

qed 2013-2014

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EDITORS



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MArch Year 1



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MArch Year 1

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atelier qed

`quod erat demonstrandum` signals the completion of a proof or argument when what was specified at the outset has been demonstratively restated in the conclusion

Civilisation is intrinsically rooted in the built environment, the development of science and technology and related societal organisation. Architecture reflects human aspiration and embodies our relationship with the worlds we know and imagine. The contemporary epoch is characterised by the development of a more profound understanding of how the human species affects the global ecosystem of which it is an integral part. This emergent knowledge field is fuelled by the increasing capacity and sophistication of computational processing that enables complex models to be developed that simulate our existence and cultural operation. This evolution is beginning to affect the way we both understand space and anticipate architecture by informing the concept of developing urbanism and the capacity of our world to support civilized cultures in perpetuity. We are poised on a threshold where systematic and holistic ecological models will promote a paradigm shift in the concept of development as it is applied to operations that take place in, on, over or under land.

The atelier 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. Rethinking the ecology of building and landscape use and the instrumental competence of materials, construction and environmental systems in an increasingly urban world is a critical aspect of the unit agenda. Understanding the concept of ecology promotes the development of strategic attitudes to sustainability and ecologically viable approaches to building design, use and adaptation that meet the challenges or exceed the expectation of aspirations for our relationship with the environment in a global ecology.

In the 2013-14 academic year qed has introduced live projects (with the National Trust) and continued to employ international competitions (for teams and individual students) as an embedded part of our learning culture developing the acuity of student understanding in a global discourse on sustainability. This methodology also reinforces excellence in the communication of research led design consistent with the professional aspirations we promote in our students. The outward facing nature of our pedagogy is enhanced through the further development of active collaborations with professional practices in architecture and related academic disciplines.

We have worked with the Biospheric Foundation, Grimshaws Architects, Green Triangle and Nvirohaus on a variety of themes, live projects and competitions exploring sustainability and future architecture.

Students have also been engaged in international workshops - the 5th Caribbean Winter School in Havana Cuba organised by Munster School of Architecture and 1KHO workshops in Manchester and Nicosia with the University of Nicosia. We undertook a study tour to Cornwall including collaborative events with Environment and Sustainability Institute / Camborne School of Mines (University of Exeter), Fielden Clegg Bradley and the Eden Project. We ran a week long Digital Design Symposium (jointly with atelier remap) including lectures from distinguished visitors and hands on workshops in scripting and related software.

msa atelier staff : Colin Pugh, Siobhan Barry and Dominic Sagar

`pick a flower on earth and you move the farthest star`
Paul Dirac (1902-1984)

msa atelier staff



Colin Pugh



Siobhan Barry



Dominic Sagar

atelier qed

qed `live` - an innovative collaboration with the National Trust at Dunham Massey produced a series of built projects in the gardens to commemorate the 1914-18 centenary when the building was used as a hospital for wounded soldiers to recuperate. Students were involved in thematic research, the development and presentation of designs to NT staff, developing a network of sponsors and suppliers, fabricating components and installing the projects on site.

qed `dream` - in parallel with the live projects for the National Trust qed students developed entries for the dream pavilion competition at the V&A Museum of Childhood in Bethnal Green Park (London). These projects explored material ecologies suited to design for manufacture in parallel with the experiential engagement of users with thematic programmes for small structures.

qed `domestic` - first year students developed a suite of projects exploring domestic architecture starting with the 1KHO workshop with students from the University of Nicosia and atelier re_map (msa) and developed through individual entries to the international student competition d3 : housing tomorrow.

qed `domestic` - the theme of ecologically viable models for housing was further developed with professional collaborators in entries for the Sunday Times Homes Awards : Ecohaus competition and a live project with the Biospheric Foundation in Manchester. Projects were the subject of critical development via contemporary environmental software analysis and dialogue with eco-developers.

qed `thesis` - final year students Richard Jefferis, Albena Atanassova and Sam Neil developed proposals for future Higher Education environments advised by live collaboration with Grimshaws Architects.

qed `thesis` - final year students Danni Foster and Gin Yee Luu produced projects in Cornwall following an atelier study trip that developed collaboration with the Environment and Sustainability Institute (Exeter University) and Camborne School of Mines both based in Falmouth.

qed `thesis` - the investigation of future ecologies of place was developed by a final year group whose projects spanned the globe. (Jemie Ejekam, Omer Osman, James Slocock, Ben Elford, Eleni Econimidou and Mohammed Haisham).

qed `thesis`- intensive habitational ecologies were explored by Alexander Valakh, Lorena Chan and Warren Lampson Suen in high density projects located in South America and China.

qed students : students in this atelier typically originating from a wide variety of nations, continents and cultures are encouraged to develop projects that reflect not only personal interests but professional ambitions within the context of the atelier ethos.

Year 1

Patrick Gorman, Alan Pun, Steven Anton, Isobel Blacklock, Tengkli Inda Syazwi Tengkli Zubir, Chan Ching Yee, Boyana Stoeva, Dayang Fatin Abang Maamon, Chu Huan Tan, Teh Seong Cheng, Charlotte Garrett, Saidatul Syahirah Shazri, Fatin Thurayyah Binti Zolkeplay, Tiffany Man – Wah Wong, Mohd Fakhuradzi Bin Tajuddin, Zlatina Spasova

Year 2

Samuel Neal, Albena Atanassova, Eleni Economidou, James Slocock, Omer Osman, Richard Jefferis, Warren Lampson Suen, Benjamin Elford, Danielle Foster, Gin-Yee Luu, Lorena Chan, Alexander Valakh, Mohamed Haisham, Jemie Ejekam

qed collaborators : atelier qed typically works with a wide range of collaborators whose contribution and support we gratefully acknowledge.

The National Trust (Dunham Massey)

University of Nicosia – Markella Menikou and Adonis Kleanthus

Green Triangle – Ian McHugh

Nvirohaus – Roger Burton

Biospheric Foundation – Vincent Walsh

Grimshaws Architects – Neven Sidor and Eduard Ross

Environment and Sustainability Institute (Exeter University) – Dr. Chris Bryan

Camborne School of Mines (Exeter University)

Fielden Clegg Bradley – Matt Williams and Tom Jarman

CLASS OF 2013/2014



MArch Year 1

Steven Anton, Chan Ching Yee, Boyana Stoeva, Tengku Inda Syazwi Tengku Zubir, Alan Pun, Teh Seong Cheng, Tan Chu Huan, Dayang Fatin Abang Maamon, Tiffany Man-Wah Wong, Charlotte Garrett, Zlatina Spasova, Saidatul Syahirah Shazri, Fatin Thurayyah Binti Zolkeplay, Mohd Fakhuradzi Bin Tajuddin, Isobel Blacklock, Patrick Gorman

MArch Year 2

Danielle Foster, Benjamin Elford, Richard Jefferis, Albena Atanassova, Eleni Economidou, James Slocock, Omer Osman, Warren Lampson Suen, Gin-Yee Luu, Lorena Chan, Alexander Valakh, Mohamed Haisham, Jemie Ejekam, Samuel Neal

Atelier qed utilises competitions and live collaborations as vehicles for students to develop their thinking within the unit agenda. This methodology is employed to both project and test our ideas and projects in frameworks that are not bound by the confines of the msa. Working on externally presented project opportunities ensures that we are both challenged and recognised by a larger intellectual community – success reflecting the validity of our position in the global discourse in architecture.

Competition briefs and live collaborations also inspire students to both work and communicate effectively. Completing a project addressing an external audience to a deadline in a persuasive way is an essential professional ability that is refined in this process. Atelier qed students also evaluate the outcomes of competition juries as well as their own team-working capacity to further this foundation in professionalism.

Success in competitions develops confidence, increases self esteem and publicises the work of the atelier to a wider audience generating new opportunities and attracting new contacts from the resulting media exposure.

GROUP COMPETITIONS

YEAR 05 +YEAR 06 COMBINED



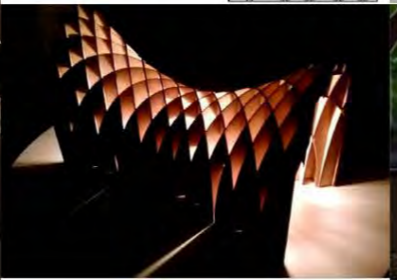
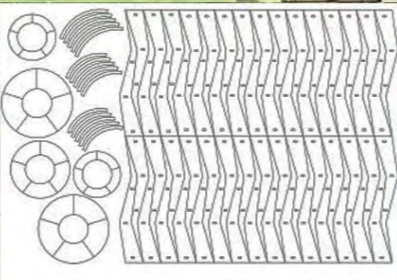
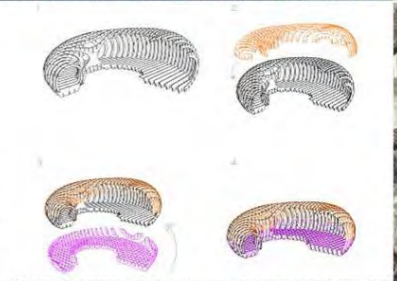
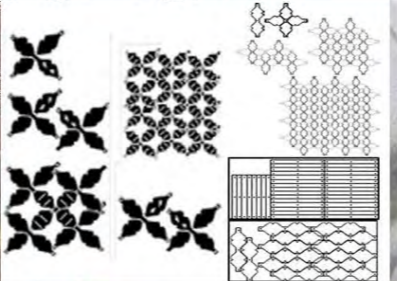
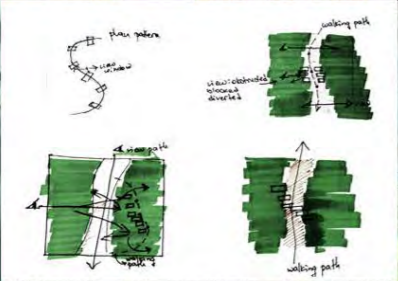
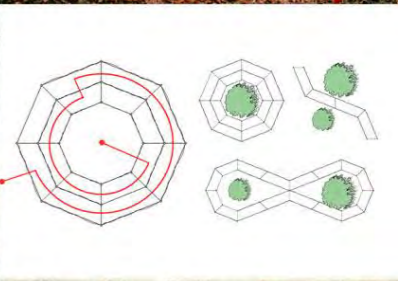
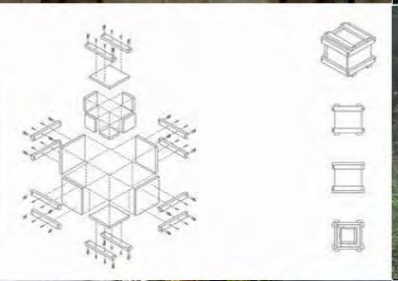
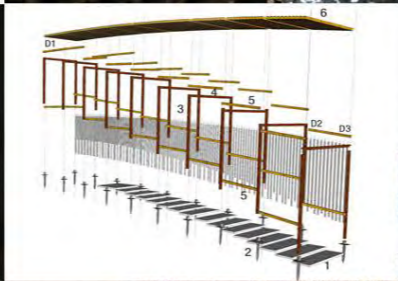
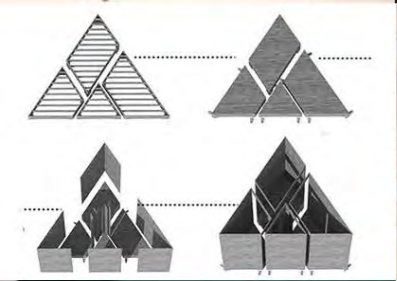
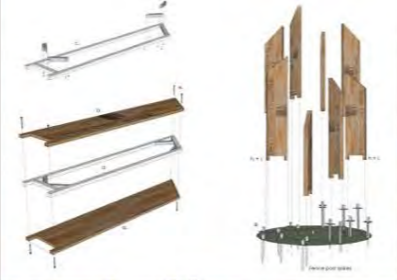
PROJECT DESCRIPTION

ged students designed pavilions to mark the centenary of the First World War for the National Trust four year programme 'Sanctuary from the Trenches' at Dunham Massey. The National Trust selected eight pavilion designs by the students to develop in groups. Five pavilions were built and installed at Dunham Massey. The aims of this live project were to work with a prestigious client, address the clients brief, limitations and requirements in a rigorous timely and professional manner. The procurement of pavilions, their material supply and sponsorship, construction build and installation into the park were all organised and successfully executed by qed students.

WWI Pavilions

NATIONAL TRUST





INTERSTICES

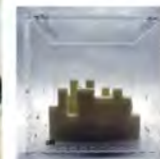
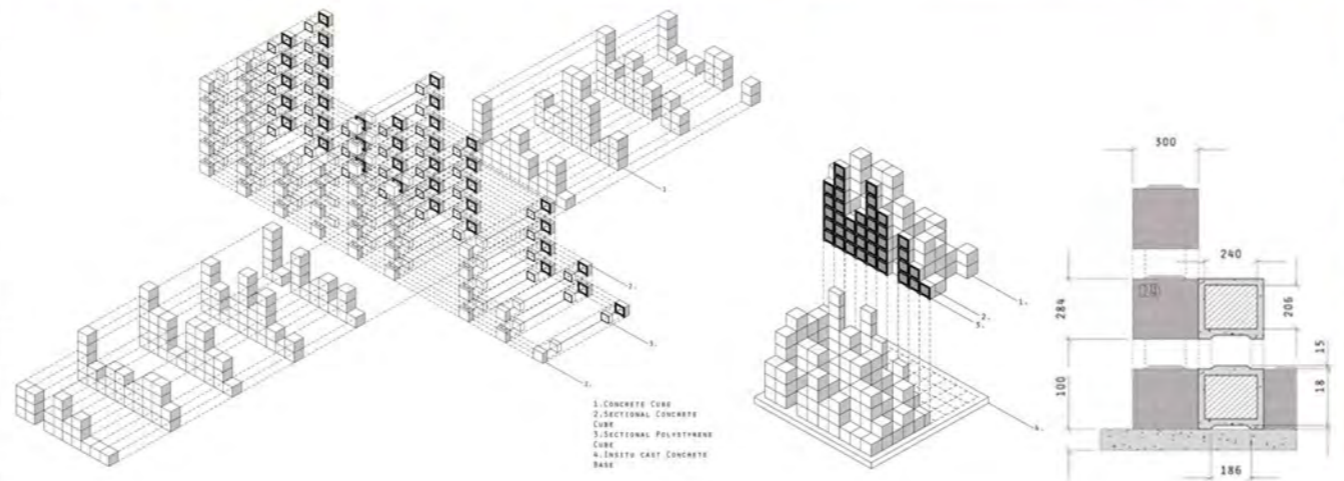
Danielle Foster

Patrick Gorman, Samuel Neal

Between April 1917 and January 1919, the Stamford Military Hospital at Dunham Massey provided a 'Sanctuary from the Trenches' for soldiers injured in the First World War. As a reflection on the 282 soldiers that passed through the hospital during this period, Interstices is a sculptural memorial that comprises 282 individually cast concrete cubes.

The sculpture is a 3-Dimensional "datascape" where the location of each cube has been specifically defined by the corresponding soldier's name, regiment and rank. Save for one nameless soldier each cube features a soldier admission number. These records were sourced from a logbook kept by the sister in charge of the hospital, Sister Catherine Bennett. The Unknown Soldier's cube has been included nonetheless, but remains blank. (Design Concept by Danielle Foster) Sponsored by Mark Bates & Sons Concrete, Educational Art & Craft Supplies, Atlantic Timber, Travis Perkins, W J Lewis Ltd, Manchester School of Architecture

<https://www.youtube.com/watch?v=7ji1p9-ydAc>



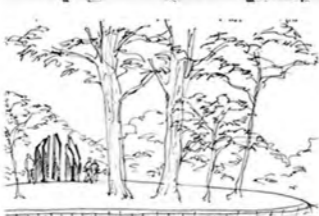
PEAK

Omer Osman

Ben Elford, Jemie Ejekam, Gin-Yee Luu, Albena Atanassova, Seong Cheng Teh, Dayang Maamon, Fatin Thurayyah Binti Zolkeplay

World War I was a turning point in history and resulted in a huge loss of life. Due to the sheer scale of death in the war, many soldiers who died while in battle during the war went missing or were buried in mass graves, without receiving gravestones. Headstones are an important acknowledgement of ones life and it is a tragedy that family and friends of many of the victims were not able to locate or visit their graves in a conventional manner and pay their tributes.

There lies the inspiration for The Peak: The Peak is a monument to the fallen soldiers of World War I. It consists of a series of timber panels imitating headstones, whose form and mass are inspired by the simple and heavy form of a tombstone. These panels are arranged such that each one of them is facing a World War I battle field. Each panel bears the name of one of the regiments treated at Stamford Military Hospital.

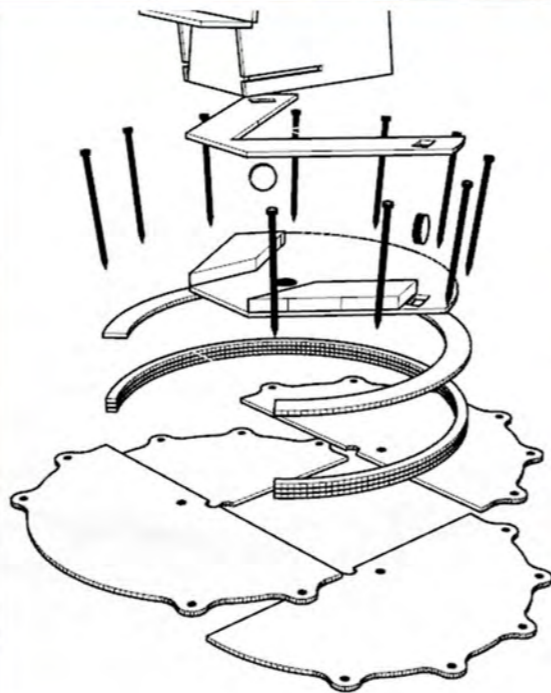


SENTRY

Richard Jefferis

Boyana Stoeva, Steven Anton, Saidatul Shazri, Mohd. Fakhuradzi Bin Tajuddin, Eleni Economidou, Warren Lampson Suen, James Slocock

The concept behind the pavilion was to create an interactive installation that would particularly engage the younger demographic of visitors to Dunham Massey. The realisation of the proposal takes inspiration from the classic periscope, the design of which was developed and perfected extensively during trench warfare in World War I. The siting of the pavilion is important to its execution and success. The periscope operates as it did in the trenches; the user is secluded amongst the tree-scape surrounding the main lawn. From this position the sculpture protrudes offering views of the main house, lawn and orangery. The tower rotates on a base and the top mirror tilts using a bicycle gear that connects to a handle to vary the elevation and direction of view.



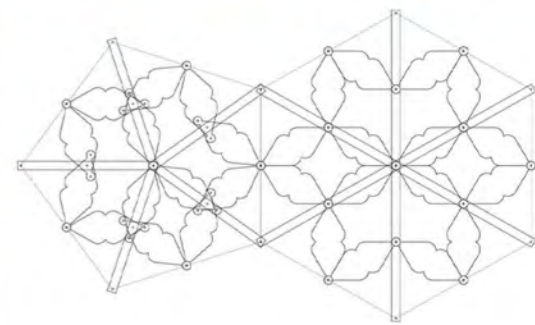
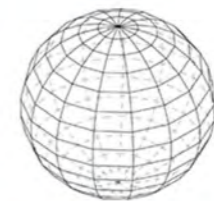
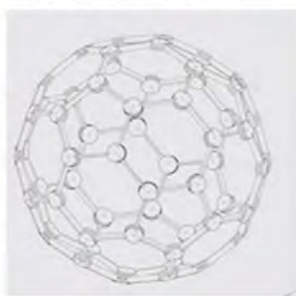
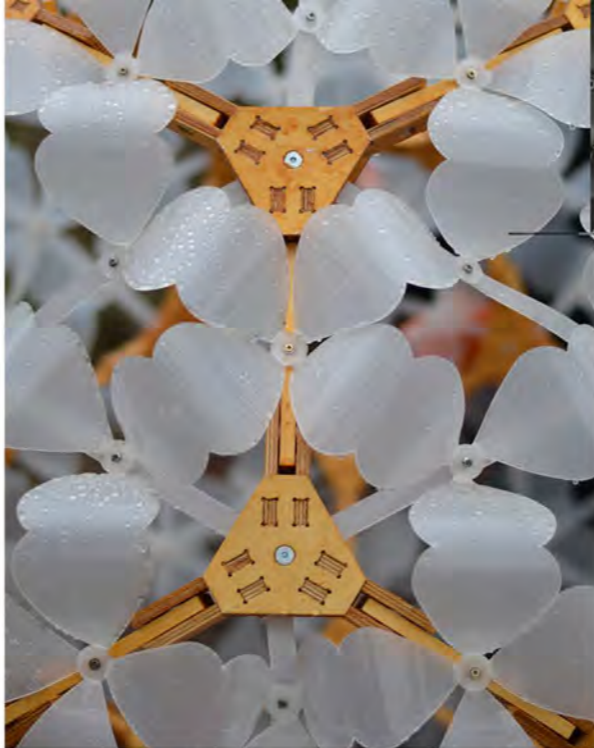
POPPY

Lorena Chan

Alexandr Valakh, Chan Ching-Yee

Poppy is a built sculpture for the National Trust at Dunham Massey marking the centenary of the First World War. It's beauty commemorates the soldiers who sacrificed their lives during the war. The skin of the pavilion is inspired by the Scarlett Corn Poppy, the symbol of remembrance popularised by the Royal British Legion. It was a Canadian surgeon John McCrae whose poem described how the poppies first grew around the fallen soldiers. However, these poppies are white to represent the fragility of the peace that we now enjoy and the sacrifice of youth and innocence for so many who served.

The design of the sculpture explores a computational system of modular components that create nodes and struts and when assembled form the geodesic structure and a secondary set of components form the skin. This again acknowledges the legacy of the first mass scale mechanised war and its tragic implications. With the logic of the system in place, the design parameters can be adjusted such as size of nodes, length of struts and number of components to create structures of different size and intricacy.



REST

Alan Pun

Tengku Ina Syazwi Tengku Zubir, Zlatina Spasova,
Tiffany Man-Wah Wong, Mohamed Haisham,
Charlotte Garrett, Tan Chu Huan, Isobel Blacklock

Rest is a tribute to Dunham Massey's Stamford Military Hospital opened during WWI to treat wounded soldiers. Rest took its design inspiration from the 'outdoor cure', a popular form of treatment for injured soldiers returning from the front at Stamford Military Hospital. Whilst they form a bed, the component elements reflect the inverted form of a Commonwealth war grave, reflecting the resonance of a bed as a site for recovery or the laying out of a corpse.

Although no patient died from their injuries at Stamford Military Hospital, Rest also pays testament to all those who gave their lives in the Great War. The colour was chosen to reflect the Grey family who so generously opened their home to wounded service personnel from Britain and the Commonwealth, providing a sanctuary from the trenches.



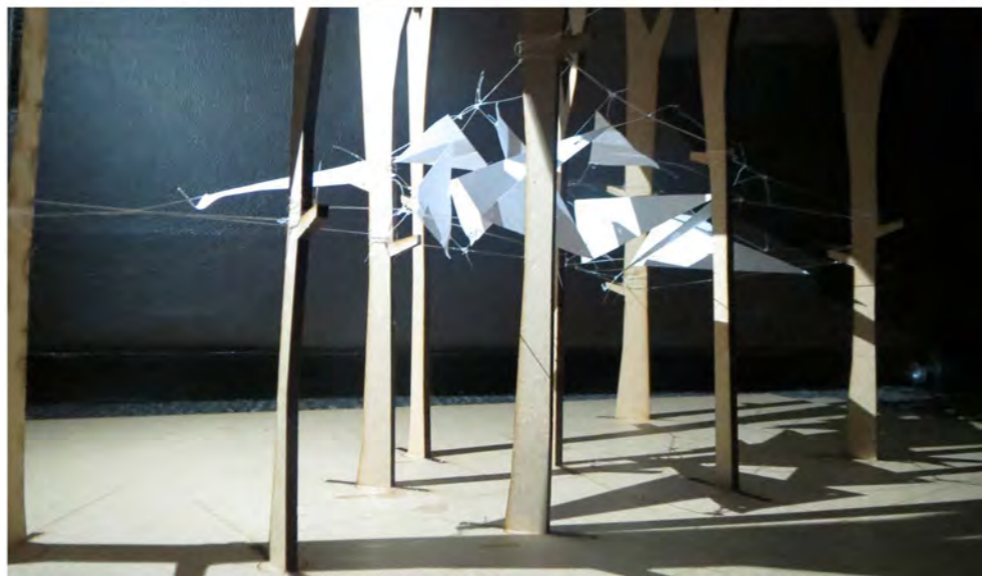
REFABRICATE

Gin-Yee Luu

Albena Atanassova, Benjamin Elford, Seong Cheng Teh, Jemie Ejekam, Dayang Fatin Abang Maamon

Taking its inspiration from aircraft development, Refabricate explores the fragile, wood framed, fabric covered biplanes of World War I; a commemoration of the first war to be fought in the skies as well as on land and sea. The fragmented nature of Refabricate serves as a reminder of the aftermath of war. A recognition of the unimaginable difficulty in restoring order to the participants lives that were often engulfed in a devastating world of chaos.

The form is designed to evoke a sense of invisibility and weightlessness, floating amongst the trees, whilst exuding a sense of comfort and calm dedicated to the remembrance of all those involved in conflict.



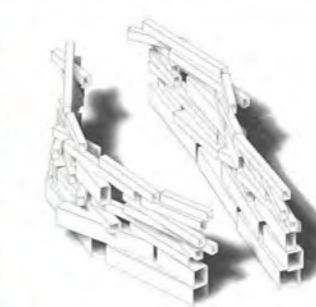
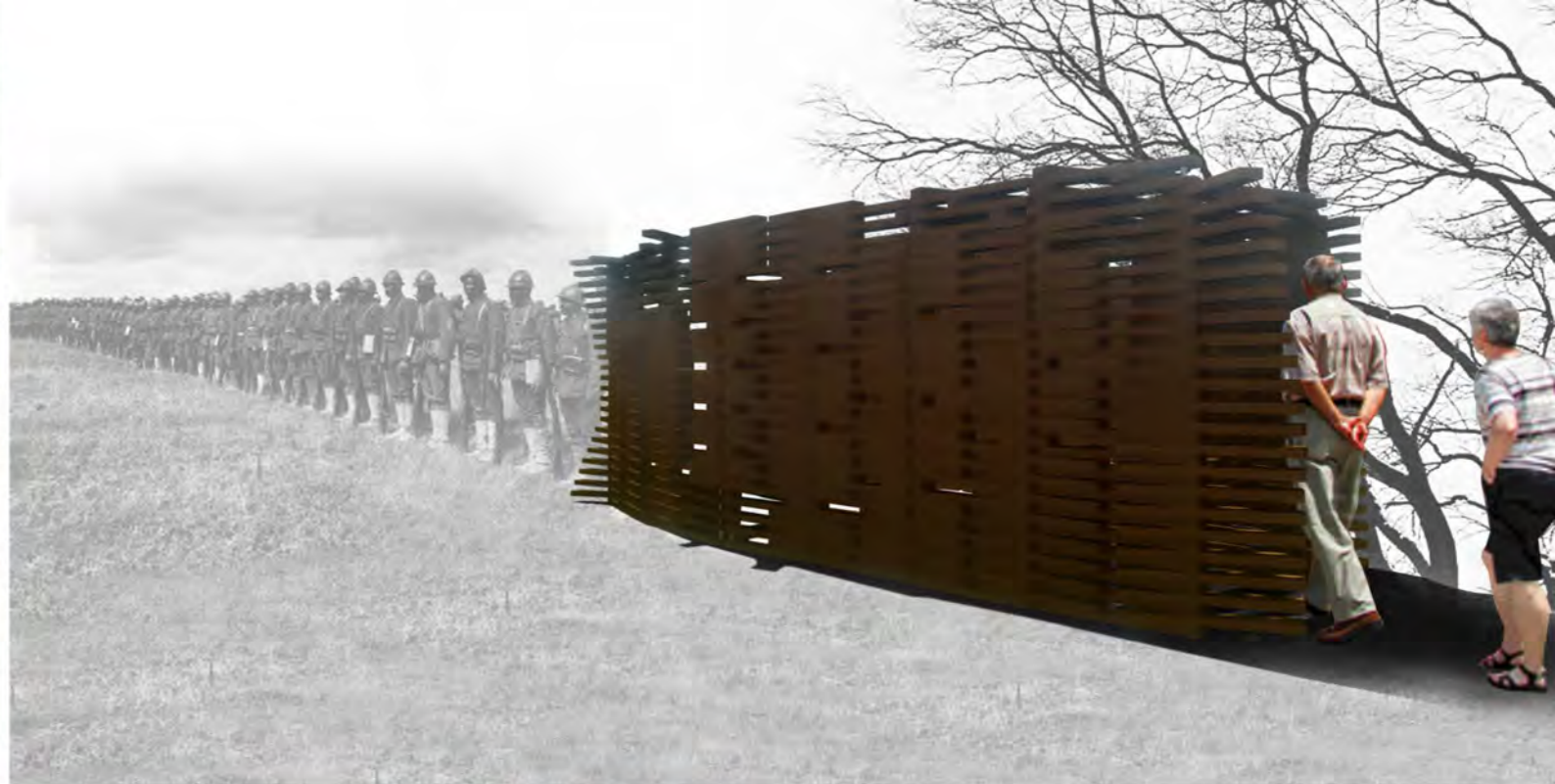
FORTIFY

Saidatul S. Shazri

Boyana Stoeva, Steven Anton, Mohd.Fakhruradzi Bin Tajuddin, James Slocock, Eleni Economidou, Warren Lampson Suen

Fortify is a space for people to interpret the trenches in a poetic and meditative way, paying tribute to the Stamford Military Hospital as a form of protection or fortification for the injured soldiers who returned from the war. The design intention is to stimulate the spatial qualities of life in the trenches through the visitor's experience. Being in the structure promotes the sense of claustrophobia and restricts the visual prospect of the surrounding landscape.

The confined environment is an enactment of the condition of the trenches during the war, where the soldiers occupied a cramped linear space with limited horizontal views in contrast to the openness, exposure and danger associated with going 'over the top'. The restriction of views in the trenches instilled both safety and fear as a function of blindness to the events overhead.



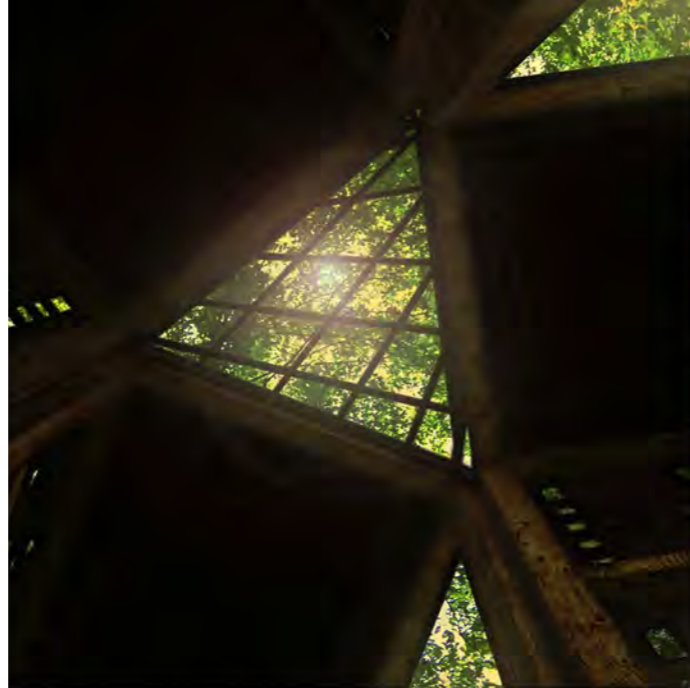
THE SHELL

Tiffany Man-Wah Wong

Mohamed Haisham, Zlatina Spasova, Charlotte Garrett, Tan Chu Huan, Isobel Blacklock

The Shell Pavilion commemorates the service of Dunham Massey as a military hospital during the First World War. This symbolic and experiential pavilion is designed as a place for reflective contemplation about the war, the soldiers, and their hoped for recovery. The exterior design is influenced by Brutalist war sculptures and gathers visual aspects of military hardware.

The design concept derived from a bombshell formed from early photographic images of soldiers managing the heavy bombs that were the agents of catastrophe. The contrast between of light and shade within the structure is intended to symbolise lightness and darkness symbolises memories of near death experiences and the 'hospital' as a place of rest and refuge.



PROJECT DESCRIPTION

The brief was to design a temporary, freestanding, transportable and contemporary showcase Pavilion for the Children's Museum Gardens in Bethnal Green, London, for the duration of the summer of 2014.

The theme for the Triumph Pavilion was 'Dream' inviting interpretations of this as the thematic driver for designs otherwise defined by limited budget and effective construction strategies. The Pavilion designs encouraged and highlighted the need for ecological and sustainable design principles where possible. qed students worked in groups to produce the design competition outputs.

DREAM PAVILIONS

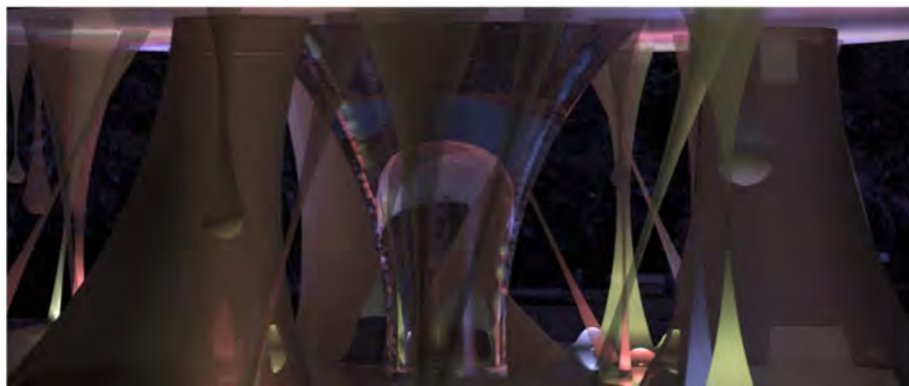
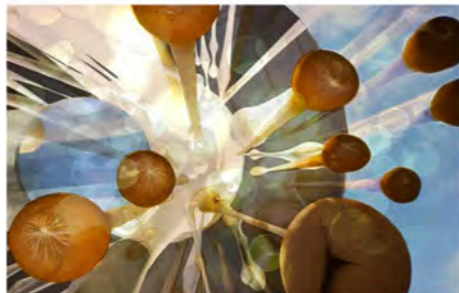
TRIUMPH PAVILION COMPETITION 2013

LIMINAL

Ben Elford, Albena Atanassova, Dayang Fatin Abang Maamon, Gin-Yee Luu, Jemie Ejekam, Seong Cheng Teh

Somewhere between fantasy and reality exists the dream world. It is a place where fragments of both reality and fantasy can coexist and intertwine. Thoughts and memories coningle to materialise visions constructed in the imagination. Liminal provides a space in which people can experience the dream world as they make their way through the distorted, warped forms within. Whilst exploring the depths of the pavilion visitors are met with a number of spaces intended to transport them into a fantasy-like dream atmosphere for thought provided by magical lighting and framed views of the sky whilst sitting amongst soft seating and curved, flowing walls.

The centre of the pavilion presents a moment of clarity in the dream world where visitors experience the real world filtering into the space. Light and shadow and the elements dance inside the pavilion playing its form like an instrument. Soft, ergonomic forms bubble inside and out to culture a moment to sit and dream. Tendrils spanning between floor and roof illuminated by night bathe the pavilion in an ephemeral glow.

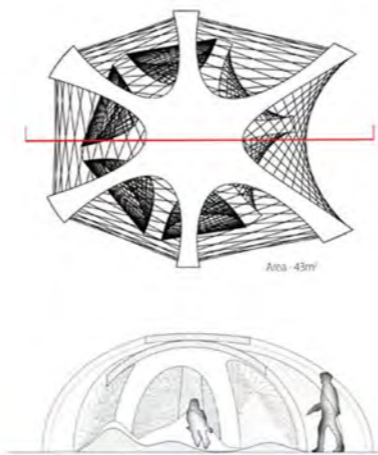


DREAM CATCHER

James Slocock, Warren Lampson Suen, Eleni Economidou, Mohd.Fakhruradzi Bin Tajuddin, Steven Anton, Saidatul S.Shazri

Our dreams reflect our unconscious minds. Dreams can be memories, fantasies, fears, or a chance to unlock our imagination and creativity. When we wake, our dreams become a memory, lost somewhere in our unconscious. Most people struggle to remember the exact details of their dreams. We visualize DREAMCATCHER as a place to lie, away from the space of normal existence. Lying inside an illuminated complexity, it is a place for people to relax and reconnect with 'lost memories' of the unconscious.

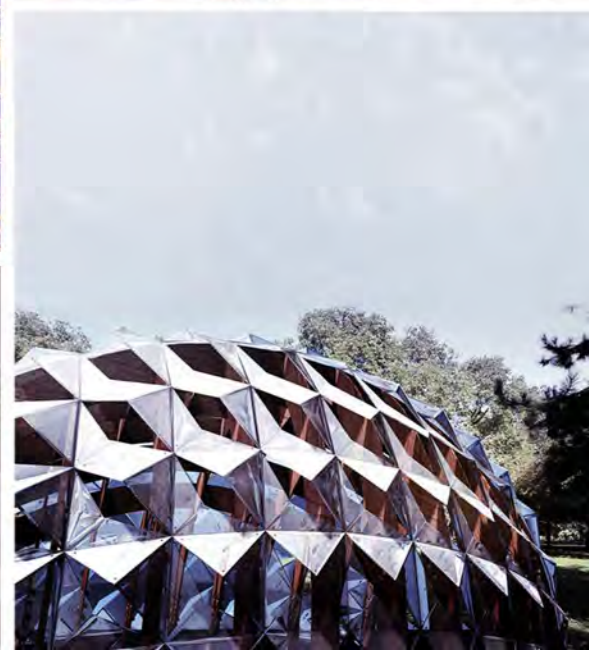
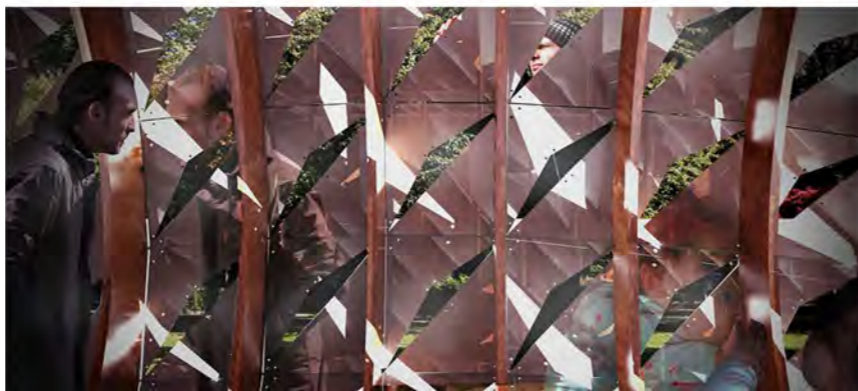
The design is inspired by the imagery of the neurotransmitter signals of the brain and the web like characteristics of a dreamcatcher. Dreamcatchers were believed to catch good dreams and filter out the bad. It is contemporary interpretation of this story. The 'neuroweb' is a place that catches dreams and memories lost in the unconscious; a reference to the Native American tradition where the feathers of a dreamcatcher guide the dream to the sleeping person below. The pavilion provides an environment to focus on remembering and re-living.



FRACTALS

Alexandr Valakh, Chan Ching Yee, Danielle Foster,
Lorena Chan, Patrick Gorman, Samuel Neal

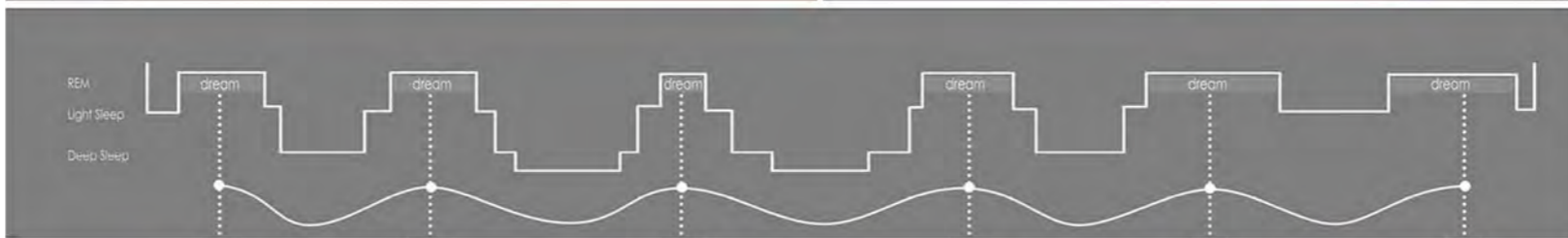
Dreams are a collation of images, emotions and sensations first experienced while awake and then re-experienced involuntarily during sleep as a distorted, surreal amalgamation of reality. In short, dreams provide a fractured re-representation of our conscious lives. For most people, while awake, our experiences, senses and emotions are stitched together in a uniform way to provide a coherent portrayal of what we see, hear, smell, taste, touch and think. This patchwork of sense distorts and is thrown out of order while we dream. Using the parametric modelling of reflective surfaces the pavilion fractures visual reality and immerses the observer into a distorted visual space. Mirrors reflect light and images from many angles and leave the viewer re-experiencing their immediate environment in a distorted way to portray a dream like reality. A sense of disorientation adds to the feeling of being in a dream and enhances the viewer's experience. While viewed from the exterior the viewer will begin to glimpse the world of dream as the natural environment of the park and sky become distorted. As visitors enter the space, the feeling of the surreal amplifies as fractured images of themselves and others are reflected back with varying levels of intensity.



DREAM KALEIDOSCOPE

Richard Jefferis, Omer Osman, Alan Pun, Boyana Stoeva, Fatin Thurayyah Binti Zolkeplay, Tengku Ina Syazwi Tengku Zubir

Kaleidoscope is a concept of infinite reflections in an intensely surreal and distorted reality. The confusing environment that a kaleidoscope creates is similar to a dream. Our pavilion plays on the concept of distorted realities, which is our interpretation of dreams. Dreams happen in a phase of our sleep cycle that represents the pinnacle of brain activity. In a typical sleep, this phase builds, passes and recurs. In the same way, our pavilion design is about reaching a pinnacle at which the users experience of reality is magnified and distorted. The volume formed by a quadrilateral triangle gives infinite reflections which is both playful and immersive. Slits in the side create a continuous ribbon which is continuous through the pavilion. The slits serve as a reference to the reality outside admitting fractals of the surrounding parkland distorted and fractured by reflection within.



PSEUDO-SOMNIA

Zlatina Spasova, Tiffany Wong, Mohamed Haisham, Charlotte Garrett, Tan Chu Huan, Isobel Blacklock

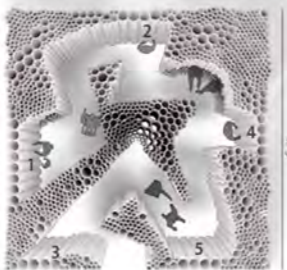
Pavilion pseudo-somnia exploits the theory that “dreams reveal more than they conceal”, seeking to alter the perception of the user through a series of “optical illusions”. A composition of fisheye, black and white, 180-degree rotation, distortion and 3-image mirages are employed to create a submersive experience that transcends the boundaries between the Real and the Imagined. These are encompassed holistically within an ethereal form generated by synthesising data gathered from agency in the park and its surroundings. The varying material density in the pavilion is achieved through the use of three different tube dimensions, creating a crescendo of intrigue and discovery where light and dark along with fluctuating degrees of visibility lead the user deeper within the structure. Having entered the pavilion, connections with the outside world are severed. The pivotal moment between consciousness and unconsciousness is reflected in the single point of access and egress. Pseudo-fenestration along the façade intensifies the effect of illusion, reinforcing the relationship between sleeping and dreaming; the REM phases and the constant transitions between deep sleep and being nearly awake.



FINAL FORM



EXPLODED: WALL, PATH & ROOF



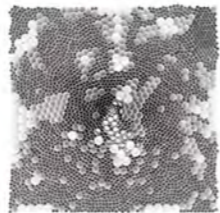
PLAN



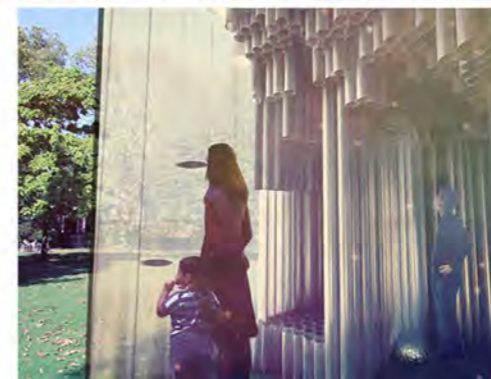
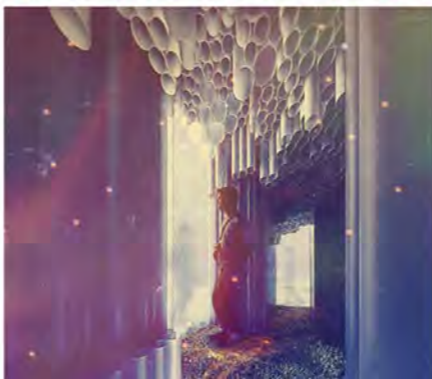
SECTION



TRANSLUCENCY WALLS



TRANSLUCENCY ROOF



MArch YEAR ONE



PROJECT DESCRIPTION

d3 Housing Tomorrow aims to encourage the design and discussion of innovative future housing strategies and is a forum for performance-based design in housing. Individual designs were submitted by MArch Year 1 students to respond to contemporary issues such as climate change and changing demographics across a variety of different cultures. Emphasis was placed on the generation sustainable ecological models for human habitat within the projects.

Two entries (Dayang Fatin Abang Maamon and Mohd. Fakhruradzi Bin Tajuddin) were selected for the d3 exhibition in Houston (Texas) and one shortlisted in the Manchester Society of Architects Design Awards (Mohd. Fakhruradzi Bin Tajuddin).

D3 HOUSING TOMORROW

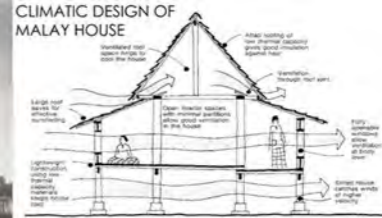
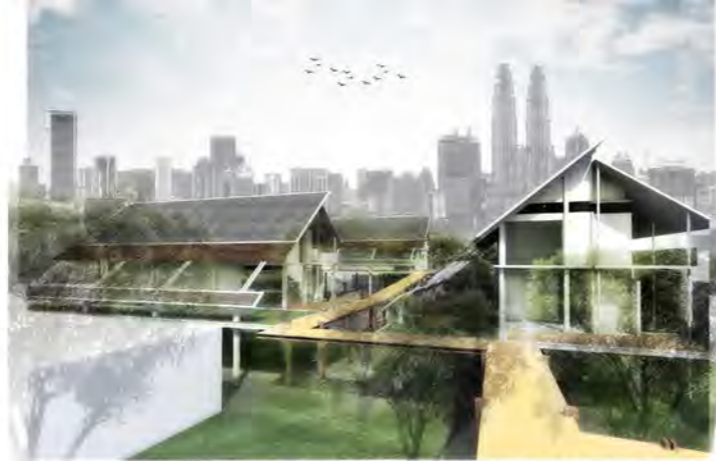
D3 Competition 2014

23 MARCH YEAR ONE

FLOATING VERNACULAR

Mohd. Fakhuradzi Bin Tajuddin

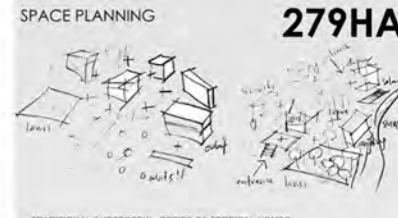
Floating Vernacular is a reinterpretation and re-adaptation of climatic aspects of the Malay Kampong House in a flood-prone area. The design was developed in the heart of Kuala Lumpur, a bustling metropolitan city in Malaysia. In Kampong Baru, the main concerns during design development were the issues of 'buildability'; trying to preserve and benefit from the heritage value of Malay Reserve Land and providing a framework for sustainable lifestyles on the flood plain. The houses were designed to be raised above the flood plain to avoid the risk of flooding. Primary pedestrian access was also raised to this higher level giving priority to the pedestrian and cyclist over the cars which would be restricted to the flood plain level. The flood plain is therefore preserved for agriculture and vegetable plots taking maximum benefit from the fertile soil. Large communal open spaces and courtyards are created between the buildings to help to build a thriving community. The house tries to challenge the idea of a house as a mini plant for the production of energy. The idea is to manipulate the growing capacity concurrently with the production of energy. The house aims to embrace new technology in order to enhance sustainability and to protect our natural and built environment for future generations.



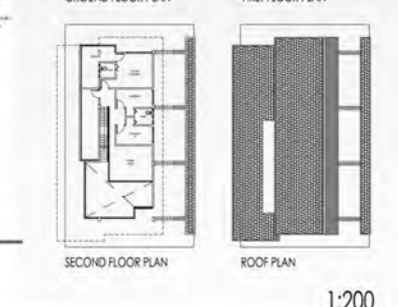
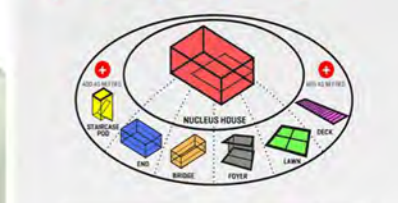
DESIGN STRATEGY



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TRADITIONAL SUCCESSFUL RECIPE OF TROPICAL HOMES



1:200

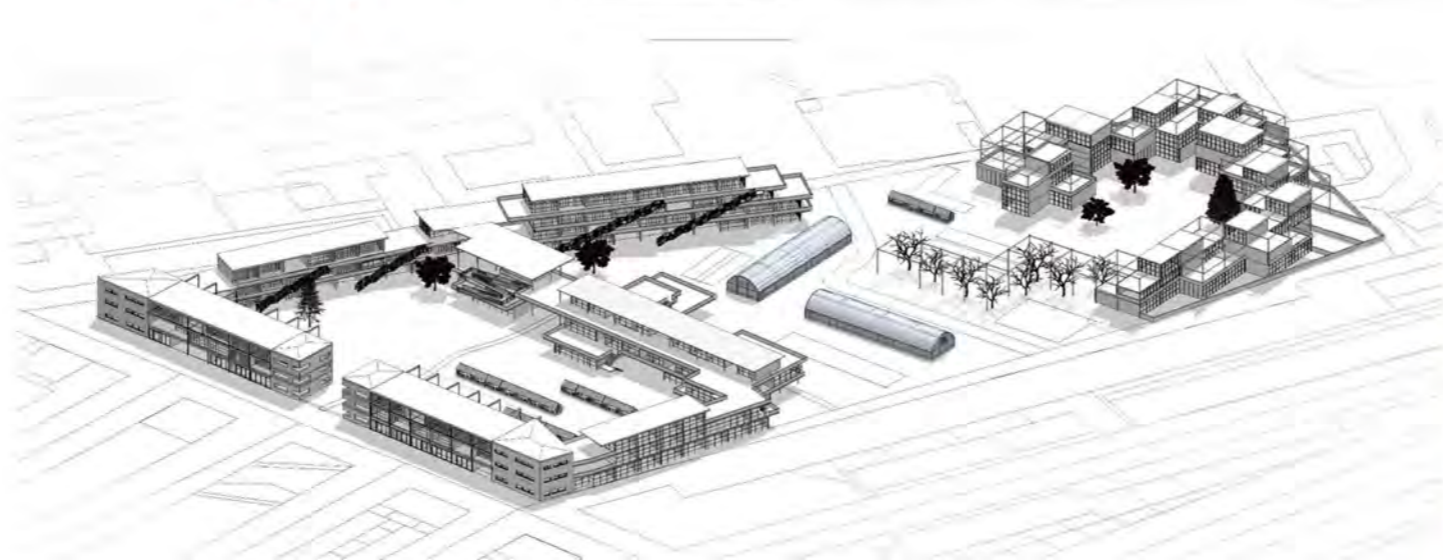
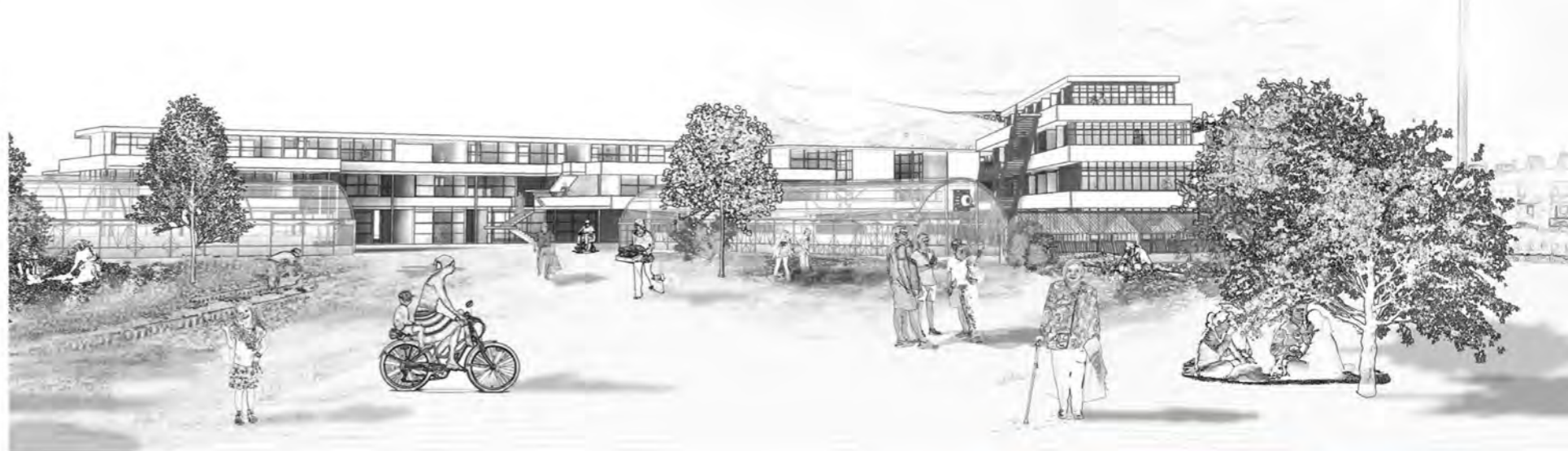
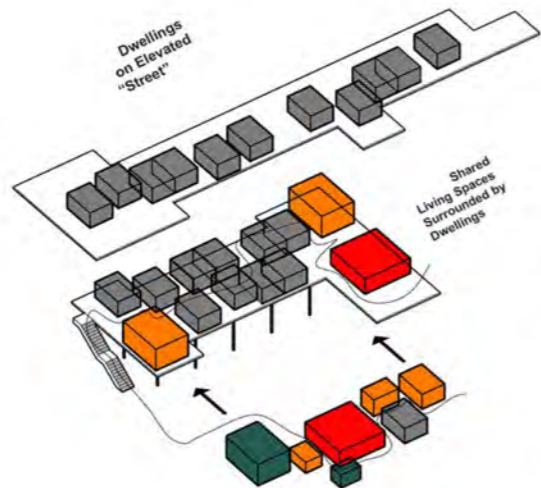
25 MARCH YEAR ONE

GENERATIONS COHOUSING

Steven Anton

In the UK, the failure of the Labour Government sponsored "Pathfinder" scheme has left a legacy of derelict inner city urban sites often in areas of relative social deprivation. In north Liverpool some of these sites have been developed and historic terraced housing has been replaced by lower density, lower quality housing built to satisfy only short term economic goals.

The character of the area has changed and traditional established communities have been dispersed. Other areas have been abandoned and neglected. This Co-housing Community seeks to provide a self-sustaining and balanced ecology, creating leisure and work opportunities within the scheme. This includes community based agriculture and assisted start-up schemes for small businesses.

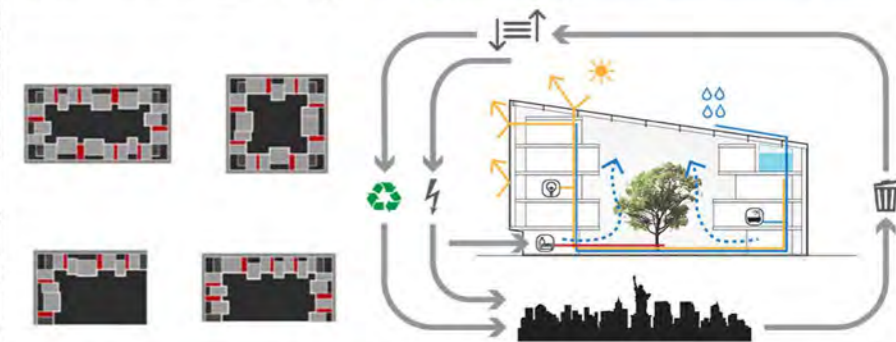


HOME FOR HOMIES- NYC

Chan Ching Yee

Many brownfield sites can be found around low-income areas in New York City. They are either being occupied by empty infrastructure or affected by environmental contamination. This is a great opportunity to clean up new land for redevelopment. A low-cost community house will be the first home for immigrants settling in after arrival in the city. Searing heat waves, reducing the number cold days, intense rainstorms and coastal flooding are occurring in New York City.

The goal of the design is to create a zero carbon and energy positive community house for immigrants to shelter from the extreme weather. In the design approach, there are three modular units, small, medium and large for different sized families. Facilities are used in common between shared units gaining some level of privacy. Spatial configurations can be adapted according to the site context. All units are arranged around an inner courtyard stacked and shifted forming various common spaces next to the habitation units. Public and private spaces are intricately woven encouraging generating social interaction between people.



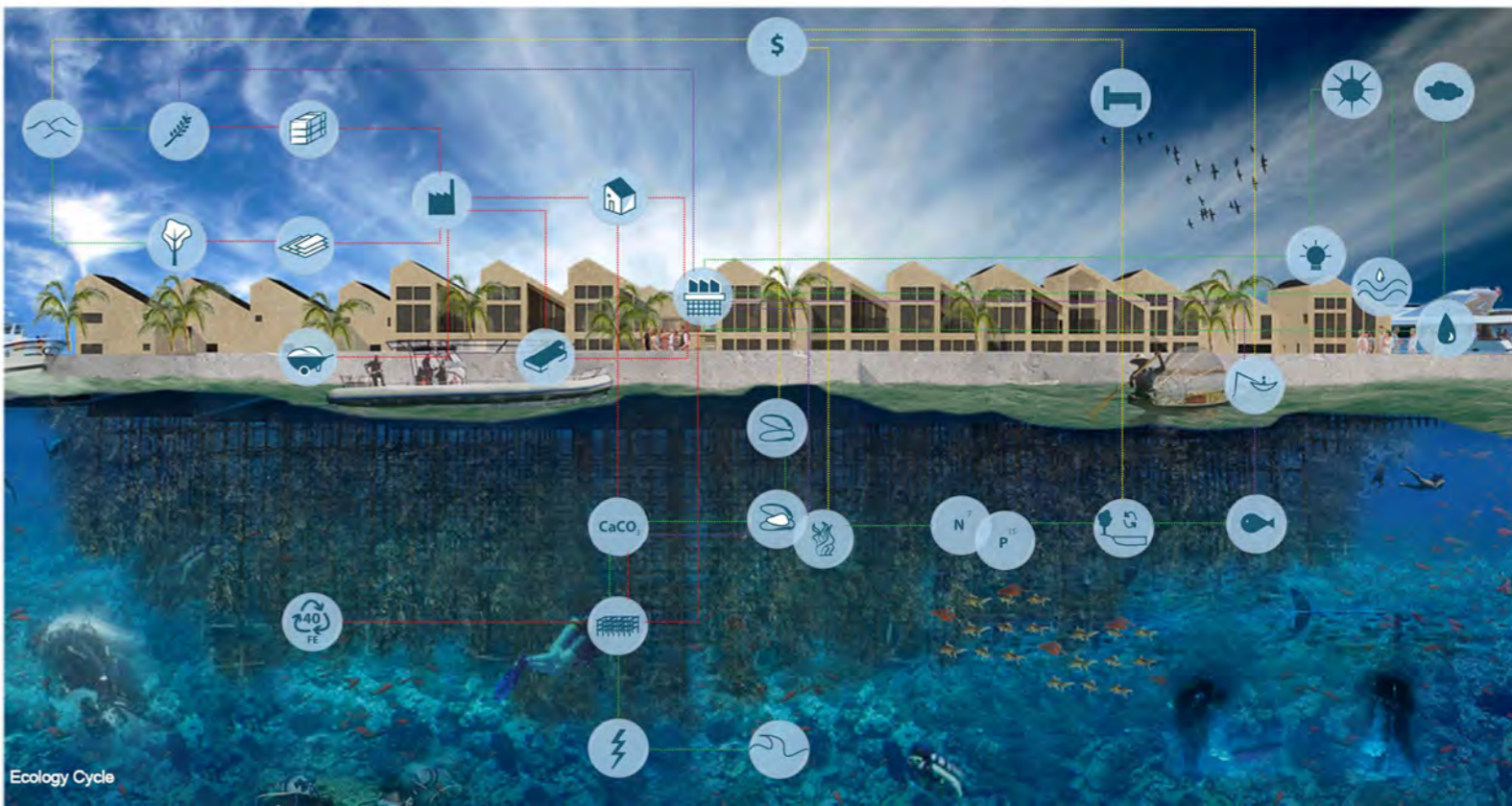
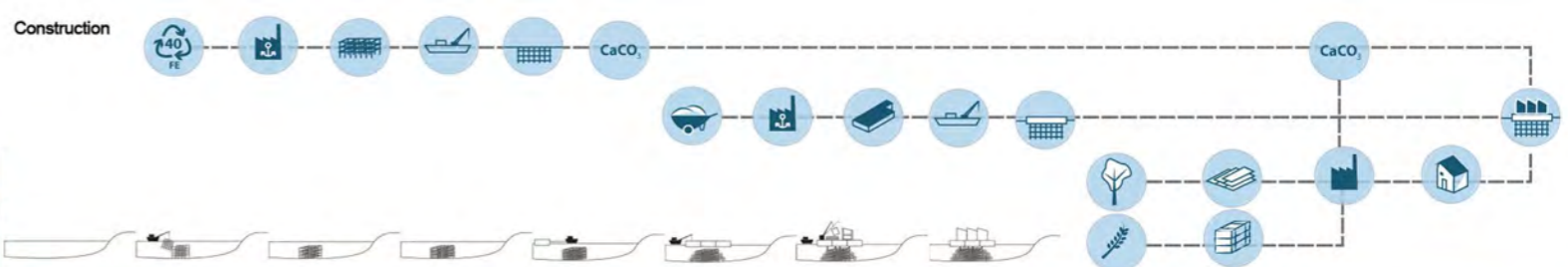
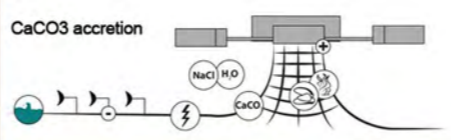
New approach - mixing with common facilities and public space

Ecological Diagram

ARCHIMEDES' VILLAGE

Zlatina Spasova

In the past 25-30 years, the Black Sea has been transformed from a diverse ecosystem supporting varied marine life to the largest anoxic water body in the world. Among the main reasons for this, is a process called 'eutrophication', caused by large input of nutrients into the water, which encourages algal bloom. This not only disturbs the aquatic ecosystems but becomes a threat for animal and human health. Therefore, I propose a housing strategy that will not only be harmless to the surrounding environment but will target its existing problems and remediate the local ecologies. The Archimedes' Village is a form of residential housing designed to solve the Eutrophication crisis in the Black Sea. Housing developments will be located in areas with excessive nutrient content along the Black Sea coast. Each housing community consists of a central core unit with public spaces and buoyant houses attached to the core unit. A steel frame structure anchors the core to the sea floor but most importantly, through Calcium carbonate accretion, mussels and seaweed are attracted to the steel structure and act as a natural water filtration system. This will drastically reduce the nutrient content in the water and will gradually reverse the process of biodegradation.



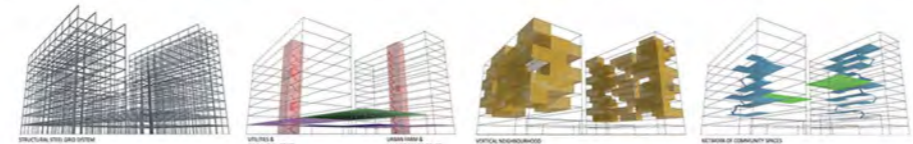
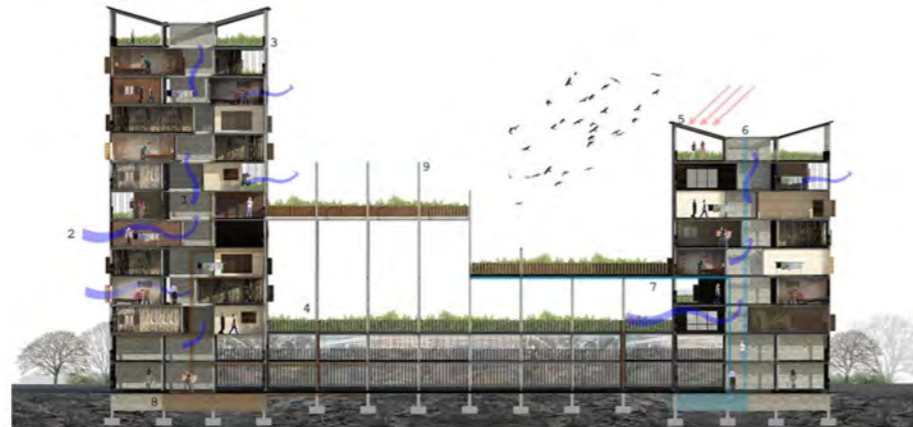
28 MARCH YEAR ONE

KAMPONG-IN-THE-SKY

Seong Cheng Teh

Large migration from rural areas to the city has resulted high populations that place enormous demand on housing stock, especially in the land-scarce Penang Island. The once ubiquitous Kampongs are also in danger of being swept into oblivion by urban high-rise residences. Kampong-in-the-sky aims to capture the demand for low cost housing promoting a spirit of togetherness and interaction while creating an economically and ecologically sustainable living space.

Unlike common high-rise, Kampong-in-the-sky allows occupants to relocate and modify their residences according to their needs ensuring the building is flexible and adaptive in the context of future change. Adopting thermal comfort strategies from traditional Malay house in the Kampong and bringing more of nature into the building promotes sustainable zero-carbon living for the occupants. The timeless legacy of culture and tradition intertwine in an enduring example of sustainable housing.



29 MARCH YEAR ONE

NOMAD CITY

Boyana Stoeva

In the city of Sofia, Bulgaria more and more construction sites are being abandoned left to the mercy of vandals and the elements. This project is an appeal for the re-use of those spaces through the development of temporary communities. The scheme proposes the use of reclaimed shipping containers as small, temporary dwellings for people with low or no income.

The containers are transformed and installed onto abandoned construction sites allowing for the flow of people to regenerate and protect the structure until the construction process is resumed. The scheme concentrates on the development of a symbiotic relationship between unwanted people and unwanted buildings, allowing both to find a new purpose in life and a place in society.



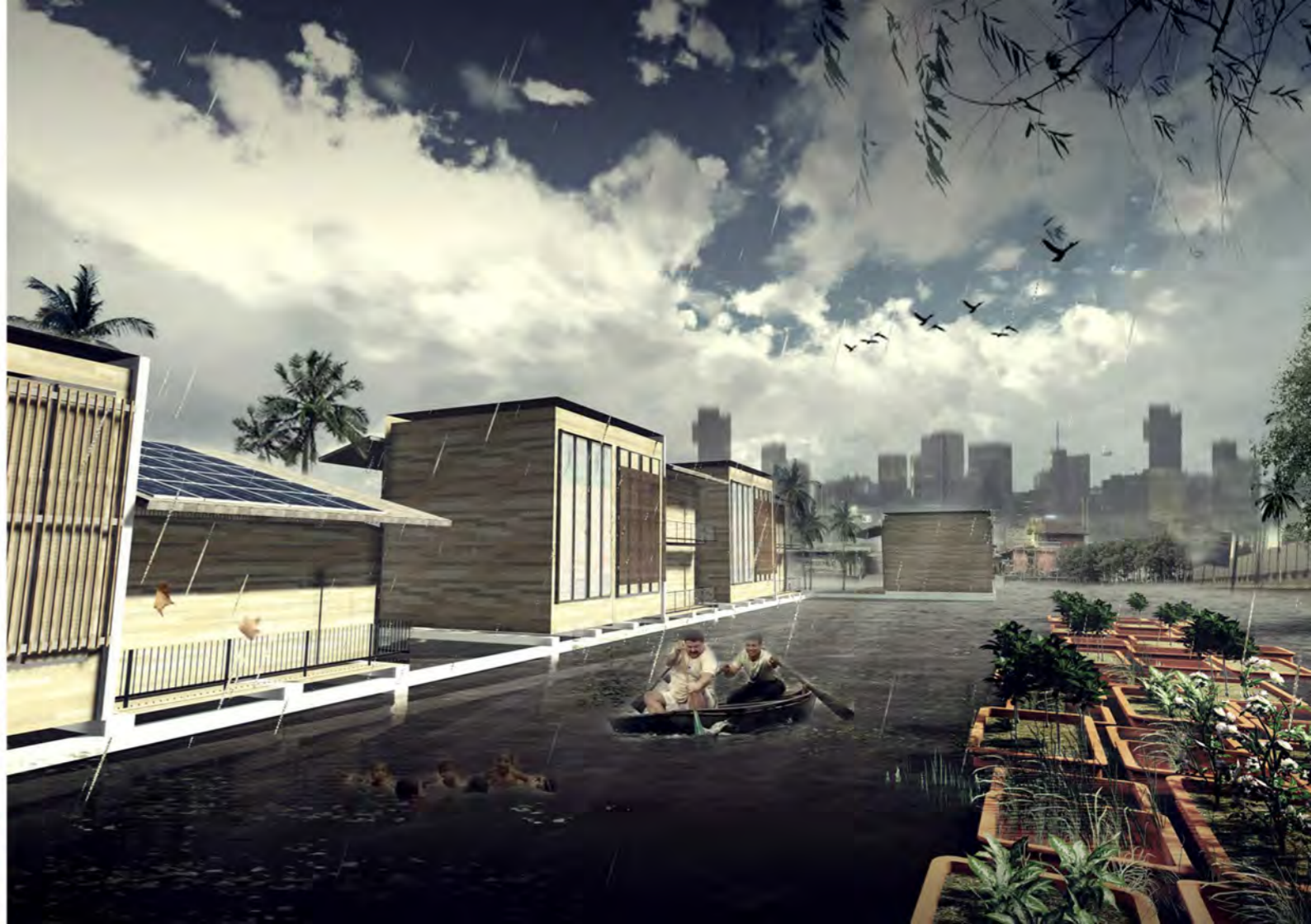
30 MARCH YEAR ONE

GREEN GLADE

Saidatul Syahirah Shazri

Green Glade embraces the 'deluge'. Instead of flooding promoting insecurity Green Glade allows the community and the flood to coexist harmoniously. Flood manipulation is being emphasised in the design of this housing system. Flood manipulation is focused on energy generation. The flow of water is directed via drainage to tanks; the kinetic energy used to drive turbines to generate electricity for the houses. Water is also used for plants and crops, which are a valuable source of food.

As the phased development evolves, the production of new material and energy also evolves. Waste from the human and agricultural activities, biomass energy is incorporated within the system. This creates a cycle of energy regeneration within the housing community. The site is Kampong Baru initially developing agricultural activities, especially in paddy planting. The low-density buildings surrounded by high density urbanism means that Kampong Baru will become a productive and sustainable 'wetland' in Kuala Lumpur.

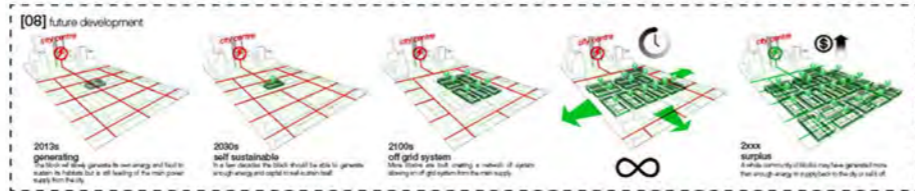
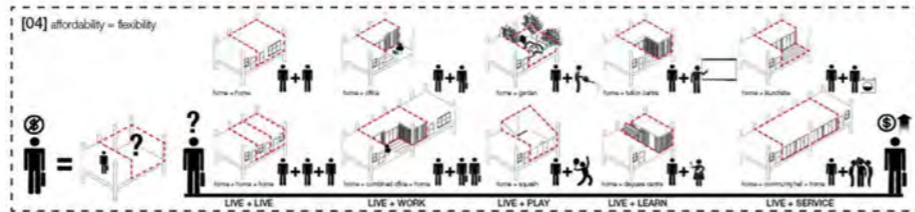
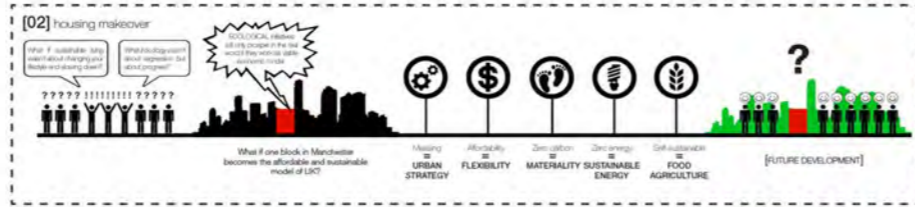


RE: BIRTH OF MANCHESTER

Tengku Inda Syazwi Binti Tengku Zubir

The design inspiration for this project resulted from two questions. What if we didn't have to adapt our lifestyle to sustainability, but instead adjusted our sustainable design to the way we want to live? What if one block in Manchester became the affordable and sustainable model for the UK? Ecological initiatives will only prosper in the real world if they also work as viable economic models. These factors were considered in order to stimulate and sustain the re-urbanisation of areas where there is a need for a housing complex to be a self-generative environment and develop a socioeconomic sustainability. Is it possible to create a housing community that could give its residents the leverage of creating economic opportunities?

Adaptability is key here; tenants are given a modular space to renovate and sub-let according to lifestyle, and the option to choose facades that best suit programming a generative sustainability through inbuilt systems for adaptive reuse. The income generated from the modules rented out or used for workspace could also finance housing costs.

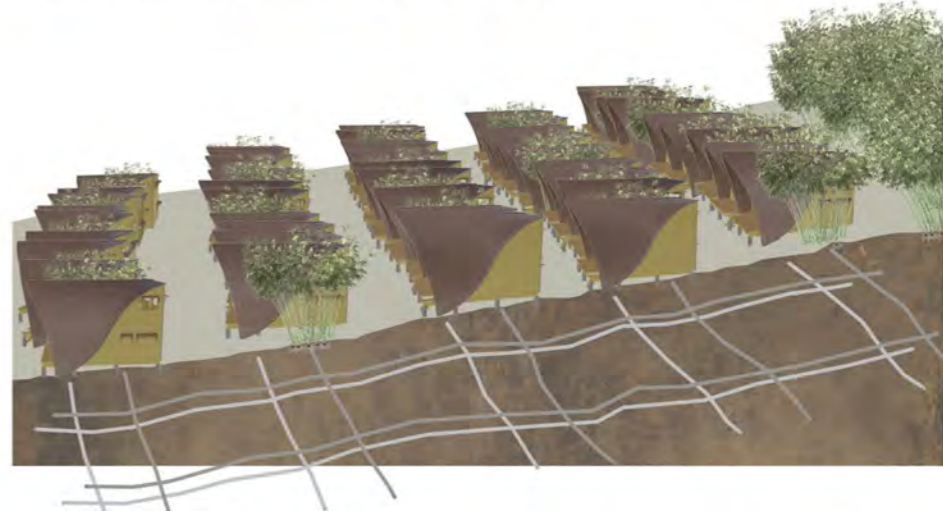


URBANISING PERIPHERY

Tan Chu Huan

As the world experiences urbanisation, cities are struggling to spatially sustain the rapidly growing urban population. However, cities with dense population such as Hong Kong and Medellin do have large amounts of undeveloped land due to hilly topography. In the case of Medellin, which sits within the Aburra Valley, the city has become heavily populated since the 1960s and all the flat areas have been completely occupied.

Peripheral informal settlements have built up on mountain slopes surrounding the city. Yet, the slopes are highly prone to landslides and soil erosion that resulted in considerable risk for residents. This proposal presents a master strategy for further development around Medellin responding to the site topography, users and the landslide risks. It utilises bamboo as a primary construction material - a response that is sustainable and economic. This scheme can also be applied to other cities especially those in the tropical climate zones. By growing our own building material, and building our own houses, construction is low cost, low energy and renewable.



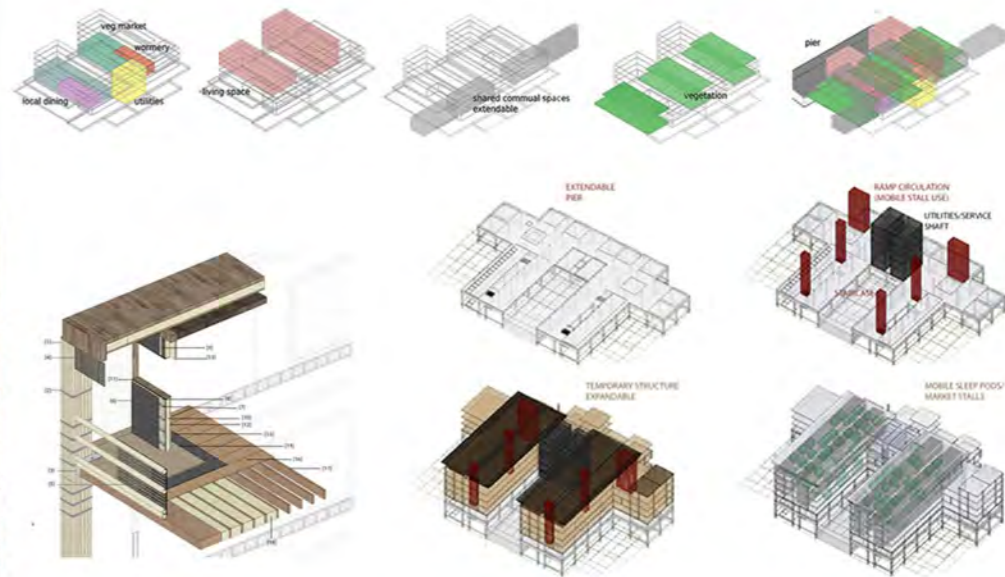
FARM-SELL-LIVE

Tiffany Man-Wah Wong

In the coastal areas of Hong Kong, many property developers have seen the potential in creating high value waterfront properties that would give a good price in the current property climate. Residents living in squatter villages in nearby coastal areas are demolished for new builds.

Moving away from these communities would bring financial problems for these people as they cannot afford to rent/buy. The waiting list to be given public housing is now longer than a decade. These factors have put the inhabitants of these squatter villages in a very difficult position.

Extreme climatic disturbances; typhoons, hotter and wetter summers and winters, and rising seawater levels are exacerbated under pressure from development. The concept is to provide low cost living space at low rent, and space to grow food to sell. Local residents and other people who arrive and depart from the ferry pier can come to eat fresh food chosen in the market prepared by resident chefs. The building, shading a pier, is constructed with bamboo (scaffolding) and reused materials such as timber and metal sheets. The modular space is adaptable and extendable in size both in the interior and exterior to suit the community's use.



KG BARU

Fatin Thurayyah Zolkeplay

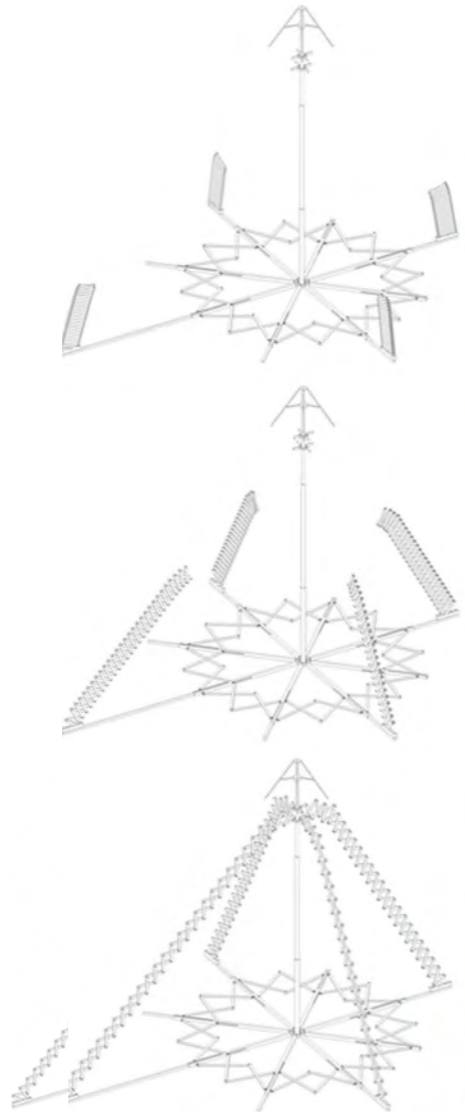
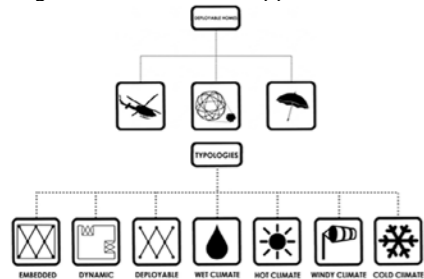
'Space moving through time' is a design concept to create greater ecological fluency of building stock in response to these unpredictable circumstances. The implication of upcycle, recycle, and reuse has been applied to achieve a sustainable design in reducing carbon emissions associated with development over time. A simple module system is used to standardise the structure accommodating contingency and typological change within a flexible system. Kampong Baru is the oldest Malay settlement in Kuala Lumpur. Overlapping ownership with an average of about five landowners per lot marks it out as stagnant in terms of development and contributes to slum conditions. The flexible design accommodating redevelopment over time has referenced and utilised basic construction and material principles of traditional Malay architecture which traditionally allow an inherent contingent adaptability in their building stock. The central premise is to authorise the residents in exerting control over their own space according to their needs with a changing lifestyle. Engagement with local people who are used to constructing their own dwelling allows this structure to implement a manually powered construction approach. The spaces are flexible and can be extended vertically or horizontally to suit the community's needs.



RE-PLACE

Charlotte Garrett

Population displacement is a growing problem, at the end of 2012; more than 45.2 million people were in situations of displacement. Driven from their homes by armed conflict, natural disasters, or climate change; however for the majority of displaced peoples, war remains the dominant cause. Re-Place is a shelter that provides emergency housing for victims of natural disasters and refugees, which following the current trend will be an all too common sight in our future. The design is intended to be easy to assemble, dismantle, transport and store providing vital emergency shelter for people in need. The structure that is transportable in its closed state, whilst providing a comfortable shelter from the elements once located. It is a durable, lightweight, versatile and modular system, designed for change in either location or application.

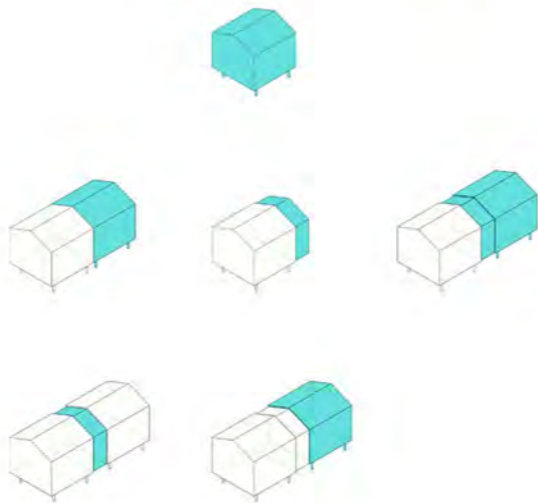
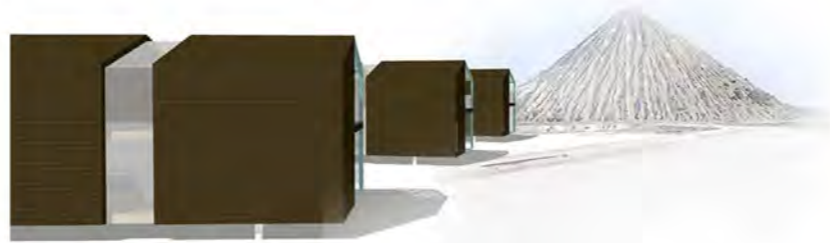


MULTIGENERATIONAL HOUSING

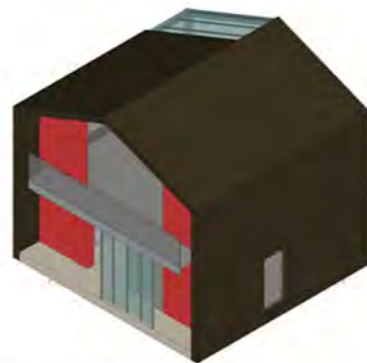
Isobel Blacklock

The design is governed by a desire to produce a viable housing solution that benefits residents of more than one generation. A continued upward trend in increased life expectancies, as proven by recent studies, denotes opportunities for three or more generations to co-habit. Innovative and flexible new models for housing should be configured to provide both interaction between and independence from generations, and adaptability for changing user needs. The housing strategy seeks to accommodate family units of varying make-up through a participant design and build scheme.

Over time with the coming of new generations, the habitation patterns will shift, allowing optimal living arrangements for the inhabitants. The construction concept is integral to the home ecology whereby the construction is shared by skilled workers (prefabricated frame construction) and the homeowners (infill construction). In this way a sense of ownership is derived as is a cyclical pattern for building and modifying the home environment to suit the changing needs and occupancy levels.



Internal visualisation



First Phase starter home



Subsequent phase modified home

PROJECT DESCRIPTION

The brief was to produce a concept scheme for ten to fifteen Units in a development of apartments on East Philip Street, Salford, adjacent to the River Irwell in an area of land that is owned by the Biospheric Foundation and Urban Splash. The concepts needed to embody a positive ecological approach in their design and be operationally environmentally 'positive': enhancing human existence. The Biospheric Foundation aims to challenge contemporary notions of food production and supply, by providing a positive alternative, based on technological application, ecological thinking and community involvement. It consists of a series of urban interventions related to food production supply and delivery, which aims not only to feed people in a more healthy and sustainable way, but also close resource cycles and improve urban resilience.



Vinnie Walsh

BIOSPHERIC FOUNDATION

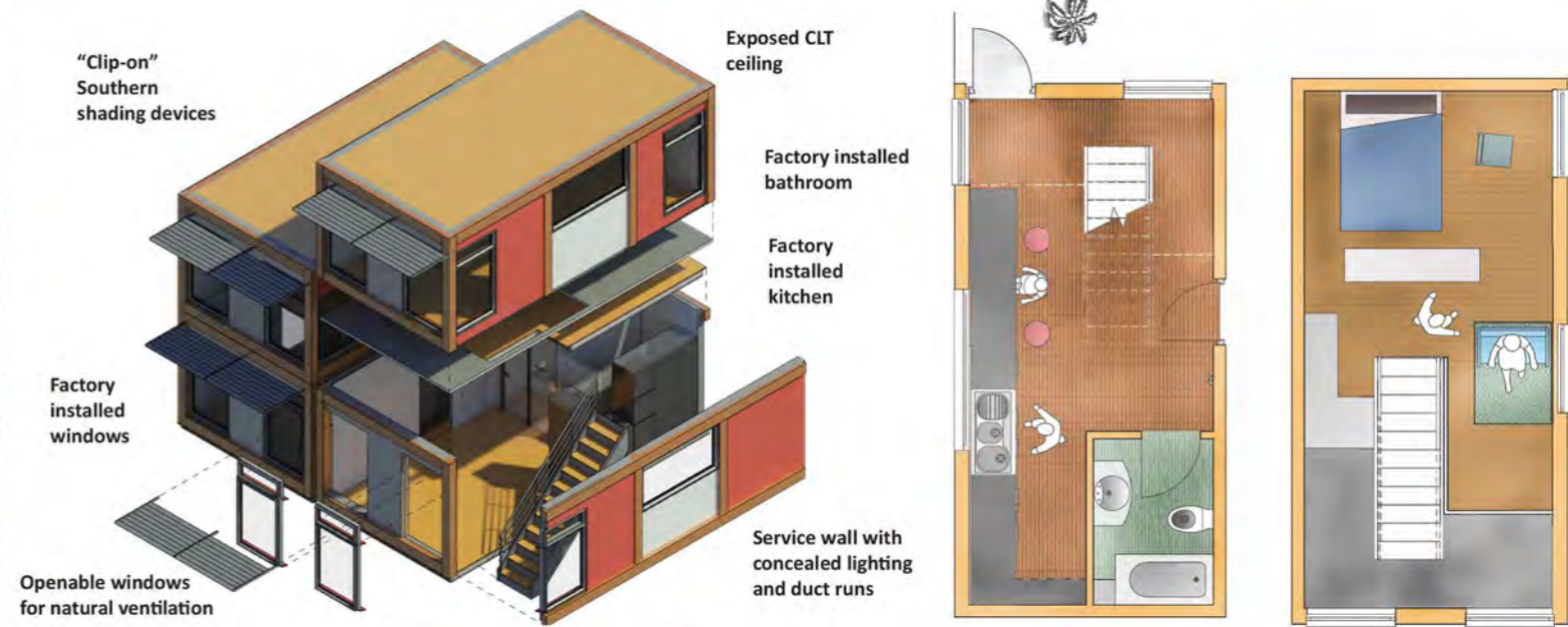
APARTMENTS ON EAST PHILIP STREET, SALFORD

BIOSPHERIC APARTMENTS

Steven Anton, Saidatul Syahirah Shazri

These low-cost apartments with a combination of one and two bedroom dwellings are located in Salford, just outside of Manchester City Centre. The plan is organised around the concept of grouped services and with the aim of maximising the southern exposure to the sun for maximum solar gain in winter. Each individual apartment has access to a southern facing outdoor space whilst maintaining the strict modularity of this low-cost design. Modules can be combined in a number of different ways, either horizontally or vertically allowing for flexible arrangements to suit user needs.

A number of add-on elements such as shading devices on the south and customisable balconies give the user freedom to control their environment and respond to future climate change. Prefabricated volumes are assembled to form three groups of one or two bedroom apartments. Outdoor balcony spaces are bolted-on as separate elements. This is a rapid and cost-effective form of construction that allows for flexibility. The whole building can be demounted and re-arranged on a different site to promote re-use as the foundation of sustainability.



IRWELL APARTMENTS

Seong Cheng Teh, Tiffany Man-Wah Wong

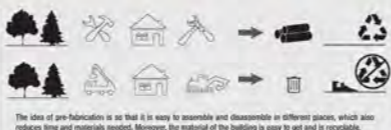
The design proposed a block containing 15 units in response to the brief from the Biospheric Foundation. Access via a controlled gate for the residents promotes security and privacy. This leads to a courtyard space that could be used for planting, a pond, or even food production space shared with the Biospheric Foundation building next door. The circulation routes are short meaning more space has been allowed for private garden terraces and a shared green roof. On the second floor there are 5 two-bed units with a private garden terrace/balcony at a higher price range compared to the single units on the 1st floor. The ground floor comprises of both 2 bed-units and 3 single units, all designed to promote social inclusion.



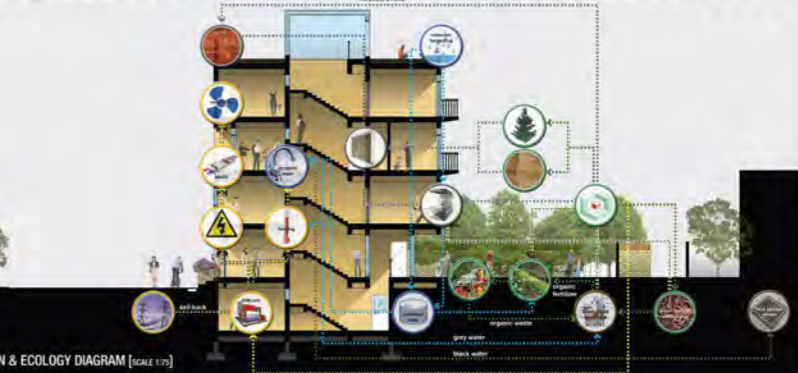
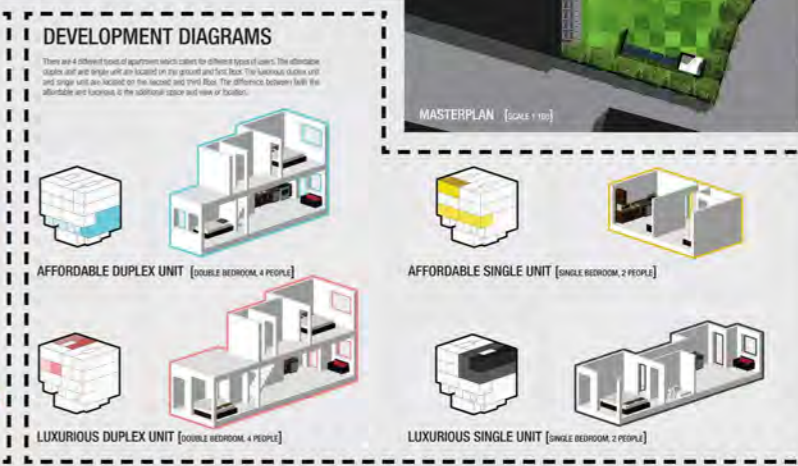
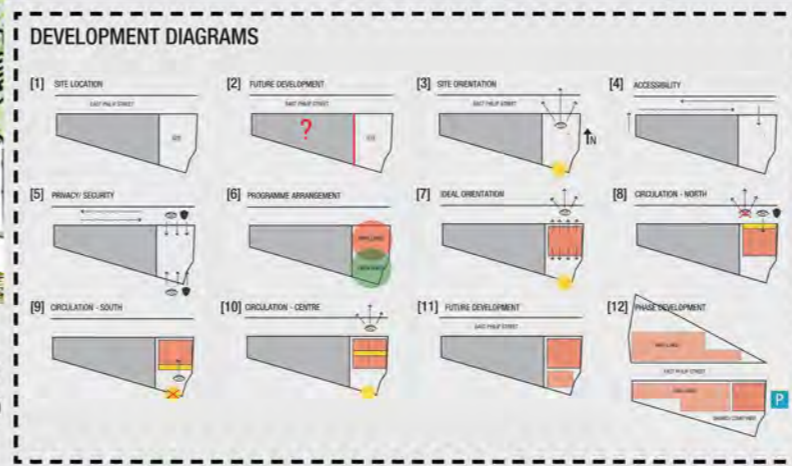
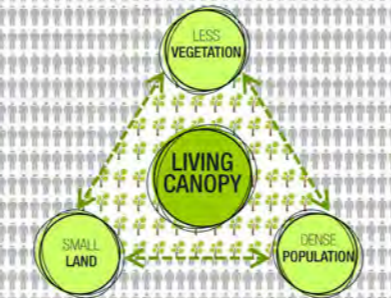
GAIA DWELLINGS

Zlatina Spasova, Tengku Inda Syazwi Tengku Zubir

The concept is developed around the notion of achieving a 3-dimensional form that elevates the level and quality of interaction within the community of residents. The spatial arrangement as well as the visual and physical connectivity will enhance the quality of the living environment and will encourage a 'well-knit community'. Our dwelling proposal uses passivhaus principles with pre-fabrication as a construction method, which dictated the modular design of our project. The regular façade grid and material palette aim to correspond with the site context and to Irwell House, thus integrating the Gaia Dwelling with the surrounding environment. Adopting a thin and narrow programmatic arrangement with circulation running in the middle of the flats allowed us to fit more units within the limited space given. There are 4 different types of apartments that cater for different types of users. - affordable duplex and single bedroom units and more luxurious duplex and single bedroom units. The project explores the notion of 'homes' that recalibrate our expectations for building ecologies in the second millennium.



The idea of pre-fabrication is so that it is easy to assemble and disassemble in different places, which also reduces time and materials needed. Moreover, the material of the building is easy to get and is recyclable.

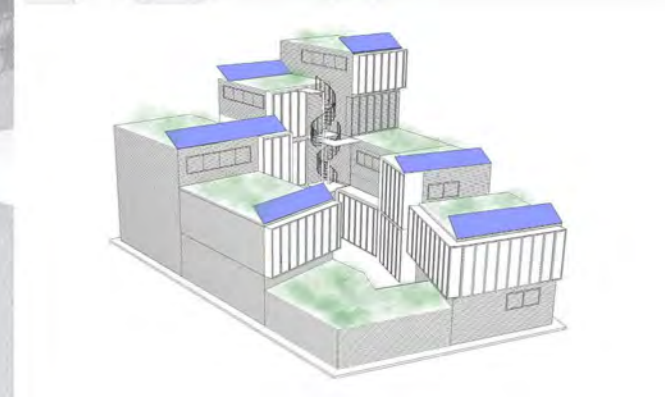
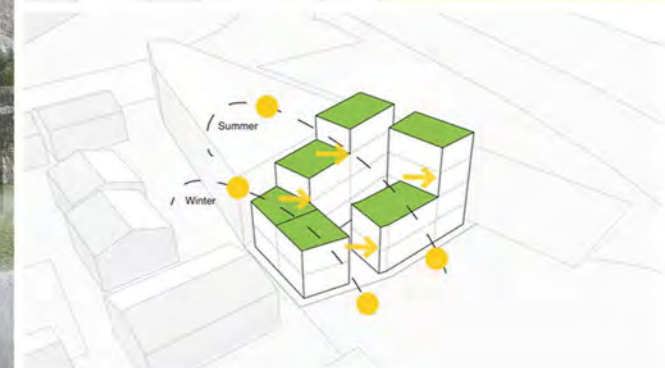
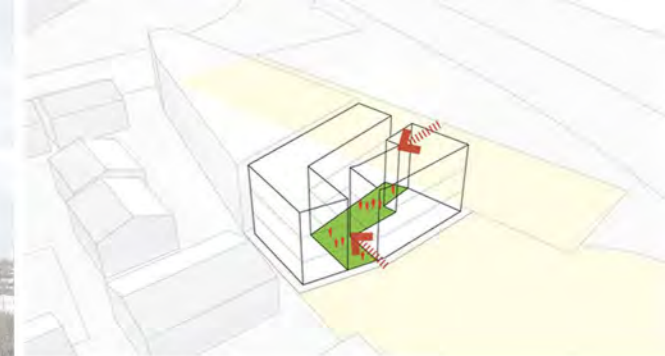


ROOF TERRACE

Chan Ching Yee, Fatin Thurayyah Zolkeplay

The Biospheric Foundation promotes complete ecological systems in their building. They generate electricity and collect rainwater both used as integral parts of the demonstrations of food systems within the building. This includes recycled materials used to produce a variety of organic mushrooms. This system is complex requiring continuous monitoring and is not suitable for integration into a housing scheme. Thus our idea was to provide a support system for the Biospheric Foundation especially to generate electricity.

Dwellings facing the inner courtyard receive more natural ventilation and light. The main entrance is located on the north linked to the future supermarket development to the east. The block is oriented to the south. A series of roof terraces are created providing roof gardens for residents. The terraced form optimises sunlight access to the dwellings with collectors harvesting energy for the Biospheric Foundation.

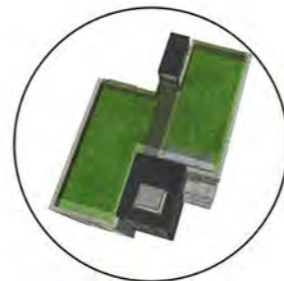


BIOSPHERIC HABITAT 113

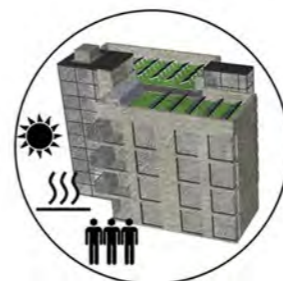
Tan Chu Huan, Dayang Fatin Abang Maamon

The main features of the proposed scheme include a hydroponic facade incorporated on the south-face, potentially a development of the experimental research that is ongoing at the Biospheric Foundation. A Passivhaus Strategy, which may cost a little more in the beginning but in the long run it would bring positive outcomes reducing operational carbon.

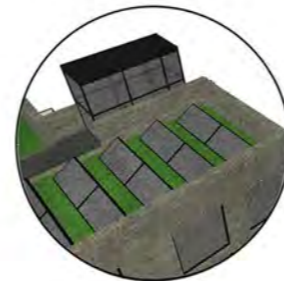
Integrated 'green technologies' are also integral to the scheme; photovoltaic panels, thermal panels, green roof and rainwater collection. The incorporation of the green roof in the design resulted from our research on regeneration and development programmes happening around the site. Responding the site analysis that identified that there are many species of birds and bats living in the area, an 'animal wall' is incorporated on the north-facing façade.



GREEN ROOF



PASSIVHAUS STRATEGY



THERMAL PANELS



ANIMAL WALL



PV PANELS



HYDROPONIC FACADE



COMPACTNESS



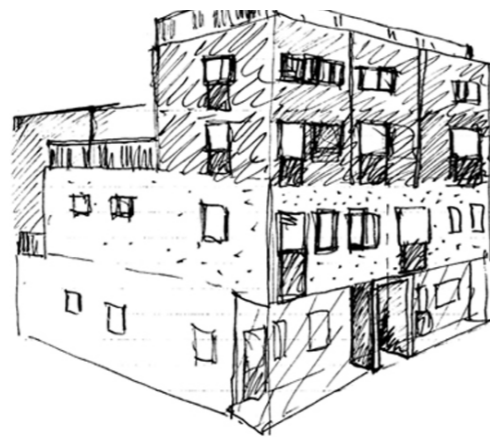
EXTERIOR LANDSCAPE



BIOSPHERIC APARTMENTS

Tan Chu Huan, Isobel Blacklock, Patrick Gorman, Charlotte Garrett

Drawing on the themes of efficient, integrated ecologies encompassed by the Biospheric Foundation, the design forms a contemporary urban representation of a sustainable community, providing a unique approach to living. The scheme integrates itself in the immediate physical context with regard to neighbouring buildings, and prospective pedestrianised areas. A critical characteristic of the scheme is the optimal quality of occupant comfort evidenced in the design of the internal spaces. The low-rise accommodation is contained within a single block encompassing eleven residential units with shared external growing spaces, which constitute part of the scheme's integrated vermiculture ecology. Furthermore, the approach to design optimises access and solar orientation. The massing of the building on the site stems from two key drivers—the largest possible rectilinear volume, and a north-south building orientation. The residential units where possible are designed along this axis with dual-aspects. The massing also minimises overlooking between units and from exterior public areas.



LEVEL 1 PLAN



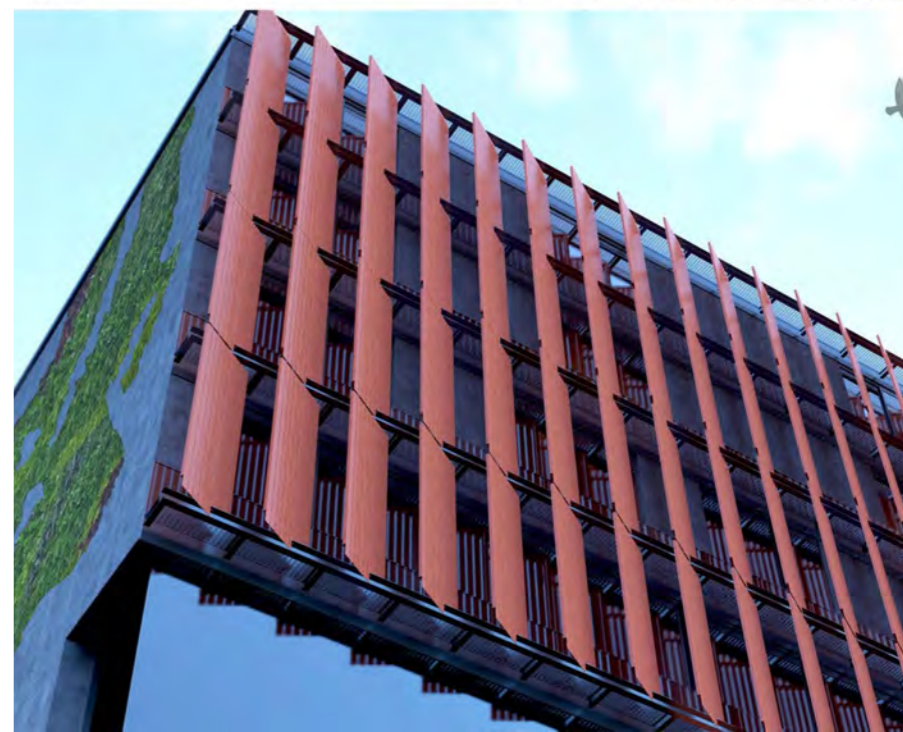
LEVEL 2 PLAN



LEVEL 4 PLAN



ROOF PLAN



44 MARCH YEAR ONE

BIOSPHERIC APARTMENTS

Isobel Blacklock, Patrick Gorman, Charlotte Garrett,
Chu Huan Tan



GAIA DWELLING

Mohd. Fakhuradzi Tajuddin, Tengku Inda Syazwi
Tengku Zubir, Saidatul Shazri, Alan Pun

The development concept aims to create a habitable space informed by natural forces. The stepped form of the building with a courtyard space was born out of the necessity to allow every apartment to gain direct sunlight throughout the day. The form resembles a loop, which can act as a metaphor for the 'no waste, natural cycle' philosophy of the Biospheric Foundation, however practical applications were also implemented to take advantage of the form.

Rainwater is collected from the highest block, which then runs through the building loop for domestic use and growing food on the green roofs. Materials and construction methods are informed by a cradle-to-cradle approach to maximise re use and recycling.

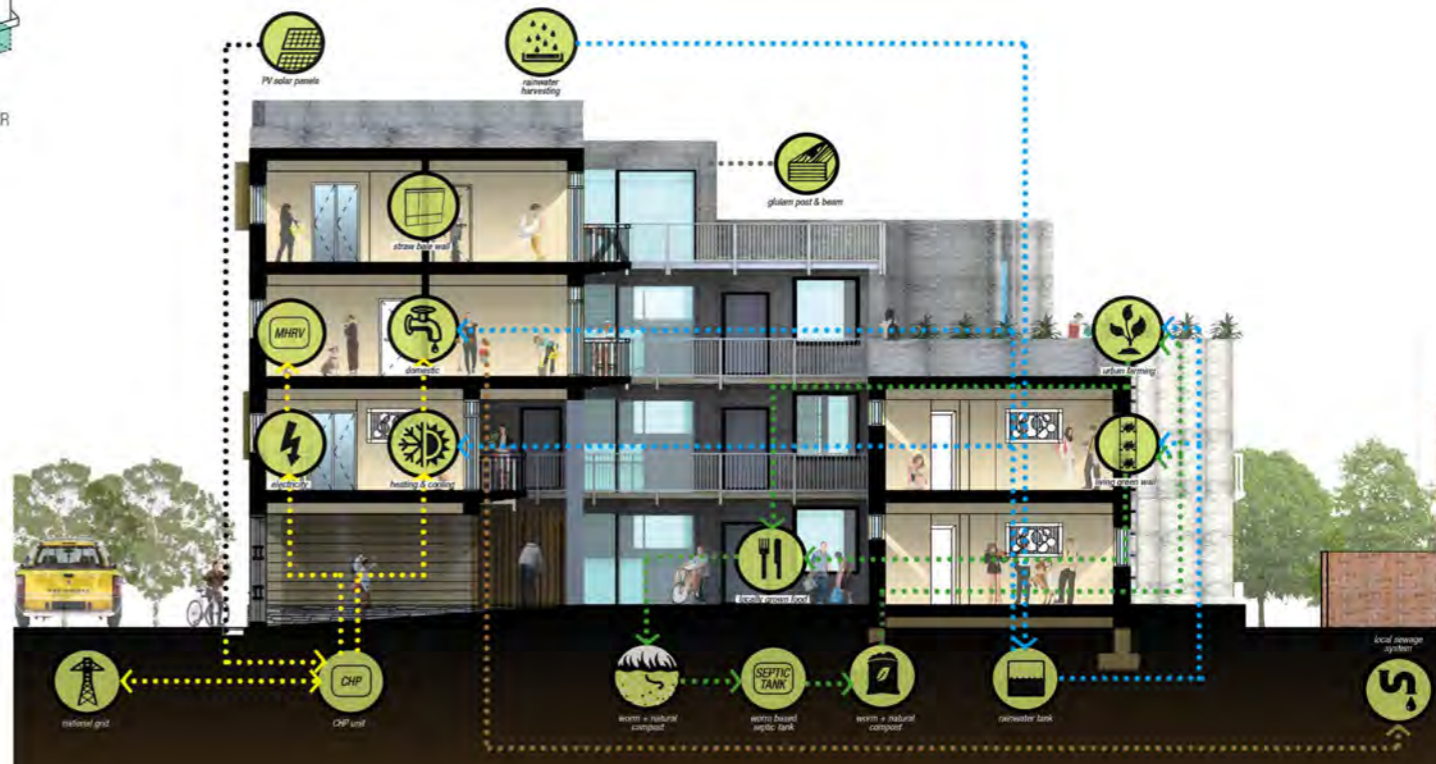
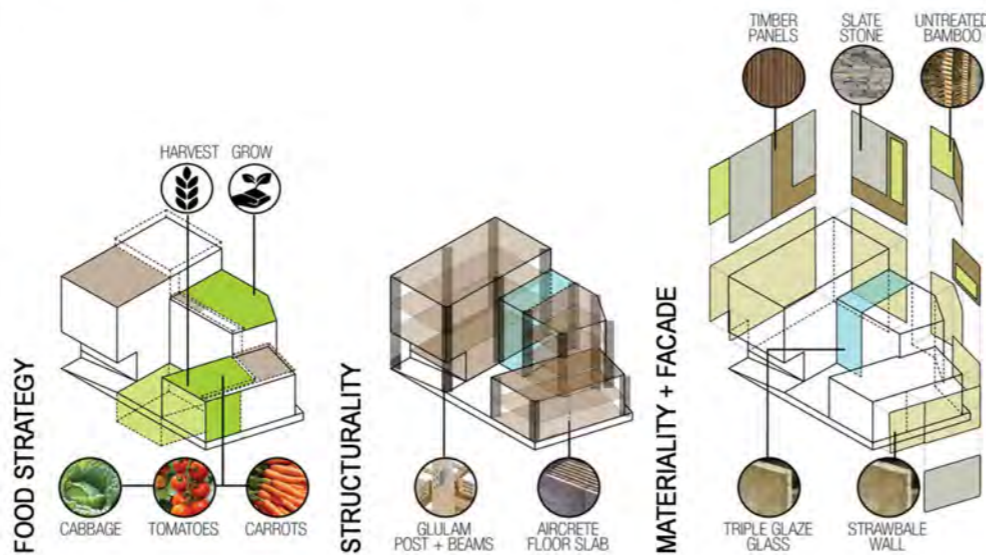
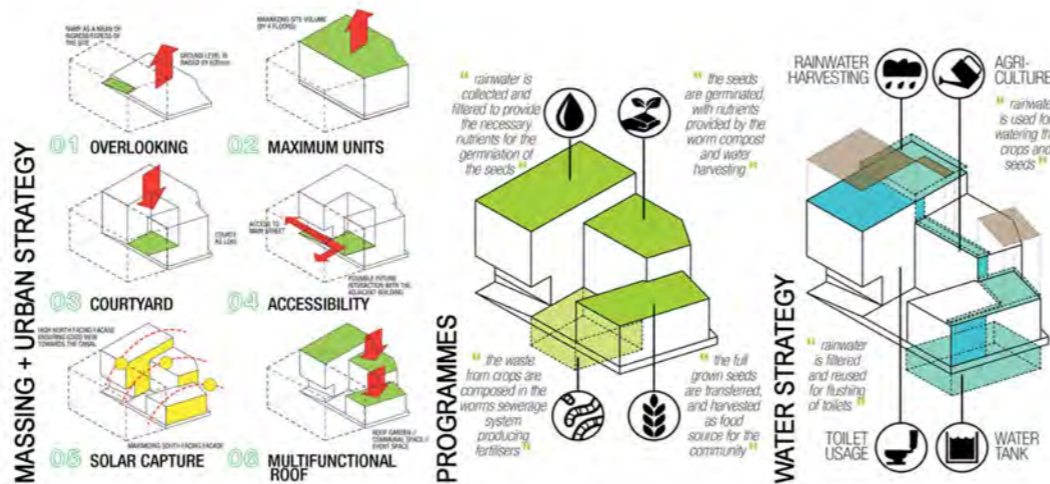


GAIA DWELLING

Mohd. Fakhuradzi Tajuddin, Tengku Inda Syazwi Tengku Zubir, Saidatul Shazri, Alan Pun

The system of the building was intended to imitate the lifecycle of a tree. Recycle and reuse concepts are widely use in generating a zero-carbon environment. The water strategy involves reusing grey water and rainwater harvesting as another source of water for domestic and agricultural use. A food strategy was inspired by the Biospheric Foundation; encouraging occupants to grow their own food and recycle their food waste as compost.

The choice of material and construction methods also played a vital role in aiming for a zero carbon development. The structural system is the core of a long-lasting and low maintenance building that can support adaptive servicing, façades systems and interior furnishings that respond to changes in use and climate over time.



PROJECT DESCRIPTION

In partnership with the Passivhaus Trust, Kingspan Insulation, the AJ and Habitat First Group, this year's Awards' competition for "EcoHaus" was to design an aspirational home to Passivhaus standards for a waterside site at one of Habitat First Group's UK sites (Lower Mill Estate, Somerford Keynes or Silverlake in Dorset).

The aims of this competition was to design with the Passivhaus methodology, a home that everyone loves to live in. Designs were to demonstrate how private and public space at a waterfront site can be combined to enhance the community living environment and deliver an aspirational lifestyle. The space between the home and the water will be private: the land in front will be communal.

Collaboration with architects:



Roger Burton (Nvirohaus)



Ian McHugh (Green Triangle)

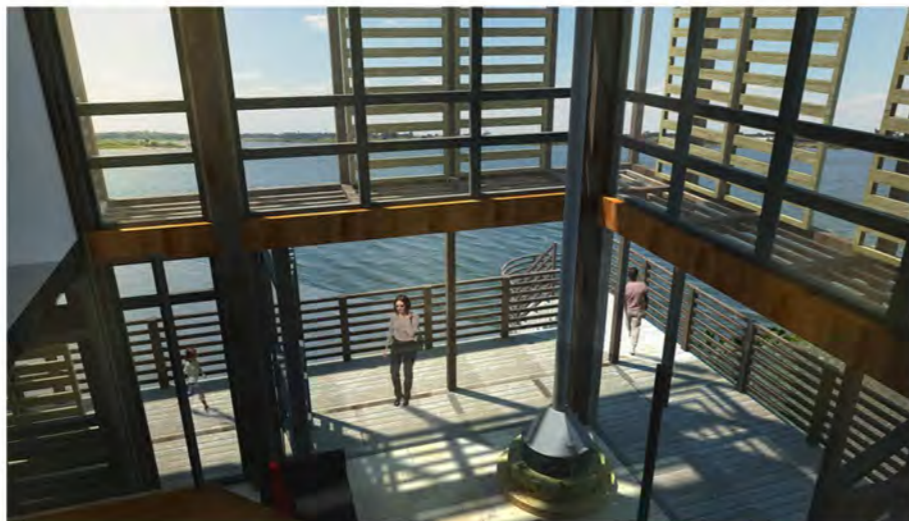
ECOHAUS COMPETITION

PASSIVHAUS DESIGN
BRITISH HOMES AWARDS 2014

THE LAKE HOUSE

Boyana Stoeva, Fatin Thurayyah Binti Zolkeplay,
Seong Cheng Teh, Zlatina Spasova

The Lake House is for people who love lakes, who want space and light and air and enjoy the simple pleasures of a beautiful natural setting with the house as the hub of activity. The design is based on a large 2 storey, 3 bedroom house which can be extended vertically to give a 3 storey 5 bedroom version with a roof garden. Its environmental orientation is designed for a north shore location. The Lake House has a relatively formal white 'villa' appearance from the north side and is approached through an open, welcoming front courtyard. The south facade of the building opens out to the lake with full height glazing and a double height living space wrapped with dynamic shading screens. Internal screens provide the option of separating the dining and kitchen from the living room if desired. Double bedrooms at first floor face east and west and a south facing master bedroom incorporates a folding screen opening onto its own balcony. The house uses the sloping site at the water's edge to include a lower deck area where boats can moor below the building. The submerged basement level has an utility room, plant room and wet storage/changing facilities.

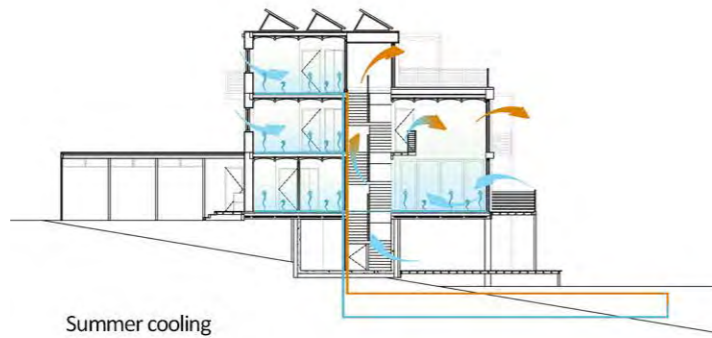


THE LAKE HOUSE

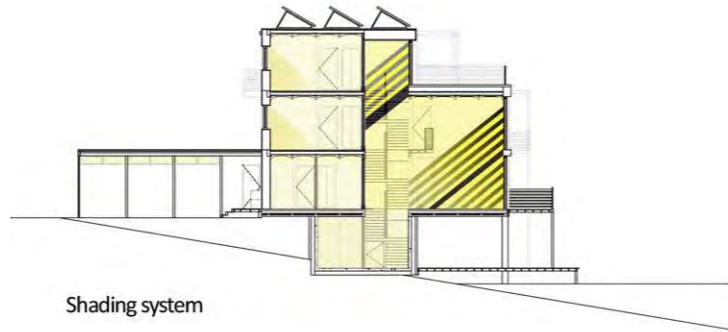
Boyana Stoeva, Fatin Thurayyah Binti Zolkeplay, Seong Cheng Teh, Zlatina Spasova

A simple timber framed and panelled double garage with green roof is positioned offset to the front of the house. This encloses the front courtyard to one side with a covered pedestrian loggia approach to the house entrance. The garage houses two generous car spaces with electric car charge points, six cycle spaces with secure steel stands and room for a workshop area. It could equally be used to house boats out of season or for repairs. The west facing side garden is an ideal sun trap falling to the water's edge. A grasscrete path allows boat access from the lane to the shore whilst gates and boundary treatment provide security and privacy.

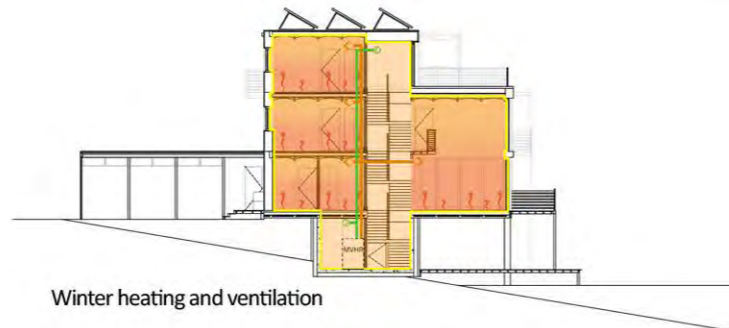
The houses are rotated by no more than 15 degrees from south to optimise performance. This form allows for a narrow winding lane to pass the houses reducing any traffic speed and allowing small 'greens' for communal activity or gatherings at the edge of perhaps woodland beyond.



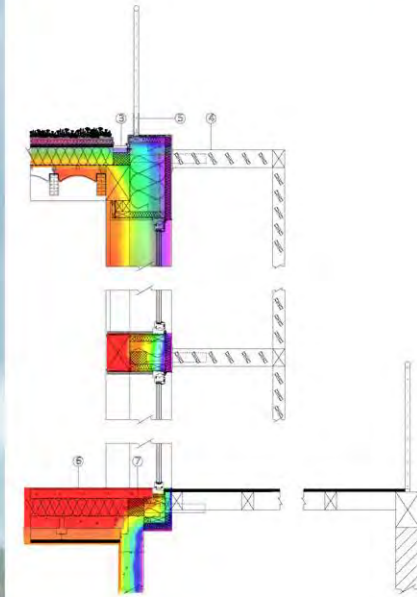
Summer cooling



Shading system



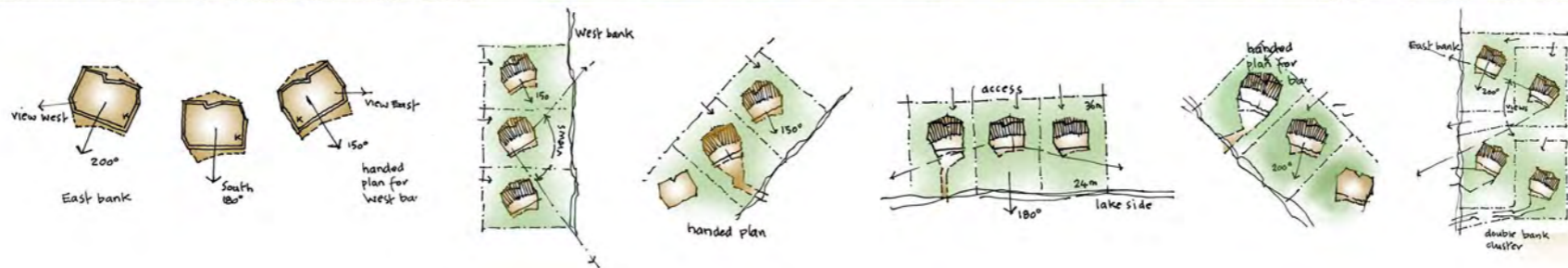
Winter heating and ventilation



HEMP-HAUS

Steven Anton, Chan Ching-Yee, Dayang Fatin Abang Maamon, Tiffany Man-Wah Wong

Warm in winter and cool in summer, the 'Hemp-Haus', will combine spacious, contemporary living with the comfort and performance of Passivhaus and the low whole life carbon afforded by the use of natural, sustainable building materials. It will be a sustainable exemplar, achieving the Zero Carbon standard proposed for 2016. Built off-site, the system will offer all the benefits of speed of build on site and construction quality which will lend itself to the rigorous performance demanded by Passivhaus. The house is a compact form over two floors which will optimise its performance while offering the flexibility to provide a range of internal configurations, at its heart an open plan living space which benefits from a quality internal environment while affording stunning views over the lake. The sculptural form which has emerged is timber clad to be sympathetic with its natural, lakeside environment.

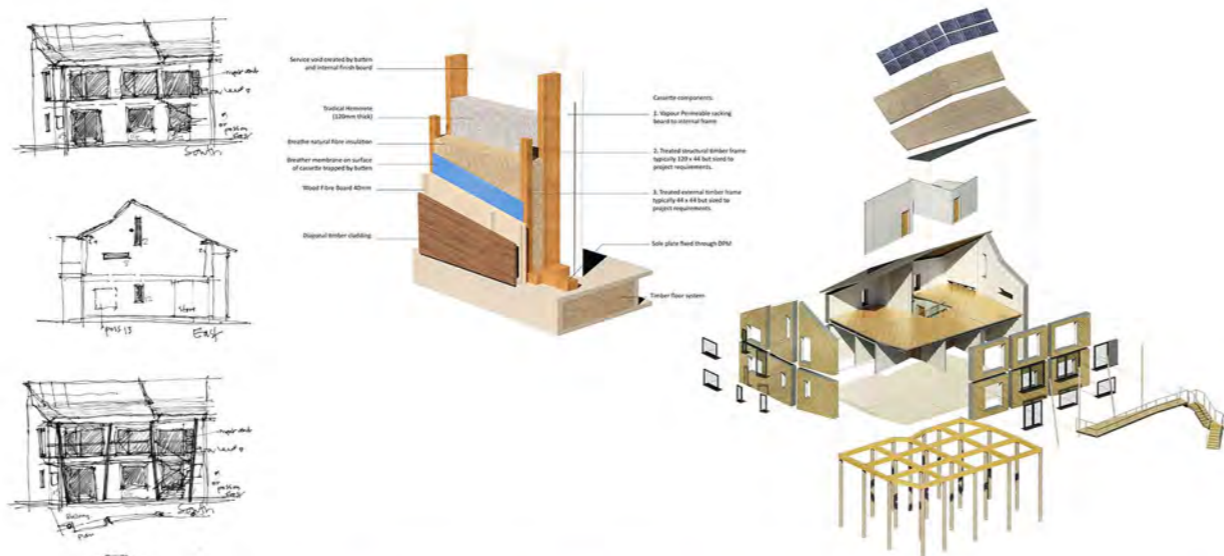


HEMP-HAUS

Steven Anton, Chan Ching-Yee, Dayang Fatin Abang Maamon, Tiffany Man-Wah Wong

The home is entered from the north side access road and parking space into a double height volume with an open staircase leading to the upper floor. The plan can be configured with the living spaces on the ground and the suite of bedrooms on the first floor or, as illustrated in our submission, with the main living spaces on the first floor. In this instance, the stair rises to the first floor, a dramatic entrance into the lofty living space with open views towards the South and across the lake.

The living space recognises the importance of cooking and dining as a leisure activity. The kitchen area is located to the front of the house with the same great views, supported by an adjacent utility room and pantry, to ensure that the kitchen is simple, stylish, effective and uncluttered. The living space has an associated work space which can also be used as a further bedroom with supporting shower room. On the other floor are four bedrooms and supporting bathrooms but this could also be configured to give three bedrooms, one of which is a master suite with associated dressing room.



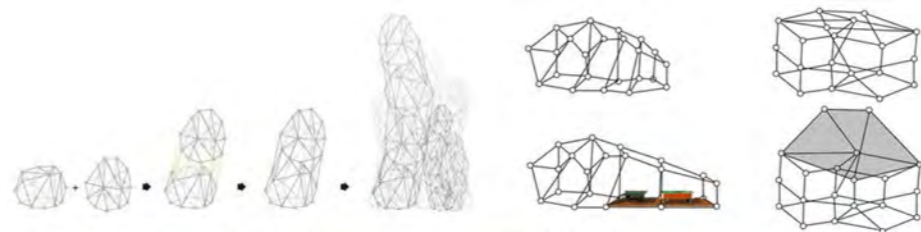
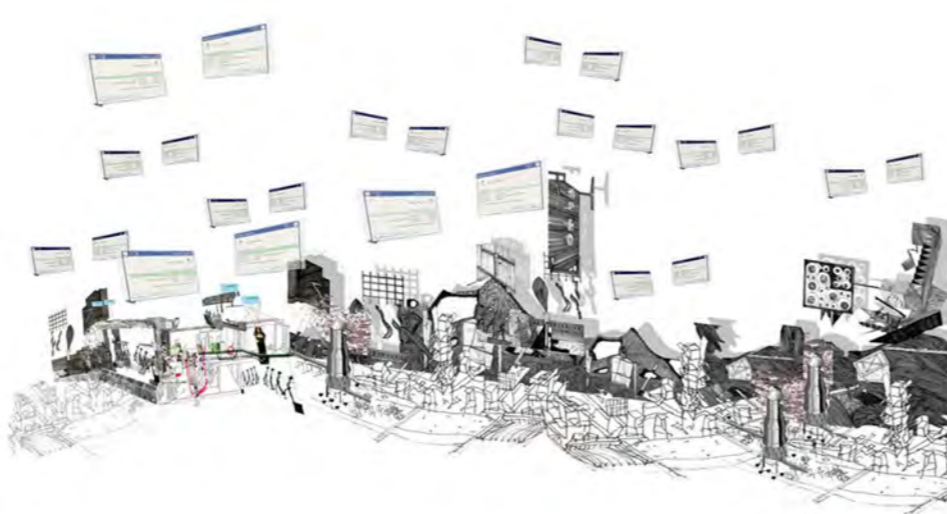
WORKSHOPS

1KHO WORKSHOP WITH UNIVERSITY OF NICOSIA
DIGITAL DESIGN SYMPOSIUM WITH RE_MAP

1KHO

1KHO is an international 3 day workshop to explore concepts applicable to the production, operation, use and evolution of human habitats into the future. The ecology of 'home' is being systematically reconsidered at this point in history within a framework of sociological, technological and scientific discourse that is generating new expectations about our relationships with each other, our political and economic systems and the environment at a variety of scales.

The workshop that welcomes Masters students and staff from the University of Nicosia to the msa to collaborate with students and staff from msa ateliers qed and [Re_Map] is an ambitious and fast paced opportunity to conceptualise 'home' in a way that may be applicable to the next millennium of human history on planet earth - our home in space.



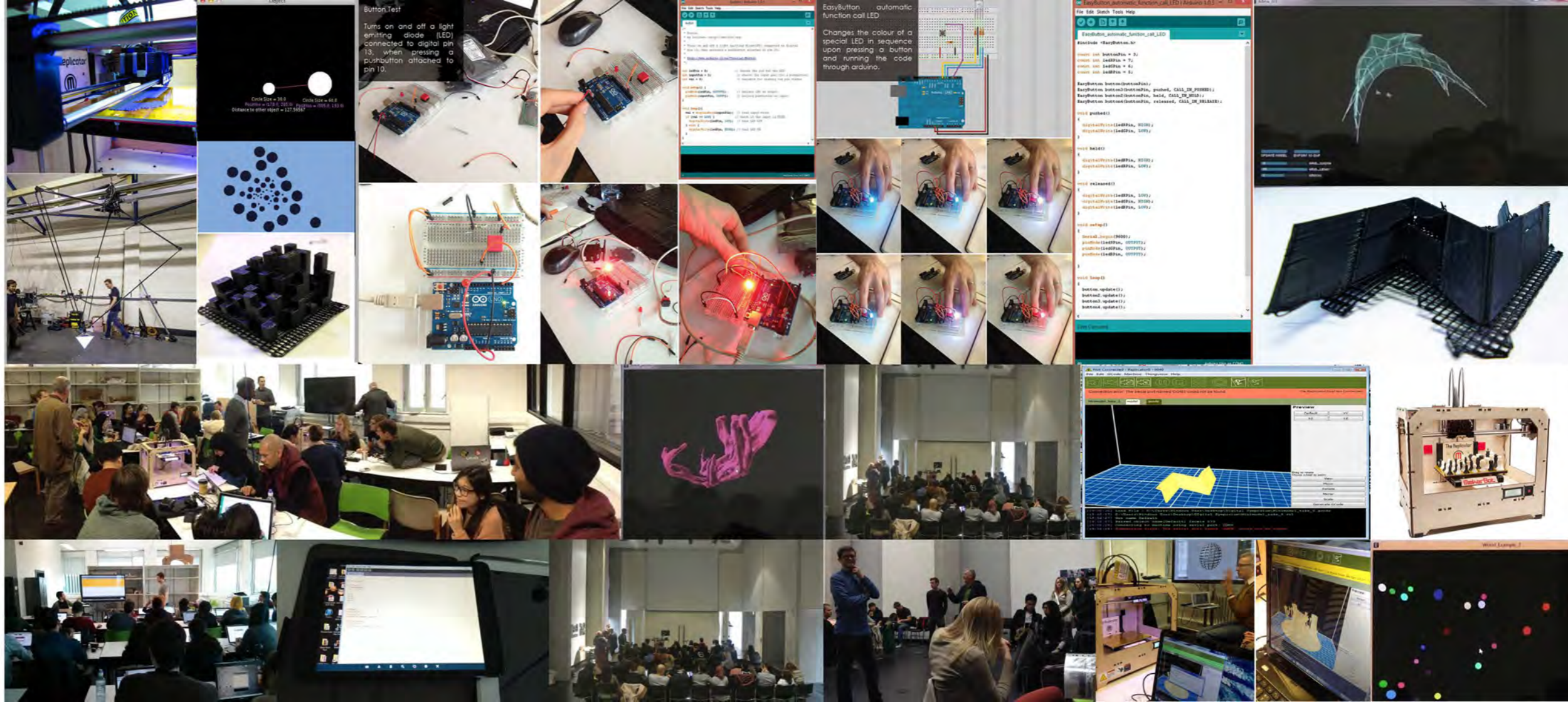
54 MARCH YEAR ONE WORKSHOPS

DIGITAL DESIGN SYMPOSIUM

The Digital Design Symposium was a joint five day event between qed and [Re_Map] ateliers. Through a series of events and lectures throughout the week, students engaged with object orientated programming, Arduino, 3D printing, their use in practice today and the possibilities that digital technologies bring to the profession. Workshops included Processing, Arduino, 3D Printing, 'Desktop' 3D Printing, Digital in Design, Code & Form Integrated Workshop, and a [Re_Map]/qed Joint Studio.

Lecture and workshop collaborators:

- Prof. Nick Dunn
- Prof. Martyn Amos
- Prof. Keith Brown
- Ruari Glynn (UCL)
- Bruce Davidson (Amanda Levette Architects)
- Tuba Kocatürk (Liverpool School of Architecture)



THESIS UNIT

MArch

YEAR TWO



WIMBORNE ONE

James Slocock

The project's primary concept is to be a catalyst that sparks a future green plan for an existing town, which could ultimately spread to other towns. It is located in the town centre of Wimborne in Dorset. As a sustainable spotlight landmark development it would have the capacity to present a unique architectural experience in a town and to showcase sustainable spaces and systems.

The fundamental goal was to design a scheme that would create a unique experience which would complement the small, compact and explorative character of the town, and part of this was in reinventing the familiar character of the arcade. As an addition to the town, it was intended to create a building that would become part of peoples' everyday civic life embracing sustainability at a variety of scales. There are few activities that unite us in the way shopping, eating and entertainment do, and these are arguably the defining activities of public space. The project was informed by integrating these civic functions with residential accommodation.



OMI.OKO.IGBO (WATER.FARM.FOREST)

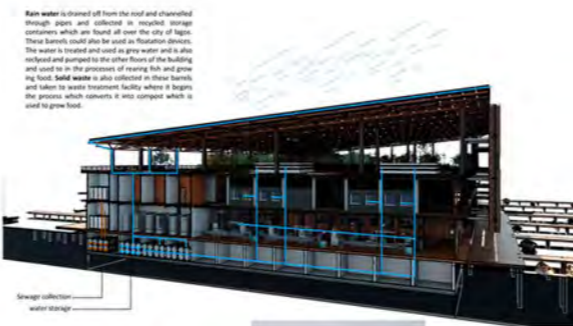
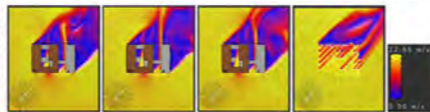
Jemie Ejekam

Due to rapid urbanisation and climate change, there is a need for the development and adaptation of coastal cities in relation to flooding. Makoko is a community on water. For nearly 100 years it has thrived on the fishing and sawing industries providing over a third of Lagos' fish supply and most of its timber. It is a highly dense and urbanized area, yet it has no roads, no land and no modern infrastructure.

Makoko is an innovative contemporary economic model for coastal African cities. Some of the challenges faced by the community include building technology, water supply and management, sanitation and waste management, electricity, as well as education, health and security. Omi.Oko.igbo (water.farm.forest) is a facility that addresses Waste Management and recycling, and integrates these with food cultures, based on fish farming, aquaponics and aquaculture systems. Through trade and tourism, Omi.Oko.igbo could act as a catalyst for the regeneration of the area.



Passive cooling is achieved in the building through the creation of stack effect. The east and western facades of the building are protected from solar gain through the use of shading devices and ventilating breezings which allow for cross ventilation from the south-west winds. The building is also kept cool through the use of "water (ourujandi)" and as wind goes through the building it carries cool air from the water to various parts of the building, thereby keeping waters cool throughout the day and at night during the hot weather.



Rain water is drained off from the roof and channelled through pipes and collected in recycled storage containers which are found all over the city of Lagos. These barrels could also be used as floatation devices. The water is treated and used as grey water and is also recycled and pumped to other floors of the building and used in the processes of rearing fish and growing food. Solid waste is also collected in these barrels and taken to waste treatment facility where it begins the process which reverts it into compost which is used to grow food.

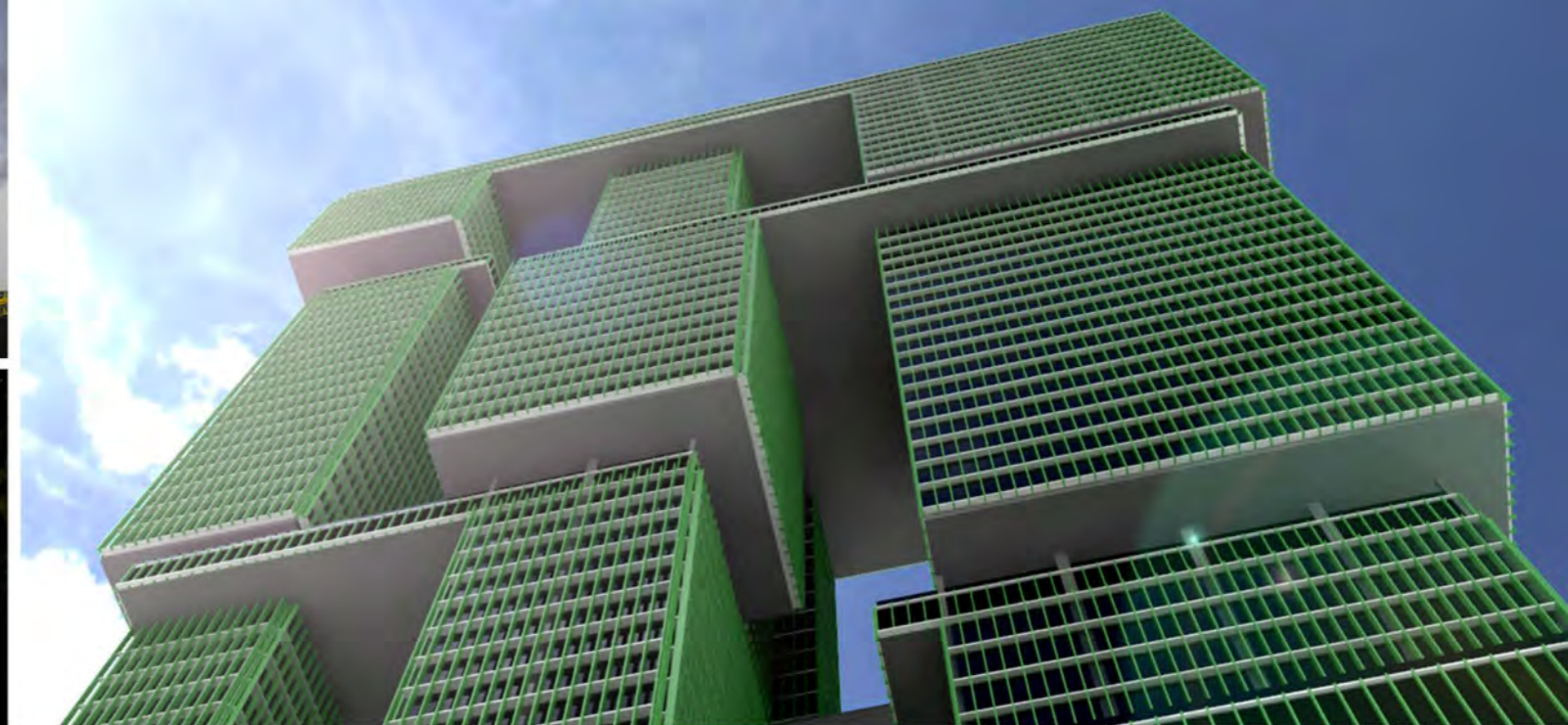
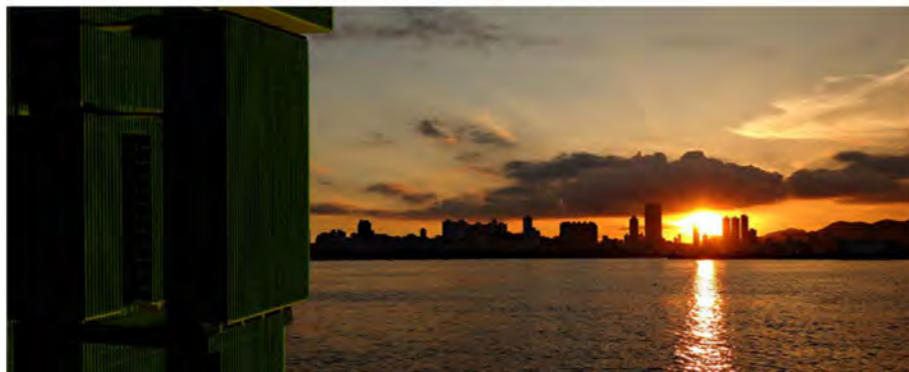
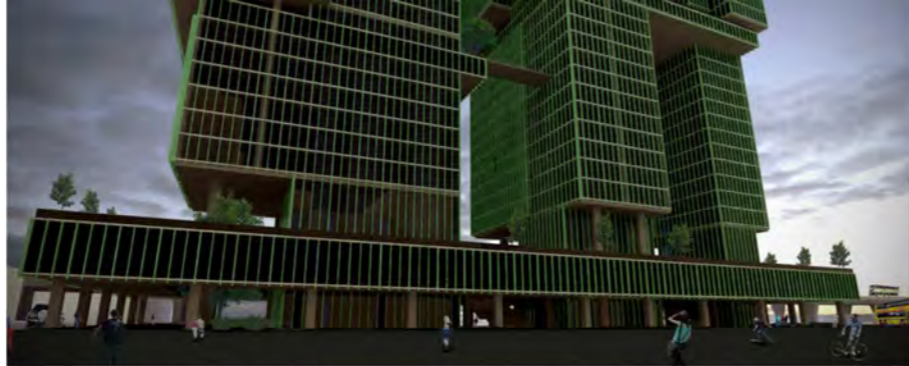


THE GREEN MATRIX

Warren Lampson Suen

In response to the rapidly changing and developing city of Hong Kong, this thesis project is focussed on the design of a mixed use skyscraper containing hotel, residential and commercial space. Hong Kong is characterised by its high density and the exceptional number of skyscrapers it possesses. The chosen site is a part of a proposed urban redevelopment plan initiated by the Hong Kong government.

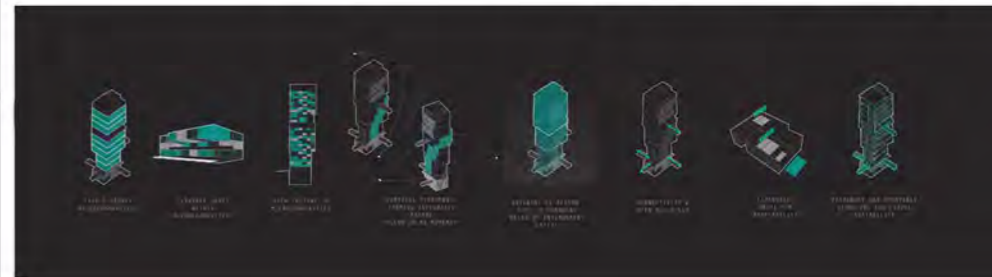
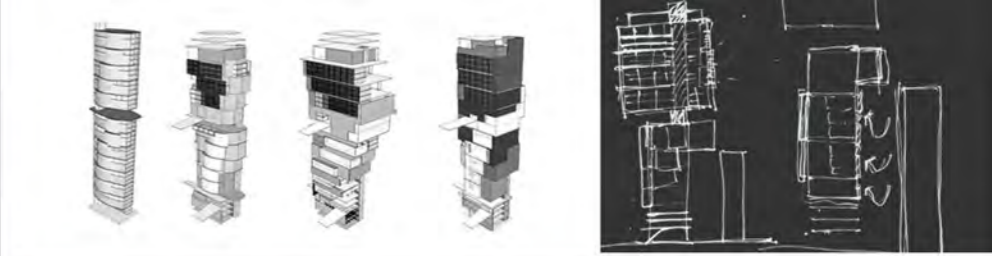
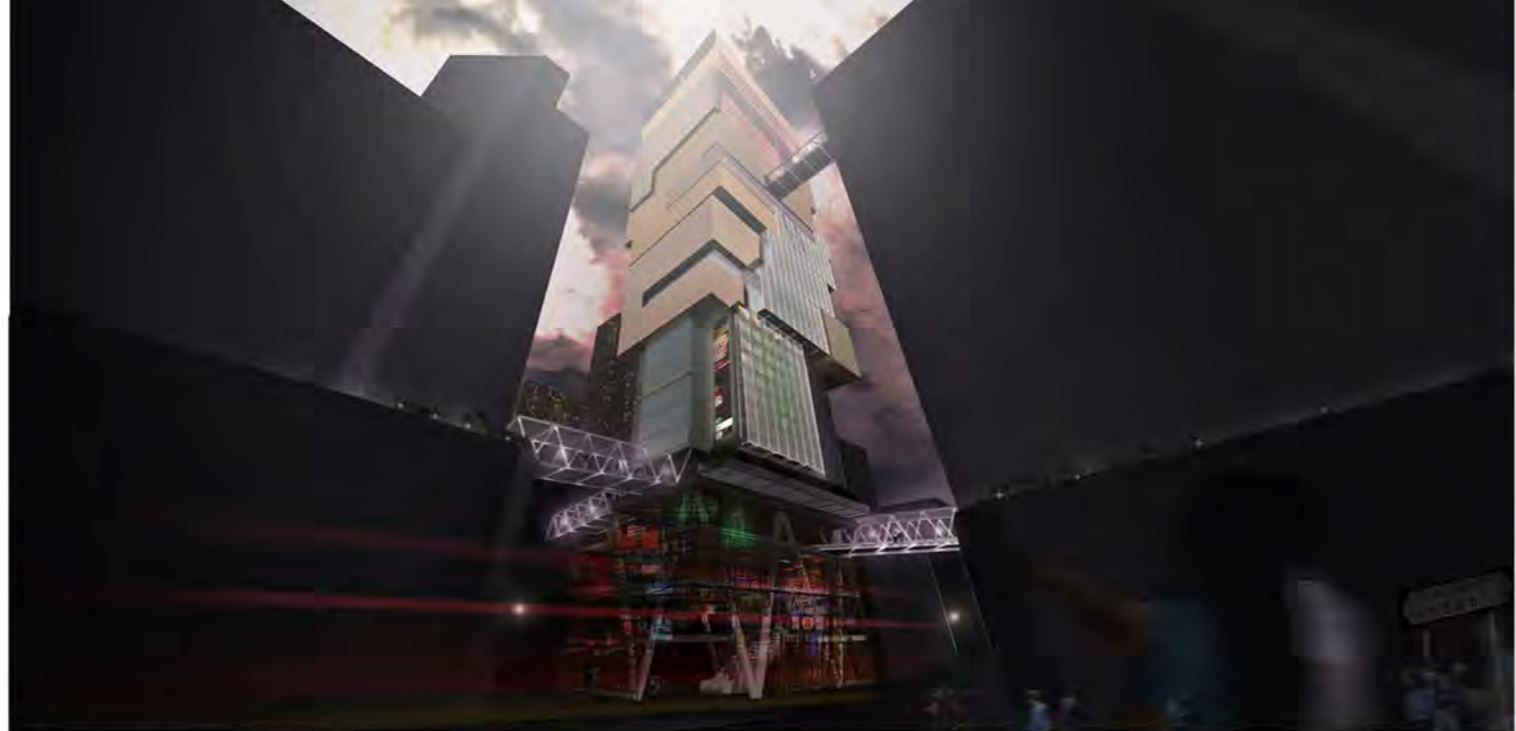
Situated next to the harbour, and adjacent to a flyover highway, the site is a transportation hub connecting to various ferry piers, a bus terminal and a mono-rail station. The site is divided into a plaza and tower structures. The structure is a buffer between the city and various transportation systems with its podium, sky-gardens and roof levels acting as public space and viewing platforms. The form of the building is composed of three separated towers, which are used for hotel, residential and office respectively, with sky-gardens and refuge floors connecting in between to provide better circulation for occupants within the whole building.



MICROCITY

Lorena Chan

Microcity is a vision for a better future for the city of Hong Kong, one that is healthy, social and adaptable. The expansion of the city due to population rise and economic wealth has caused a ripple effect through the scales of urban components and the resulting pressures are faced by the city dwellers. The economic reliance on the housing market and limited land space mean those economically vulnerable live in poor conditions and the city's luxury vertical living is no longer rooted in Hong Kong's social culture. As the city expands and continues to rise these problems will become increasingly severe. For the city to move forward, the smaller urban component, that is the buildings, must change to return a responding ripple effect for the better. Microcity brings the elements of the existing city into the tower; a city within a city. It is a catalyst for more social and connected buildings, to bring the cultural richness through vertical layers of the urban landscape. It integrates cyclical food ecologies within the city for a sustainable future that also brings economic benefits. The development of the local food production industry means pressure is lifted from the housing market and the reliance on imported food. Microcity explores an adaptable approach to buildings which allow towers to be flexible for different programs and to respond to changing climate in the short term, future and the far future. In the city of Hong Kong that is rapidly changing, buildings must become smarter and greener.

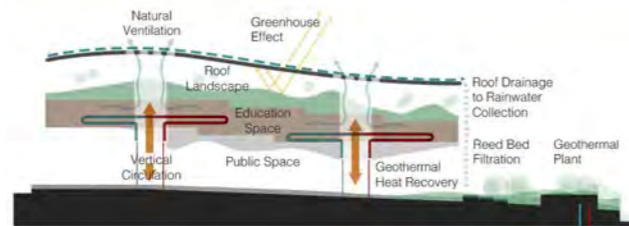
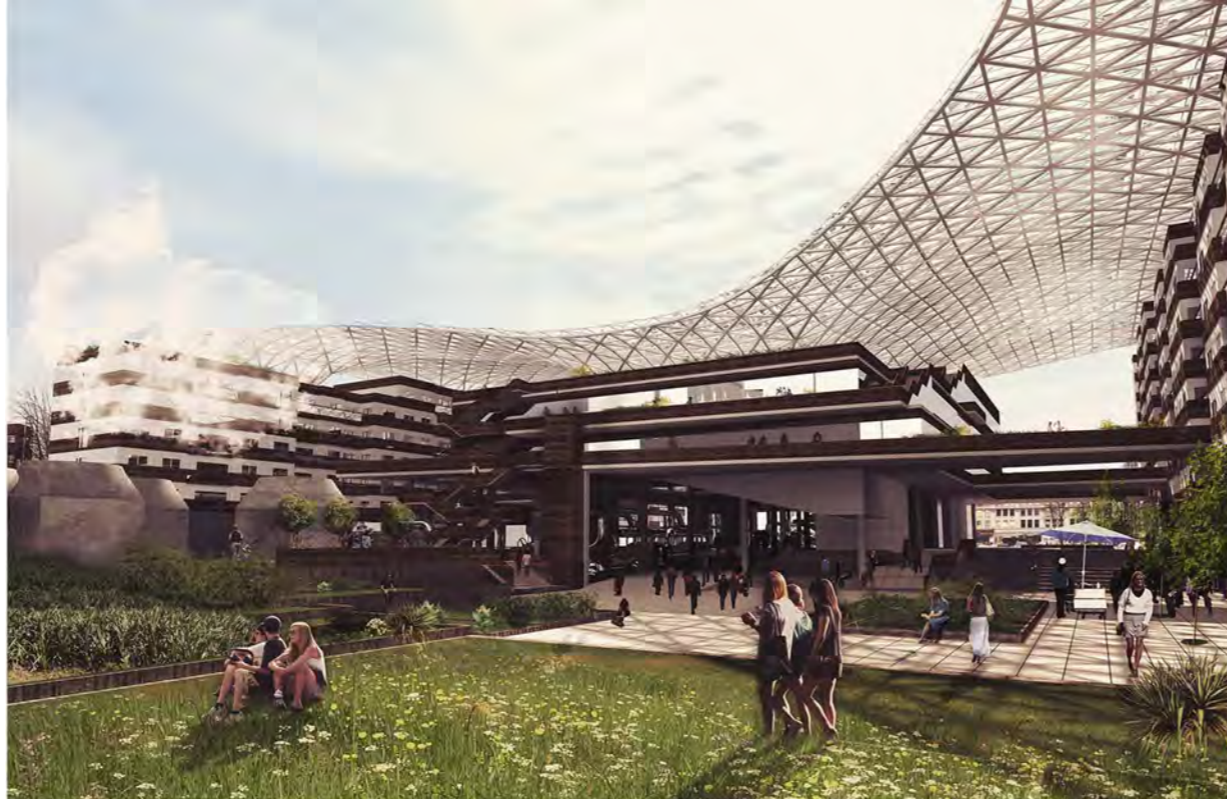


UNIVERCITY

Richard Jefferis

The model for UniverCity is based on higher education that interacts with the city and is open and democratic. Income from geothermal energy generation, accommodation and retail spaces allows the building to function as a free public service with high performance equipment and building specification. The design concept is based on the public realm occupying the majority of the ground floor plane, with a large, flexible learning space above flanked by accommodation blocks.

The scheme is unified by a large roof which encourages a sense of belonging as well as performing environmental benefits. The public space accommodates a market square, an amphitheatre, a skatepark, retail and café areas, which flow from the urbanity of Oxford Road into a park at the rear of the site by the River Medlock. The geothermal plant is exposed, with elements of the power station integrated into the landscape. Educational space is conceived as democratic and non-territorial. This enables multiple user groups to inherit the building and use it as they see fit. Different spatial typologies are provided to reflect emerging trends in learning patterns.



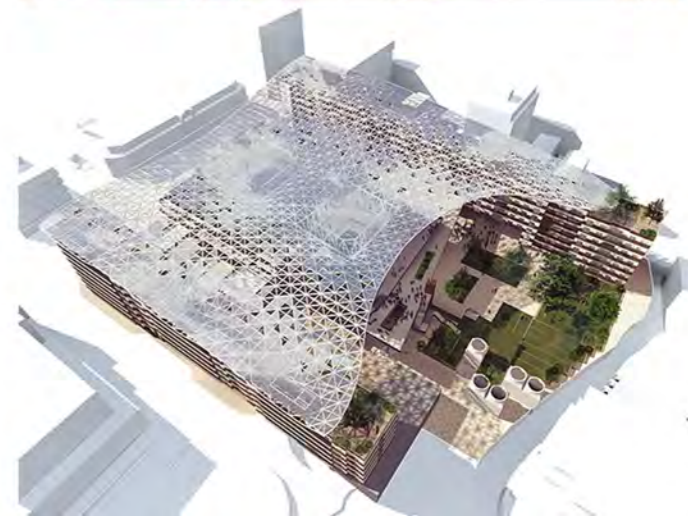
▼ Programme

Accommodation Halls of Residence / Hotel	Learning Spaces Social / Solo Theatre Study Gardens
Geothermal Power Plant 'Energy Landscape' Visible Process	Commercial Retail Spaces Cafes / Restaurants Market

▼ Spatialisation



▼ Building Section

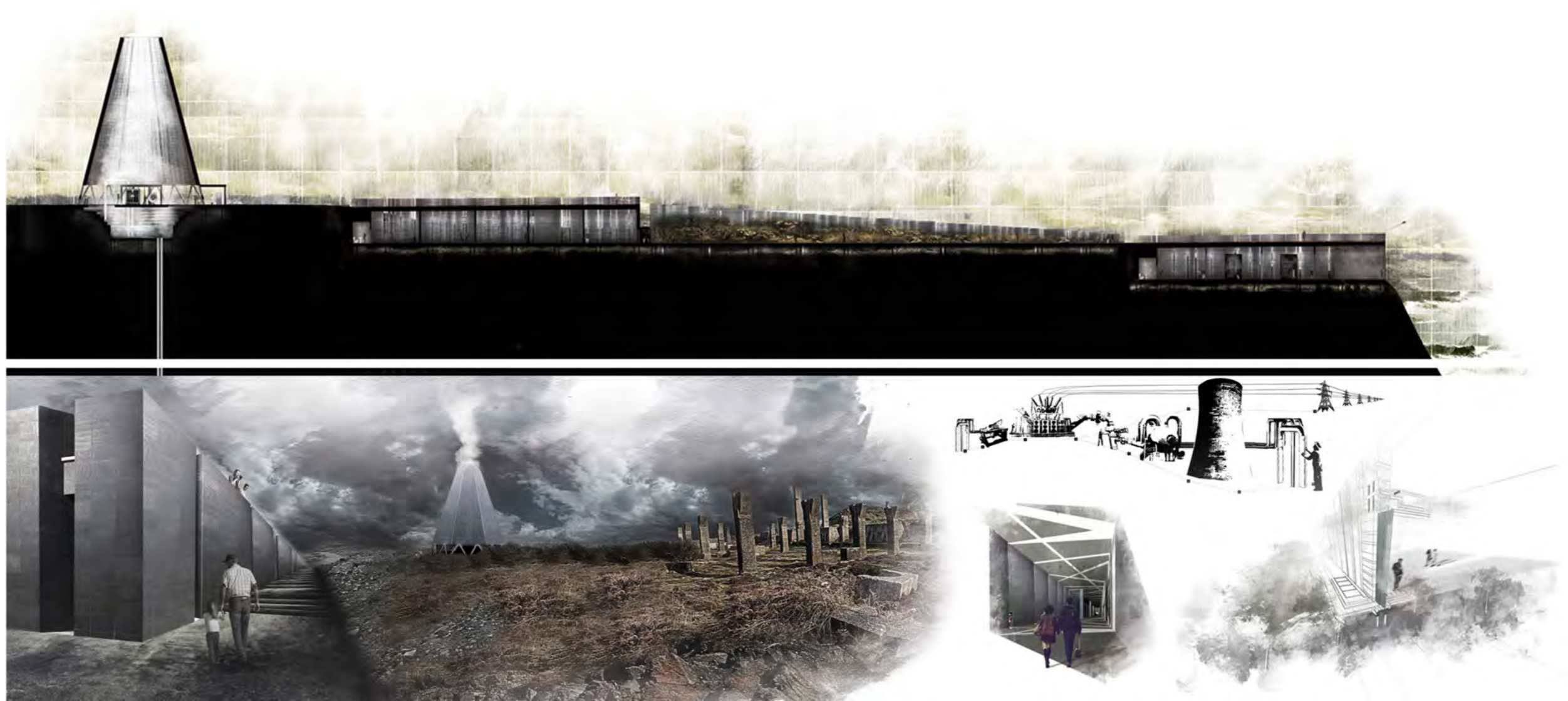


RENASCENTIA

Danielle Foster

An intervention above the old mining networks at Pendeen and Geevor containing a research facility, exhibition centre and experimental garden which serves as an architectural warning device of our transience. It provides a vault of knowledge towards sustainable survival through the use of genetic engineering and renewable technologies.

The proposal lies on a site of significant historical importance, cascading down the cliff side. The structures then present façades that respond to competing environmental conditions, with their cores rooted into the surrounding earth. The scheme endeavours to be relevant both now and in 200 years when the future may exhibit conditions that are different from the present-day.



MECD

Samuel Neal

Manchester Engineering Campus Development is an ambitious project to relocate Manchester's School of Engineering from their historic UMIST home to the university's growing South Campus.

This project, using the move as a catalyst, presents a new model for fluid learning that meets current needs and is able to adapt with future trends. Evolved from a strategy examining current teaching delivery, the new model for higher education is a symbiosis between community, education and industry. The building houses traditional learning spaces alongside areas designed to induce innovative informal learning and cross discipline arena connections. The school focuses on world-class research in partnership with industry; pushing forward world markets; while becoming a driving force (within its local, national and international community) for innovation and regeneration. The building is a hub to facilitate connections as a means to economic and social sustainability. The campus move presents a rare chance to redesign how engineering is taught within higher education and provides a model for higher education for the future.

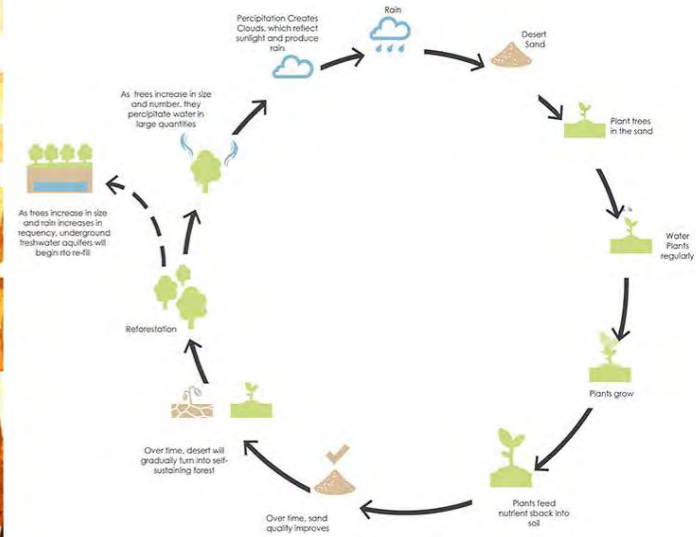


QARYAT AL-SAHARA

Omer Osman

Qaryat Al-Sahara is a self-sustaining desert settlement that employs sustainable environmental modification strategies to tackle and reverse desertification and freshwater depletion. It is located in Port Sudan and will contain four main programmes:

1. **Permaculture Research Centre:** This will act as a local hub for the study and teaching of desert permaculture with the primary ambition of reforesting the Sahara Desert. 2. **Bio-Brick Factory:** This facility will use desert sand to manufacture bricks. The process will see the use of a bacterium (*Bacillus Pasteurii*) to cement desert sand granules and produce a 'bio-brick' in a low-cost and sustainable process and used to construct the buildings on the site before becoming a commercial facility. 3. **Water Purification Facility:** This will purify sea water using Mangrove Trees to generate freshwater which can be used for watering plants or human consumption. This passive and natural desalination process will also help facilitate reforestation and permaculture activities. 4. **Accommodation:** for staff, students and visitors.



AARA'H -NEW ISLAND

Mohamed Haisham

Many climate change models predict that by the year 2100, the rise in sea level could be as high as 2m, this will pose an extreme and unparalleled threat to the many low lying coastal cities and countries. Some will have the opportunity to retreat inland and seek refuge on higher ground; however this project focuses on one particular precedent that does not have that luxury, the Maldives. 80% of the dry land in the Maldives is 0.6m from mean sea level. Already the effects of the rising seas are visible with the erosion of the existing land, threatening the way of life for the residents of the Maldives.

Aa Ra'h - is a factory built island that is climate resilient, self sustaining, habitable – an economically oriented project that seeks to be a climate proof solution for the Maldives. It explores how the existing off shore rig architecture and technology can be adapted to create an urban island that is flexible to accommodate future programs, self sustaining ecologies; energy, food and aid in sustaining the existing communities into the future.

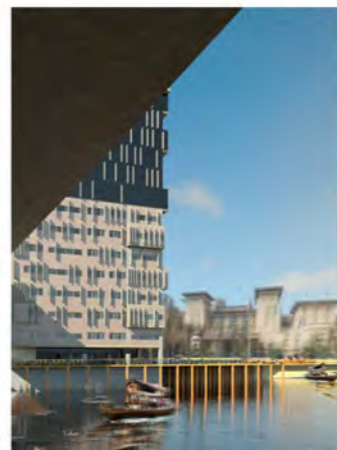


WIND TOWER 5

Eleni Economidou

This thesis project was based on ACCA Dubai Architecture School Tower Competition. The brief called for an architecture school tower with additional zones open to the general public. This building typology and the given site of the project consisted of a challenge on its own. Dubai has been through a building boom in the past decade. An economy built from the top, a bubble which burst when the financial crisis of 2008 hit.

As recently as the middle of the 20th century, Dubai was a fishing and pearling city engaged in commerce and boat building. Nowadays, the action of small entrepreneurs that have tended to shift or balance things out by building from the bottom up, turning to the community, fostering a capitalism from below. In this constantly shifting environment the intention is to propose an iconic building with a positive impact towards the environment, utilising a bioclimatic design concept in respect to the selected site. Students will be educated through the building's construction (moving timber louvers, wind tower concept to enable passive cooling) which in turn refers back to vernacular traditional architecture.

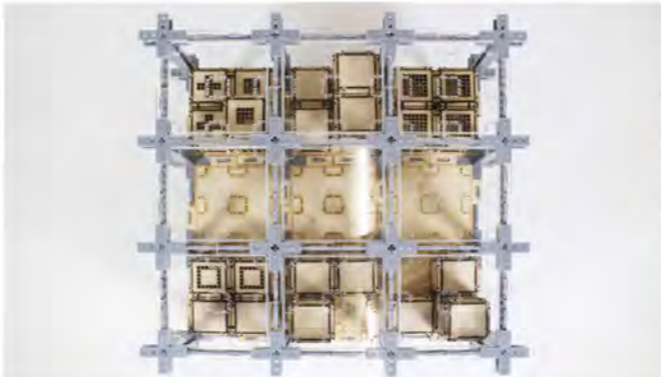
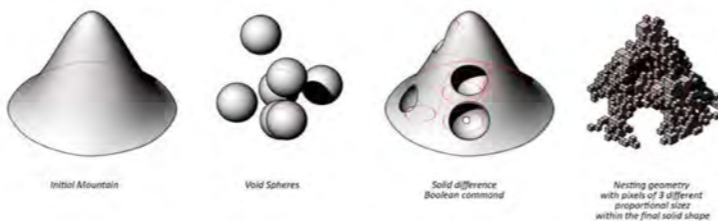
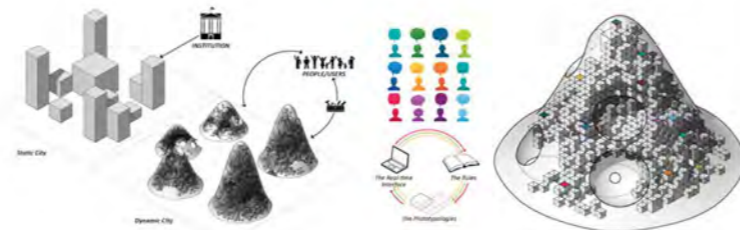
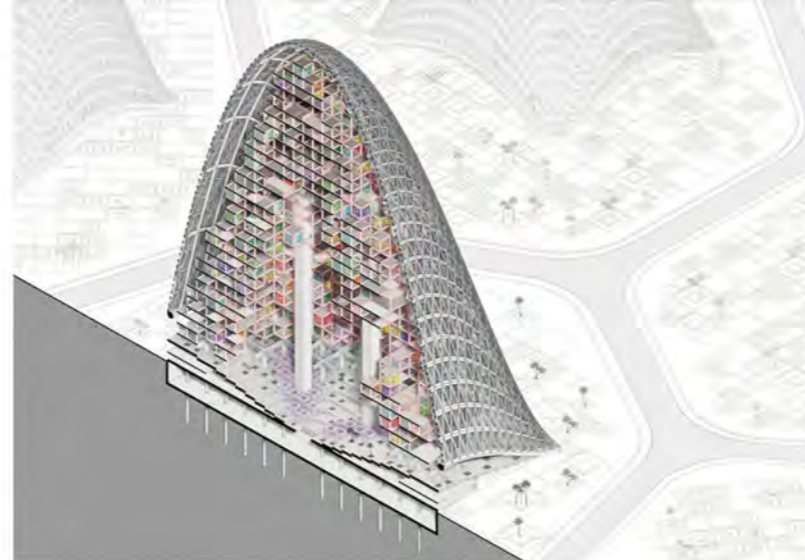


THE STACKED CITY PROTOTYPE

Alexandr Valakh

The stacked city is a constantly evolving system based on the rules of supply and demand, this prototypical city formation is designed to cope with rapid changes encountered and acted upon in the body of the modern city. It is capable of adapting into various morphologies depending on social, economic and environmental conditions of a given context. Essentially, it serves as a piece of infrastructure which adapts to its site, whilst offering adaptable/flexible plug and play environment, where in occupants can modify and adapt program typologies depending on their requirements at any given time.

The proposal is initiated by construction of basic infrastructure which is occupied by businesses (service and light industry) that instigate the incipient startup, this then encourages further nesting of other programmes around the base commercial program including residential, public space, offices, entertainment, retail, education and modular unit production facility. The system combines the informal user led dynamism found in slum formations with the formal infrastructural elements of the planned city to create a hybrid tower capable of accommodating thousands of residents and visitors; acting as a city in itself that capitalises on the best element of both these strategies. The prototype is a flexible strategy which is based around modular construction, yet it encourages diversity in housing and other programs and differentiation in public spaces.

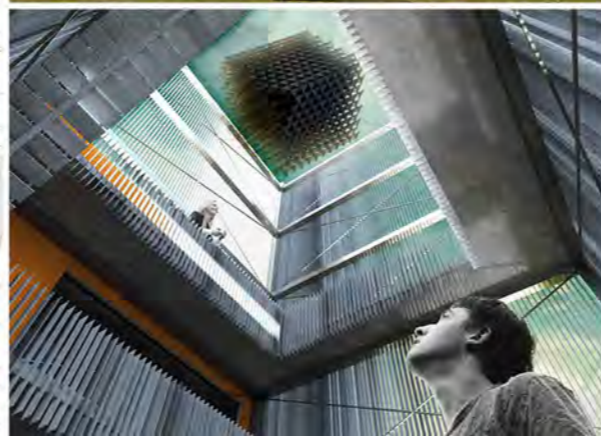
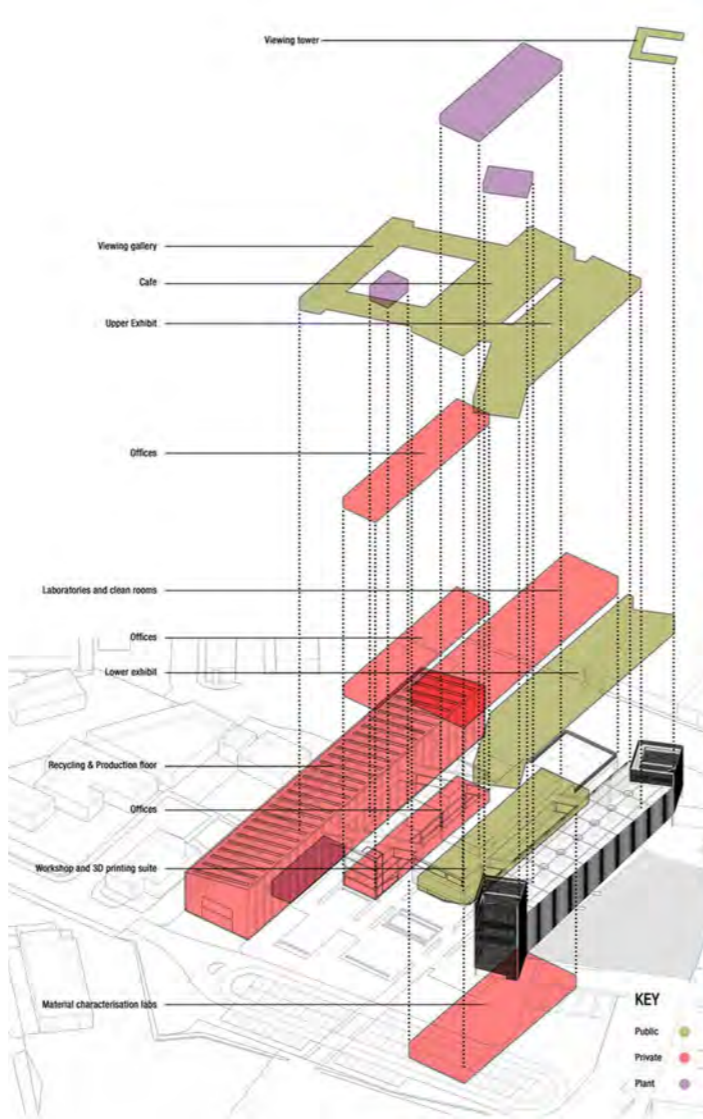


A CELEBRATION OF INNOVATION

Benjamin Elford

As our planet's resources reach depletion new methods of production and fabrication are being developed to reduce waste and maximise our precious resources, in particular the advent of additive manufacturing. Situated on the west of Greenwich Peninsula in London, the scheme strives to integrate within a proposed Greenwich masterplan responding to a future context in which the area will change dramatically and become an area of significant industrial innovation and provide London with a local means of production. In light of the need for this area of London to promote and drive innovation within industry, a hybrid scheme combining facilities for the development of additive manufacturing technologies and their applications within the industrial process is theorised and designed with local forces and global issues defining the evolution of the proposal.

The scheme incorporates facilities for large scale additive manufacturing, coupled with a recycling plant for material recovery. Laboratories and material characterisation facilities will provide the means to test new materials, as well as a public workshop and 3D-printing suite that will allow visitors to explore the possibilities of such technology. Office space is provided for small tech businesses to take advantage of these new on-site facilities. An exhibition space provides the public with a link to the innovations being created within the rest of the building, as well as allowing a glimpse of the production process, often kept hidden from view.

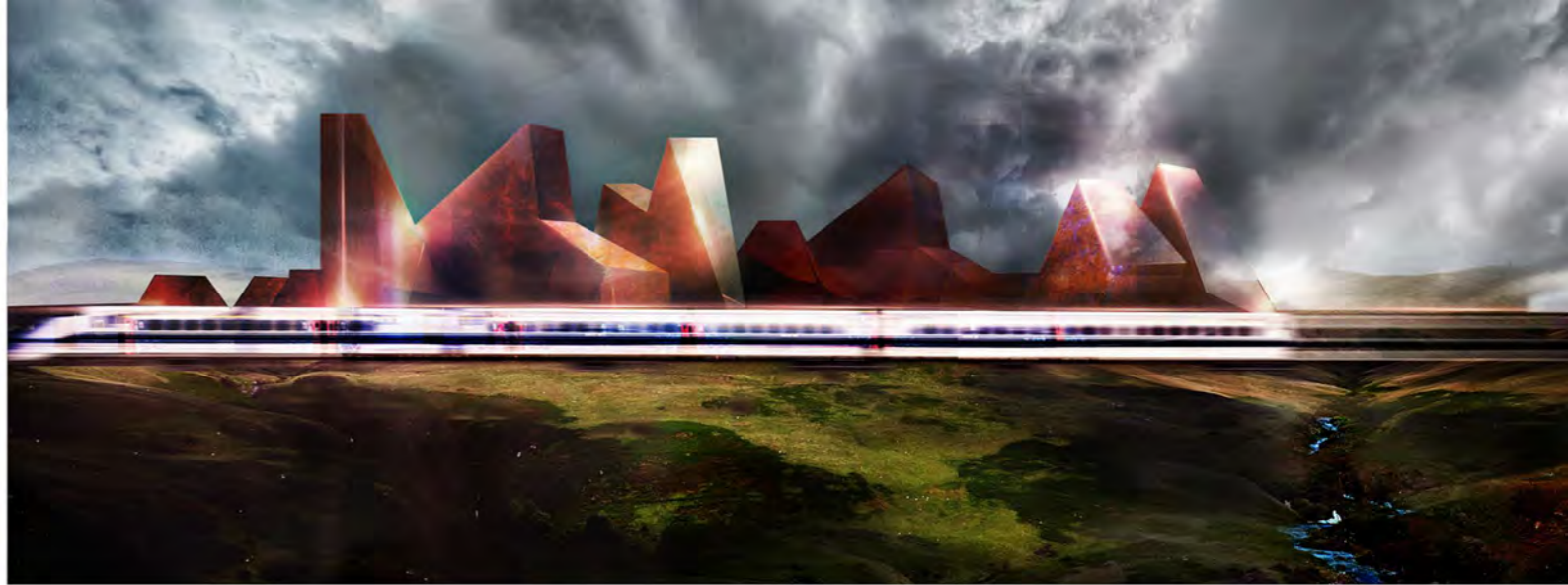


terra-VISION

Gin-Yee Luu

For centuries contaminated geological landscapes have plagued mining areas and created vast expanses of unusable terrain. terra-VISION is deeply embedded in the history of Cornwall's geology, yet it capitalises on the future of mining which takes us from the ground to the sky. Decoding Cornwall's mining landscape as an educational resource in a way that aims to change perceptions of toxic mine waste from that of a destructive entity to a valuable resource is a way of building opportunities for future scientific study, education, tourism and innovation.

In response to Camborne and Redruths' economic crisis, terra-VISION is a catalyst used to regenerate the area through a unique model of higher education. In collaboration with the existing educational institutes, the income generated from the visitor centre is used to promote educational opportunity and economic activity. This shift from higher education as a 'silo' model to one that engages directly with a large quantum of externalities to benefit the wider context is a radical yet expected change for the future of higher education. With the existing infrastructure in place, terra-VISION gains global significance, is globally accessible, globally connected, and yet locally grounded.



MSA EVENTS MONTH

MArch

YEAR ONE



DISASTER RELIEF ARCHITECTURE

QED: Steven Anton, Chan Ching Yee
MSA_P: Michelle Lim, Adrian Coelho

In Event 7 students were given the task to design and construct a prototype for a rapidly deployable emergency shelter for a post-earthquake disaster scenario. By studying origamic structures, a shelter can be created that is structurally efficient and can be flat-packed for ease-of-transportation. In a post-disaster scenario, these structures have several potential advantages over current emergency shelters. Their simple means of deployment eliminate the need to send a trained volunteer overseas to the location, cutting both response time and cost to charities.



WHY WASTE WASTE

Zlatina Spasova, Tiffany Man-Wah Wong,
Seong Cheng Teh, Alan Pun

We live in an unsustainable throwaway culture where we discard things without a second thought. This event's aim was to explore ways to reuse waste, in this case used wooden pallets, to create a useful, micro garden shelter. The design process of the micro-structure included designing digitally, as well as hands-on experimentation and improvisation with the pallets, where the latter proved to be a more useful method. The first and second years also got valuable experience in interacting with and receiving feedback from our external collaborator and client Jane Leach, for whom the micro-shelter would be built. Additionally, they also received in-house engineering and technology advice from Stephen Connah, a tutor at the msa, which was essential for progressing the design to its final stages. After the design was finalised, the pallets were prepared for assembly, where the students had to solve structural and logistical problems, such as the need for structural reinforcement and transportation limitations.



WEARABLE SHELTER

Tan Chu Huan , Dayang Abang Maamon, Tengku Inda Syazwi Tengku Zubir

Due to environmental disasters, human rights violations, civil unrest or homelessness, there are many people who are forced from their homes, stripped of value or identity and reduced to their physical bodies. This event asked the following questions. How can clothing as the most intimate form of shelter respond psychologically and physically to these traumatised bodies by:

1. offering a feeling of safety, 2. reconstructing the trauma story, and 3. connecting the individual to the community? Through making techniques of weaving, wrapping, stitching, and folding extending into architectural space while providing solutions to typological issues of emergency shelters, for example multi-functionality, portability, space-saving, and adaptability.

The event theme is an extension of the idea of understanding of the relationship between the human body and the space that surrounds it. In collaboration with Grumpy (www.grumpy.org.co.uk), students are required to produce "wearable shelters" that serve as protective all-weather garments in the day and insulating dwellings at night, demonstrating a cradle to cradle approach.



QED STUDY TRIPS

CORNWALL
CUBA
CYPRUS



CORNWALL

This year qed visited Cornwall. Apart from the unique aspects of landscape and seascape the visit afforded workshops at the Environment and Sustainability Institute and Camborne School of Mines (Exeter University in Falmouth) and a lecture from Matt Williams (FCB studios) on contemporary developments in Hayle and his own self build student project at Priests Cove (St. Just). Students visited galleries by MUMA in Newlyn and Penzance, the Eden Project, Maritime Museum (Falmouth), the Tate and Hepworth Museum (St Ives), the Minack Theatre and Telegraph Museum (Porthcurno) and Geevor Tin Mine (Trewellard).



Carnyorth



Newlyn



Minack Theatre



University of Cornwall



Maritime Museum



St. Ives



Greevor Tin Mines



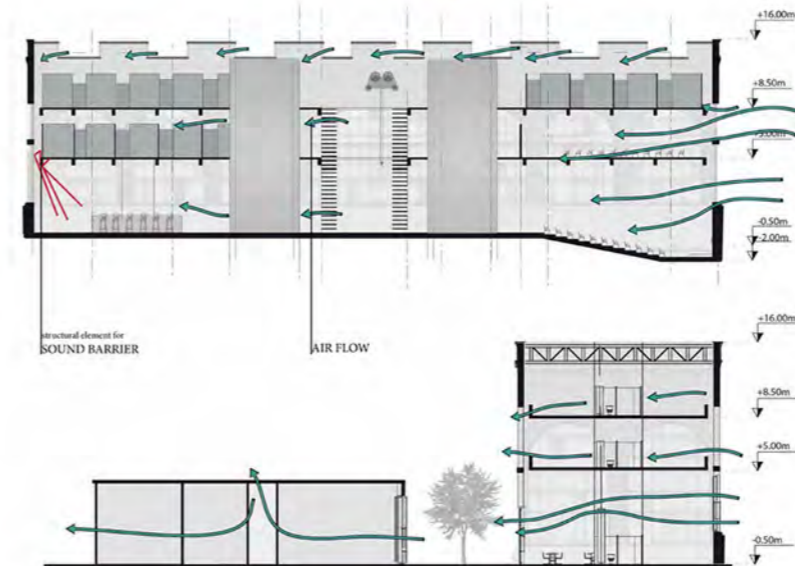
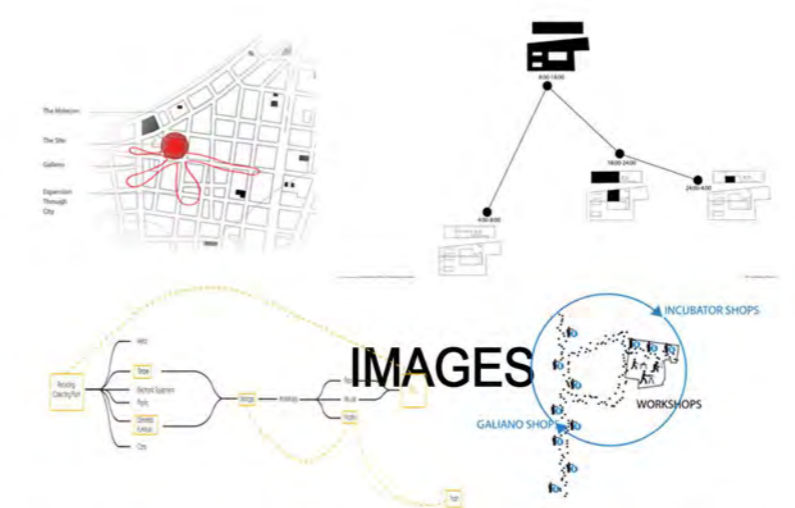
Eden Project

CUBA

Boyana Stoeva, Patrick Gorman

In Havana a period of transition and urban renewal is expected. Besides the renovation of existing buildings the substitution by new structures will become necessary in the central area of the metropolis. By these interventions urban life should be preserved in the central area of the metropolis in order to avoid the translocation of central activities to the outskirts.

The aim of the Winter School is to discuss design strategies for a business incubator that would satisfy the demand for start-up opportunities and better qualification in Cuba. It is then intended to test the practicality of the project through a design project in the quarter "Centro Habana" in the centre of Havana.



78 QED STUDY TRIPS

CUBA

Boyana Stoeva, Patrick Gorman



CYPRUS

Tan Chu Huan, Seong Cheng Teh,
Alan Pun, Steven Anton

The "Skin-Deep" workshop is a continuation of the 1 KHO: the one thousand year home workshop. This 3-day intense collaborative workshop was carried out at University of Nicosia with its students and staff. The 'Skin-Deep' workshop attempts to reconsider the skin of 'home' environments as a vital interface between what is building and what is not, what is in and what is out, what is conditioned or transformed and what is left to its own devices, what postulates new ideas and what is left 'being'; what deliberately creates a new atmosphere and what is plainly the atmosphere.

The focus of the outputs was to test the developed scenarios of 'home' via skin as interface, and as a mediator between defined inside or outside conditions, in actuality as well as conceptually. The workshop inspired the students from both Manchester School of Architecture and the University of Nicosia.

