ARCHITECTURE PORTFOLIO

CHANDNI PATEL

DESIGN 5A

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Kent School of Architecture 2019/20
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Unit 4

FROM ACTIVISM TO GOVERNANCE - CLIMATE CHANGE AND ARCHITECTURE.

This year Unit 4 focus' on the subject of Climate Change, the relationship of ecology and architecture and the role of Activism in influencing and educating civil society. Split across the cities of Venice and London the year begins with the exploration of ecology and weather in relation to Climate Change. Exploring how climate can influence architecture, working in harmony with nature. As one of the most important issues of our generation, the role of activism will be explored in its successes of raising awareness and enforcing change.

TASK 1 - Transformative Installations

An exploration into how perceptions of space, politics, and thinking of climate change can be conveyed through transformative art pieces or installations.

TASK 2 - Climate Change

Climate Change is happening all around us, but who are the real contributors, and what are the major impacts happening around the world.

TASK 3 - The Climate Machine

Investigating how the climate can be used as a physical measuring device, or a direct sign of warning to the possible affects of changing weather conditions.

TASK 4 - John Soane Temporal Piece

An exploration into temporality, with experimentation of weathering of an artefact, through intentional and unintentional control of destruction.

TASK 5 - Activism

Activism takes on various forms, with strikes and protests occurring more and more as Climate Change becomes an issue that can no longer be ignored. Using it as a tool for change it has the abilities to gain the attention from Governance, influencing policy changes.

TASK 6 - Climate Pavilion

Set by the International Maritime Organisation the pavilion aims to become a final think piece which educates people of the potential future impacts to the city if change does not occur.

- TRANSFORMATIVE INSTALLATIONS -

This task set out to find examples of various different artists, installations, interventions, sculpture & Movements that transform your perception of space, politics, society, thinking or its own form through the climate.

The pieces found aimed to explore the four different elements of Earth, Air, Water and Fire in transformative or Kinetic Installations.

This could be quite obscure, and the pieces could include less obvious elemental qualities, such as using humidity, wind, air temperature, fire or even pollution, to portray a message in either a direct or more subtle form about climate change.

Dan Das Mann - Crude Awakening - 2007

The centrepiece is a 99-foot-tall wooden oil derrick, which included the completion of the steps inside that allow attendees to climb to the top. The installation dramatises the worshipful relationship and dependence modern man has toward oil.

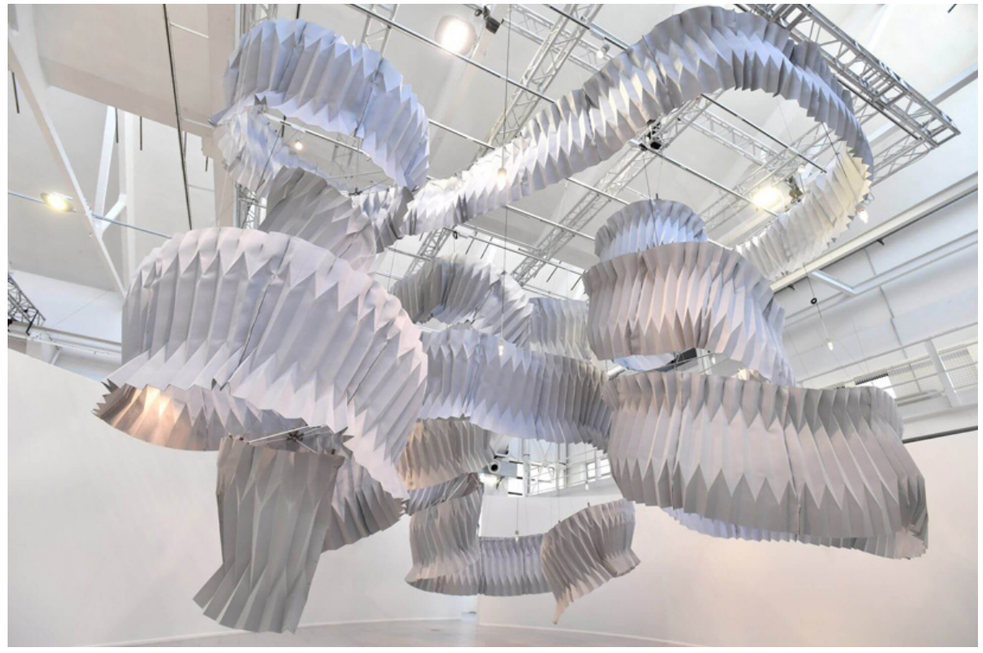
Four different containers at each corner of the tower shot a total of 900 gallons of jet fuel (given away by NASA as unusable for its purposes) to engulf the top of the structure in a huge fireball creating 2.4 gigawatt's of energy, was enough to power the entire Bay Area for one minute.

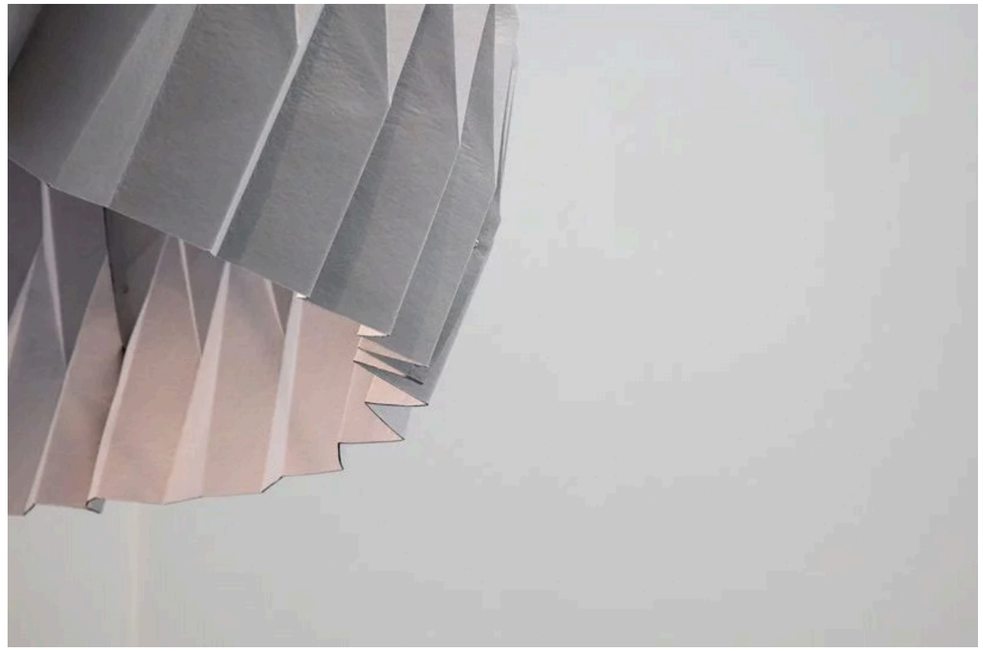
Kengo Kuma - 'Breath/ng' - 2018

Kuma's has created a six-metre high structure, made from large pleated coils of a special pollution-neutralising material, which trapped particles of pollution as air passed through the mesh fabric.

The installation has the power to absorb the pollution of an estimated 90,000 cars in a year.

The structure is comprised of 120 suspended fabric panels, which have been developed by Italian company Anemotech. The fabric elements have been folded by hand like Origami to increase the pollution-absorbing capacity of the structure.





Joshua Allen Harris - 'Air Bears'

Harris has created quite an online buzz with his polar bear-like inflatable plastic bag bears. It inflates and deflates with the passing of the subterranean subway trains, springing to life and then fading away in a vital commentary on global warming.

What starts as a lump of plastic slowly inflates into a giddy, shivering, gleeful mini polar bear - which then deflates back into a lump on the ground when the air runs out. Forcing passers-by to watch it die out over and over again.

Christo Guelov - 'Colour Mobile'

Rivers are a source of life and energy. Historically the Tarn River has been used to produce electricity through the hydroelectric turbines of the Brusson Plant, which is now abandoned.

The plant was abandoned after extreme weather conditions led to a flood which devastated the local community.

The colour mobile seeks to honour the history of the River Tarn in a joyful and engaging manner.

Courtney Mattison - 'Fossil Fuels'

The LA-based artist and "ocean advocate" hand-builds enormous and intricate ceramic sculptural installations inspired by the fragile beauty of reefs and the human-caused threats they face. From highlighting our changing seas to the depressing issue of dying coral reefs, she's now drawing our attention to fossil fuels with a clever new series of the same name.

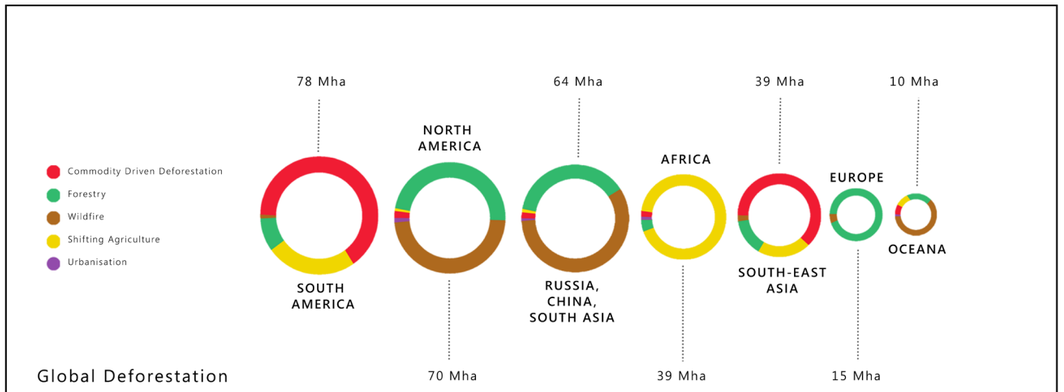
Made out of glazed stoneware and porcelain, the artworks show bits of coral growing out of oil drums to yet again shout about the way climate change is destroying our oceans

- CLIMATE CHANGE -

This task sets out to find some interesting examples of the impacts and causes of climate change, and who its main contributors are.

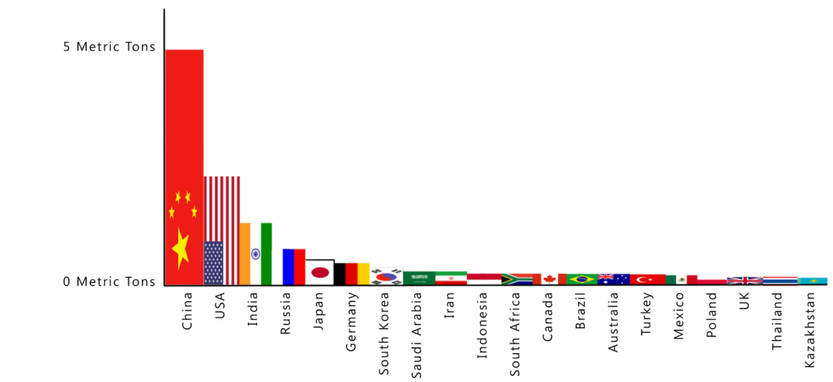
Higher fossil fuel consumption has led the level of carbon emissions in the atmosphere has increased in large amounts over the past few years. This is having large impacts to all types of ecosystems, both on land and at sea.

High economy countries such as USA, China and Russia are amongst the biggest contributors to emission being emitted into the worlds atmosphere. With high amounts of different types of industries, it also lists highest in fossil fuel consumption and levels of deforestation. Even though the levels of CO2 Emissions are extremely high in these countries it is also having serious repercussions on many countries around the world who are small contributors to the worlds overall issue.



Global Deforestation

10 Highest Co2 Emitting Countries Worldwide



Global Fossil Fuel Consumption

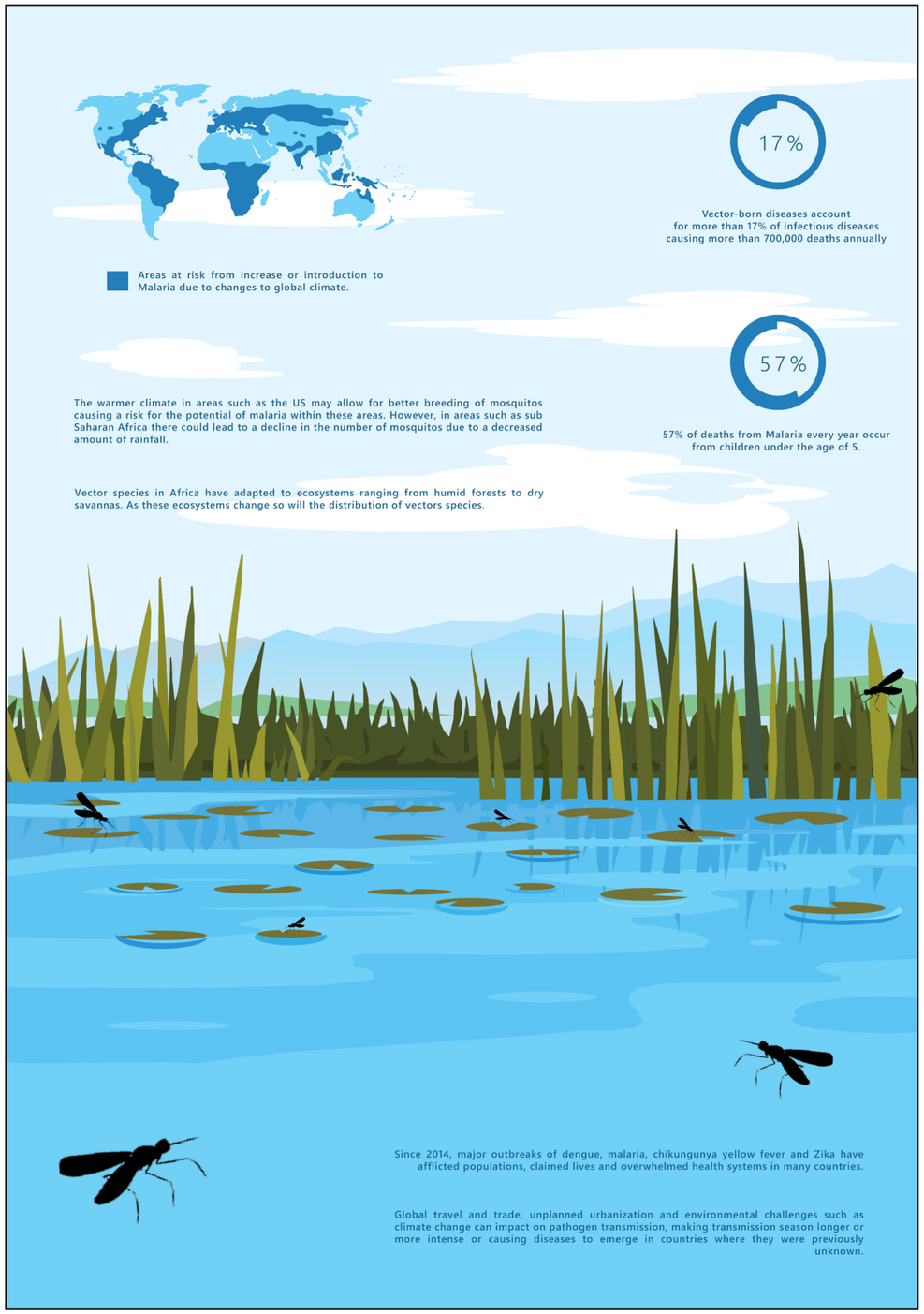
01

1. https://www.wri.org/blog/2017/10/global-tree-cover-loss-rose-51-percent-2016
2. https://www.ucsusa.org/resources/each-countrys-share-co2-emissions

01

Climate change may transform the community of microbes that forms the crucial top layer of soil, known as a biocrust. Throughout the arid regions of the world, desert soil is permeated by a cryptic collection of photosynthetic organisms, including microbes, lichens and mosses. These mostly bacterial biocrust's anchor the soil, preventing sandstorms and erosion. They also play a critical role in cycling carbon and providing nitrogen in the soil, which feeds the growth of desert plants.

1. https://esdac.jrc.ec.europa.eu › themes › global-soil-erosion



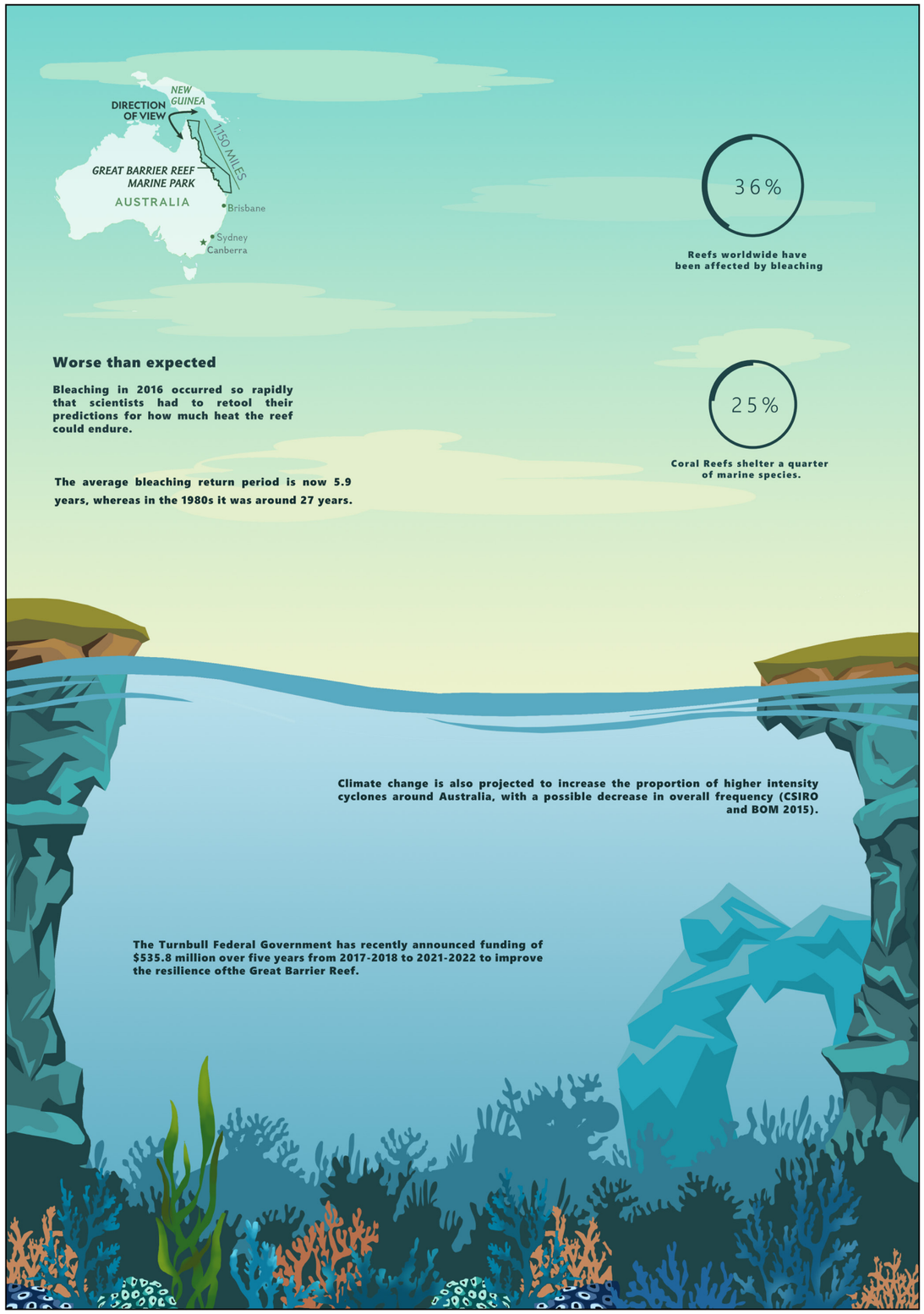
02

The tropical African climate is favourable to most major vector-borne diseases, including: malaria, schistosomiasis, onchocerciasis, trypanosomiasis, filariasis, leishmaniasis, Rift Valley fever, yellow fever and tick-borne haemorrhagic fevers. The continent has a high diversity of vector-species complexes that have the potential to redistribute themselves to new climate-driven habitats all over the world, leading to new disease patterns.

1. https://www.who.int/news-room/fact-sheets/detail/vector-borne-diseases
2. https://www.nhs.uk/conditions/malaria/

Triggered by unbalanced sea temperatures, bleaching destroys a reef's colourful algae, leaving the coral to starve. The Great Barrier Reef illustrates how extensive the damage can be, with thirty percent of the coral perished in 2016, another 20 percent in 2017. Much of the marine ecosystem along the reef's north coast has become barren and skeletal with little hope of recovery.

The largest contributor to the destruction of these reefs all over the world are from large ships. Both cruise ships and those used for exporting and importing goods emit extensive amounts of black carbon, sulphur dioxide and nitrate oxide into both the atmosphere and water.



01

1. https://www.aims.gov.au/coral-bleaching
2. https://www.arcgis.com/apps/Cascade/index.html?appid=8e92f6992bbc4bf3a764d2ad408af68e

01

Even though cruise and shipping companies are polluting more and more every year, they are currently exempt from the Paris agreement on climate change and have largely unregulated pollution levels.

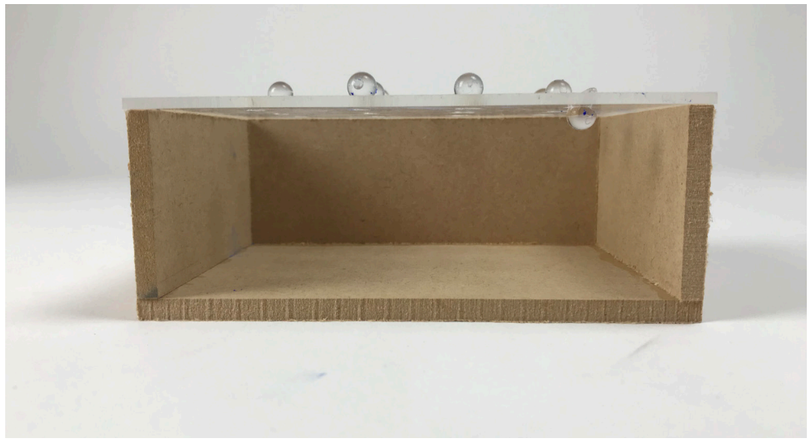
All other transport types have regulations in place for emissions, yet boats have remain unscathed by policies for years. However, as a result, The International Maritime Organisation in April 2018 agreed a draft greenhouse gas strategy for shipping and cruise ships to reduce its emissions by at least 50% by 2050.

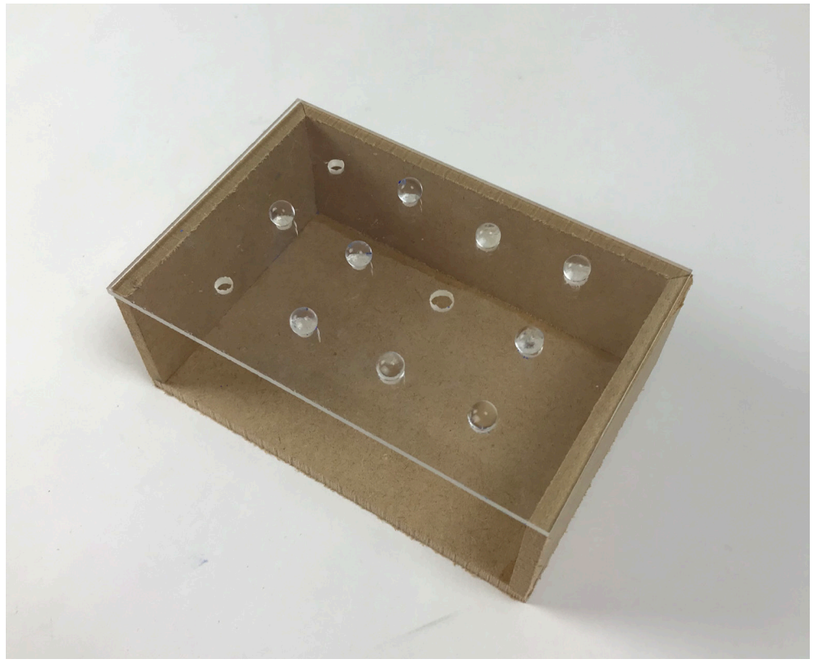
- THE CLIMATE MACHINE -

This task aims to explore kinetic transformative structures as a response to the studies of climate change and transformative installation pieces.

The machine will measure of study using an element as its main driver, or could even transform an environmental element into something else, such as wind to movement.

This task was completed as a group task, where the final outcome became a portable device that could be deployed in its intended area of study.





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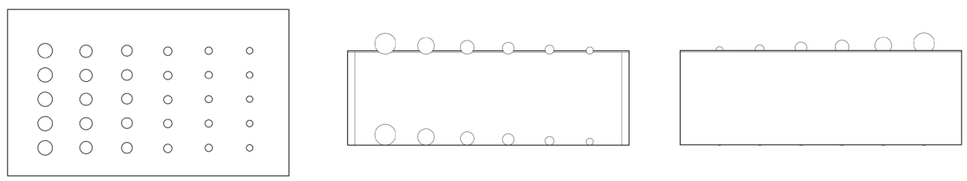

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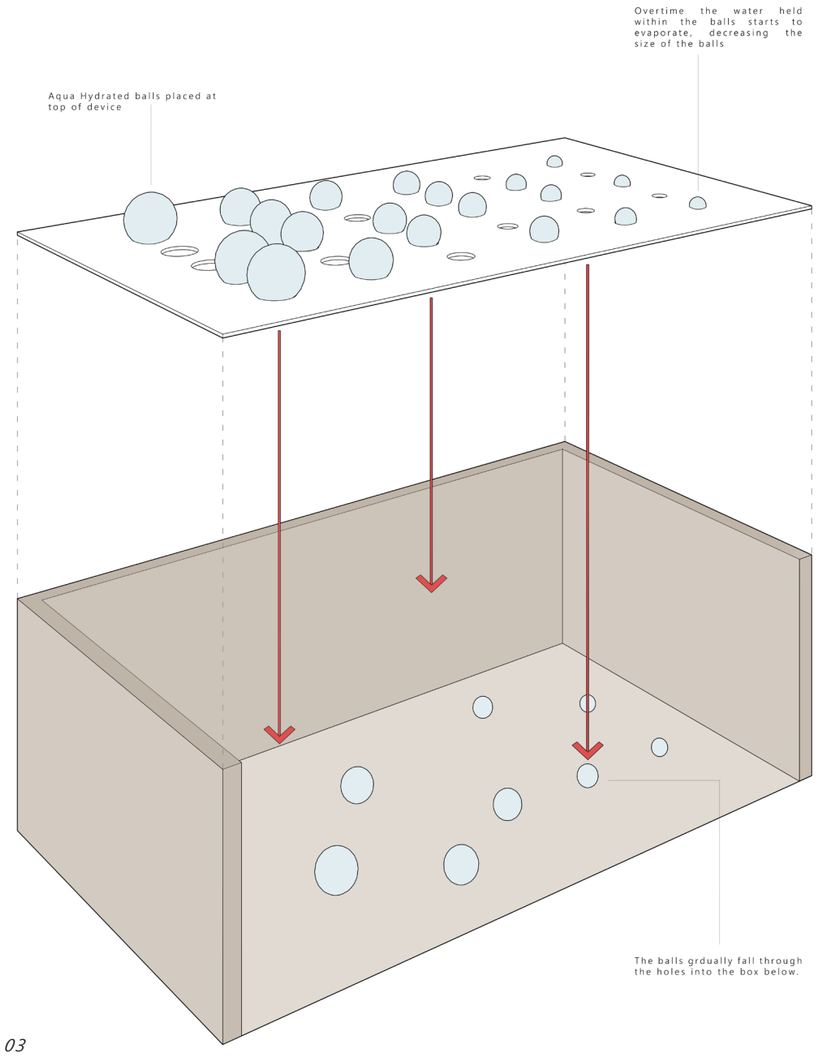
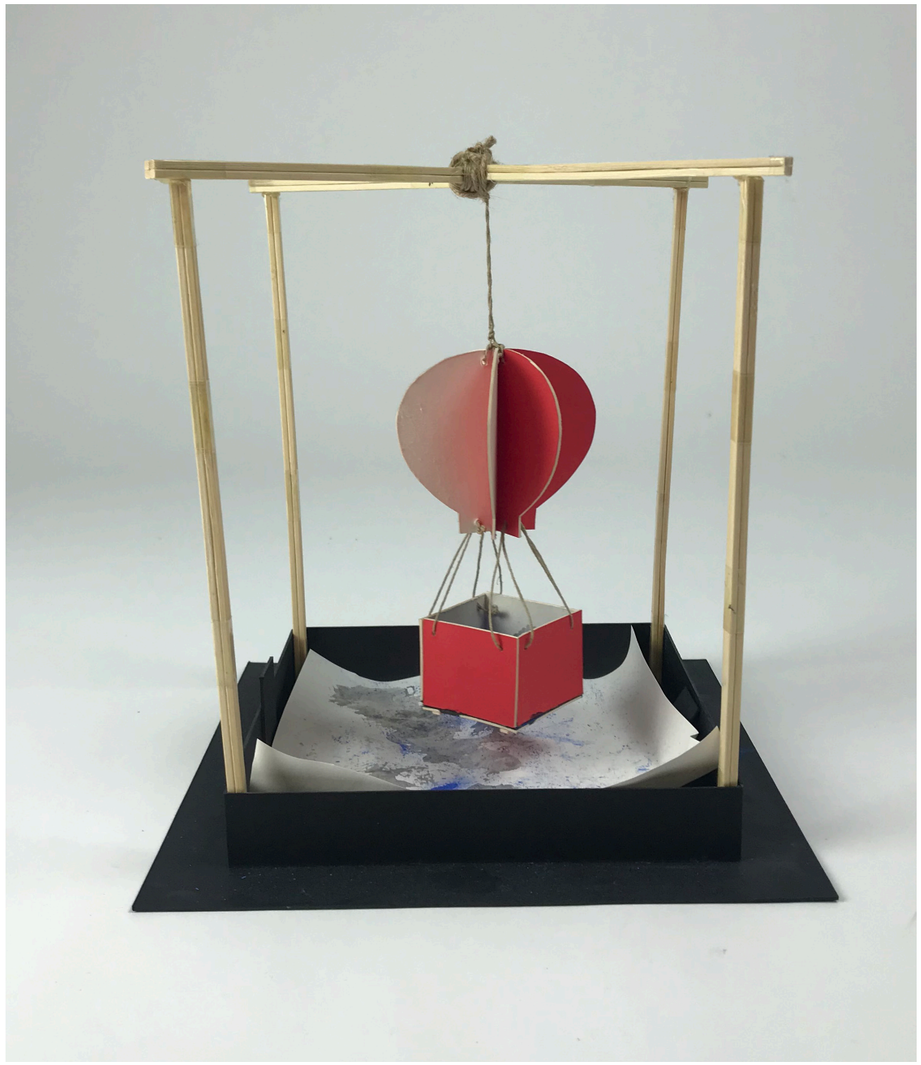


03

Aimed at using the element of Air, in particular temperature, the initial ideas for the climate machine uses aqua beads as a source of providing a visual warning on warming temperatures. As air temperature increases, more balls will dehydrate at a more rapid pace, allowing more balls to fall through the holes into the box below.

However in order to be used as a climate machine, the device would need a more technical element in order to measure the exact rate of dehydration in comparison to air temperature.

01. Test Model Of Air Climate Device *02. Diagram Of Device In Use*
03. Exploded Axonometric Of Air Climate Device *04. Orthographic Drawings of Device*



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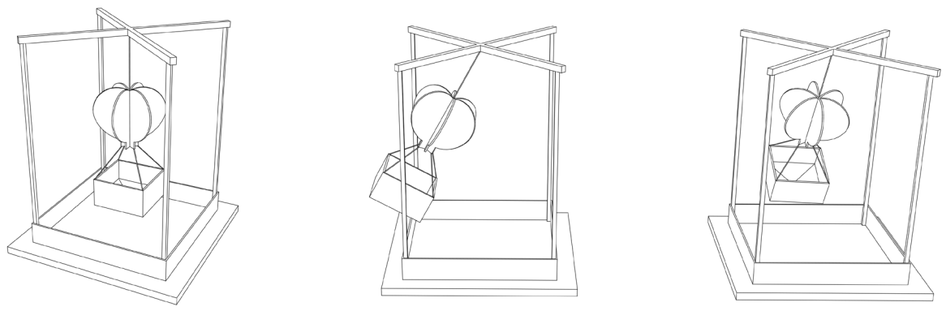

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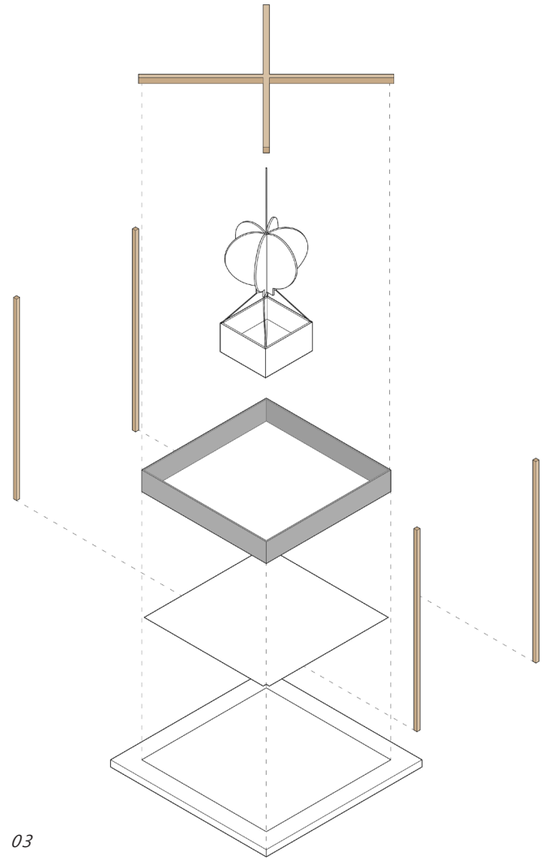

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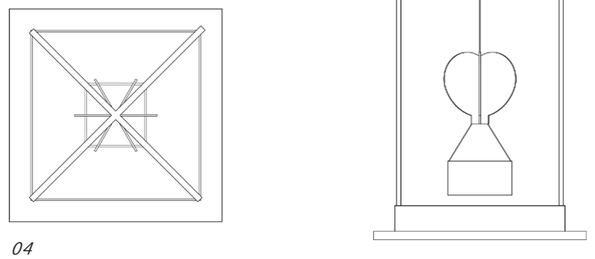


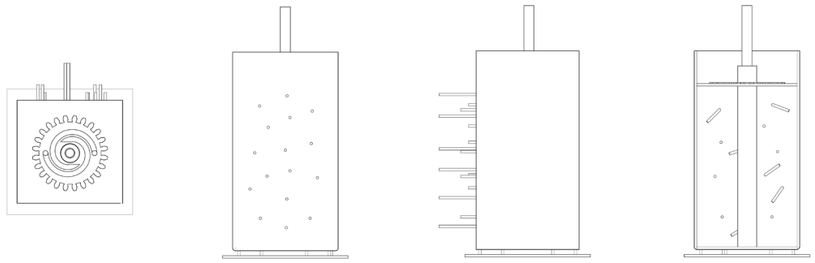
04

Still using the element of Air, this Climate machine aims to create an art piece using the wind as its main tool. A suspended form hangs from a frame, that carried paint in a small basket below which have a series of small holes below.

As the wind blows, the object swings in a pendulum like form, gradually letting out the paint through the holes to create an art piece below. The higher the wind speed, the more lines will be created on the paper below.

01. *Test Model Of Wind Climate Device* ***02.*** *Orthographic Drawings of Device*
03. *Exploded Axonometric Of Wind Climate Device*

01



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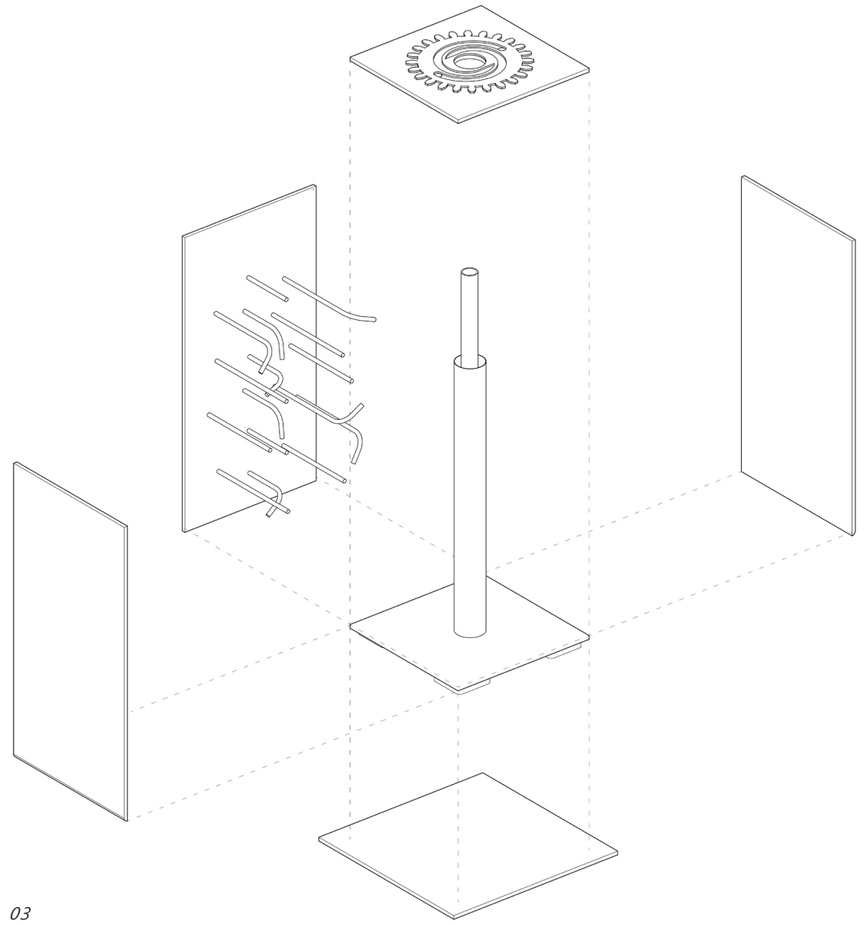
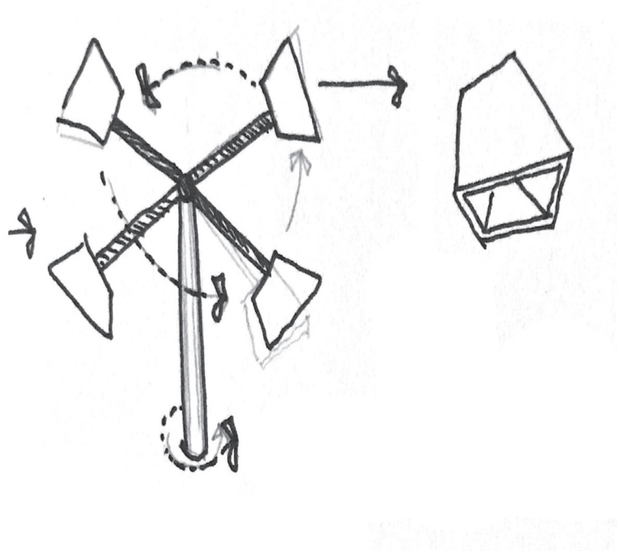


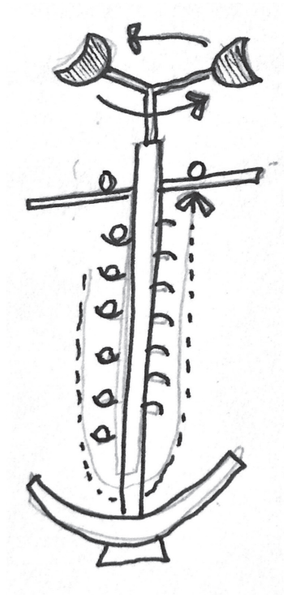
03

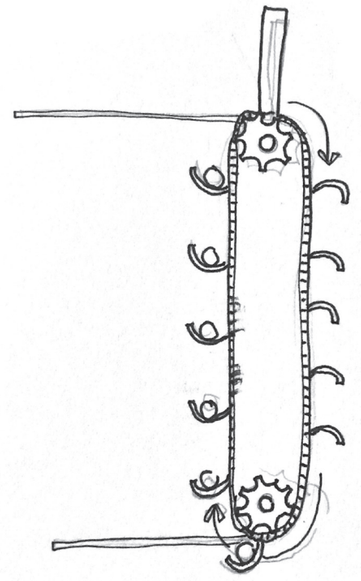
Continuing to use the element of air and focussing on wind, the developed climate machine aims to create an alarm device, that creates warning through sound, rather than through a visual piece.

Using the wind, the machine will aim to deposit a series of metal balls that will fall through a cog like system. As balls drop into the box below, the balls will hit a series of metal tubes which will create a noise. The higher the wind speed the more balls will drop through the device.

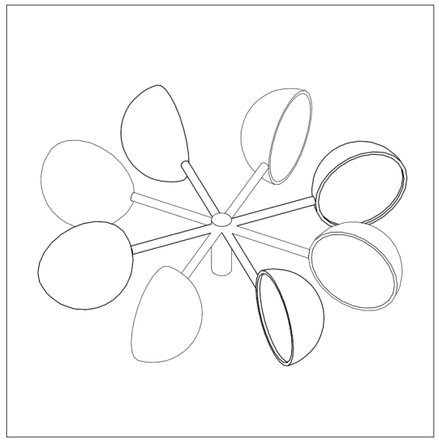


In order to allow the cog to move it needs a device that can be powered by the wind. Using a simplified version of a wind anemometer measuring device, it will be use as the main power mechanism to drive the device to work.

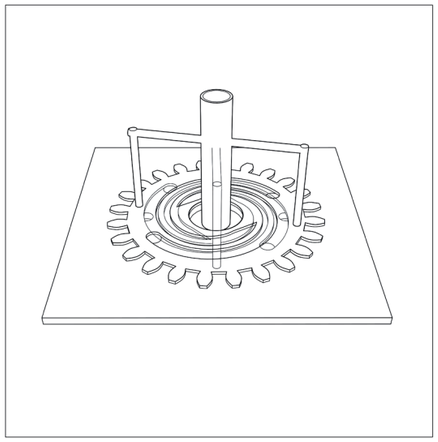




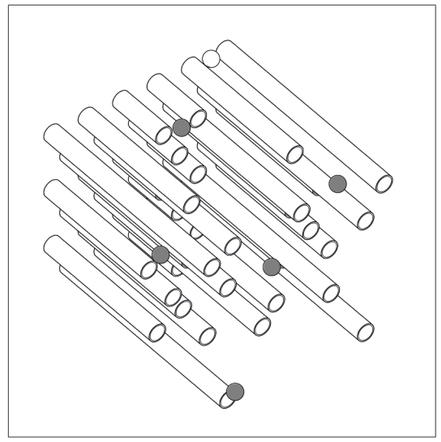
Another issue to solve is a method of allowing the metal balls to move back up to the top of the device without any placement from a person. This lift mechanism will need to connect to the main pole that holds the anemometer in order for it to move by itself.



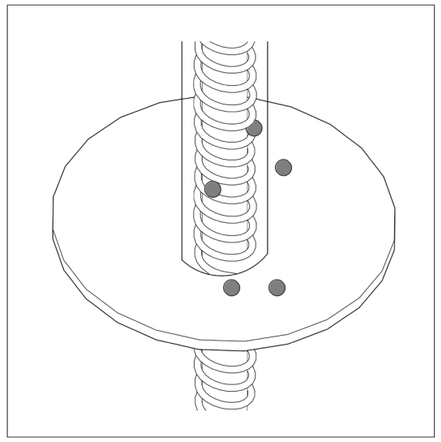
In order for the device to use the wind to power the climate machine, an anemometer is used to allow the wind to move the device. As the wind speed is stronger the anemometer will rotate at a faster pace.



Connected to the anemometer is a central cylinder and cog system. Metal balls are placed on top of the cog and gradually move through the cog until they eventually fall through the holes. The balls will move through the holes at a faster pace when wind speeds are high.



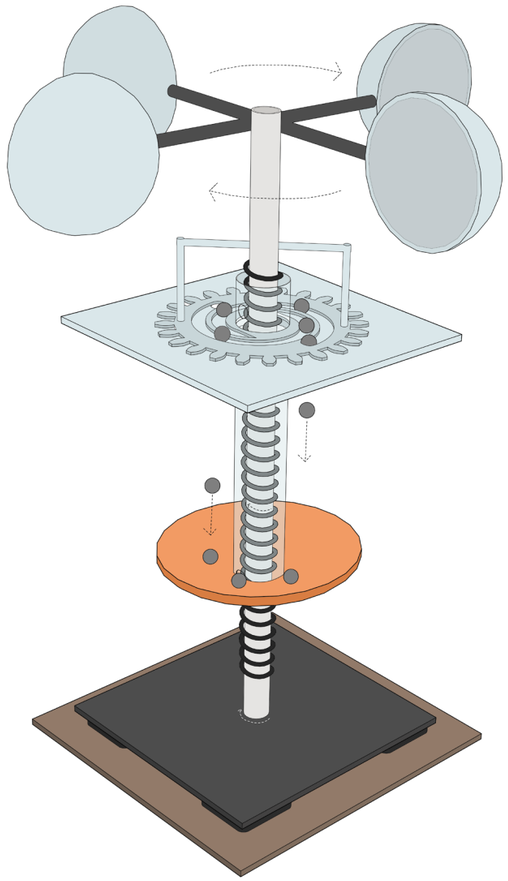
As the metal balls fall through the hole in the cog system they will hit a series of copper pipes on their way down, creating a chime like sound. The pipes are cut to various different sizes to create varied different pitches of sound.

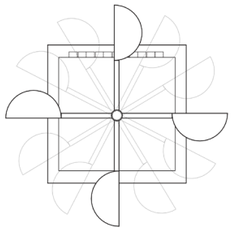


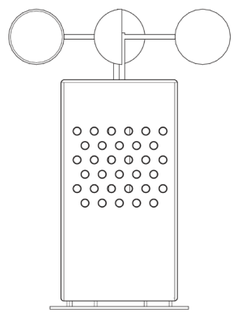
Once the balls drop through the pipes they land into a metal dish below where they are guided through a hole in the outer cylinder of the machine. In order for the machine to be self working, an Archimedes screw is used to transport the balls back to the top of the device where the process is repeated.

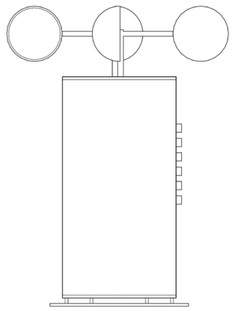
With coastal areas becoming more at risk to extreme weather conditions due to Climate Change, the Climate Machine would ideally placed in these areas to detect strong wind speeds that would signal the risks of weather events such as high tides, or cyclones.

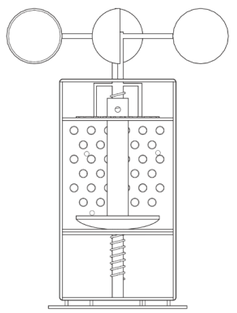
High wind speeds in coastal areas are often the main indicator of an increase in tide levels, and through the sounds created from the machine it can allow for early warning to those nearby of the potential threat that may occur.

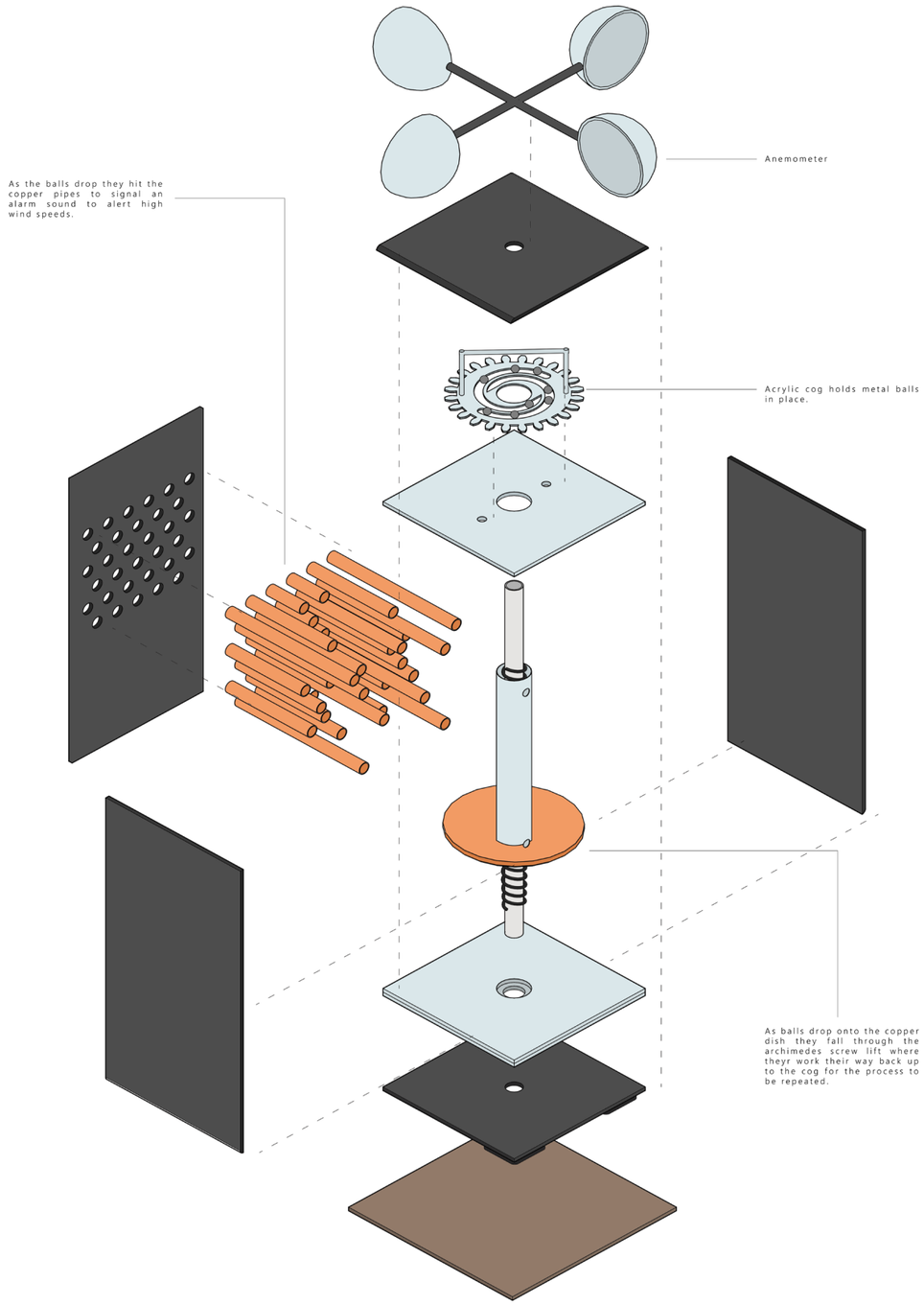


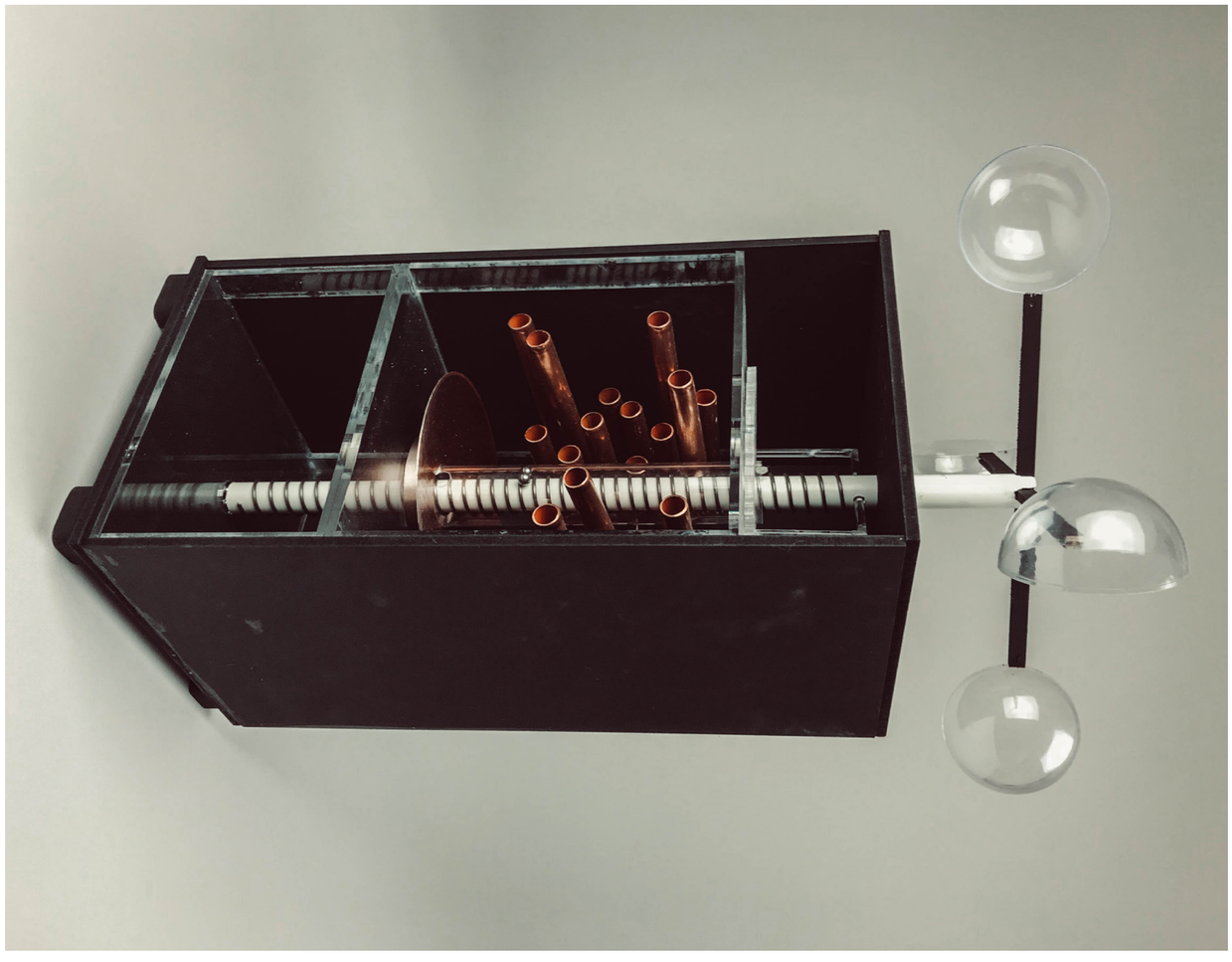


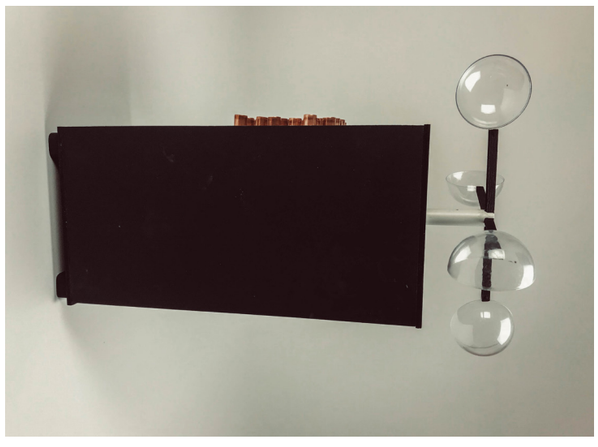


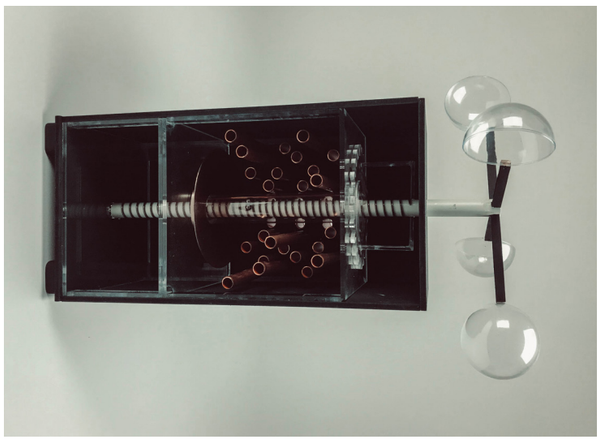


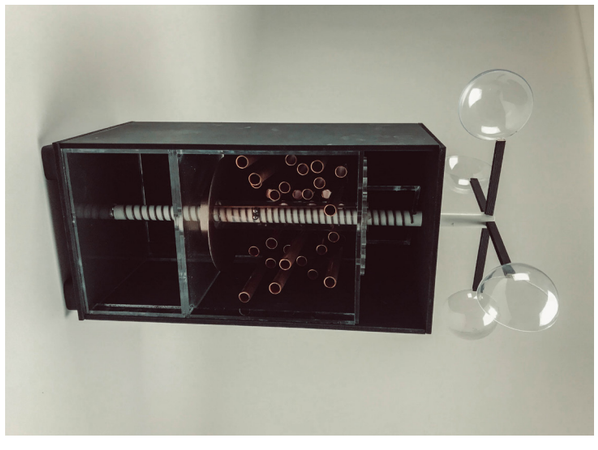


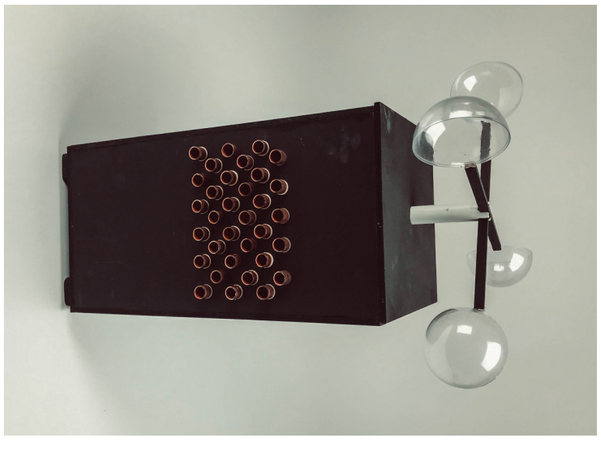












- JOHN SOANE -
- TEMPORAL PIECE -

Using the themes which have started to emerge through out climate work, we were asked to select one three dimensional object or architectural fragment within the John Soane Museum to carefully study, analyse and expand its narratives in response to weather and weathering.

Soane was responsible for the creation of the first museum of architecture. He created an internal climate through the manipulations of light and temperature, curating a vast collection of antiquities according to the atmospherics of the interiors and their contents.

Reflecting on Soane's approach to re-associate architecture with climate, my own piece selected explores adding elements of control to temporality, through the elements of heat and air.

01

Temple of Fortuna Virilis is a temple in Rome, Italy, one of the best preserved of all Roman temples.

Dictated by its original name it is likely to be dedicated to Portunus, the god of keys, doors and livestock, and so granaries, it is the main temple dedicated to the god in the city. Portunus was closely related to the god Janus, with whom he shares many characteristics; being the god of beginnings, gates, transitions, time, duality, doorways,passages, and endings.

Soane, had a fascination for items which had close relationships to death, where he dedicated most of the basement of his home to architectural models and artefacts that played close resemblances to death.

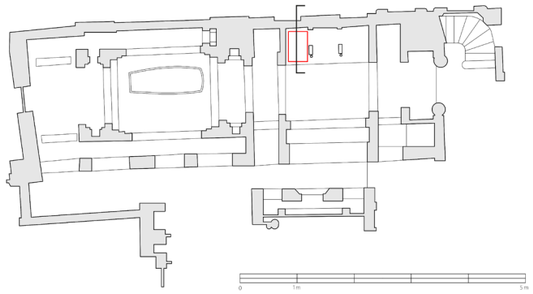
02

He owned 14 different cork models of various different temples. The cork models were used as a way of representing monuments in their ruined state.

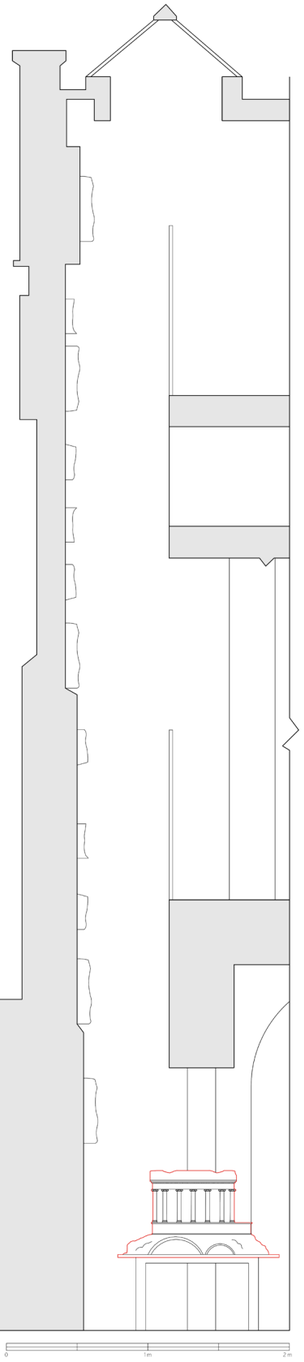
Soane recreated pristine replicas of the temples out of plaster to show their original state. These models were placed next to their destroyed cork interpretation, playing with two ideals of romanticism; the original and the ruin which collide with one another.

The majority of these models were displayed within Soane's model room, however the cork model of the Temple of Fortuna Virilis was specifically placed in the crypt to show its final destroyed state.

BASEMENT CRYPT ELEVATION



BASEMENT CRYPT PLAN

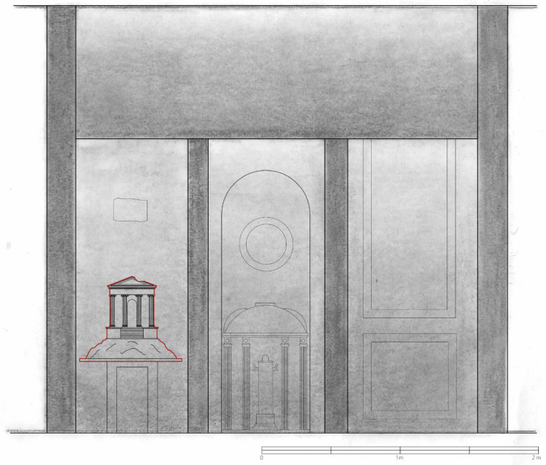


BASEMENT CRYPT SECTION

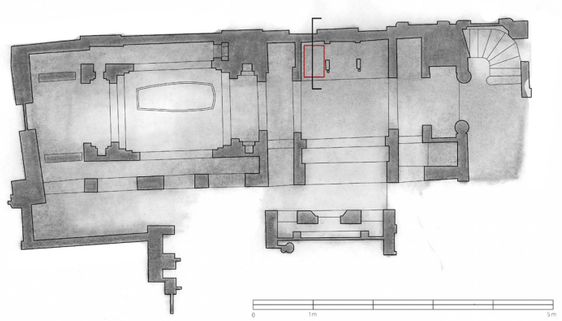
Soane's model of the Temple Virilis, which he purchased in 1832, has been displayed in the Basement Crypt since its purchase.

The model, is one of 4 cork models placed in the crypt. The original displayed location of the piece is unknown however, it may have originally been displayed in Dubourg's exhibition in 1798.

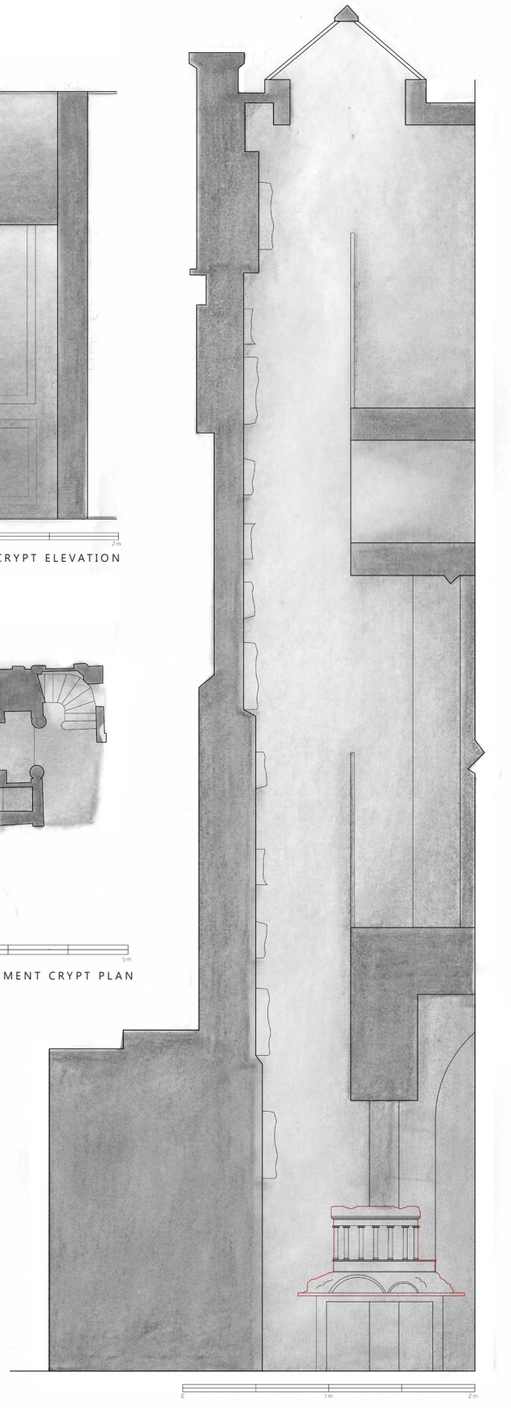
01



BASEMENT CRYPT ELEVATION



BASEMENT CRYPT PLAN

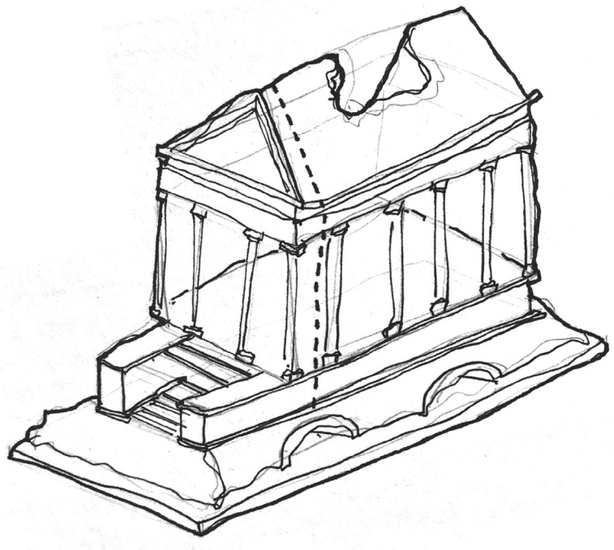


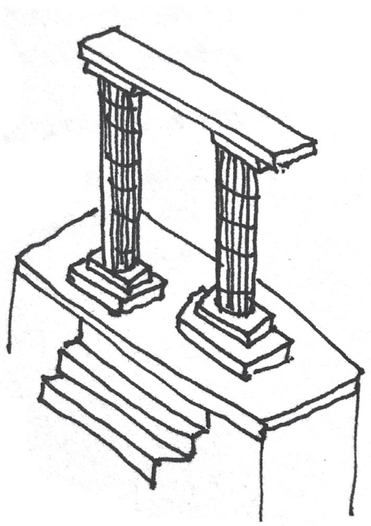
BASEMENT CRYPT SECTION

Even though the model has been placed above a void space, due to the large amount of plaster models on the walls above, it receives very little light, emphasising the weathered areas of the model.

Unlike Soane's other models, the Temple of Fortuna has been weathered using black paint to make certain areas look more weathered than others.

02





01

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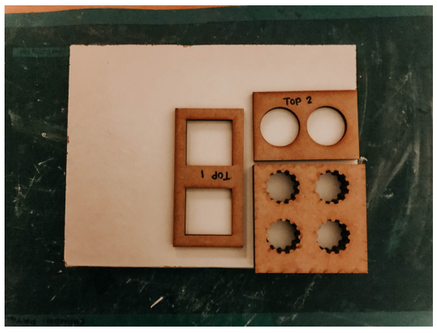
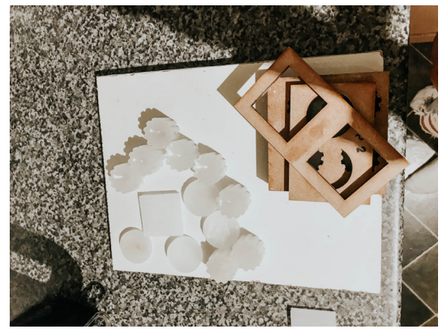
01

A small section of the Model in the Soane Museum was selected to construct. These models were true to the original size of the Temple model, to give a full reflection of its scale. The model has been constructed completely out of cork to get a true sense of the construction process and detail needed to make the full model.

The soft texture of the material when cutting and drilling pieces allowed for a more textured finish, which created a similar resemblance to weathered stone.

01. Wax Column Model Construction Process





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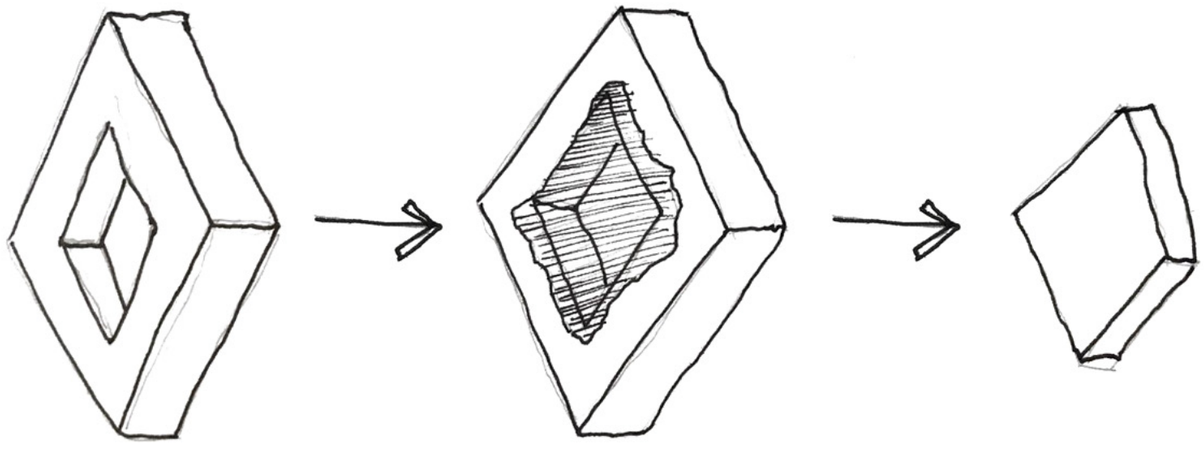
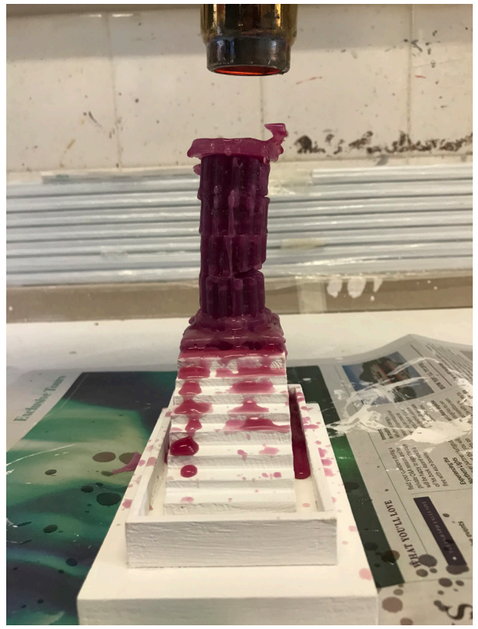
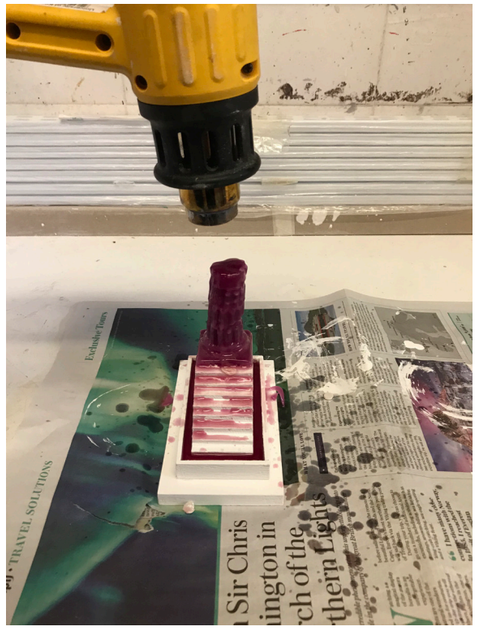


01

In order to explore the weathering process with a more direct link to my climate change based research, I recreated the same model in a different material that could deteriorate naturally with an increased temperature. Using a mould-able material such as Wax, I was able to recreate the same form by creating a series of various moulds to create a number of different pieces that could be assembled together to create the final model.





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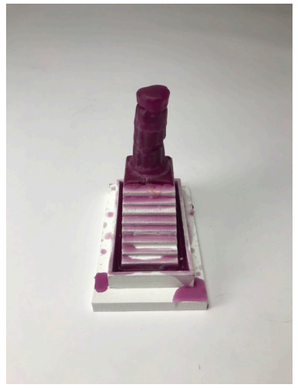

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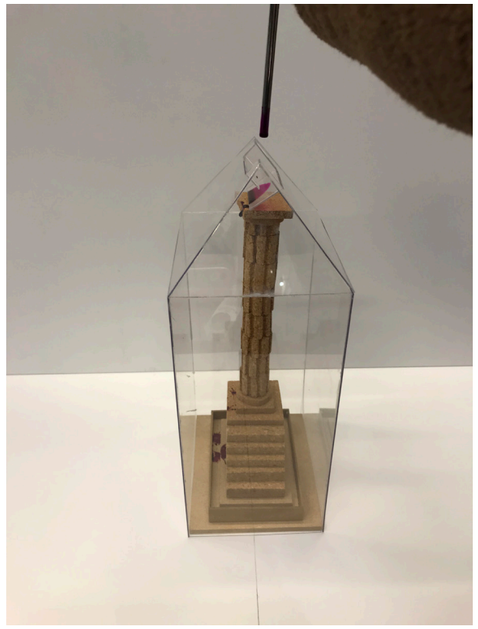


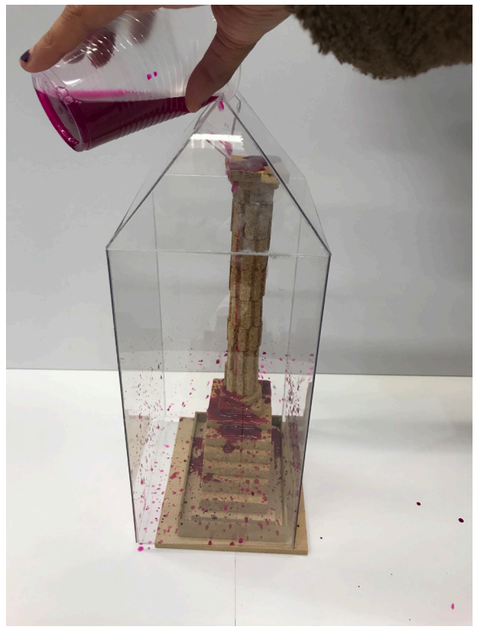

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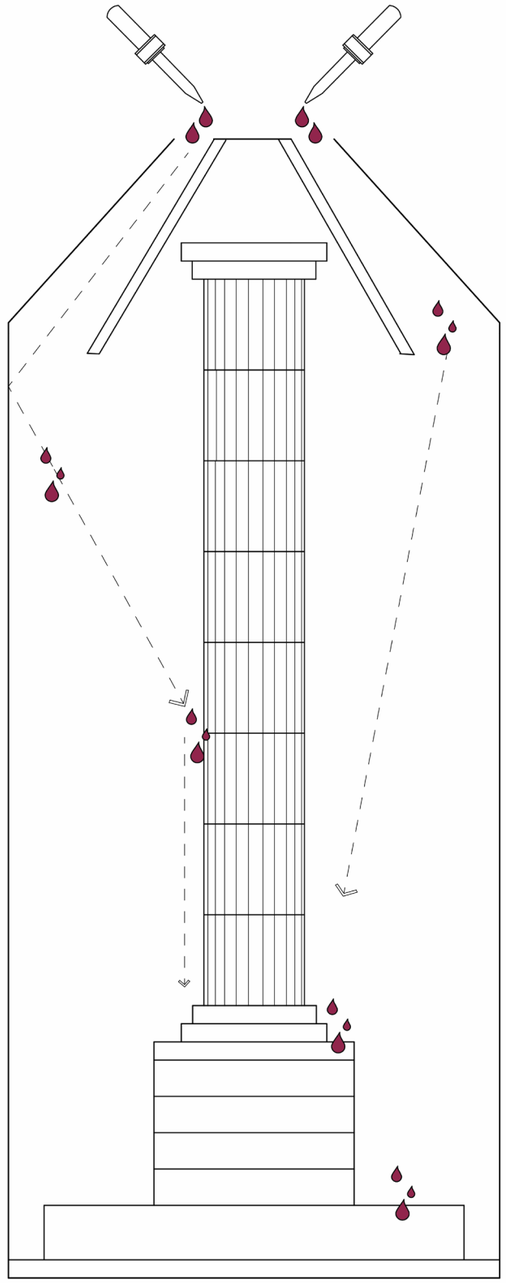

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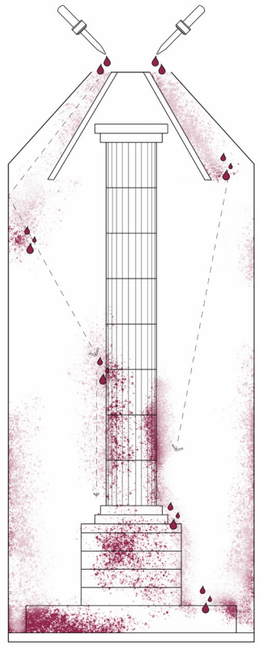
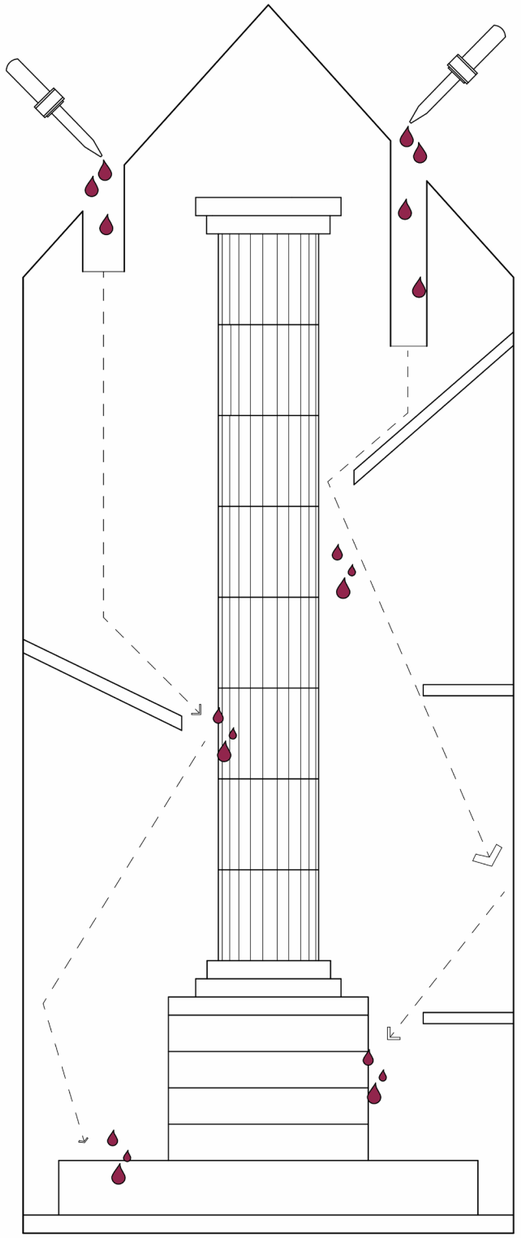
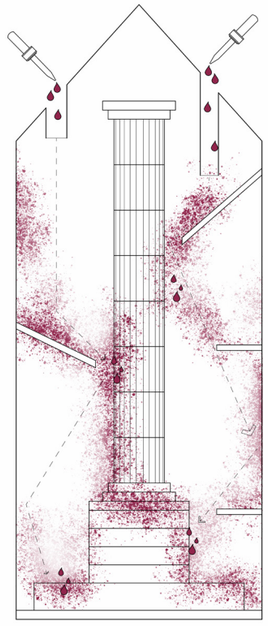


When carrying out the temporal process on both my wax and cork models, I found it was quit difficult to predict how the coloured ink would hit and discolour the model, and where the melted wax would drip down.

Even though the model shown in Soane's museum also used ink to create more emphasis on its ruination, the process was painted on and done intentionally.





To add some element of control to where the weathering of the piece takes place, the outer container of the model can be designed in a way to allow the ink to drop in a certain way, dictating more where the ink will hit the cork model.

This can be done both with how the different openings are placed, and whether additional pieces are added inside to guide the ink to flow down in a particular way.

- ACTIVISM -

Asked to create a think piece, we were asked to consider the purposes of activism in general, with its purpose and the forms it normally takes. Looking at the examples of the transformative artists, we gain examples of how art can be used as a tool for activism.

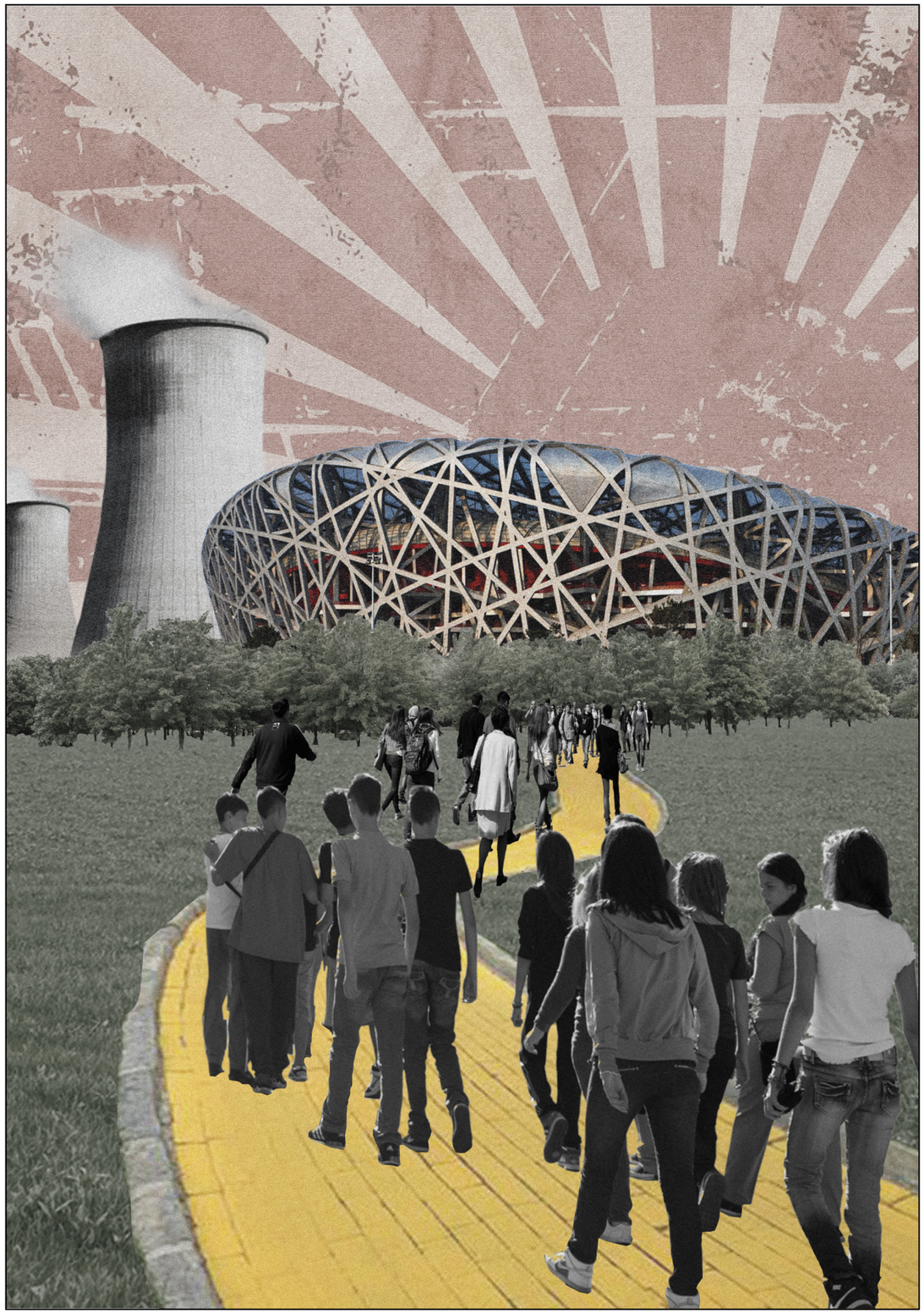
Similarly it can be applied through various way in both politics and architecture. The following pages explores the different forms of activism that stand out today, particularly in regards to Climate change and its affect on the Governance.

Exploring the role of Government Control and architectural activism, an example can be seeing with China's Beijing's National Stadium designed for the Olympics.

Herzog de Meuron saw their participation in the Olympics as a stepping stone into China's Political transformation. They viewed the games with the international congregation as a significant democratic influence.

It was described that the design of the stadium as being for many people and more democratic then other Olympic stadiums. The element of a freedom structure allowed that people would be able to approach the stadium from all directions, allowing for sense of bad direction from inside.

Unintentionally, it became a statement of power and an act of architectural propaganda by the state, with its use as only a tourist attraction after the games, with no allowance for the use by the local people, which were aimed to be the original use after the games.



01

Activism through protest is one of the most common ways of expressing an issue to particular events, policies or situations. Protests can take many different forms, from individual statements to mass demonstrations, and can be one of the greatest ways of expressing an issue to many people.

The September 2019 climate strikes, also known as the Global Week for Future, were a series of international strikes and protests to demand action be taken to address climate change, which took place from 20–27 September. The strikes' key dates were 20 September, which was three days before the United Nations Climate Summit, and 27 September. The protests took place across 4,500 locations in 150 countries.

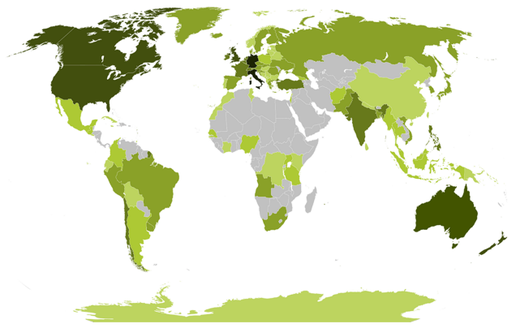
The event is a part of the school strike for climate movement, inspired by Swedish climate activist Greta Thunberg. The 20 September protests were likely the largest climate strikes in world history.

GLOBAL CLIMATE STRIKE

Over 7.6 Million People Worldwide

185 Countries

8583 Websites



Protest atendee numbersduring the 2019 Global Climate Strike

20-27 September 2019, we saw a record 7.6 million people take to the streets and strike for climate action. The biggest climate mobilisation in history. From Jakarta to New York, Karachi to Amman, Berlin to Kampala, Istanbul to Québec, Guadalajara to Asunción, in big cities and small villages, millions of people joined hands and raised their voices in defense of the climate. The Global Climate Strike shows that we have the people power we need to create a just world and end the era of fossil fuels.

It'll take everyone to secure a better future and avert the worst of the climate crisis. What happens next is up
to us. No matter where you live, there's a way to take action.

01

Protests are happening on anti-vaccination all around the world, however many people taking part in these protests have been given false information through social media websites.

The health minister of the UK Government has called for a ban on many anti vaccinations social media pages to stray parents away from incorrect information in regards to vaccination for their children.

Health minister Nicola Blackwood in April of this year pledged government funding of £56 million to research the health implications that are linked with climate change. Non-profit organisations such as Archive Global are already researching into this and providing housing solutions to reduce health implications.

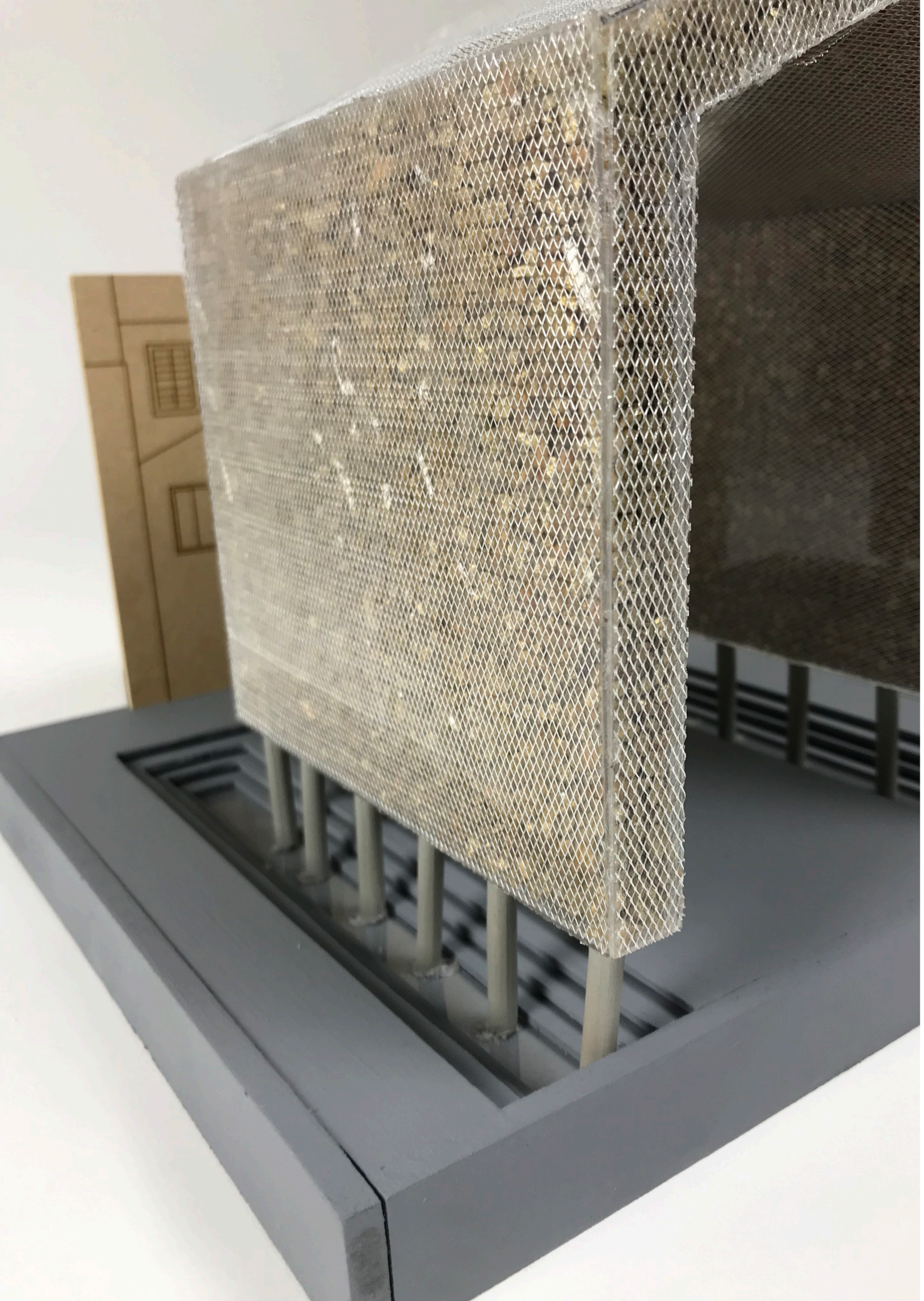
01

01

The local people have been calling for major governmental change for many years, however barely any change has yet to have occurred, with plans for change being pushed to the side.

However, June 2019 saw a 13 deck, 275m long cruise ship collide with a dock and local boat, which led to a public outcry and major protest from the local Venetian people for a definitive ban, which has finally led to the local peoples voices being heard by the Italian Government.

As a result of the cruise disaster, Government plans have led to a diversion, with boats weighing over 1000 tonnes from not being able to sail down the main canal, however currently the plans are insufficient to prevent underwater erosion and pollution to the city, and more needs to be done to ensure the survival of the city from sinking in the future.



- THE CLIMATE PAVILION -

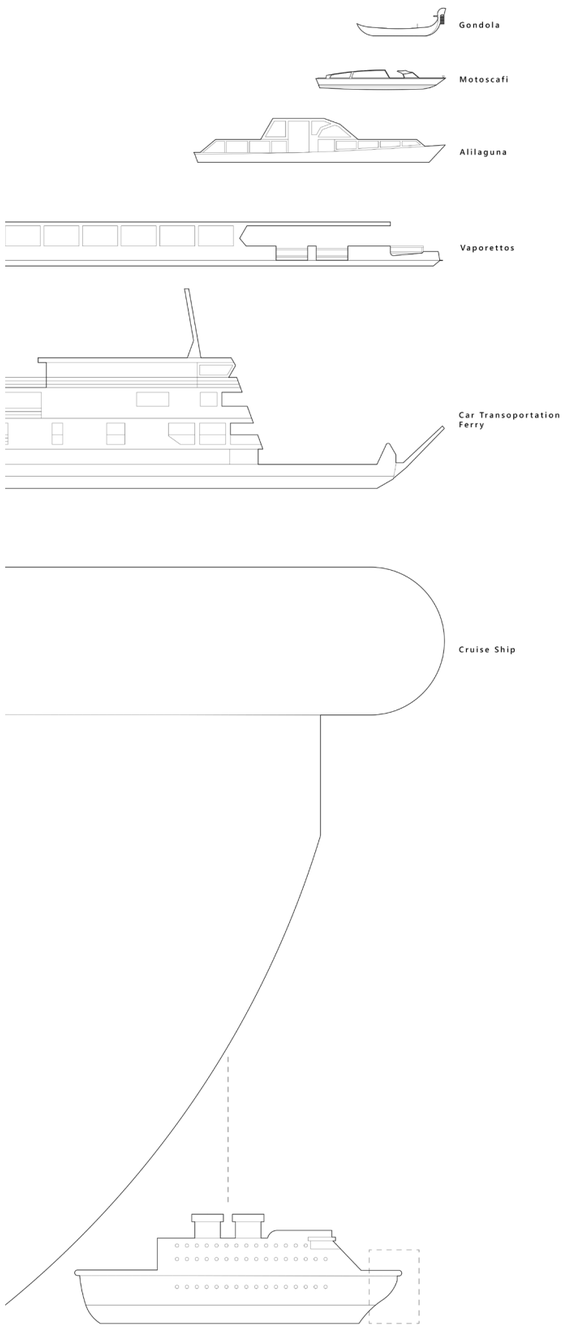
Focussing on the impacts of increased sulphur dioxide in both the atmosphere and in the water caused by the excessive usage of boats. The final tasks sets to produce a pavilion design to be situated in an area of Venice, to educate people of the potential future impacts to the city if change does not occur.

Aimed at creating a pavilion which acts as a concept project and driver for the final building design in 5B, the outcome sets to take theories and understandings from earlier tasks which had been completed during this term.

With Venice being one of the worst European cities as a producer of sulphur dioxide, it is key that change starts to occur in major dock cities like Venice.

Using the goals set by the International Maritime Organisation for global boat emissions to be cut by almost 50% by 2050, the City of Venice requires their eyes to be opened to the impacts they are having not only globally but to their own area, which in years to come could possibly not exist anymore.

01. *Boat Types In Venice*
02. *Cruise Terminals In Venice*
03. *Number of Tourists Visiting Yearly*
04. *Vaporetto Docks in Venice*



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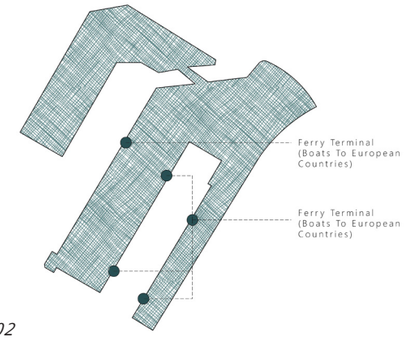

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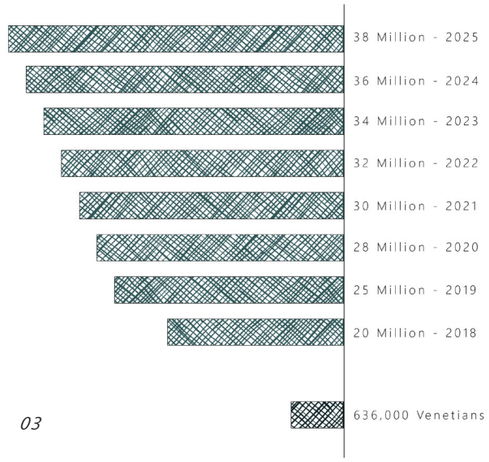
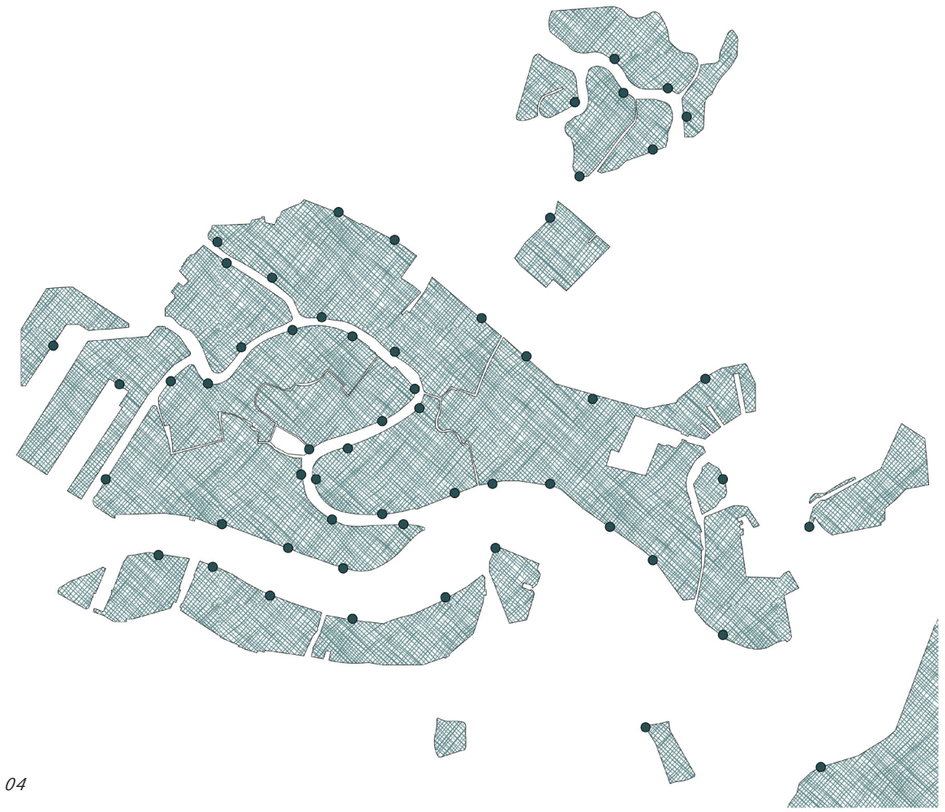


03

With 15 different boat types in Venice, they are the third largest contributor to Sulphur dioxide and nitrate oxide in Europe. Out of all 15 boat types that currently run along the canals of Venice, there are only 3 types which are currently sustainable. The gondola, the Allaiguna airport boat, and a small number of electric boats which are owned by the local Venetian people.

With Venice becoming an ever growing hotspot for tourists, the levels of visitors is increasing every year. Even though the cruise ship is the biggest contributor to boat emissions, this only accounts for a small number of tourists visiting yearly. As boats are the only main source of travel throughout the island the increased flow of people has led to an increase in water transport all over Venice.

This calls for a major change in the running of these transport methods, not only for the tourists, but also the locals to create a sustainable future within Venice that allows for the ever growing popularity.



04

Venice bans large cruise ships from docking at its historic city centre

share

Save 5

Plans to change cruise ship routes in Venice date back to 2017 CREDIT: GETTY

Ships over 55,000 tonnes will have to dock in Marghera, on the mainland

01

With more boats situated within Venice, the levels of Sulphur Dioxide in the water has led to major imbalances in PH levels of the waters. As a result, recent years have seen a rise in sea levels, putting the city at higher risks of more frequent and intense flooding.

November 2019 saw the second worst flooding to occur in Venice since records began in 1923 as a result of the acqua alta, which hit 1.87 metres amid heavy rain, just short of the record 1.94 metres measured in 1966.

More than 85% of Venice was flooded, including the historic St Mark's basilica. Low lying areas such as St Mark's Square and Cannaregio, as a result have found themselves vulnerable to serious damage that if gets worse, may not be able to be recovered from.

1. https://www.telegraph.co.uk/travel/cruises/news/cruise-ships-crack-down-venice-historic-centre-unesco-overtourism/
2. https://www.independent.co.uk/travel/news-and-advice/venice-cruise-ship-ban-55-tonnes-marghera-port-where-is-it-italy-a8044026.html
3. https://www.theguardian.com/environment/2019/nov/13/waves-in-st-marks-square-as-venice-flooded-highest-tide-in-50-years#maincontent

02

01

Situated in the North of Cannaregio, the Venetian Ghetto was an area of Venice in which Jews were compelled to live by the Government of the Venetian Republic. Instituted on March 1516, those who were forced to live within gained their own senses of Governance within, with the Gheto Nuovo square becoming the epicentre of the community.

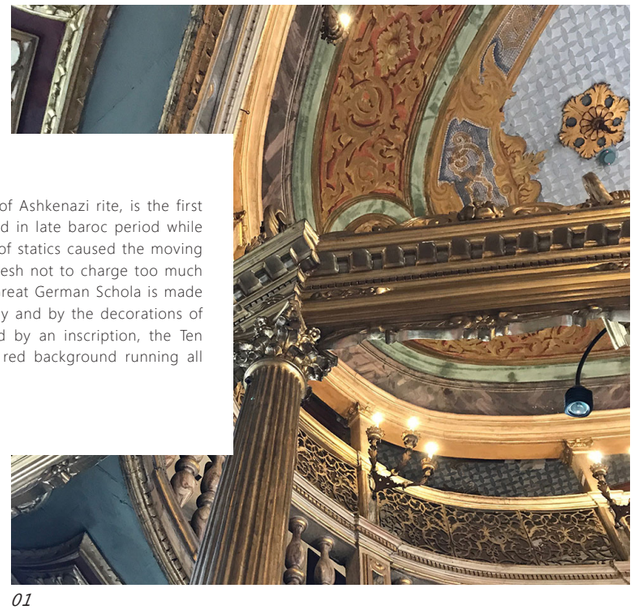
With 6 various synagogues situated in the Gheto, 4 of these sit within the main square, all to provide a place of prayer to the different ethnicities of the Jewish Community. Even though the desolation of the ghetto's separation from the city ended in 1797. The various synagogues still stand within the area today, with the main Canton Schola housing the official Jewish Museum.

With its rich history, it has bought many tourists to the area, however the recent floods have seen damage caused, with the Museums ground floor library being completely ruined in the recent floods. Even though the synagogues are typically situated on upper floors of the buildings, its only a matter of time before the infrastructure damage caused to the lower levels of the buildings due to flooding damage result in a serious impact to these historical places of worship.

02

1. https://jewish-heritage-europe.eu/2019/11/14/italy-devastating-acqua-alta-in-venice/

Built in 1528 the Great German Schola, of Ashkenazi rite, is the first synagogue of the Ghetto. It was restored in late baroc period while in the early Nineteenth some problems of statics caused the moving of the pulpit opposite the 'Aròn Ha Qòdesh not to charge too much on the floor. The irregular plant of the Great German Schola is made harmonical by an elliptic women's gallery and by the decorations of the walls covered with "marmorino" and by an inscription, the Ten Commandments, in golden letters with red background running all over the walls of the cultural room.



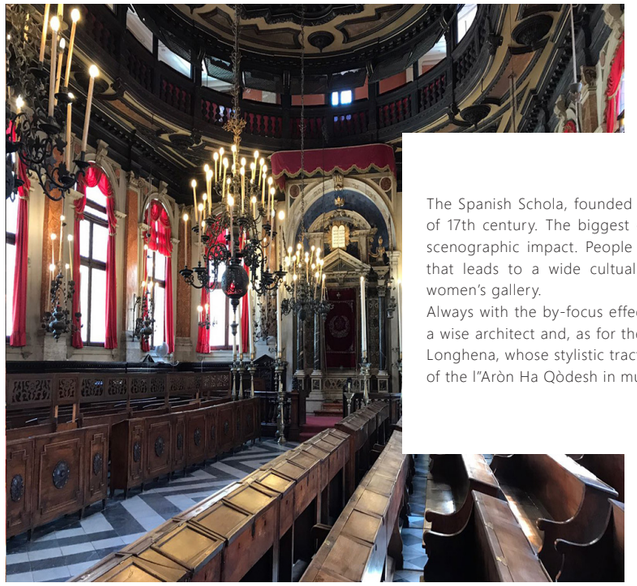
01

The Italian Schola, founded in 1575, is the simplest of the Venetian synagogues; it results, anyway to be the most luminous one, thanks to five wide windows opening on the south side of the square, and the most austere for the lacking of the gleaming tones of the golden leaf decorating the two Ashkenazi synagogues.

02

The Levantine Schola, founded in 1541, was rebuilt in the second half of 17th century. Even if without documents unequivocally proving that, it is thought that the artists who worked for the restoration were Baldassarre Longhena, whose stylistic models are clearly evident on the façade and Andrea Brustolon for the important pulpit.

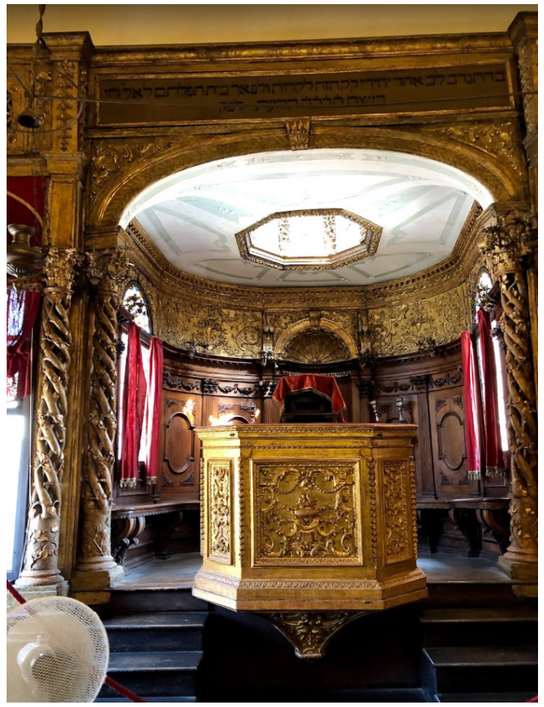
03



The Spanish Schola, founded about 1580, but rebuilt on the first half of 17th century. The biggest of the Venetian synagogues is of great scenographic impact. People go upstairs in a wide double staircase that leads to a wide cultual room exalted by a very high elliptic women's gallery.
Always with the by-focus effect, the stylistic grace shows the hand of a wise architect and, as for the Levantine Schola, the thought goes to Longhena, whose stylistic tract can be also read in the smart planning of the l"Aròn Ha Qòdesh in multicoloured marble.

04

1. http://www.museoebraico.it/en/synagogues/



01

02

The Canton Synagogue was founded in 1531 / 32 and completely restored in late baroc period. The Canton Schola is the most unique of all of the synagogues situated in the Ghetto, as it is the only one not to be divided by ethic identity. It stands as one of the oldest and most important extant Jewish institutions.

The Schola was seen as one of the most important to the Jewish community at that time as it reflected both the vibrancy of Jewish life during medieval Venice and the continued attempts by ruling authorities to suppress Jewish culture.

Deliberately concealed with extravagant exteriors and placed on upper floors of the buildings, the synagogues became unknown to outsiders and inconspicuous from the outside, it is richly decorated from within with lavish gold finished interiors with intricate details to forms.

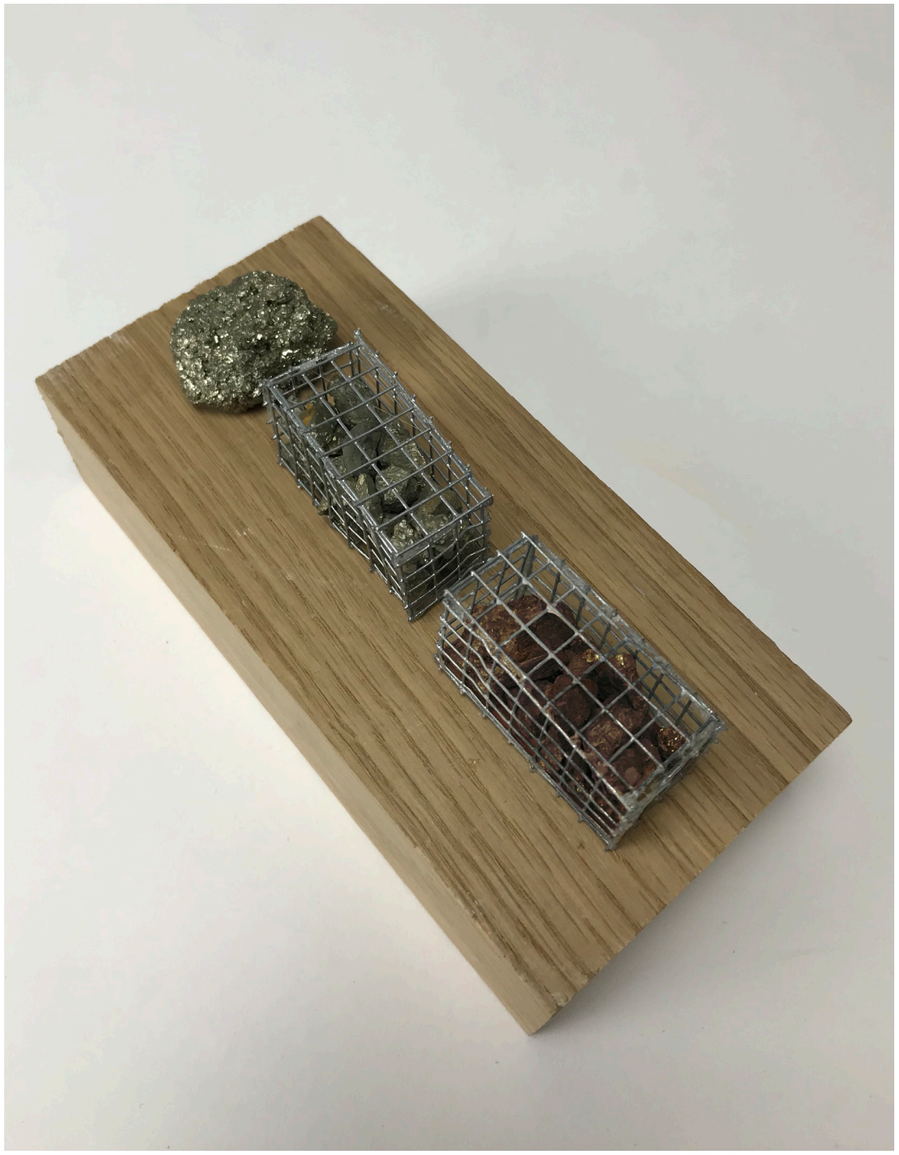
Today, the building forms the Jewish Museum, which houses many ancient books and manuscripts and some objects used in the most important moments of the cycle of civil and religious life, as well as the synagogue which has been fully restored.

01

As my own research on climate change has focused on the bleaching and oxidisation on both infrastructure on land and in the water, the aim would be to use the pavilion design to educate tourists on their own potential impacts that they could have to historical areas like the Jewish Ghetto.

Similar to the synagogues within the Ghetto, they have all been designed with more extravagant interiors and basic exteriors. Filled with gold like material, the intentions would be to find a similar material such as pyrite that degrades over time due to higher humidity and sulphur dioxide in the atmosphere, which reduces the gold and shiny material to a rusty orange lifeless stone.

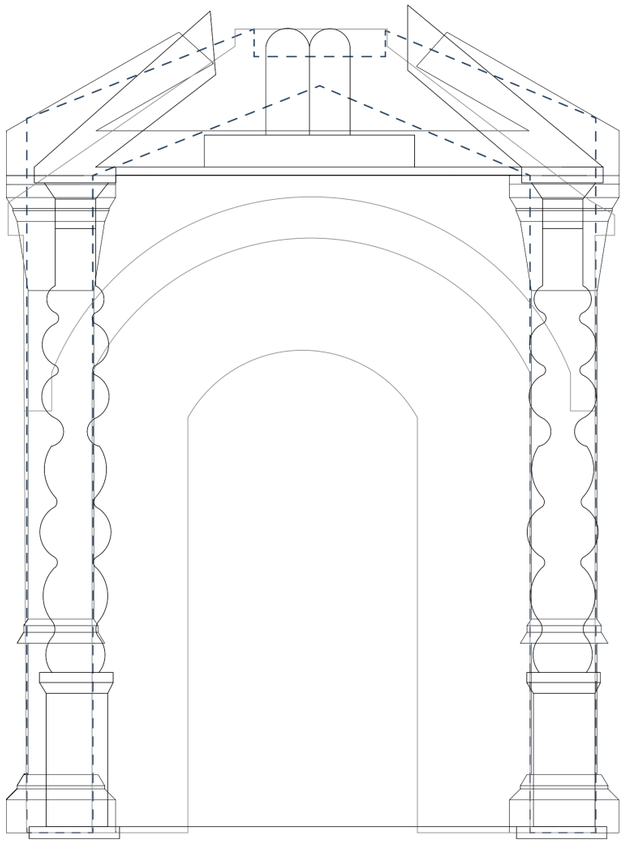
Concealed to outsiders, the pavilion design would intend to catch the attention of the tourists visiting the square by creating a weathering process that occurs from within the pavilion, so for those outside of the square would see a gold like, untouched material, however those walking through would see the full affects of the climate on the material with a temporal process occurring within.

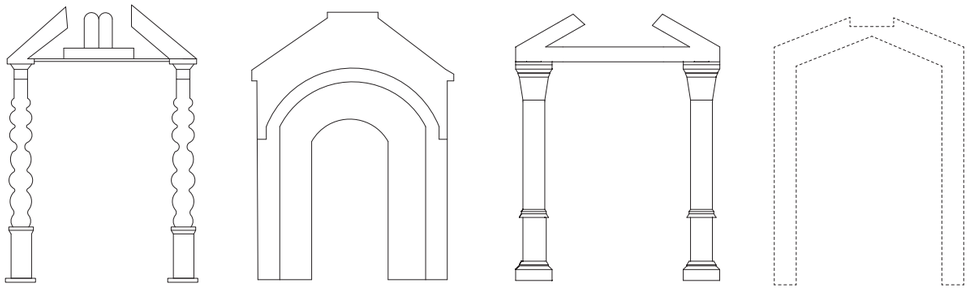


02

A Torah Ark can be seen as one of the most important elements to a Jewish Synagogue. Housing the Torah scrolls which are used during times of prayer it acts as one of the most sacred and ornamental elements that forms the place of worship.

Creating a entrance like form, the typologies of the various different synagogues in the Gheto can be compared and combined to create the intended exterior forms for my own pavilion design.

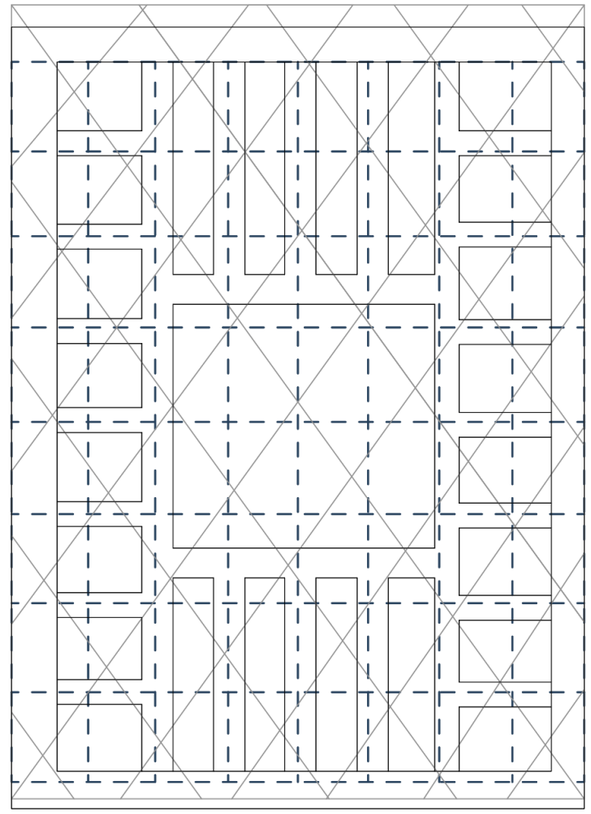


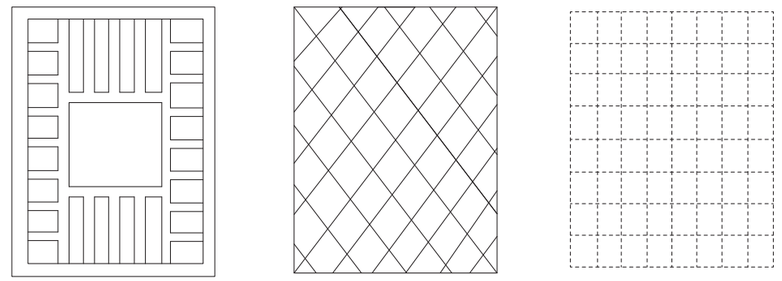


01

A Mechitza is a partition, particularly one that is used to separate men and women. The divider was first established to preserve modesty and attention during this time. These panels are often perforated materials, to allow for there to be a more fluid separation than a wall.

Using these form of a perforated material to allow for restricted visibility, yet still allows for a distorted view from within. Taking this element forward, in my own pavilion, the use of using a material that could allow for a similar visibility will be explored to conceal the gold like material that would experience a temporal process with changing climates.





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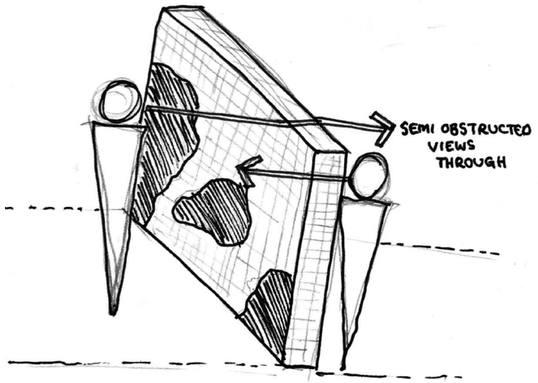
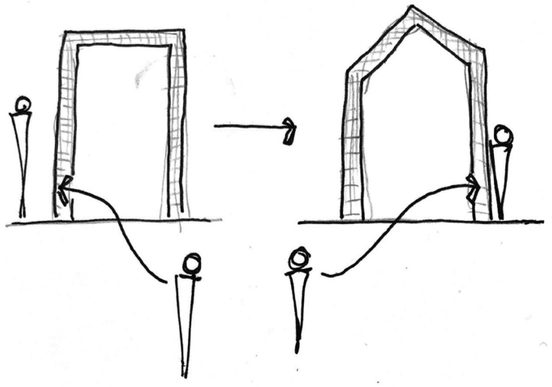


In order to create a semi obstructed view to those within the pavilion and those outside, the pyrite stones would require to be strategically placed to allow for a slight view out and in, whilst allowing those standing outside to not fully view the weathered stones within.

Taking the example of a buffer wall created for a cafe in Seol, a similar approach could be used to both allow visibility to the gold stones, but by creating gaps in the walls can allow for interesting light qualities within the various pavilion spaces.



Even though there are 3 different access points to the square, only one main route is used by tourists as it leads to the Vaporetto stops as well as local train station. Aimed at creating inviting entrances to the site will encourage more tourists visiting to enter the square.

Taking the example of an installation in Kings cross, the use of broken entrance and openings can allow for greater encouragement for people to pass through, even if they do not enter through the main access point.

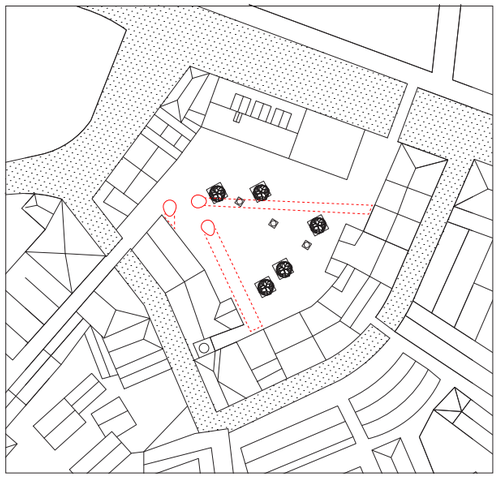
01

02

SITE ACCESS POINTS

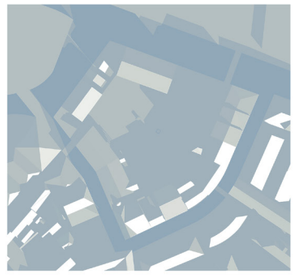
AQUA ALTA CONTOURS

SYNAGOGUES LOCATIONS



VIEWING POINTS TO SYNAGOGUES

01



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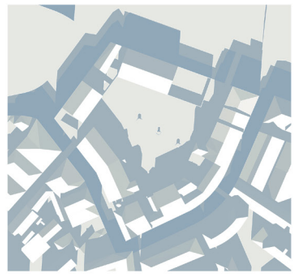

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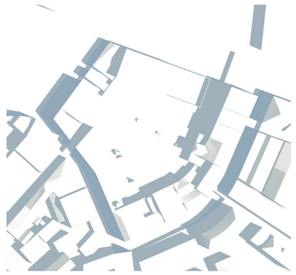
21.1.2019 - 15:30



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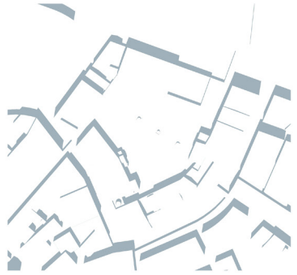

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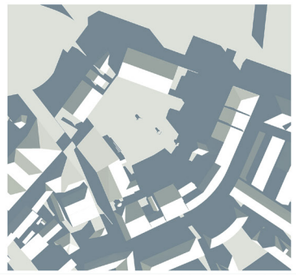

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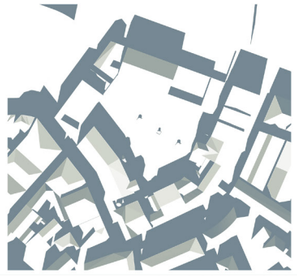

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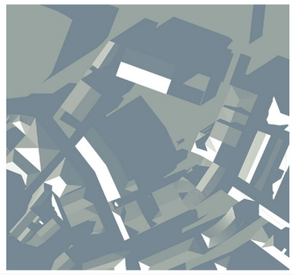

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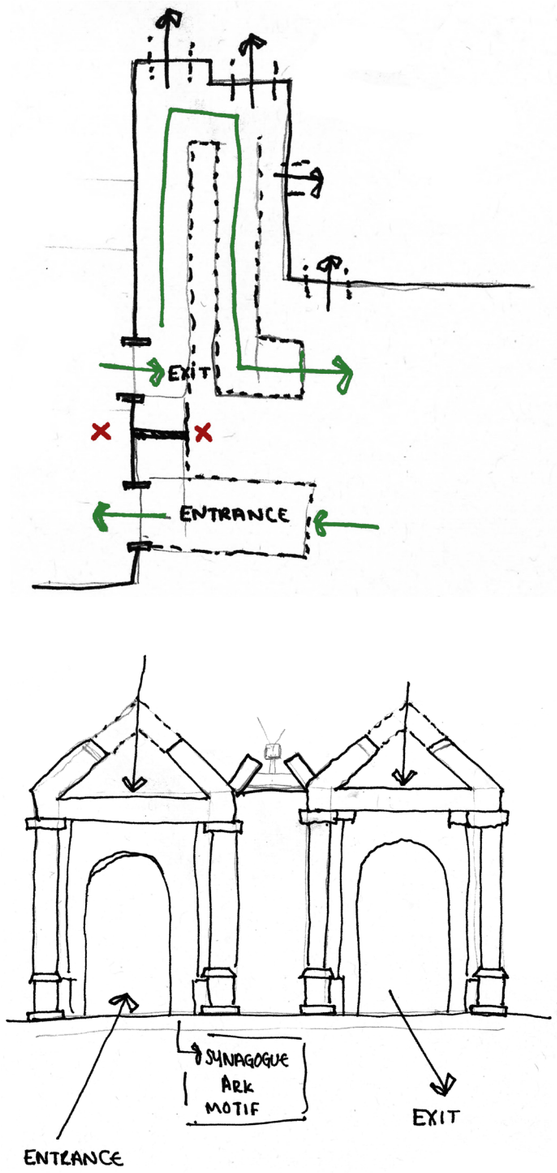
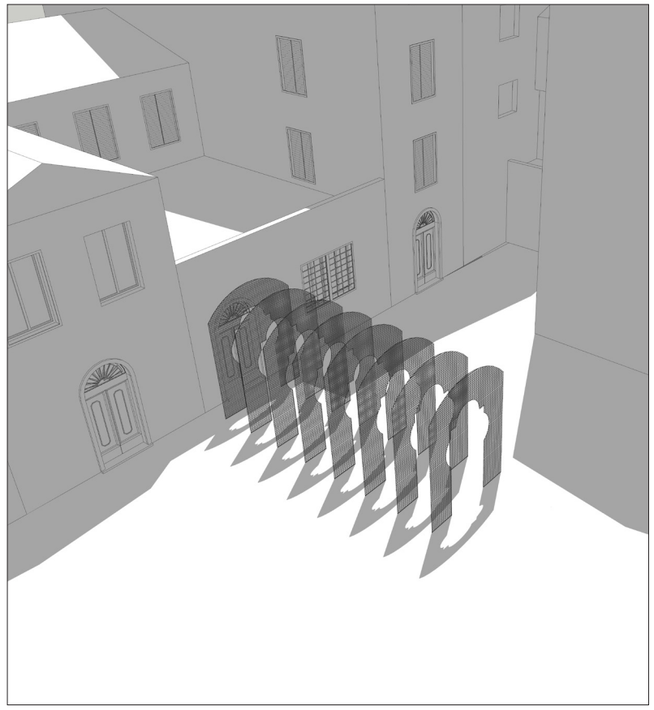
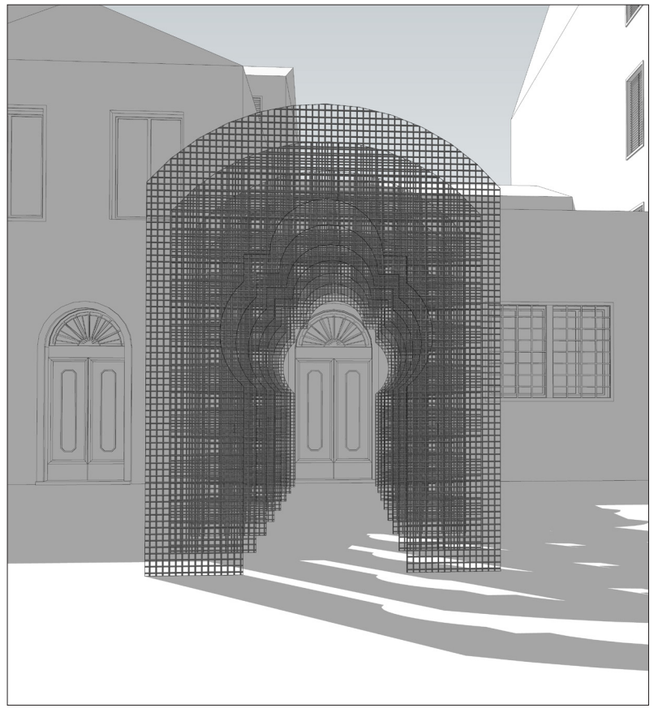


01

With the aims to educate tourists visiting the square on the future implications of climate change. The initial pavilion ideas aimed to target the museum, as this part of the Gheto sees the most flow of tourists. Using early motifs that were identified in the typologies of the various synagogues, a similar ark like entrance way would be created to form a new entrance and exit for the museum.

The original design aimed to preserve the entrance way, but allow for weathering to the exit walkway. This would allow for those visiting to be immersed within a similar gold and lavish interior in the entrance way that they would find themselves in when also visiting the Canton Schola within the museum. But would then be introduced to the damage that may occur to them in the future through their exit of the museum, with the weathered and destroyed stones.





02

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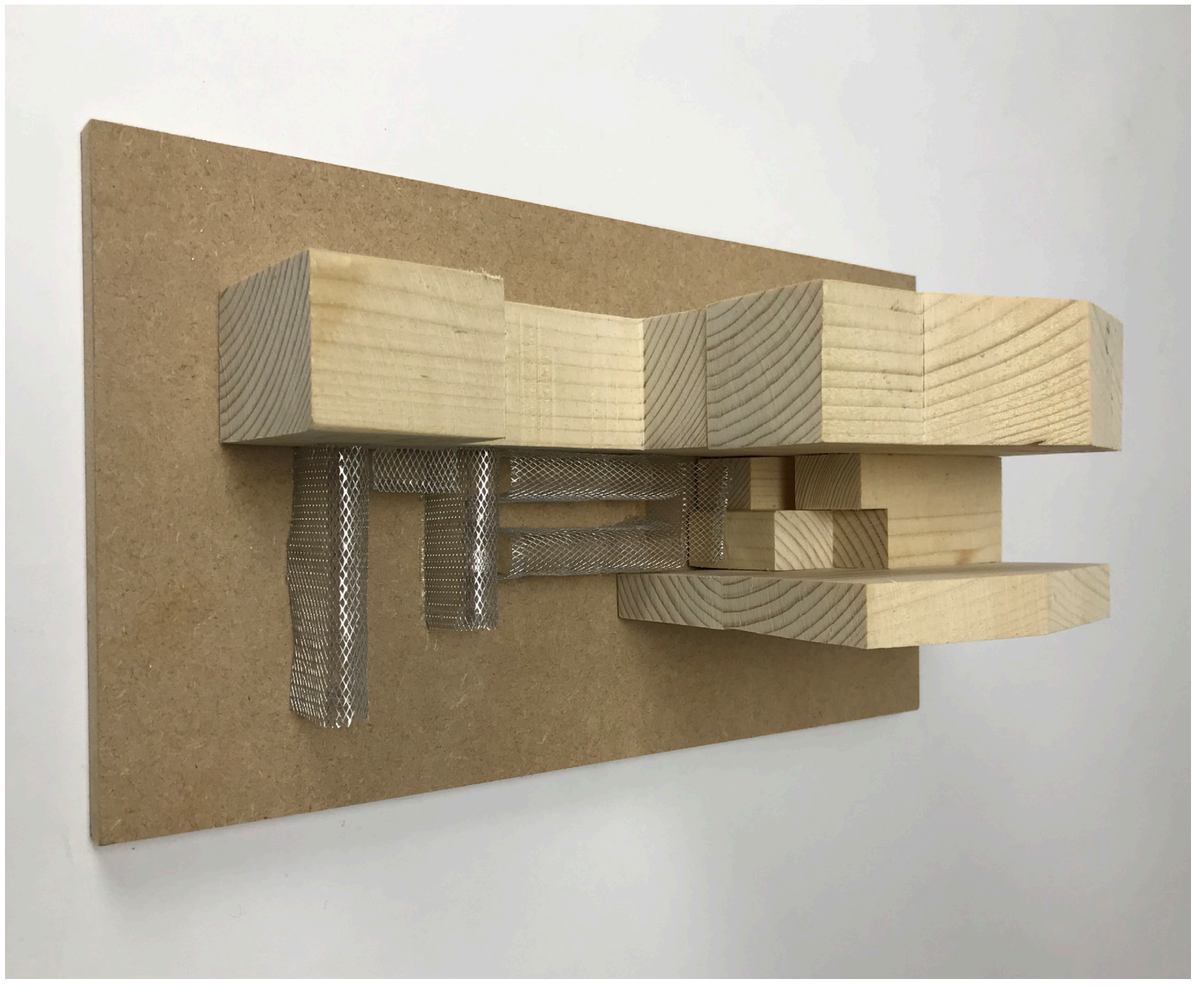
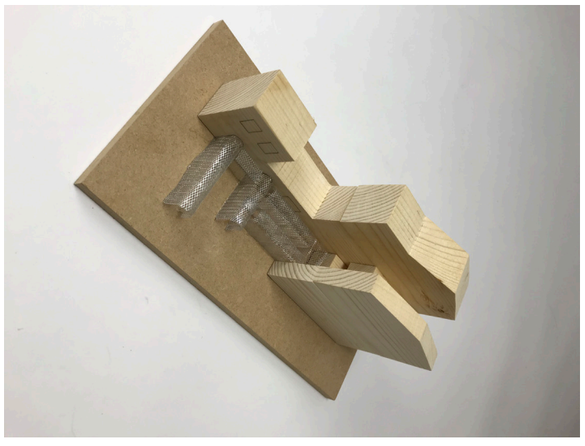
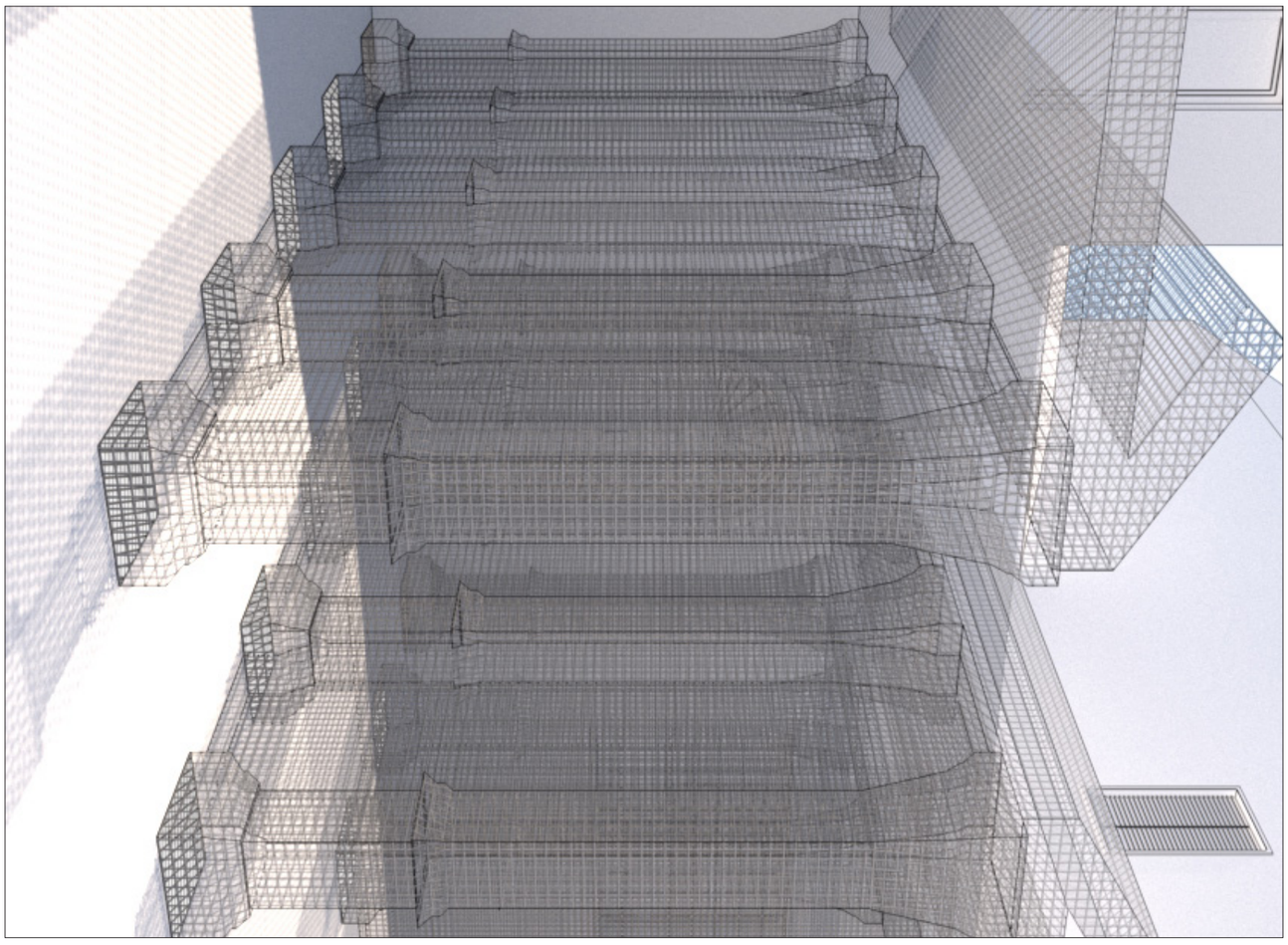




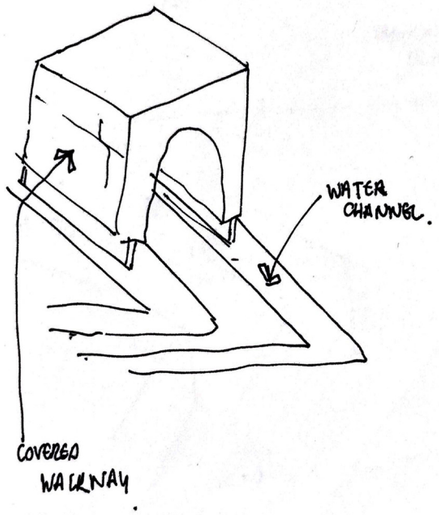
01. Initial Pavilion Model Development

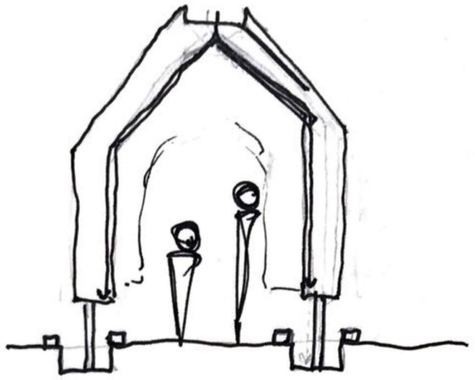
01

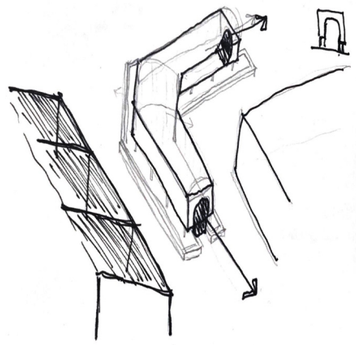
02

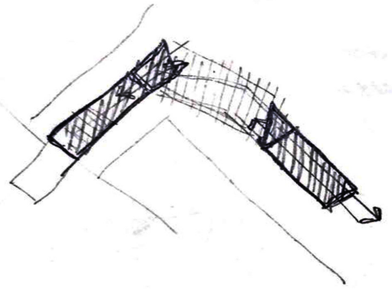


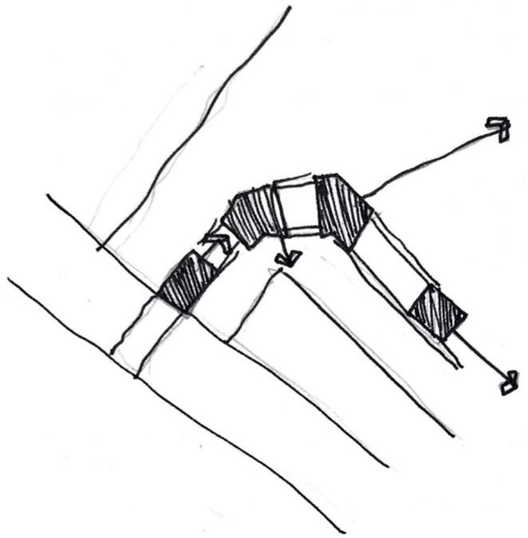
01. Jewish Museum Pavilion Development Design
02. Jewish Museum Pavilion Entrance Approach











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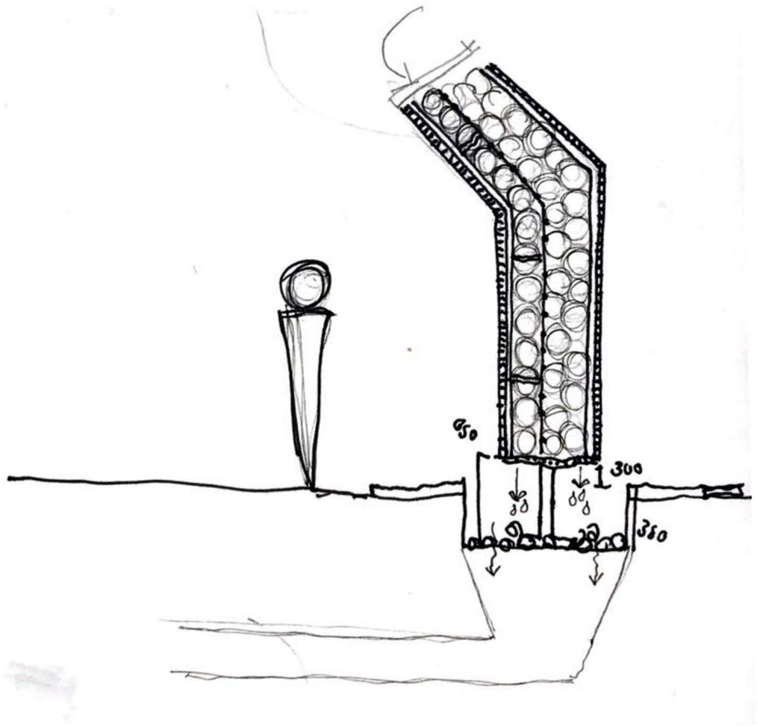


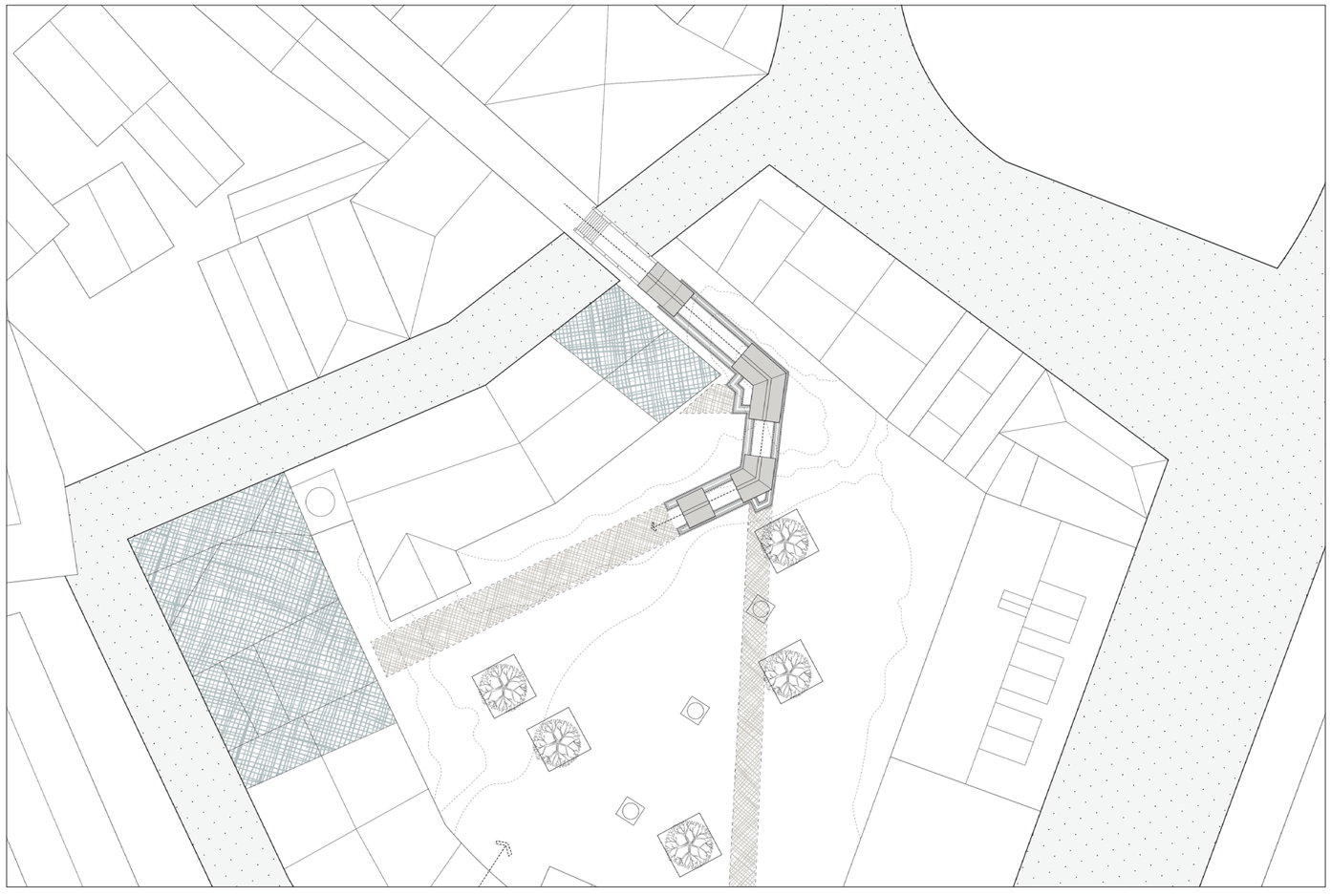
01

As the pyrite stones that will sit within will gradually weather with rain, flooding and humidity, a channelling system to collect the dirty water would need to be considered in order to not destroy the ground surface of the square.

A porous material such as sandstone will sit at the bottom of the channels to allow the dirty water to gradually filter through until it is absorbed into the ground, and ultimately the well system that sits below the square.

As the choice of location for my pavilion receives the most amount of shading the pavilion will be broken into 4 smaller pavilions. This not only allows each pavilion to be slightly different, to allow a focus to each of the different synagogues, but also allows light to pass through more, which allows the pavilions not to be completely shaded at all times of day.

01



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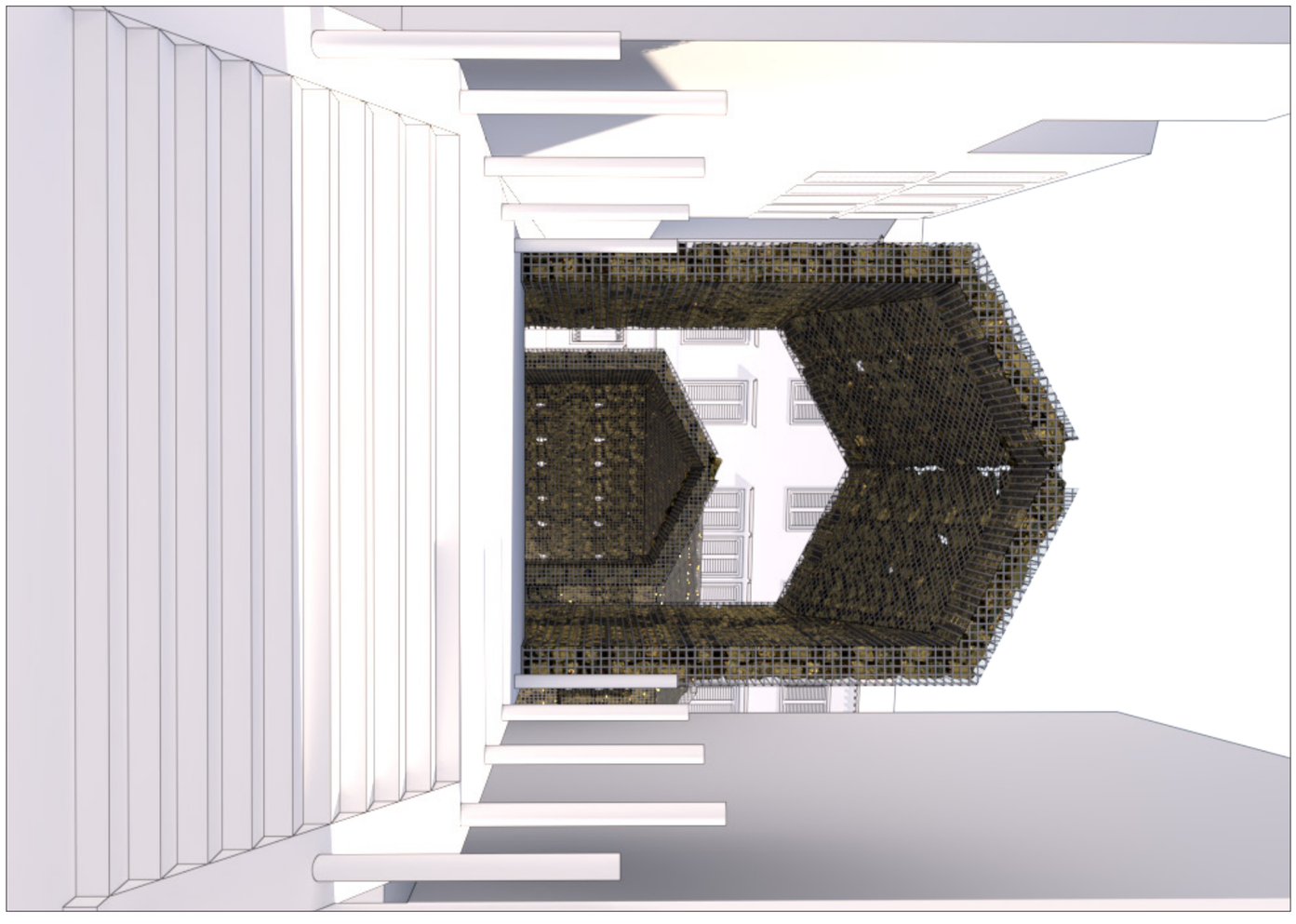
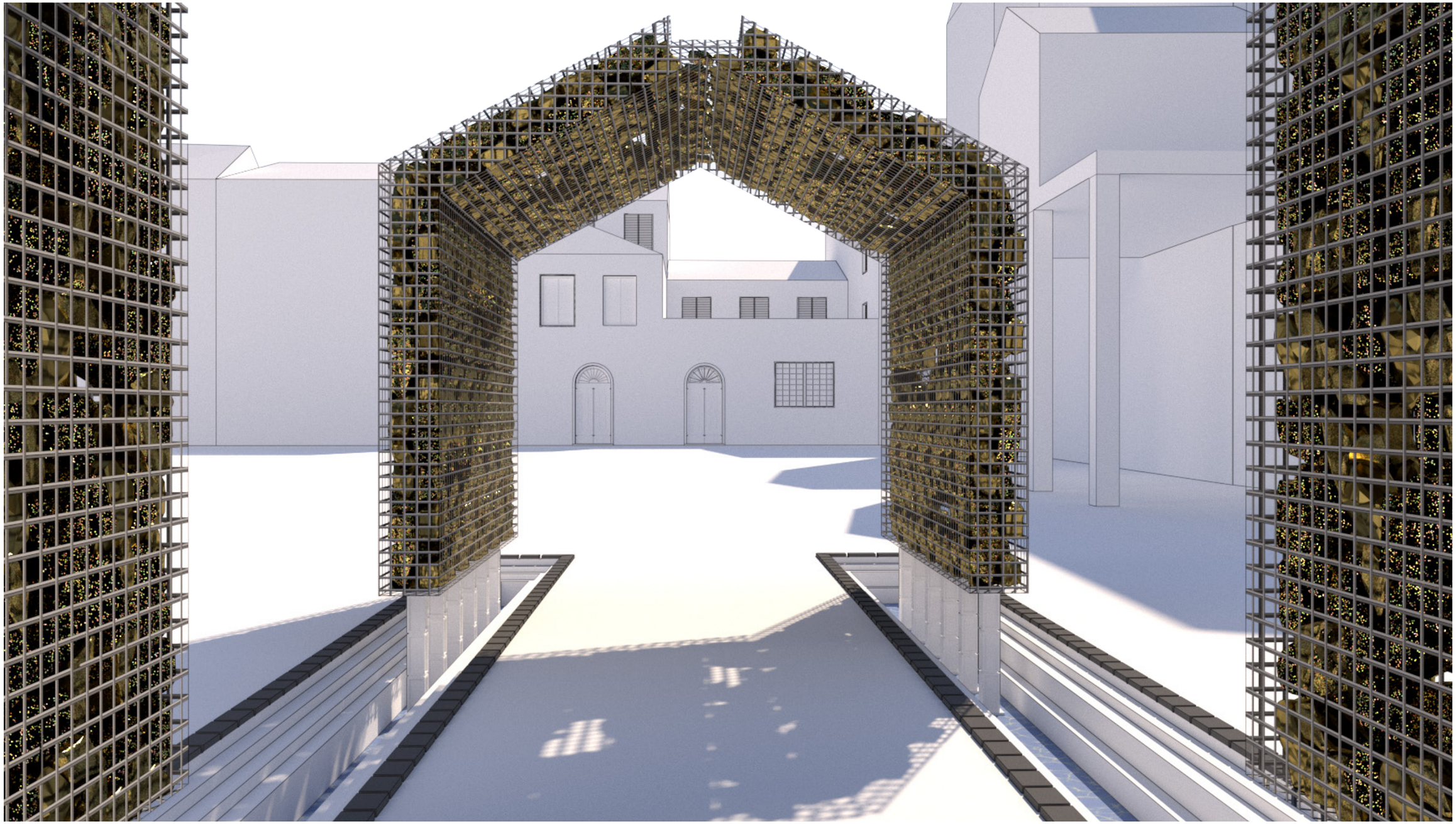


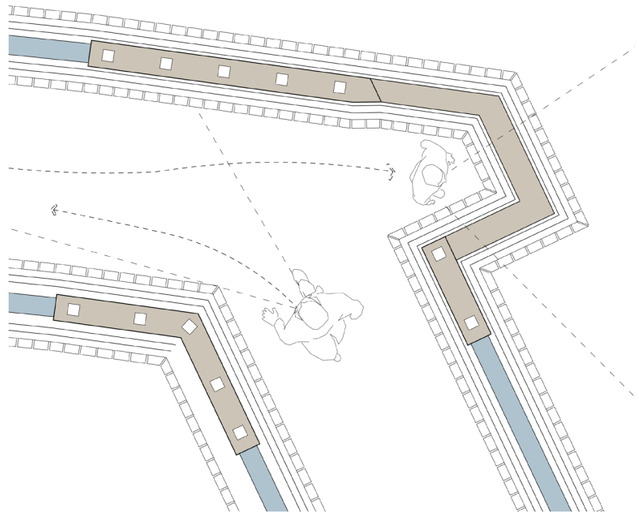
01. Pavilion Location Plan 02. Approach to Square



01

Each Pavilion aims to differ slightly, each focusing those walking within on something different, with subtle changes to height and width. Even though there is separation in the various pavilions, the water channels continue right to the end guiding people towards the museum.

01. *Movement Through Pavilion 3* ***02.*** *Section Through All Four Pavilions*



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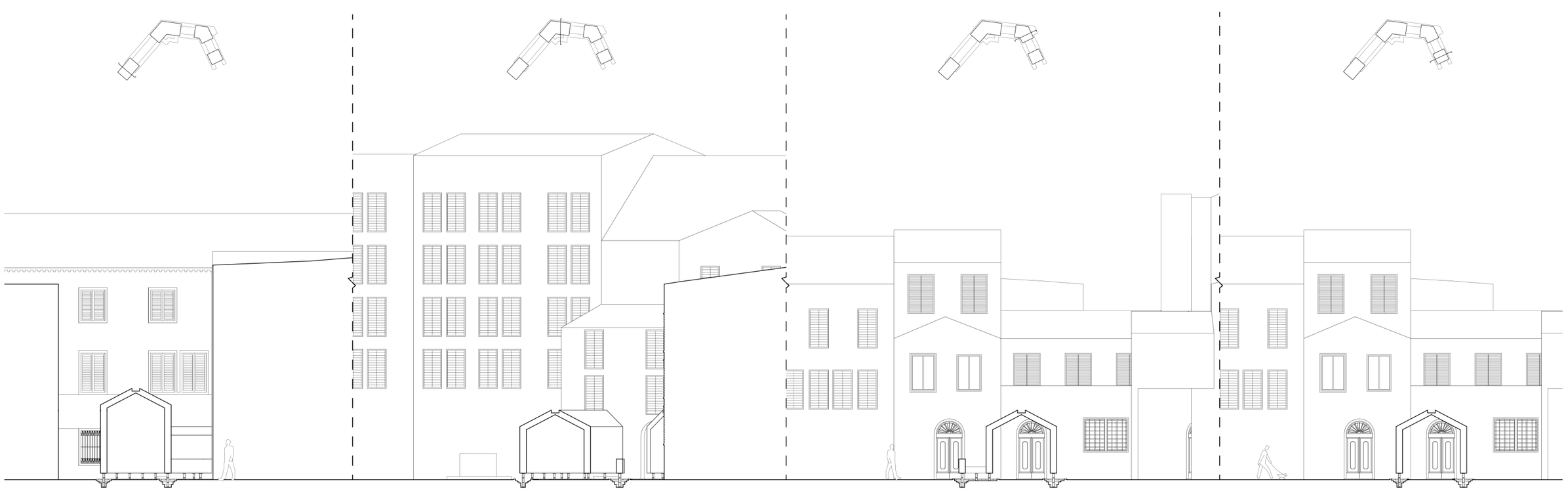

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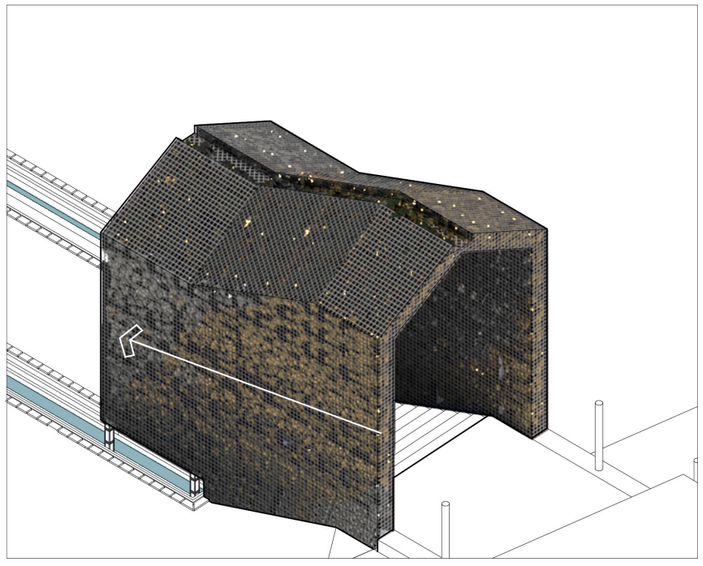
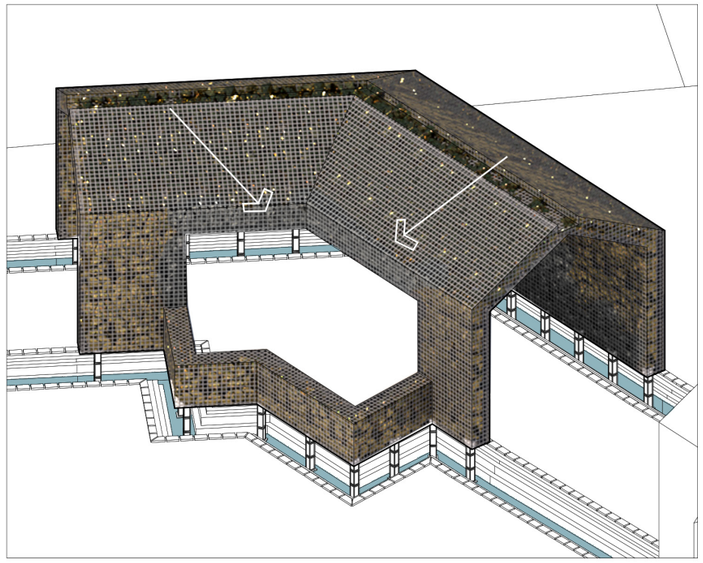


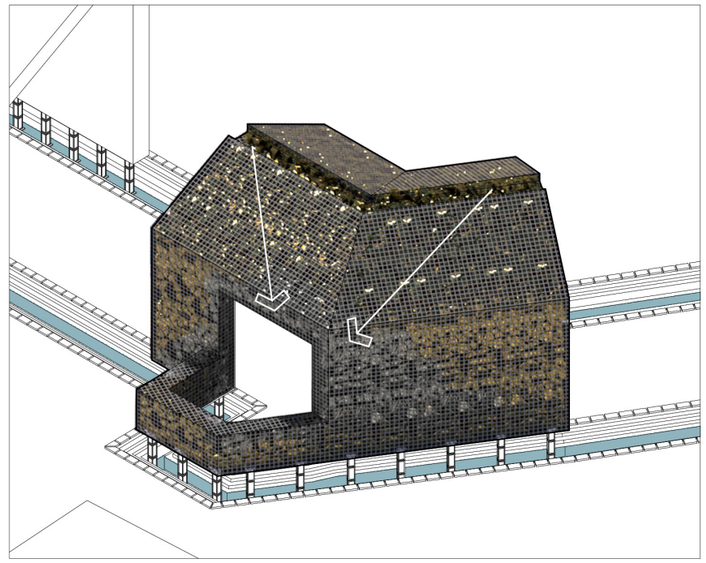
01

Entrance to site, main route through into the square for tourists. View is directed into the site, with the pavilion beginning at the point of the canal bridge.



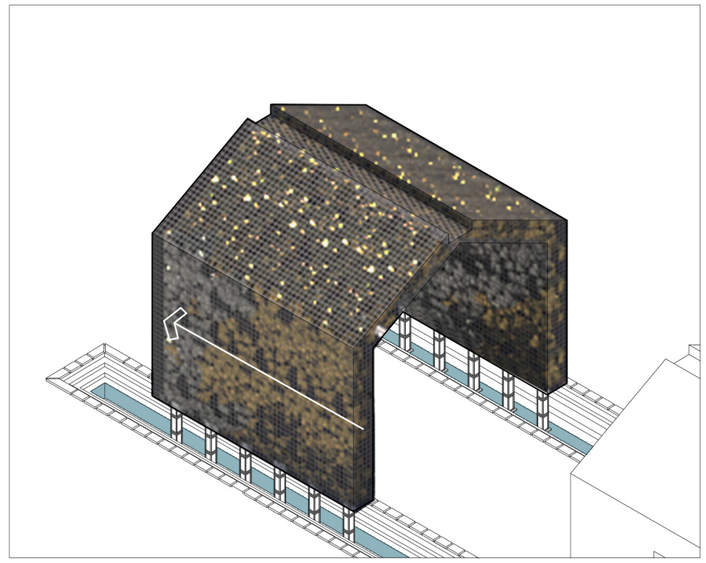
02

Second pavilion leads tourists towards the square, breaking their pathway with an opening which forces a view towards the Italian Schola.



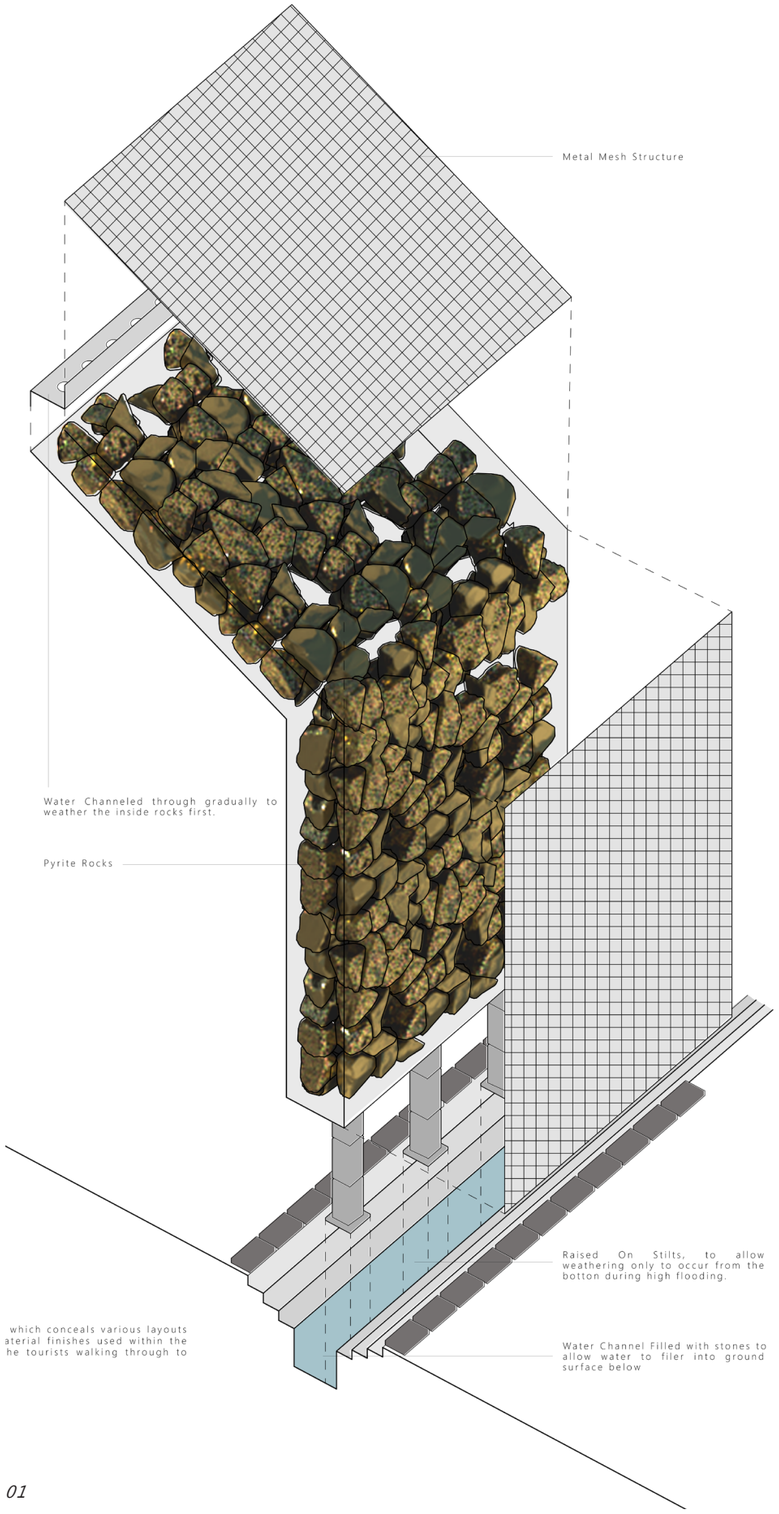
03

The third pavilion, similar to the second, break the directional pathway, directing the view towards the Chabad Synagogue and German Schola.



04

Lastly the last pavilion directs the view straight towards the Canton Schola and Jewish Museum, the main attraction for tourists to visit in the square.



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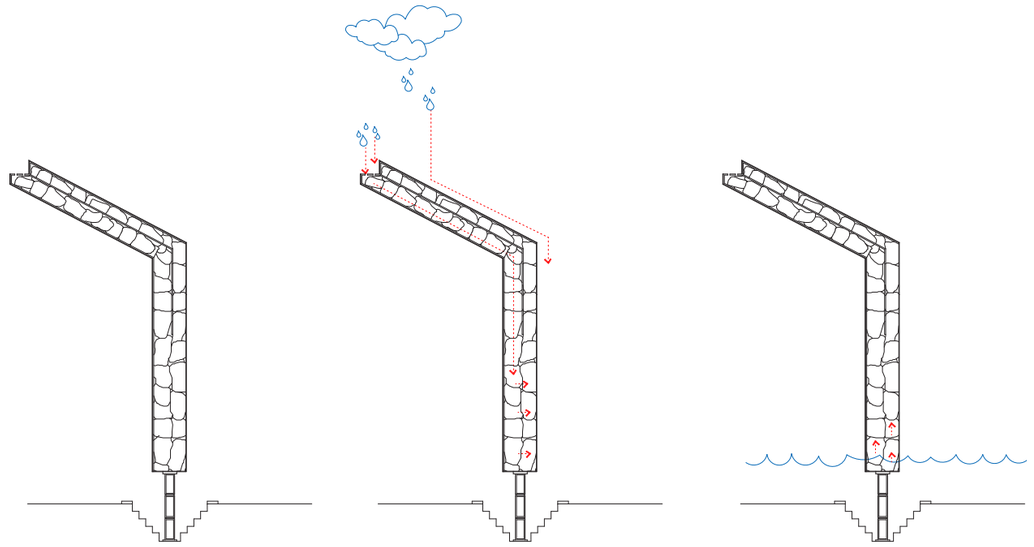
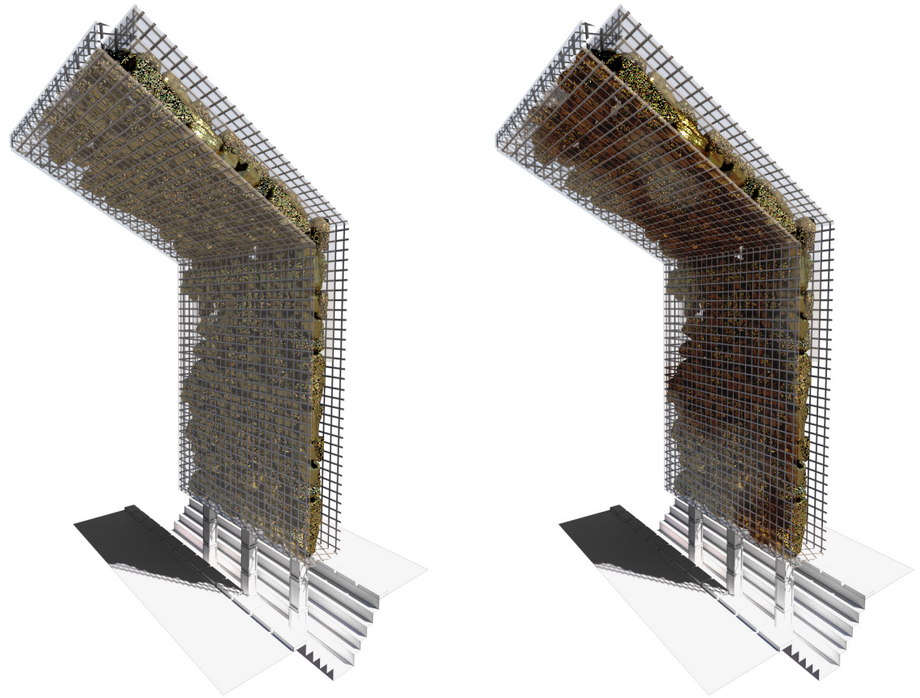


Due to the acrylic panels placed within the pavilion, it will allow for a gradual weathering process. Water will gradually trickle down dampening the stones. The more rain and flooding that occurs the quicker the temporal process.

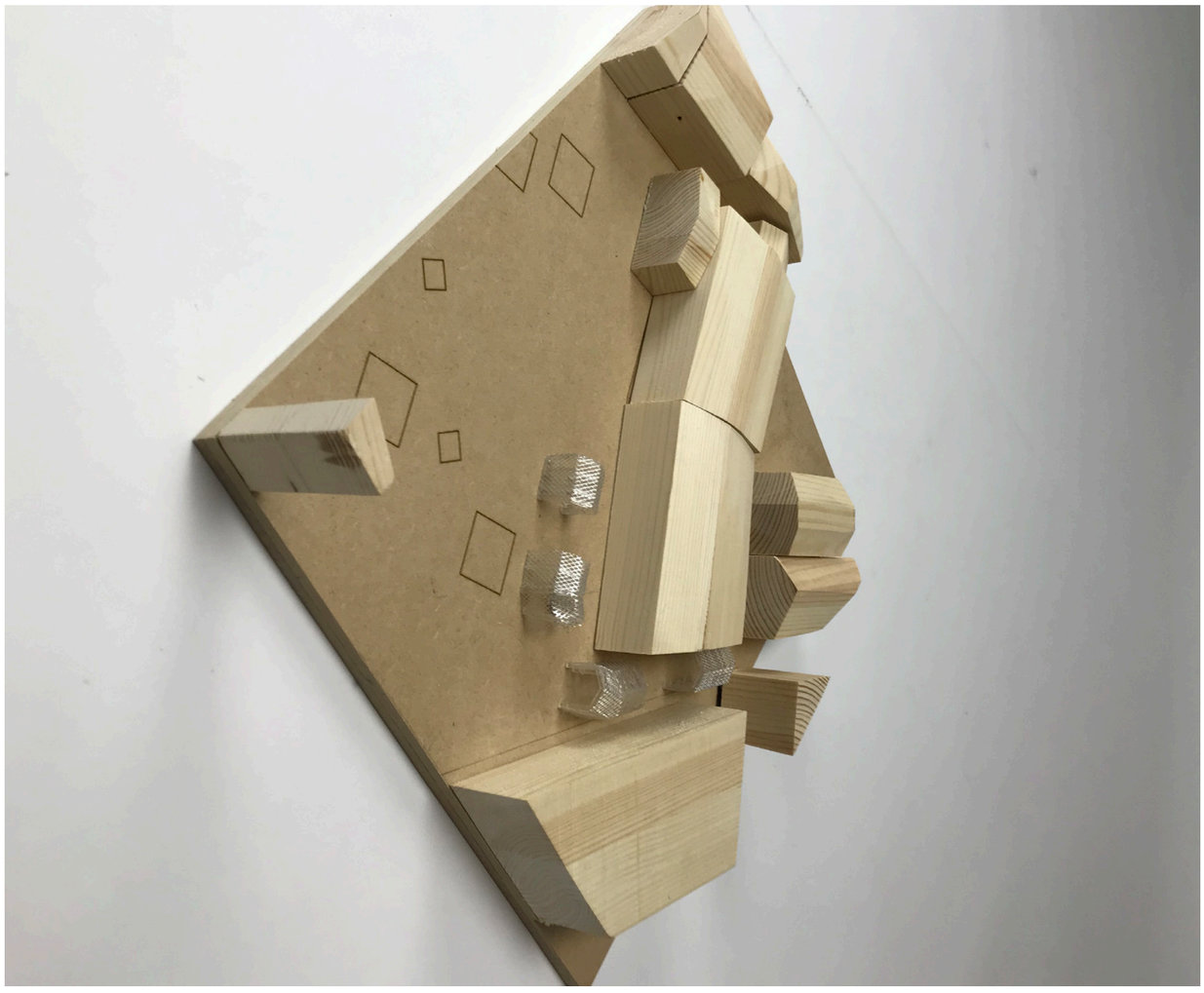
As it rains, water will fall through the acrylic openings, allowing the water to channel through the inside of the pavilion, creating a weathering from the inner wall. This will mean for the roof to become the most weathered.

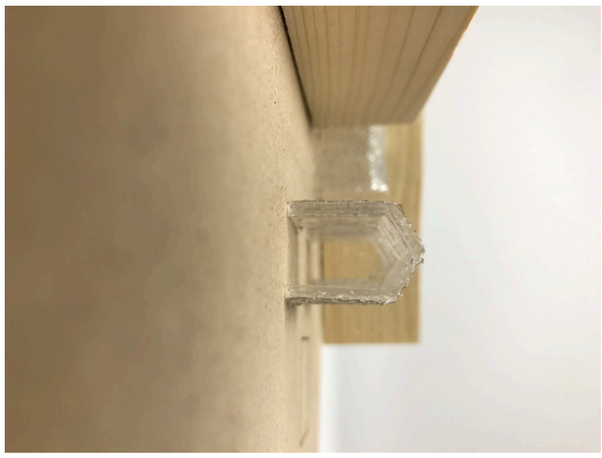
During times where aqua alta occurs, the channels will be filled and the stones on the bottom will become wet and start to weather. The more intense flooding will result in more of the pavilion becoming destroyed over time.

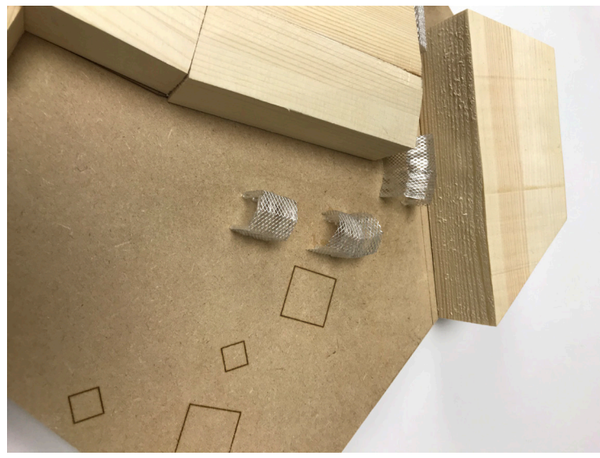


02

01

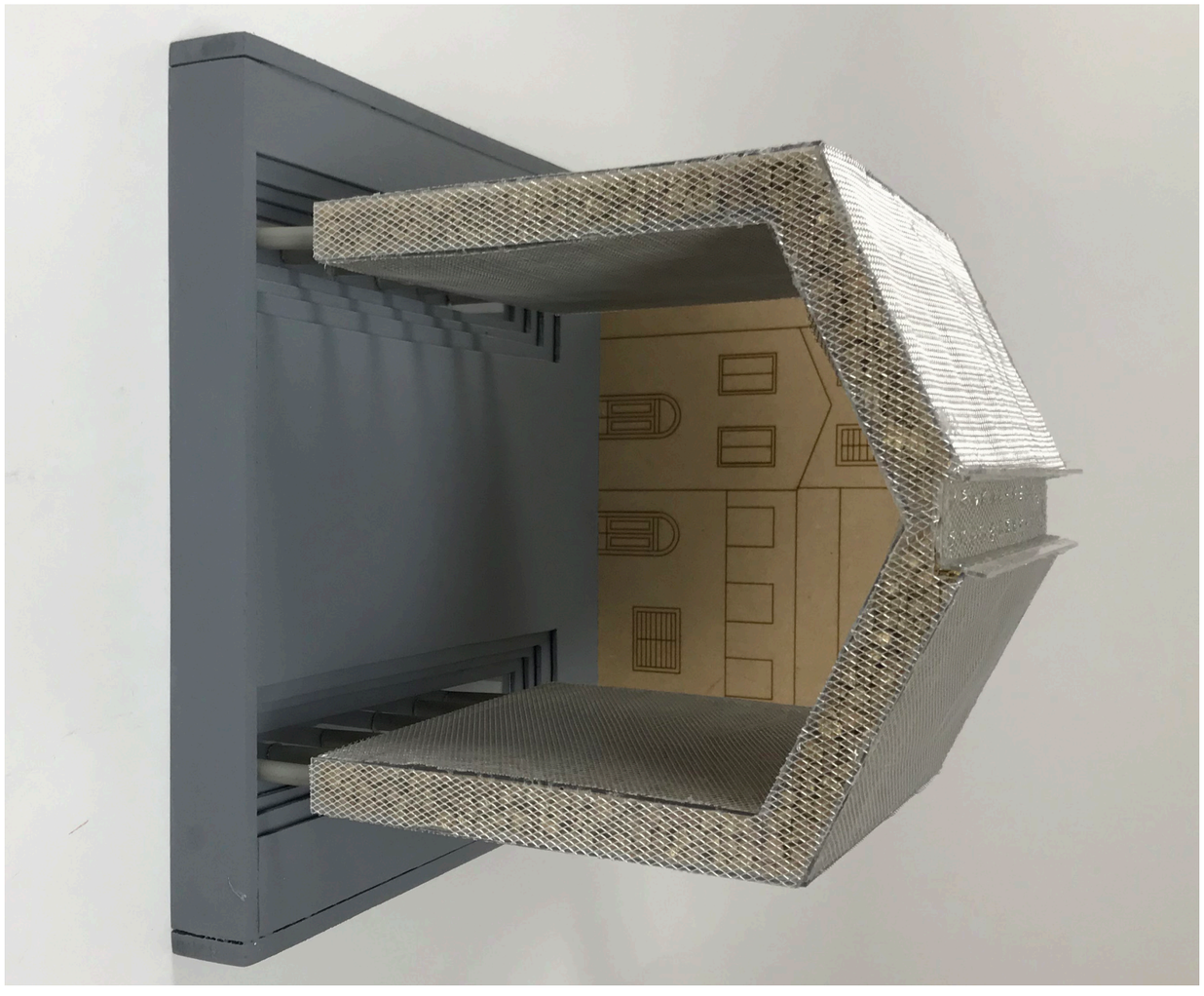


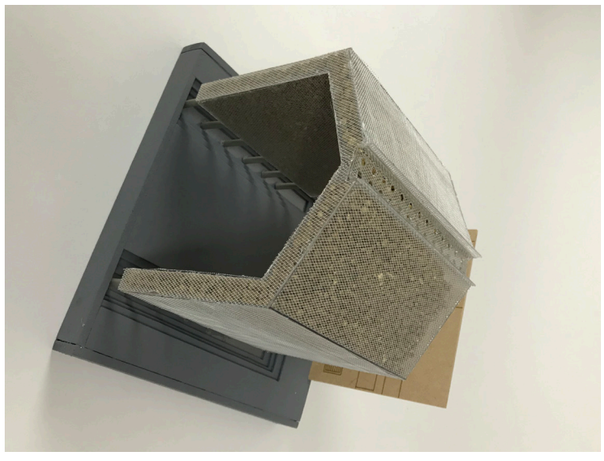




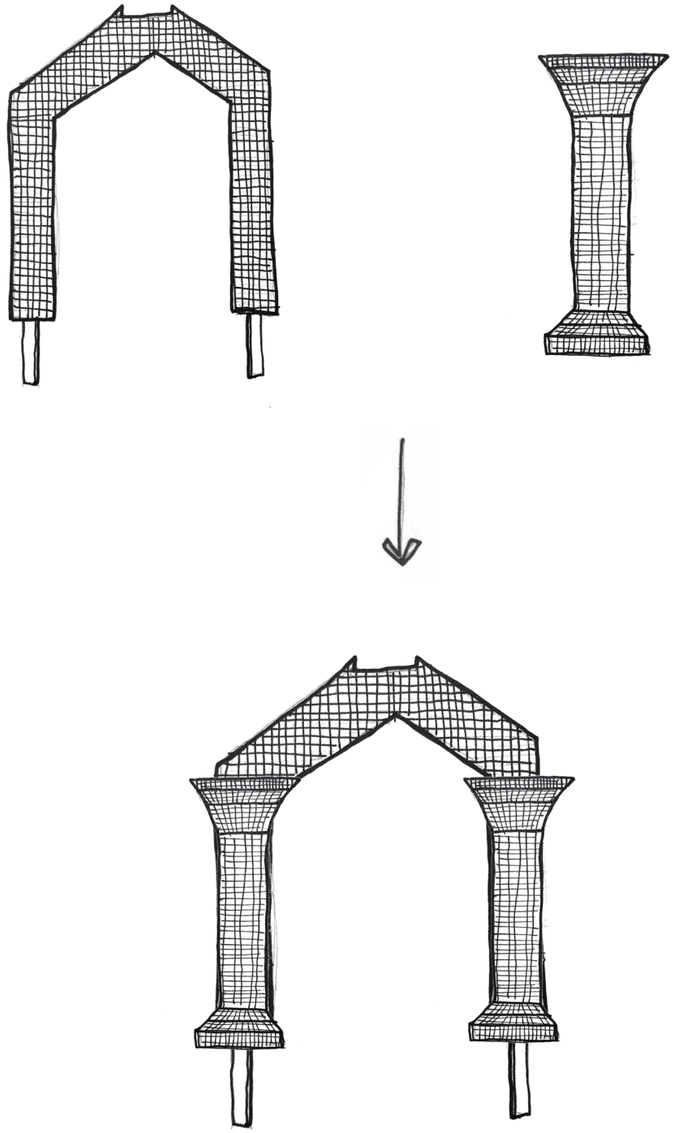
01. *Final Pavilion 1:200 Scale Massing Model*

01





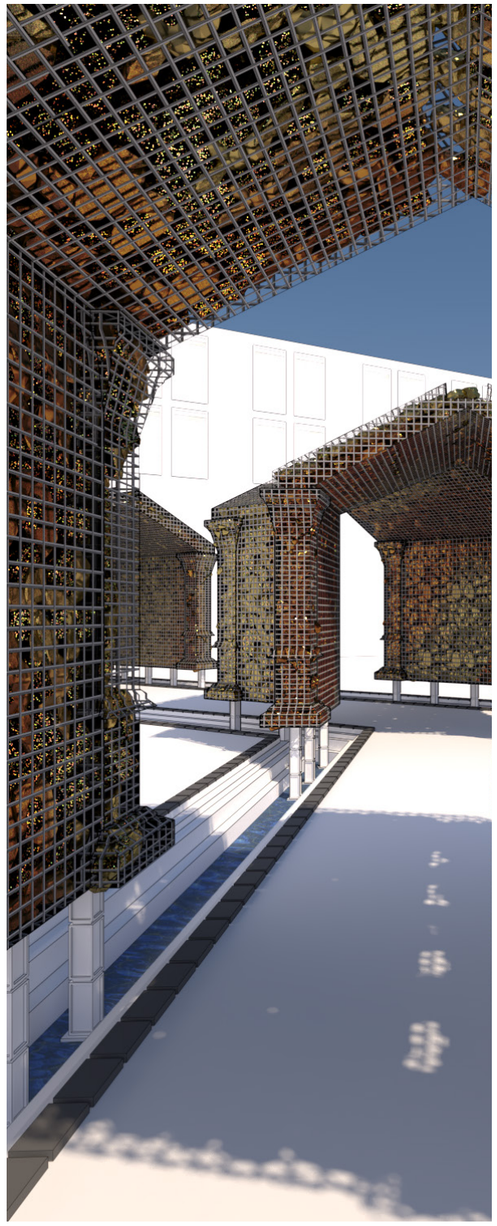
01. Final Pavilion 4 1:20 Scale Model

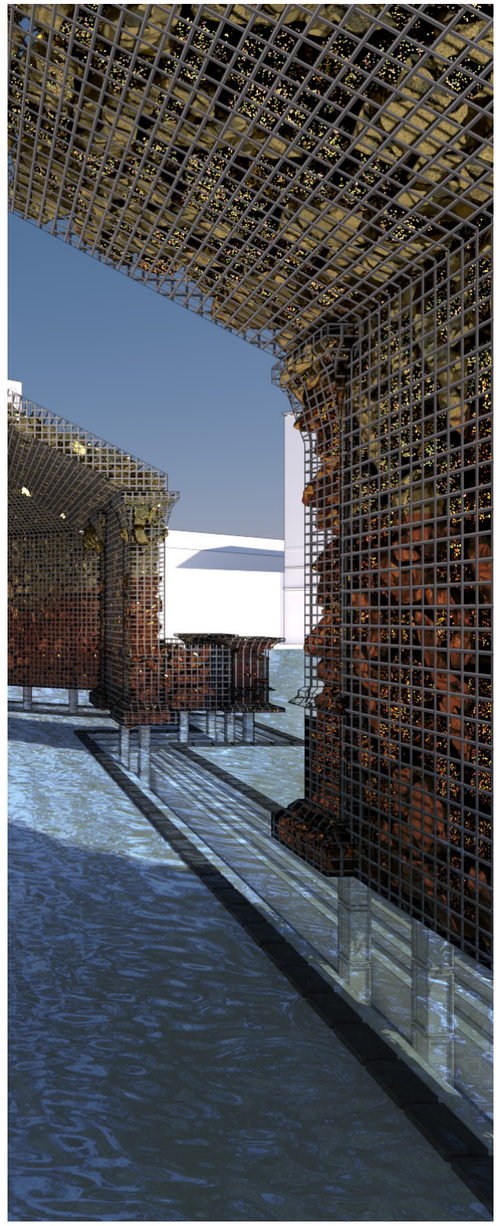


01

Following my end of term critique, comments were made about improving the design of the pavilion to include more of the intricate detailing researched from the interiors of the synagogue. Taking this on, some of the early column motifs that had been used in my earlier pavilion development has been re adopted in a simpler form, to give more intricacy to the overall typology of the various pavilions.

02

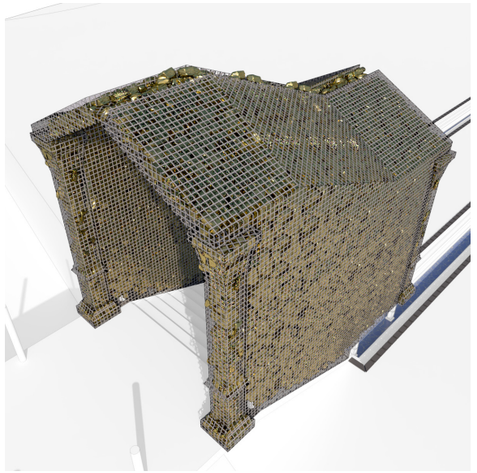




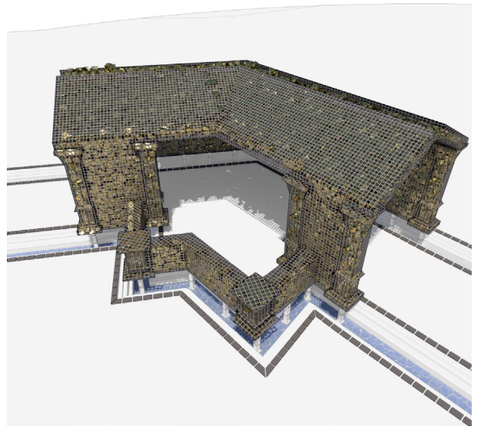
01

WEATHERING FROM RAIN

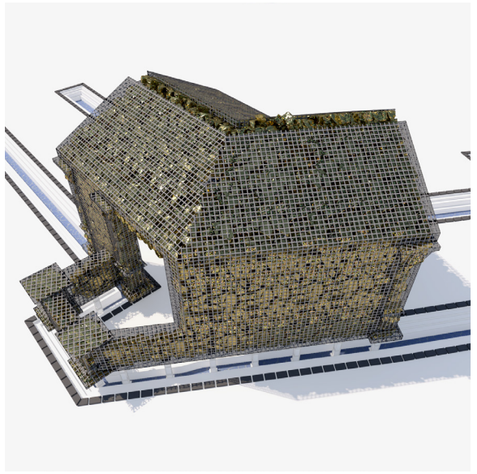
WEATHERING FROM ACQUA ALTA



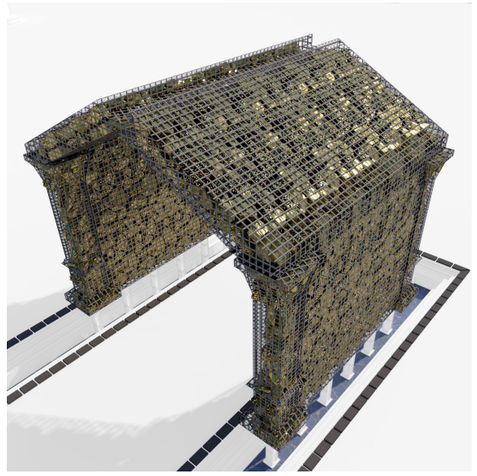
PAVILION 1



PAVILION 2



PAVILION 3



PAVILION 4

02