Mecanoo B.15 Modelmaking Awards 2017

BA (Hons) Architecture

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The University of Manchester B.15 MODELMAKING WORKSHOP

Continuity in Architecture BA3 Introduction 2016/17

CiA see model making as a key design tool and form of communication throughout the year and like to keep the workshop busy!

Students begin by building facade models of some of our favourite buildings for critical analysis. We then move onto a series of massing models as a design and research exercise to explore contextual relationships. In the second term we continue to model at a range of scales; continual refinement of massing at 1:500, a detailed model at 1:50 of a corner element of the building, which investigates the spatial qualities of the building from a human perspective. We also produce stripped back elemental models

In the second term we continue to model at a range of scales; continual refinement of massing at 1:500, a detailed model at 1:50 of a corner element of the building, which investigates the spatial qualities of the building from a human perspective. We also produce stripped back elemental models to test structural strategies and make further detailed contextual models.

In the final term, we encourage modelling at 1:1 scale of a component of the building in order to explore detailed form, materiality and tactile qualities.

Maxime Willing

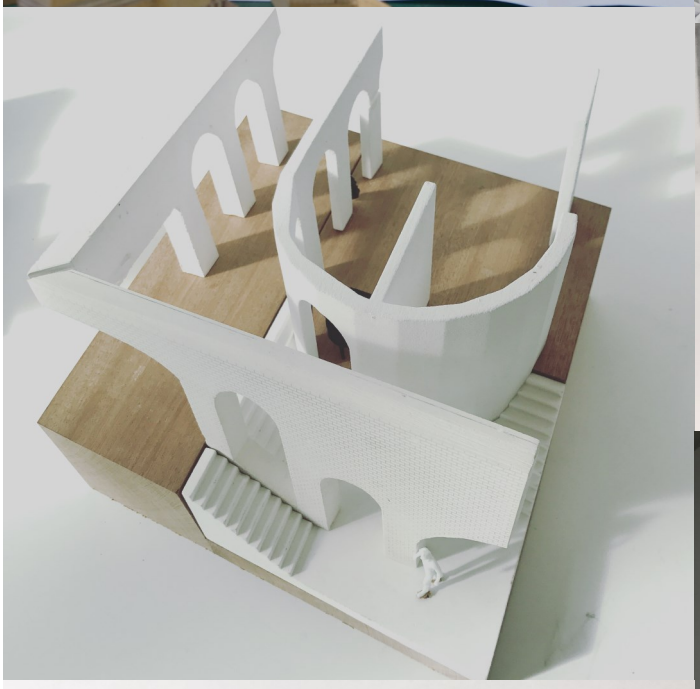
Continuity in Architecture

The Continuity in Architecture brief this year was concerned with designing a new cultural building on a challenging site in the centre of Manchester. The site is heavily sloped, with the biggest topographical range in the city centre, with listed buildings framing and a railway viaduct framing it on three sides. The atelier believes that all buildings should be informed by their physical and historical context, so modelling was key to ensure that my building was completely tied into the neighbourhood; seeing every design iteration in context was instrumental in developing the scheme.

Modelling a part of my building at 1:50 helped me to better understand spatial qualities, in a way that I couldn't with drawing. Tactility and materiality are important to the Continuity in Architecture atelier, so I decided to design and build a 1:1 model of the front door handle of my building. This made me think in depth about the user experience whilst learning a more traditional crafting technique such as lathing. My final 1:200 presentation model shows the building with a small amount of context to frame it. This was this first time I had been able to see the entire building in the round.

I have used a relatively limited palette of materials for my models this year; so that they appear as a collection of work. Early massing models were made of jelutong, for its ease of shaping whilst trying to develop initial ideas.

My 1:50 and 1:200 models appear similar to one another, both with a sanded but otherwise untreated mahogany base with a white superstructure. The curved wall and stairs of the 1:50 model are powder printed for a crisp finish, whilst the exterior walls were cast and then laser engraved with a brick pattern for a heavier, more rustic look. The superstructure of the 1:200 model is entirely powder printed, as it allowed me to have a high level of detail in the interior, visible to the observer. I tried a more traditional technique in the development of my 1:1 door handle model. Using a lathe enabled me to create an organic curve, whilst exposing the grain of the wood. There were two iterations of this model, as my ability on the lathe increased I was able to create a more exciting, slender form.



Carmen Maxim

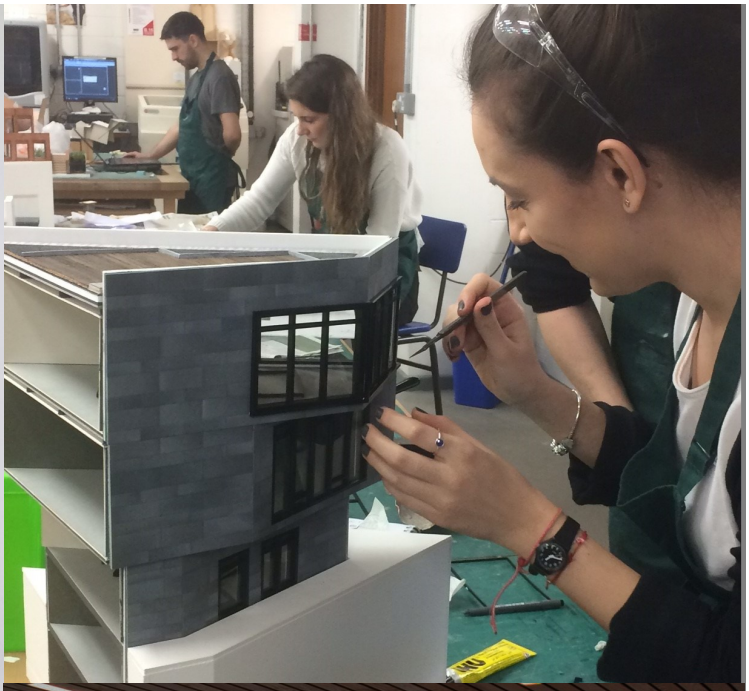
Continuity in Architecture

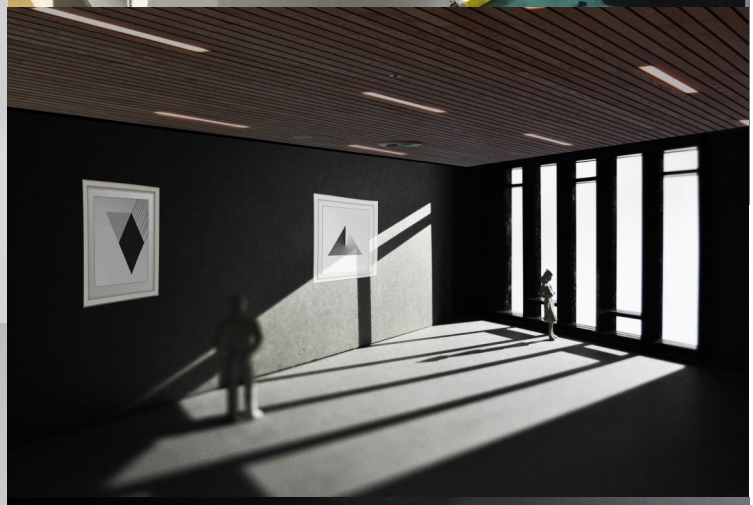
Proposing a site full of contrasts, we were required to redefine the limits of Oxford Road Train Station forecourt, by designing a building as a character, one which should be able to engage in the urban conversation, creating a legible continuity between past, present and future, through reinvention not repetition. By observing the life, analysing the historic fabric and taking responsibilities for the proposed site's apron, "The Corner Art Hub" took shape. The intention was to design an engaging scheme that brings back the scent of art and culture to the little city square, one which used to be found in the former Cornerhouse.

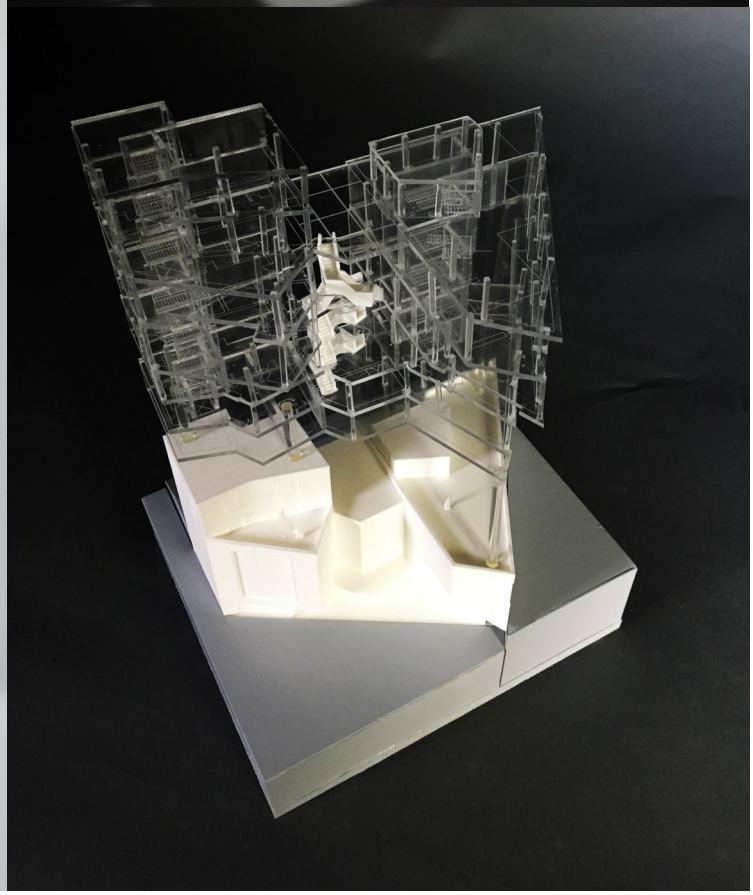
Through modelling a corner of the building at 1:50, from street to roof, I started to explore the architectural intent, the inner strategies of my proposals, ethos, and relationship between people, envelope, activity and city. Choosing this scale, enabled me to go into a higher level of detail and to develop a better understanding of the construction techniques. Underlying the integrity of my design, I aimed to use materials that mimic the as much as possible the actual materials of the building. In order to replicate the mendiger basalt stone cladding, I used grey acrylic as the accent material, sanded it until the rough texture was achieved, then laser cut it and engraved the random coursed pattern, and ultimately each rectangle was individually spray painted in three different shades of grey, to create the basalt stone texture. Clear acrylic was used for the glazing and the black acrylic portrays the frames.

Regarding the internal components, I tried to follow the actual construction sequence, by reproducing each layer and the structural elements. Starting from the underground levels, 6mm grey painted MDF was used to show the concrete retaining walls and the concrete floor slabs. Insulation and mineral wool were replicated by foam board, the waterproof membrane, by green cardboard and the internal finishes (walls, concrete floors and suspended ceilings) by beige/grey cardboard. For the steel superstructure I used styrene "H" beams.The walkable green roof was represented by dark brown veneer wood for flooring and spray painted grass matt for the green bits. Also, grey veneer wood was used to show the parapet of the building.

By completing different scales of models this year, I managed to investigate the quality of the internal and external levels and also understood the constructional difference between the outer skin and the remaining envelope components.







Chin Kiu Justin Chung

Continuity in Architecture

The Red Cellar seeks to provide a sensitive yet forward-facing programme which both recognises and embraces Manchester's genealogical red brick vernacular and climatological labeling of the 'rainy city', and offers a contemporary, innovative venue which facilitates and cultivates the production and celebration of local wine. Adhering to the Continuity in Architecture atelier, I have taken a considered approach to reinventing the shrubland site, offering a measured and nuanced topographical resolution to Manchester's temporal urban continuity while contributing to the city's burgeoning culture of drink; a true Mancunian landmark that both embraces history and confronts the future.

With regards to models, firstly, 1:500 massing models made from layers of scrap MDF were explored to develop a basic volume. Then, a 1:200 model was built from a combination of handcrafted and laser cut plywood, expressing the overall aesthetics of the building within its surrounding context, offering a more comprehensive insight. The model was then spray painted with a carefully considered metallic colour to harmonise the palette and serve as a memetic prop to the red brick genealogy. Finally, a 1:50 model was made to show the materiality of the design and its structural system; the brick perforations, concrete walls, as well as other parts are constructed in layers with the aid of laser cutting, and varnished with various wood dyes (contrary to the traditional monochromatic aesthetic) to emphasise the materiality and contextualise it within the aforementioned vernacular of the city.

Model making helped me through the design process and when 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 a model helps to visualise the design in three dimensions, providing a sense of tangible presence for the audience in the exhibition space.

Urban Spatial Exploration BA3 Introduction 2016/17

USE members aim to create integrated and coherent landscape and architectural projects. We will investigate the interaction between man-made and natural materials. We aim to create a design that allows space for biodiversity. The physical nature of our projects will be resilient and embrace change over time. Every person is asked to reflect upon the materials and structures they choose in terms of an experiential journey between internal and external spaces, and between process and design.

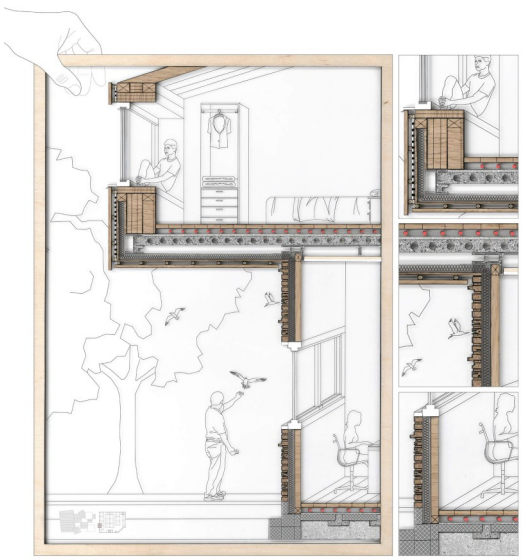
Ghada Mudara

Urban Spatial Experimentation

Engaging with the USE atelier approach this year has not only helped me see a wholeness in the concept of man and nature, but it further allowed me to blur the boundaries between the two entities and have them coexist, even at different scales. Ultimately, the aim of my Homeless Support Centre scheme was to devise a place that affords a connection between people and natural systems as I sought to design for maximum biodiversity and resilience. I showed this on my 1:20 section detail model where I show the brick biotope I designed for birds whilst having a man engage with the birds.

Throughout developing my scheme I chose to model at 3 different scales, exploring different materials for each model, to help me understand both the physical and metaphorical details within the proposed scheme. For example, the 1:20 staircase detail model helped me in illustrating the idea of "glimpses" throughout the building at a bigger scale. This helped further in showing the intensity of the timber partitions that span across the building to explore proximity between private and public areas. Similarly, working on a 1:50 facade model allowed me to visually present the domestic experience I was trying to achieve in my building, as brick and timber cladding are both considered domestic materials. With this model, I also began to understand the time and process of real construction as the way I laid the brick was very similar to actual bricklaying processes.

Modelling this year has helped me mainly, but not only, in physically communicating my ideas to others as I was able to show them all studied models up to the final one. More importantly, it helped me realise that some parts of my building don't work, such as structural details, as they were not evident at a smaller scale in my drawings. Thus, I was able to continuously develop and refine my design through physically seeing it, at several different scales.



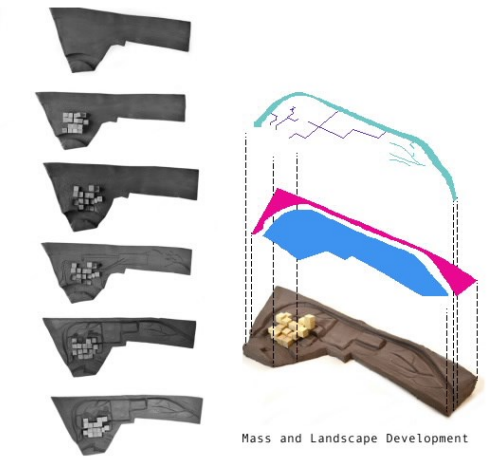
Rosa Whiteley

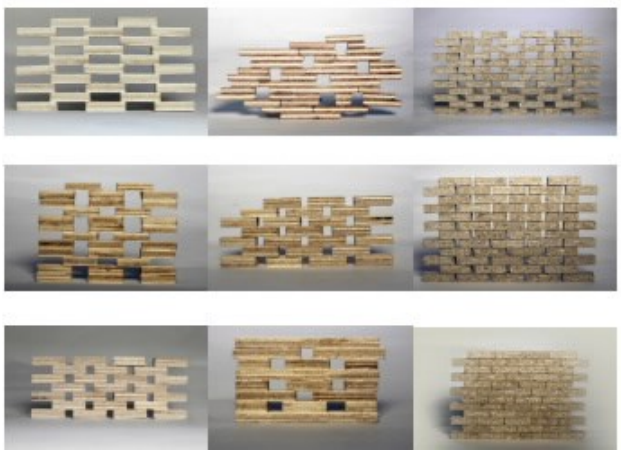
Urban Spatial Experimentation

I responded to the U.S.E Atelier brief, which has a strong focus on the connection of natural and cultural processes, by designing a Pottery Studio acting as a Tactile Therapy Hub. This was set within and dependent upon an ecological heartland: a wetland. A focus on tactile engagement and haptic perception developed a building that took you on a journey of many different factors of hapticity. This tactile, material focus strongly influenced and informed the style of my model making throughout the design process.

I choose a 1:50 scale to demonstrate the how studio spaces linked with circulation areas, the river, and beyond to the landscape, whilst explaining the material detail of a corner of the building. I was determined to produce this predominately manually, to reflect the programme and aims of the building. The material detailing focused on the board cast concrete wall, set beneath the stone masonry with seams of recycled river and boundary walls from site. This was juxtaposed with clean, shiny flooring representing resin floor, to bring a focus to the material environment. It was essential, for me, to represent the stone wall not as a clean, flat material, but by using a variety of colour and texture within the painted mdf 'stones', arranging them by hand to achieve a believable finish.

Models have played a huge role in my development and decision making this year. Experimental Models provided a quick and investigatory technique to understand spatial arrangement, which was key to enabling communicative, social spaces. Additionally, interior levels were strongly dependent on exterior, as it was essential that the underwater river windows were placed so that the river level was at eyesight. Experimental models allowed the 12 different interior levels to be fully understood and interconnected with the exterior environment. U.S.E. brings a strong focus on the landscape as well as the building. Investigatory models allowed me to understand the levels of the site, and how a wetland could be created


Mass and Landscape Development



MSA Praxis BA3 Introduction 2016/17

Manchester Spatial Agents (Praxis*) investigates real communities and works on live projects by using our individual and collective architectural, research and creative skills in parallel with the deep local knowledge of residents whilst taking a post-capitalist position on architecture and urbanism. We will use these skills and imaginations on projects working towards making cities more inclusive, by proposing projects for the civic space of Stretford in Trafford, Manchester. Our overall aim is to create places shared between people of all ages, abilities, attitudes and occupations.

The atelier will work as a parallel collaborative architectural platform for you to collectively investigate, interrogate and test design processes, which are involved in participating and engaging in the public and civic realm. Initially by challenging your preconceived positions on architecture, we will enable you to explore alternative forms of spatial practices, and you will create a series of theoretical architectural practices.

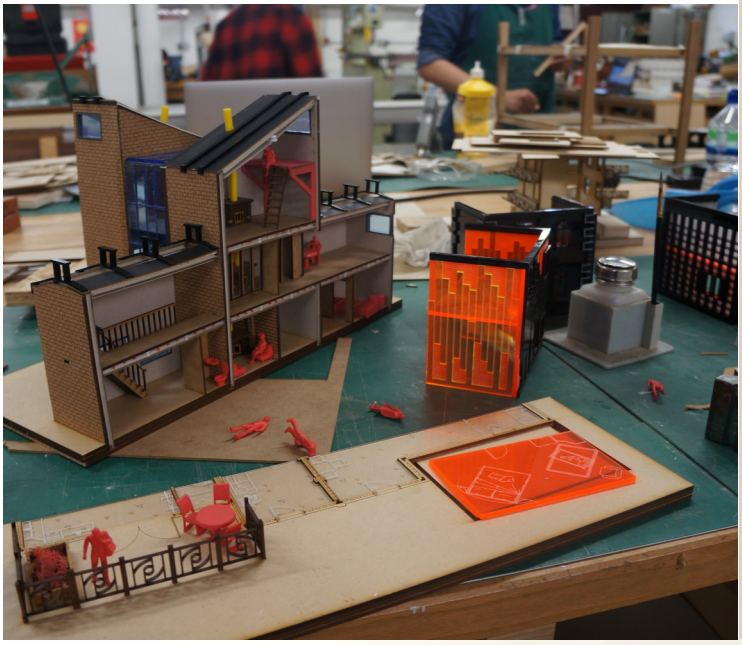
Jude Hui Li Yee

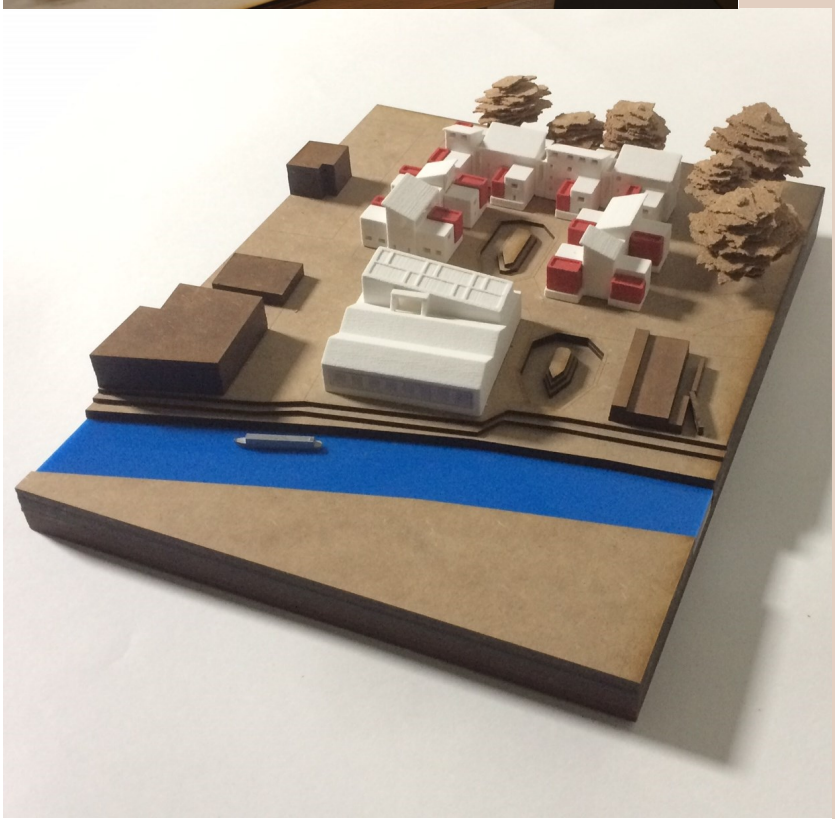
MSA Praxis

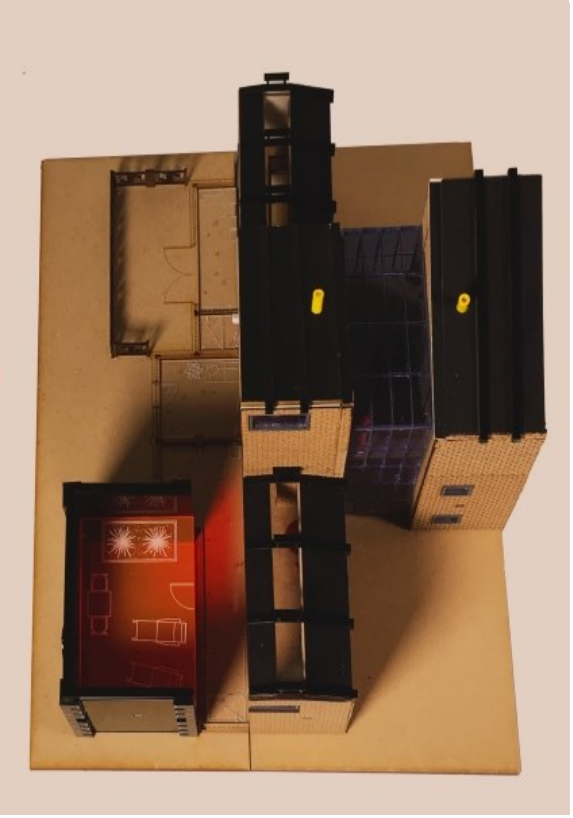
The main driver to communicate my project was via model making. The atelier brief this year for MSA Praxis was to respond to the socio-political scene in Stretford, Manchester by improving its built environment. Designing a self-build, incremental housing community, the buildability of the project has always been prioritised. I ensured that each of my design iterations could be built into a physical model, and not just a standalone digital format, to assure that self-built techniques proposed are achievable.

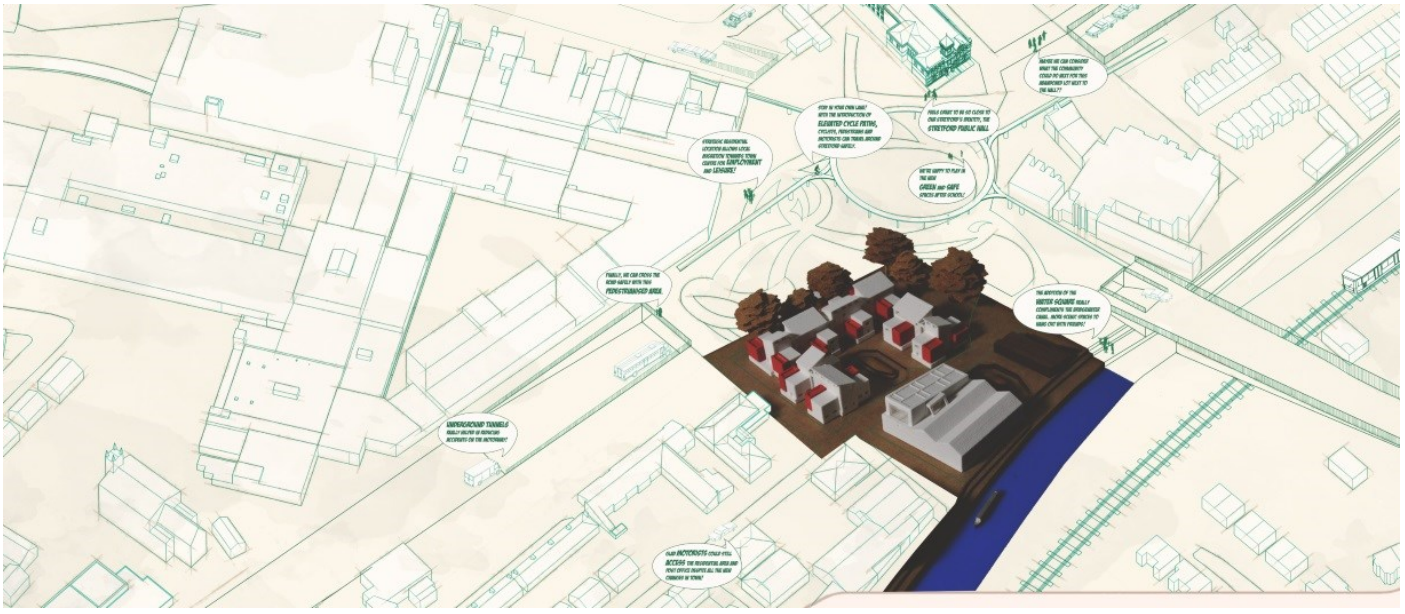
Initially, a 1:100 structural model was made to determine the stability of the structure. By laser-cutting and assembling MDF sheets, a high precision, monolithic aesthetic was achieved without deviating the focus on the framework itself.
To visualise and relate the project to its site, I created a 1:500 site model to explore the relationship of between the project and its immediate context. By emphasising and utilising the difference in materiality and aesthetics of 3D powder printing, MDF and acrylic sheets, I managed to create a stark contrast to highlight the project without neglecting its surrounding context. Hand crafted cork trees were added to illustrate the surrounding flora, which blended perfectly with the brownish hues of the MDF base.

A 1:50 sectional model was built to illustrate the technical details and incremental properties of the project. Upon completing the mixed media base model (laser cut MDF sheets, brick facade from cork sheets, styrene I-Beams, acrylic rods and ABS tubes to accentuate the details), I started exploring façade details of the incremental units by laser-cutting brightly coloured acrylic sheets.
By exploring a variety of simple form and structure through models, I achieved the final iteration for my design as it stands today. Model making had clearly helped me to communicate my project clearer and more concise than drawings and digital models.








ELEVATED CYCLE PATH,
STRETCHED PUBLIC HALL
GREEN and SAFE
UNDERGROUND TUNNELS

Common Ground BA3 Introduction 2016/17

Common Ground aligns itself with those architectural theorists that see the city as a complex man-made object, its physical form a record of its many creators and view the city as a form of knowledge. We believe the city, constituted by unique fragments are parts of a whole that are inextricably bound to its future trajectory and contribute to its character and unique form - its sense of place. We believe that ideas about architecture emerge from the nature of cities and conversely, that good architecture is itself a microcosm of the city.

This year Common Ground will be exploring the theme of the 'city as theatre' going on to develop a brief to undertake the design of a building for the Performing Arts. The study territory is in the east of central Manchester among the city's canal network and defining warehouse buildings, once the hub of the city's industrialised economy.

Hannah Cruikshank

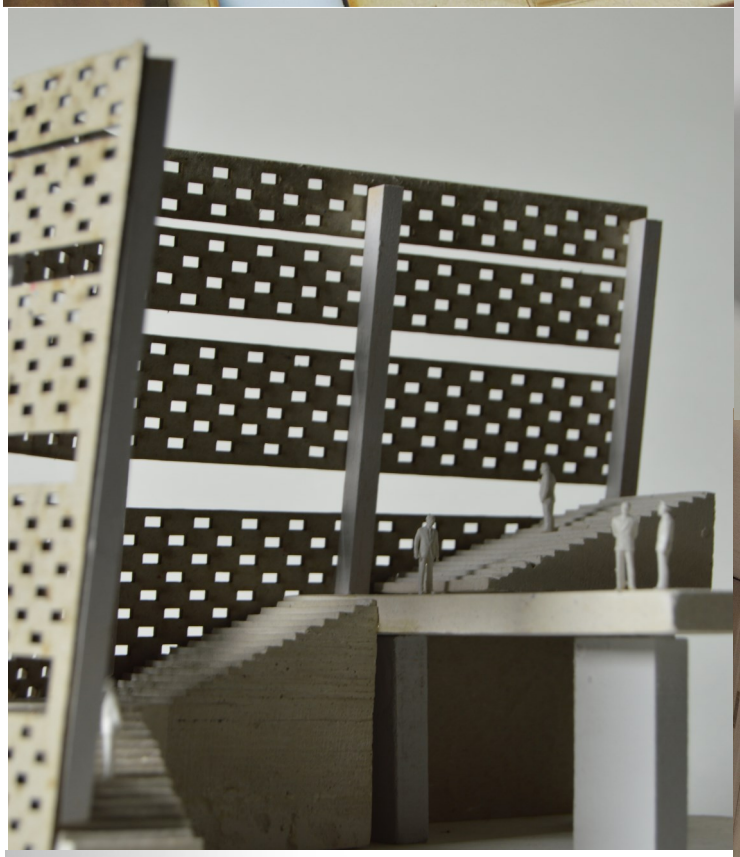
Common Ground

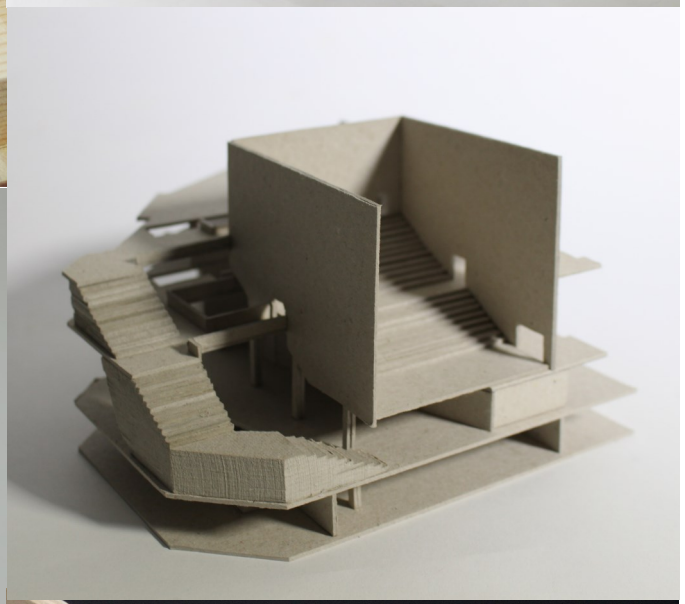
David Chipperfield talks about the issue of permanence in the current architectural environment. Through the application of models across the year, I have been able to design in context, thus establishing my building into the existing urban fabric and to ascertain the continuing effect of the natural and artificial environment on the building. It was the approach of the atelier to use the physical model in such a way as to create a relationship with the immediate and wider city, as well as to be consistently making models in order to visualise the reality of the design and overcome design issues – some of which, for me, only became apparent because of a model I had made.

Over the year I have used a variety of scales ranging from 1:1000 at the earliest design stages; 1:100 structural models; 1:50 interior models; 1:5 iterative models of details; concluding in a 1:50 sectional model. I have worked with a variety of materials in order to assess and iterate the atmosphere and effect of light within the key spaces.

My final sectional model was the culmination of multiple series' of test models, investigating the effect of light within the music hall. The test models were made out of hand cut mount board (roof) and laser cut MDF (large window perforations), these iterations had a huge effect on my final design and the influence of light in the music hall at different times of day. In the final model I used a combination of laser cutting and hand crafting in order to create a textured finish that would resemble the built reality.

By employing model making as a design tool, I have been able to experiment with materiality of key internal spaces, thus optimising the atmosphere within the building. The use of models has allowed me to develop an experiential journey through the building, ensuring that the spaces both relate and differentiate themselves. Personally, the use of the model has been in invaluable way of translating an abstract concept into a material product of my design.





Arinjoy Sen

Common Ground

How is a building like a city? The Common Ground atelier sees the city as a complex man-made object comprising of unique fragments/elements which constitute the gestalt of the city. A study of these unique fragments or ruins of Manchester reveal the politics and intricacies of an idiosyncratic architecture.

"Interest in ancient ruins was motivated not by an abstract respect for the heritage but rather by its political instrumentality, which often coincided with the desire to refound and reconstruct the city." (Vier Vittorio Aureli, Instauratio Urbis) The Politics of Urban Dichotomy: A Political Institution for Manchester.

The disjunctive composition of the city's urban fabric and the negotiated state of the site led to the inception of the concept of contradiction and duality. which runs throughout the project. The project for a political institution was conceived through an exploration of spatial and programmatic contradictions and duality. The building is programmed as a chain of conflicting events - Dictate-Protest-Debate - which give rise to ambivalent spaces and polemic confrontations, each inspired by the city; theoretically and spatially, evoking a strong sense of duality. The experience of moving through the building, comprised of these fragments, is meant to evoke a strong sense of the city and give rise to socio-cultural and political dialogues needed in this era.

The intention of the 1:50 scale interior model was to help explore the spatial and material qualities of the building as well as to provide a sense of the what the project and space are about. The scale 1:50 encourages one to dive into thoughts about the finer details of the space and forces one to make decisions which read practically and conceptually.

The choice of materials read conceptually with the project, which was inspired by industrial Manchester. Not only the materials but also the way they were laid and finished reflect the concepts of the project and the city itself. The various methods used for the production of the model were meant to be a reflection of the way buildings are actually made. The extensive processes involved helped me truly understand and appreciate the qualities and possibilities of the materials. Starting from exploration into the form and spatial qualities of the building to making crucial structural decisions, model-making has guided me throughout the year.


You can't

QED BA3 Introduction 2016/17

QED is concerned with the operation of buildings over time and as a result promotes simulation as a point of departure for conceptual thinking and a methodology for presenting the flow of design construction, use and adaptation. Airports are afforded a unique position as an international gateway to major cities, as such they need to handle, perform and adapt to change and activity in a unique way. Their very nature standard closing for re or retro fitting, as passengers engage with them 24 hours a day, 7 days a week. The dynamic, rapidly changing environment is a key backdrop for urban theatre,

QED ask: How do we curate the experience of visitors to our city, our nation or continent? What is the international impression of Manchester?
What should it be, how can we design it, within a highly regulated and performance driven environment? If such architecture is to behave differently, will it be made differently? We consider the latest developments of construction, customisation, adaptation and material technology.

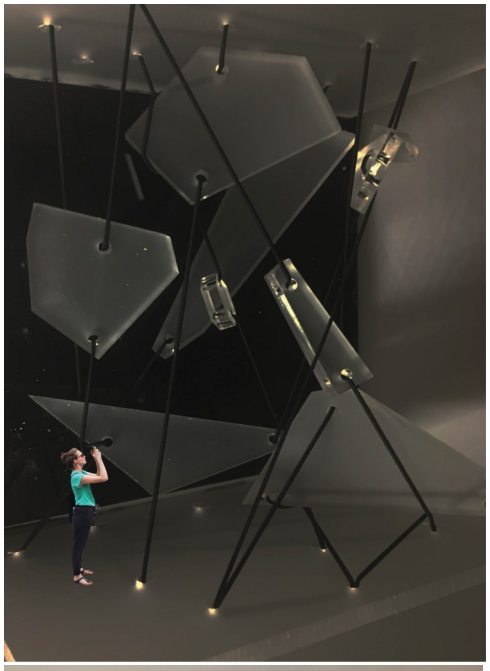
Madelina Oana Blaje

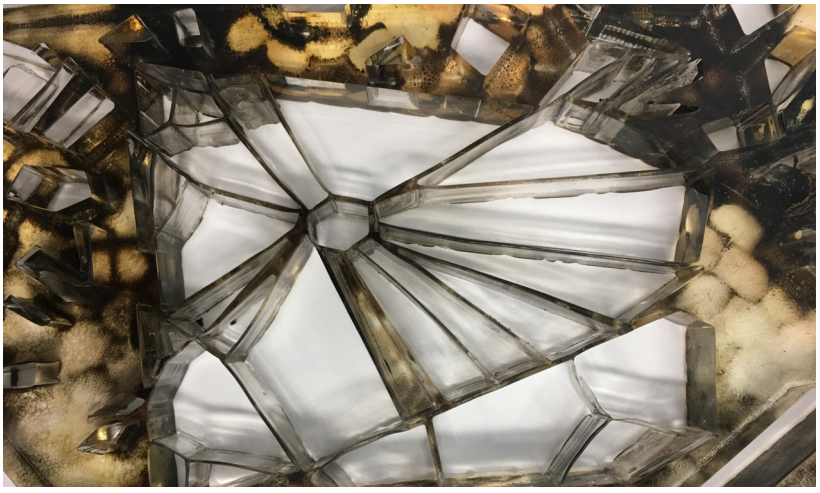
QED

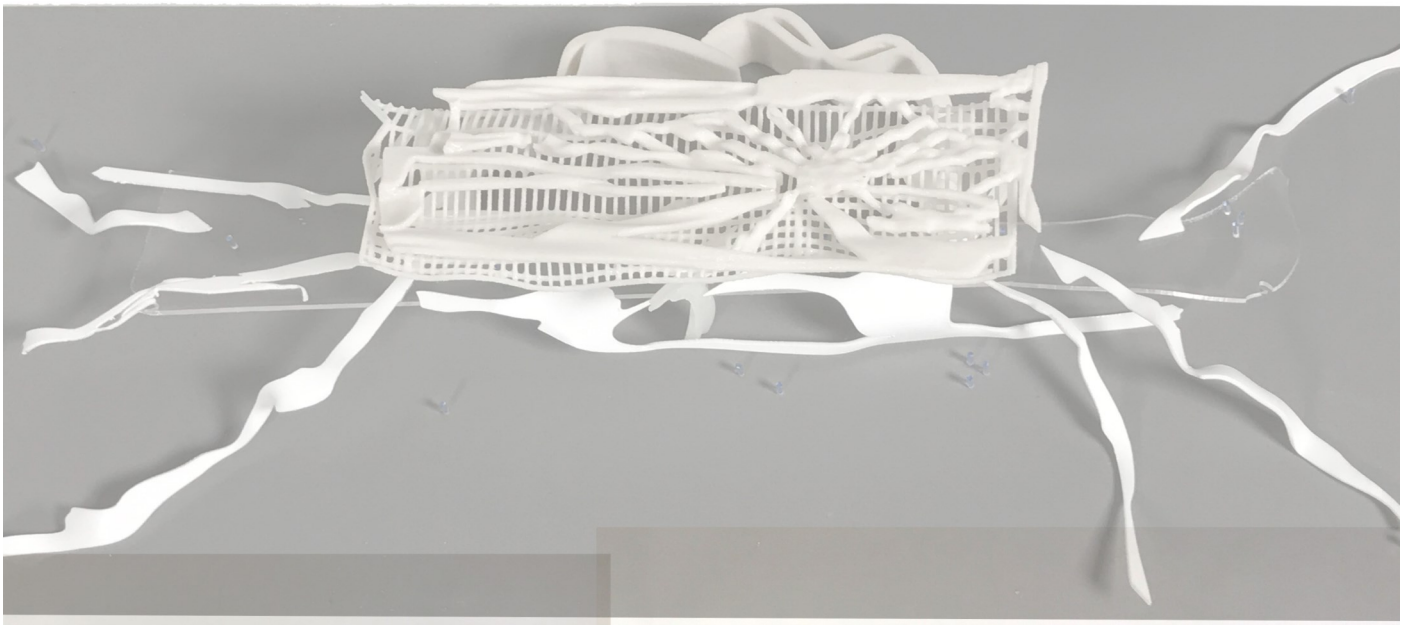
The aim for this project was to create a welcoming, embracing and memorable space in Manchester Airport, for visitors and citizens. Considered a 'hostess' of the city, the short experience through the gallery proposal is suitable both for people in a rush and for the ones with a few extra hours. The Spider Web was a tool to examine the connectivity and the 'spread' of the Airport to the world. I have considered a range of design techniques in order to explore, test, explain and create an architectural design that satisfy both aesthetic and technical.

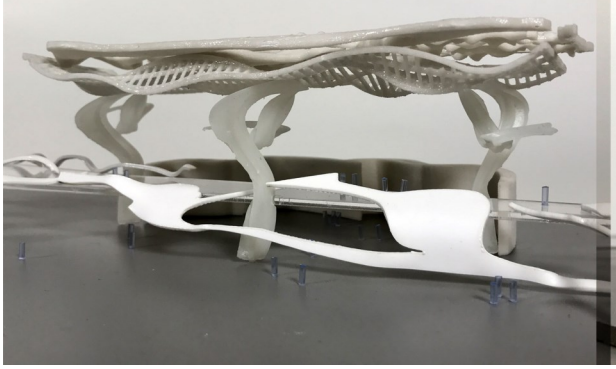
Exploring the notion: Testing was conducted to evaluate and explore layering, levels of transparency, reflection and shadow distribution. The different scale size models helped me in the design process to understand and demonstrate the practicability and aesthetics of the free-form shaped columns and fluid roof-shape.

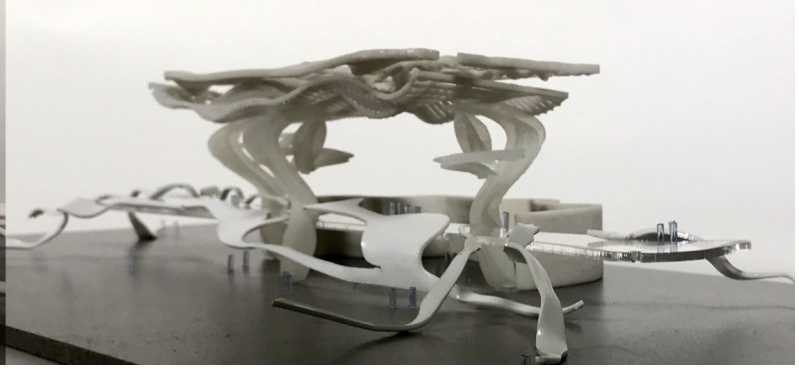
The 3D Printed Models included testing, computational simulation and prototyping though digital fabrication. The Model Making represented the starting point of the project and the most important way of demonstrating and exploring my concept.











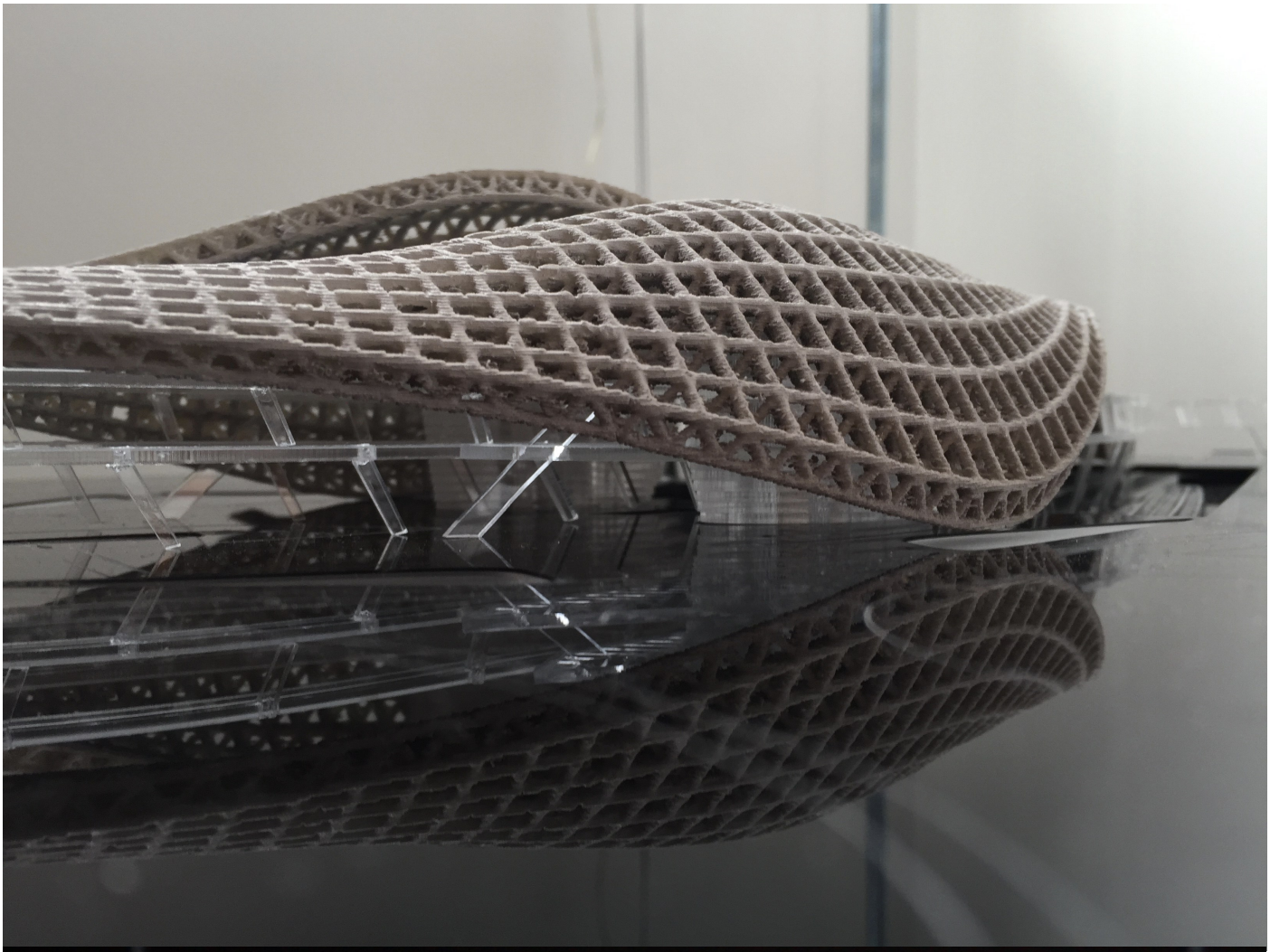
Theodoris Tamvakis

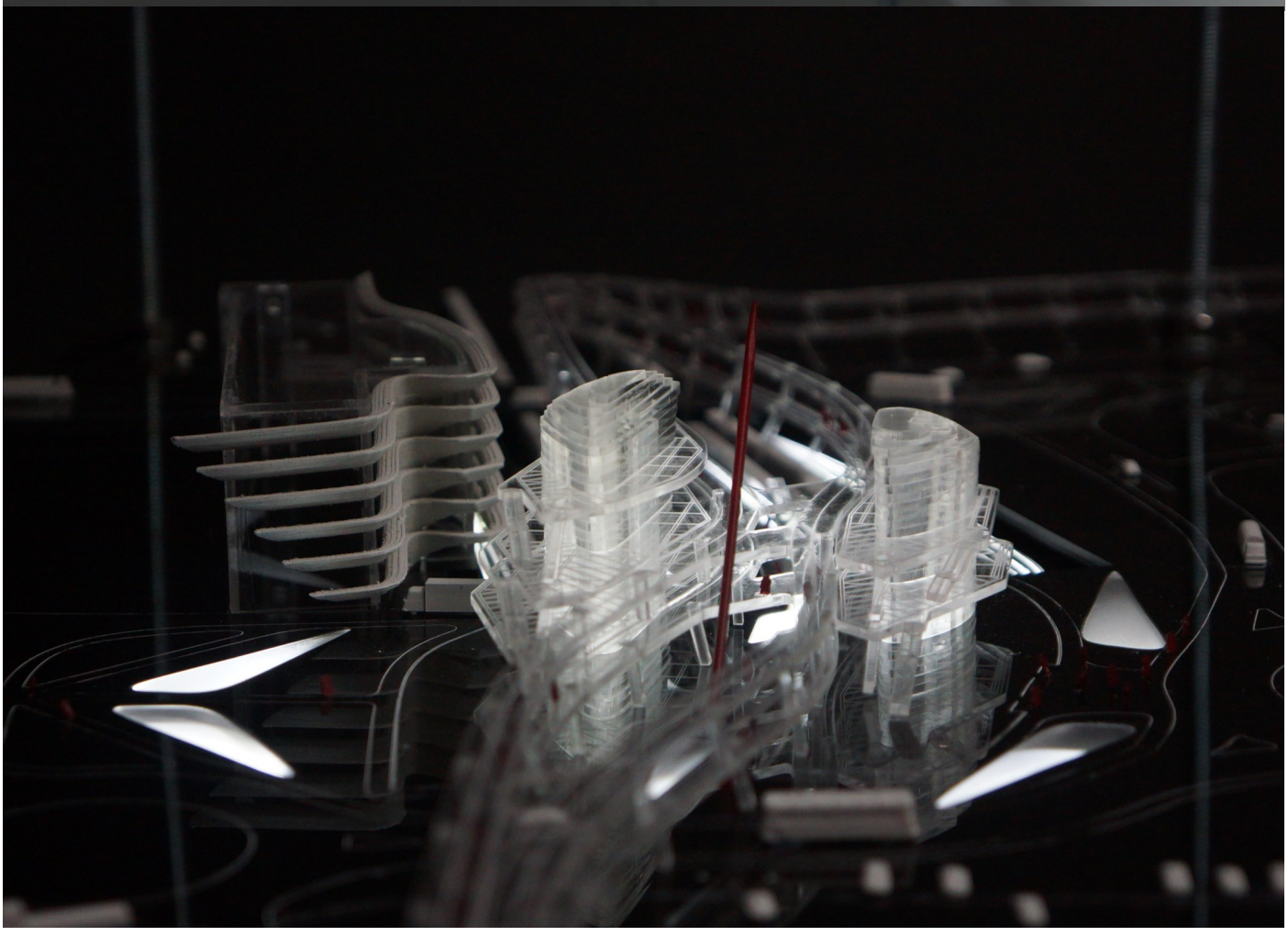
QED

This year atelier QED asked us to explore the idea of an exhibition space located at Manchester airport site. The nature of Atelier QED encourages and explores future scenarios of architecture, design and fabrication. My proposition called [Re]genesis is an exhibition centre which celebrates art through the lens of technology and more specifically 3D printing. [Re]genesis has a dual programme as it is also a train station. A free form fluid roof blends the two programmes together in a harmonious way. As our brief asked us, [Re]genesis is a highly adaptable exhibition centre as it offers a wide variety of spaces, from claustrophobic concrete bunkers to 30 metre naturally lit atriums. The driving force of the design is the main permanent exhibit located at a courtyard. The whole geometry of the building splits to accommodate, greet and create panoramic views of a reused spike from the B of the Bang.

The final presentation model is a 1:500 exploded axonometric of my whole scheme. Through this model I strived to showcase the programmatic and spatial arrangement of my design. The scheme is exploded into four separate layers. 1- The Basement, which shows the underground exhibition spaces and the foundation piles of the building. 2- Ground Level, which includes the interweaving sky-pathways which connect [Re]genesis to the Terminals 2 and 3, all the context of the site and the cantilevering exhibition spaces. At the ground level the ways [Re]genesis connects to the city are showcased with the Train lines, Motorway and Sky-pathways protruding out of the models base. 3- Roof Spaceframe, this level includes a 3D printed representation of the spaceframe structure. 4- Cladding of the Roof. Black Perspex with engravings was used for the base of the model, as it is highly reflective and would allow the observer to experience the different layers by many angles. Frosted acrylic was used to diffuse the light produced by LED strips located in the ground level of the model.

Model making was a crucial step in my design process this year, as my proposition had a very fluid form since the early stages of design. Various 3d printed iterations of my proposition helped me understand how my design would meet the ground and interact with its surroundings and what spaces and light conditions the roof structure would create.





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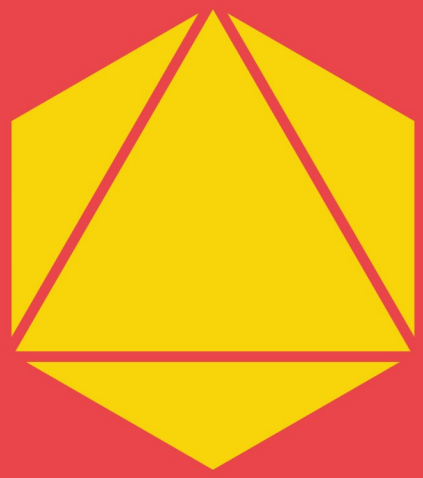
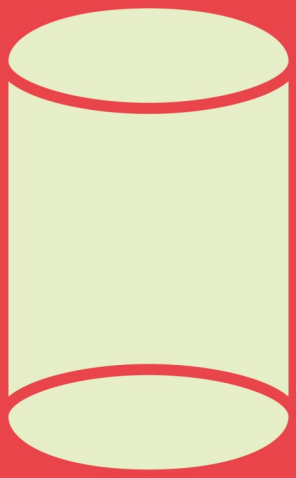
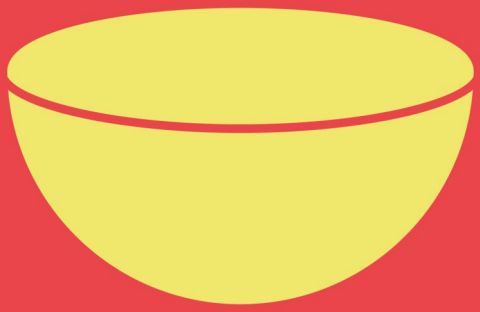
MArch







More information
manchester.ac.uk/b15workshop
www.mecanoo.nl

mecanoo msa Manchester School of Architecture Manchester Metropolitan University MANCHESTER 1824 The University of Manchester B.15 MODELMAKING WORKSHOP

Leigh Ellis

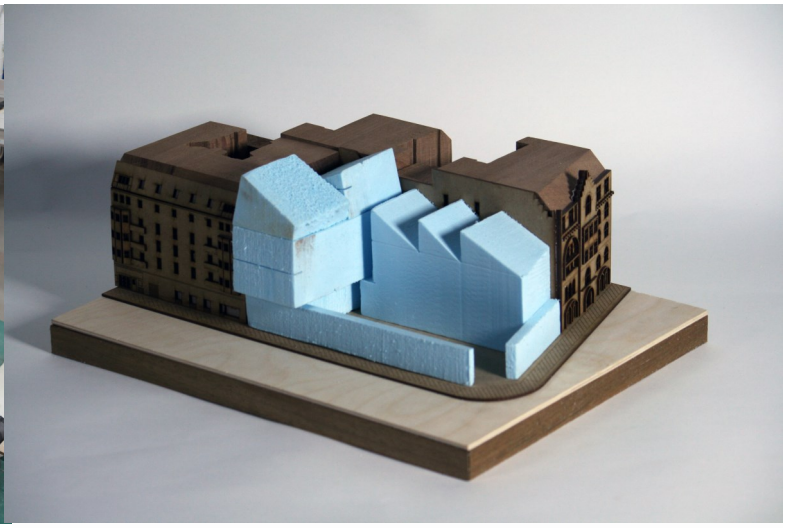
Urban Spatial Experimentation

This year I tasked myself with the design of a venue that specifically caters for same-sex marriage ceremonies, in Berlin. Contemplating how the act of marriage can be re-interpreted for the LGBT community, my site strategy amalgamates congregational, ceremonial and reception facilities upon a single site. This is to establish a building programme that caters for three key moments of the 'typical' wedding day.

I began designing these three fundamental components at 1:200 scale testing blue foam forms upon a site model to ascertain appropriate building heights, building footprints, but most of all, an architectural language for a scheme that has no clearly defined precedent programmatically. The initial difficulties I encountered during these studies was that the architecture needed to aesthetically embody spiritual and religious architectural characteristics, yet without referencing too literally, the church spire.

Upon recognising this challenge I switched materials from foam to plastercene, to pursue a sculptural architectural aesthetic and identify the colour palette of the building forms. Using plastercene much like clay I sculpted and refined the lessons learnt from using rigid blue foam to bring the three building elements closer to resolution with a malleable material. Three stone-plaster sculptures pigmented with two distinct patinas perfect the colours of these plastecene models and importantly highlight in-situ concrete as the chosen construction material.

This year I feel I have overall evidenced a stringent and invaluable design-making process, where materials alter as I journey from something raw to something curated and permanent. Model making here has not been about solely revealing the perfect scheme or product but how at each defined stage, the relationship of engaging your hands with physical materials is truly symbiotic with the architectural sketch. Should I have relied solely on digital techniques I think the experience and outcome of the scheme would have been completely lacklustre in comparison. Physical methods of making have been profound in marrying the external architectural language with the interior design colour palette of my thesis project and I believe I represent the use of modelling as something holistic and a key component of the design process.



Jenny Bedford

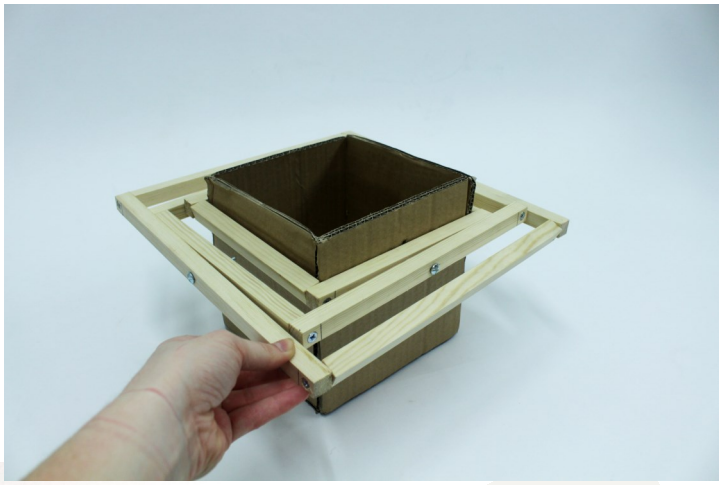
Urban Spatial Experimentation

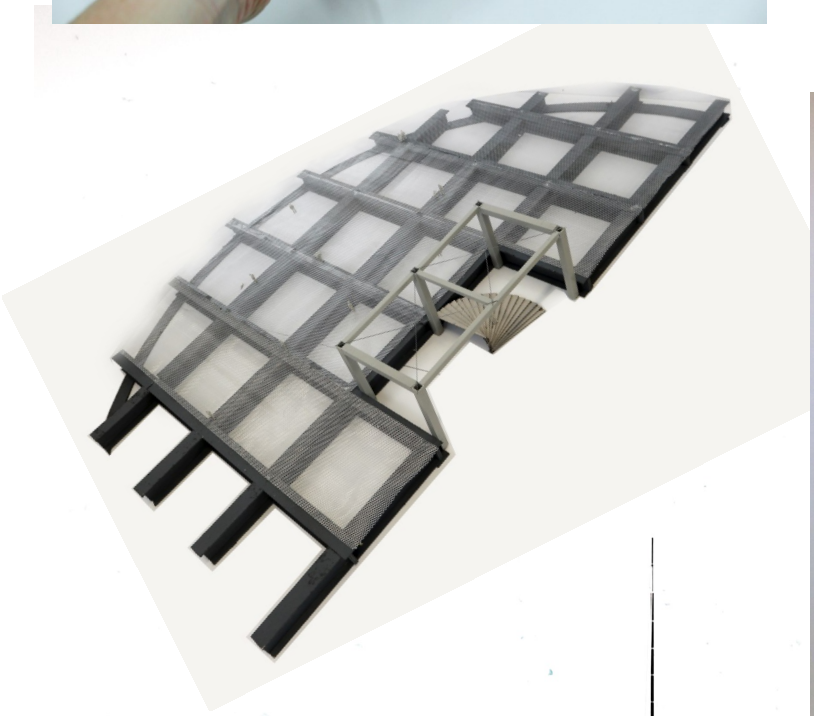
Tempelhof Turm

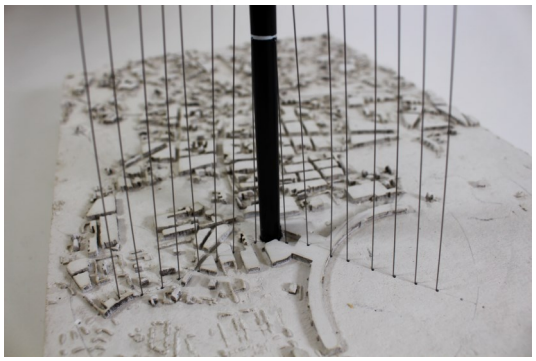
The brief focused on interpreting present conditions and reimagining the future for Berlin which is famous for its artistic and individual character. The inherent identity is being challenged by growing tensions triggered by gentrification and commodification which is reducing the allure of the city that initially attracted artists. This project begins on the premise of cultural revolution required following the vacation of the artists which caused metaphorical and physical cultural gaps in Berlin. The premise for the revolution lies within scientific endeavour, exploiting an interest which was sparked by the 2015 solar eclipse. The project developed into the creation of a new architectural statement seeking to further ignite scientific interest and blur the lines between specialised scientific development and popular culture. The tower developed from the need to reach above light pollution to allow visitors to observe space. From the ground the tower which scales the sky appears as the spectacle, however at the summit the architectural spectacle is dwarfed by the spectacle of the sky. The tower aimed to promote scientific study amongst Berliners and visitors from across the world, using Berlin as a platform to bring together the human race in the name of science.

Models of varying materials and scales were vitally important in testing structural and spatial principals throughout the project. Some models were quick test models made simply from card exploring spatial principals which accentuated the poetic nature of the project. Others were more precise technical models testing specific structural ideas allowing me to realise the potential for the project.

The plaster cast model represents the whole city in a simplified version. The block structure can be easily read from this scale. The dense model represents the homogenised city and the fractures represent that despite it functioning as a whole it is very much made up of its parts. The city is a jigsaw of history, ideology and culture which is wrapped up into one solid form. The model allows the scale of the structure to be communicated and shows the extent which the project spans as the tension cables stretch out across the city.







Daniel Kirkby & Vanessa Torri

Urban Spatial Experimentation

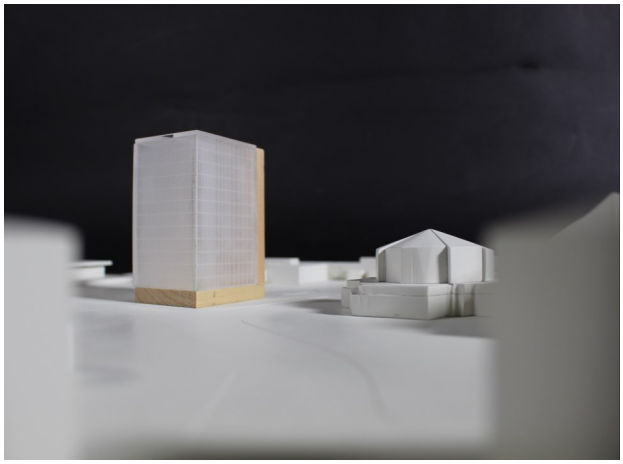
USE was approached with an open brief that looked at the history and diversification of culture in Berlin, with specific focus drawn to various sites across the city centre. This thesis project stems from a workshop that took place at ANCB Network Campus in Berlin that imagined a future scenario for Britain's relationship with the European Union in a brief for the vacant Kulturforum site.

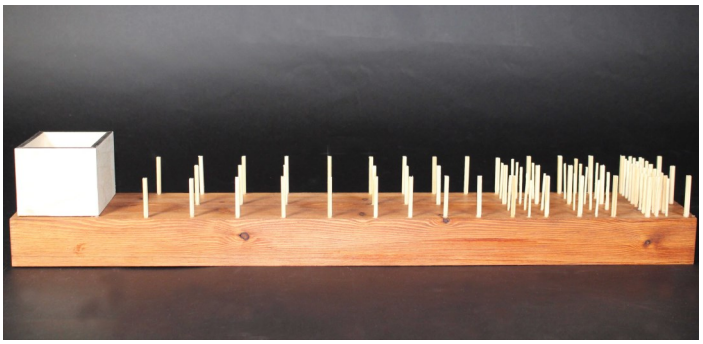
This hypothesis that provocatively addresses the current political situation in the UK, while exaggerating a response to the actual brief for the Kulturforum site in Berlin, was extrapolated into a thesis project that aims to hold a mirror to cultural and socio-economic relationships across Europe. Hidden behind a conventional museum aesthetic, a new hybrid typology is formed whereby fine art storage needs dynamic and automated technologies to fulfil the fast and ever-changing distribution quotas.

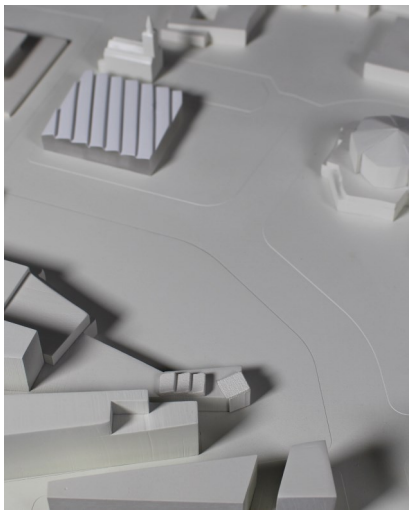
Beginning in the workshop, we used modelmaking to inform both out design aesthetics and concept development, by creating a 1:20 model of the proposal alongside a group site model, both of which were completed with limited materials on-site, yet were some of the most valuable models to communicate our proposal and the sheer scale of the site. Appreciating the vast site and the difficulty in representing scale, we created a personal site model with our own brief to explore the massing as a pure form (completed in seamless matt white) from which we could assess our proposals.

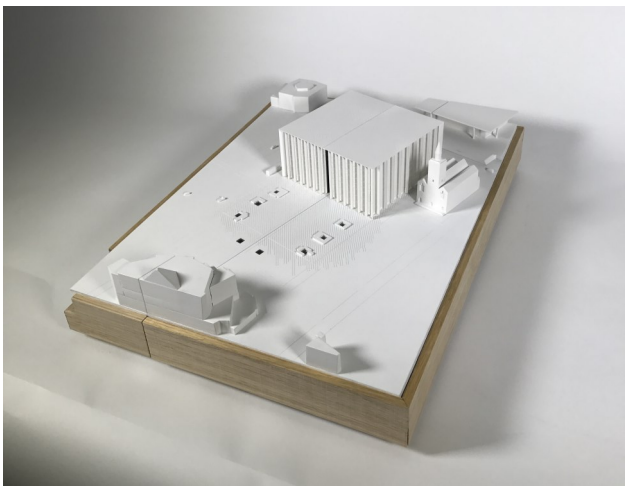
The transition from massing at 1:1000 into building proposals meant working to two extreme scales at once to further the design process on such a vast site. 1:100 structural bays were visualised alongside massing models as to understand the relationship between the scale of structural elements and the overall building design. Through modelmaking alongside our research into warehouse layouts and forms, our proposal amalgamated this typology with a bold scale on the site.

The final proposal's model furthered this criteria as a 'hidden' warehouse. A highly detailed 1:500 sectional model was completed in two parts that work together to form a whole that can be opened to reveal a contrasting a busy interior from what is a uniform and unassuming exterior.









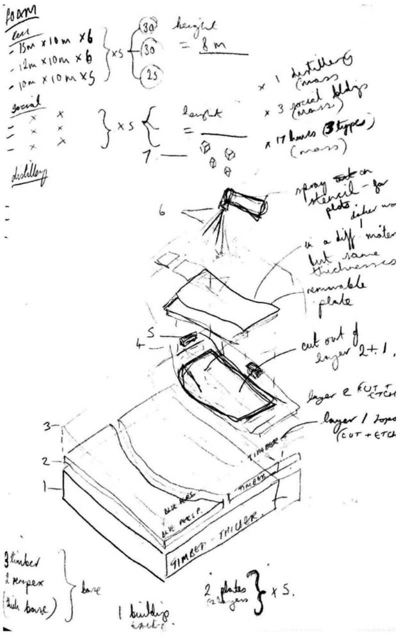
Georgina Mitchell

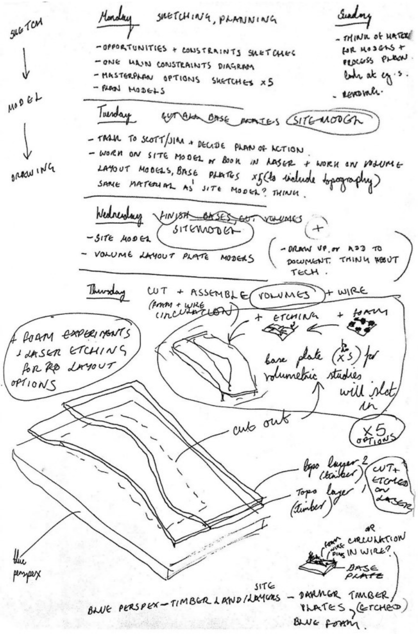
Infrastructure Space

My approach to modelmaking throughout the final year of MArch focusses on the process/act of making as a developmental design tool, constantly shifting in various directions as the project progresses as opposed to a finished product. Each iteration informs design and vice versa, from start to finish. In conjunction with digital post-production, for example diagramming with model photographs in photoshop, I have produced two significant 'working' base models that explore relationships between context, theoretical positioning and volumes - at both masterplan and building scales. The tactility of the model, ease of working and importance of understanding contrasting scales have been invaluable to project development which would otherwise be solely visualised on-screen.

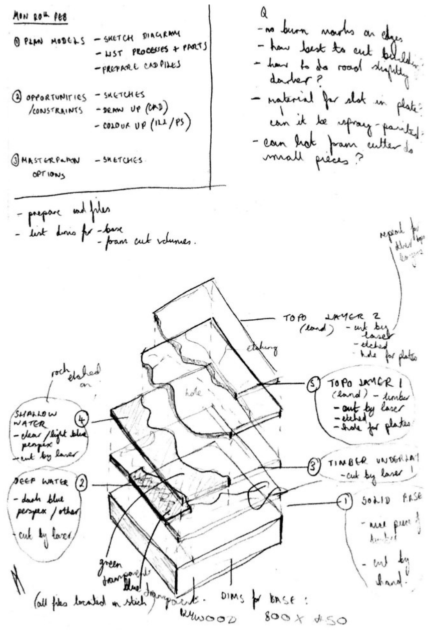
As part of the Infrastructure Space atelier, large-scale projects, dispersed landscapes, infrastructure, process and digital connectivity have been at the heart of the project, set in the Scottish Highlands. This being said, the brief is open - evolving from work carried out during Y05 into 'Connectivity in the Highlands Edgeless City', a group atlas composed of mappings and theoretical studies. From this I began to investigate the disadvantages of constant digital connectivity and internet / smart-phone use upon well-being, whilst researching military defence typologies, rehabilitation methods and studies into social interaction. Distance, protection, activity and companionship became key terms and Loch Ewe, Wester Ross became the project's location - chosen for being the sole North facing Highland loch, with a rich history in terms of environment/climate, operation during WWII, and culture. The project became the design of a traditional Highland whisky distillery, residential units and surrounding landscape treatments.

Following drawings into requirements, interactions and programmes, building an initial site model at 1:1250 enabled me to further visualise masterplan components in physical form, to concretise wider spatial relationships before moving forward into closer volumetric explorations. The site base is made of sanded plywood contour layers etched with land boundary markings, roads and other general surface features, plus two-tone perspex for different water levels. The extents of the site have been purposely made removable, for ease with creating future iterations whilst retaining quality of the remaining model extents. Subsequent volumetric studies at 1:200 were vital to the development of the building before detailed structural integration. For these, coded blocks comprised of $2m^2$ stained wood units were used as a comparative tool between volumes, and string visualised testing connections between different components.

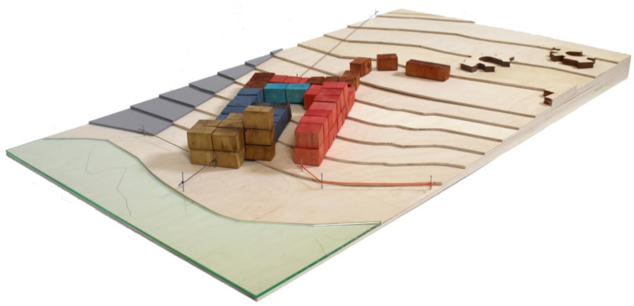


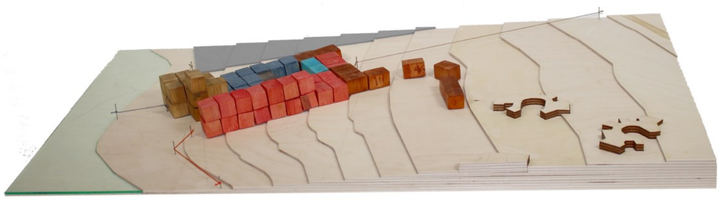


SKETCH
MODEL
DRAWING
Monday SKETCHING, PLANNING
- OPPORTUNITIES + CONSTRAINTS SKETCHES
- ONE MAIN CONSTRAINTS DIAGRAM
- MASTERPLAN OPTIONS SKETCHES x5
- PLAN MODELS
Tuesday
- TALK TO SCOTT/JIM + DECIDE PLAN OF ACTION
Wednesday
- SITE MODEL
- VOLUME LAYOUT PLATE MODELS
Thursday CUT + ASSEMBLE VOLUMES + WIRE



MON 20th FEB
1 PLAN MODELS
- SKETCH DIAGRAM
- LIST PROCESSES + PARTS
- PREPARE CAD FILES
2 OPPORTUNITIES /CONSTRAINTS
- SKETCHES
- DRAW UP (CAD)
- COLOUR UP (ILL/PS)
3 MASTERPLAN OPTIONS
- SKETCHES
SHALLOW WATER
DEEP WATER
TOPO LAYER 2
TOPO LAYER 1
TIMBER UNDERLAY
SOLID BASE





George Williams

Continuity in Architecture

During the year we have been sent a number of briefs that focus on how to create design that references cultural and historical richness of place set within Lisbon, Portugal. The briefs have varied from strategic site based design, building design development to 1:1 ornamental detail design. I have responded to these briefs by creating a model at the early stages of these being issued as to create an unobstructed approach to my design development. The models this year have played a huge role in the how I have approached the design development of the site context, building development, material composition, construction methods and overall understanding of how models can be used to benefit methods of thinking throughout the whole design process, not just at the strategic levels of a project.

Models:

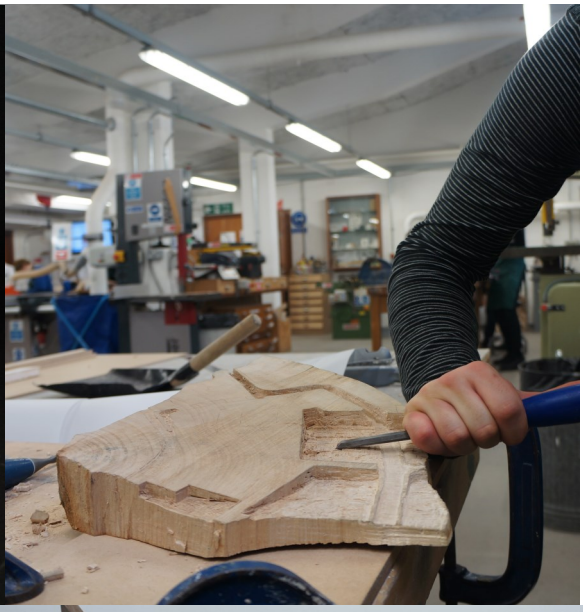
1:50 Site development model created from cast stone plaster with mixed techniques of laser etching and hand carving to achieve the proposed intervention and the subtle textures of the existing site, whilst creating a physical output that could drive the site development.

1:500 Existing Site model constructed using an ash tree stump hand carved to achieve the interesting topography, the buildings were constructed of oak as the similarity of the materials provided a view of the buildings stemming from the natural topography. This hand carved process helped the understanding of site for the purposes of design development on a strategic level.

1:20 Handrail Model constructed from a mix of cast stone plaster hand carved and sandstone pebbles to create a view of how this handrail detail may interact with the user.

1:1 Handrail Model constructed using cast stone plaster in CNC prepared moulds and stonework blocks on a timber frame construction, this model was instrumental in providing development for construction methods and material development of the project.

1:50 Typical Building Section constructed of laser cut MDF and cast stone plaster columns, this model was a culmination of the learned model making techniques over the year to provide a final view of the design development and construction methods



Samuel Stone

Continuity in Architecture

Whilst visiting the city of Lisbon the notion of it's craft is almost tangible, from the decorative wrought iron verandas to the tessellated azulejo tiles, the manual, hand made implications of making the city are evident throughout it. What impressed me most was the ostentatious display of skill in the stonemasonry work of the manueline architecture in an area of Lisbon named Belém. It intrigued me to understand the depth of knowledge and skill needed to create such profound displays of craftsmanship.

My aim initially was to learn through making, as a direct response to my early research into various crafts local to Lisbon. I started with studies into the processes of stonemasonry (manueline style columns), mimicking the carving and chiseling of stone by using plaster as a more malleable material.

The resultant studies linked back well to my interpretation of Lisbon as a crafted city, and I tried to transfer this knowledge into my design/programme further down the line.

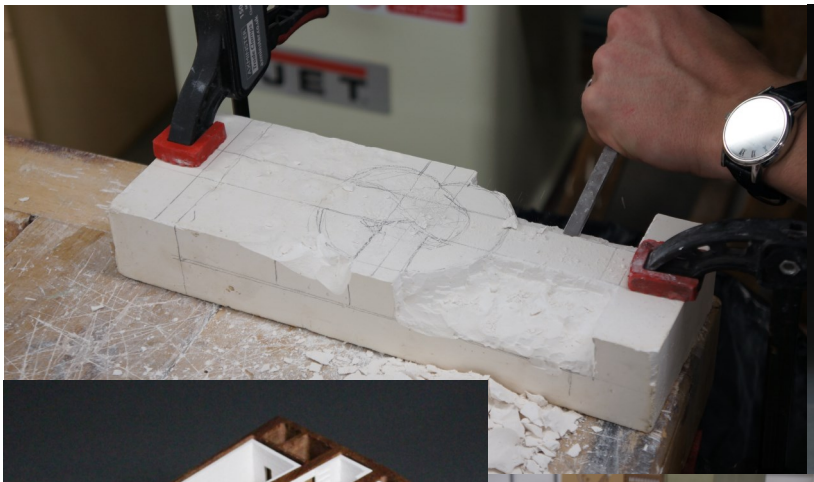
I gained a partial understanding of what it means to me to be a craftsman; having a true understanding of material, knowledge and economy of technique and most evidently, much practice and repetition.

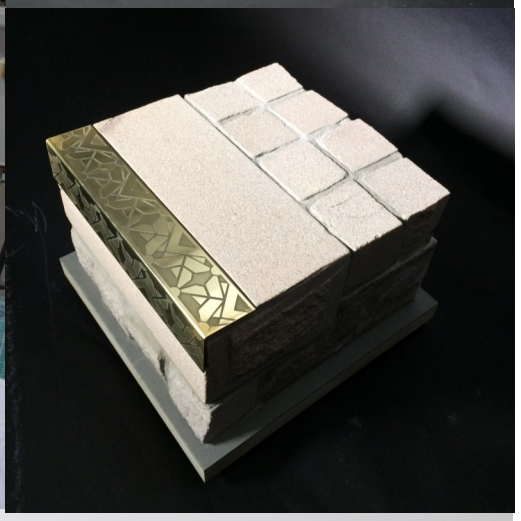
After gaining more confidence with the tools, the material and act of carving, I attempted to produce a concept model and 1:500 site model. I thought these early analytical studies and their method of production, along with site analysis could inform my approach to design later on.

Through manually carving away to reveal the site (using a 3D CAD model as reference) I grasped a deeper, more tactile understanding of the varied topography and stepped character of the sloped landscape of my site. It also enabled me to interrogate the landscape closer.

I have since enjoyed working with acid etching brass, and have made a 1:1 scale step out of an unused sandstone block from Manchester Museum with brass nosing. Through etching the site plan into a brass plate, I created my urban interpolations concept model.

I have enjoyed the hands-on approach to designing and really taken the time to improve my understanding of the said materials





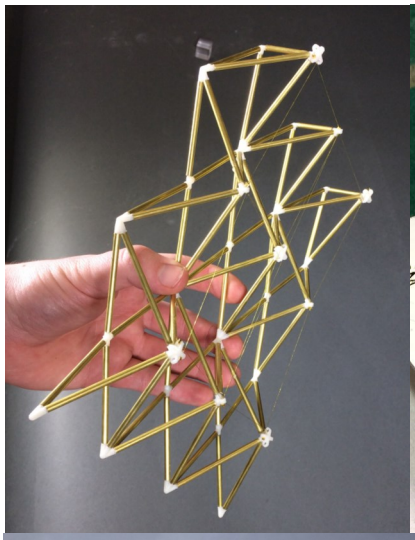
James Donegan

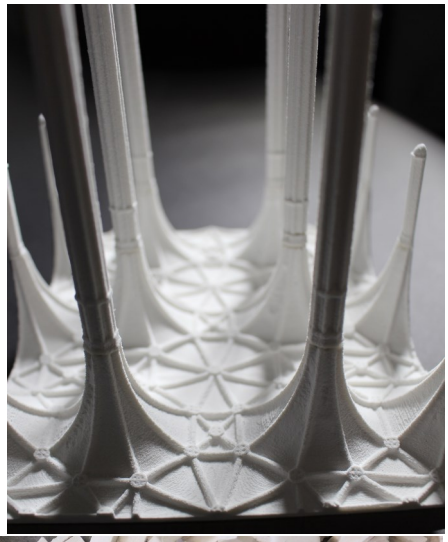
Continuity in Architecture

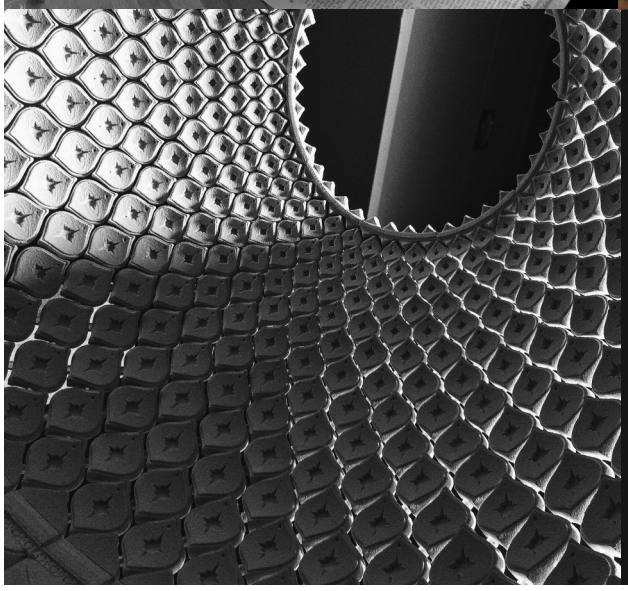
This year my Atelier travelled to Lisbon, Portugal where we were given sites in the historic district of Barrio Alto. My site was an existing palace and former resident of Sebastiao Marques de Pombal, an instrumental figure in Portugal's history. The brief involved restoring the Palace which now served as a gallery space for exhibitions and inserting a new, modern structure into the old building.

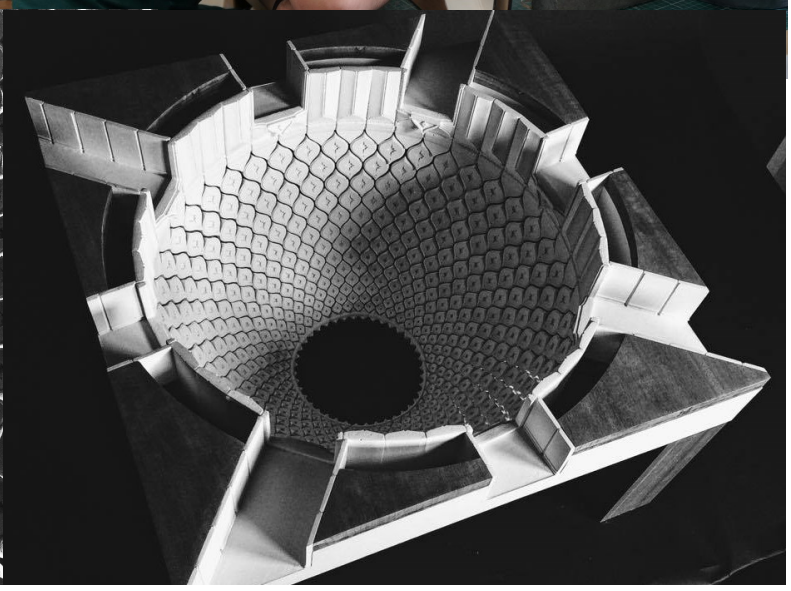
Due to the nature of the brief, much of the old building was retained which allowed me to focus in detail on the new additions to the building. This meant creating a number of large scale models between 1:25 and 1:10 that allowed the me to use specified materials (namely brass, mahogany and plaster) and test the design structurally.
Though many of the new additions were traditional in form I wanted to explore modern manufacturing techniques to create them, which involved 3D printing, CNC Milling and laser cutting alongside mould making and casting.

Rather than just being used for presentation purposes, the models I have made have been the result of an iterative design process that has been refined over a number of stages to produce finished pieces. They have been used to help me test the structure and material technology used in the building.
It has also given me a greater understanding of how some of the techniques I have used for model making can be scaled up and used in construction; particularly with regards to 3D printing in mould making. The process allows the casting of more traditional materials for producing cheaper and structurally robust doubly curved surfaces - a technique seen in London's cross rail where Laing O'Rourke have 3D printed moulds for the casting of concrete panels.









Adam Whiting

Continuity in Architecture

Museu de Imprensa Lisboa.

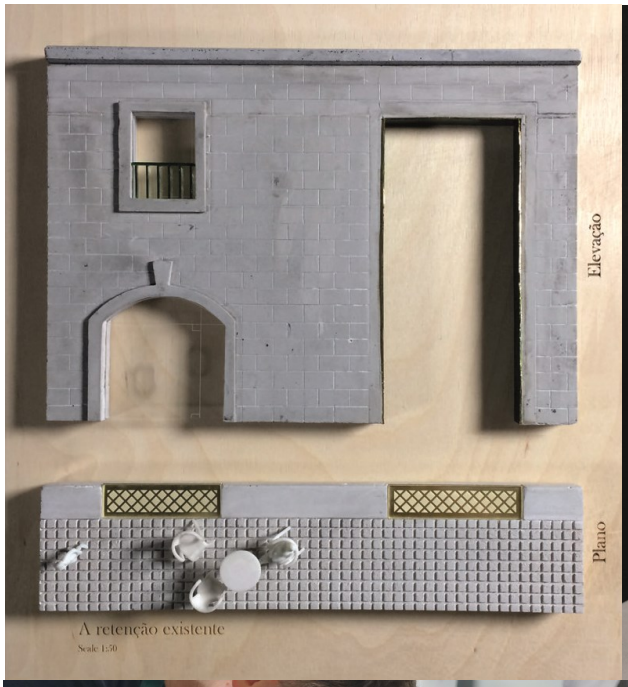
My thesis project aims to create a contextual scheme that responds directly to its surroundings, progressing Lisbon's identity, culture and sense of place. Museu de Imprensa Lisboa extends the city's public realm through the existing walls into the proposed courtyard. The scheme was inspired by the forgotten printing history of the area and this is further translated into the detailed design of the building and representation through modelling.

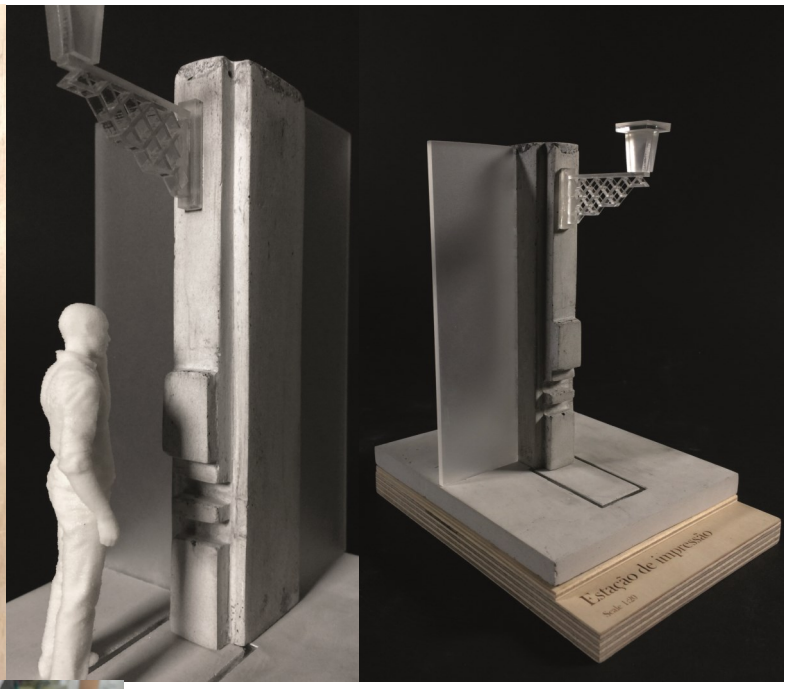
Initially, I struggled to understand the site's characteristics due to the extent and complex nature of the existing context. I looked to model making to resolve this. As each layer was realised, this deepened my knowledge of the area and therefore benefitted my design through a stronger spatial understanding. The creation of a 1:200 site model presents an overall understanding of how the scheme fits into the context, whilst also being able add refined detail. Larger scale studies compliment the site model, used to further describe elements of the scheme focusing on materiality and form.

Across all models created, I have strived to stay true to the material qualities, carefully specifying for representation and forms to be created. Plywood was chosen due to the flexible characteristics of the 0.8mm pieces to form the existing retaining wall, further translated to the material palette.

I have refined and developed techniques of casting over this year. The process of a creating a negative to form a positive is inherently linked to the project's theme of printing, therefore strengthening the concept. A single plaster cast floor piece was used to demonstrate the continuation of the existing public space through into my scheme.

Having invested a lot of time to model making this year, this has played a strong influence in the practices that I will be hoping to apply for. The ability to develop a scheme through model making demonstrates a holistic understanding of design, and I have learnt to appreciate this year. I strive to find a practice that incorporates this process into their problem solving and continue to strengthen my skills as a model making Part II Architectural assistant.


Elevação
Plano
A retenção existente
Scale 1:50


Estação de impressão
Scale 1:20