

# FULL LONGLIST

SimpsonHaugh | B.15

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## Modelmaking Awards 2019

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Rewarding appropriate and well executed models from design development through to presentation. Open to all 3rd, 5th and 6th year MSA students. Awards will be judged and presented with SimpsonHaugh at this year's MSA End of Year Show on June 7th.

More information available from:  
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WORKSHOP

# Modelmaking Awards 2019

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## BA LONGLIST

# Alasdair Sheldon

Ba Year 3- Atelier: Common Ground

## Project: Uprising with Art

The programmatic formulation of the 'Uprising with Art' museum was inspired by American Economist, Richard Sennett's socio-economic profiling of Ancient Roman: 'We also mis-imagine how those medieval walls functioned. Although they enclosed the city, they also served as sites for unregulated development therein.. far from the control of their centre'. Our site, the Northern Quarter, can be portrayed as Manchester's site for unregulated development from the punk music culture in the 80's to the ever present graffiti art. Sitting within this epicentre for art and culture, the 'Uprising with Art' museum strives to celebrate the historical resistance to social conforms in this part of Manchester, with a gallery of political art.

The museum follows this underground culture narrative with a large portion of the structure below ground - a hidden system of exhibition and educational spaces that run perpendicular to the respective political plane. A large central chasm cuts through these spaces and penetrates the surface thus manifesting the tremour or rift caused by political uprising. Derived from a varying classical geometric sequence on each floor, the chasm presents a dynamic, 'corkscrew' appearance to visitors looking up or down the void. As visitors descend with the chasm, they enter the subterranean system - a system hidden in plain sight.

Modelmaking was a key part of structural, material and programmatic progression. Initial massing models helped to catalyse the idea of an underground system - a sequence of chambers and voids connected by the central chasm. A 1:500 sketch model and 1:100 structural model finalised the idea of the central chasm and its relation to the structural grid; this was also where the idea of vaults underground were first introduced to further explore this concept of subsystem - varying vault sizes are used to express a tension between a bunker and cathedral-like space. The 1:50 interior model explored the atmosphere of these subterranean exhibition spaces through materiality, artefacts displayed and the inclusion of groin vaults. The varying, white vaults juxtapose the austere, monolithic exposed concrete walls and manifest this conceptual journey through smaller bunker-like spaces to larger temples of art. When constructing the model, I only used 3D printing when needed. One 3D printed vault was used as a template to create the seven remaining structures through stone powder casting



1:500 massing model



1:100 structural model exploring the chasm that penetrates the building.



The 1:50 interior model - stone powder casted vaults with silicone mould.



Groin vault ceilings create dramatic stark shadows.



Bankys wall created through image printing onto wood. Also features artist's famous half-shredded piece.



Succession of spaces - moving from the smaller vaults to larger double height spaces.



# Alexandru Munteanu

BA Year 3 - Atelier: Common Ground

## Project: MUSEUM OF ADAPTION

The View of the City Inwards

The Museum of Adaption has the intention of converging the essence of Northern Quarter as an artistic realm inwards into a structure that documents this character. Based on how Northern Quarter had a shift from an industrial heritage that now acts as a canvas for individuals to perform artistic interventions, enriching the surroundings, the Museum acts as an inventory of relevant urban artefacts and at the same time contributes by facilitating art related activities in a layout that encourages interaction and communitarian values. Using different architectural motifs and concepts, the Museum of Adaption channels into a scripted journey that guides the visitors through the spaces which are defined to have different aesthetic and environmental conditions to match certain states of mind and enhance immersion. The artefacts themselves are either new creations from artists based in the region or preservation of existing artefacts facilitating a timeless inventory of exhibits, thus defining a view inward of the city in the Museum.

Model making represented an important step in defining the final proposal for the scheme as it provided the opportunity to physically appraise the qualities of the site and its volumetric possibilities, considering a relatively constrained site of 19x21m. Based on the different scales which I interacted with, from massing models to overall layout in 1:100 models and 1:50 internal studies, this influenced overall decisions in the circulation which is the main parameter of the project and internal qualities and aesthetics in both 1:50 models developed. While the 1:100 models embody a refined abstract aspect to enhance definition and have a precision in quality through the use of laser cutting, the 1:50 makes use of different materials and contrasts to show material quality. The use of concrete screed on the wooden base aimed to replicate 1:1 materials in combination with the simulation of brick masonry using image transfer to fully replicate the Flemish bond technique inherited by the proposal from the surrounding context.



Image 01: 1:50 Internal Study Model  
MDF, Image transfer, Concrete Screed,  
Acetate, Greyboard



Image 02: 1:100 Conceptual Circulation Model



Image 03: 1:100 Structural Development Model



Image 04: 1:50 Internal Study Model  
MDF, Image transfer, Concrete Screed,  
Acetate, Greyboard



Image 05: 1:50 Internal Study Model  
MDF, Image transfer, Concrete Screed



# ANA MAYTE ALVARADO

Ba Year 3 - Atelier: LOOP

## Project: STRETFORD TWIGS' HOUSE

A inside space for the kids on Stretford

The atelier approach to design was to choose a worker/artist for which to design a building that would be located at Stretford Victoria Park, south east of Manchester. The aim of the atelier was to learn by making and creating. I chose to create a place for the kids that allows them to do plasticine sculpture, theatre, and playing inside; for the times the weather did not allow them to play outside.

My journey started by the design of all the furniture for the sculpture workshop and then translating what I learn to the building. I decided to slot the table to avoid using bolts or nails, that translated later in the idea to use a bespoke frame that would replicate the same idea of being slotted.

For the facade I tried to get inspiration of the plasticine process of wire, muscles, clothes and any embellishments after. I choose a glulam frame with clt panes for bracing and rigid insulation. At the end I chose to cladd all the building on stainless bronze panels with leaf pattern.

I came up with the form, the structure approach and the pattern design by modelmaking. I used to go to the workshop with an idea of how to develop my design but once in the workshop I ended up with something more interesting.



Image 01: sculpture table model  
Plywood, clay

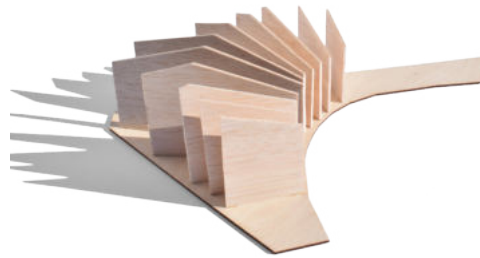


Image 01: frames study model - plywood,  
balsa wood



Image 03: Bracing study model  
Plywood, balsa wood

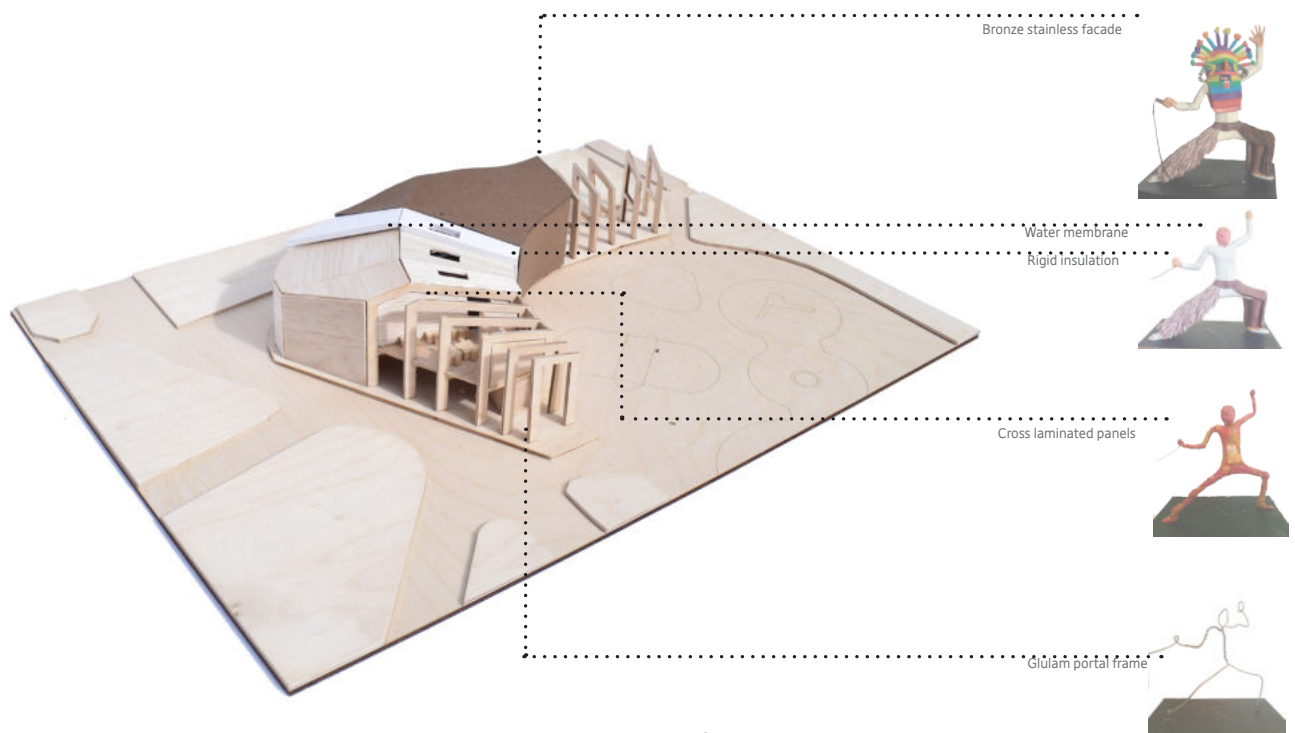


Image 04: Peel away model on site - Plywood, laser cut, Balsa wood, foam board, leather paper.



Image 05: Etching of leaf pattern as a try to the facade design



Image 06: Detail model- Wood, foamboard, greyboard, metal mesh, card, plasticine person



# Bagner Villacis Alvarez

BA Year 3 - USE

## Project: The ReJunk Hall

Restaurant and market-hall based on reclaimed food and local products

Food waste has become a worldwide issue in recent years, generating economic, social and ecological repercussions. Conscious education on food management will help alleviate several of its consequences, including global warming, wasted water, landfill usage and more.

Inspired by local and international initiatives to tackle food waste, The ReJunk Hall emerges as a space in which reclaimed edible food can be put back into the cycle. The small ecological footprint building is comprised of a restaurant and a market-hall which work with a circular economy system supporting one another by preparing affordable food from intercepted, edible and seasonal products. On a larger scale the project serves as a central point connecting local producers, community gardens and the people of Manchester. By celebrating the forgotten River Medlock through an extensive wetland area, the scheme aims to reconnect human beings with nature and provide a green buffer zone within the city.

Using different ways of model making helped me understand the different relationships existing in architecture, scale human-building, scale for a phenomenological experience, volumes for space organization, tactility, façade treatment and more. Furthermore, working with soil within a MDF frame helped me understand better the changes in topography and how to work with it in order to create a coherent and realistic design. Overall, I believe that model making is crucial when developing a project as by its different methods and approaches, it helps people reveal and keep improving specific characteristics of a project.



Image 01: Sketch Model - Testing the Facade, Mount Board



Image 02: Defining Geometry - Facade, MDF



Image 03: Redefining the Building - Volumes, Timber

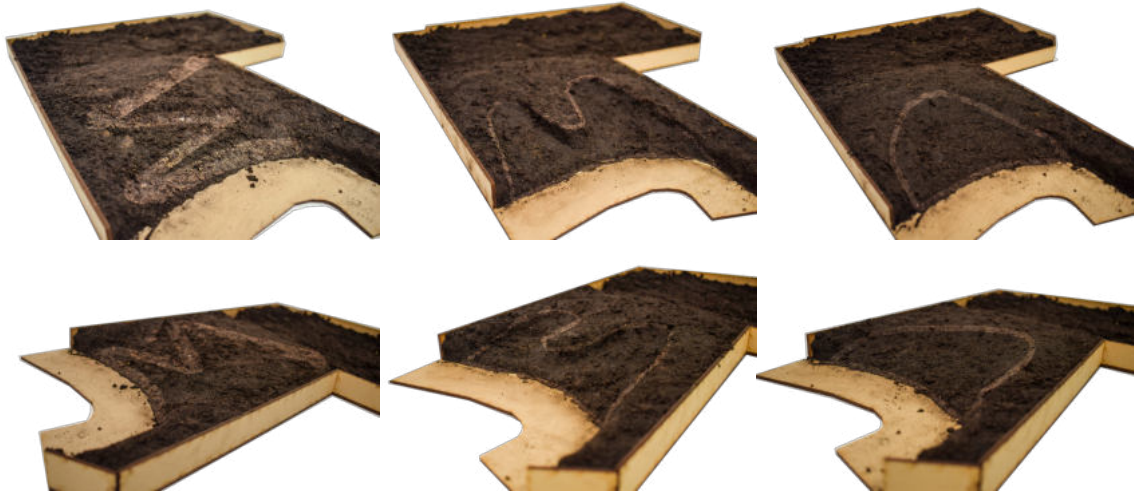


Image 04: Topography Testing, MDF and Soil



Image 05: Structure and Space - The Market-hall, MDF

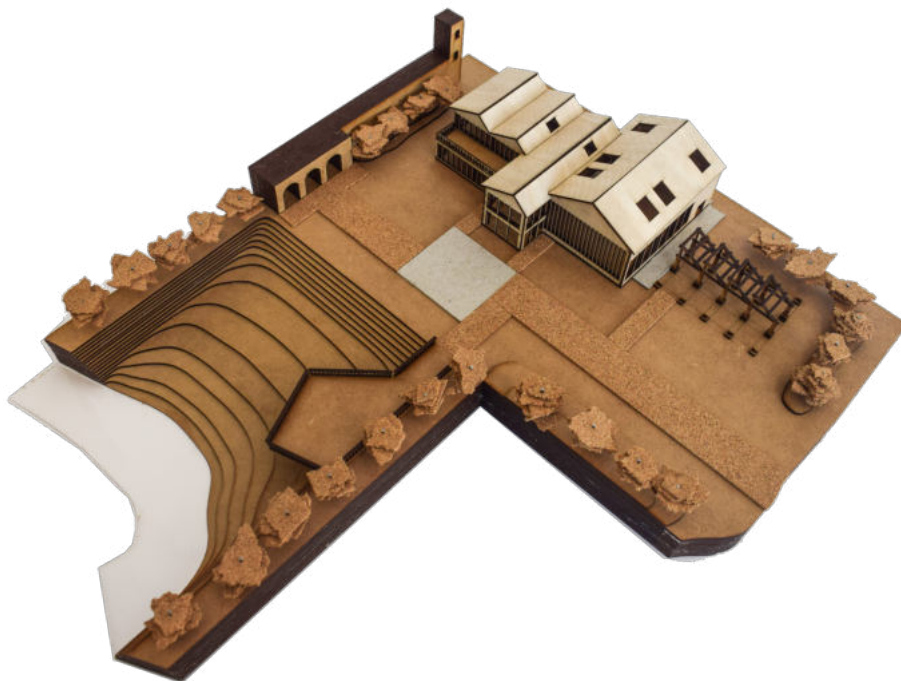


Image 06: Unification - The Proposed Scheme, MDF, Balsa, Plywood, Cork, Acrylic and Grayboard

# Callum Richardson

Ba Year 3 - Atelier: Common Ground

## Project: The Archive of Unbuilt Visions

A museum for unbuilt architecture

Situated on 19 Dale Street, the Archive of unbuilt visions is a museum which celebrates the architecture which could have shaped the past present and future. Ranging from ideologically driven monuments to sustainable visions of the future. The museum aims to inform people of the importance of architecture and how it can change the fabric of society.

Incorporating concepts by Alvaro Rossi and Richard Sennett, the building explores the notion of embodying 'democratic space', through promoting a 'readiness among strangers'. As such the spaces are designed to have places to reflect, as well as explore. It is just as important to discuss the exhibits of the museum, showing how we can learn from the architecture that never came to be.

A complex, dynamic and unpredictable journey form the backbone of the building. Designed to embody the way we journey through cities, the building is unpredictable, spiritual and full of variety, whereby inhabitants journey around a series of inhibited volumes.

Throughout history, we have ascended through technological, political and societal evolution. This concept of ascension is present throughout the material, spatial and structural qualities of the building. The bottom of the building is dark and claustrophobic to reflect the darkest moments of human history, whereas the top of the building is unpredictable in its structure to embody the unpredictability and wonder of future visionary projects.

Given the programmatic ambition of the project, model making was essential to communicate the intricacies of the journey and the structural complexities of the project.

A synergy between the precision of laser cutting and material qualities of hand-crafted models was crucial to convey the material and spatial properties of the design process.

Many of my models are at the 1:100 scale, given the fact that I knew the building would be large, 1:100 allowed me to have the perfect balance of visual clarity, consistency and detail to communicate the design process. Later in the process, the scale would increase to 1:10 and 1:50, where the material palette would evolve to capture the ethereal quality of the building.

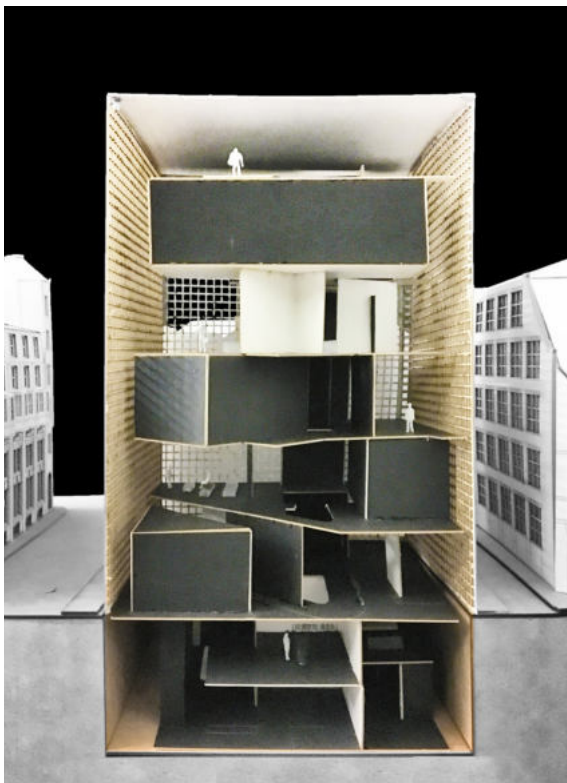


Image 1: Initial 1:100 GA Sectional model on a 1:100 sectional site model



Image 2:  
Developmental  
design 1:100  
GA model - the  
relationship  
between  
artefact and  
inhibited volume  
(Made from  
mountboard and  
balsa wood and  
acrylic)





Image 3: Diagrammatic developmental 1:100 structural model -the relationship between structure and programme. (Made from coloured mountboard and Balsa wood)

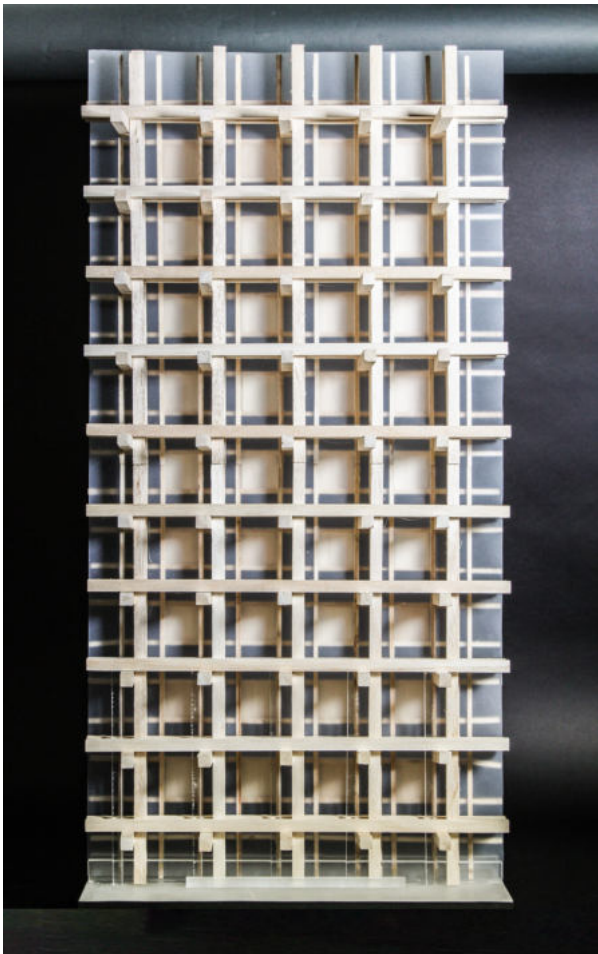


Image 5: 1:10 Facade detail model - elegance through simplicity and repetition (Made from Balsa wood with PVC sheeting)



Image 4: Integration of refined programmatic and structural concepts into a 1:100 GA Model. (Made from Balsa wood, Acrylic, Plywood and laser cut mount board)

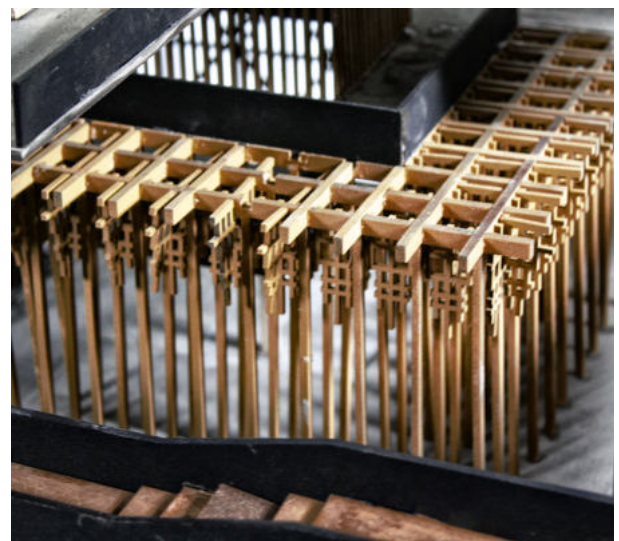


Image 6: 1:50 material study of the public pavilion model - an exploration of the material and spatial qualities of the heart of the building. (Made from painted wood and concrete)



# Cameron Frame

BA3 - Atelier: Common Ground

## Project: **ARCHIVE OF THE UNBUILT**

Housing knowledge of Unrealised Urbanism

Situated in Manchester's culturally significant Northern Quarter, this proposal provides the territory with a Museum of Urbanism that is suitable for the area's complex contextual conditions. Driven by a desire to increase knowledge of the built environment, the programme educates users, archives pieces of the city, and exhibits notable urbanist projects. Therefore, this building sets out to be a continuation of the city, mirroring navigational techniques. In the Northern Quarter's gridded terrain, it is void spaces (e.g. parks, public open spaces) that we navigate via, and therefore it could be said that voids are 'urban landmarks'. This project uses large atria and exhibition halls as the landmarks that underpin circulation within the building. These voids are visited regularly to establish familiarity, as we do when navigating the city. Façade treatment of this building re-establishes historic site lines, and provides a contemporary take on Manchester's red-brick texture. The culmination of this journey is loggia terraces that frame views of the city and allow users to apply learned knowledge to the city surrounding them. This building is of the city, for the city.

Throughout this project modelmaking has been crucial to properly communicate, test, and resolve the design. Beginning with foam massing models and a 1:500 site model, a form was generated suitable for programme and context. During the structural design phase, a 1:100 model was made using the laser cutter and MDF. Cheap and quick to assemble, this model served its purpose for communicating ideas to structural engineers and guest tutors. Interior models provide a high-quality finish to a specific space, and give a sense of light and scale which no computer generated visual can rival. Models have been integral to the design of this building's façade, and a set of 1:100 elevation bays have been made throughout the process. Starting with greyboard to generate a design, followed by MDF to study fenestration, before moving to plaster cast to test materiality; these models track the design process in a comparable manner, which is easy to understand. This was followed by a 1:200 presentation model which shows the scheme interacting with a simple massing context.

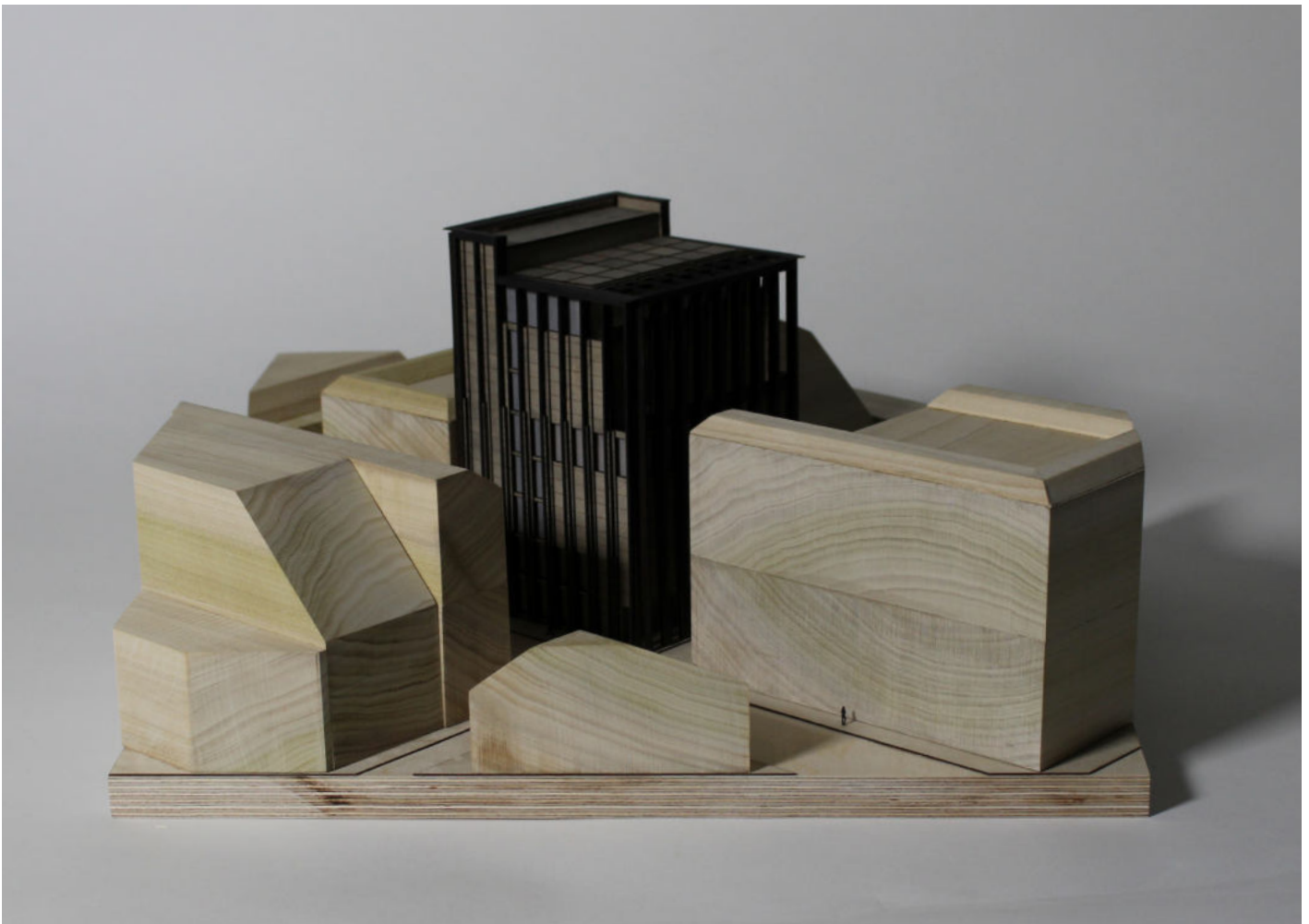


Image 01: Facade model in Context @ 1:200

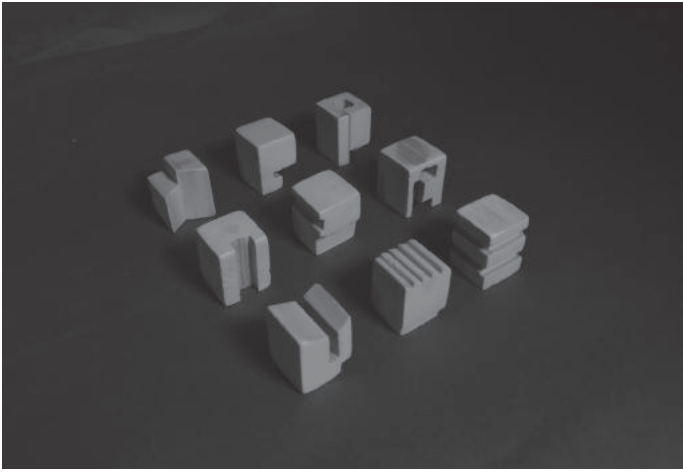


Image 02: Foam massing iterations @ 1:500



Image 03: Structural model @ 1:100



Image 04: Plaster Cast Elevation @ 1:100

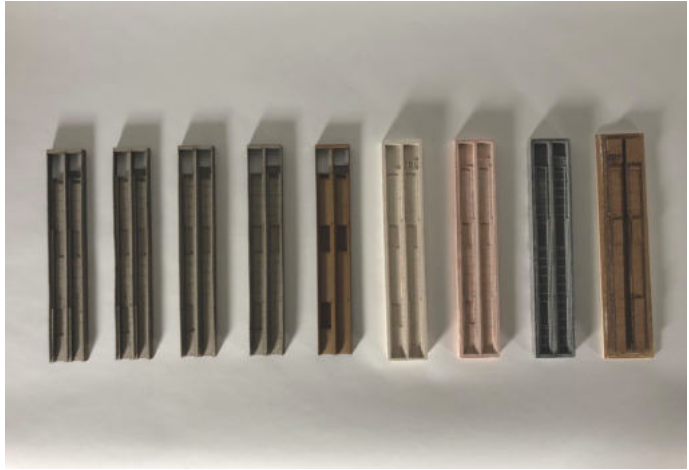


Image 05: Multi-media facade development @ 1:100



Image 06: Internal model of Main Atrium @ 1:50



## BA3 - USE

## Co-working in connection with nature

A co-working hub with light-filled workspaces raises literally from the Earth, creating natural working environments for people to think, develop and collaborate in environmentally guided projects for the benefit of the city, the planet and all living species. The building will create a biophilic culture from its daily encounters with wildlife, the smell of Earth, the action of the elements on the materials and the awareness of natural processes surrounding us. The Earth Hub is an opportunity for non-only-human communities to flourish.

The use of model making has been a key element of my design process, starting from the analysis of precedents to develop a minimum footprint building. I have used a range of materials to explore different programme arrangements, form and specially the texture of materials, which create the experience in buildings. The use of materials has been carefully selected to explore the idea of a building that raises from earth and has a natural feeling.

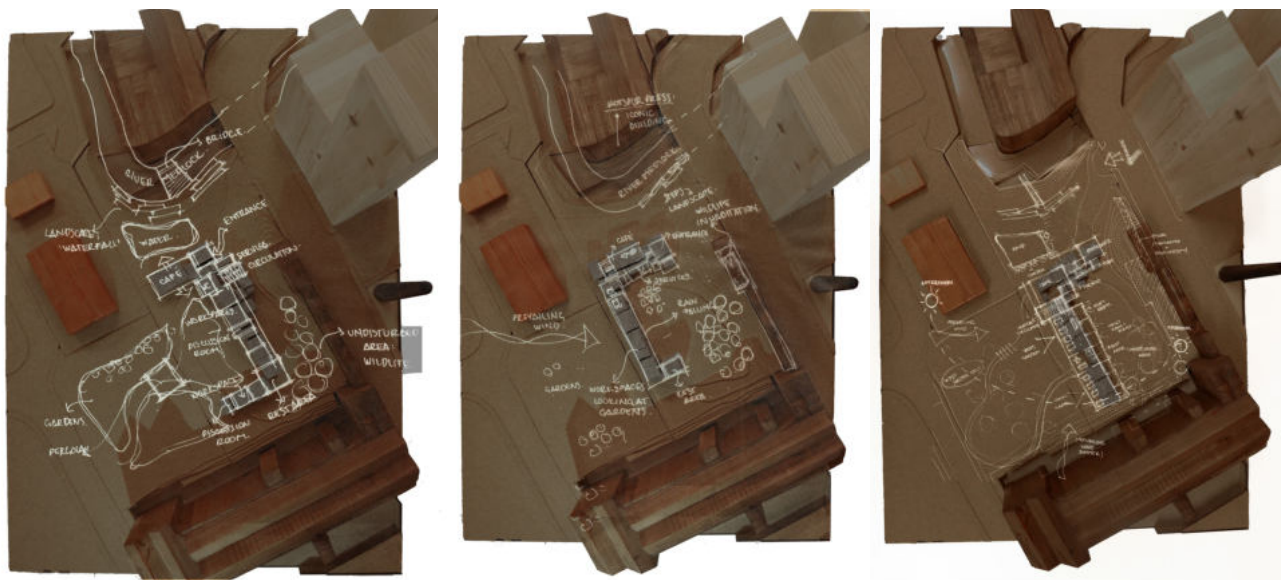


Image 01: 1:200 Annotated volumetric models exploring programme arrangement. Stone Clay.



Image 02: 1:200 Model analysing landscape and materiality - Plasticine, balsa wood, greyboard and craft paper



Image 03: 1:200 Model analysing landscape and form  
Plasticine, balsa wood, greyboard and craft paper

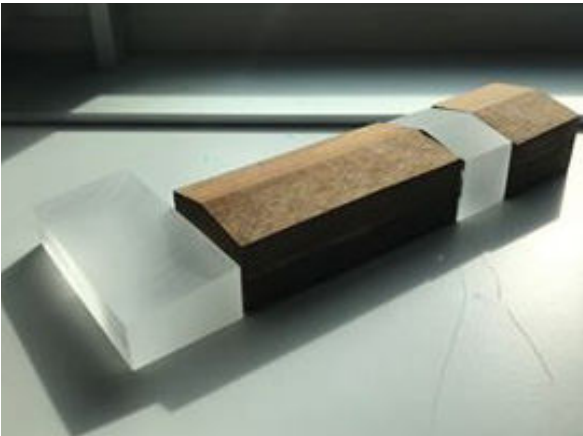


Image 04: 1:200 volumetric model analysing form  
Wood and acrylic.



Image 05: Rammed Earth model analysing material texture and structural properties.



Image 06: 1:200 Final model - Plaster cast, balsa wood, cast covered walls painted.



# Daniel Collinson

BA Year 3 - Atelier: CIA

## Project: ARC Studios

Artist studio & accommodation

ARC studios is a creative hub that is situated within central Manchester, adjacent to Projekts MCR. This space is intended to create both a collaborative and creative environment for artists and individuals. Events and exhibitions are open to the public along with galleries, public art programmes and residencies. Traveling artists are able to reside in private residence situated on the roof along with a private terrace. Users enter the building through the raised walkways that mimic the Mancunian way with a sunken sculpture garden below. Continuity between the building and surrounding context is created through the use of precast concrete panels along with a vibrant pastel facade that echoes the red hues of the surrounding brick buildings. This building will play a critical role in the revival of the Mayfield area along with the current Mayfield development.

Model making was used as a means of exploring and developing various concepts throughout all stages of my design. Visualising models at various scales in three dimensions has helped me better understand the spatial and material experiences that sketches can't portray. Model making has been used as a quick tool in the initial stages of design whilst being further refined once the scheme is resolved. One of the first few prototypes I made were massing concept models along with a landscape that is slotted into the group site model. These models helped me generate new ideas for the concept as I started working on materiality on a larger scale. Afterwards, I started working on a larger scale 1:200 landscape models along with initial core placement and structural prototype models. I experimented with various materials such as cork and Perspex in order to portray the desired effect. Once the scheme was resolved, I developed a second prototype the landscape using similar materials but used mahogany and a block of Perspex to illustrate the concept. I experimented with varnishes and stains to differentiate the materiality of the structure. Once the scheme was refined, I started developing prototypes at a larger scale, I experimented with layers of spray-paint with concrete in order to achieve the grainy effect of concrete. In the final iteration of the large scale model I utilised different shades of spray-paint in conjunction with various stained woods to highlight the public and private areas within the building. In order to achieve the desired pastel effect on the façade, I utilised card with watercolour to achieve the different shades of orange on the façade. All of the selected materials are purposefully chosen to explain the scheme.

Image 01: Structural Model & Initial Landscape

1:200 Scale  
2mm MDF  
Wooden Dowels  
Acetate sheet

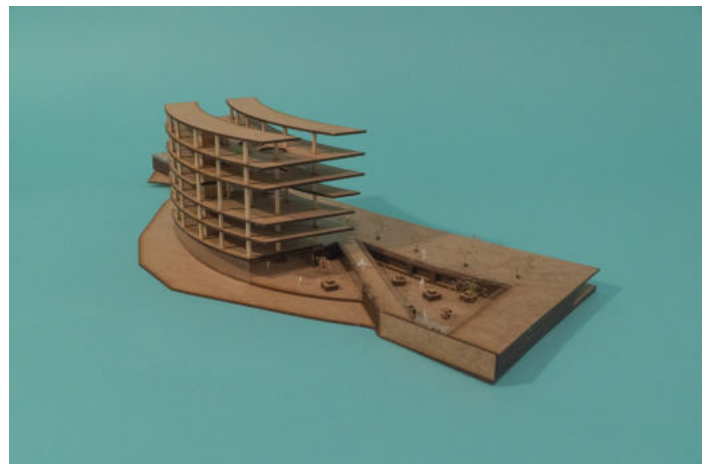


Image 02: Final Massing Model & Landscape

1:200 Scale  
2mm MDF  
Perspex sheet  
Acrylic block  
Tracing paper

Mahogany  
Stained Mahogany



**Image 03: Prototype 1 Corner model**  
 1:50 Scale  
 2mm MDF  
 Perspex sheet  
 Acrylic block  
 Mahogany  
 Stained Mahogany



**Image 04: Prototype 2 Corner Model**  
 1:200 Scale  
 2mm MDF  
 Perspex sheet  
 Acrylic block  
 Mahogany  
 Stained Mahogany



**Image 05: Corner model Final Iteration**  
 1:50 Scale  
 4, 6mm MDF sheet  
 Non-stained plywood sheet (public space)  
 Stained plywood sheet (private space)  
 mahogany furniture  
 Cork sheet (ancillary spaces + ground materials)



**Image 06: Corner model Interior**

# Darshan Varsani

BA Year 3 - Atelier: Common Ground

## Project: The Outside, Inside Museum of Urbanism

Exploration of Design within the Northern Quarter

The project brief was to design a museum of my choice that considered the wider context within the Northern Quarter. The site given was located on Dale Street which is an unused site that was left due to fire damage to an earlier building. The purpose of the building had to somehow integrate the Northern Quarter's heritage and use in some way.

Throughout the whole project it was encouraged to make use of physical models and sketching as a way of process and hence throughout the project I have explored the various details from concept stage to the end product through using different model making techniques. For the concept model I used scrap hardwood that I had found to create quick models that could give an overall idea to the form and the development of this. By using wood, I was able to produce models quickly using the tools in the workshop but also allows them to be more hardwearing and gives a rustic look to it. Exploring the waffle slab, I used the laser cut machine to save time but accurately cut the waffle slab which is layered to create a thickness. This then allowed me to test what materials I could infill the square gaps with to hide lighting fixtures. Moving on, looking at the surface detail I decided to cast the brick bonds that had a casting mould made of laser cut grey board. The reason for this was to give an idea of what the arrangement of the bond is like but also achieve a look that looks like slips rather than whole bricks and hence the casting method allowed for that. The final image was an interior model that was created using laser cut MDF to quickly put together the pieces but then work hard on the interior atmosphere through materiality and lighting and by doing this I realised by spray painting something to look like concrete rather than casting it can achieve a similar result in a cheaper and less time-consuming way.

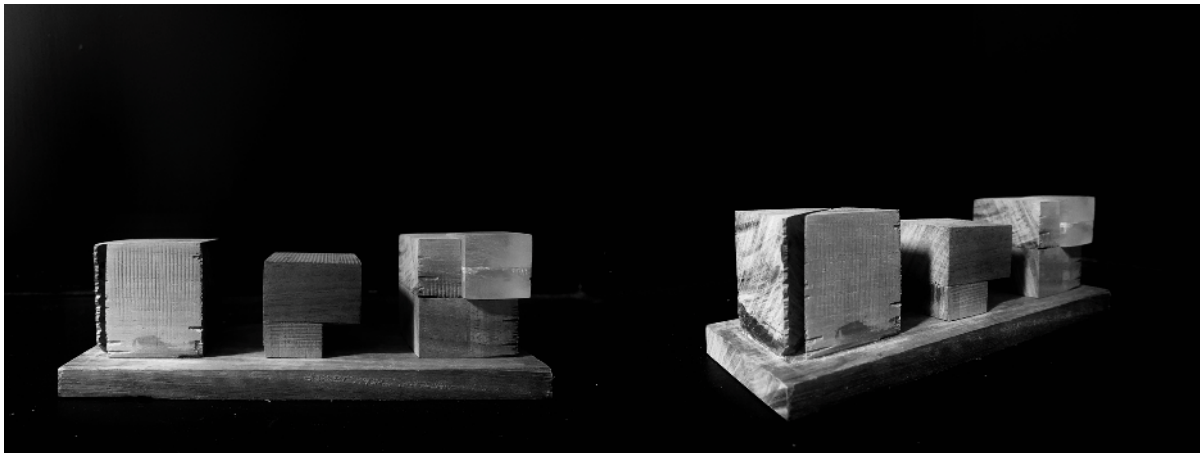


Image 01: Conceptual Massing. Made using scrap hardwood and frosted acrylic.

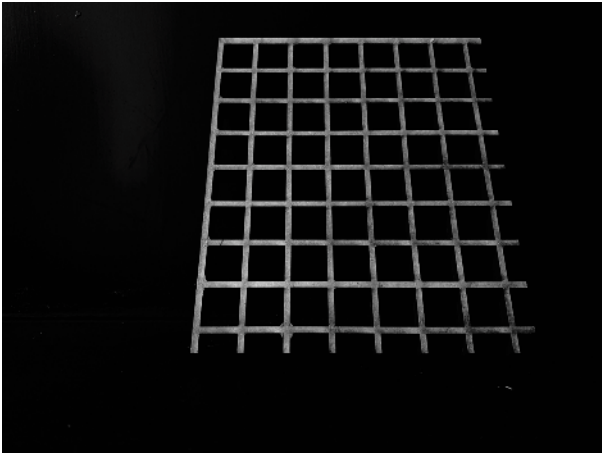


Image 02: Exploring Waffle Slabs. Made using MDF laser cut.

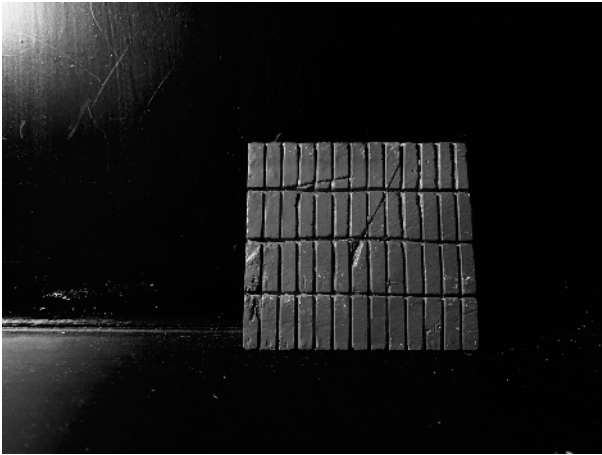


Image 03: Vertical Stack Bond Arrangement. Made with cast plaster which is then spray painted.

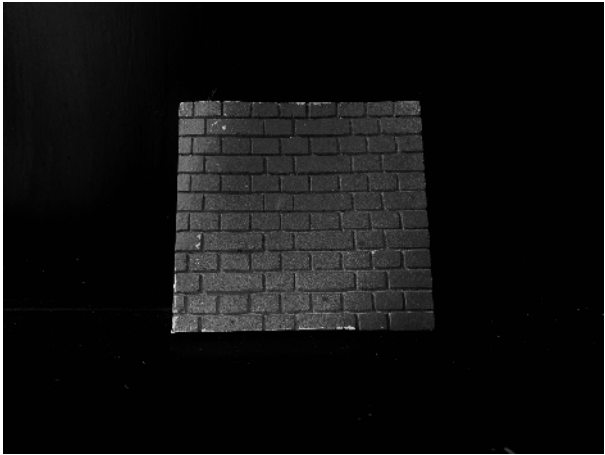


Image 04: English Cross Bond Arrangement. Made with cast plaster which is then spray painted.



Image 02: Interior Exhibition Space Model. Made using MDF laser cut then spray painted to achieve concrete effect.



# Daryl Quayle

Ba - Atelier: LOOP

## Project: Stretford Botanical

Situated in the heart of Stretford's dense urban environment, Victoria Park is a green oasis filled with plant life indigenous to the UK. At the very centre of the park, Stretford Botanical accommodates tropical flora species from rainforests across the globe. Stretford Botanical is an educational facility which aims to raise awareness of the dangers our current lifestyles impose on our planet's natural Ecosystems. Deforestation on the current trajectory poses a real threat to biodiversity and the global climate. Recognising the use of palm oil, single use plastics and irresponsible timber sourcing, positive changes can be made to promote a diverse and healthy planet for generations to come.

Development and iteration testing through modelmaking was an essential methodology which allowed me to push the boundaries of material capabilities. The physical representation allowed me greater scope to test ideas in comparison to the limits of a digital model. Throughout my process, mistakes were made, designs necessarily altered and breakthroughs achieved as a result. Using ply wood and cast jasmonite to represent CLT, glulam and lime rich concrete, I made a sectional model at 1:100 scale that plays with light, shadows and textures using lightweight and heavy materials. The concept with the timber structure is an inverted forest. The roof lattice is an abstract root system with glulam 'trunks' that support the canopy at ground level. The mezzanine 'canopy walk' is a timber walkway suspended from the roof structure via steel cables (piano wire) which offers visitors views of the vegetation from a different perspective and external views around the park.

Taking inspiration in the form from the Essoldo cinema (Stretford's Art Deco landmark), Manchester's network of viaducts and St. Peter's Seminary in Dumfries, the tall, curved jasmonite wall provides Victoria Park with its very own landmark. The northern wall provides the structure with thermal mass reducing temperature peaks and troughs while the lightweight timber structure South of the concrete allows the internal space to be saturated with natural light, both elements working in harmony for a healthy flora displays.



Image 01: East Section



Image 02: North East perspective view

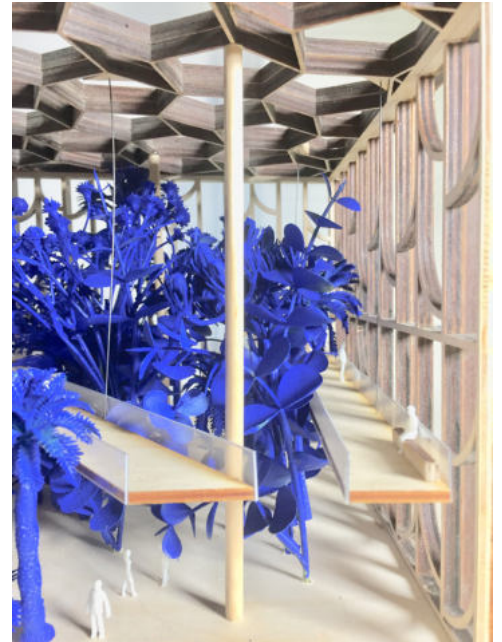


Image 03: 'Canopy Walk' - suspended from roof structure

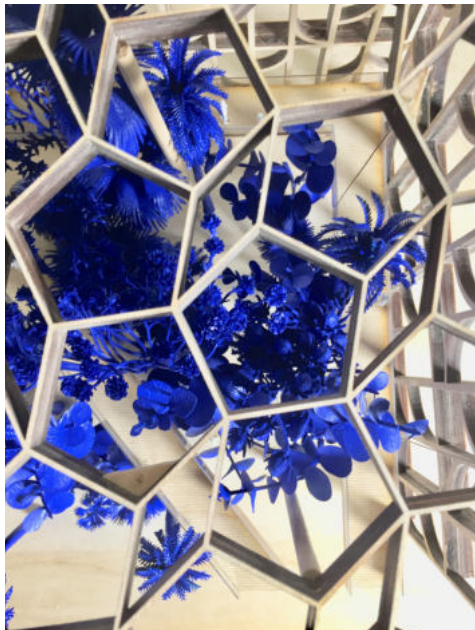


Image 04: CLT Lattice 'Root' roof structure



Image 04: ever changing play of light and shadow on the inside space

# Demilade Okunfulure

BA/ Year 3/ Continuity in Architecture

## 'MCR Youth Centre'

Hospitality and Leisure

I have created a youth centre that is occupied by ProjektsMCR which is an organisation where skateboarders can make use of their skatepark. The aim of this project was to create a building that served as not just a learning environment but also a place where children and teenagers can come and have fun. The centre offers a range of facilities such as a teaching kitchen, a skateboard design workshop, an indoor playroom and many more. As a way of creating unity between my building and its context, I created a dynamic cantilever which bridges across the scope of the site, connecting the skatepark and the River Medlock. Technology was an important aspect of this project as I experimented with using steel trusses to support the cantilever. This created a dynamic feature within the building.

The model making process was very important in my project as it was crucial to test key decisions within my building at different scales to ensure that my ideas would be feasible in 1:1 scale. One of the first models I did was the structural model (Image 03) which helped me visualise what my building would look like if I chose to use steel to support it. More importantly, I was able to understand the inner workings of the ambitious cantilever that shoots through the centre of my building. I then moved to a bigger scale, 1:50 and this helped me work out the detail for this part of my building. I built up the base using mdf and made sure to reinforce the base so that it would support the weight of the cantilever. I tested the angles of the trusses using the belt sander. I used acrylic to elude to curtain glazing and chose to keep the colour scheme of this model as black, grey, white and, natural mdf. This model allowed me to really appreciate the interior and exterior qualities of my building. This could not solely be achieved through drawings alone.

Image 01: Structural Axonometric

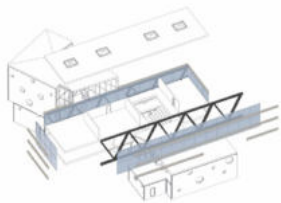


Image 02: Sketches of process

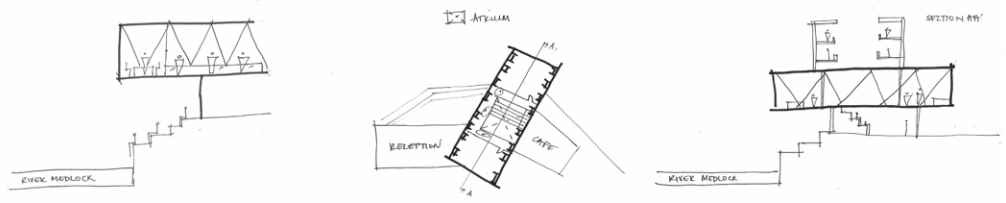


Image 03: Structural Model





Image 04: 1:200 model

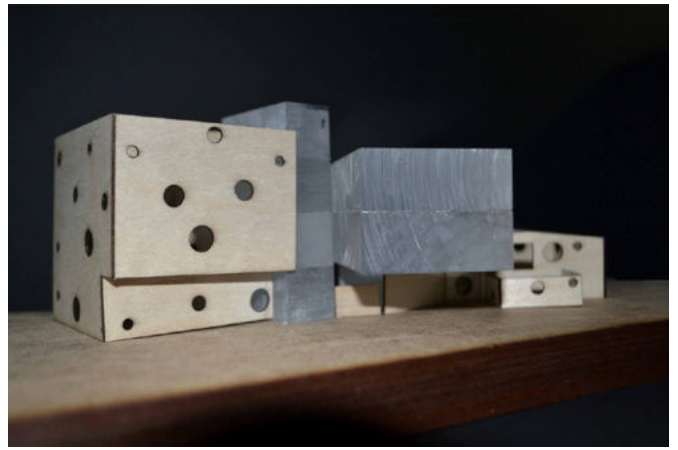


Image 05: 1:50 model of key corner in my building, the cantilever



# Diana Ursachianu

Ba 3 - Atelier: Common Ground

## Project: Manchester House of Photography

The atelier's approach is based on the fact that the city itself is a form of knowledge and that the typology represents a generative role in the design process of a building. Phenomenologists can argue that we can never fully acknowledge all the characteristics of a city. However, I strongly consider that photography is the finest media which can encapsulate the essence of a city's character. I decided to design a museum of photography as a way of responding to the atelier's question "how is a building like a city?". Located in Northern Quarter, Manchester House of Photography accommodates a collection of over 80,000 pictures and prints of old Manchester. To celebrate the past, I incorporated a room in each gallery space dedicated to recreating moments from the past. The main concept of the building is strongly related to how architecture can manipulate people's feelings through the use of light. The museum is composed of two heavy looking buildings which are connected through a lightweight glass prismatic volume.

Throughout the year I used model making as a way to develop key spaces of my building, producing models at different scales. At 1:500 I tested how my building sits within its context and I explored the impact it has in its surrounding area. In the 1:100 structural model I highlighted the different use of materials of the columns and slabs by using different thicknesses of MDF. As my main focus was on the interior atmosphere, I used model making to express the materiality that I wanted to use as well as to develop the relationship between light and artefacts. I used simple materials for the room (mdf and acrylic), however, I paid more attention to the finishes and the objects. I used paper to make the books and then coffee to make them look old. This process helped me to develop and improve the created views, thing which cannot be done through the use of sketches.

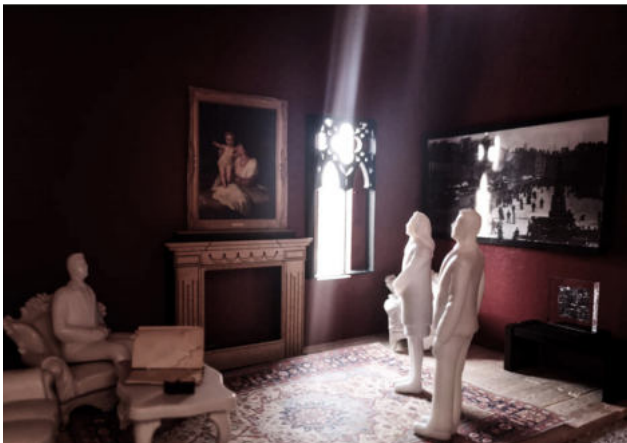


Image 01: "a moment in time" | 1:25 interior model: - wood, spray paint, acrylic, paper



Image 02: gallery display | 1:25 interior model - wood, spray paint, acrylic, paper



Image 03: gallery display | 1:25 interior model: - wood, spray paint, acrylic, paper



Image 04: "under construction" | 1:100 structural model: wood

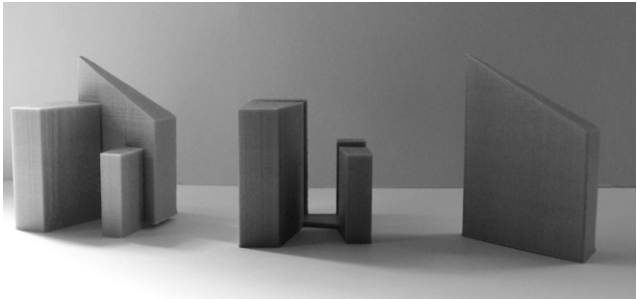


Image 05: concept | 1:500 massing model: 3d printed



Image 04: "reflections" | 1:50 interior model: wood, acrylic



# Emily Edwards

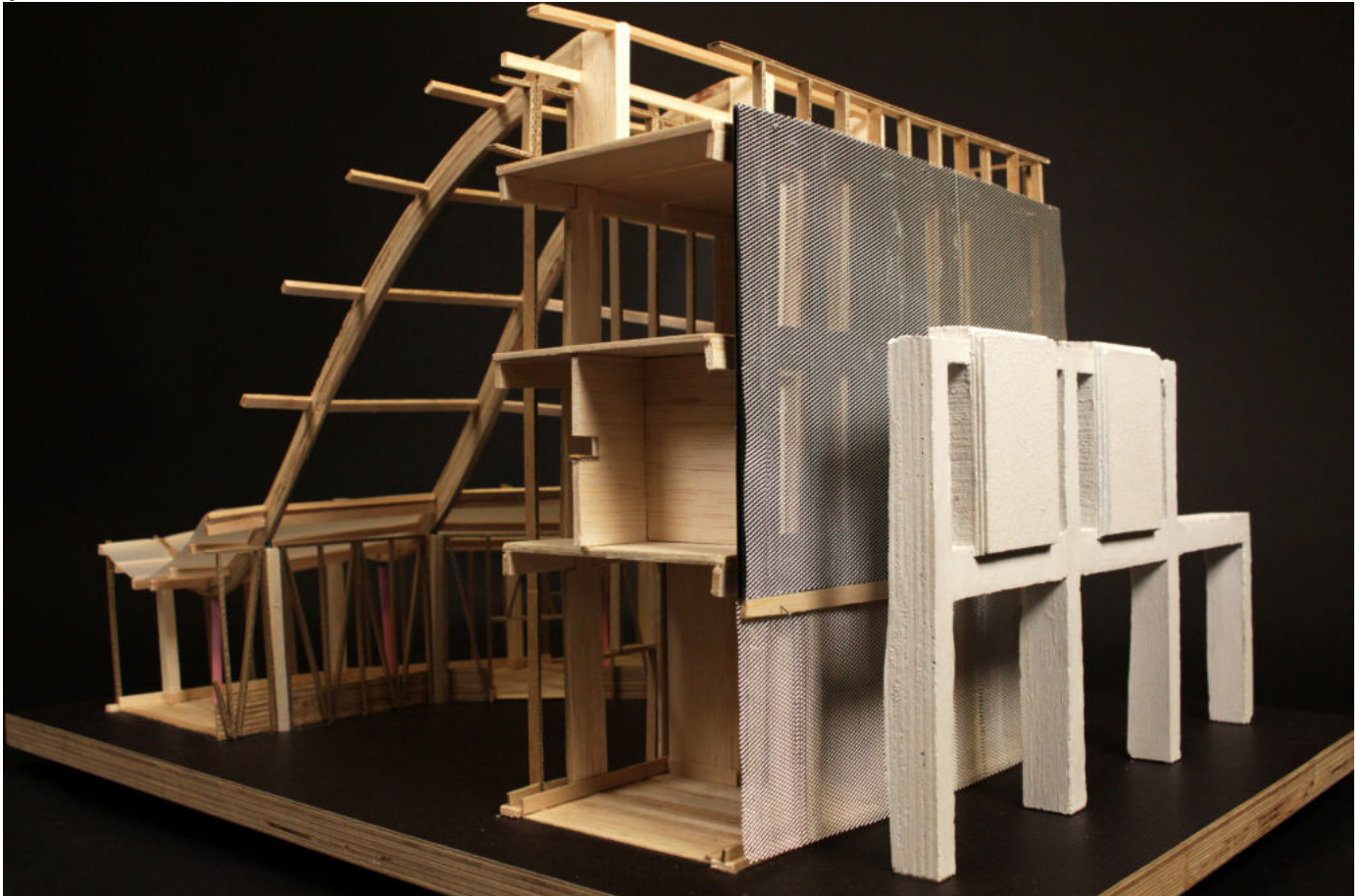
BA Year 3 - Atelier: Praxxis

## Project: The Canopy

This project is located in Hulme. The proposal was initiated by studying existing community assets and as a result aims to rethink the typologies of the cafe, a healthcare centre and a green space to form a place to support and nurture the health of Hulme. Hosting a greenhouse at its centre, the building utilises biophilic patterns to promote a space connected to its environment and the people that use it. The greenhouse provides a sense of growing your own environment, indicating a sense of care over the space. The shared table, which links all programmatic elements of the plan, runs down the spine of the building following the line of rainwater collection columns. The building intends to celebrate its structure as in nature, and the tactile quality of modelling making helped ensure this was at the forefront of the design process.

The 1:50 sectional model was a crucial ending point to the project. Completely handmade it emphasises the structure and atmosphere of the building through a careful selection of materials and construction techniques. The glulam beams form the most striking part of the building - encasing the greenhouse - and I felt it was important to make these as would be done in life to truly understand the process. To form each unique beam in the desired curve I printed out each one in section. I ran a line of nails down one side of the curve and against it wedged six thin strips of plywood each covered with PVA. This was then held in place with another line of nails and left to dry. Once sanded down, each beam is unique and helps to create an atmosphere of what the space is like underneath. The use of a metal mesh depicts the translucency and reflections I desire from the facade. This method was used in smaller iterative models. The stone powder cast existing wall acknowledges recognition of this requirement of the brief, and difference between the old and new is something I was keen to portray through differences of material and construction techniques.

**Image 1:** 1:50 Sectional model from Stretford Road showing facade retention. Stone powder cast, balsa, cardboard and plywood.



**Image 2:** Constructing the glulam beams. Six strips of ply curved around a set of nails with copious amounts of PVA and left to dry.



**Image 3&4:** Internal views of 1:50 sectional model, emphasising atmosphere and scale of space through handmade glulam beams.



**Image 5:** 1:500 iterative form finding models considering threshold and pathways through the site. Cork, mesh, dress making pins and cotton.



**Image 6:** 1:200 iterative modelling of potential facade layers. Looking at the relationship between existing and new and potential material possibilities. Mountboard, balsa and metal mesh.





# FAIZAL AKALWAYA

Ba Year 3 - Atelier: INFRASTRUCTURE SPACE

## Project: The Cuttlefish

Collyhurst station, Optical fibre factory, Modular and regular workspaces

Focusing on ways to tackle technological obsolescence; my scheme redevelops an existing telephone exchange in Collyhurst, reinstating the rail network in the area, bringing greater economic value through connectivity, in conjunction with an optical fibre production facility on an adjacent redundant plot. The main body to the exchange houses the station on its ground floor alongside amenity spaces forming the consumer domain. Whereas, upper floors and a bridge over to the factory space are part of the secured staffed spaces. The main factory body was conceived as a versatile space frame capable of utilising automated gantry systems along its length to increase the efficiency of distribution within the volume, though planned as being a container hoisting system for modular living post fibre obsolescence. Above the factory sits a spiral mass, built as a lightweight steel frame parasitic workspace anchored onto a rigid concrete core. Built to house fibre drawing towers, it can be re-purposed to fit lifts for access to upper and lower work or residential spaces in the spiral and the rectangular prism.

Modelling was an essential step towards rationalising the layout of a large-scale infrastructure project on a vast site. At such dimensions smaller details become almost invisible and greater attention is drawn towards the form of the buildings. Thus, the model allows for the expression of clarity of form through massing blocks representing various unique spaces. The creation process has involved a variety of model making methods ranging from the digital (laser cutting), to traditional hand-craft. The spiral has challenged my craft skills through stepping away from the ease of a 3D print and working with a mahogany block to carve out a complex form using; saws, files, rasps, surforms, Planes, chisels and sandpaper. Working through 6 different grits across the whole model has helped emphasise the clarity in each of the blocks and given the overall model a sense of unity. Beyond the feel of the model, I believe that the spirit of the industrial scheme can't be given justice without the willingness to put in labour and connect with traditional methods for model making.

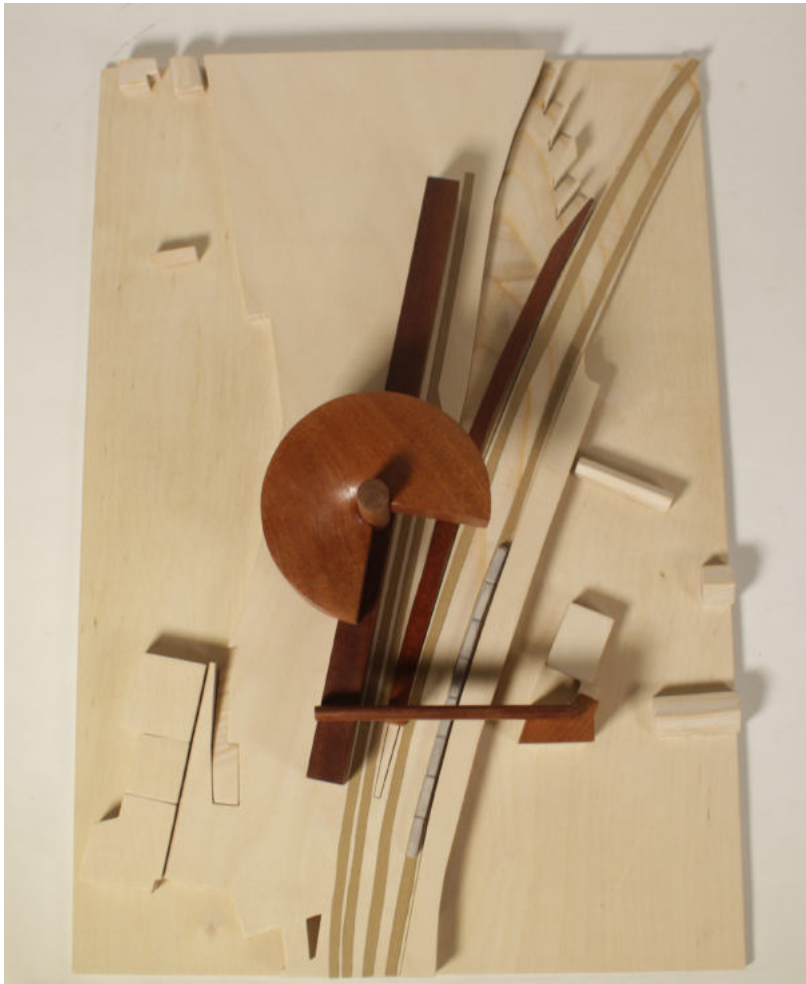


Image 01 left:  
Top down view  
of model on site  
(constructivism  
inspired)

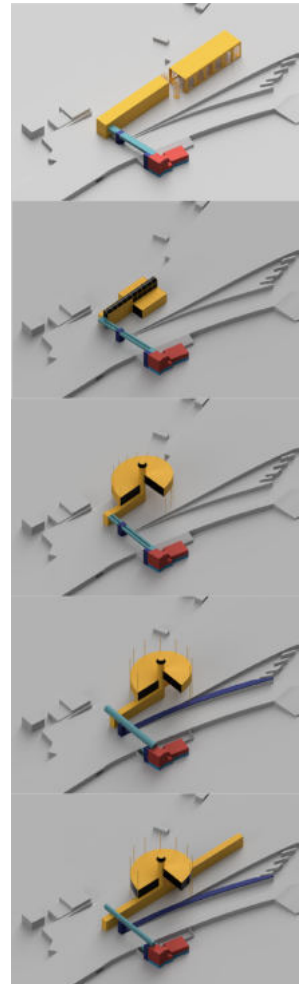


Image 02 right:  
Iteration sequence  
for digital form  
design





Image 03 top: Spiral elevation



Image 04 left: Train  
added for scale



Image 05 + 06  
bottom left:  
Merging of a  
physical and  
digital model  
to make a  
composition

# Hannah Byrom

BA Year 3 - Atelier: L.O.O.P

## Project: Terracotta Cove

My project is a screen-printing studio situated in Victoria Park, Stretford. It is a hub for the wider community to get involved by producing politically motivated artwork. On the ground floor there is a café where people who are struggling in the community will be able to work and begin to rehabilitate their lives whilst the café also provides a source of income for the running cost of the building.

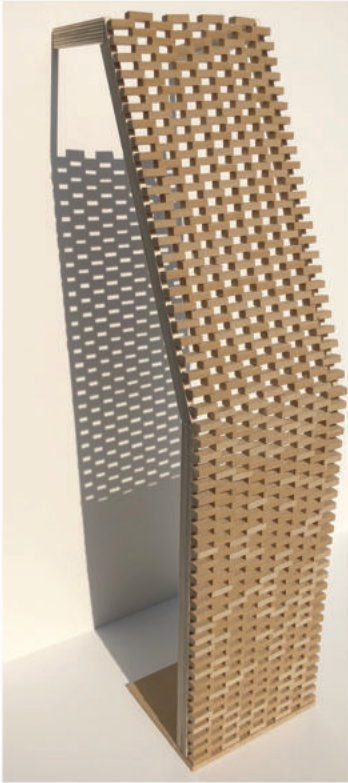


1:5 Timber joint

I gave myself a budget of £20 to spend on model making. I achieved this by using offcuts from the workshop to make my models by hand. I developed a shading device which began with a timber solution which I developed from a precedent I had found on the study trip to Venice. I created a timber joint and the connection to floor and brick wall at 1:5. My first iteration of the shading device was created at 1:10, from this I could imagine the user experience and was able to experiment with the effect of lighting and how well the shading device worked.



1:10 Timber shading device



**1:10 Brick shading device - iteration 1**

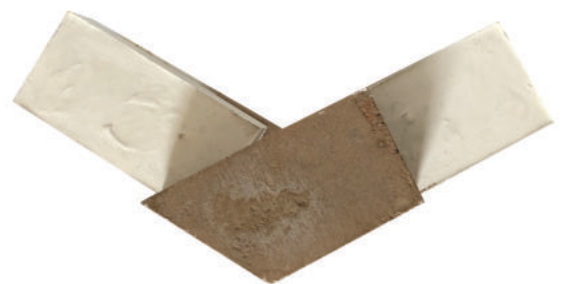


**1:10 Brick shading device - iteration 2**

After looking at further precedents for studios and looking at the surrounding buildings in Stretford, I then incorporated the idea of using perforated brick as a method of providing shading. I started with a simple perforated brick wall. I then completed two 1:10 iterations of the brick shading device. The first of which the bricks were stacked at an angle as the height reached the first-floor level, the second iteration the bricks were all at the same angle. In these iterations I then used the initial timber shading device joints as a structural support behind the brick shading device which extended from the timber structure I designed. Due to the form of the brick shading device which included several angles, I developed a bespoke 1:1 brick made from sand and cement. Finally, I created a 1:20 detail model of the brick shading device incorporating all the ideas from my process models. My main priority throughout model making was to test the structural stability, the lighting and to achieve a feel for the structure and its buildability.



**1:20 detail model**



**1:1 Bespoke angled brick for shading device**



# Harry Tate

BA3 - Atelier: Common Ground

## Project: The Cottonopolis House of Fashion Brickwork Tapestry

Great Britain is a major contributor to the worldwide fashion industry with contemporary British designers held to high international esteem. To celebrate this, The Cottonopolis House of Fashion proposes the creation of a new museum capable of showcasing this talent through the exhibition of garments, textiles, photography and illustrations. The museum also highlights and supports Manchester's own talent through a workshop space and corresponding gallery to facilitate the creation and exhibition of in house work. Located on Dale Street in the Northern Quarter, the museum is part of Manchester's cultural centre, forming a new outpost for fashion at both city and national scales.

Models were utilised extensively throughout the project as a means of developing and testing ideas. Model making began at 1:500 scale to correspond to the simple block massing moves made at the start of the project. I then began to work with increasingly larger scales as the complexity and detail of my project increased. Some of my final development work occurred at 1:20, a scale chosen to best test the finer brickwork patterns within my project.

Plaster casting is a new technique I have sought to learn and refine. Prior to year three this was a technique that interested me but also one I had never attempted. Practiced through many earlier models, this culminated in my final presentation models. A single laser engraved panel could be used to make a silicone mould. This in turn could then be used to create multiple plaster replicas reflecting the repeated panel design of my building. The use of silicone and plaster also allowed me to achieve great detail within the brickwork without lengthy laser etching for the many copies of the same panel.

Alongside plaster, wood has been another key material this year. I enjoy the level of craft that comes from wood work and as such many of my wooden models have been hand cut and finished. This is best illustrated by my 1:500 massing models. Formed from solid blocks of wood, the reductive process allowed me to make considered marks and decisions.



Image 01: 1:200 Final Presentation Model with Context - Plaster cast elements, hand cut jelutong site massing, laser cut plywood and frosted acrylic.



Image 02: 1:50 Facade and Section Development Model - Hand cut and finished jelutong and mahogany, stained laser etched plywood, with plaster cast elements.



Image 03: 1:50 Interior Spatial Study Model - Hand cut and finished jelutong.



Image 04: 1:20 Materiality Tests - Plaster cast elements with jelutong framing.



Image 05: 1:20 External Facade Model- Plaster cast elements, steel frame with stained plywood inserts.



Image 06: 1:500 Massing Tests - Hand cut and finished jelutong and mahogany.

# Hayley Sheldon

BA3 - Atelier: USE

## Project: The Culinarium

A bespoke culinary educational centre

The Culinarium sits on the bank of the River Medlock, opposite Hotspur Press, Manchester. The site is an abandoned growth where vegetation has begun to take over the derelict buildings.

Model making was a key aspect to my design development, producing models to represent the form, materiality and functionality of my building.

The atrium, is a fundamental feature of the Culinarium, at the heart of the building brimming with edible plants. The journey from kitchen, to atrium to cafe is the key concept to be taken from my 1:50 model. The sensory experience the user gains from walking through this feature is captured through the scented flowers in my model.

Materiality choices were chosen to represent each element of my building. The existing façade is replicated through laser engraved plaster board which was further worked by hand to represent the crumbling brick. The atrium, formed from Perspex, is framed by plywood to represent the structural mullions. Detail was added to the timber façade by engraving the individual clad elements.

The representation of the herb and rooftop garden useful in showing the ambience of this area. The hand cut hardwood represents the pergola feature which spans across the roof top.

The sectional model also provided an opportunity to show occupation within the kitchen and café area. Hand crafted pots and pans were made from soldering wire to metal washers then shaped into various utensils. Wall filler was used to represent the plaster on the interior of the building and seal the joins.

The second model was a 1:200 landscape and building model. This was utilised to the relationship between building and landscape. The Cork landscape was chosen for its natural aesthetic. CNC router was used to form the base contours, then hand sanded to pronounce some features. MDF was added to replicate stairs and vegetation was placed around. The balance between realistic features and realistic was used to highlight certain elements. I began forming the base of the river bed with gravel and planting then poured resin mix on top to create the realistic feature. The concept of my landscape was to draw in the River Medlock to bring water into the heart of the site creating more natural habitats for wildlife.

1:50 sectional model : Roof Garden and Pergola representation





1:50 sectional model : Engraved plaster board and wall filler wall finishes.



1:50 entrance showing existing brick walkway



1:50 sectional model : Interior detailing of kitchen



1:200 landscape model : Water feature showing reflected building



Landscape image taken from human perspective



# Jessica Birch

BA Year 3 - Common Ground:

## Project: Electrics Exchange

The Electrics Exchange is located in the heart of the Northern Quarter. Coming just off the main road of Dale street, the site is encased by narrow side streets around the rest of its perimeter. The exchange is simply not just an exhibition space requested in the brief, but a space where one can recycle, re-use and repurpose discarded and obsolete technology as the Northern Quarter flourishes. Collecting scrap electronics in the market space, repurposing them in the fabrication lab, to then exhibit them in the galleries, reconnects the museum to the previous factories that once surrounded the site, also moulding its node form. Driven by the NQ's network of alley ways, the surrounding streets are opened up to create a 'democratic' public space which one can enjoy.

The initial massing model testing was crucial to the start of my design. By making these modest grey board models, I was able to decide the main aspects I wished to focus on throughout the project, these being the open ground floor and the nodule forms of the roof to create dramatic lighting in key spaces. Other materials such as clay also allowed me to experiment with form in smaller scales. the versatility of the clay allowed me to cut and sculpt my desired form, modifying the clay as I went along to see what worked best, the redness in the clay also reflecting the red brick adjacent buildings. Throughout the project I wanted to break apart the key spaces of the building, such as the educational spaces, gallery spaces and facade. Testing the more intricate spaces such as the exterior nodes using grey board early on forced me to consider more carefully how these would translate to the experience of the Exchange and how this would appear at a larger scale.

The Electrics Exchange's ambition is to respond to the ongoing issues of waste in the Northern Quarter, bringing the community together to educate the public on other ways to recycle electric waste.

Image 01: 1:500 Massing models: greyboard

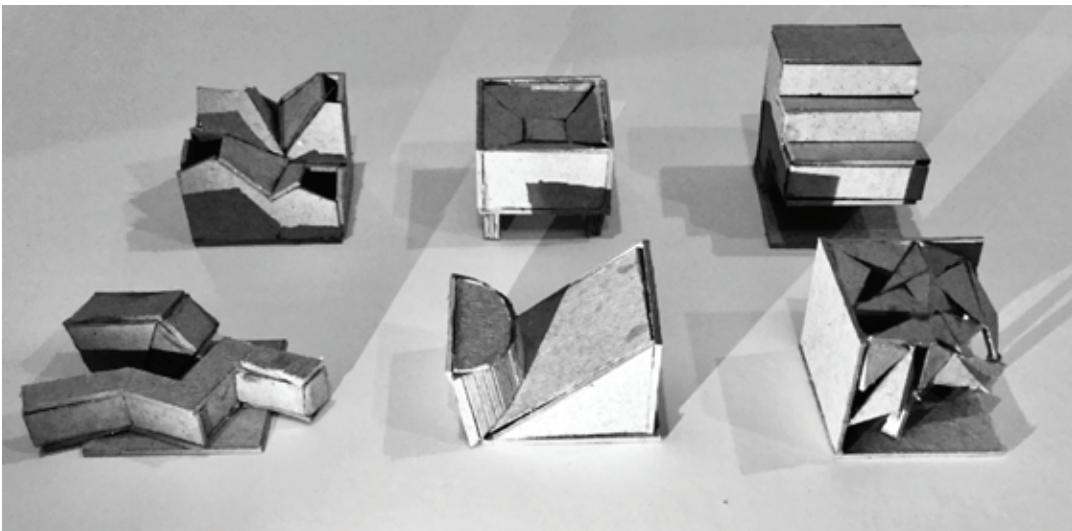


Image 02: 1:500 Massing model: clay



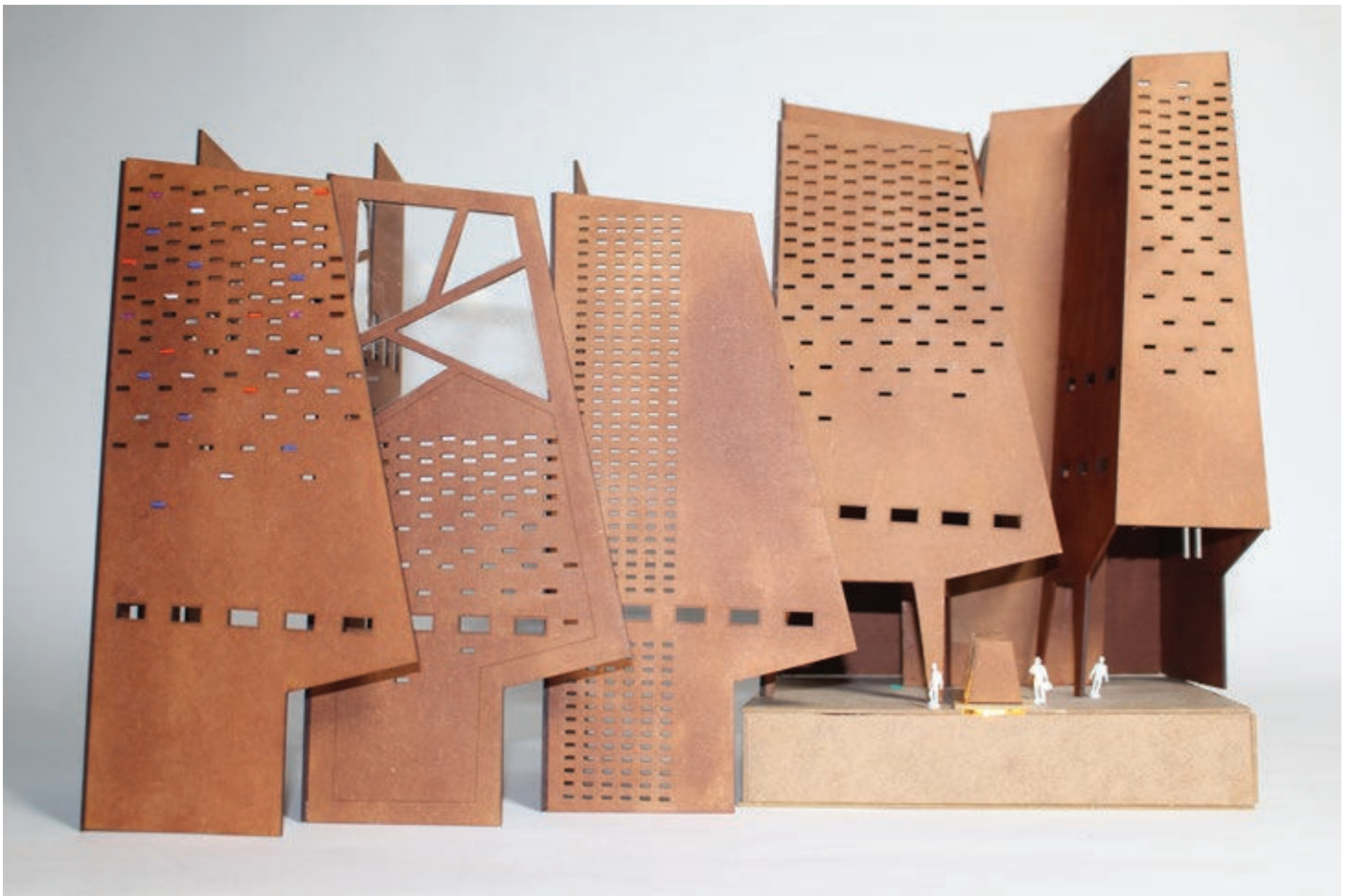


Image 03: 1:100 Facade model & Facade iterations experimenting with a perforated brick facade: wood & perspex



Image 04: 1:50 theatre space model expressing the vast perforated brick covered nodes & the connection between spaces: wood, greyboard, perspex



Image 05: classroom overlooking the theatre via glass balcony



Image 06: 1:50 model of gallery space, exterior nodes and market space, showing how the spaces connect. The model shows the layer build up using greyboard, foam board and wood.



# Maria Izabela Andreescu

Ba Year 3 - Atelier: USE

## Project: HOME

Plastic recycling and homelessness prevention center

Placed in the heart of Manchester, the project HOME aims to translate the innate desire humans have to connect with nature into the building and landscape design and to create lively, safe, sustainable and healthy spaces that will lead to a future with blurred boundaries between nature and the built environment, humans and beasts. The programme of the building incorporates a hostel, a plastic recycling workshop and a coffee shop. It is used to raise awareness about different plastic recycling methods and to create a source of income that will provide alternatives for people on the verge of homelessness. People can live in the hostel for long periods of time and instead of paying, they can recycle plastic in the workshop and create objects that will be sold in the coffee shop for money.

I wanted to create a model that expresses unity and balance, but at the same time reflects the play between private and public spaces created using the landscape. For previous iterations and test models I have tried using different materials for building, landscape and vegetation and I have come to the conclusion that my approach and vision of a place where the built and natural environment are merging together is best represented by using only one material for everything. Therefore, I chose PLY for my model and MDF for the roads and surrounding buildings. I have used the burned edges of the Ply sheets for the rockery next to the hostel to further emphasize the separation between public and private, and show how the landscape is used not only to connect, but also to divide.



Image 01: Building and landscape model - Laser Cut Ply and MDF



Image 02: Hostel view showing indoor/outdoor private area (timber and brick cladding)

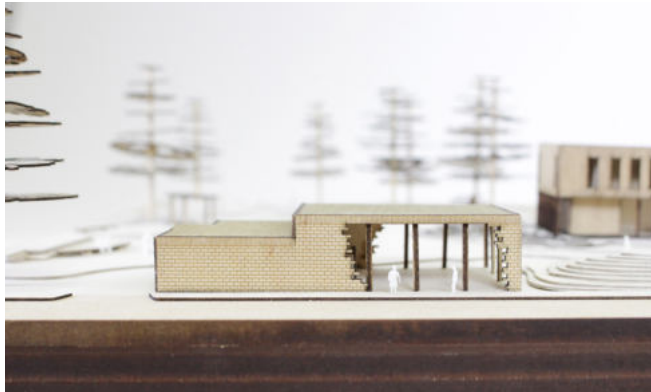


Image 03: Workshop next to the sidewalk (Glass and Brick Cladding)



Image 04: Coffee Shop view from the bridge and main entrance on the site



Image 05: Public park with natural woodland and hostel

# Max King

BA3 - Atelier Common Ground

## Project: Museum of Ambient Works

A museum to exhibit music

In this final year of the BA, my studio project was based in the Northern Quarter of Manchester where our atelier brief was to design a museum with our own programme. As a result I chose to exhibit music due to the rich history of music in Manchester. Music is an expression of emotion which connects the whole brain, stimulating our senses much like the life-like nature of the Northern Quarter. The Museum of Ambient Works is based on a connection to music and the outside world, where the upward journey is continuously connected to the music. Screens on the exterior can be moved to highlight artefacts to the outside world, likewise on the ground floor large doors can be opened so the whole experience is revealed to the public.

Model making has played a huge role in my project, as spaces and relationships were translated from quick sketches to reality. This impacted my design choices as the process allowed me to visualise design aspects which I was trying to achieve. Most importantly for my project was the effect of light, transparency and mass where substitute materials such as plaster casts, clear/frosted acrylic and a variety of paints allowed me to repeatedly test my ideas and chose the most appropriate. My final model involved a combination of all of my learned skills where I used layers of paint to simulate the effect of casting and resulted in an effective finish concluding my model making journey this year.



Image 01: Final 1:50 sectional model  
MDF, frosted/clear Acrylic & finished in acrylic & emulsion paint



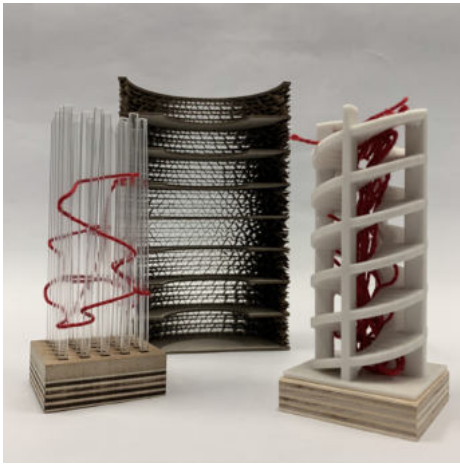


Image 02: Concept model tests of movement and transparency  
Ply, corrugated card, string, 3D Printed & Acrylic rod



Image 03: Cast acoustic ceiling test  
Cast from 3D print in silicon mould,  
Beach wood, Ply

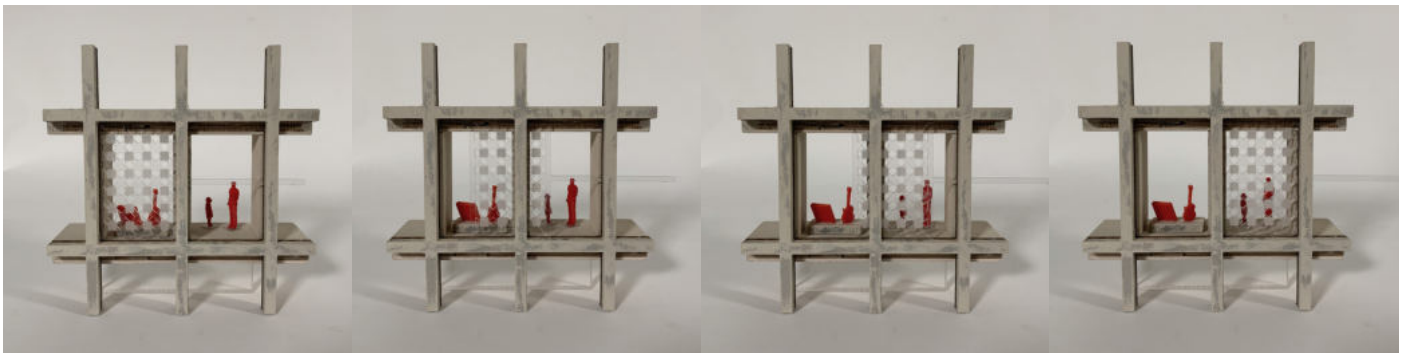


Image 04: 1:50 Facade mock up, Sliding facade element  
MDF, frosted/clear Acrylic & finished in acrylic & emulsion paint

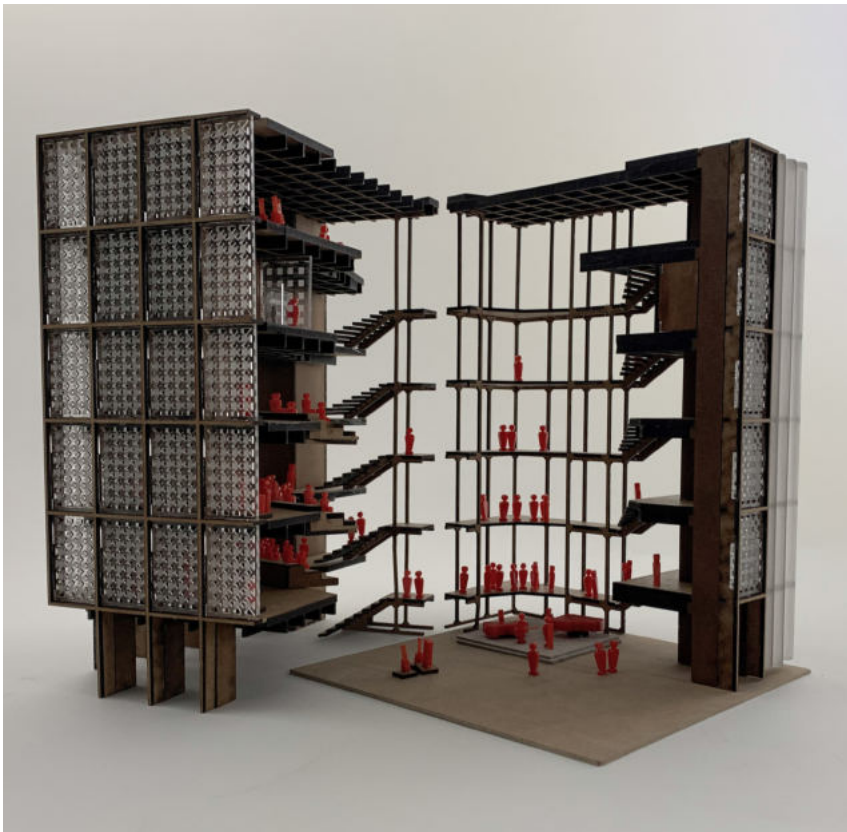


Image 05: 1:100 Sectional Structural model, with occupation  
Mdf, frosted/clear Acrylic & finished in wood stain



Image 06: 1:50 Facade Sectional model,  
Mdf, frosted/clear Acrylic & finished in acrylic  
& emulsion paint

# Max Tillotson Home

BA Year 3 - Atelier: L.O.O.P.

## Project: Shed.32

scrap-wood recycling and sculpture workshop

Shed.32 is a scrap wood recycling and sculpture workshop, which aims to demonstrate the potential of adaptable self-build construction techniques using untreated, hyper-local, sustainably sourced timber. Located in Victoria Park (Stretford, M32) the shed's primary structure is built using existing trees which are felled, roughly milled and hand-finished in the park. New trees are then planted and managed to promote hyper-localised material use and sourcing for future self-build timber construction within Stretford, whilst maintaining a symbiotic relationship with the trees and land. The shed's structural elements and materials are fully exposed and celebrated through the corrugated polycarbonate sheeting; the material's translucency encouraging inquisitive observation and tangible, tactile interactions through the hand-crafted facade.

I embraced frugality as a theme throughout my model-making, mirroring the processes that a scrap-wood recycler/sculptor/self-builder would encounter. The timber posts in my 1:10 detail models were made using scavenged tree branches I found lying around Victoria Park, stumbling upon fallen ash and cherry tree branches of roughly the right diameter. I allowed these found materials to shape the models I made keeping the process unprecious, raw and fluid, in the same way the building would be constructed. The branches were roughly planed and mortice and tenon-esque ends were carefully chiselled to fit the metal collar joints.

The fabrication of the metal brackets lead me to experiment in the metal workshop with aluminium, a material I had never worked with before. The processes involved contrasted the rough imperfections of the timber posts, with precision-cut and detailed fixings developed with re-usable threaded connections. The different physical properties of the aluminium highlighted how metal and timber work in harmony as complimentary materials, exaggerating the distinct materiality of each more so alongside each other. Alongside developing the 1:10 model, a 1:1 model was also tested to solidify my design decisions and explore the material palette further. Both models can be taken apart down to the bolt, with minimal use of adhesives to ensure sustainable design for disassembly and future re-use - I'm inspired to experiment further with timber/metal materiality.



Image 01: 1:10 facade detail model: cherry branch, aluminium, steel bolts/nuts, OSB, cork, timber studs, corrugated styrene





Image 02: initial development of 1:10 facade detail model:  
ash branches, steel bolts/nuts, tracing paper



Image 03: chiselling tree branches

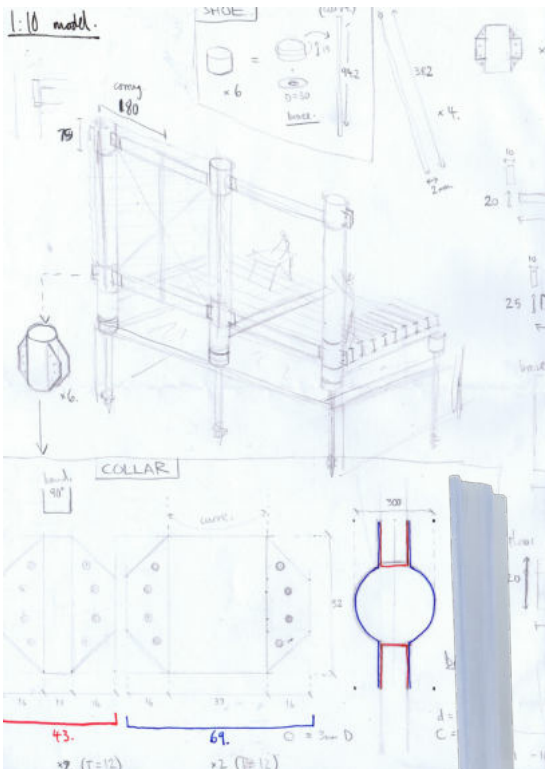


Image 04: model planning and pi calculations for curved metal elements

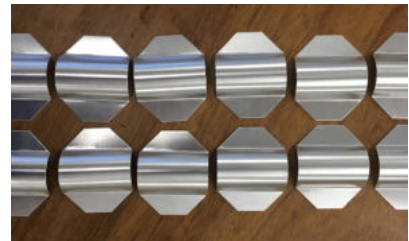


Image 05: fabricating aluminium collars



Image 05: 1:1 detail model (developed alongside 1:10 model): scavenged corrugated polycarbonate, scavenged timber studs, 3mm aluminium, steel bolts/nuts, scavenged cherry tree log, OSB, scavenged ecobatt insulation



# Mohamed Ahmed Harfoush

BA/ Year 3/ L.O.O.P

Project: ULI

African Culture Center

In my atelier we started the year by working on a design commission from Stretford Arts Collective. As a group we were given the responsibility to design and build an exhibition stands that enable their November exhibition. This project only lasted for 6 weeks and the main purpose of it was to develop certain skills that would feed into everyone's individual project. Personally it was the testing process that we had to do every week that feed into my design, and I realized the huge importance of models.

We built 1:10 models to visualise the design, then a 1:1 prototype to test the structure.

After the 6 weeks we spent on the live commission, I started my project which is an African Culture Centre located in Stretford park, the place which has always been a hub for different arts and cultural experience, thus the Centre acts as a revival to the rule of the park in its community. The main programme in the building is to experience the arts created by a tribal Nigerian women ULI. 3 key spaces that defines this experience; studio, exhibition and an inspiring garden.

In the design process several sketchy models were made using available material such as corrugated paper and the main purpose was to test form and scale on site, then as the projects develop different material were used that would help better visualise, for example plywood to represent the timber in the design or grey board that has a neutral feeling to inform more about form and internal relation between space rather than material quality.

The final step was to create models that would introduce the scheme to the audience in a simple, clear and coherent way, thus a structure model was made that represents my structure at 1:100 then another 1:100 acrylic model that represents circulation which plays a crucial part in the design, and finally a 1:50 model that shows the interior experience and how structure and circulation act in the building. (1:50 model will be available during exhibition, not completed yet)

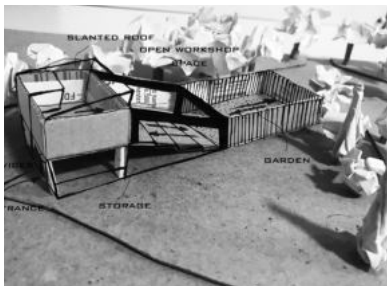


Image 1: series of form exploration

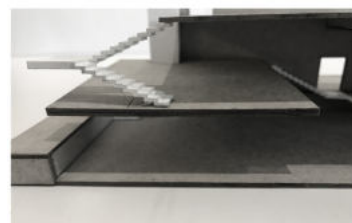
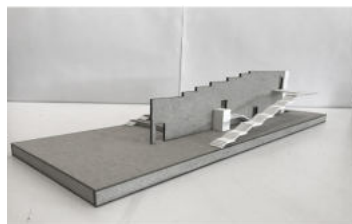


Image 2: development of circulation



Image 3: facade pattern testing, real tree branches, plywood



Image 4: several sectional model used to test space and different facade iterations

Image 5: structural model

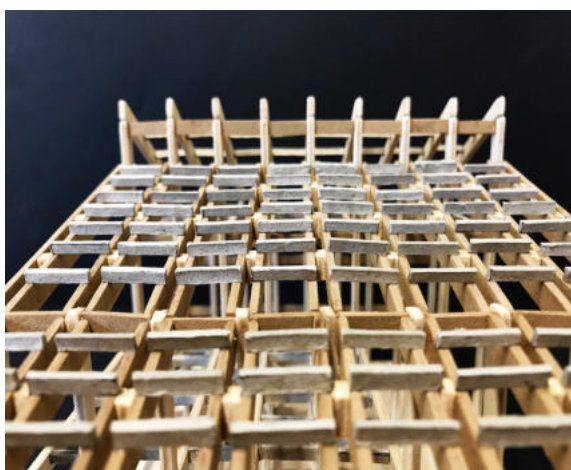
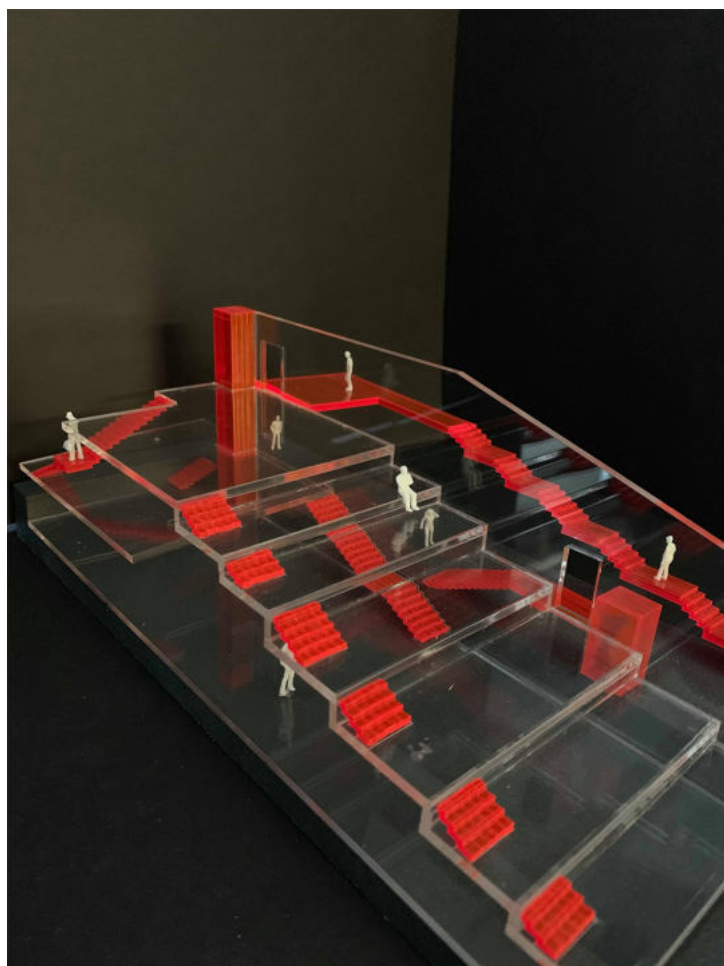


Image 6: circulation model transparent acrylic



# Nadir Mahmood

BA Year 3 - Atelier: CIA

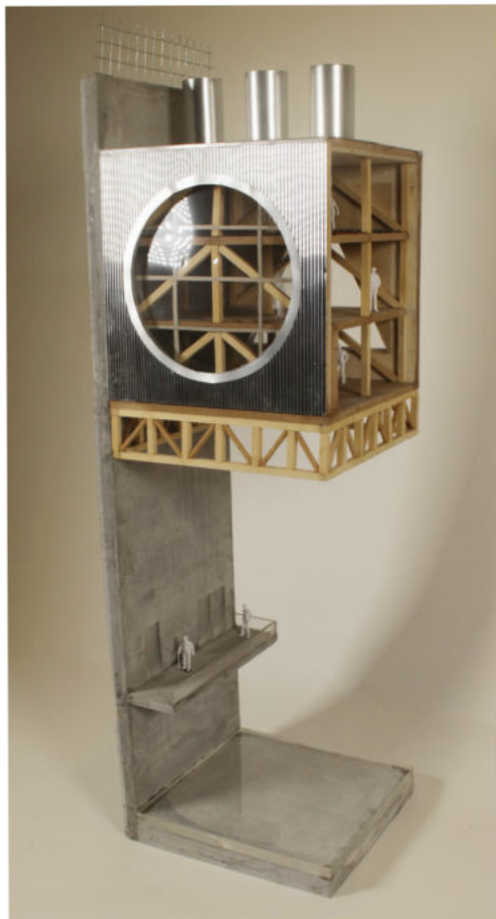
## Project: THREE

The THREE is a functional tower tucked away in the heart of Manchester. When given the opportunity to 'redesign' the site, after looking at and testing several options, I opted to amplify the effect of the existing river by excavating the site to make the river larger. This lent me to the idea of creating a structure in water - which I immediately knew would be interesting to create and represent in model form. The three is a meeting place that everyone can enjoy, and is designed to become a daily ritual for the surrounding communities. The building holds a solid, concrete core/tower, which holds services. From this, there are three cantilever elements that come off the central tower; A crèche, a cafe, and a co working space. Creating a flow between all programmes. Drop your children off at the crèche, grab a coffee, and head to your working space.

When model making, I wanted to avoid laser cutting so had hand cut and hand made everything on my 1:50 model. This technique led to many imperfections, however, I believe that its what gave the model so much character. The model was made to explore structural elements, but also to emphasise the dominance of the cantilever structure. I used plaster casting to create the walls that would represent the 'core' of my building and used acrylic to represent the water on the site. I opted to use materials that would represent the building in its true form in my 1:50 model, hence the addition of the corrugated aluminium. It was risky to model as I wasn't too sure the structure would stand without any additional support, However it worked out in the end.

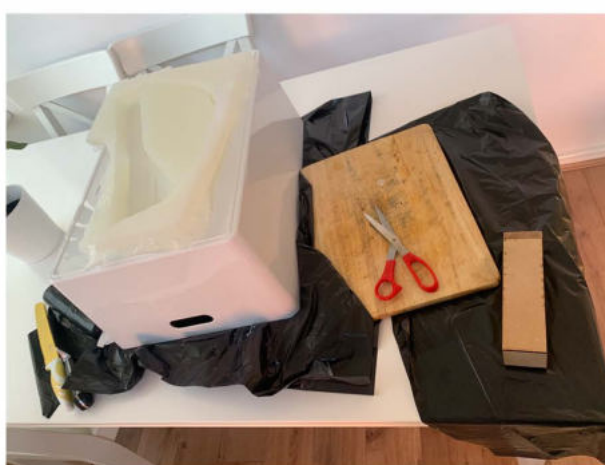
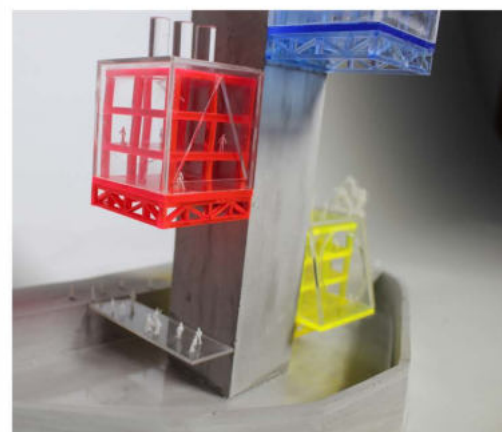
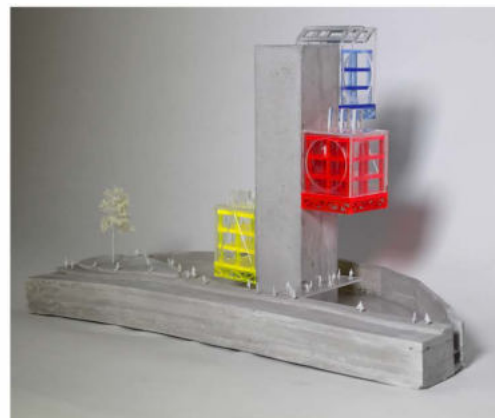
My 1:200 model was made to show the whole structure in its immediate landscape. I wanted the two models to be cohesive, Which is why casting was used on my 1:200 model too. It was done through a process of laser cutting, silicone moulding and casting. I couldn't avoid laser cutting for this model as the pieces were extremely small and intricate. I wanted this 1:200 model to emphasise the different programmes within my project, so took the abstract route of using coloured acrylics to represent each programme. All anchored on the concrete tower.

My 1:50 model The detaild of the corrugated aluminium. Card was used for the trims





This is my 1:200 model. Done by plaster casting and laser cutting acrylics.



# Paul Cedillo

BA Year 3 - Atelier: Praxxis

## Project: A Right to the City

### Homeless Reintegration: Beyond Food and Shelter

The project emerges as a response to the increasing homelessness issue in Manchester. Due to the lack of an appropriate long-term system of reintegration, it is very difficult for homeless to recover. Thus, the building attempts to provide a space for reintegration which not only relies in food and shelter but a whole structure that helps them to overcome homelessness, creating spaces in which they can get back their right to the city. The project will take the place of the Hulme Library in Manchester. However, to honour the history of the building and the Hulme community it has been decided to retain its main façade.

The first model explores how this façade can be retained and how this informs the structure which, in turn, starts to inform the design and create spaces as well as the especial experience. The materials of the model were chosen not only for its texture, but to allow flexibility and exploration in the creative process of designing. After some quick sketches is the scalpel blade that creates the spaces. Similarly, the copper wire and cotton yarn, is used as part of the process. From the process of creating this model, the next model and the building emerges.

Due to the complexity of the form and structure, drawings were not enough for me to understand the building. Thus, I decided to laser cut the structure using software design. The model was designed to allow the maximum flexibility. Any part of the model is glued, so I could take apart every piece of it and modify it, while preserving the concept. The model would develop as the building progresses. The frosted acrylic plates sit on slots in the main structure, so they can be taken out and drawn on top to explore programme, and plans. This was the best way for me to understand the building. By taking all the plates, I could change the whole building internally which I did to explore the flat arrangements and circulation. It transformed the model in a completely different one.

Modelmaking was crucial, not only to understand the building, but to explore it.

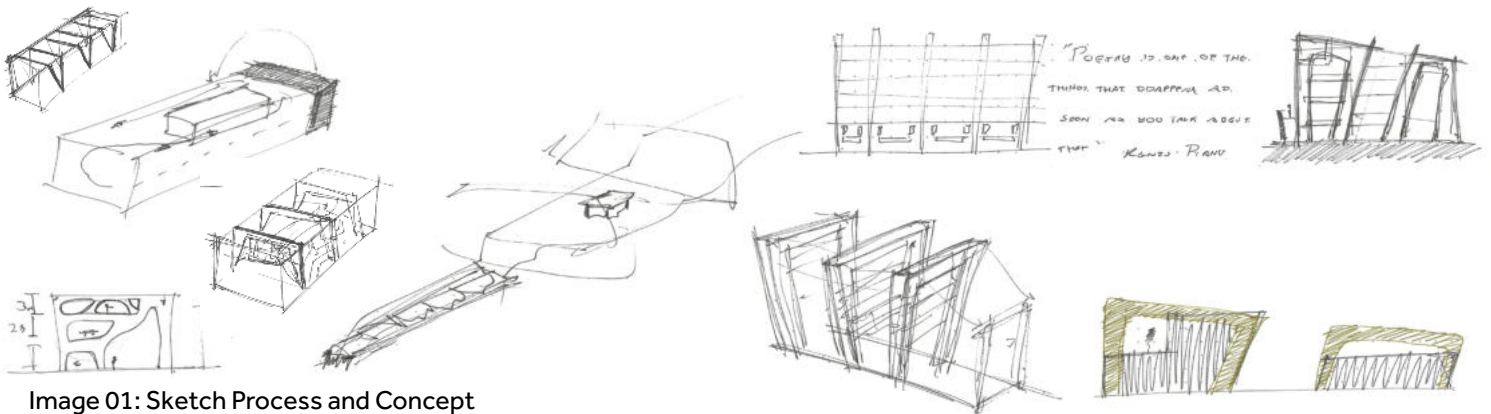


Image 01: Sketch Process and Concept



Image 02: Spatial Experience in Facade Retention- Balsa Wood, Copper Wire, Cotton Yarn, Wood, Acrylic, Mountboard.



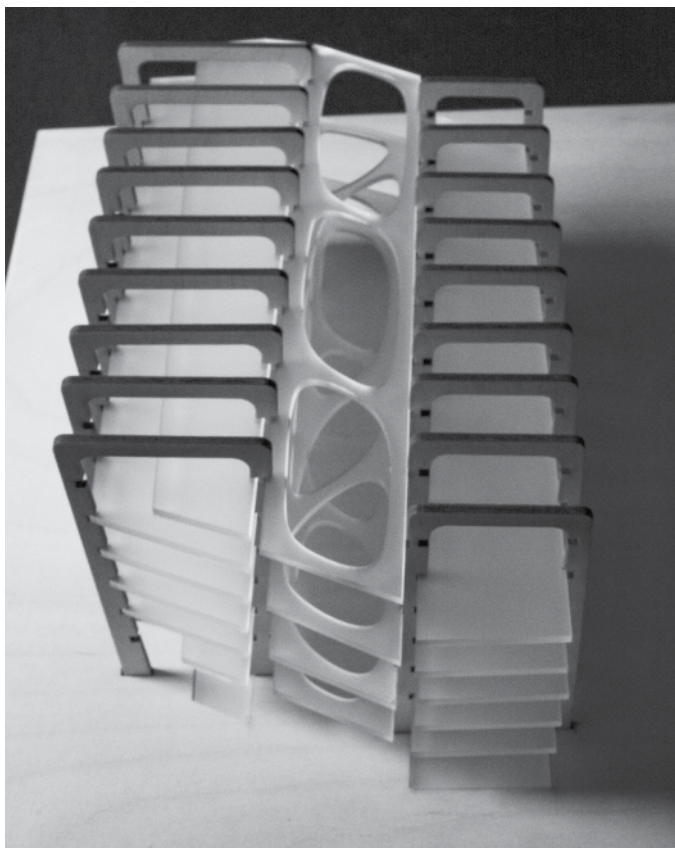


Image 03: The Ribs Structure - Frosted Acrylic, Plywood

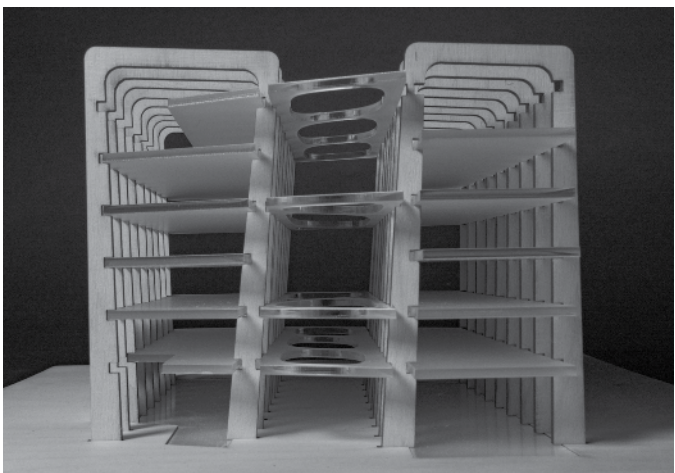


Image 04: Elevation - Frosted Acrylic, Plywood

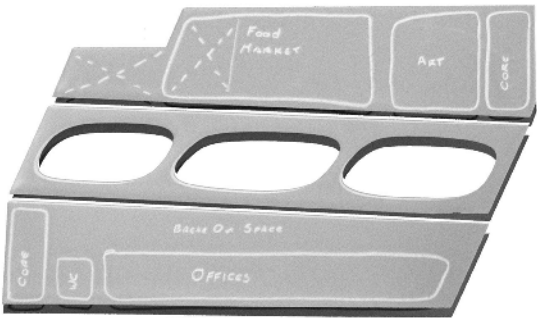
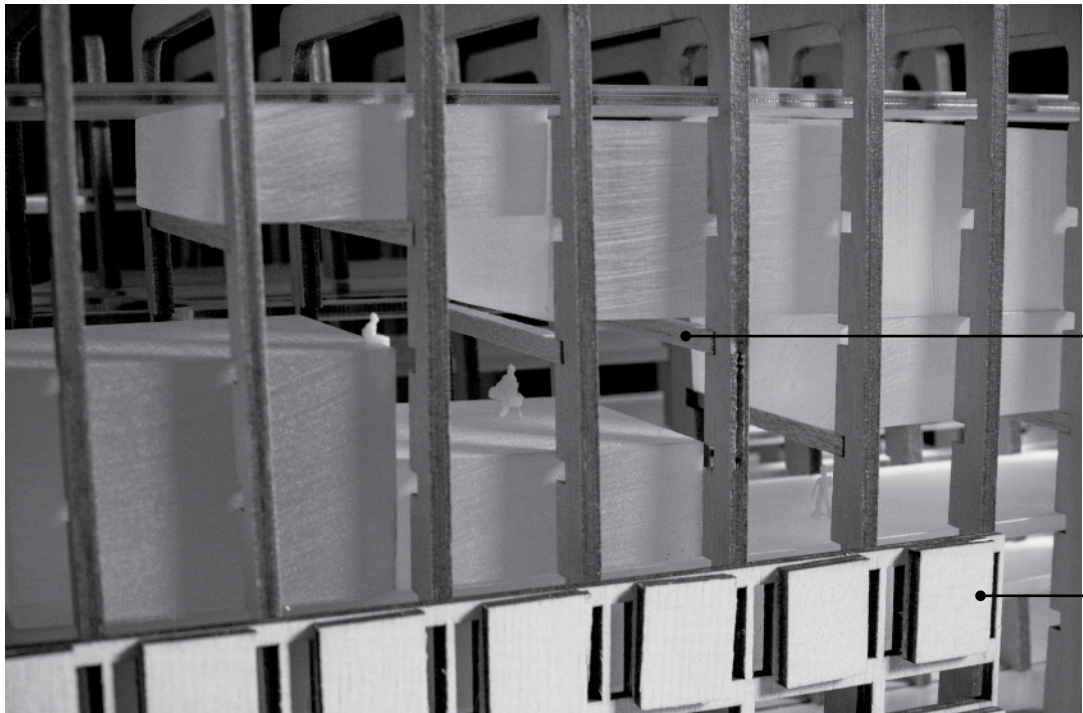


Image 05: First Floor Plate - White Pencil on Frosted Acrylic

Image 06: Flat Blocks - Acrylic Blocks, Frosted Acrylic, Plywood and Balsa Wood.



Supplementary Structure

Retained Facade



# Raghav Garg

BA Year 3 - Atelier: Continuity in Architecture

## Project: The London Street Fashion House

I am proposing a Fashion house scheme for my project, which will deal in the design, sale and production of high-fashion clothing and accessories. The idea is to take visitors through all the various activities happening in the Fashion house. The programme was influenced by looking at the warehouse typology in Manchester and the nearby located cotton mills. Manchester has a rich history and heritage linked with cotton textiles and fabrics, but nowadays this heritage can only be seen from the existing grade 1 buildings and can't be experienced. I intend to highlight this missing link through my proposal.

Model making was an important part in the development of my design. I made a 1:200 massing model to explain the overall massing of the building and a 1:50 sectional model to showcase the materiality of the building exterior and interior. I used timber and perspex as the two main materials for generating the idea of massing for my design. The perspex blocks indicate the areas that would be glazed and the solid timber pieces show the solid massing. Each wood piece was made by first cutting and sanding the pieces in plan and then in elevation. For the 1:50 sectional model I wanted to highlight the materiality and textures of the exterior and interior spaces. The idea was to resonate the fashion house with the Manchester's old textile heritage. Building the physical model helped me to think over and over about the interior finishes and atmosphere of the spaces and also how the pieces would assemble together. The most interesting challenge was the overall assembly of all the pieces, as there was a cantilever and the pieces meet at sharp angles. To highlight the brick texture I engraved the cork sheets and used spray painting to create realistic concrete textures for the interior spaces.



Front entrance approach



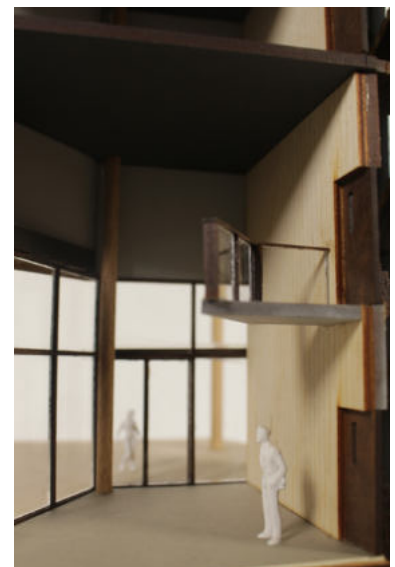
Side elevation showing glazing for the stairs



Street view of the main building elevation



Sectional cut view looking into the main atrium space.



Interior finishes of the entrance lobby



Process- Spray painting the different facade pieces



Process - measuring the angles of the corner pieces



1:200 Massing model Front approach



Front Bird eye view



Approaching the building from the back



Back bird eye view



# Samantha Millington

Ba Year 3 - Atelier: USE

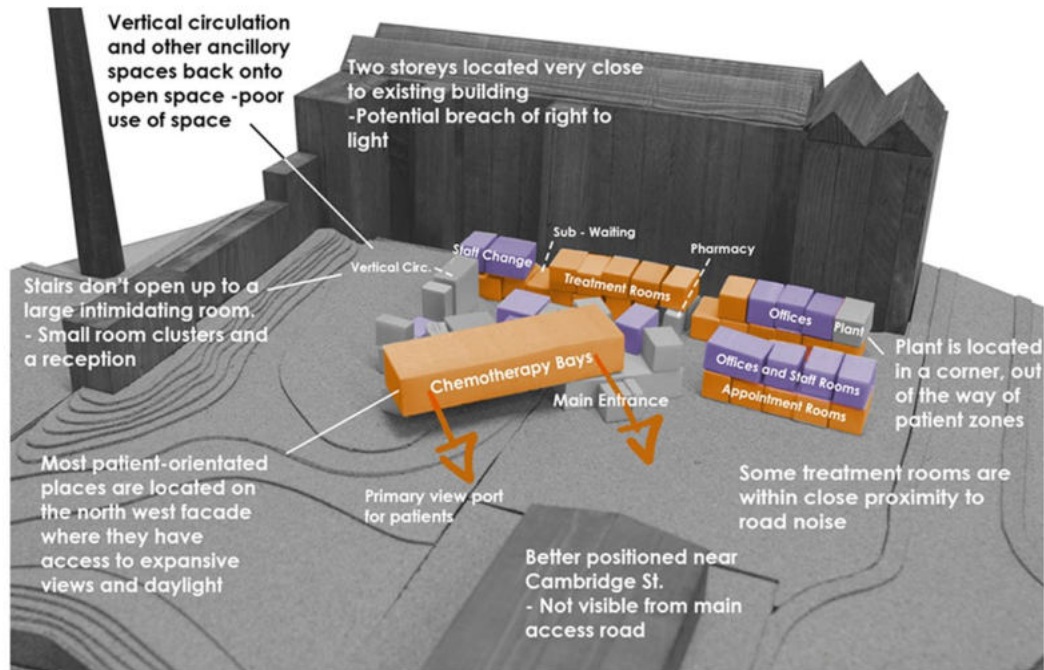
A chemotherapy ward utilizing the therapeutic effect of the natural environment and domestic atmosphere adapted from the Maggie's Centre typology. The form of the building was optimised to provide views from all long-stay patient areas, tilting the glazed façade down 10 degrees to direct line of sight to the garden and away from the tall towering neighbours. The publicly accessible gardens were left partially unmaintained to create a raw and natural wooded area and a flower bed lined path for visitors to make their journey through the changing site and in to the greenhouse lobby, where the vegetation continues into the 'Kitchen' for the visitors to experience a bright, green and socialised entry to the hospital.

Model making was utilised in various ways for this project. Initial massing models aided in the understanding of adjacency and scale on a group-built site model. This exercise was crucial in ensuring the space on the site was used effectively.

Secondly, a sandbox model was used to better understand the complex topography of the existing site. This model allowed me to simulate a cut and fill method of manipulating the earth and helped recognise the issues of cutting away at the river banks for better visual access while keeping the land near the hospital flat and accessible.

The final 1:200 landscape model was created using MDF and coloured mount board with nailed in trees. This model was left more diagrammatic, using contrasting colours and simple forms to communicate seating, vegetations, circulation and glazing etc. The model of the lobby stairs was created completely analogue. By creating this model, I learned and utilised more skills and tools, such as planing. Great care was taken to achieve accuracy and neatness, such as right-angle clamps and a damp cloth against any smudged glue marks. The model was later utilised to create a final composition piece and photoshopped to show how the central structure would accommodate the climbing plants.

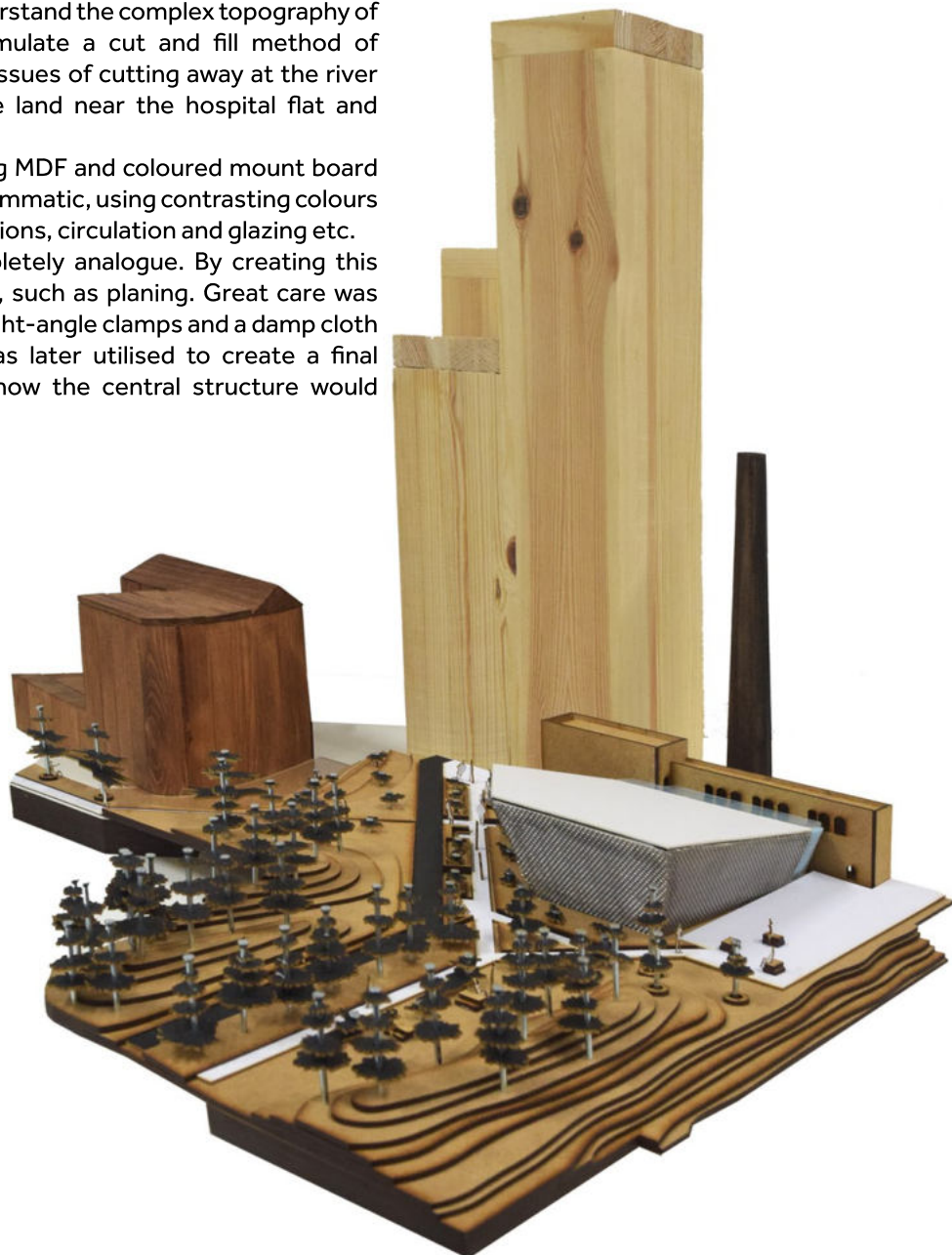
## Project: Garden Hospital



**Image 01:** Early on site massing models of precedent hospitals - 1:200.



**Image 02:** Process of making the landscape model- drilling holes for nailed trees, fixing together complex angled pieces.

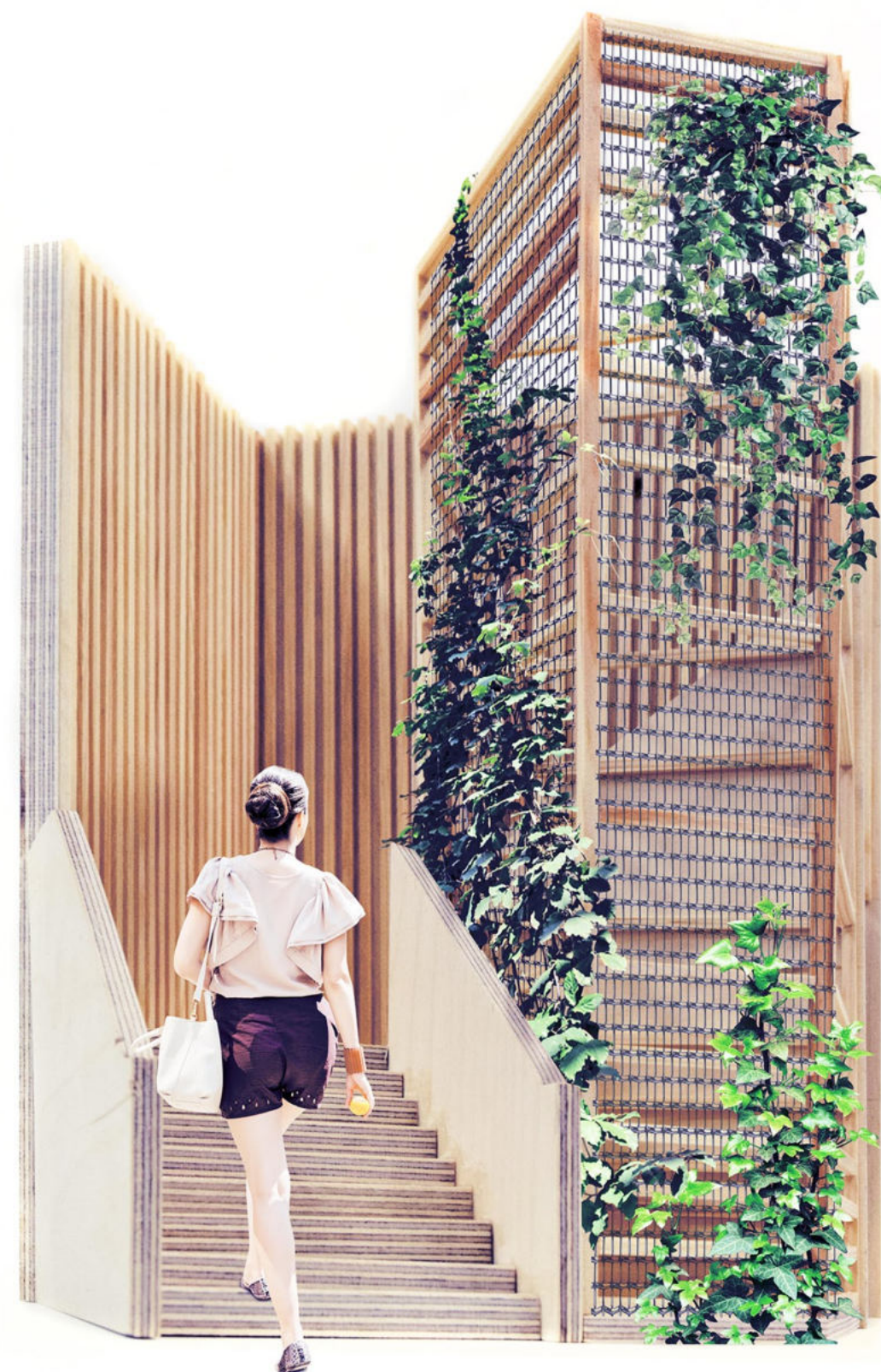


**Image 03:** 1:200 Landscape Model





**Image 04:** Sandbox model with blue foam to represent hard landscape and plant beds and it was determined that this iteration involved too much intervention - 1:200.



**Image 06:** 1:20 Final Stair Model Composition - Plywood and Photoshop



**Image 05:** Process of creating the stair model.



# Srirat Jongsanguandi

Ba - Atelier: Continuity In Architecture

## Project: Zen

In a world full of chaos, we enter Zen, transcending into a sense of sanctuary and serenity. A new kind of utopia, tucking you away from all the stress in life, it is a place to make you feel at home; calm and comforting.

The site is located in Mayfield, it's a plot of over grown grass with cloudy water from the River Medlock running through it. It's enclosed by heavy, concrete structures, full of noise and pollution from the Mancunian way. The purpose of the building was to become a refuge, with a suitable site as all the buildings around it insulate and cocoon it.

The purpose of the building is to bring back nature that has once been lost. The historical importance of the River Medlock, once seen as a necessity in life, has been buried through industrialised times. By making the river more central and sculpting landscape so people can interact with it, it has can now be used. It explores the idea of camouflaging on plan view, as the form continues the contours, and grain of the city.

The initial design concept was made using sketch models and inspiration from the site. By doing quick sketch models using scraps of wood, I was able to experiment with different forms that fits within the site model at a 1:500 scale. This initial process enabled the design to development further as the scale reduces.

Then I started testing out the curvature of the form work using materials that can bend and keep its form, whether it is round/ flat wires, or pasta. Finding materials that could work, during design process or final models, were fun and exhilarating. Early stages of design there was lots of tests, iterative design, experiment with materiality. Once it came to a 1:50 models, more thinking was involved, especially using the glue gun.

Zen, a place you can be yourself entirely, with spiritual spaces like a chapel, and a soul like the grove of trees in a forest. Through model making, I was able to communicate my ideas in physical form, how it sits within the context of Manchester.



Image 01: Sketch Models, form finding



Image 02: Interior experience- Cast plaster from 3D print mould using gelflex, wood for base, clay for handrails



Image 03: Landscaping, poly filler, gel wax, glue gun, plywood



Image 04: Bringing nature into the building, Exploring exterior and interior spaces.

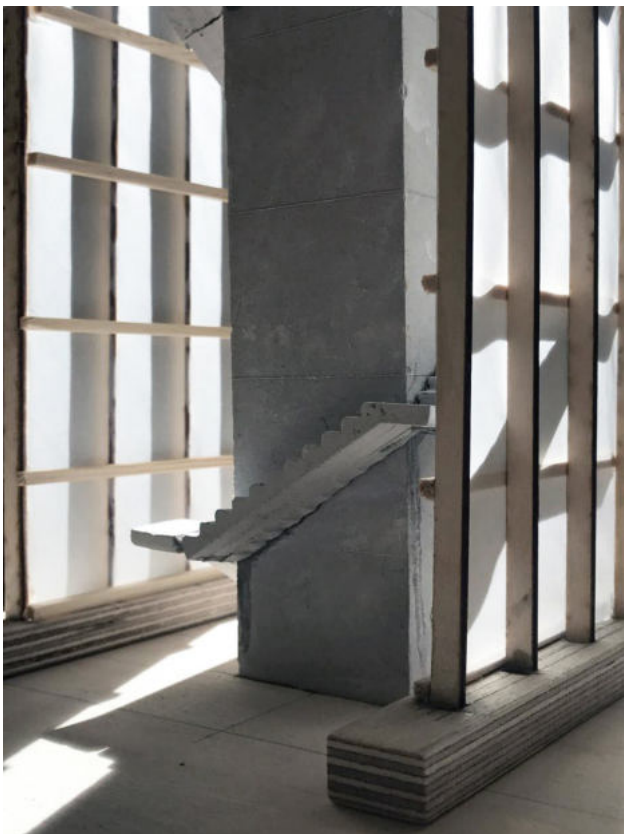


Image 05: Light, facade, concrete core and cast stairs 1:50



Image 06: Top of tower- clay furnitures spray painted, stair banister made using glue gun



# Theodore Fisher

Ba Year 3 - Atelier: CIA

## Project: CounterPostition

A Skate photography studio with attached co-op working spaces

The Project brief was to create a "place of welcome" to work in conjunction with the skatepark which sits opposite to our site. The site sits on the edge of Mayfield in green space by the river Medlock, with the skatepark sitting under the Mancunian way.

The design concept comes from bringing together 2 contrasting elements to work in harmony to create an interestingly unique sense of place.

The main element attaches the proposal to the site, which appears to have arisen from the earth. The second element consists of stacked glass boxes hanging from the main element, leaving only the gentlest imprint on the site. The 2 components are tied together via a series of tunneled bridges.

Model making is a useful tool that I use as part of my design process. It allows me to get an understanding of how the components come together, and to see it from new angles, giving the chance to experiment with the design. I also use models as a way to present my final design.

In this project, I had 3 models utilized to create and present my design. The first is a 1:200 model series used to experiment with different ways of joining the 2 structures, by using hand-cut MDF and acetate. The second is a 1:200 final presentation model made using a block of CNCed cork as the base, to quickly create a more organic landscape. For the building, I used frosted perspex as the glass elements and a block of stained hardwood as the main building element. Both of these were cut to shape using the bandsaw. The final model is a 1:50 final presentation model which aims to show the relationship between the facade and the interior. As part of making the model, 2 iterations of the facade were made: the first out of individually cut wooden blocks, the second was jasmonate cast in a foam mold that I CNCed, which was used in the final model. The structure was made of stained MDF cut with the bandsaw, and the interior elements were made of spray-painted gray board.



Image 01 - Connection Series 1:200 - MDF & acetate

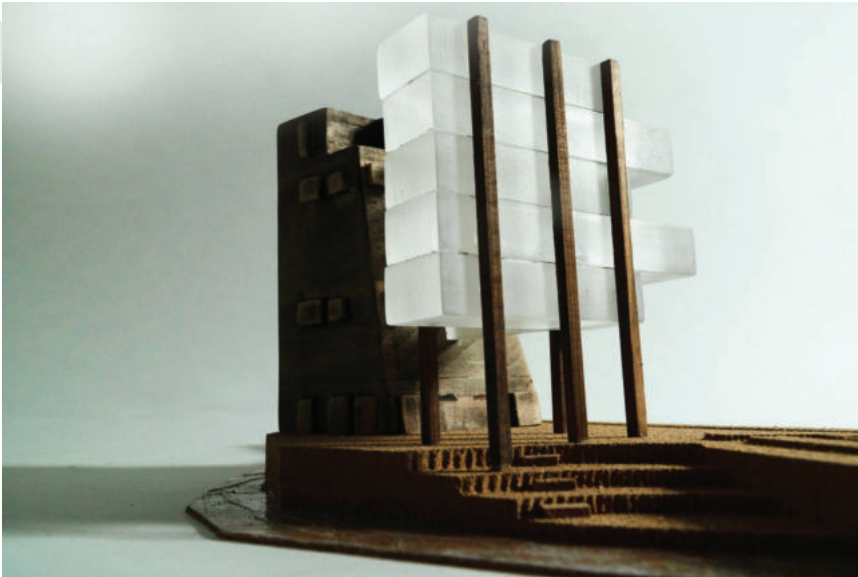


Image 02 - Final presentation 1:200 - cork, beech & perspex

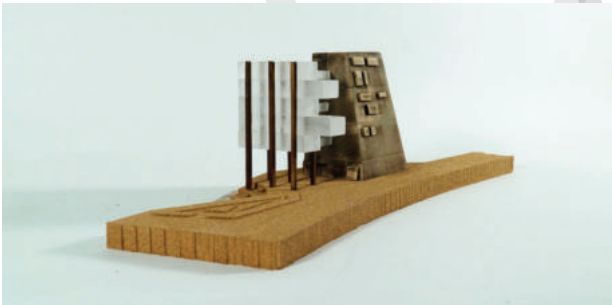


Image 03 - Final presentation 1:200 - cork, beech & perspex

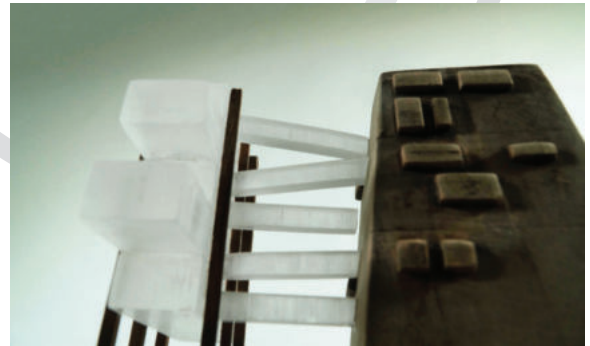


Image 04 - Final presentation 1:200 - cork, beech & perspex



Image 05 - Final presentation 1:50 - Jasmonate, MDF & Grayboard

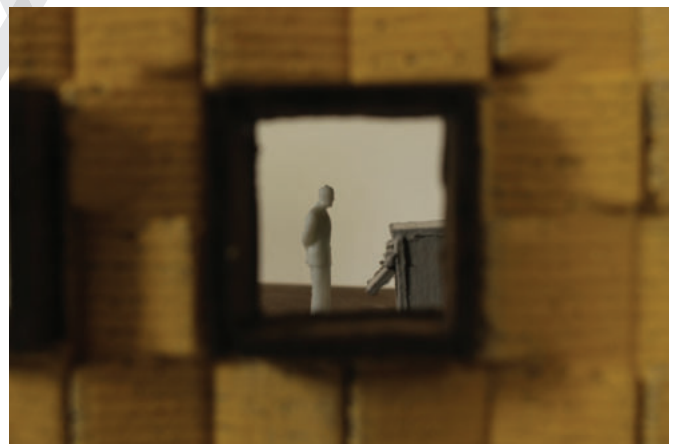


Image 06 - Final presentation 1:50 - Jasmonate, MDF & Grayboard

# Tom Cooper

BA Year 3 - Atelier: USE

## Project: New Living

Customise/Move/Live

Our USE brief set to benefit both cultural and natural systems through the wider landscape down to the building to result in an ecological, low-tech resilient design. This was to be explored by the bank of the River Medlock by One Cambridge St, through our own chosen programme.

My project, 'New Living' creates a solution to standardised city apartments that prioritises user health through key elements such as maximum lighting, a close connection to nature and a customisable design. The building incorporates private balconies and roof gardens that bring the landscape to the apartments. Whilst the public park re introduces the river Medlock and nature to Manchester for everyone to use. These modular apartments are prefabricated so buyers can customise their layouts and materials to create their perfect home.

Model making served as an invaluable tool in the design process of my project that explored concepts further than drawings could. As an atelier we made a 1:200 site model that was a very useful resource for personal models to be tested compared to the context. From initial research the apartment module size was roughly determined so I could make small scale blocks from scrap timber. These let me iteratively test different layouts whilst considering circulation core placements and optimum solar gain. Similar mass models from foam and mountboard showed potential design options (image 02).

The apartments modular design required a larger scale to see more detail in structure and human relationship. However still using fast sketch models with scalpel cut greyboard and 3D pen structural frames gave an efficient development process (image 03). Once the design advanced, laser cutting larger scale 1:20 models showed me redundant structural components.

Using a 1:50 model with removable elements allowed façade and floor testing that resulted in finding the optimum window positions and a perforated floor to bring in maximum natural light (image 04). Laser cutting let me use accurate dimensions from my working SketchUp model and saved time with a jigsaw like assembly process.

Whereas for my final 1:200 model a CNC cut cork landscape gave accurate changes in topography that are key in my design.



Image 01: 1:200 final site model - CNC cut cork sheet, laser cut plywood and MDF





Image 02: Sketch massing model Mountboard with site model timber and cork

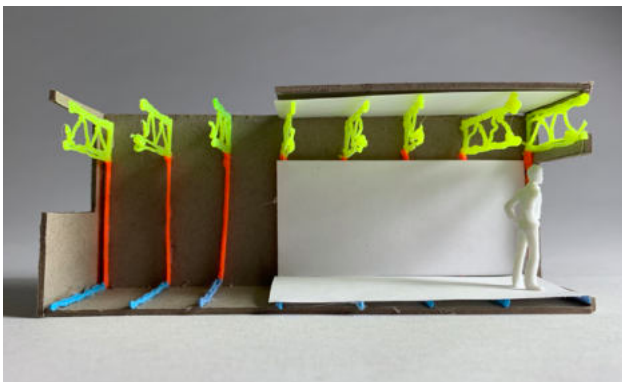


Image 03: 1:50 apartment structural module Laser cut MDF



Image 04: 1:50 facade and floor alternate testing Laser cut MDF



Image 05: 1:200 landscape/building testing Hand moulded clay, hand cut card and laser cut MDF



Image 06: 1:50 final customisable apartment modules Laser cut plywood, MDF and cork

# Tsun Hei Xavier Lee

BA Year 3 - Atelier: Infrastructure Space

## Project: Future Habitation

### Scheme:

Due to population growth and an increase in life expectancy, there is a rise in demand for infrastructure especially housing. This project aims to design a new residential system to tackle the problem. The new housing system objective is to eliminate obsolescence by exploring the flexibility and expandability of housing units. It introduces new living styles which would allow people to reflect on their living habits.

Interconnectivity, Flexibility, Modularity, Expandability, Verticality and Repairability are the six design directions. Located in Collyhurst, this project aims to revitalize the area by introducing the new housing system.

### Models:

Interactive Site Model is made to look into the development of Collyhurst and people's expectations of a well-designed district. Plaster casts were used to indicate different land uses. Series of Sketch Models are created to explore the relationship between the two components of my project: Residential Blocks, Cultural Hubs. Design parameters are set up through mix-and-matching.

Structural Model using wood and acrylic rods visualized the different structural components of my design. Through playing with the rods, the base form of the building is created. Conceptual Model (1:300) is made to explain my scheme about residential expandability and flexibility. Acrylic boxes are made to allow people to play around with the composition of the units.

Site Model (1:700) is made of hand-cut cardboard. It helped presenting my master planning of the site and its reaction with the surroundings. Services Model (1:150) is colour-coded, indicating the different service components. People can play with the pattern of the detachable balconies which imitates the residents' opportunities to affect the actual design.

Construction Model (1:30) is made to explain the construction sequence of the plugged-in pods and the connections in between. The pod is a sectional model displaying the thermal envelope. Balcony Detail Model (1:15) is 3D-printed to show the detachable bolt connection of the concrete frame and the timber-cladded balcony.

Final-massing model (1:400) is made by stacking up laser-cut plywood showing the overall form of the four residential blocks. Final model (1:100) is created to display the final appearance and the façade pattern of a single residential block.



Image 01: The 10 models shown in the exhibition

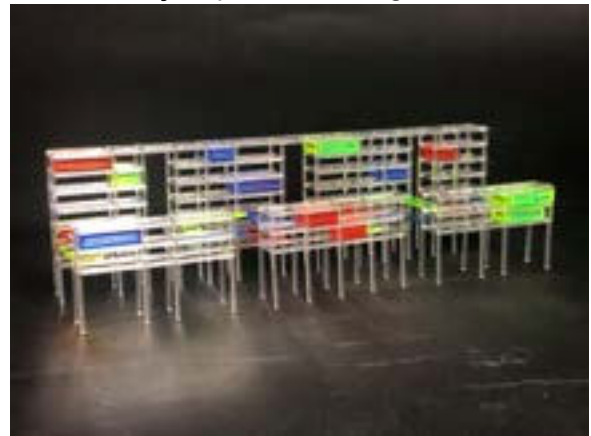


Image 02: Conceptual Model about the Scheme



Image 03: Hand Cut 1:700 Site Model





Image 04: Final 1:400 Massing Model



Image 05: 1:150 Services model with Detacheable Balconies

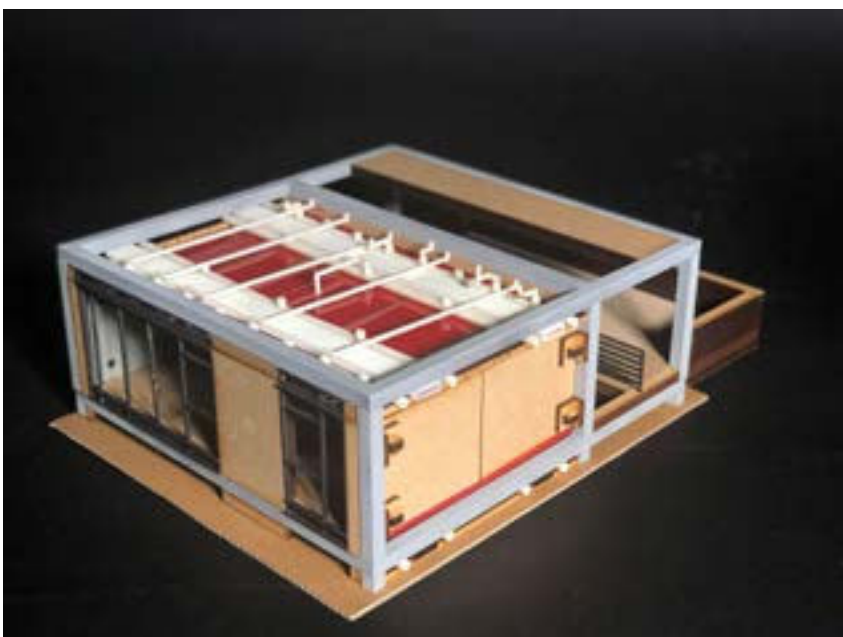


Image 06: 1:30 Detail Model explaining the construction sequences



# Yilin Zeng

BA Year 3 - Atelier: Platform

## Project: The Grids

### Manchester's Contemporary Textile Industry

The Grids is situated in the heart of Ancoats which once played an important role in the textile industry of Manchester. The district has undergone regeneration, becoming a hub where traditional and modern architecture stand in harmony. The Grids aims to become a place to recall the significance of Manchester textile industry and re-interpret the cultural and economic meaning of textile manufacture. The building consists of three main programmes: a fabric recycle factory, a textile museum and a store. As a contemporary textile factory, it recycles the fabric waste collected from neighbourhood and converts it into garment products, reducing negative environmental impact unlike conventional textile industry. The garment goods are either sold in the store or to other garment business. In the exhibition space, machines and fabrics are display with the existing mill as background, bringing visitors back to the historic context of industrial revolution.

Model making was found effective in the initial stage of the installation project, which was the starting point of the design project of the factory. Lightweight materials such as paper, bamboo sticks and straws were used as they were easy to manipulate. Successful light and shadow study was obtained after this simple and efficient model making process. The structural bay model consisted of several materials. During the assembly of the model, it forced me to deliberate the details of the structure and the construction sequence. In the final model of the factory, threads were used to create the parabolic surface instead of using 3d printing. In the aligning process - stretching the threads- straight components were formed, the property of paraboloid was evoked. In addition, the material reflected the building programmed as a textile factory. The model was designed to be able to remove from the plate to a site model.



Image 01: Initial attempt of installation - paper

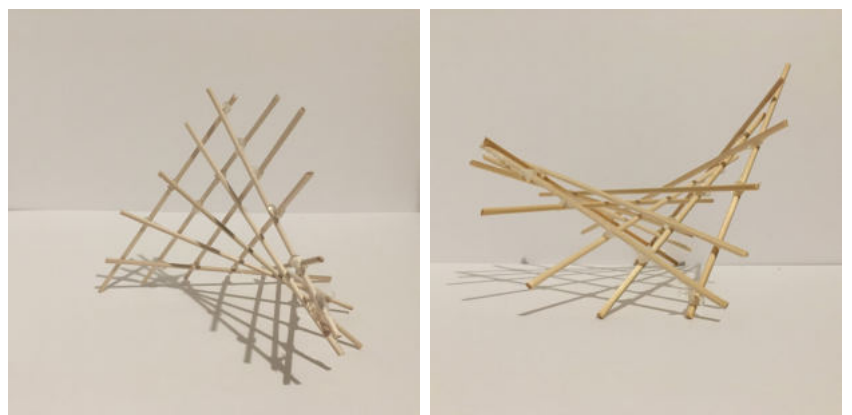


Image 02: Investigation of grid structure - bamboo sticks

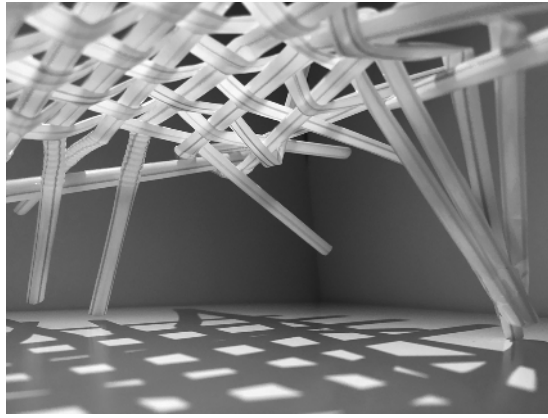
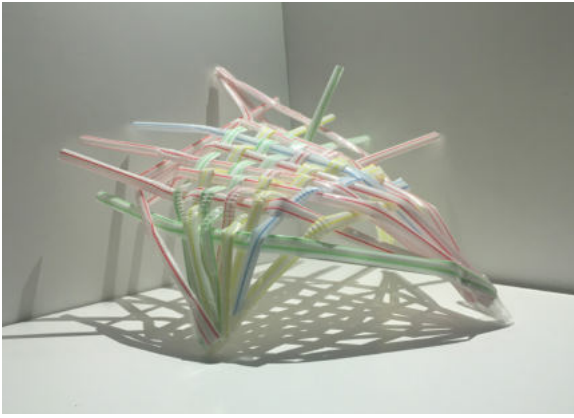


Image 03: Investigation of woven structure - straw

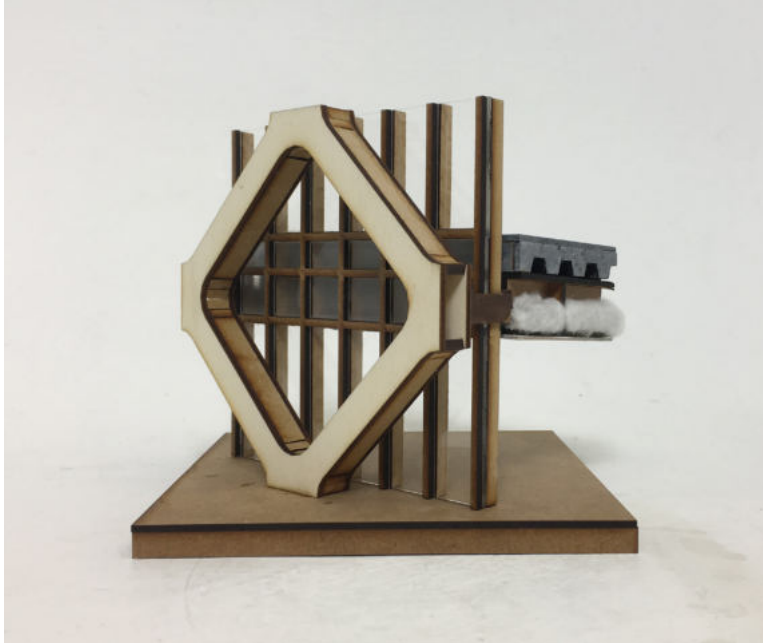


Image 04: Structural bay model- MDF, plywood, acrylic, cotton, mount board

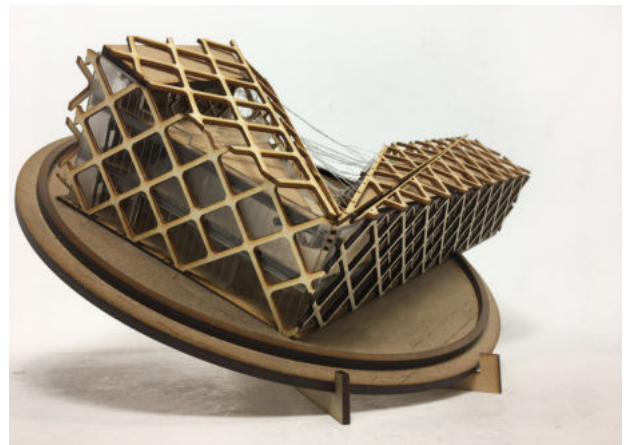


Image 05: Envelope and facade (removable) - MDF, plywood, acrylic, threads

# Modelmaking Awards 2019

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## MArch LONGLIST



# Aadil Sidat

March Year 2 - Atelier: USE

## Project: Archotica

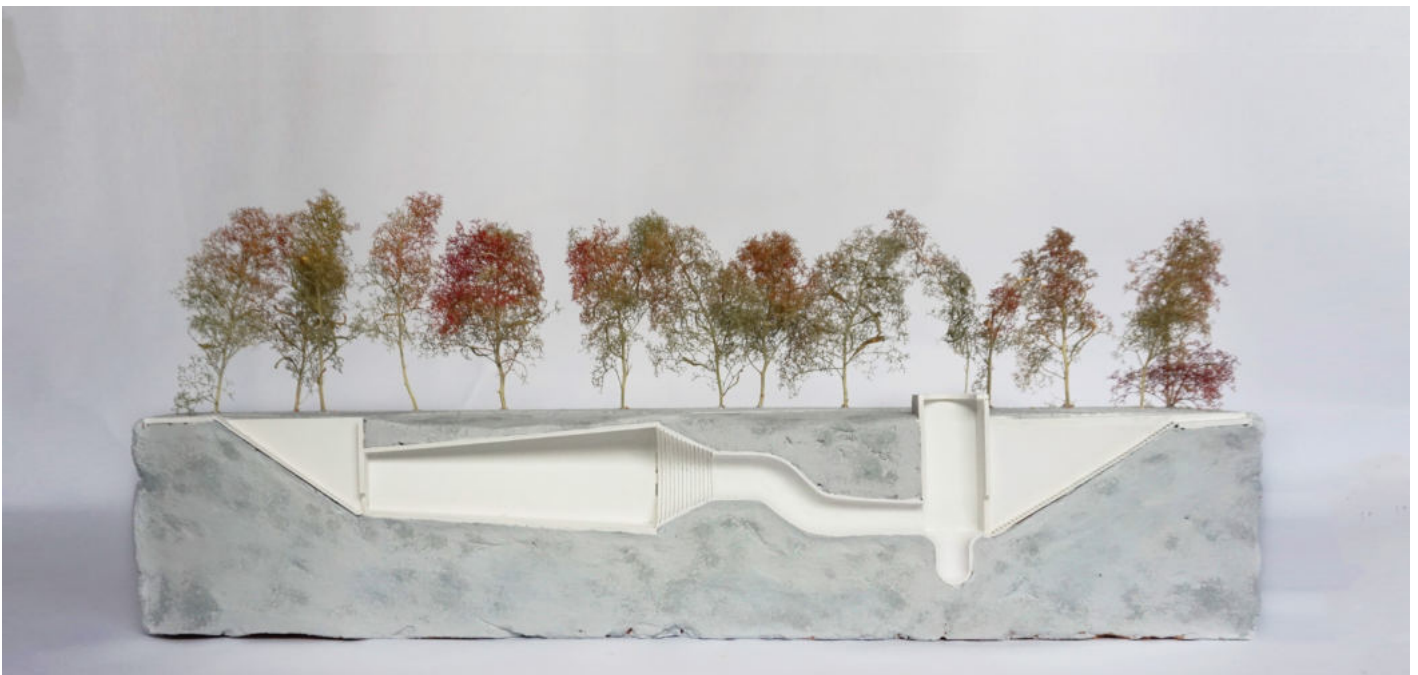
Berlin has had a historic relationship with drugs. Since the war, post war and even now. Drugs are used to create highly stimulative experiences in a variety of ways, some calming and some energetic. So often in architecture does the design and environment neglect the users senses neurologically and psychologically. Therefore, the project aims to replicate and learn from drugs in order to create a highly stimulative architectural experience. In doing so, we can better understand design factors and strategies that affect an individual's body, mind and brain.

However, drug use can become harmful and affect society. Many immigrants have come to the city to sell drugs and this has led to a violent relationship with Berlin residents within Görlitzer park. Through architectural high sensory stimulation, neurologically and psychological design can architecture be a catalyst for change to allow for introspection, neural wellness and a better life?

This year has allowed me to truly experiment with model-making, models allowed me to convey a sensory experience in the best way possible, compared to sketches and drawings. 5.1 explored sensory architectural experiences openly and freely, whilst 5.2 focused into certain specific experiences. Finally, 5.3 the models convey the form rather than experience as this was done separately in previous models including the making of an installation in an garage. Making the majority of models varied from using anything I could find, walking around the shops and finding unique materials and objects that would help develop my project in unusual ways. The final project was 3 pavilions. Each pavilion was embedded into the landscape and this was key to show, therefore I attempted to cast the model. Initially I wanted to use concrete but ended using a specific bonding plaster that was lighter.

The models were made in a variety of scales, the initial experiences were made at smaller scales whereas the final cast models were made at 1:200. Within the final year I used wood, plaster, 3d printing, sponge, glass, mirror, metal, greenery, foam, card, and playdoh. It was vital to experiment to achieve experiences through a model whilst also enjoying the model making process myself with new exciting methods.

Image 02: Low Sensation Pavilion Model - Wood, 3d printed and bonding plaster casted.



A collection of 15 small, handcrafted paper models arranged on a white surface. The models include various geometric shapes like spheres, cones, and cylinders, as well as more complex structures like a house-like form and a multi-story building. Some models are decorated with colorful patterns or images.

A photograph showing a person standing in the dark, rocky opening of a cave. The person is silhouetted against a very bright, hazy light coming from outside the cave. The cave walls are rough and textured. The overall scene is dramatic and atmospheric.



# Aaron Perry

M Arch Year 6 - Atelier: Platform

## Project: "Batteries Not Included"

*Can an architectural programme resolve the damaging disconnection  
between the capital investment of laboratories and a lack of operational funding?*

Often capital committed to scientific infrastructure is not accompanied by the additional necessary revenue to achieve industry growth. The potential of the UK's framework is being compromised by the lack of a long-term strategic investment, especially concerning both the complexity of sourcing and the short-term nature of available funding. Ultimately, laboratories with insufficient funding are unable to remain operational, with considerable concern surrounding the duration in which individual facilities endure success. In the current climate, mono-functional structures often become outdated or even obsolete when the user requirements or the intended function changes.

My programme endeavours to provide an alternative approach, in which the permanence of the infrastructure is radicalised. In place of traditional concepts of lifecycle, 'Research & Innovation Infrastructure' (RII) will typically experience a new sequence of phases across an individual laboratory lifecycle, most noticeable re-orientation or re-purposing, in place of termination/decommission. Architecturally, the programme would provide a universal

approach to design with a multitude of parameters determined by the end-user in an intuitive way. With the ambition of encompassing complete flexibility, the reversible design can be de-constructed to component level.

Whilst developing the following proposal, the physical model offered a chance to demonstrate a series of phases the programme would be subjected to over the course of its lifecycle. The model was produced with the ambition of using a minimal amount of adhesive to allow individuals to "play" with the structure altering both the external appearance and the internal massing. With earlier experimentation, both the scale and a reasonable number of reversible components was deduced to reduce complexity. Additionally, a high level of precision was required to ensure the model remained stable and could be combined with ease, which ultimately resulted in the use of laser cut MDF. The model has provided invaluable insight into several aspects of the final design (especially the tectonic resolution) and continues to receive a strong level of engagement with inquisitive students.

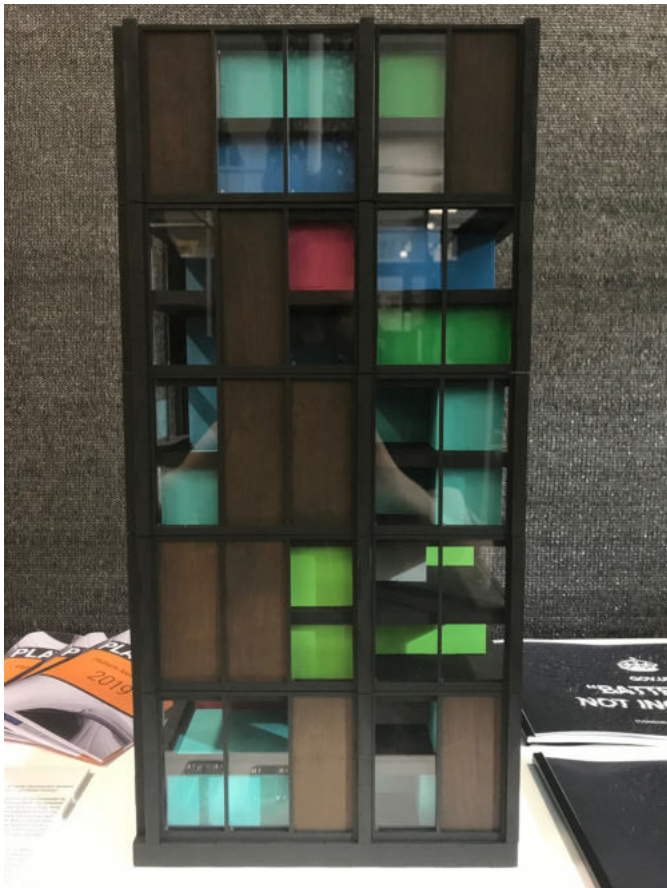


Image 01: Final appearance of physical model. Colours directly relate to an allocated programme e.g. laboratory, commercial, educational etc.



Image 02: Joints with inclusive tolerances allow many of the components to be placed freely without any form of adhesive or temporary fixing.





Image 03: Phase 1 - Initially the exoskeleton would be determined, considering both the volumetric constraints, and external appearance (external relation with context).



Image 04: Phase 2 - Over a given period the spatial strategy would consume the entire structure, leaving isolated pockets throughout the exoskeleton.



Image 05: Phase 3 - If a change in function is required, the programme must allow for the partial or complete removal of spatial arrangements (including facade/internal structure).



Image 06: Early process model focusing on the use of reversible junctions. Each joint combines both a male/female profiles with additional support from magnets.

# Adamos Nicolaou

March Year 2 - Atelier: PLATFORM

## Project: Architextile: Self-Supportive Knitted Textile Structure

The scope of this thesis is to investigate the potential of textile architecture "ARCHITEXTILE" through a multi-layer study of traditional knitting and advanced computational design techniques and methods, along with the mechanical properties of the material used to produce self-supportive textile structures. The empirical part of the study was led through a set of experimental physical models that used to examine the potential of fabric as a robust building material system. The outcome of the research shifts the perception of the textile as being "old-fashioned", by instead showing its alternative use as a sustainable, flexible and adaptable building material with endless possibilities. The design development process results in a structure that looked fragile but is in fact robust. A series of EXPO pavilions have been produced across Manchester's city centre region, enabling the generation of dynamic, interactive, event and process-based spaces, in order to maintain, develop and sustain Manchester's textile industry, recognising the need for agility and adaption.

Model making techniques were key for my design development, in order to understand and investigate the properties of knitted textile structures. The first model I made for this project was a knitted fabric tension structure supported by some form of compression and bending elements. The first physical model encouraged me to understand the properties of tension membrane structures and start studying about the opportunities to be transformed into self-supportive structural systems. The testing of various model-making techniques and materials allowed me to achieve the desired effect of this model. A Self-supportive knitted structure that is light, flexible, adaptable, robust and maintains a lighting effect.

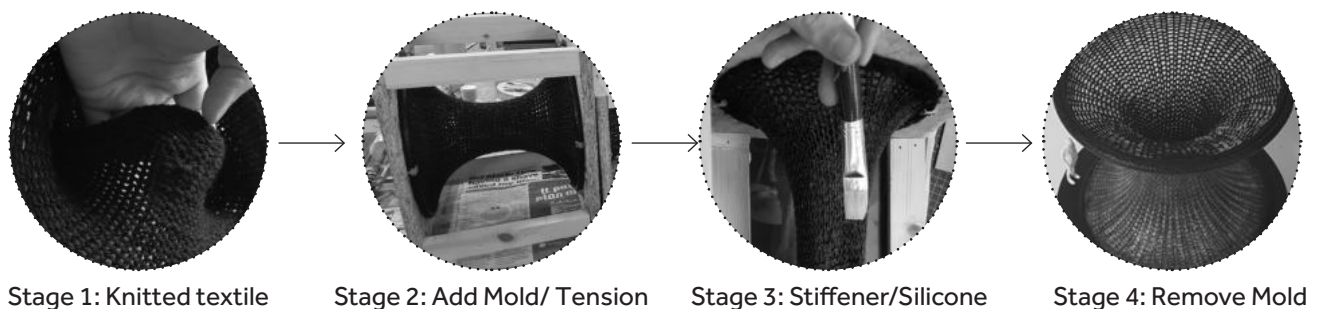


Image 01: Development Process/ Construction Sequence



Image 02: Top View/ Knitted Fabric, Fabric Stiffener, Translucent Silicone, Plastic Hoops, Mdf Wood, Paper.



Image 02: Front View (Self-Supportive Textile Structure)/ Knitted Fabric, Fabric Stiffener, Translucent Silicone, Plastic Hoops, Mdf Wood, Paper.

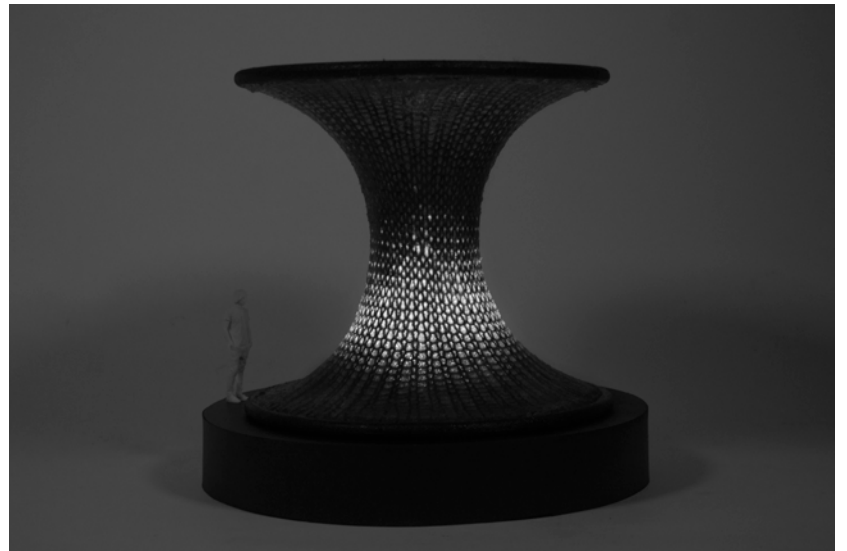


Image 03: Front View (Lighting Effect)/ Knitted Fabric, Fabric Stiffener, Translucent Silicone, Plastic Hoops, Mdf Wood, Paper,LED Light.

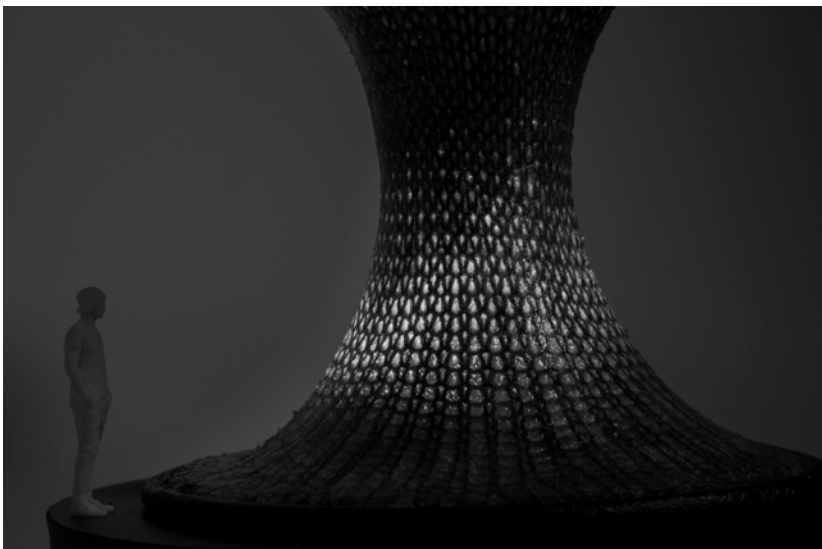


Image 02: Close-Up View (Lighting Effect) / Knitted Fabric, Fabric Stiffener, Translucent Silicone, Plastic Hoops, Mdf Wood, Paper, LED Light.



# Aimee Williams-King

March Year 6 - Atelier: CiA

## Project: Rochdale by way of Venice 'The Fun Palace'

The Fun Palace occupies an existing shopping centre in Rochdale town centre. Combining a number of leisure activities: aquarium, brewery, go-karting, climbing, lazer-tag, mini golf, zipline, education spaces and the MP's office. The playful program is paired with the practical move to carve the existing structure, to create direct routes through the building linking the high street and the new retail complex, with a central public square. This proposal combines building reuse with a playful concept and improves connectivity. Model making has been imperative to the projects development. Simple massing models helped me make initial key decisions. I modelled the existing concrete frame which I used to work out how to carve up the structure. Next, I made concept models to develop the facade, test the key routes and summarise the main uses. Finally, I made a set of three models, these challenged me to ensure the large proposal works at all scales and to consider: town scape, building construction and fittings.

My 1:500 site massing model shows the overall impact the proposal has on the existing town centre. The site slope is made up on layers of cork, the surrounding buildings of jelutong and the proposal of tulip wood. Each block is hand cut which enabled me to create unusual shapes such as the ramps. Finishing touches, like the wire that represents the zipline, ensure the fun of the proposal is showcased.

The 1:50 sectional model is cast stone plaster to represent the existing concrete structure. I then layered balsa and acrylic to represent the new curtain walling system and laser cut card for the perforated aluminium. This model shows the combination of the existing structure with the new façade system, the aesthetic of the cladding and the interesting shadows the perforations create.

The final model of the set, the 1:1 tiles, encouraged me to develop the ornament of the scheme. Ensuring that such a bold proposal is linked directly back to Rochdale and the site specifically through the wheatsheaf. This is the name of the existing shopping centre and historically the sites use. The tiles are laser cut plaster and are mounted on cork with an oak frame.



Image 01: 1:500 Site massing model A  
Cork, Jelutong and Tulip wood



Image 02: 1:500 Site massing model B



Image 03: 1:50 Sectional model A  
Stone plaster, Balsa, Acrylic and Card



Image 04: 1:50 Sectional model B

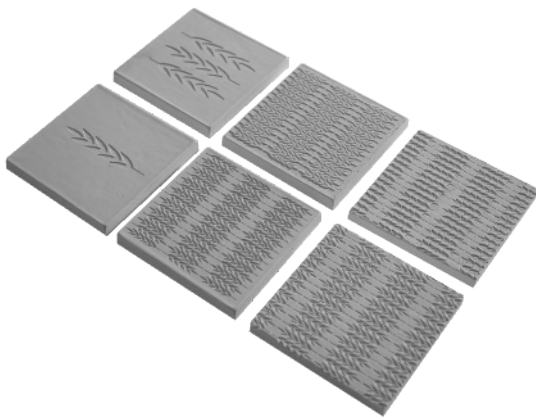


Image 05: 1:1 Ornament tiles A  
Stone plaster, Cork & Oak



Image 06: 1:1 Ornament tiles B

# Andrew Chung

March Year 2 - Atelier: Platform

## Project: FormKnit

How can knitted textiles be used to create complex concrete forms?

This focus of this project is on materials and methods in architecture, specifically knitted textiles and their potential utilisation as an alternative construction method. From material sourcing, production and transport, to building processes and lifetime durability, sustainability and the environmental impact of projects has been increasingly scrutinised over recent years. CO2 production from concrete building processes is one of the largest polluters from the construction industry and with the continuing desire to create structural, organic, smooth designs it is highly unlikely the use of concrete will not diminish despite its negative environmental impact.

FormKnit, therefore, seeks to manufacture project-specific textiles to be used as formwork and reinforcement for structural concrete. This process and construction method is much more sustainable through minimised waste in production of the textile, vastly reduced pollution impact through reduction of formwork material required, its ability to be compacted and subsequently reduction of specialised/heavy transportation needs.

Modelmaking was essential for this project due to virtually no precedent to follow and unknown parameters. Initial models were used to test the physical capabilities of knitted textiles and how changes in its structure affect its performance. Further models were produced to then test its behaviour when under tension and how the textile uniformly distributes load. The following set of models then tested the effectiveness of knitted textiles as formwork; whether the formwork layer prevents any seepage and penetration without an intermediate layer, whether the target form can be retained, and whether the final outcome can be structural. Finally, collating the results from these tests and experiments, the aim was to implement and visualise this process to building scale as an output – This led to the use of 3D printing to demonstrate and represent the large-scale output capabilities in a compact, real world, size.



Image 01: Single surface, tensile fabric test  
Stained timber lathe-turned legs, Steel frame,  
hand-stitched fabric.

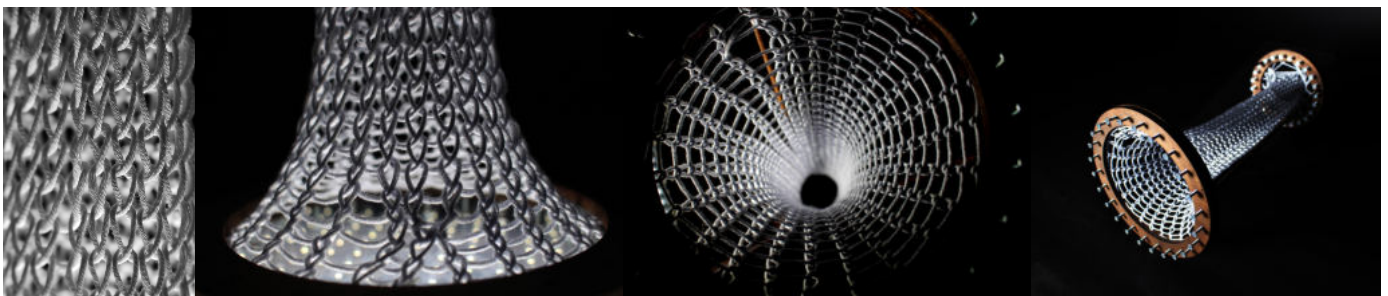


Image 02: Hand-loom, knitted column investigative model  
2mm diameter yarn, stained timber.





Image 03: Knit structure exploration via domestic knitting machine  
Clear acrylic, wire, mixed yarn

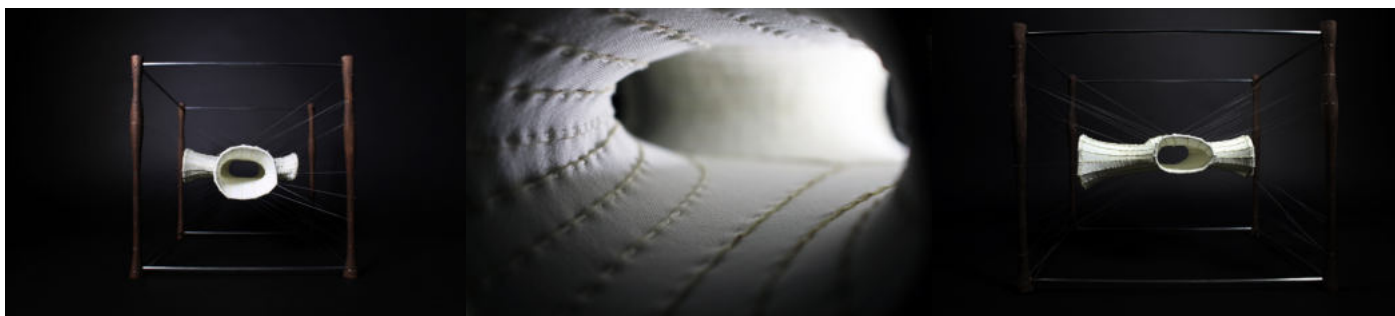


Image 04: Tensioned fabric form experiment  
Lathe-turned timber legs, steel, laser-cut & hand-stitched fabric, wire



Image 05: CAD modelled tensioned form & lighting exploration  
3D printing



Image 06: Knitted formwork, structural cast  
Timber, knitted columns, cyanoacrylate, plasterboard adhesive



# Charlotte Hagerty

March Year 6 - Atelier: &rchitecture

## Project: Imperfecting the Architectural Design Process

In architecture there exist so many variables it is impossible to find the perfect solution and yet we strive for it. 'Common sense 'normal' language, attitudes and practices' (Boys, 2018) perpetuate a fixation with perfectionism in architecture, providing us with a set of rules that we as architects (often unthinkingly) conform to. This is not to say that the accepted methods are wrong, rather that they are not the only means by which it is possible to make architecture. The purpose of my thesis was to critically and creatively investigate the dominant architectural beliefs regarding accuracy, simulated logic and the assumed linear relationship between drawing, construction and built result. This was done via the application of the Wabi-Sabi Principals (imperfection, incompleteness and impermanence). Using a drawing machine and a set of 'Paramechanic Instructions' I made explicit the embodied processes employed throughout the drawing and design of my outputs. By applying a design methodology of constraint and detailed documentation my aim was to make transparent the non-linear process by which I was able to produce several imperfect architectural iterations through non-normalised drawing and design methods. These iterations amounted to sixteen drawn iterations and twelve modelled iterations (see image 01).

The Barcelona Pavilion acted as a point of departure for my design, in that this was the design that I aimed to re-imagine as an imperfect form. I began with a plan of Mies Van Der Rohe's original design and the design process worked as follows: I would draw an image using my hand-crafted drawing machine, I would then interpret the drawn lines and produce several model iterations which would consequently inform my next set of drawings. Given that the underlying principal of my design process was imperfection I opted to use plaster of Paris and balsa wood as materials. I saw these materials as the best means of representing my drawings and both allowed for unexpected and imperfect textures and forms to arise throughout the process, giving rise to a level of uncertainty that aligned with my critique of the standard, 'perfect' architectural process. I primarily modelled at scale 1:100 as this best suited the scale at which my drawing machine was able to draw. My set of iterative models were the most important output of my thesis project, conveying effectively my creative and iterative investigation into imperfection as a methodology for designing architecture.

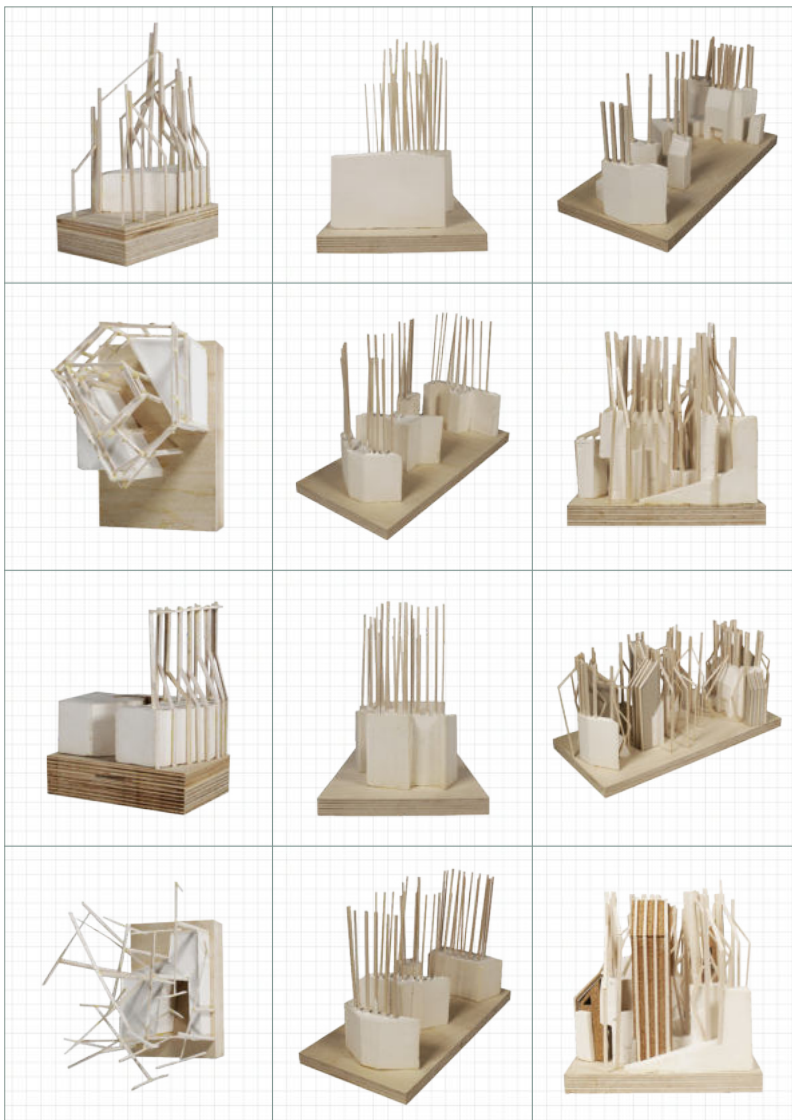


Image 01: Twelve Model Iterations

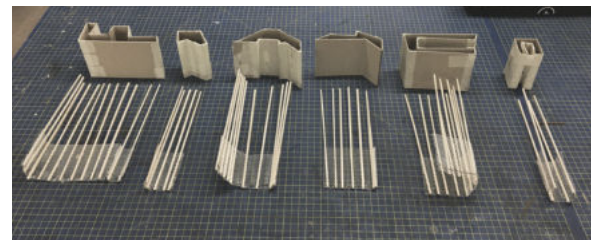


Image 02: The Casting Process





Image 03: Iterative Model No. 10



Image 04: Iterative Model No. 11



Image 05: Iterative Model No. 12



# Chin Kiu Justin Chung

March Year 1 - Atelier CIA

## Project: The Champness Urban Farm Aeroponics Farm in adaptive re-used building

The Champness Urban Farm aims to offer a contemporary but sensitive intervention that both reveals and respects the historic precedence of place, and yet provides a forward facing programme in service of Rochdale's extant farming culture. Situated at the centre of a strong urban setting, the building reconstructs the historical cooperative community value through the introduction of an Urban Farm. The existing main hall is transformed into a production hall where the design utilises aeroponics for the production of vegetables and fruits, allowing rapid and sustainable vertical farming to occur within a small footprint of the building. A marriage between the existing and new building fabric, the design adaptively reuse dilapidated structures and creates a place with a spirit of growth, yet fosters a sense of tranquillity, a true Rochdale landmark that both embraces history and confronts the future.

Model making helped me through the design process and overcoming design issues; from massing to detailing, different models have allowed me to explore the potential of my design and resolve ongoing complications. Moreover, the use of models helped me visualise the design in three dimensions, providing a sense of tangible presence for the audience in the exhibition space. As materiality is one of the key elements of my design, model making provided an opportunity for me to test different materials to convey various qualities of space. With regards to models, firstly 1:500 massing models made from layers of scrap MDF were explored to develop a basic volume of the building complex. The 1:200 model aims to demonstrate the connection between old and new parts of the building and displaying a range of complimentary material palette. Built from a combination of laser-cut and hand-crafted plywood, the model expresses the overall aesthetics of the building within the surrounding context, offering a comprehensive insight to the design. The brass ornamented panels are crafted individually and painted using wood stain with decorative pieces painted gold and fixed onto the surface piece by piece. The model was then spray painted with a carefully considered metallic colour to harmonise the palette and serve as a mimetic prop to the red brick genealogy. The choice of expressing colour in my models, contrary to the traditional monochromatic aesthetic, emphasise the materiality and contextualise it within the aforementioned vernacular of the city.

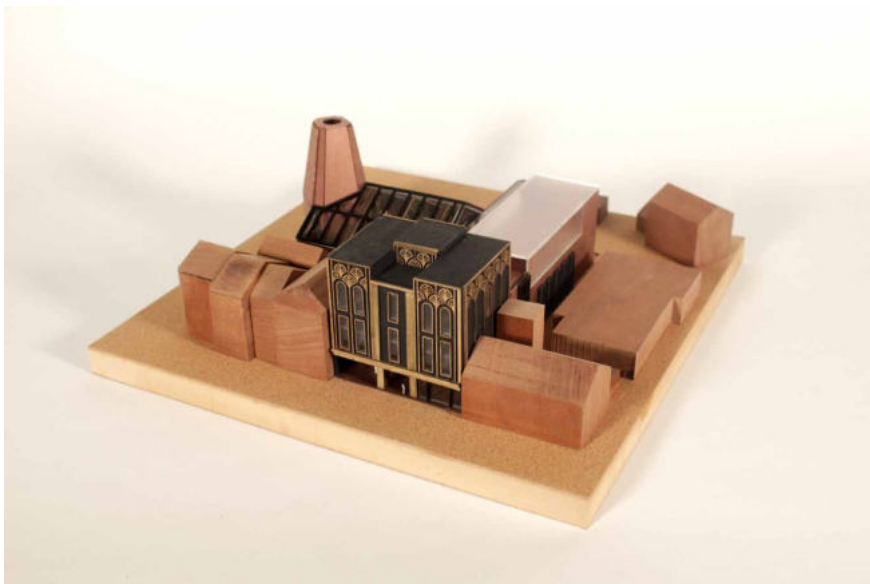


Image 01: 1:200 Model demonstrating the relationship of complex



Image 02: Main Entrance with decorative panels



Image 03: 1: 50 Ornamented Mock Up Panel

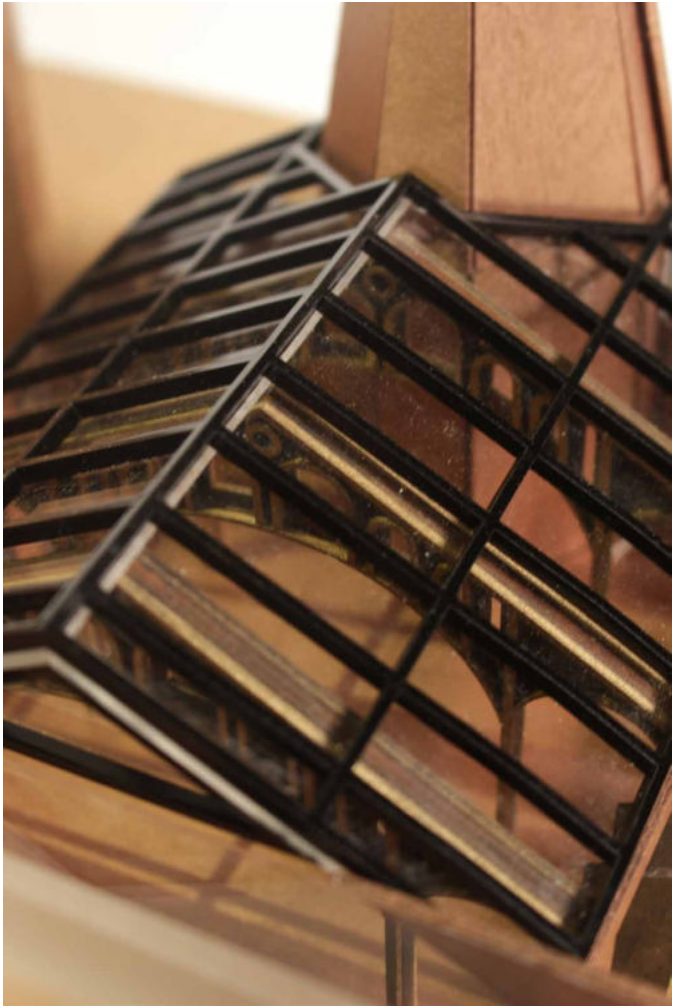


Image 04: Acrylic panels showing the connection between skylight and truss

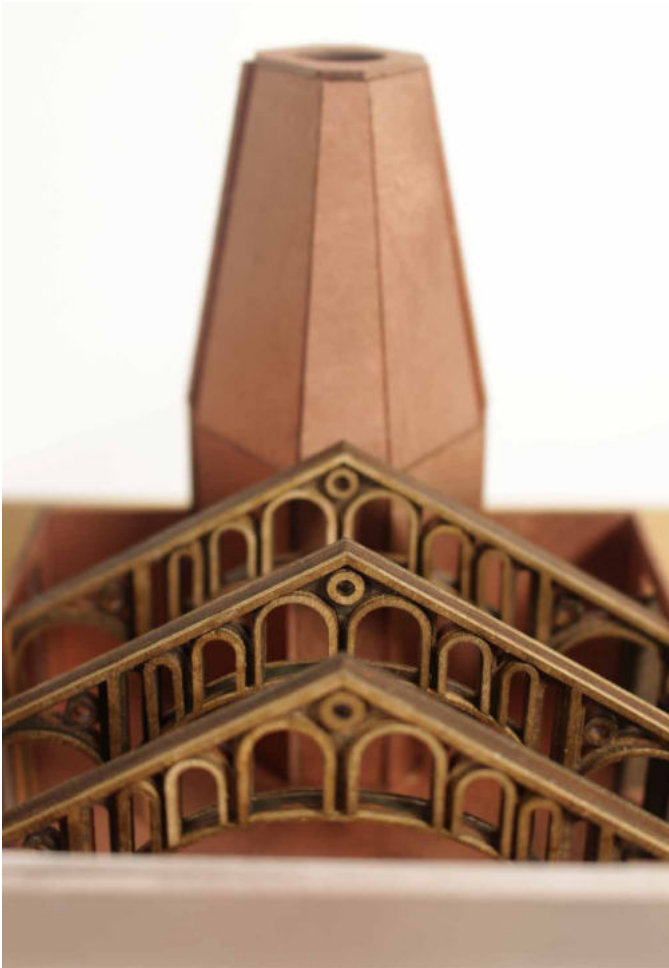


Image 05: Hand-crafted wooden frame indicating structural truss



Image 06: Atrium showing the connection between 3 parts of the building

# Courtney Ives / Yiting Zhou

March Year 6 - Atelier: Continuity in Architecture

## Rochdale Bathhouse Massing Model

As part of the self-defined brief for our thesis, we chose to make a 1:500 massing model of our site in Rochdale to demonstrate the topography level changes across the site. The base was cast from stone powder, which was mixed with pigment powders to achieve the desired colour. The buildings were made from offcut pieces to keep costs down, with our site buildings simply stained a darker contrasting colour. Trees were drilled in and secured to give a sense of scale.

The model process involved preparing a digital file for the CNC machine to carve out the inverse of the site from foam to make the formwork required to cast the base. Part of model-making is learning through trial and error, and interestingly enough, the CNC was stopped before the final pass through fear the position of the foam had become mis-aligned. The result was that the cast topography ended up being rougher than originally intended without the finer milling, but we felt this texture gave more character. We also left parts of the grey foam ingrained within the base for this too.

The model was particularly useful as a working model. We have used it throughout the year to test different massing iterations as the design of the project developed. The different massing were 3d powder printed, for both the visual contrast of the white finish and to show the intricate roofscape, a key aspect of our thesis project.



Image 01: Work in Progress

Image 02: Model of the Existing Site



Image 03: Model of the Proposed Site



# Courtney Ives / Yiting Zhou

March Year 6 - Atelier: Continuity in Architecture

## Rochdale Bath house

### Turning The Corner

As part of the self-defined brief for our thesis project, we chose to make a 1:50 corner model of part of our intervention to test materiality. The model was intended to be a quick and low-cost study model, going from concept to construction over the course of two days. The corner was chosen to develop the upper levels of the facade (which have higher importance in the scheme), expressing how the materials come together.

The upper walls were laser cut from thin pieces of plywood to form vertical fins that express the rhythm of the structure and frame simple openings. The cladding pieces were stained in alternating shades of wood stain to emphasise the ornament and assembled in layers.

A crown of copper tiles appear above a shadow gap so that the upper level appears to float above the lower. The copper reappears at roof, folding over the edge of the parapet. The copper was handcut from foil, and the roof sheets folded to a standing seam pattern using flexible MDF as a jig to score along.

Thicker offcuts of maple and mahogany were selected and cut on the bandsaw to represent the heavy mass of the brick at lower levels. The brick pattern was laser engraved onto the maple, whilst the interior was left white.

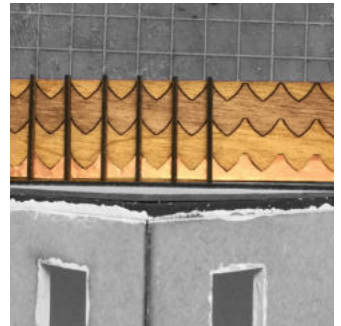
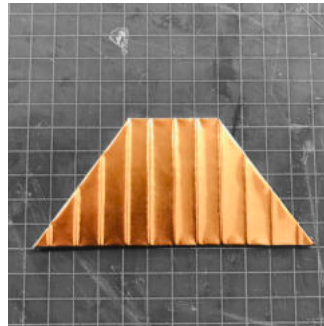
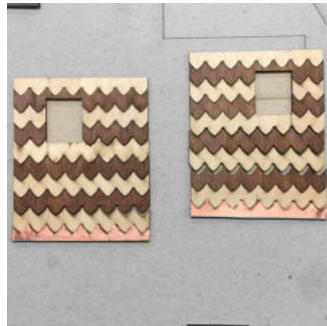
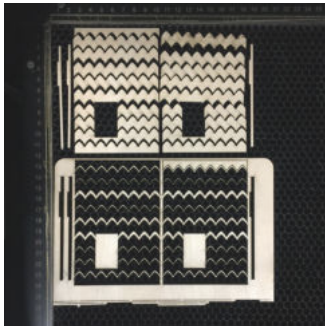


Image 04: Work in Progress



Image 05: Front View



Image 06: Side View

# Daniel Vella, Nicholas Bowker & Daniel Vella

MArch Year 5 - Continuity In Architecture

## Project: Rochdale Collective Co-Working

The project is the re-use and re-programming of the Champness Hall, a 1920's Methodist Hall in the centre of the town. The building occupies a prominent location on the town's high street and therefore we decide on a programme which would bring demand to the area rather than more supply, this came in the form of a co-working space. The design strategy for the project involved the careful demolition of problematic areas of the building including the atrium space and areas of the floorplates. Then the designing of strategic interventions within these areas to address the existing issues of light and circulation.

We started our investigation with a site model made of pigmented cast plaster and stained jelutong with a mount-board and paper insert. The formwork was laser cut from grey-board before being lined and cast into. The precision and solidity of the plaster contrasts the building insert which was made as a rough investigative tool which could be taken apart and re-formed as our concept evolved, finally ending up as a diagrammatic tool for the communication of our project.

When working out the main atrium space of our intervention we utilised the sectional model. Made from a combination of foam-board and a 3D printed staircase this quick model is aimed at displaying the quality of space in our atrium design, and with a detail overlay became part of the technical communication of our project.

Finally, we went on to explore the balustrading of our cast staircase with a 1:1 model. The model is made from pigmented cast plaster with limestone in order to emulate terrazzo. The handrail is made from hand shaped brass brazed to a brass 'U' channel which is screwed to the brass tubing (inside which dowels have been hammered) forming the balusters.

Making a 1:1 model allowed us to explore the detailing of the project as we had to physically make the connections which we were drawing, it helped to highlight issues such as designing in access for tools in fitting elements together.



Image 01: Site Model, Pigmented Plaster and Stained Jelutong with Mount-board and Paper Insert.



Image 02: Sectional Model, 3D Printing & Foamboard



Image 03: Construction of the Model, we utilised metal wire drilled into the 3D print to emulate rebar and secure the stair.



Image 04: Detailed View of the Model Highlighting the Occupation.



Image 05: Detail View of the Handrail Highlighting the Materiality.



Image 06: 1:1 Handrail, Brass and Pigmented Plaster with Limestone Chips.



# Emily Daye

March Year 2 - Atelier: USE

## Project: Lost in Berlin

What are the Visuospatial Effects of Dementia?

Lost in Berlin explores a physical manifestation of what it's like for those living with dementia. As 6 in 10 people with dementia will wander, the thesis explores why Berlin isn't safe for those with dementia.

Using physical models, the thesis explores what those with dementia experience. The models have been built from multiple conversations with families, hospital staff and patients experiencing dementia. Through a collaboration with Manchester Royal infirmary the models particularly explore the Visuospatial effects of dementia and what its like to be lost within the city of Berlin.

The entire project has been produced and developed solely using hand -made physical models. This was deliberate to put the viewer in the perspective of those suffering with dementia. The paper/card materials were explicitly selected to represent the city of Berlin to capture its institutional atmosphere. To portray a first-person experience, the models were designed to be filmed. Building models as part of a film set was a crucial part of the development process, as a result the scale of the film set is 1:75 to capture enough detail to describe the effects of dementia.

The sites throughout the film come from my time in Berlin, where I devised a system to become lost. The film depicts the difficulties when experiencing architectural elements such as paving, glass, textures and colour. Please take the time to watch the film....

Lost In Berlin: <https://vimeo.com/335701536>



Image 01: Visuospatial Effects of Dementia, mount board, card, paper

Image 02: Lost in Berlin Film Set, mount board, card, paper, acetate, clay



Image 03: Site Model, mount board, card, paper

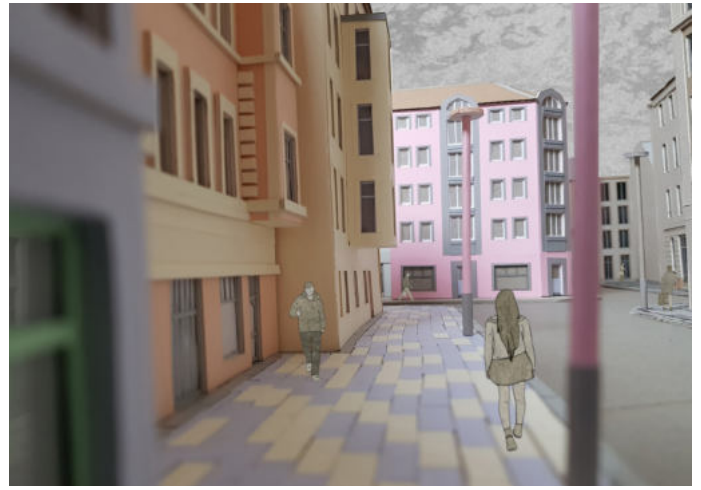


Image 04: Helping Dementia, mount board, card, paper



Image 05: Dementia Effects, mount board, card, paper



Image 06: Dementia Effects, mount board, card, paper

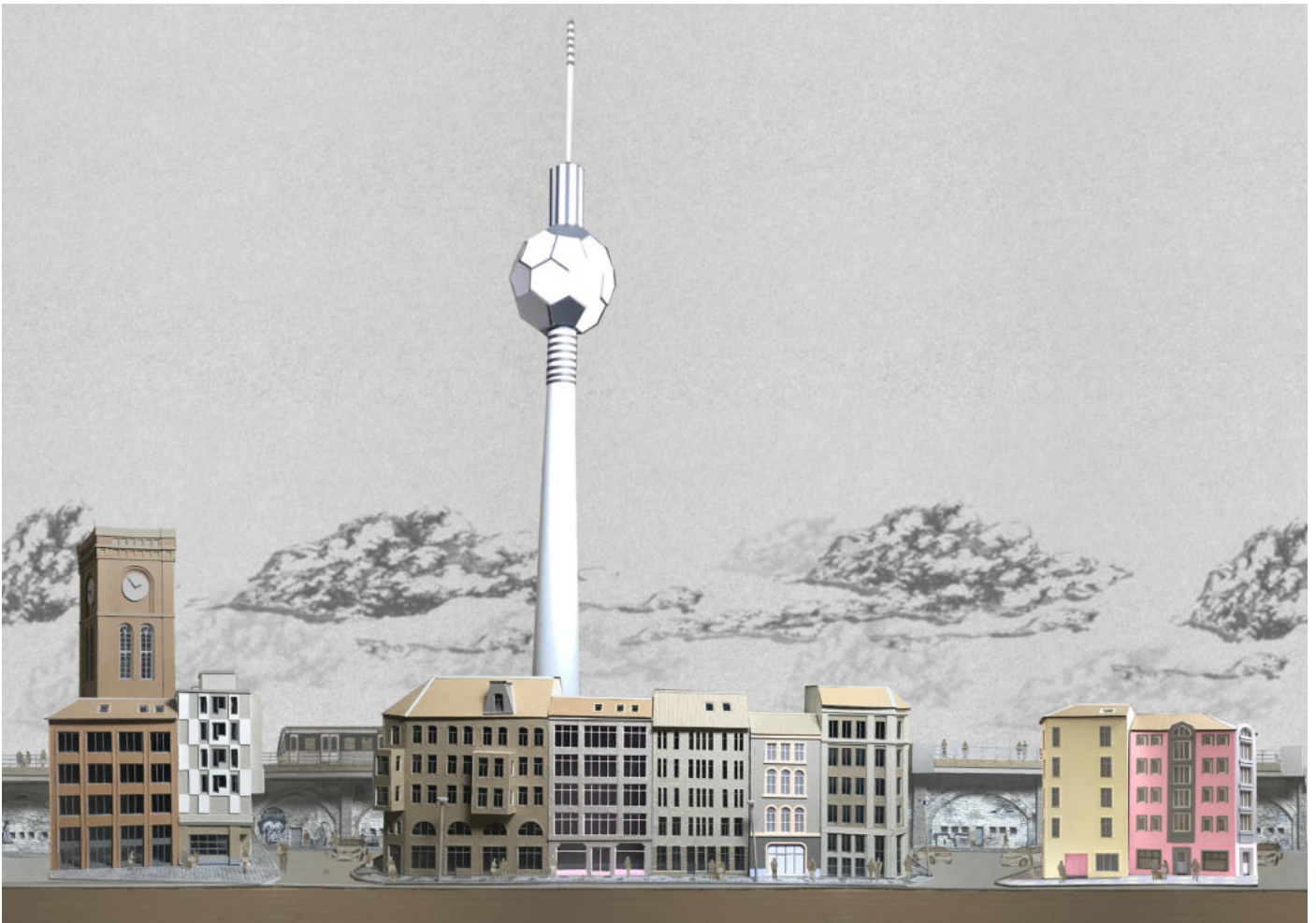


Image 07: Lost in Berlin Model section, mount board, card, paper, acetate, clay



# Jim Rapanut & Erin Edmondson

March Year 1 - Atelier: CiA

## Project: Champness Hall Tweedale Street / Arcade / Tower

### Project Brief :

Champness Hall Adaptive Re Use.

The brief was to develop a scheme that offered a new or adapted use of Champness Hall, responding to the regeneration of Rochdale (Drake Street). Our approach developed from our initial visit, the circulation appeared disjointed and an opportunity for reconfiguration of the core. Our aim was to simplify the circulation route, considering both horizontal & vertical, joining the new Internal street (Arcade) and the Tower.

Scale - 1:500

Material - Scrap pieces of hard and soft wood, acrylic.

Process - Cutting, sanding & arranging sections of the wood & acrylic.

We start with a range of sketches, these were then translated to sketch models. The aim of the massing was to illustrate the height and form of the Tower.

The softwood elements were used to represent the existing brick conveying a seamless transition of new and old. The hardwood is an experimental exercise to see a contrast of different shade of materials. We explored the massing of the Tower, from a solid base to open lighter top, represented by the acrylic. The shadow cast by the Tower was recorded to gain an understand of it's impact on the context & arcade adjacent.

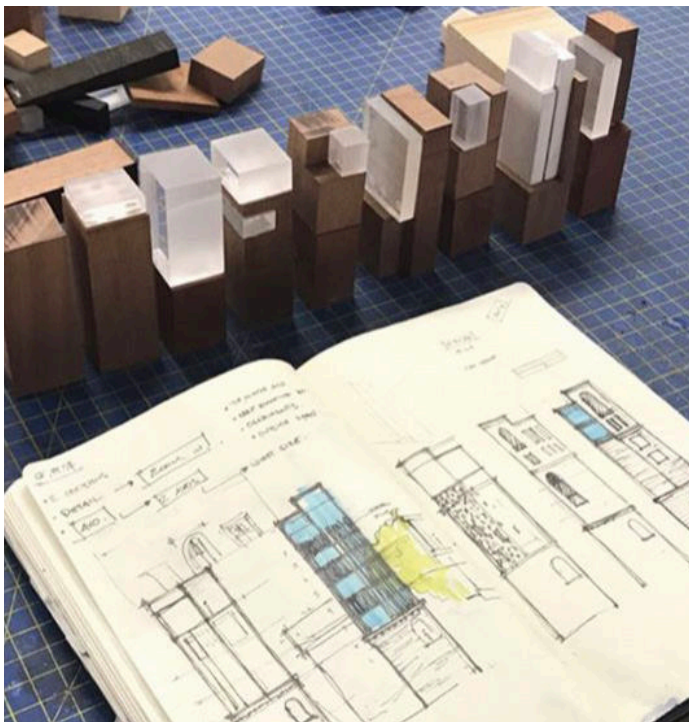


Image 01: Sketches & Sketch Models



Image 02 : Tower Shadows



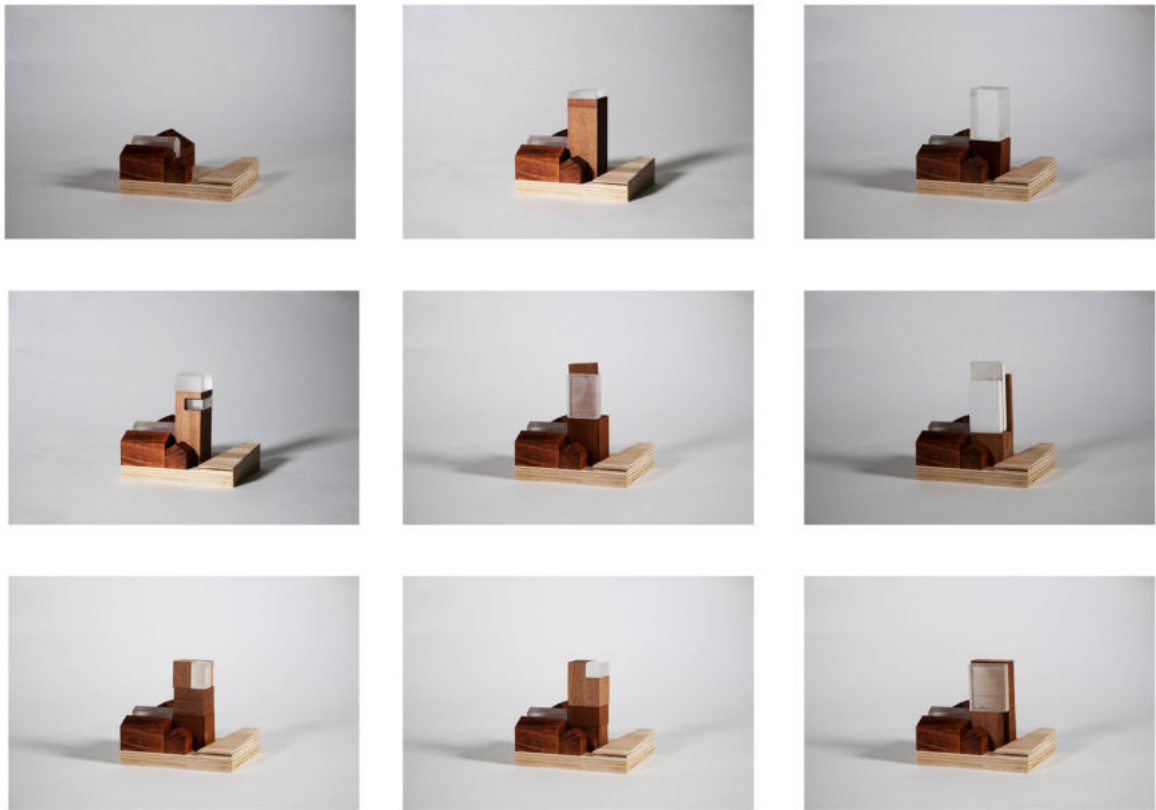


Image 03: Tower Massing Options on Context Base.

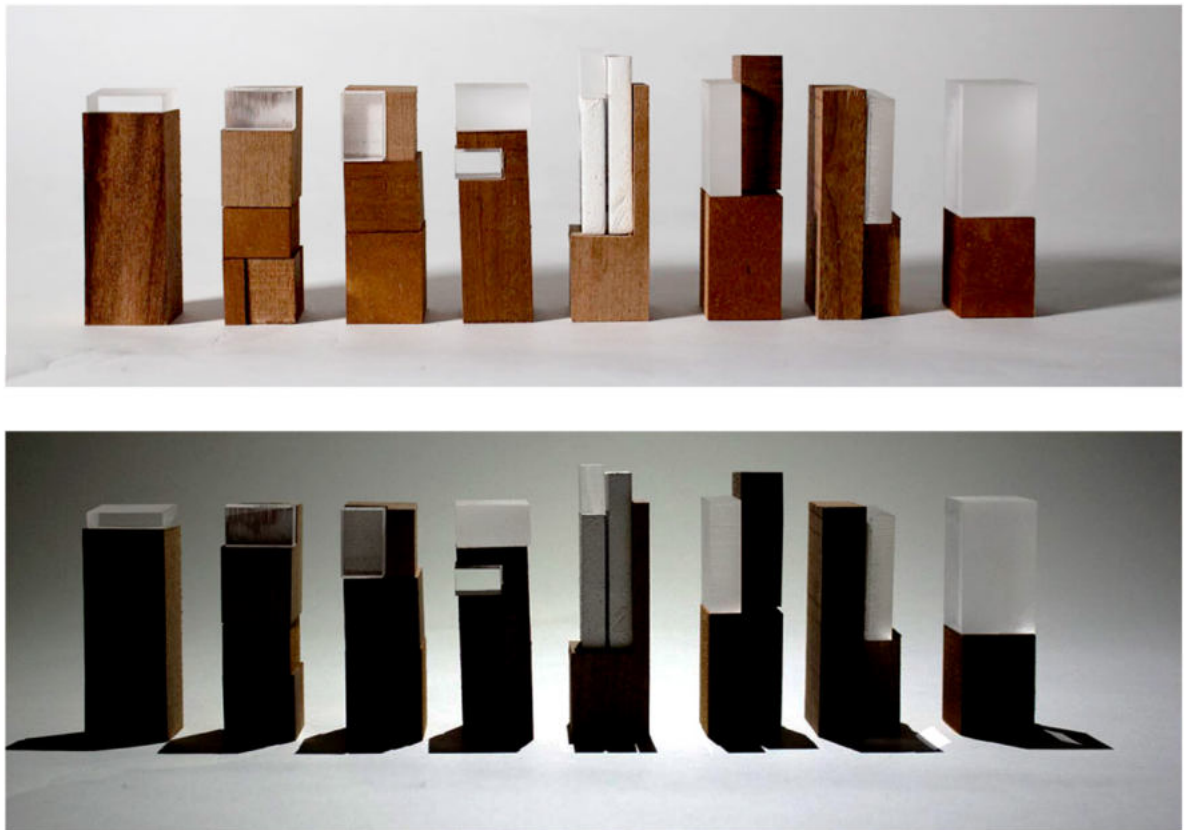


Image 04: Tower Elevations

# Hugh Gibbs

March Year 6 - Atelier: CIA

## Project: Rochdale Gateway

Proposed Train Station & Co-Working Offices

The project:

Rochdale Gateway is a proposed new train station combined with co-working offices in Rochdale, England. The design is part of a 6th year architectural thesis exploring how to design in post-industrial towns. The proposed Rochdale Gateway aims to improve function, wayfinding, and architectural experience, providing a new positive impression of Rochdale.

The form of the train station takes a series of different size pitched roofs in a contemporary reimagination of the historic mills that used to occupy the area. This concept is further reinforced with the Wayfinding Tower - a viewing platform for visitors and a beacon for those approaching the station - symbolic of the brick kilns that used to power the industry of the town.

Bringing ideas to life through model making:

The site model is hand-cut from wood blocks: mahogany for the existing context, and a tulip wood for the proposed. The colour change highlights the important parts of the model, and links to the proposed materiality: a white powder coated steel for the new train station that contrasts with the brick site buildings.

The facade and ornament study are casts made from negative projections. By casting as a solid mass, the focus stays on the form, rhythm, and ornament of the designs.

For the 1:200 train station model, a combination of frosted acrylic, backed with a white screen, and clear acrylic provide the atmosphere of the model. It allows light to spill from the model, reinforcing the concept of the train station as a beacon and gateway node in the town.

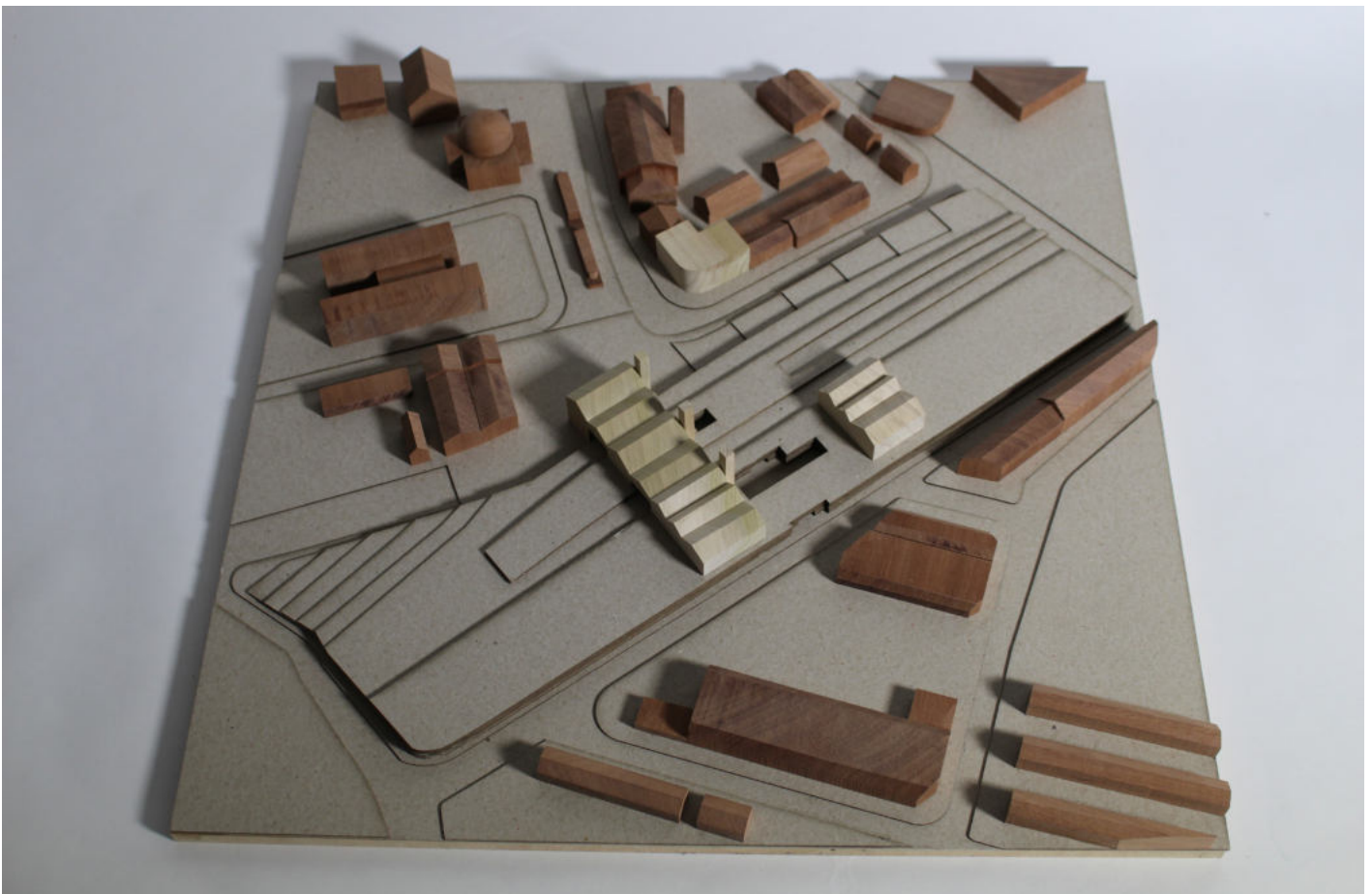


Image 01: Rochdale Gateway Site Model



Image 02: Facade and Ornament Options



Image 03: Pitched Massing "Cutting" into the Landscape



Image 04: The Wayfinding Tower



Image 05: Rochdale Gateway Train Station



# Name: Jingchun Xu

March Year 6 - Atelier: CIA

## Project: Living in Rochdale

A Study of Densification, Repopulation and Intensification of Use in Rochdale

Through focusing on young adults' transition process from the parental home to independent living, the issues of multigenerational housing and intergenerational communities were explored. Since residential future has increasingly become a major topic of discussion, and multigenerational households have always existed in generationally diverse communities, the project enabled the opportunity to experiment an applicable way of urban approach for future residential communities in a typical post-industrial town - Rochdale.

The 1:50 corner model shows the North West side of the central square within the proposed community. Facades of the two different buildings were made to demonstrate the symmetrical grids. The anchor point of the square was highlighted with patterns to emphasise the intersection of the circulation and the main walking axis from Drake street to Rochdale Parish Church. The views from different approaches were considered in the design in order to create an attractive space. The model demonstrated the uses of the civic and private pergolas in the central square.

Materials were minimised in order to demonstrate the symmetrical elevations created by the central axis, used materials including Plywood, MDF, Greyboard, Acetate, Wood Stain. Two colours were selected to represent different textures & materials. All light colour pieces were cut by hands in order to avoid the burnt edge made by the laser machine. 1:50 as a suitable scale to show a corner of the design in detail.



Image 01: Local Supermarket & Multi-Generational Homes



Image 02: The Curved Pergolas



Image 03: Approaching the Supermarket

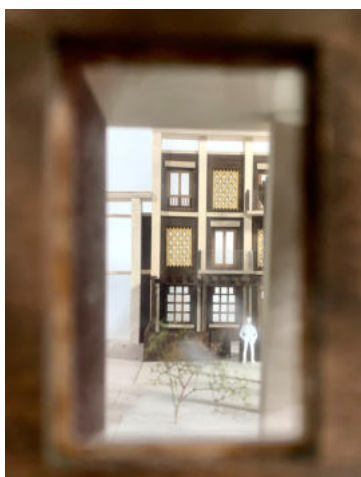


Image 04: View from the Supermarket



Image 05: Approaching the Central Square



# Joshua Griffiths

MArch Year 2 - Urban Spatial Experimentation (U.S.E)

## Project: The Green Industrial Belt, Berlin.

'Start-up factories of the future'

### Project research question:

Can the 'Green Industrial Belt' create an accessible manufacturing process which bridges the gap between industry, start-ups and academia, whilst showcasing the manufacturing process through architecture?

### Background:

Research presented the success of the global brand as we know today as 'Siemens', a new start-up company with a vision founded 171 years ago in Kreuzberg, Berlin. Werner von Siemens and Johann Georg Halske founded the company and went on to build 'Siemensstadt, Berlin' where mass production took place on a global scale. After recently visiting Siemensstadt it turned out that the majority of the iconic mass production plants and factories had become rented offices and therefore manufacturing no-longer took place in Berlin, but further afield in countries where the cost of production was lower. That being said, in recent months Siemens AG announced they will be investing 600 million Euros into Siemensstadt.

### The Masterplan

The aim of the thesis was to investigate whether the next generation of advanced manufacturing can revolutionise the German capital, leading the way with Industry 4.0 by creating a green assembly belt of five railway factories dotted around the 'Ring-bahn' railway line within a green belt of forestry. The factories will be recycling, reusing and repairing Waste Electrical and Electronic Equipment (W.E.E) to create a new industry of electrical and electronic production at a city scale.

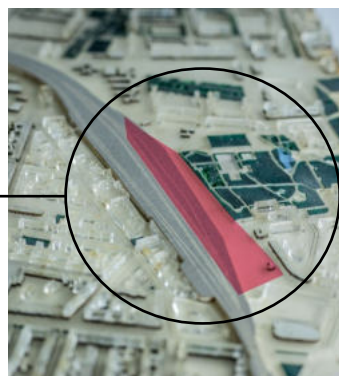
### The Proposal

Throughout the research, design development and design process - model making has been an integral tool for communication. When communicating the project, it required working at a variety of scales, the decision was made to choose 1:5000, 1:500 and 1:50 to communicate the different levels of detail. Material selection was based upon the narrative of the project, the forth industrial revolution creates a level of transparency to the city of Berlin and as a result the decision was made to select clear acrylic to model the context and later sandblast to communicate the edgy atmospheric feeling when walking the streets of Berlin.

### The Masterplan:



Site 2: Friedrichshain



Site 1: Neukölln

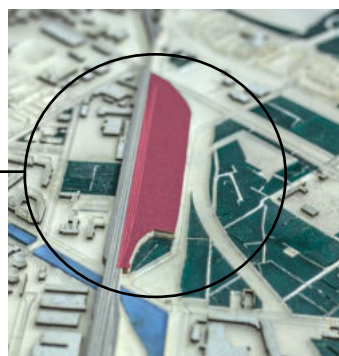


Image 01: Site Model - 1:5000

Site 1: Neukölln



Site 2: Friedrichshain



Image 02: Proposed Vegetation (Green Belt) - 1:5000



## Site 1 - Design Development

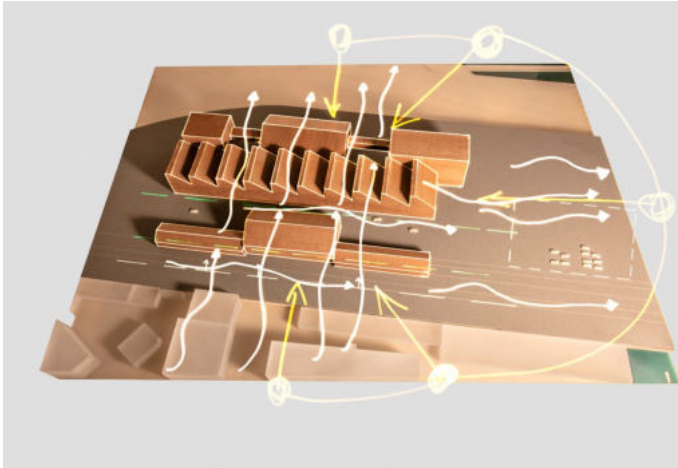


Image 03: Massing design development on site 1 - 1:500

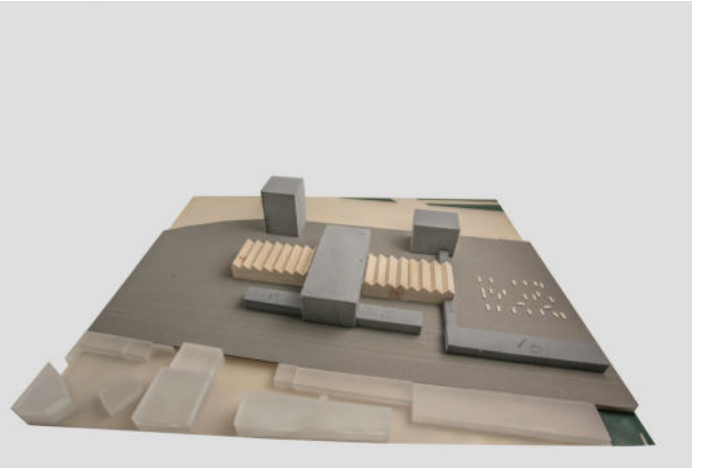


Image 04: The factory as a circuit board, site 1 - 1:500

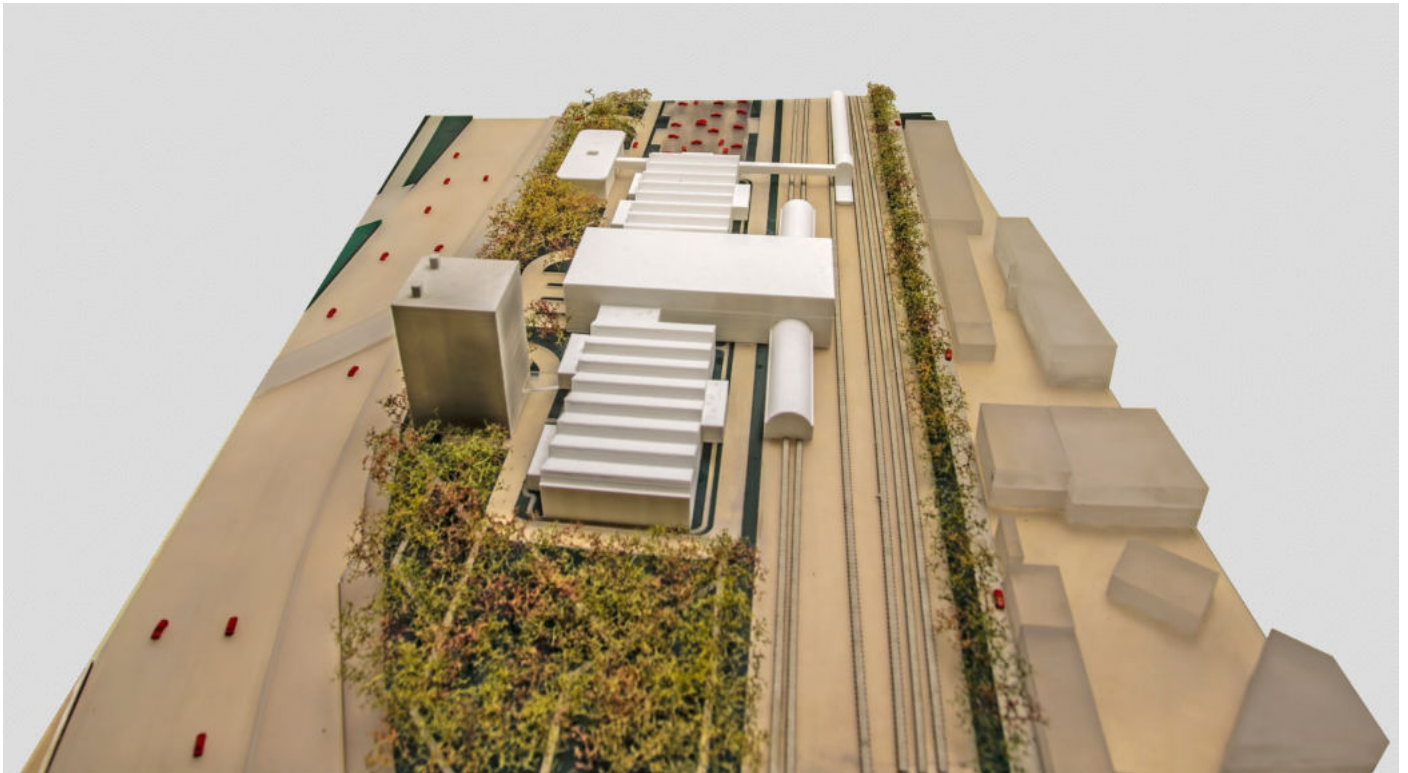


Image 05 - Interconnecting nodes: factory model - 1:500

### Detail:



Image 6: Detailed model: Warehouse to plant (Exploring structure, materials and construction) - 1:50

\*Please note Image 6 - Detailed model is still in working progress and will be complete for the end of year show.

# Lobna Elagouz

MArch Year 6 - Atelier: &rchitecture

## Project: What Isn't There

A proposal for the restoration and development of Kurt Schwitters' MERZBARN & its associated landscape project.

Adaptive reuse provides a way to preserve memory and maintain our connections to the past. The Cylinders Estate in this project has become a site of memory referencing the past: Kurt Schwitters' life and art movement: MERZ.

The starting point of this project was the ongoing debate about the preservation of the MERZBARN. In this proposal, existing buildings on site are to be subject to minimal justifications, their formal characteristics are to remain unaltered. In addition to the existing structures a few structures are to be added to the site, which would serve almost as a timeline of Schwitters' life; exploring the different phases in his career and how, with that, his art movement evolved. The raw, non-finite and fragmented atmosphere has been preserved through the choice of materiality and maintenance of vernacular qualities in forms.

of architecture does not consist of generically improving wellness and quality of life or assessing personal needs, but rather of stimulating a profound change in habits and beliefs. This influenced a lot of the decisions made throughout this project proposal; from my first decision to not restore the merzbarn to its original state, to my decision to represent the project proposal through hand drawn sketches and collages, as opposed to "perfect" & "clean" line and life like drawings and models.

To sum up my approach to modelmaking this year here is a quote by Kurt Schwitters:

I had to shout out my exultation. Thriftily I used whatever came to hand for ours was an impoverished land. One can shout with garbage, and that is what I did, gluing and nailing it together. I called it Merz; it was prayer about the victorious end of the war, for once again peace had conquered. As it was, everything had broken down and it was necessary to build the new out of the fragment. That is what Merz is all about... It was like an image of the revolution within me, not as it was but as it ought to be. (Schwitters, 1918, in Crossley, 2005, p.14)

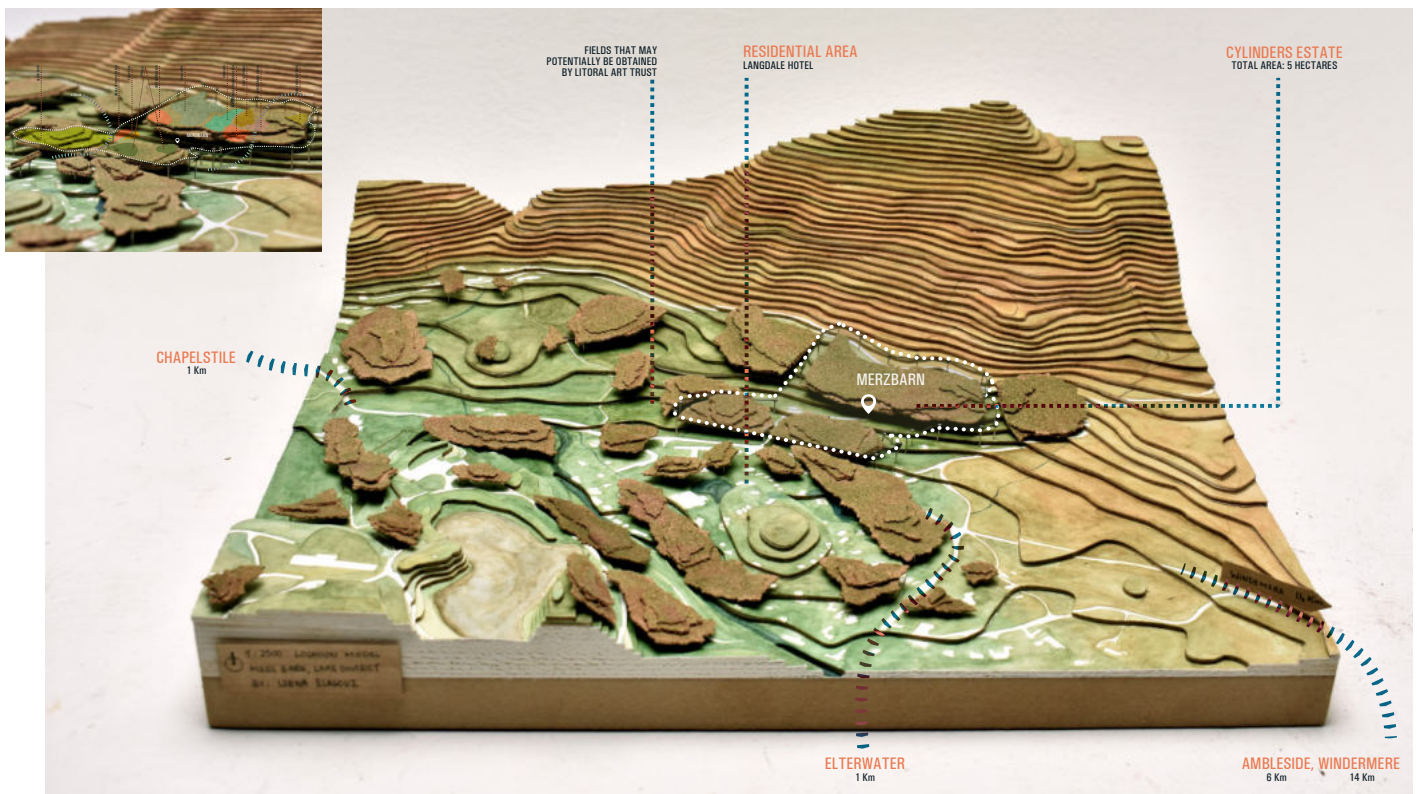


Image 01-02: 1:2500 Location Model

Hand painted (watercolour) layers of mountboard and paper, torn cork sheet offcuts, recycled wire, nails and pins

this was one of the first model I made and in making it I was exploring the different layers of the site. So, not only did I use it a way of presenting my work; I used it to learn more about my project.



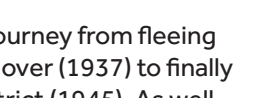
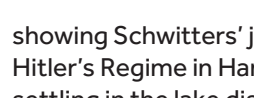
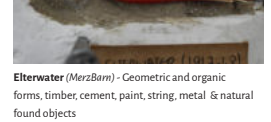
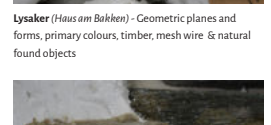
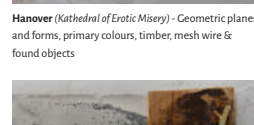
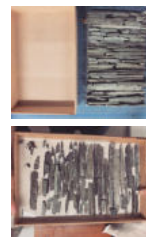


Image 02-13 (above): 1:50,000,000 Diagrammatic Model  
Stones collected from site, cast in a cement and plaster mixture hand carved and formed with polyfilla nails, wire, and other found objects.

**Hanover (Kathedra of Erotic Misery)** - Geometric planes and forms, primary colours, timber, mesh wire & found objects

**Lysaker (Haus am Bakken)** - Geometric planes and forms, primary colours, timber, mesh wire & natural found objects

**Hjertoya (Merzhytte)** - Collaged newspaper, tickets, paper, natural found objects, directly on the wall of the Barn

**Elterwater (MerzBarn)** - Geometric and organic forms, timber, cement, paint, string, metal & natural found objects

showing Schwitters' journey from fleeing Hitler's Regime in Hanover (1937) to finally settling in the lake district (1945). As well as exploring the different constructions (merzbauten) he assembled in all the places he temporarily called a home



Image 14 (above): Material studies models  
Construction waste collected from UOM construction site, sorted and cast in a plaster cement mixture in a vaccum fomed mould)



Image 14: Project proposal assemblage  
natural materials collected from site, paper and card.



Image 15 (above): 1:50 model of an intervention  
Construction waste collected from UOM construction site, sorted and cast in a plaster cement mixture



## March Year 6 - Atelier: CIA

## Project: The Wedge

# Rochdale by way of Venice

Situated at the bottom of Drake Street, a triangular set of buildings holding some of Rochdale's most architecturally significant buildings, which have suffered from urban decay. Our proposed scheme offers a new lease of life to the site, focusing on establishing new pedestrian routes towards Rochdale Town Centre. The proposal provides an alternative set of retail shops for smaller businesses, provide 16 new apartments for young professional with retail below, a tiered courtyard for events to take and an art gallery. We believe this array of building uses will re-purpose a deprived high street and set an example for the area.

We have used model making in various ways to inform our designs. Initially we created a site model at 1:500, constructed of 70 sections out of card, which upon assembly read as one 3D mass. This model was crucial in defining our sites context; the sections are removable to analyse our sites relationship with other key buildings, like the Rochdale Town Hall.

Our second; a cast site model at 1:200, was used to develop the massing implications our proposed scheme may have had on the sites existing buildings. To create the formwork for this model, we CNC'd the negative form out of 3 sheets of 50mm Polystyrene boards and cast into it with stone powder. The context and landscaping was cast from one mould to create a solid base that we could add our moveable massing pieces to. These pieces were fashioned from dark and light timber to highlight different programs and to contrast against the stone powder.

Thirdly we laser cut some simple façade models out of ply wood which we could draw on to better determine composition and ornamentation patterns. We later laser engraved our proposed ornamentation patterns into model board to produce a collection of tiled samples.

Our final model can be seen as an amalgamation of all of our previous models, drawing on each process used to create a cast 1:200 façade model with card sections set behind. These sections, again, when placed together, create a 3D appearance that tells little stories of the daily on goings within each apartment.

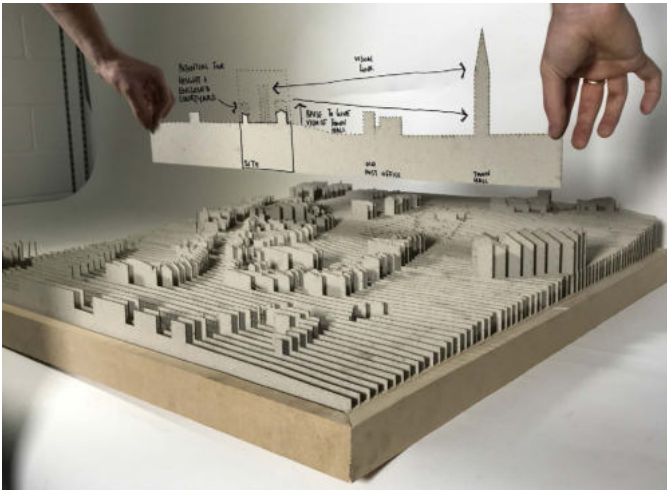


Image 01: 1:500 annotated sectional site model



Image 02: 1:500 annotated sectional site model



Image 03: Ornamentation and facade models

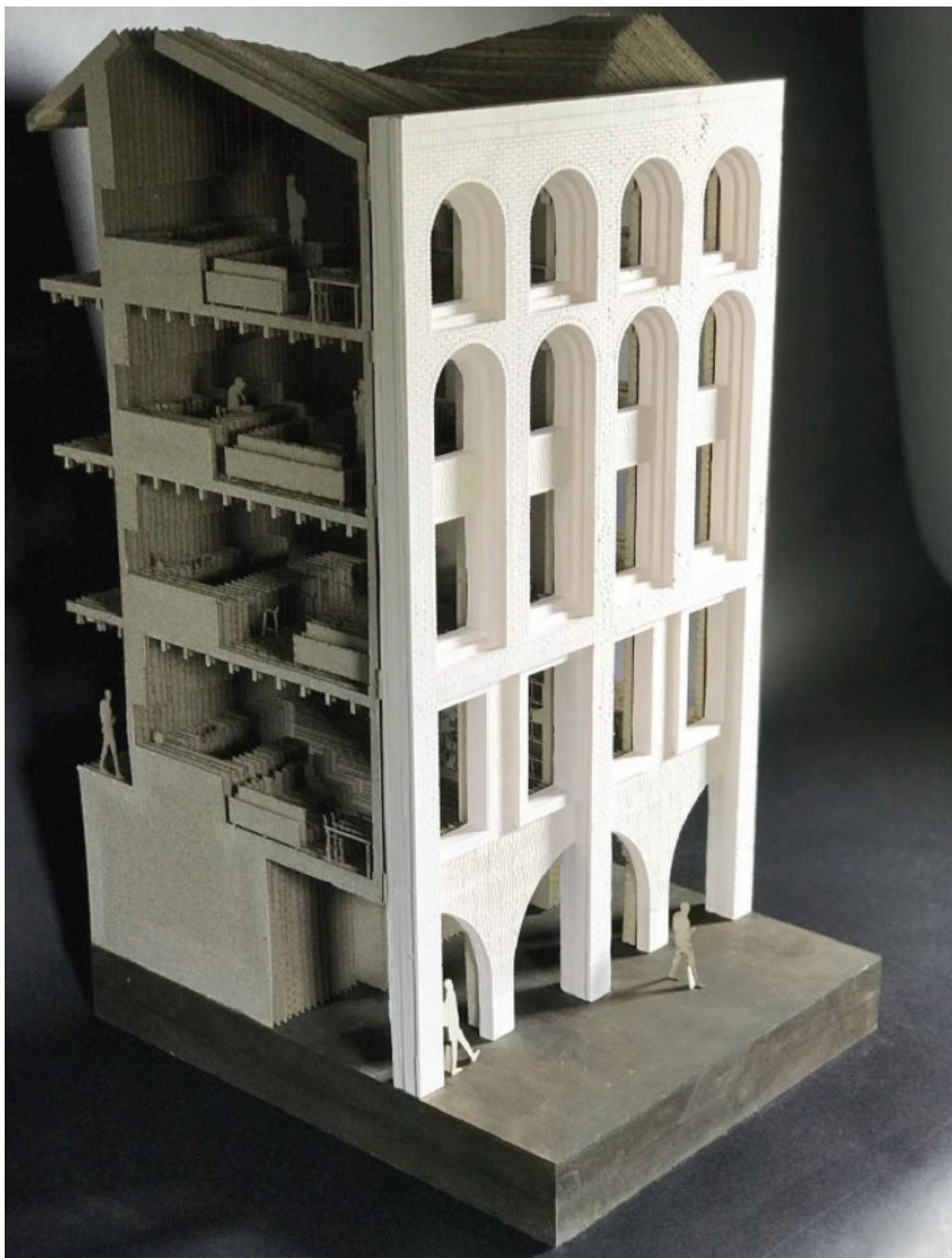


Image 04: 1:20 Final model



Image 05: 1:20 Final model facade detail



Image 06: 1:20 Final model interior detail



# Maciej Augustynowicz

Ba / March Year x - Atelier: MArch Year 1 - USE

## Project: Block30 & SciFi City

Re-use and development of the disused Tempelhof Airport in Berlin.

The USE briefs throughout the year revolved around the Tempelhof Airport in Berlin. The first term focused on creating a lightweight, modular system for co-living on the roof of the Tempelhof. Block 30 was our response to the project, a timber frame with pre-made wall and floor sandwich panels. Through the use of models I was able to test the proposed structure, creating some 1:20 experiments then 1:5 connection details to test how well the structure would work. Then I continued to experiment by creating some panels and their build up, ending up with a range of sips panels decorated with wooden shingles. This led me to creating a 1:20 model of a structural bay with a concrete base representing the existing, heavy weight roof and the frame was made from balsa, meeting the brief requirements of lightweight. This model helps explain the structure as well as portrays the atmosphere within the spaces. To help further explain the whole scheme, I created a 1:100 wooden model. This model was a mixture of laser cut floor plates and wooden dowels representing the frame, successfully explaining the whole scheme and its 'event pockets' throughout the building, making this scheme no ordinary co-living housing.

The second part of the year focused on re-use within the Tempelhof. We decided to focus on the rich past of transport within the site, opting to design around our vision of the future of transport. This also created a link with the previous project to create a 'work/play' environment. Very quickly the project took on an industrial look, helping settle any of our ideas within its context, this was further experimented through some concept models of concrete base and timber parts, spray painted and stacked on top of each other representing our interventions within the airport building. Once we settled on a design, I decided to create a representation of our 'education shuttle' which hangs below the roof. This model was carefully considered in AutoCad and laser-cut to be later constructed into a complex shape made up of many angles. To help get the Sci-fi atmosphere across, the model was painted with a bold red metallic colour and mirror glass was added for a further effect the building floating above ground. This successfully tested not only our design but the construction method chosen, proving that in fact it would be possible to create in real life.



Image 01: Sci-Fi City: Education Shuttle



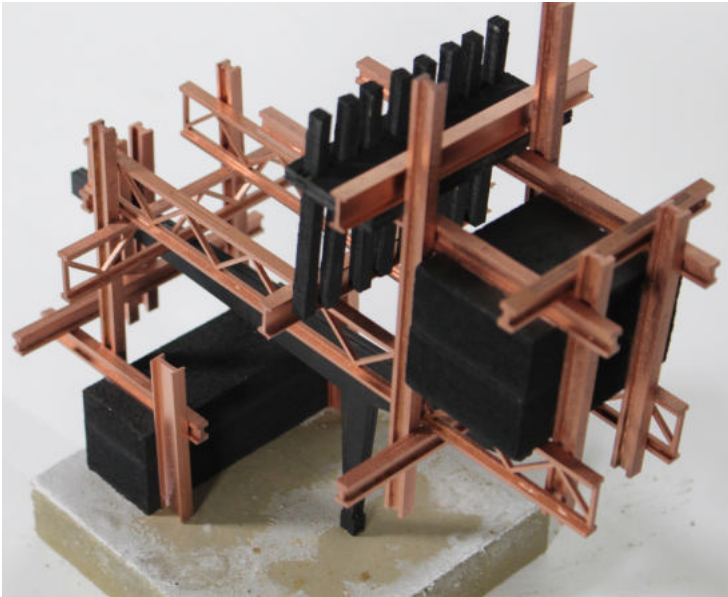


Image 02: Sci-Fi City: Conceptual Model



Image 03: Sci-Fi City: Education Shuttle Side View

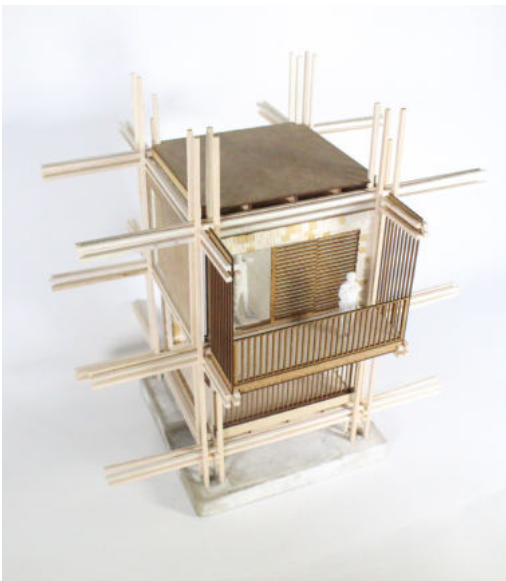


Image 04: Block 30: Atmospheric Model 1:20

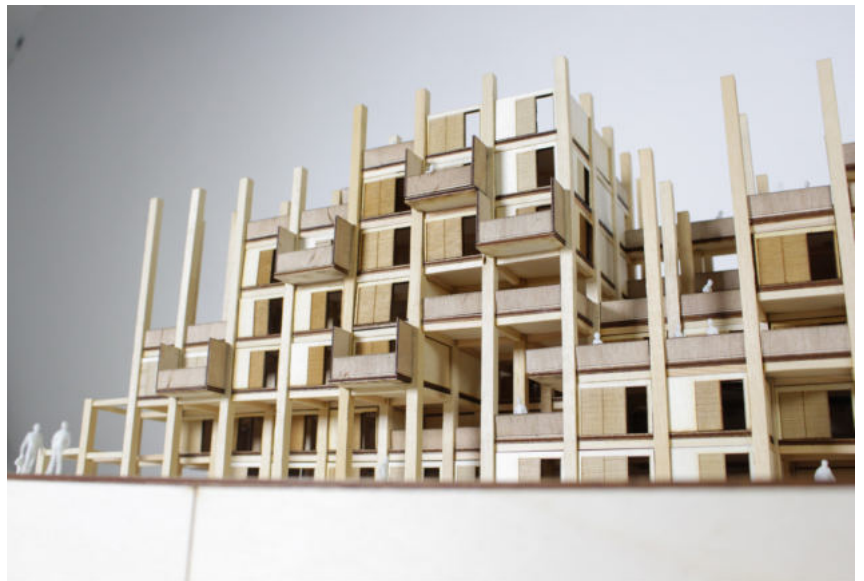


Image 05: Block 30: Whole Scheme Model 1:100



Image 06: Block 30: Internal Shot of the 1:20 model

# Natasha (Keqin He)

March Year 5 - Atelier: CIA

## Project: CHAMPNESS HALL

Activate Nelson Street by Cultural Hub

In the 1950s, Drake Street used to be home to a number of large shops, but it began to decline in the 1960s.

The large windows are one of the most impressive Art Deco features characterizing the Hall. The large Art Deco metal windows were recently removed, including the period glazing bars.

### 1)Location

Champness Hall is a former Methodist meeting hall on Drake Street in Rochdale.

### 2)Purpose

- The building is only partially used, there is a need to explore how and in what form it could be brought back to life in full use.

- The hall has lost many of its architectural features, how could this be considered in renovation?

### 3)Design concept

Based on the building survey, the gist of adaptive intervention has been considered throughout the design process, which encouraged me to develop more suitable solutions by tackling those existing issues.

Art deco, as the existing architectural expression of Champness Hall, is a proper direction to addressing the design features.

### 4)Physical model

The model displays a number of design features being derived from the existing, such as the existing truss structure, and blue painted door and floor in the existing corridors etc.

The chosen scale 1:40 is sufficient to express certain ornaments and details, and it is able to recognize the difference in colour and material palettes. Apart from that, the details, glazed brick and tile patterns from the design, have been shown.

The model has been carried out by laser cutting in 3mm wood board. Before assembling all the components, the details have been manually painted in a combination of acrylic and spray paints. Some parts of the detail are rather small in scale down to 1mm, therefore, it required loads of patience and time.



Image 01: New facade of the main hall



Image 02: New entrance





Image 03: Floor tile and ornaments

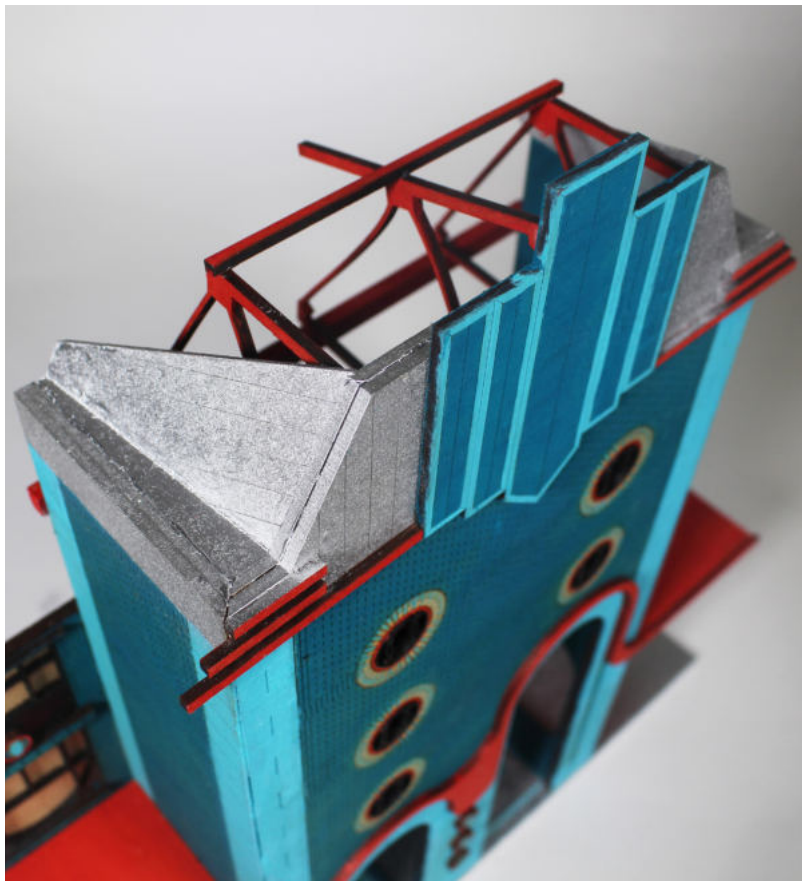


Image 04: New truss and roof



Image 05: Arches form the loggia



Image 06: Painting the badge for Rochdale Cultural Hub



# Nicholas Royce

M.Arch Year 2 - Atelier: Urban Spatial Experimentation

## Project: The Fourth Wall

The Fourth Wall – The Ring Bahn's two year long, sequentially constructed, multicultural, performing [arts] festival, with a meaningful legacy, designed to adapt and last.

I was initially struck by the way in which the Ring Bahn monotonously encircles Berlin, democratically linking contrasting communities through its lack of beginning or end; I feel that this is something that should be celebrated. However, the character of the Ring Bahn is far from celebratory. Furthermore, I am passionate about theatre and performance; I saw a lot of evidence of such in Berlin. Moreover, having identified that performance occupies architecture I ask, Can Buildings Perform? Yes; construction often appears beautifully choreographed, like the most elegant ballet.

Thus I asked, In What Way Can the Ring Bahn Celebrate Its Surrounding Cultures Through Hosting Berlin's Existing and Future Scales of Performance?

I propose The Fourth Wall. Performing arts, cultural and action events occupy small and large scale, temporary and permanent architectural interventions, whose construction is choreographed and phased.

For me, model-making is key; creating both conceptual models and representations of architectural form are integral to my process. The Fourth Wall allowed me to use existing skills, as well as learning new ones that suit this project specifically.

Most notably, this year I included moving elements in most models. During my first conceptual model, I used a handle and gears to create moving parts of a stage set. Through many models, this developed to included battery powered motors, gear boxes and buttons etc. Through these, I represented the atmosphere of The Fourth Wall and the idea that it is something other than static architectural form.

Furthermore, I integrated lighting into some models. In my model of Westend for example, the lights cast moving and changing colour shadows on the translucent facade.

Lastly, The Fourth Wall has many sites. Thus, I designed and built an interactive exhibition model that represents the festival as a whole. The model is 1.2x1.2m, on a custom-made table that I pre-wired with lighting, buttons and batteries to power my mechanisms. The model includes both development and 'final' models that sit on shelves above Berlin.

Video Link: <https://vimeo.com/336566603>



Click to Play



Image 01 & 02: Westend Interior Day & Night

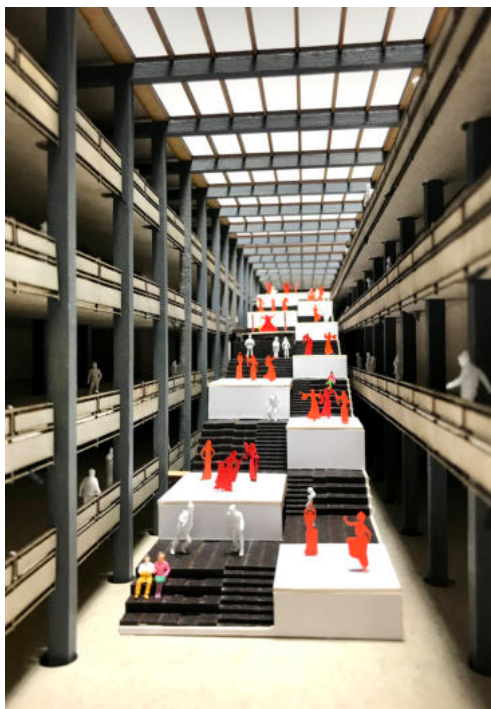


Image 03: Paradrone Interior

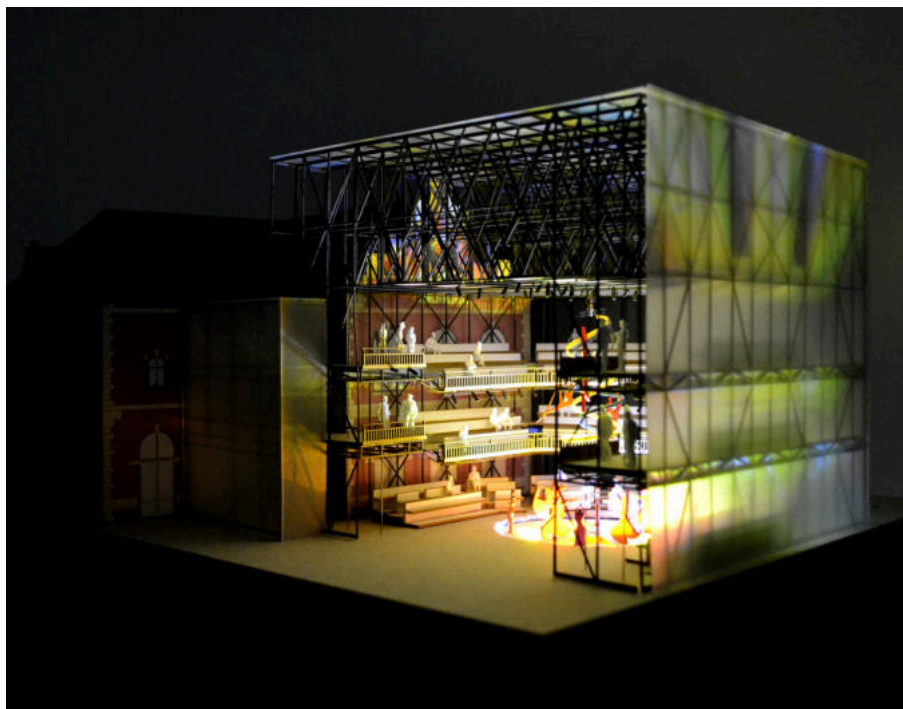


Image 04: Westend Exterior

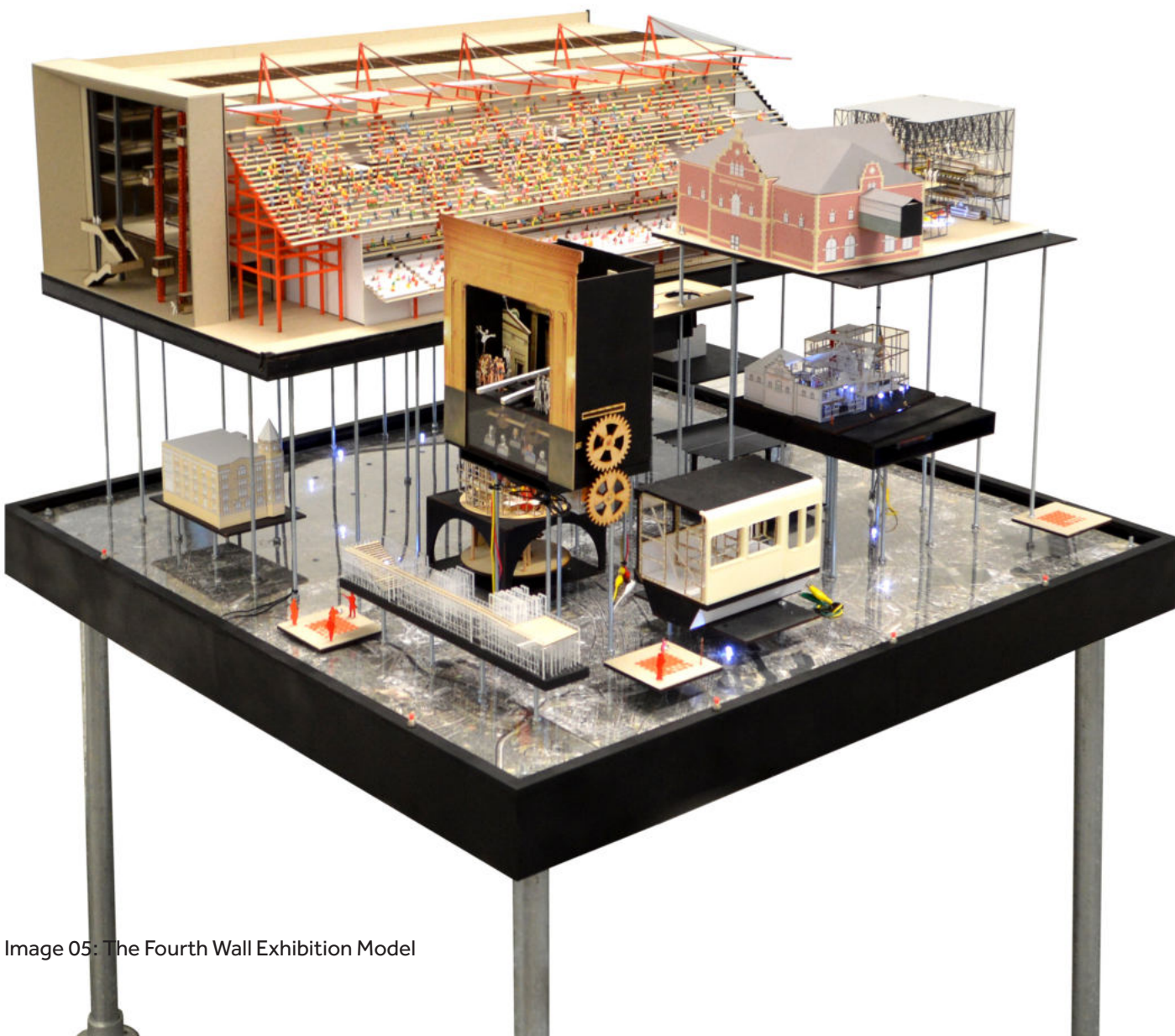


Image 05: The Fourth Wall Exhibition Model



# Rachel Alty

MArch Year 6 - Atelier: USE

## Project: Neukölln Craft Exchange A Ringbahn Settlement

Neukölln Craft Exchange is a residential settlement located on the Ringbahn, - Berlin's circular railway, which celebrates local handcrafting traditions whilst promoting new ways of living on the periphery of a major city. Interventions at a range of scales strive to destigmatise the Ringbahn as a social barrier, forming connections across the tracks whilst enriching the multicultural identity of Neukölln as a destination for craft. The settlement comprises of affordable living units, a craft exchange and exhibition hall and aims to become a catalyst for further development at other abandoned sites along the Ringbahn tracks. In addition to relieving the current housing crisis in Berlin, the settlements will become nuclei for development within the city, encouraging economic growth.

My approach to modelmaking focuses on the manipulation of relatively ordinary materials such as card, greyboard, fabric and balsa wood, understanding and testing the limitations and unique properties of each material. The model presented below shows a view from an apartment balcony space at 1:20 scale. This scale enables the use of natural light as a component with which to explore the relationship between light and space within the design, - at this scale textures are particularly important in order to give a sense of the material quality of the space.

I believe that the construction process is equally as important as the end result and as such have included several images showing the method which I used to create the model. Beginning with a sketch perspective, I then produced a maquette using foamboard, pins and masking tape in order to visualise the space, adjusting this to finalise the scene. I experimented with various materials to find the most appropriate to use for each component. It was important to work to small tolerances throughout, so that when components are fitted together at the end, a high level of accuracy still remained. The final image encompasses each of the aspects of modelmaking which I believe are important, benefitting from the use of natural light to promote the spatial qualities of the apartment design to prospective settlement residents.



Image 01: Initial Model Intent Sketch



Image 02: Lighting and Spatial Arrangement Maquette



Image 03: Material Iterations

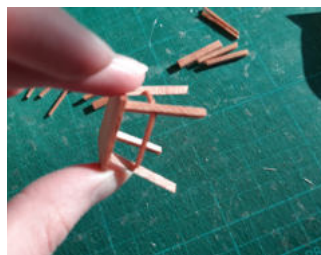


Image 04: Hand-cut Details





Image 05: Installation of Finished Material Components



Image 06: Ringbahn Apartment View at 1:20 Scale

# Sandhya Parekh

MArch Year 6 - Atelier: Urban Spatial Experimentation, U.S.E

## Project: Handbook for Healing: Schrebergärten Revived

In Berlin today there are over 71,000 allotment plots. These are collectively called Schrebergärten colonies. No comparable metropolis has as many allotment plots, in the central catchment area, as Berlin. The origin of the Schrebergärten culture derives from the work of Dr Schreber, who used outdoor spaces for physiotherapy to promote the health benefits of interacting with our environment. My project explores how to re-purpose these significant places for the habitation of recovering hospital patients.

Offering a place to recover, sleep, eat and live, "Schrebergärten Revived" exaggerates the connection between human-kind and Earth for an optimal healing environment. The scheme promotes the textures and vistas of sky, earth, water and time; framing nature, whilst encouraging reflection and contemplation. My handbook illustrates a series of follies, buildings and outdoor spaces which distinguish routes to faster healing in relation to our experience of the environment we recover in.

My material exploration has derived from representing an appreciation to ground. In addition to common construction materials such as concrete and timber, my investigations led me to design spaces which utilise primitive building techniques, such as mud render or rammed earth.

Throughout the academic year, I created multiple rammed earth casts. Replicating the 1:1 onsite construction techniques of rammed earth walls, my models were created by combining 7 parts soil and 3 parts concrete. Each layer was rammed into a mould and left to dry. The outcome is a material which evokes a sense of natural tactility that can not be achieved with merely concrete. The grain and texture of the soil leaves the finished surfaces intricate and detailed close up, yet monolithic and robust from a distance. During my casting, I tested alternative colours with acrylic paints to represent the use of different clay-based soils or pigments.

My final rammed earth model is a representation of the 'Seed Bank' tower. An existing allotment shed is retained and elevated by the tower. The footprint of the tower matches that of the shed. The intention of this was to create the appearance that the shed has been extruded from the ground by the soil itself.

01



02



Image 01 + 02: "Seed Bank", 1:50 Rammed Earth models, hand rammed models made from 7 part soil and 3 part concrete. Acrylic paint added for pigmental differentiation. Existing elevated shed made from etched and stained mdf and corrugated card



03



04



Image 03 + 04: "Long Pool", 1:50 Sectional model  
1300mm long, made from concrete covered  
mdf, cast transparent candle wax, clay, card and  
stained plywood

05

Image 05: "Birdwatching Bay", 1:50 Model  
elevating existing shed, made from mdf, timber,  
card and paper



# Sean Martin

March Year 6 - Atelier: U.S.E

## Project: The Info Mine

A Speculative Future of Berlin's Data Privacy



Image 01: Final Model. Multiple Media. 1:100

The project is an architectural materialisation of a cultural paranoia regarding data privacy and surveillance engrained within Berlin's society. In 2018, Google abolished plans to establish a new innovation centre in Kreuzberg - a district of Berlin famed for its activist and squatting movements. This decision came after strong opposition from local residents fearing the corporations ethics towards data handling and gentrification.

The Info Mine speculates a future where Google exist within Kreuzberg, collecting creative and counter-cultural information. To do this, they utilise squatting as a constructive method rather than a disruptive device, saving an existing creative collective squat on Lausitzer St. from eviction and creating a hidden network of spaces within.

The model and its making process are founded on three key themes. The first is the exploration and portrayal of the project narrative - fundamentally illustrated by the splitting of the model allowing hidden spaces to be concealed and revealed. This is further explored through materiality, where the chosen media is not only thus to reflect a realism but also to clearly differentiate between spaces; utilising plastics and 3D printing to create digital 'Google' space with card and timber used for the 'rougher' creatives spaces.



Image 02: The Auditorium. Testing 3D Powder Print & Flexible Plywood



Image 03: The Archive. Testing potential use of casting within 'Non-Google' spaces. How thin can I cast plaster?



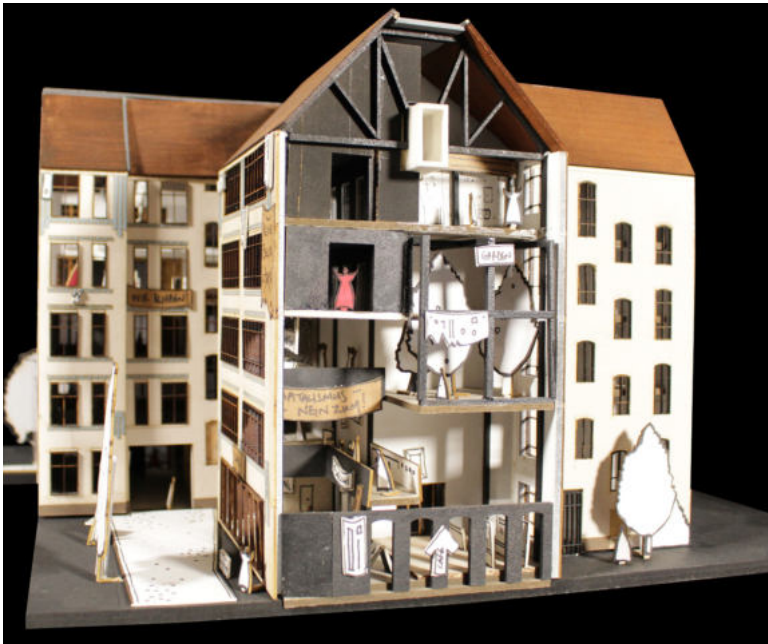


Image 04: Section 1 of Final Model. 1:100

The second theme was to study and explore the use of an existing building by detailing; the façades proportions and materiality, retained internal layout, and relationship to urban context. The complexity of the existing facade combined with the 1.100 scale of the model demanded an interesting solution, mounting coloured card upon white card finished with a tiled pattern etched on the laser-cutter to achieve the white clinker tile with coloured details.

The final theme leads on from this, as testing predominantly came in the form of trialling methods for achieving these representations of the existing. However it was also utilised in order to understand the success and viability of the mirrored elements - which were carried forth into the final model - and the kinetic mechanisms which unfortunately were not as the tests demonstrated that at the models scale these would be problematic.



Image 05: Facade Tests 1:100



Image 06: Mirrored Corridor Test Model. Plywood and Mirror Card. 1:20

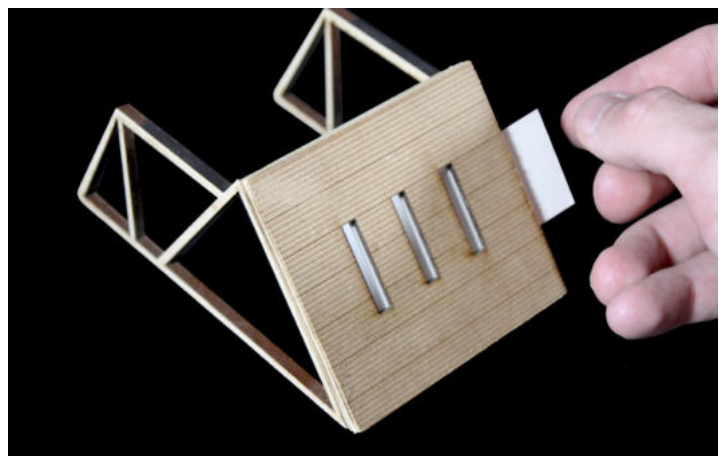


Image 07: Kinetic roof test model. Slot card behind plywood.

# Suyeb Ahmed & Hidayatullah Hatami

March Year 6 - Atelier: CIA

## Project: The Basin Development

The project is a reimagination of the current vacant retail park into a flourishing mix-used commercial and residential community, which acts as a gateway to the town centre from prominent arrivals including the Rochdale train station. It has retained the historic commercial Drake street's character via a set of commercial units and offices spaces that mirror the existing development and is aimed at providing high quality living spaces for individual and families to form small community blocks.

The proposal has also kept the urban scale and the sites contexts landscaping at the forefront of the design discussions, using the scheme to connect the disconnected vehicular and pedestrian paths, thus, improving the circulation of the retail park and towards the town centre.

The project offers a pedestrianised mix-used scheme that centres an outdoor social hub, the 'Basin Park' which brings back the canal as the focus of the park's central attraction. The park is centralised and focuses all the proposed buildings, the commercial and residential alike to create a true sense of community.

Model Making was a vital aspect of the design scheme in which has enabled us to develop our concept design to more refined in the later stages. Model making is a way of expressing and communicating ideas which we believe was very helpful to us. This also allowed us to work from larger to smaller scales for example the site model at 1:500 was made to understand our scheme with the context of the Rochdale town. The finer detail such as the Tower sectional facade was done at 1:20 scale to show the intricate ornament detail of the tower. The models were achieved through mixture of materials from various woods, acrylic and the use of 3d printing. The choice of materials were selected carefully for instance the use of 3d printing was to highlight our scheme from the existing contexts, making clear the new and the old parts of the town.



Image 01: Tower sectional Facade - wood, perspex



Image 02: Ornamental detail





Image 03: Site Model - wood, greyboard, 3d printing



Image 04: Scheme with context



# Victoria Axioti

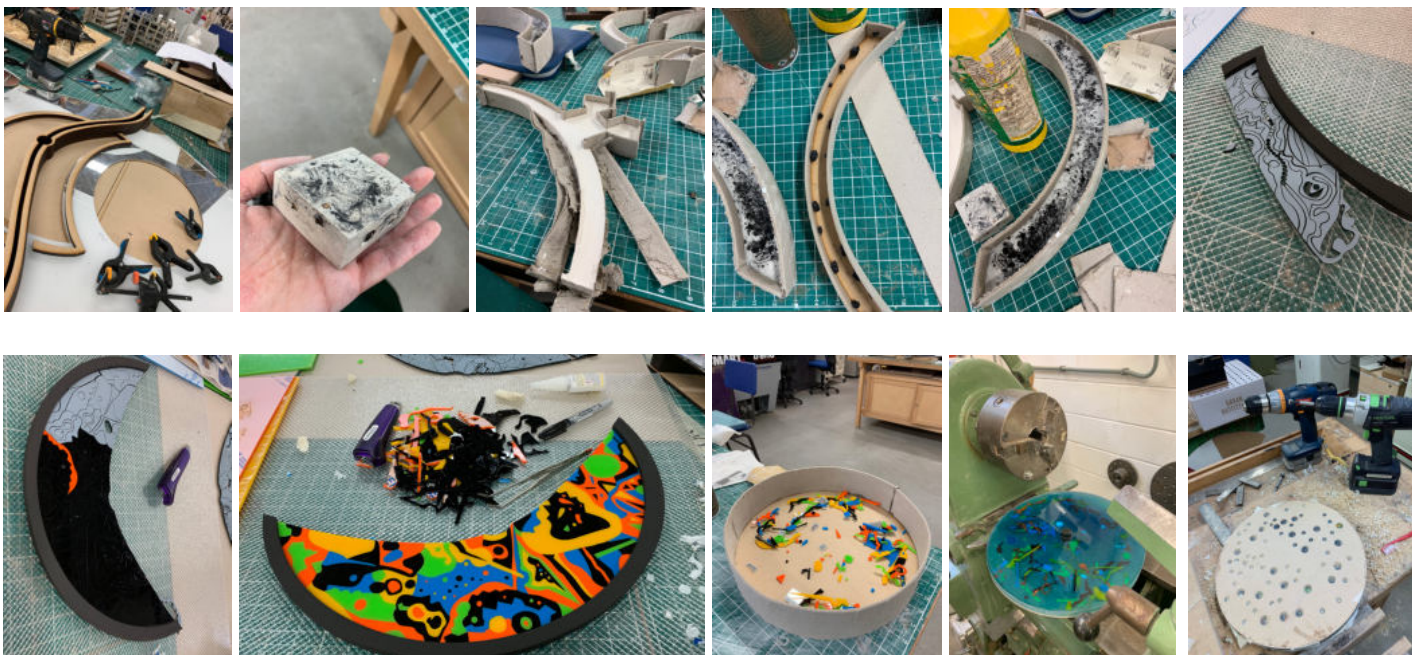
March Year 6 - Atelier: USE

## Project: Cosmonautica Order - Chaos Masterplan

Cosmonautica is an intensive preparation program, in Tempelhof Airport, Berlin. This project sets its foundation on science development with a specific mission and cosmonauts will be focused on their goal with not any distraction from the external world. The age extension, the quick knowledge collection and the rapid technological development are the key factors to bring the humanity's next big steps. The goal is to create a programme of intensive research and experiments in order to be able to design an autonomous space colony which will live forever without the need of the Earth's and sun's resources. A space elevator will ease the cosmonaut's transportation from Tempelhof base to the Space Station.

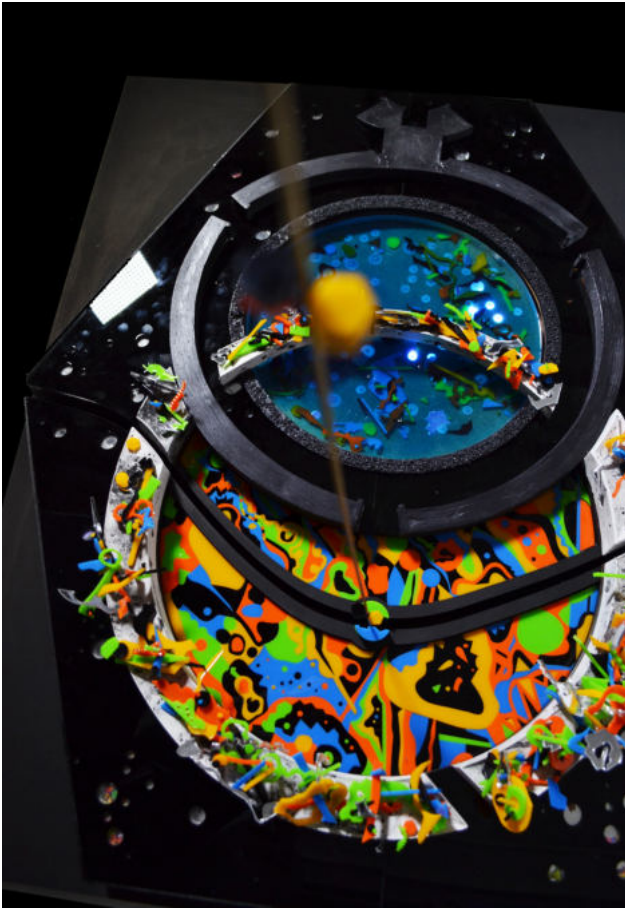
"Chaos and order is the big subject of the universe, the creation of order out of chaos and the eventual return to randomness. This applies to the evolution of inanimate matter as well as all life forms including us." (Berezin, 2014) The proposed design highlights the contrast between chaos and order. The bigger ring represents the complexity of the space environment and architecturally introduces the human transition from earth to space. In other words, space is the chaos that we are trying to put in order, to an algorithm, in order to understand it.

This model was more like an experimental process for me as my purpose was to explore various modelmaking techniques and experiment with materials. For the base I have used 12mm MDF, 3mm Mirror and 3mm Black Acrylic Sheets. For the casted plaster rings I used greyboard, which was easy bend. In half of the rings I mixed plaster with black stones and black color powder to achieve a result which reminds of the space. The colorful acrylic pattern which represents the chaotic field, is where the 'space elevator departures' sit and it is drawn in Autocad and cut in the Lasercutting machine in 5 different colours. The most exciting part was then making the puzzle. 3mm Acrylic Pieces have been used on the top of the 'chaotic' rings, functioning as their roofs. One of the most important parts of the project is the '0 gravity simulator' pool. The pool is made of Cast Blue Epoxy Resin and casted again in grey board to achieve the rounded sides. In the pool there is a whole world of 'space stations' mock-up pieces where cosmonauts are getting trained, made from 2mm acrylic pieces. Finally, a two meters brass rod is used to represent the space elevator that takes cosmonauts to their space station.



The development process





Order-Chaos Masterplan: 12mm MDF - 3mm Mirror - 3mm Black Acrylic Sheets, Cast Plaster, Colorful Acrylic Pattern, Cast Blue Epoxy Resin, 2mm Acrylic Pieces, Two meters Brass Rod

