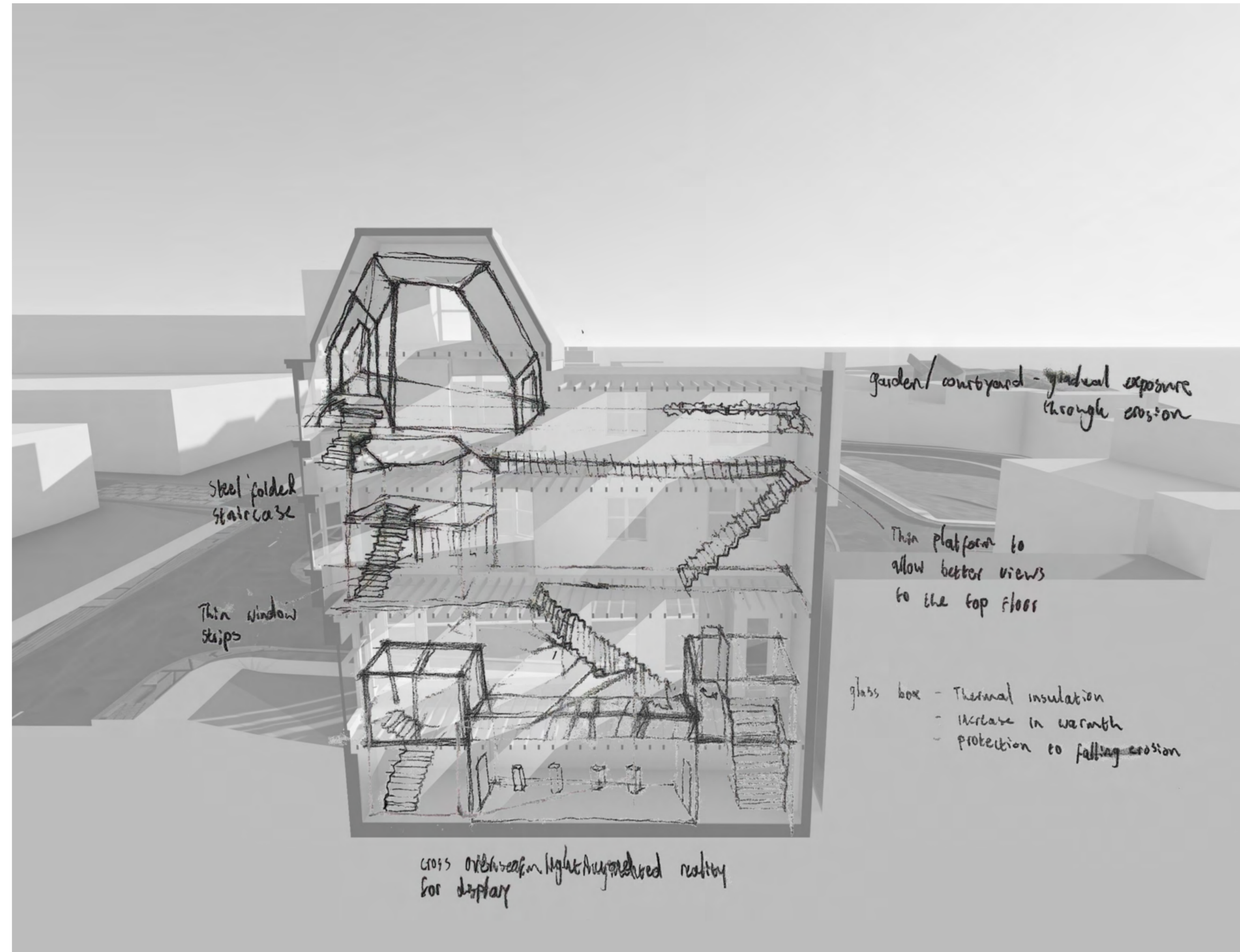
On the 22nd of September, the light continues to change, creating a closer focus point the east interior.



December (21st) - Solstice

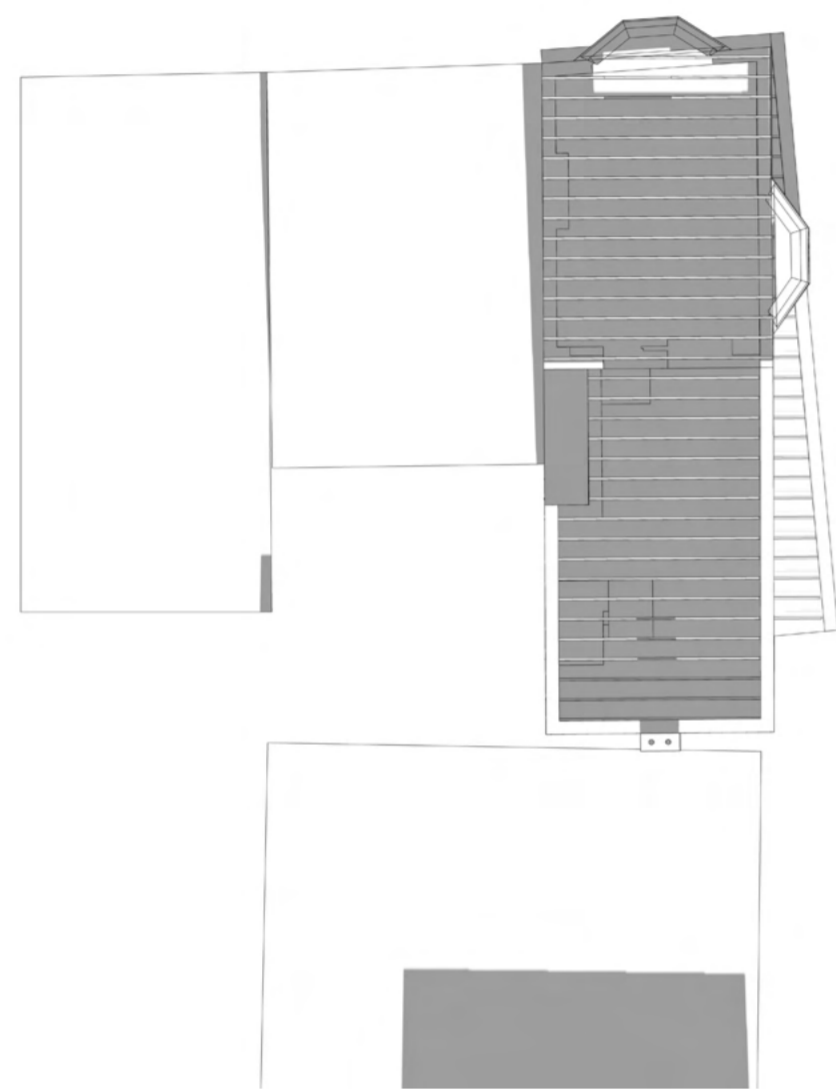
December the 21st collates the smallest amount of lux within the building, creating only one area to work with from plan images. Floor 3 will have to be the activation point in order to achieve a clear light display. This may influence the overall height of the space inside as it will need to collect as much light as possible due to the sun being weaker at this time of the year.

This analysis was created to represent how much light will change over the course of the year and will always be changing due to the weather. Therefore, it is crucial to calculate the reading of environmental change in order to create a successful light display, challenging the moment to moment changes within the solar system.

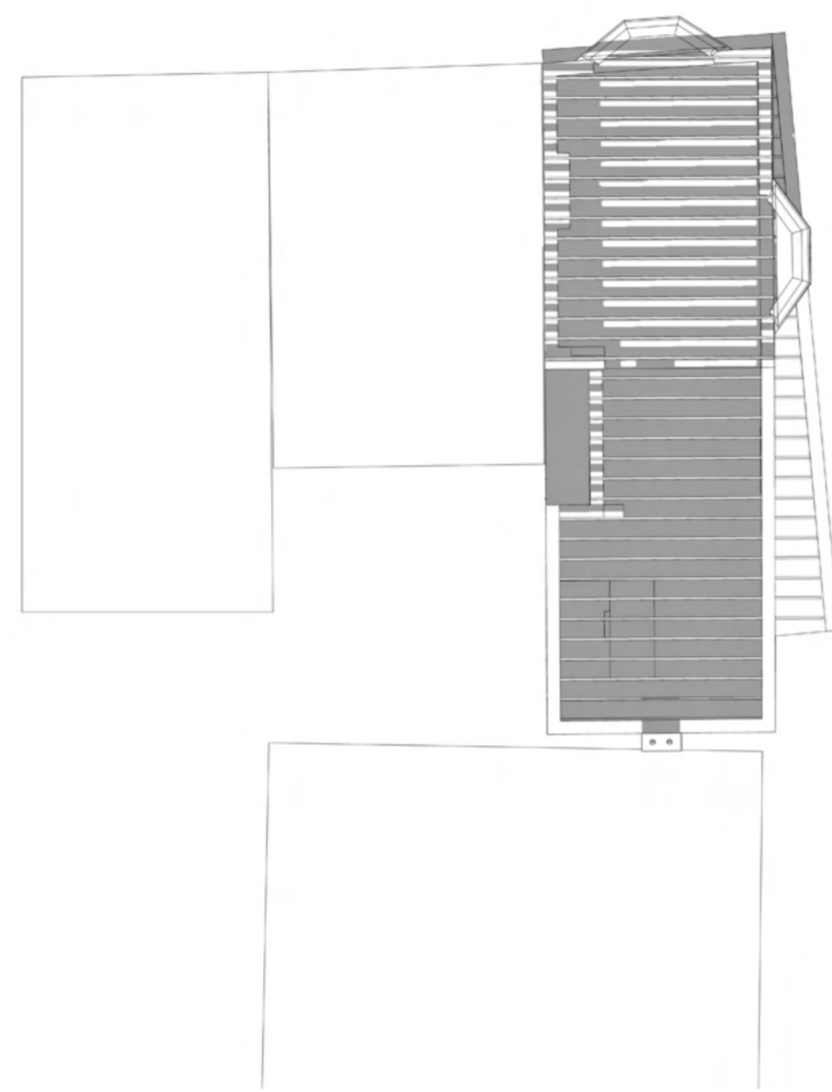


December (21st) - Solstice Sketch

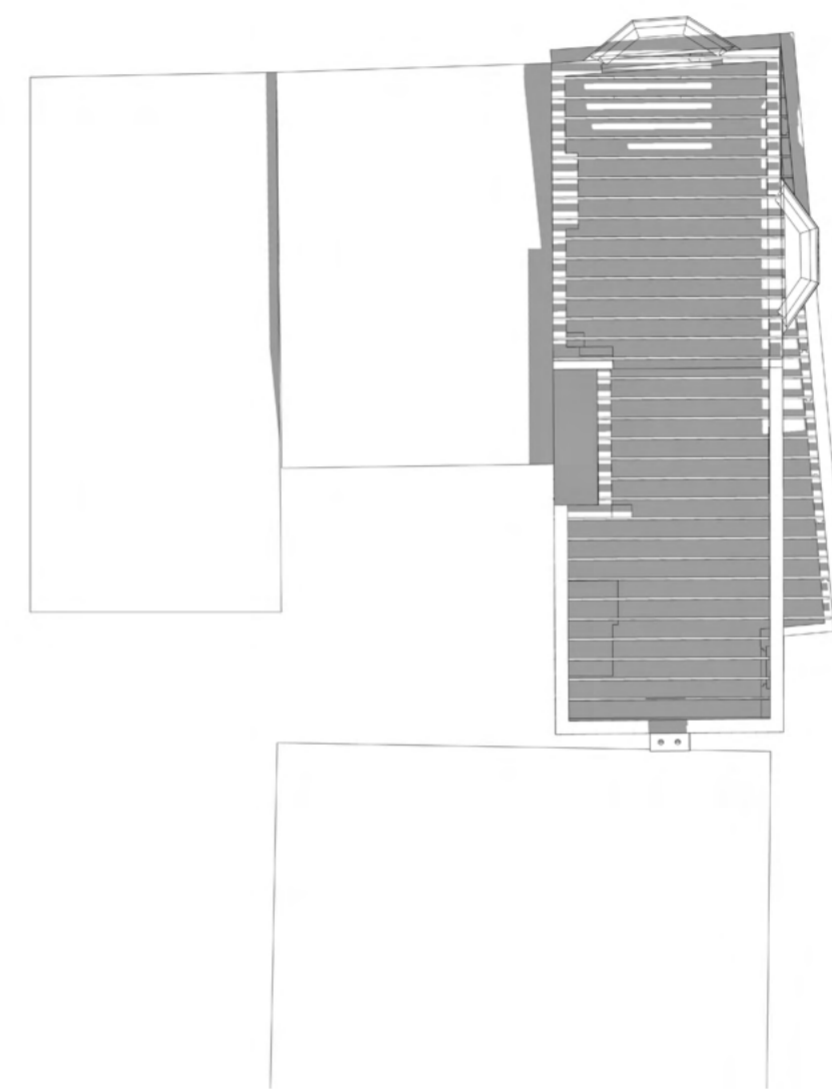
This sketch represents an experiment of how the spaces may sit within the building on the December 21st solstice. Different floor widths and access point will become very important when altering the design according to the sun.



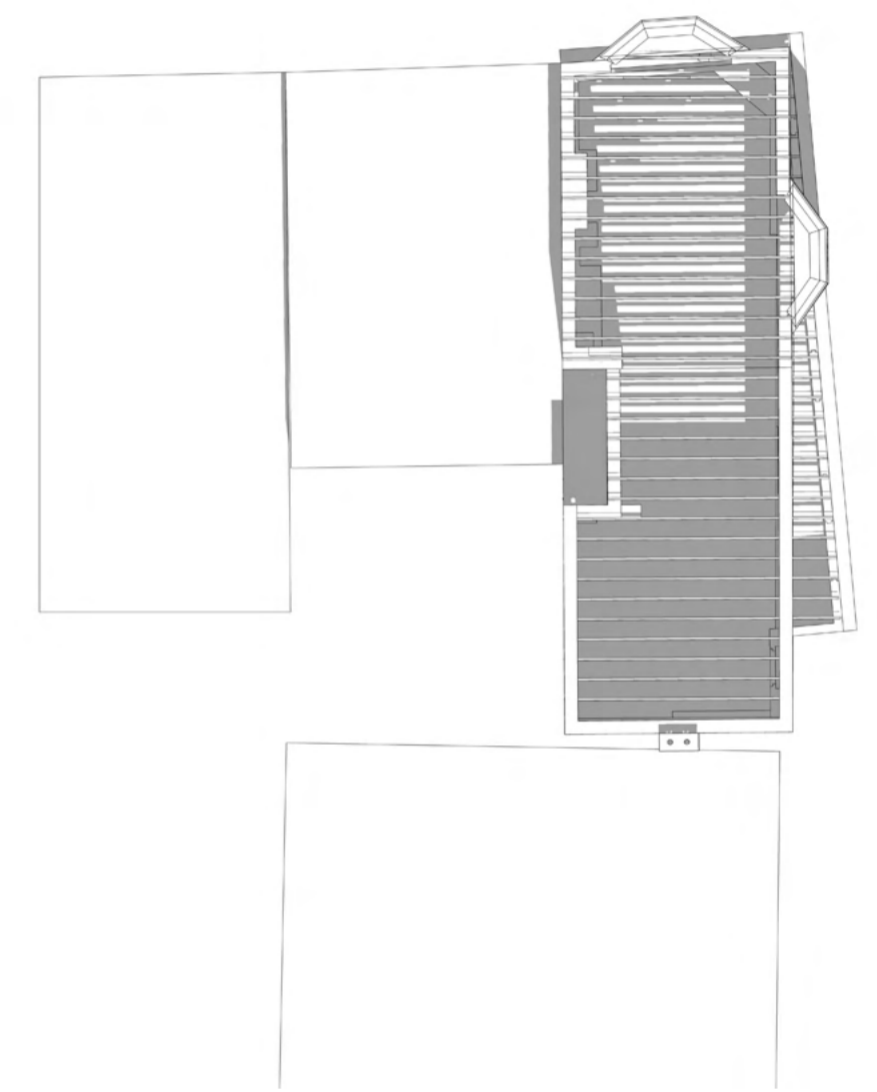
December (21st) - Solstice



September (22nd) - Equinox



March (20th) - Equinox



June (21st) - Solstice

Plans Layed Out For Design

After the sun analysis was made it was then important to select where the activation points will be. They have been arranged in order of sunlight strength, having the strongest display (June) in the basement. The December display will be on the top floor as this is the best location for the time of year.

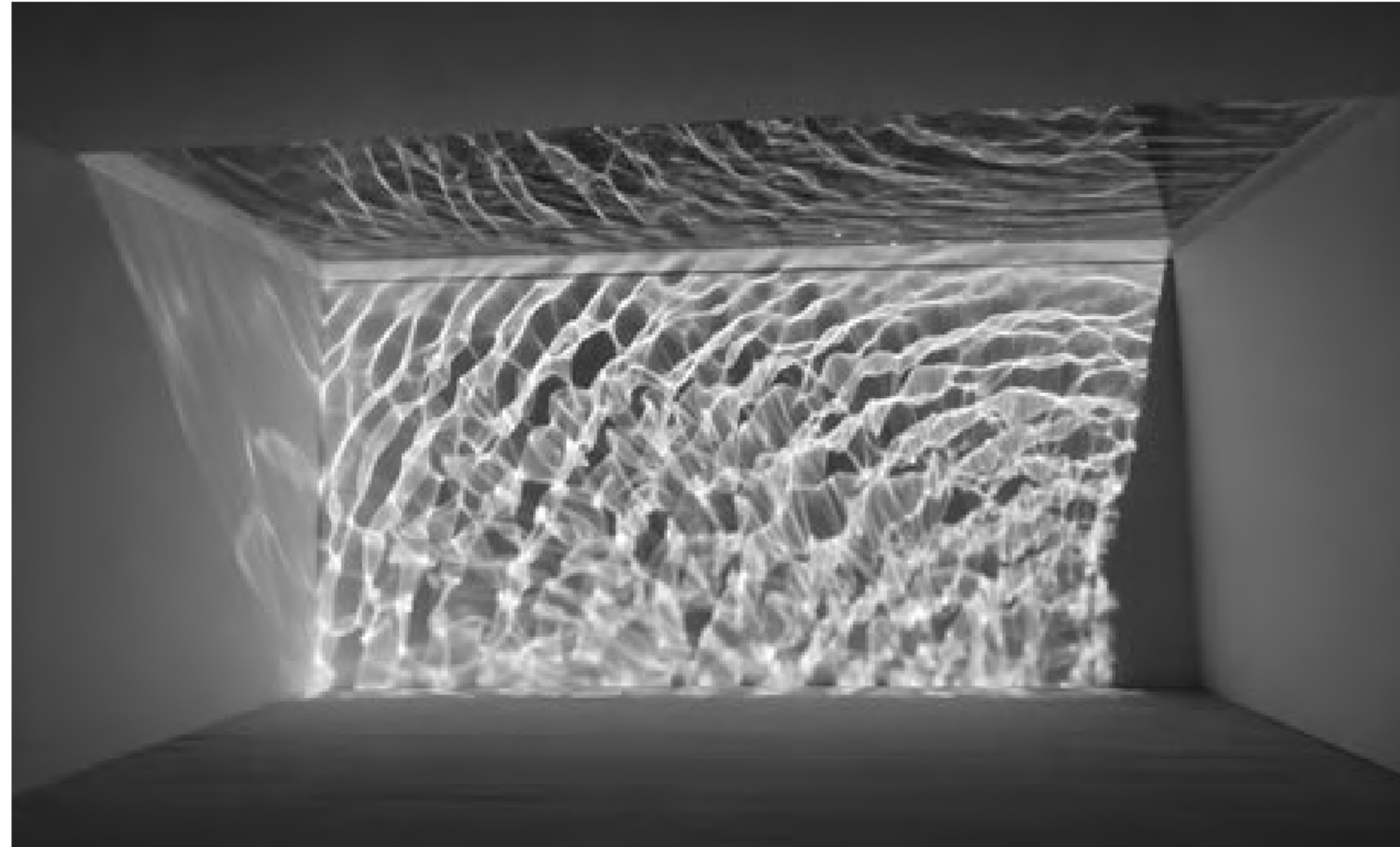
REFLECTION

Noun

The act of reflecting, as in **casting** back a **light** or heat, **mirroring**, or giving back or showing an **image**; the state of being reflected in this way.

Verb

The sun rays reflected off the still **water**.

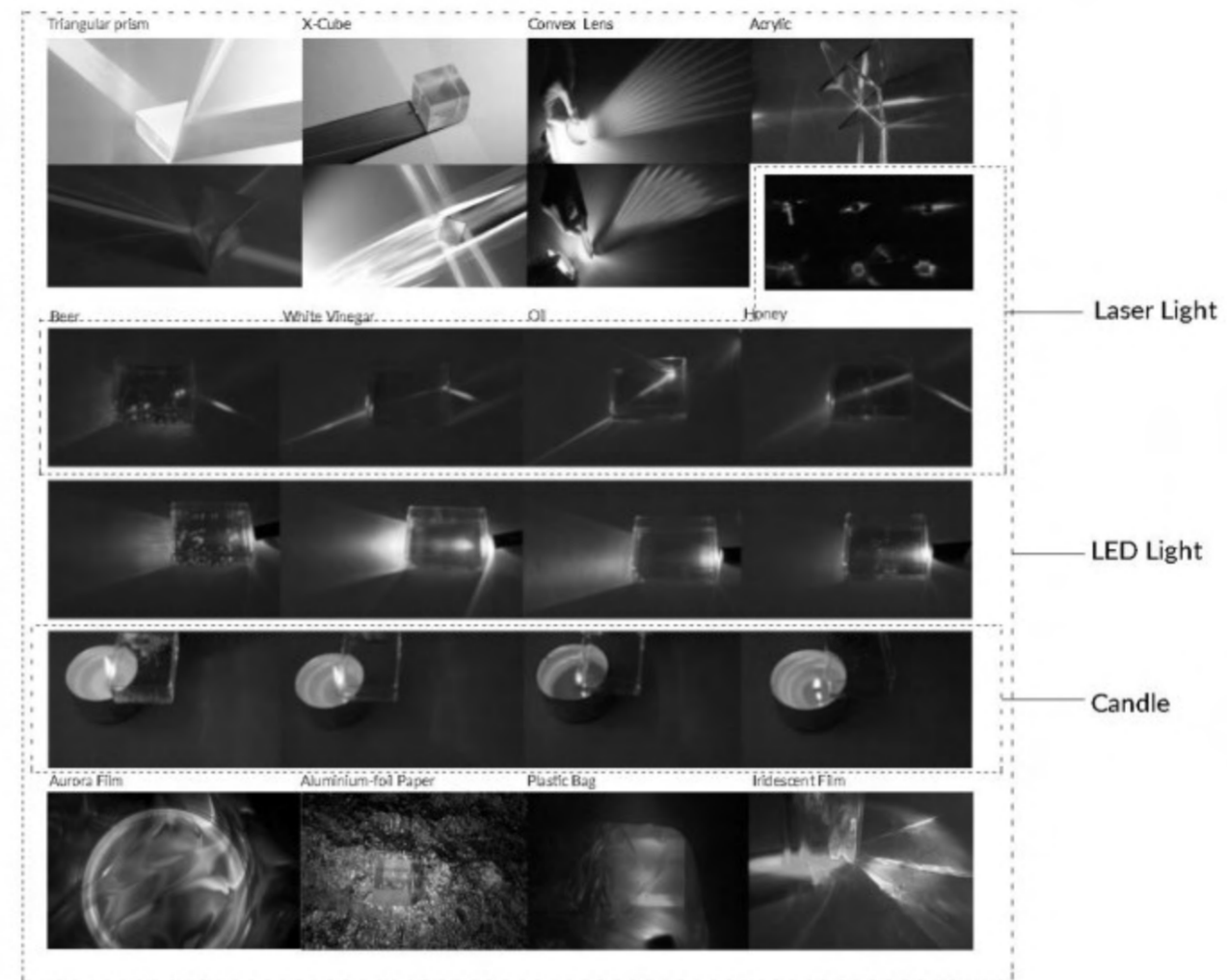


“A wet space apparently”

Philippe Bompas - Caustic (optics)

By constructing a transparent or translucent ceiling, covered by a fine layer of water, a projection of light is created. The surface of the water moves due to a light breeze, creating a continuously unique display within a space. The sun allows for the flow of caustics to present a morphing perturbation of the water surface.

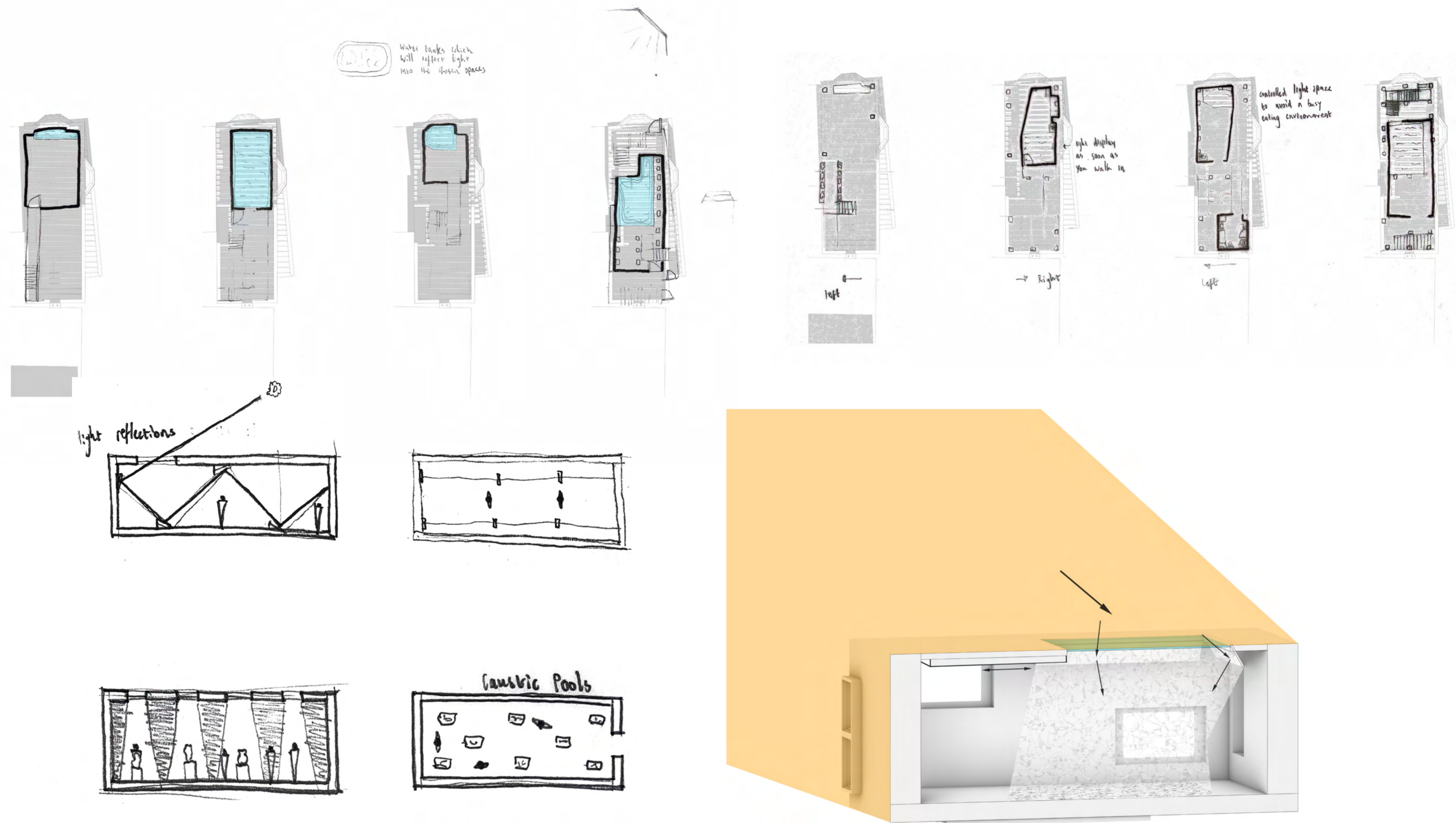
By using this method there will be an opportunity for a theatrical attraction within the sight on the day of the solstice and the equinox.



“The sun never understood how great it was until it hit the side of a house.” Louis Kahn (1994)

Water And Light - Philosophy With Time

An experiment about light and materials was conducted by Chen Xue, Bian Sini and Sun Xiaoxu in 2017. They put together a range of experiments to see which materials would be best suited to express the concept of time. Their philosophical readings summarised the relationship between humans and water, and how one cannot live without the other. The interaction between light and water, therefore creates a symbol of life and change within itself due to the continuous cycle of life.

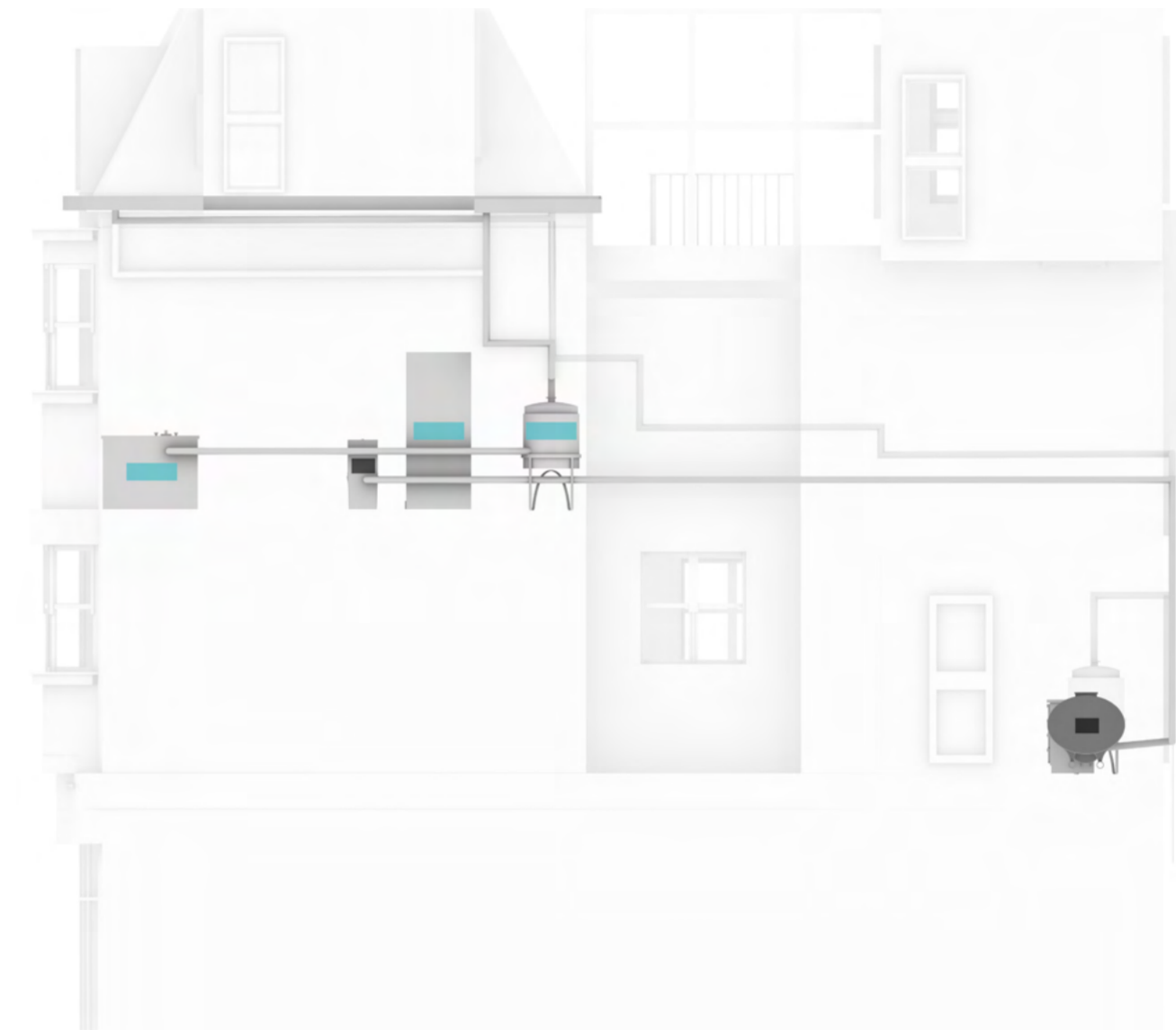
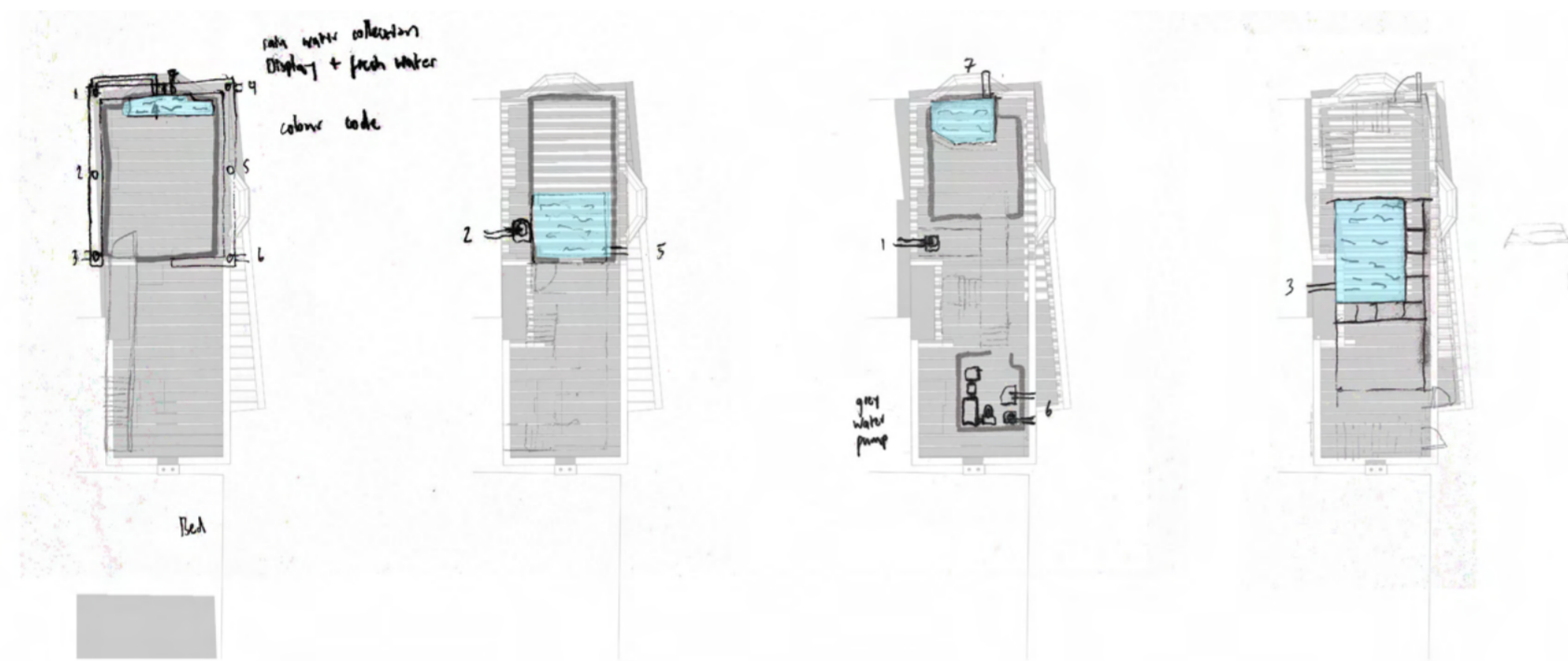


Caustic Sketches

Once I had located the possible areas in which the light pools could be placed it was then incorporated into the site. This continued to look at how light could be displayed, providing the option of different 'pools' of light which will be projected into the spaces.

The diagram on the right displays the use of a mirror which will reflect the light into a specific area of the building. The other option is to design the space around the available

patches of light. The bottom left sketch shows the light to be displayed on the archaeological findings although this will be inverted due to the artifacts needing to be preserved as well as possible.



Size of rainwater roof collector	20 x 0.36 = 7.2
- 20 msq	7.2 x 0.8 = 5.76
Annual precipitation (Brighton)	Average collection of rainwater
- 364mm	= 5.76 litres per day
Evaporation - 0.8mm	

Water System Strategy

The sketches show a continued experiment of where the caustic pools will be placed. Alongside this I investigated how the water will be sourced. One strategy will be for the rainwater to be collected and filtered. It will then be distributed throughout the building. The rainwater will be used for the water pools but also for the shower and sink. The rainwater which is collected will be passed through a filter system and then stored within a tank which will be controlled by the client, in attempt to only use the water when necessary.

Grey water will also be distributed around the building by the help of a water pump. This will include the toilet, washing machine.

Height opens up
the space

Different wall
extensions

Balance between
natural light
+ artificial



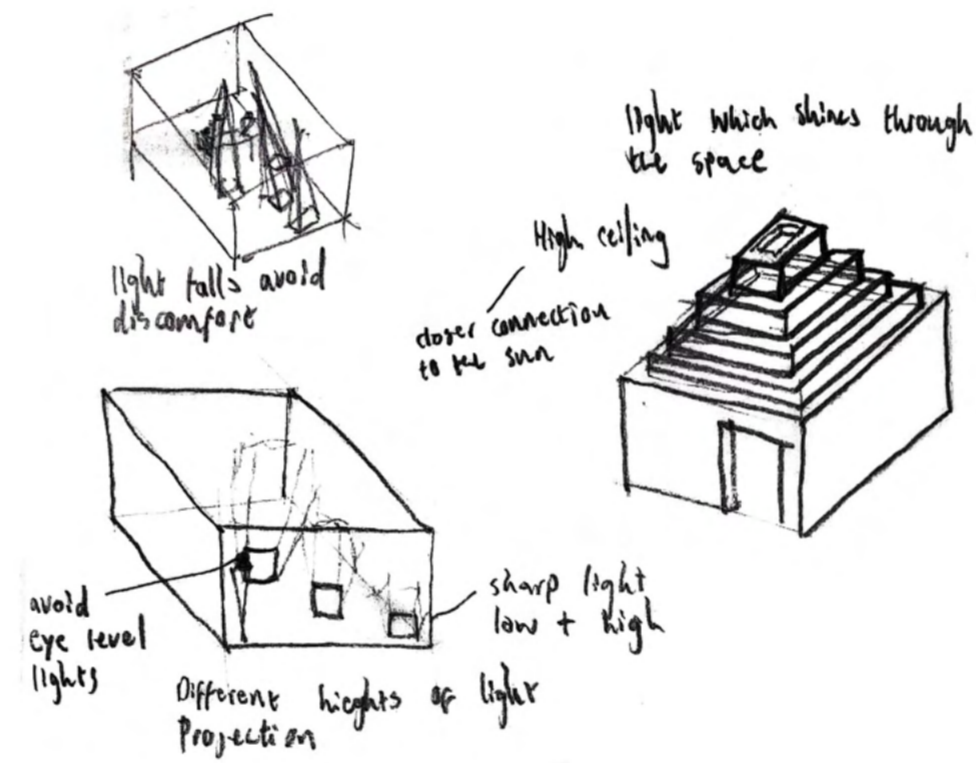
Enhanced perspective

Artificial light sitting
on the perimeters of the
space

"Skyspace,"

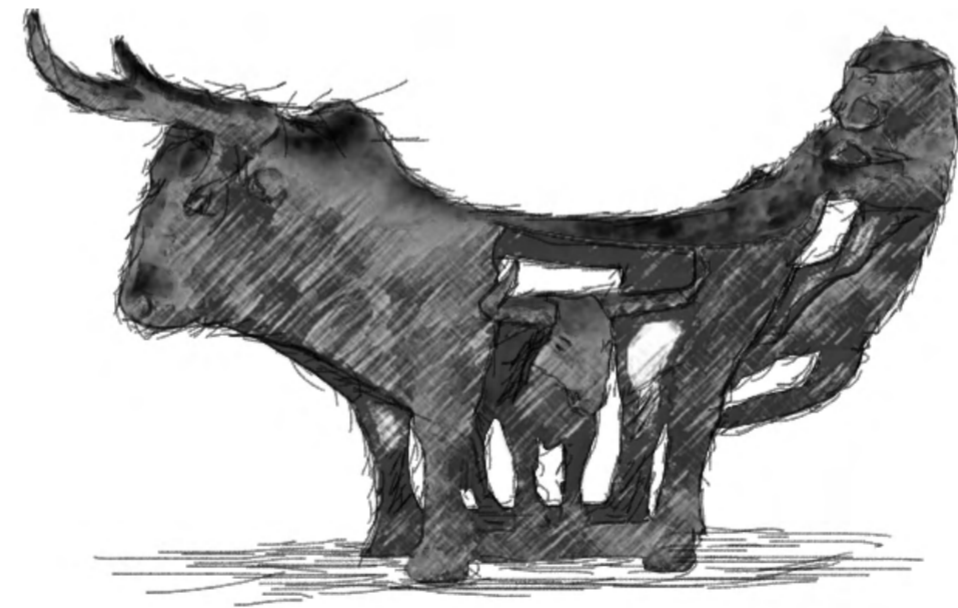
James Turrell

With the use of natural and artificial light, Turrell creates a theatrical display. His projects consider the orientation of the sun and moon, by doing so the windows provide intense moments to highlight the possibilities when considering natural elements.



Sketches - Spatial Arrangement

As the light has become a key amenity within the design process it was important to gather ideas on how the public and client will experience the light falling into each room. Therefore looking at different heights and locations of the windows will become very important for dictating their experience



Location: Iraq
Age: 2094–2047 B.C.
Museum: The Metropolitan Museum of Art

Location: China
Age: 481 - 403 B.C.
Museum: Yunnan Provincial Museum

Location: Syria
Age: 3000 B.C.
Museum: The Metropolitan Museum of Art

Bronze Age Sculpture Collection

These sculptures represent part of my client's collection. As he has travelled across much of the world and specialises in metal work from the bronze age, he has managed to keep these within his possession. The top half of the page shows the pictures he has taken of the findings, whereas the bottom pictures represent his sketches which he would have made once he found them on site. This would have then been scanned and documented along his other work.

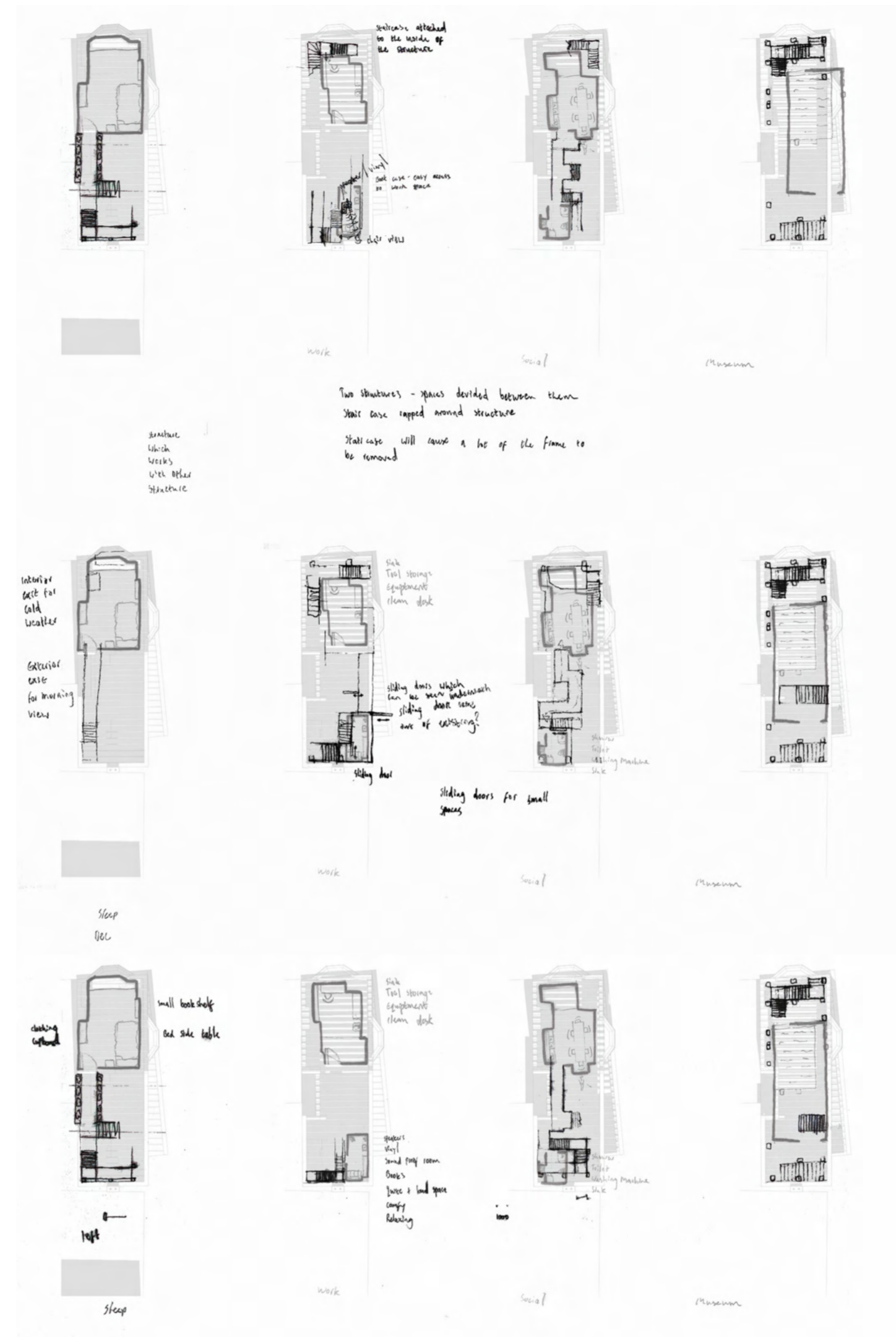


“The old structure with the new aesthetic”

Dovecote Studio - Haworth Tompkins

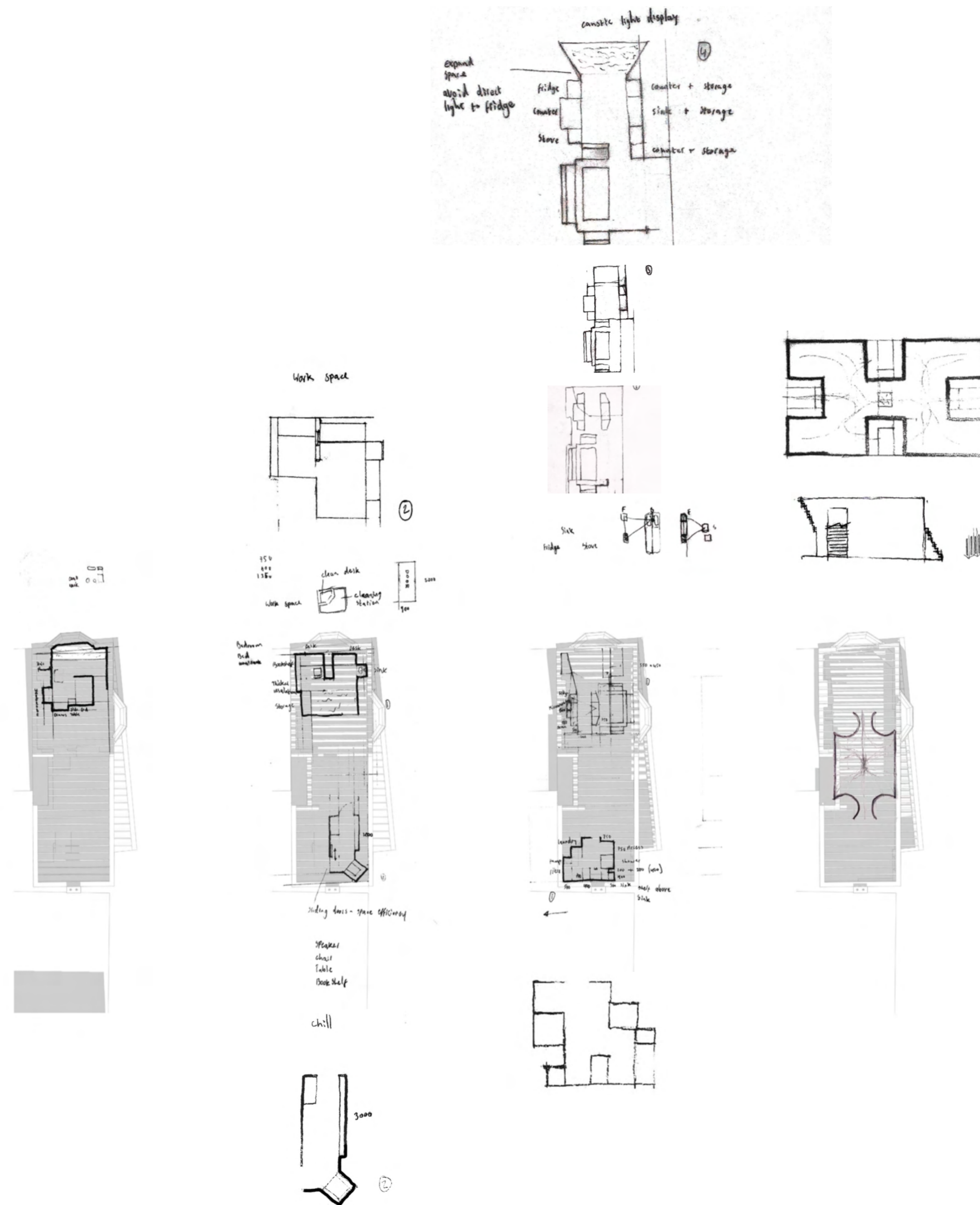
Located at the Dovecote Studio campus in Snape Maltings, Haworth Tompkins found a fitting way for the new construction to be built. With the careful use of rusted steel there is a beautiful contrast between the old and the new. The building pays respect to the previous structure and shows how derelict buildings can be used within future builds.

Within my proposal I will be allow for the existing building to fall apart, exposing the new structure, this sets a create example of what the results may look like in the future.



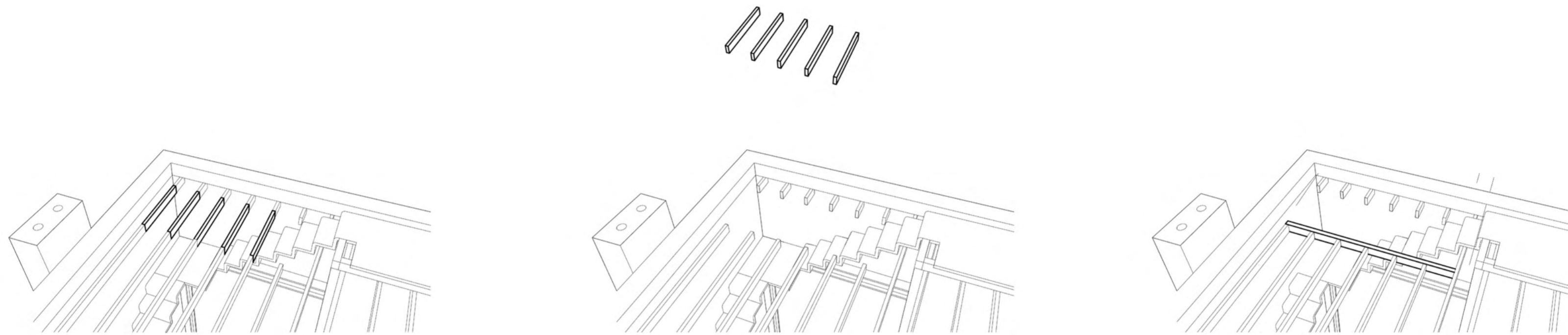
Staircase And Structure Development

This group of sketches show a further advancement of how the structure within my building will be laid out and the access points to get from one floor to the next. In order to decrease the mass of the structure the staircases will be made alongside the beams to increase the stability.



Room Layout Development

Continuing the process of design, here I am testing the boundaries of how small I can make the spaces. with the use of the minimum space standard and the consideration of where the light pools will be placed. The design has started to create some unique shapes which allow for small viewpoints to be created through the different levels.



Wooden Framework Strategy

Due to the proposal consisting of a structure which will sit inside the existing building, certain areas will need to be open in order for the client and the public to access them. The wooden beams will be kept, representing the archaeology of the minute to minute, gradually eroding away over time. To help avoid early erosion the beams which are taken out will also be used to create further stability to the beams which do not touch on either side.



“The views he wishes the observer to appreciate”

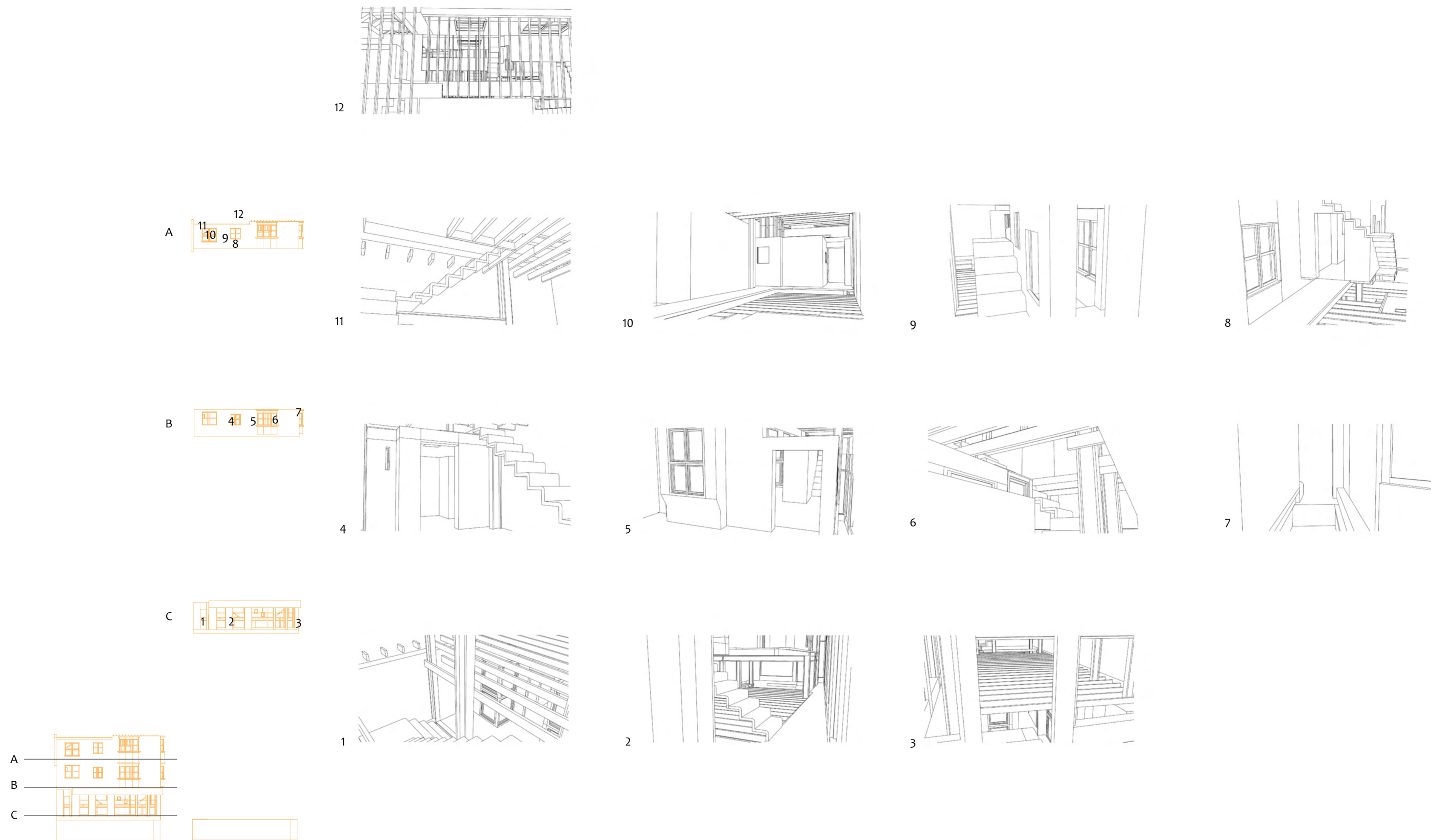
Alvaro Siza - Porto School of Architecture

The work consists of 10 different volumes, each one with its own unique personality, but which find a common identity through colour, opacity and constructive solutions. Alvaro Siza heavily focussed on the connection between the spaces, therefore creating open but intricate viewpoints throughout the campus. This allowed for plenty of natural light and a closer connection to nature. His focus was to enhance the learning environment making bold design decisions in between the classrooms. This would allow for the students to interact with the building even when taking a moments rest.



View Points

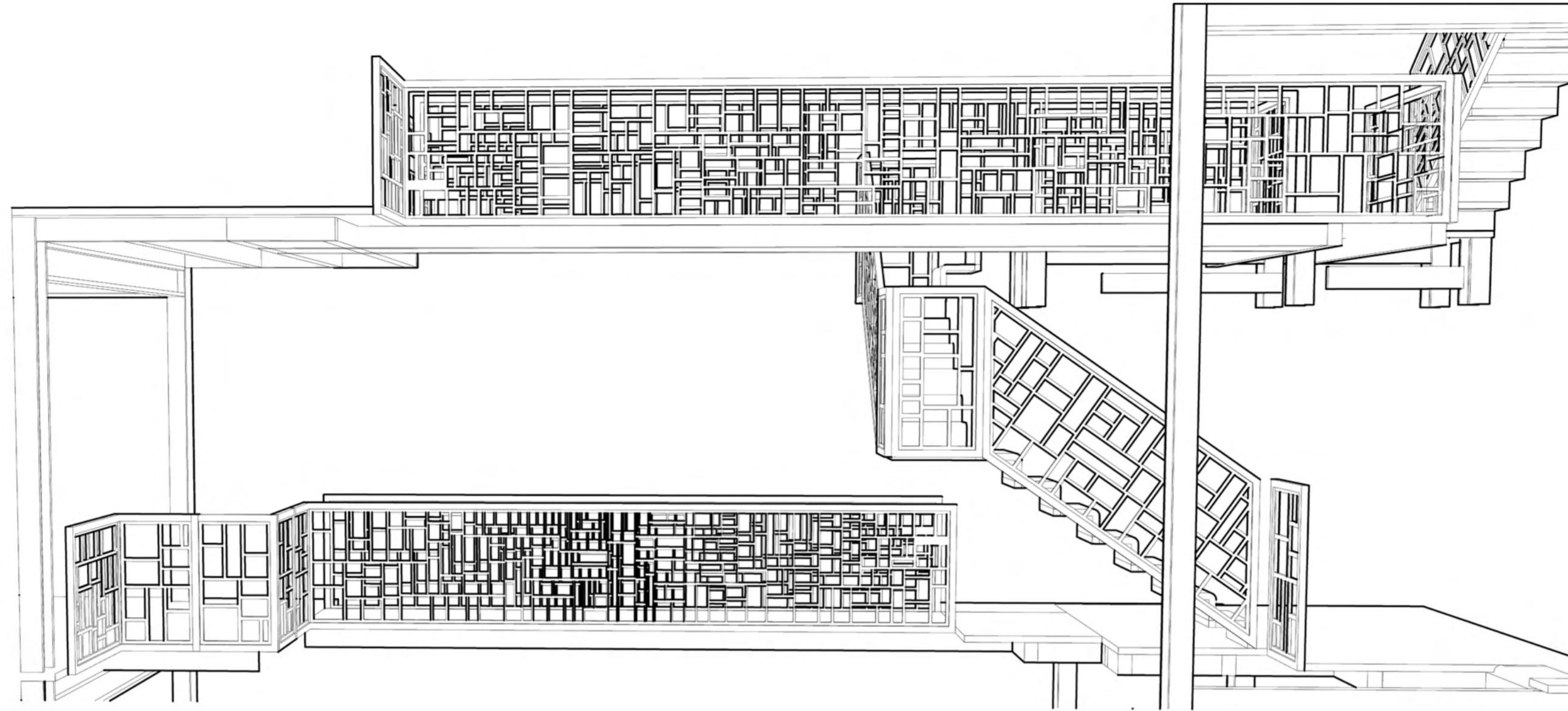
After seeing how well Alvaro Siza creates views between the spaces within Porto School of Architecture, I wanted to create a similar version which would suit the site. The picture on the left shows a view which could be used within his bedroom. Giving a hint of the light display which would be placed at the back of the room. The picture on the right shows a view through the museum. This is something which became very important as it would allow for the public to see hints of activity before even entering the space.



The Journey

In order to create a clear understanding of the experience within the space I created a travel route which runs through the building. The bottom starts with three different entry points, number '2' is a private access which is controlled by the client. The route allows for you to enter the floors above. Giving the client this option will allow him to pick and choose when he lets the public walk around his home.

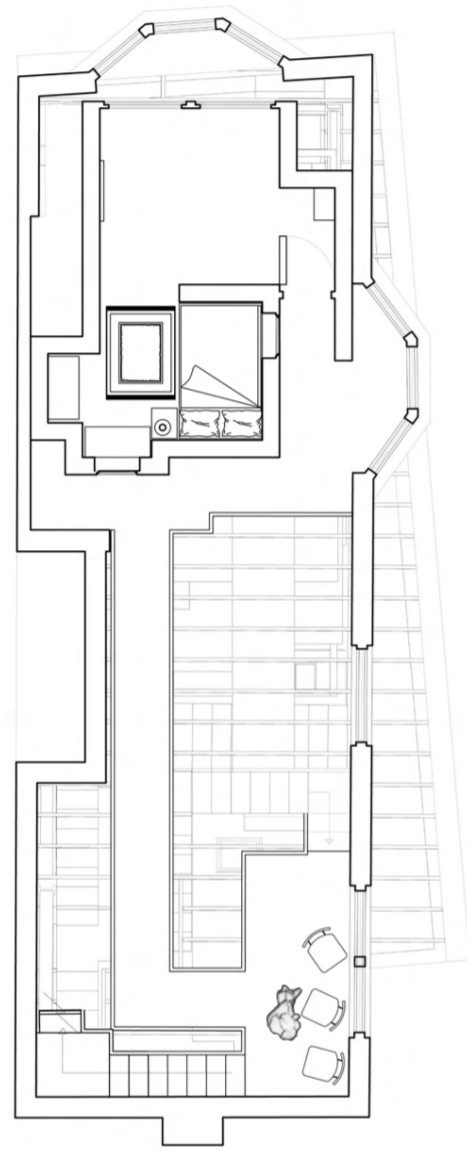
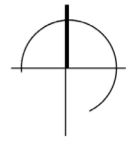
The remaining pictures show several different design features and options of exploration. They are labelled on left hand side (elevation) depending on where they are situated in the buildings.



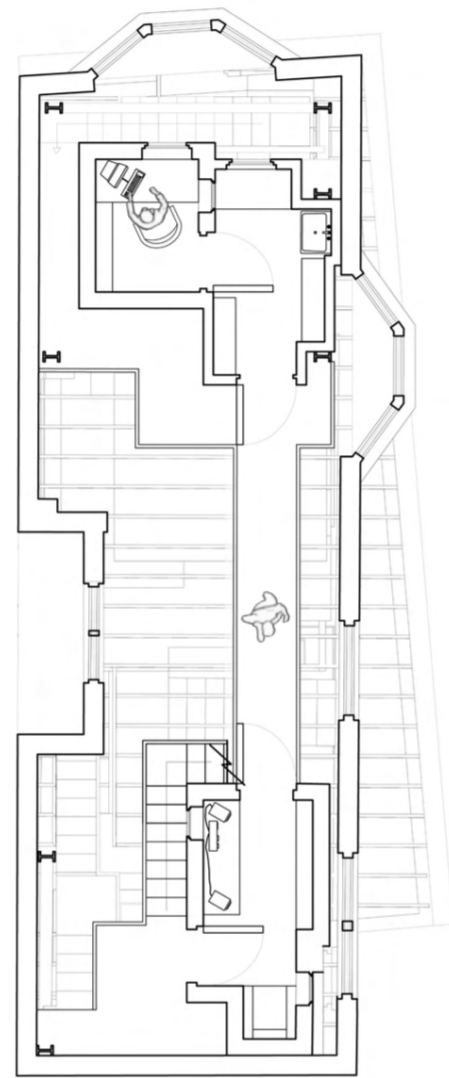
Mosaic Balcony

At the beginning of the portfolio research was conducted to highlight the variety of ruins and archaeological sites around Sussex. One of the sites (Fishbourne Roman Palace) had a unique amount of mosaic tiles restored from the site. Due to its interesting history and abstract aesthetic, I thought it would be a great site to pay tribute towards. This has led to a balcony design which symbolises the roman era and therefore contributing to sites historic referencing.

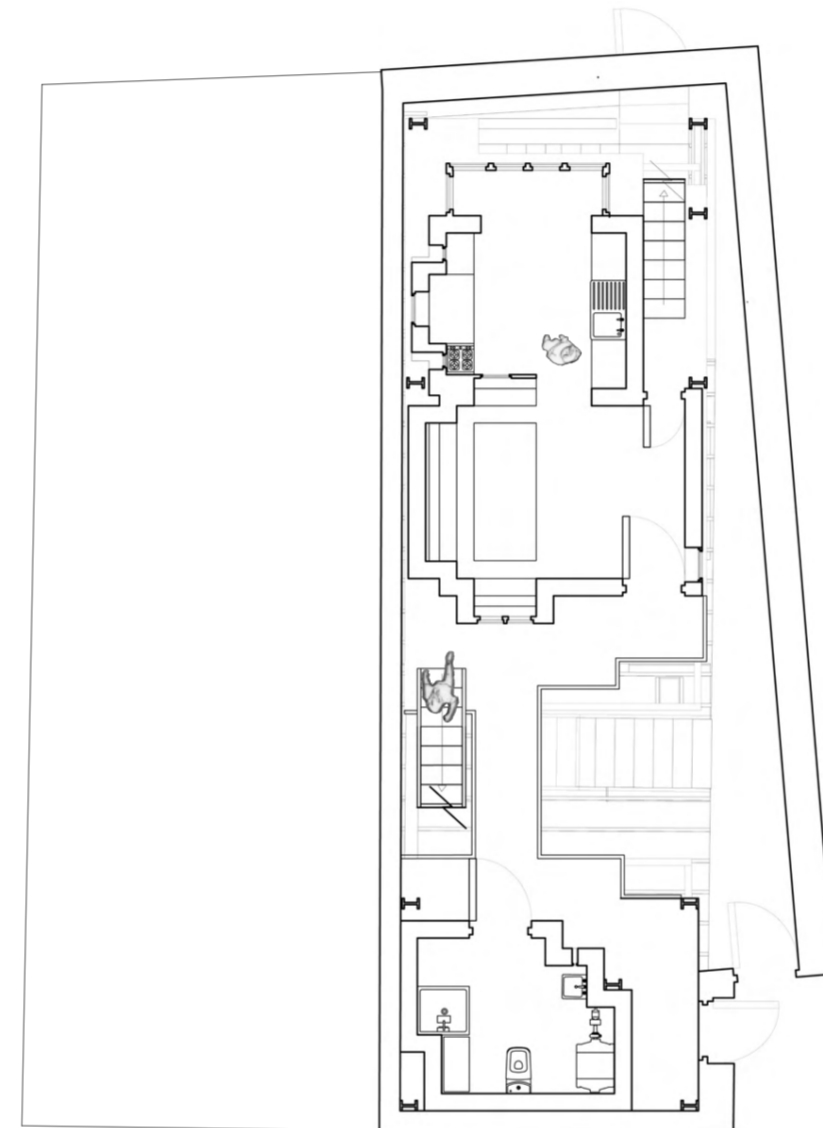
THE FINAL
PROPOSAL



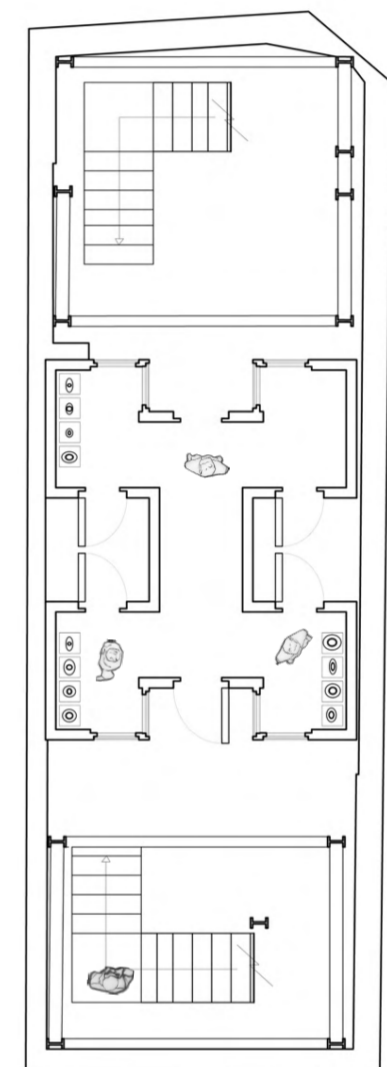
F2



F1



GF



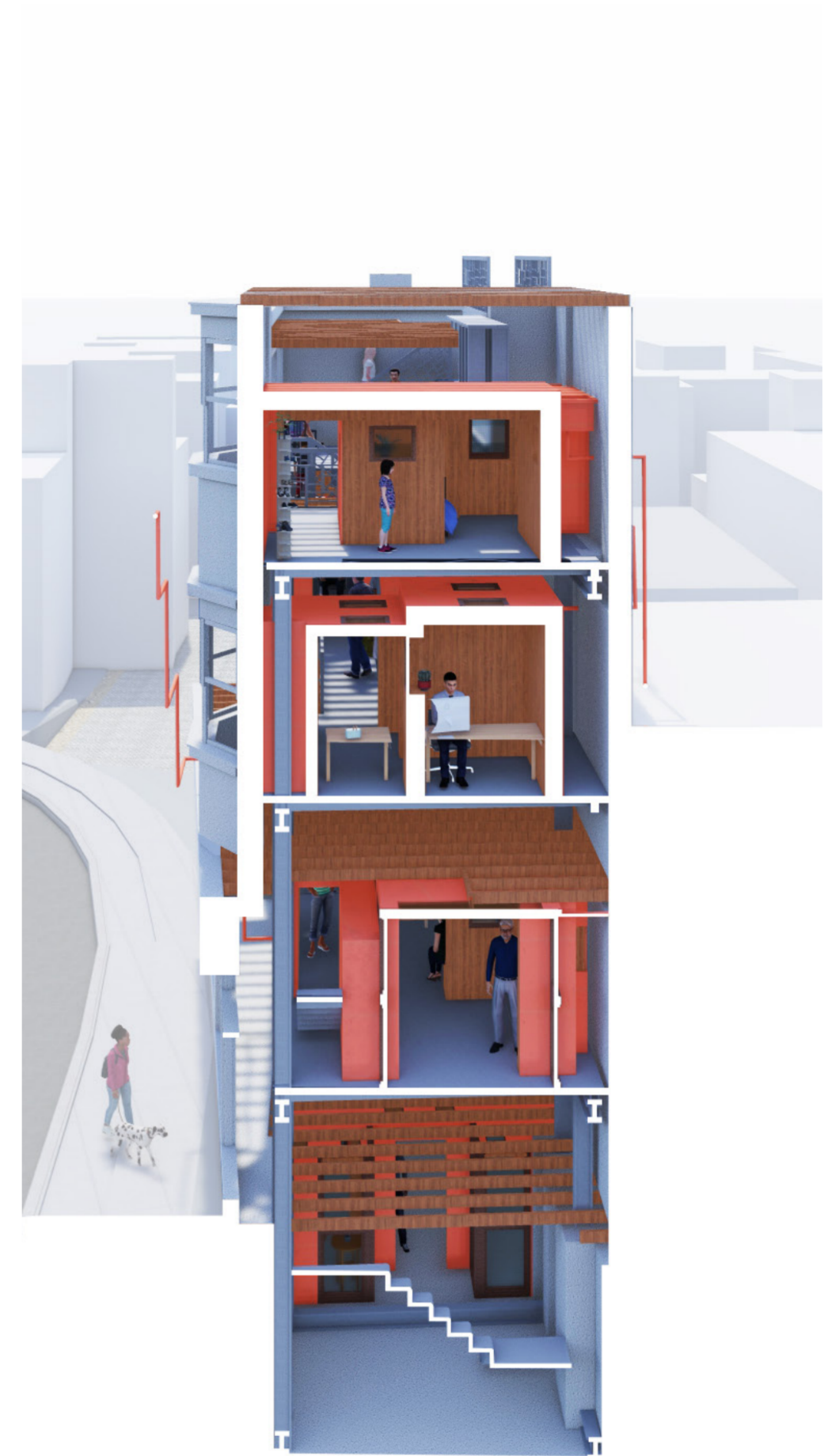
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Proposal Plans



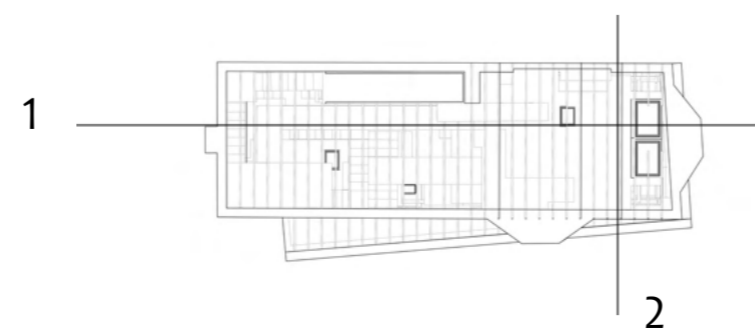


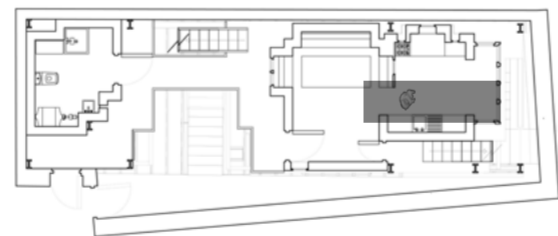
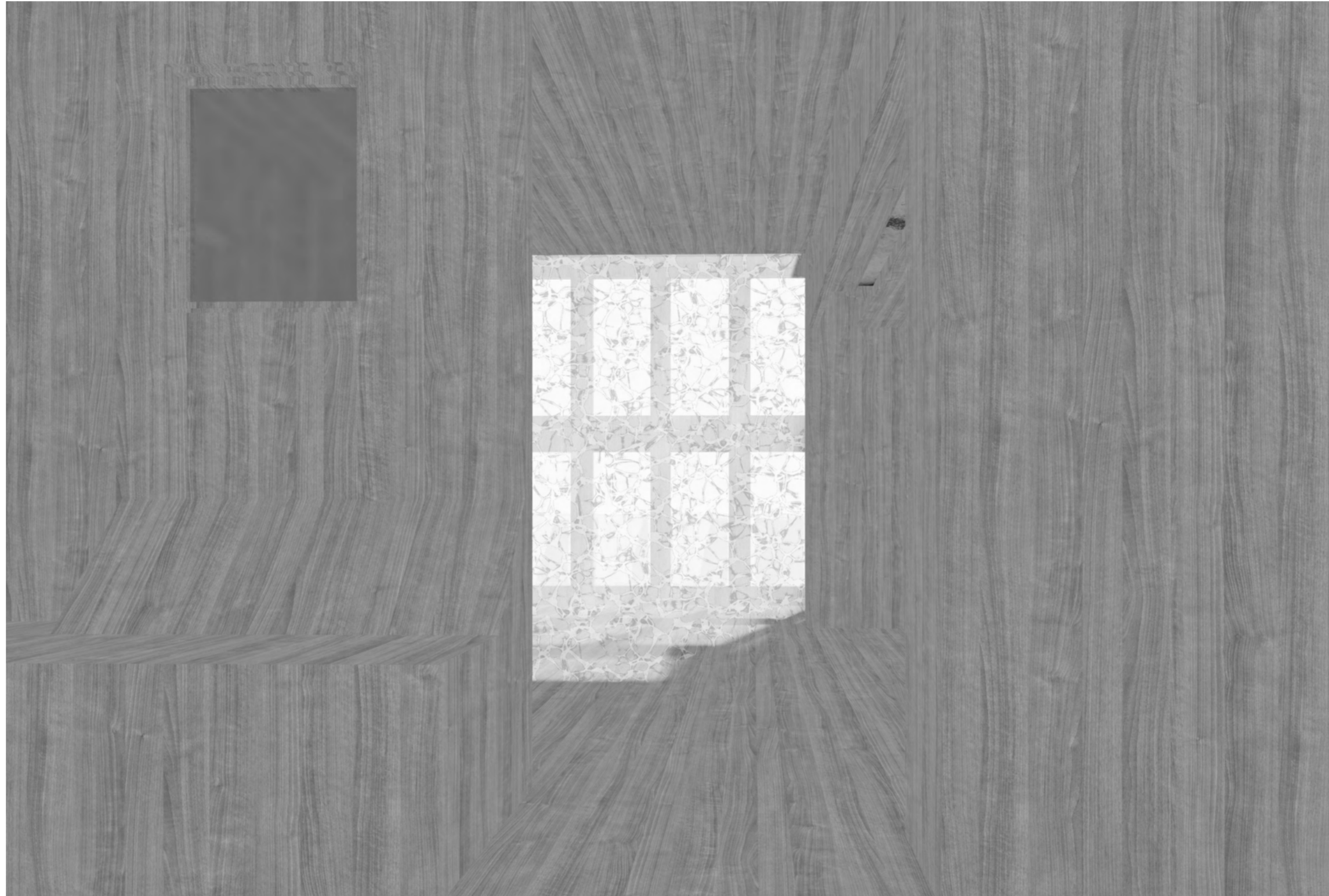
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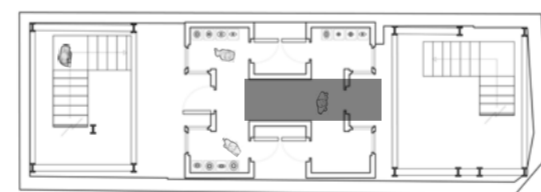
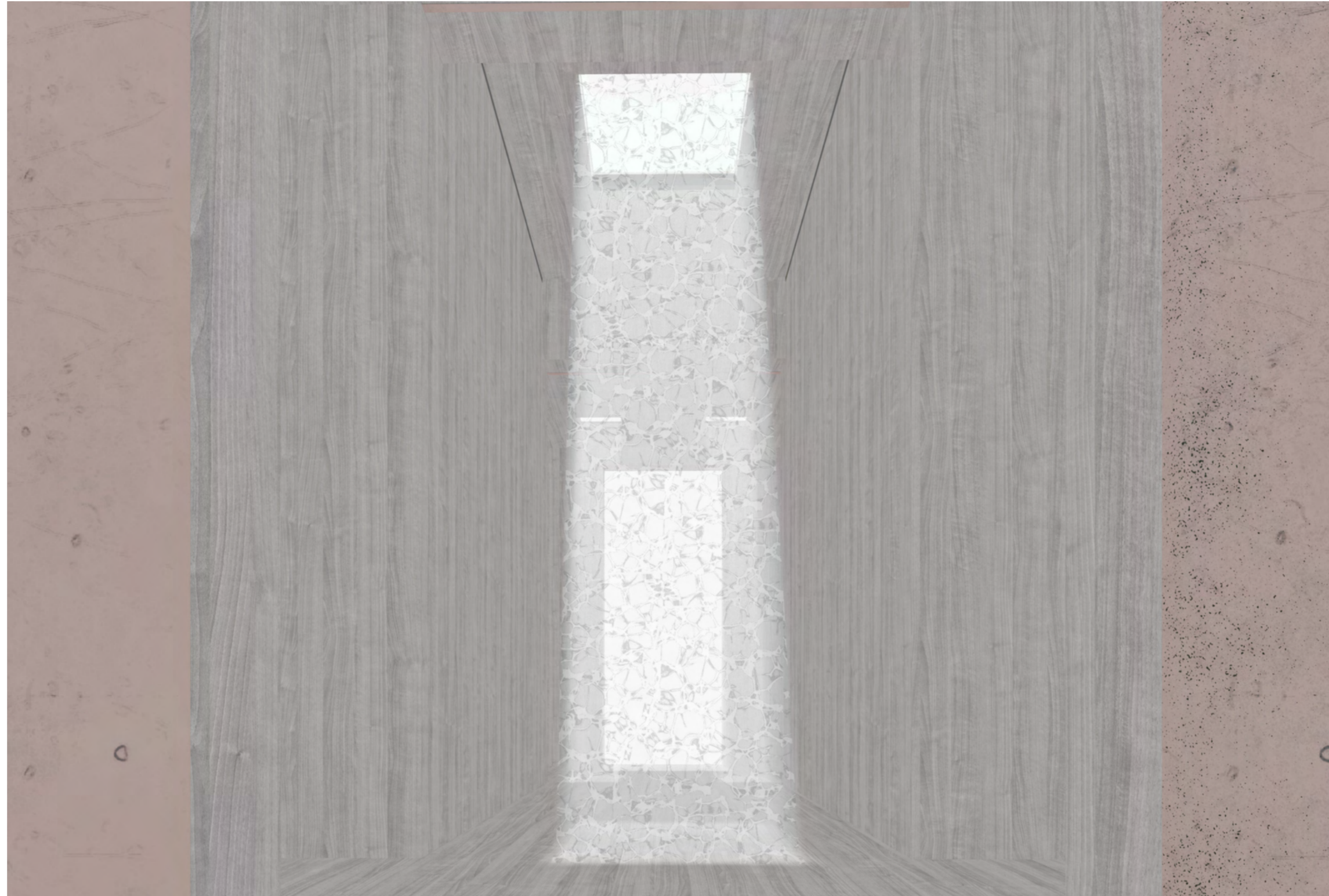
Proposal Section





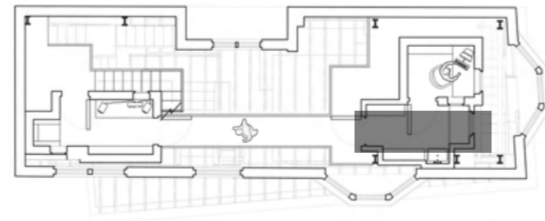
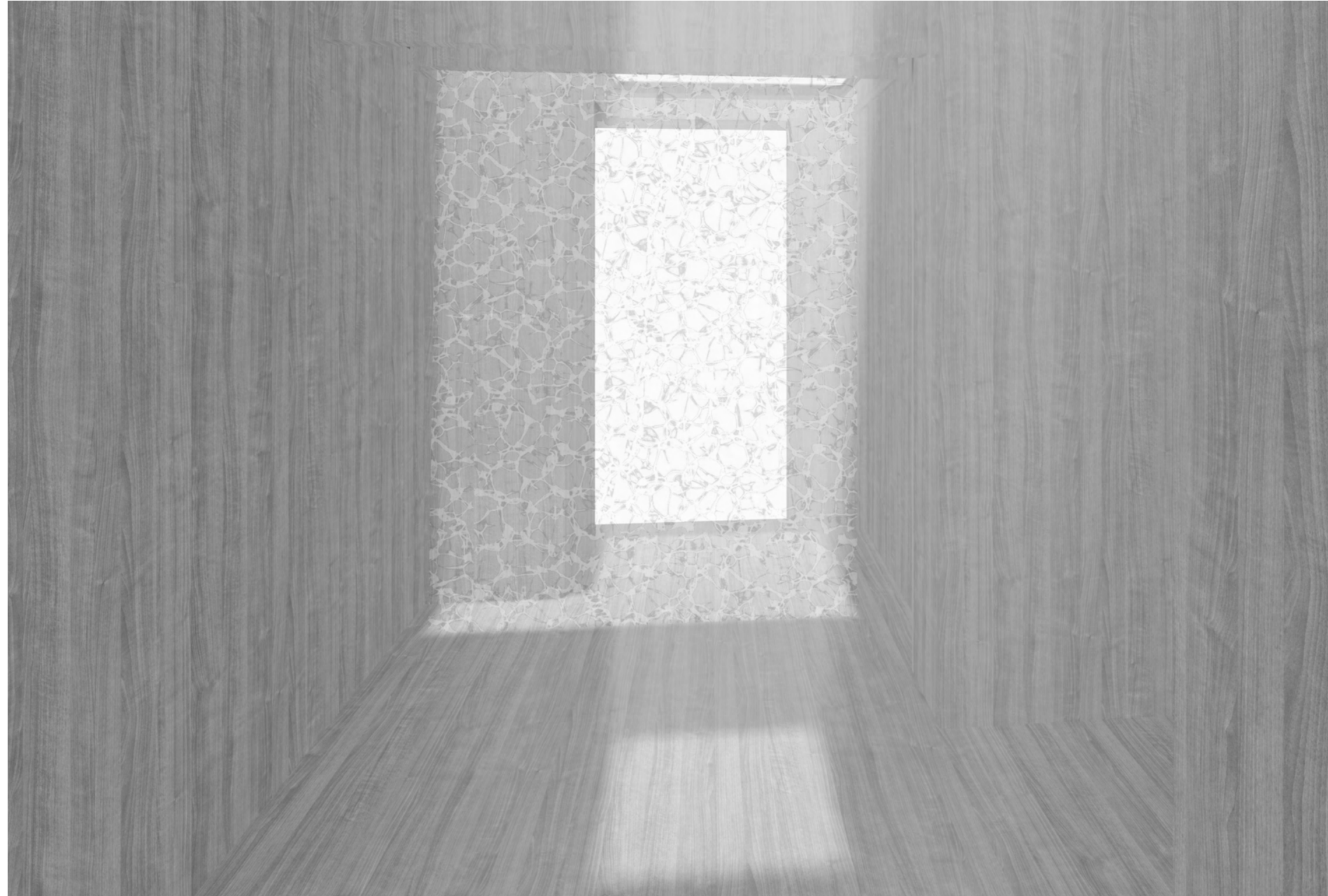
March (20th) - Equinox

Situated in the kitchen, it allows for a large number to view to caustic light presentation at one time.



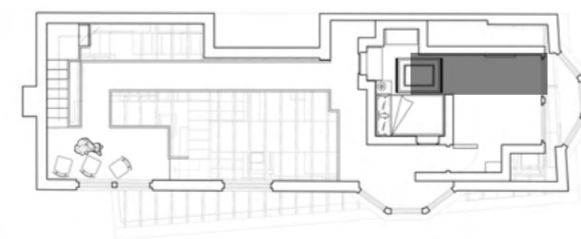
June (21st) - Solstice

Situated in the museum, there will be an opportunity for the display to be viewed from several different angles but with enough protection to increase the contrast of light to dark.



September (22nd) - Equinox

Situated in the work space, there will be a display as you enter the room to provide an a theatrical entrance but this will also allow for the desks to only be provided with northern light which will avoid any distress whilst working.



December (21st) - Solstice

The final display is in the client's bedroom, being displayed in an open space which will provide room for a larger number of people to visit. The bedroom itself is sheltered to allow for pockets of privacy.



The Present

Once the proposal has been constructed it will then be open for visits and inhabitation. The client (Paul) will then begin his new project within his own home. understanding and analysing how the building will erode and what present archaeology will begin to develop. The project will hope to aid his passion within the field of archaeology, and it will allow for a new form of research to begin.

Alongside this there will be an event held four times a year showcasing the equinox and solstice which will be open to the public. Paul will be able to choose whether he lets people visit his home in between but the museum will always be open. This gives him the opportunity to display his work allowing him to educate and encourage the public towards his profession.



The Future

Over time the existing building will eventually erode, exposing the installation. The materials selected will also age over time and will continue their natural entropy. This will continue the process of encapsulating time and historic referencing, providing a symbol for modern day archaeology.