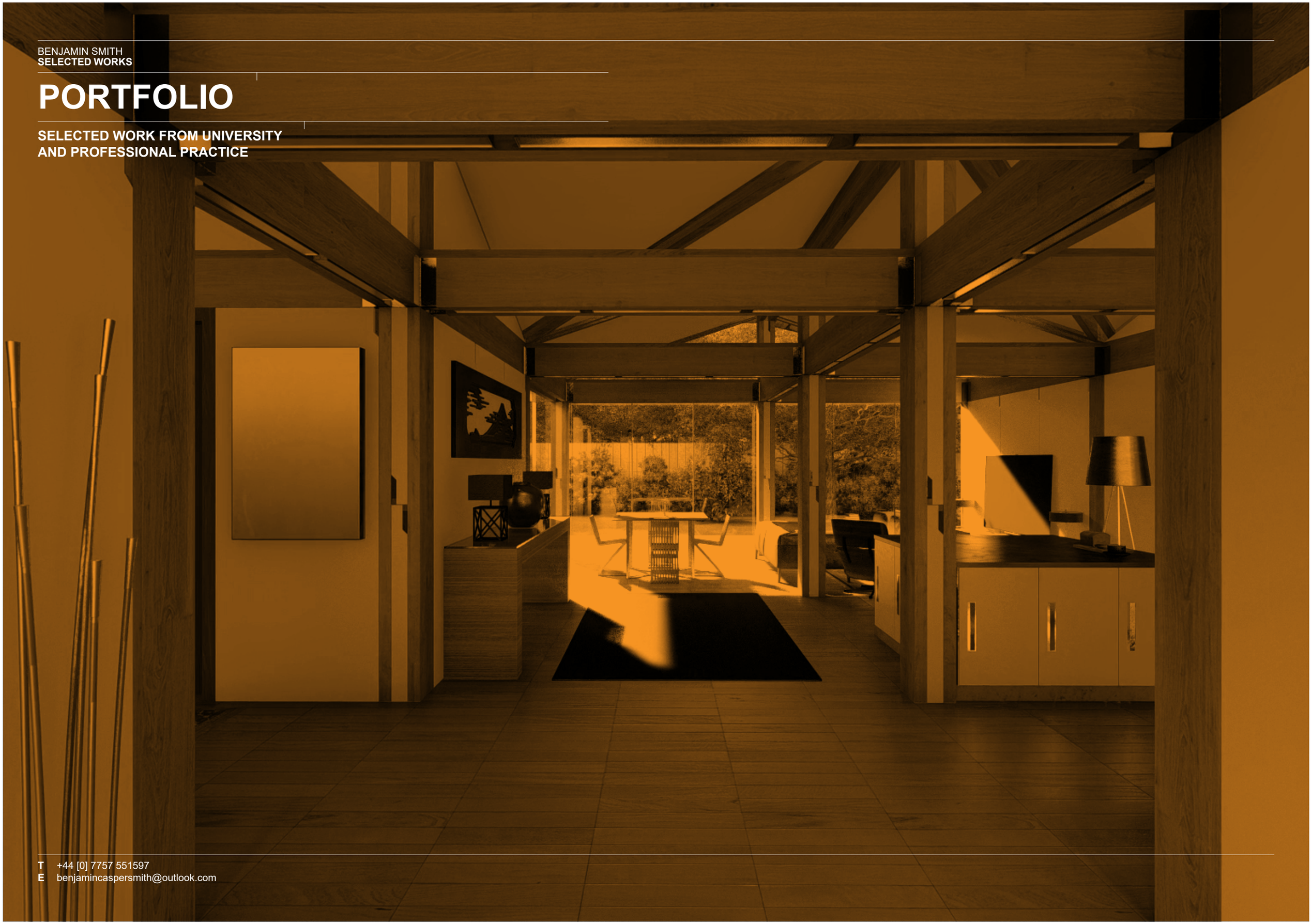
BENJAMIN SMITH
SELECTED WORKS

PORTFOLIO

SELECTED WORK FROM UNIVERSITY AND PROFESSIONAL PRACTICE

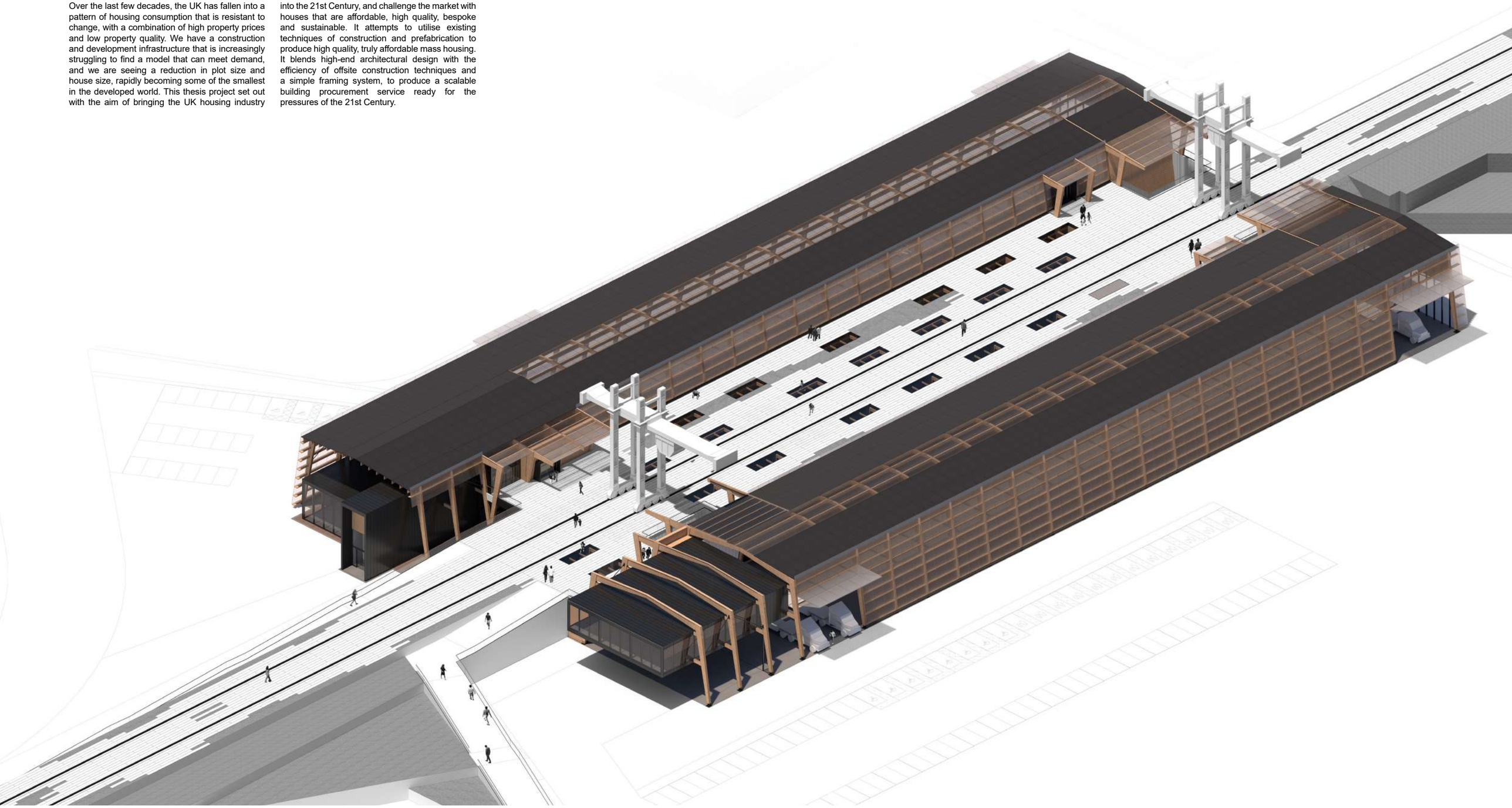


T +44 [0] 7757 551597
E benjamincaspersmith@outlook.com

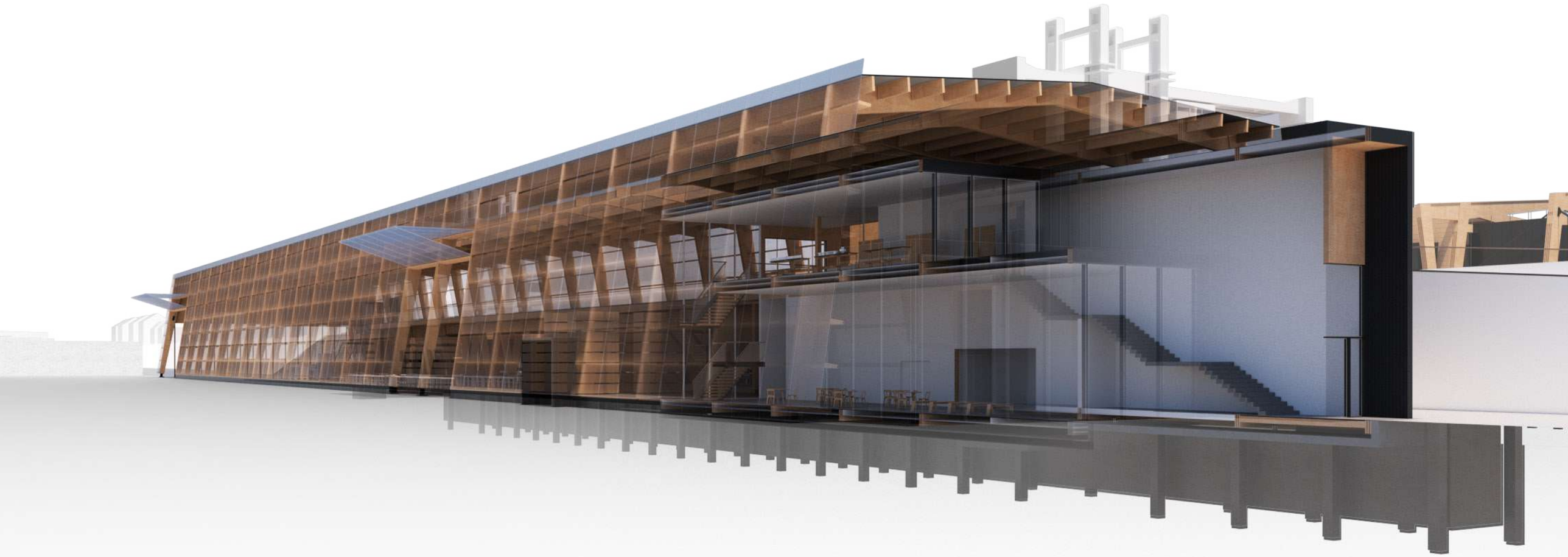
FABRICATING THE FUTURE

SYSTEM THEORY

Over the last few decades, the UK has fallen into a pattern of housing consumption that is resistant to change, with a combination of high property prices and low property quality. We have a construction and development infrastructure that is increasingly struggling to find a model that can meet demand, and we are seeing a reduction in plot size and house size, rapidly becoming some of the smallest in the developed world. This thesis project set out with the aim of bringing the UK housing industry into the 21st Century, and challenge the market with houses that are affordable, high quality, bespoke and sustainable. It attempts to utilise existing techniques of construction and prefabrication to produce high quality, truly affordable mass housing. It blends high-end architectural design with the efficiency of offsite construction techniques and a simple framing system, to produce a scalable building procurement service ready for the pressures of the 21st Century.

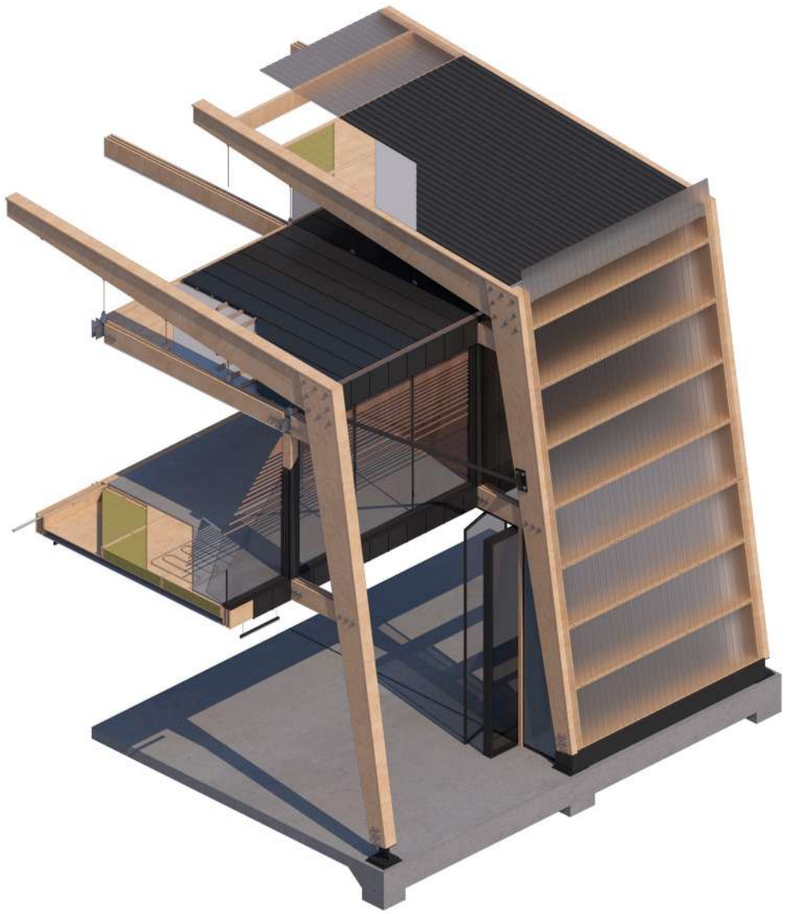


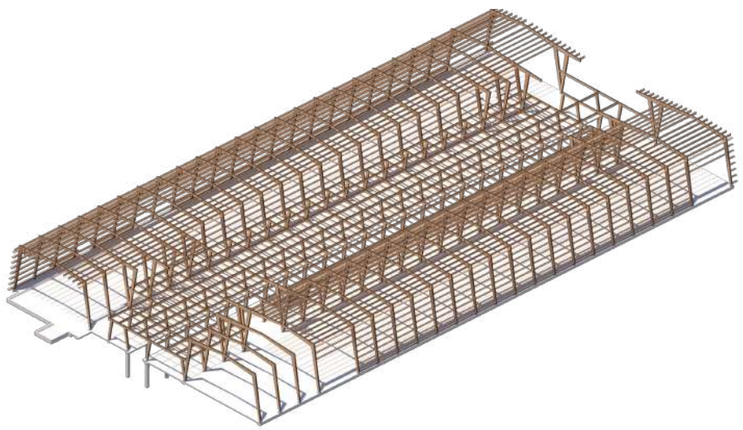
THE HOUSING FACTORY



MASS TIMBER MODULAR HOUSING

The housing factory is a building that gives form to a system. Its form follows and enables its function, however its function is much broader and richer than a simple factory. It is inspired by industrial buildings of the past, and by the production methods of the future; this is a building for builders and makers. In form and in function, it needs to stand as a beacon for the future of Thamesmead, and to bring that future into existence. The factory has been envisaged as a 21st Century reimagination of the original factory that produced precast components for the Thamesmead Masterplan. Wood is offloaded from lorries, cut to the correct size and length, packaged into components, and stored within the automatic storage and recovery system. These are then assembled on the factory floor and then delivered to site either via the crane or road network as individual preassembled modules or a kit of parts that are then slotted together on site.

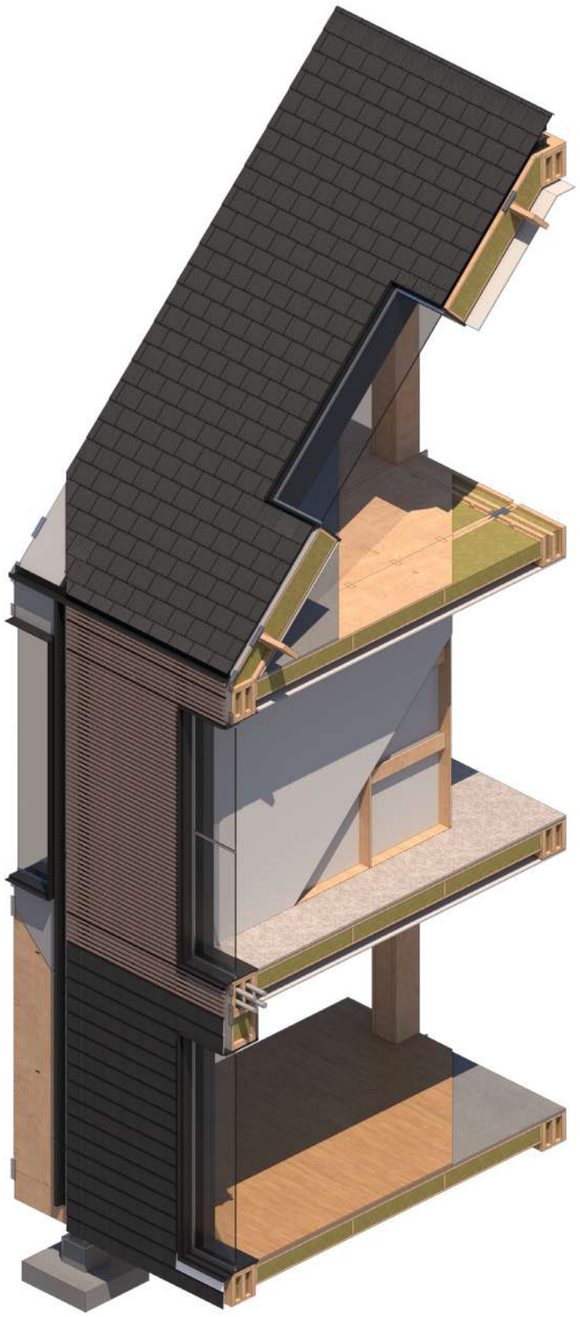


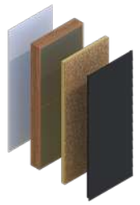


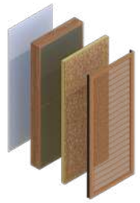
PREBUILD

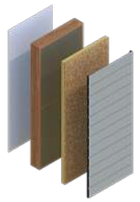
SCALABLE AND ADAPTABLE DESIGN

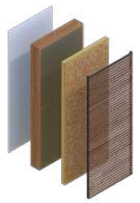
PreBuild exists to address the modern construction industry's inability to build enough housing to meet demand, and its inability to offer any choice for consumers over the design of their homes. The UK's domestic construction and property industry has an inertia of scale that has stopped it from adopting new technologies or processes and led to almost a century of repetitive housing. It aims to offer high quality, flexible and affordable homes through preconstruction. Hitting the sweet-spot between prefabrication and bespoke design through the use of a standardised kit of parts, that can be combined with small amounts of bespoke fabrication, into a near infinite number of homes. Through using a kit, both digitally and physically, it can offer a streamlined version of bespoke Architectural Design Services, combined with in-house construction, to bring beautiful homes within reach of a larger market.

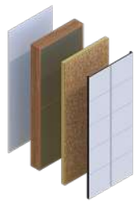


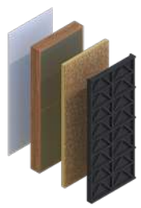


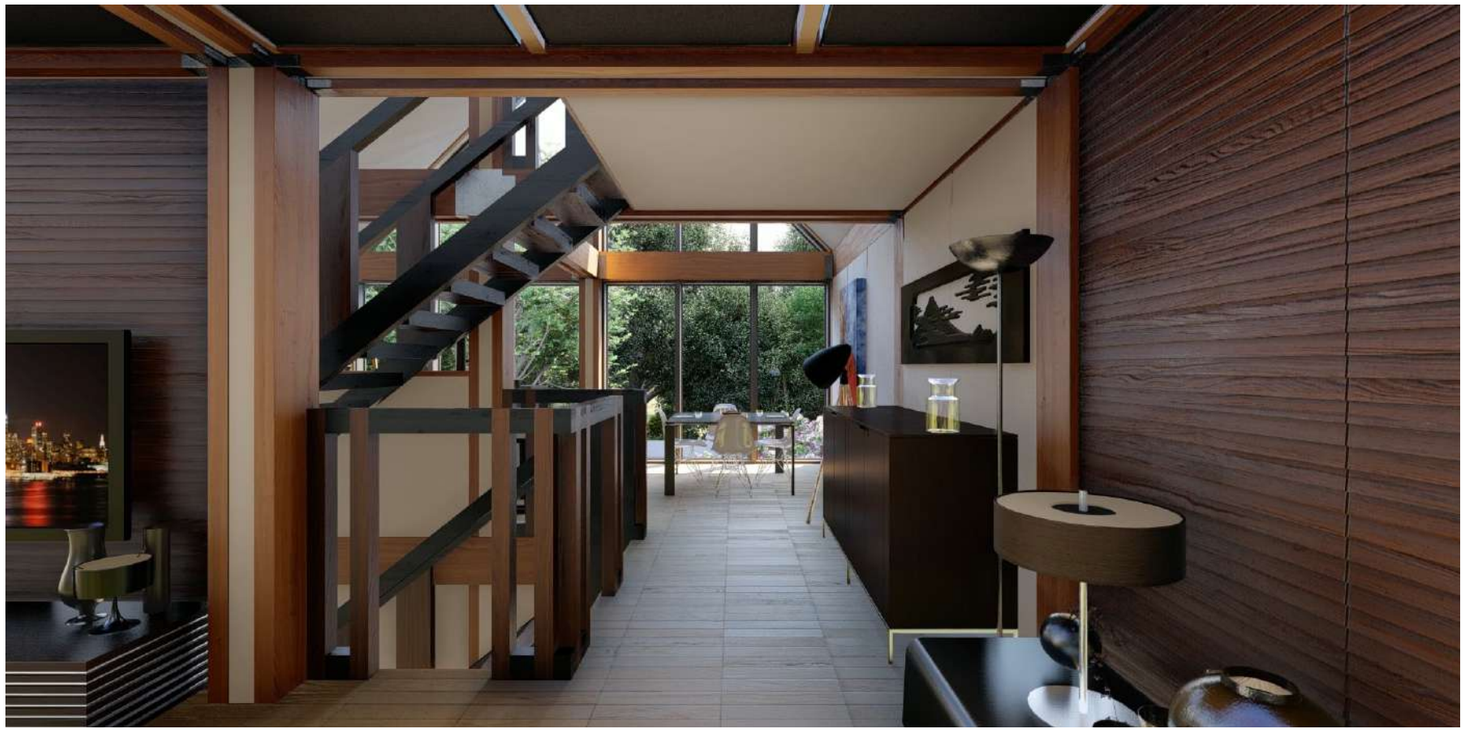




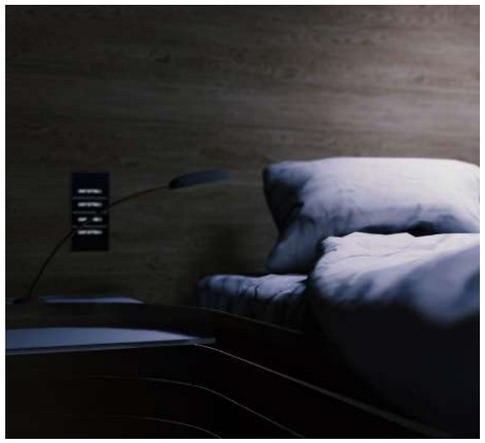








POD HOTEL CONCEPT



DESIGNING FOR MANUFACTURE AND ASSEMBLY

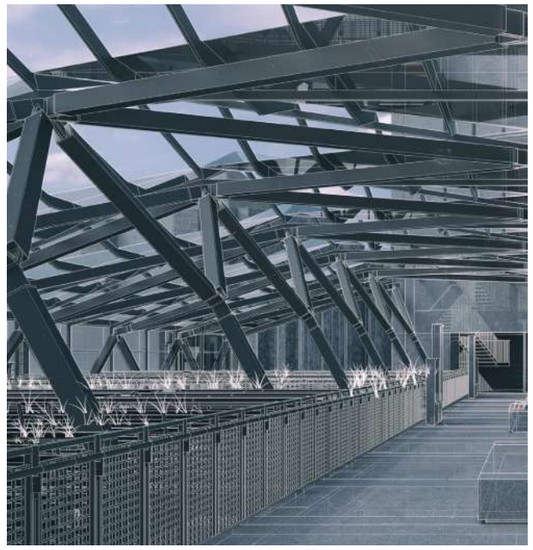
Virtual reality does not just change the way we experience digital representation, it changes the way we create it. It moves representation into the immersive realm, out of the 2D and into the 3D. The Pod Hotel was a research project that aimed to utilise Virtual Reality as a tool for people to experience the digital proposal. The technology enables us to merge the realities of space and place the user in a digital environment where they can look in all directions, move around, and interact with digital objects like never before. The idea was that the modules would be fabricated and pre-assembled off-site, transported to site and connected into an existing buildings infrastructure. VR dissolves the divide between the built environment and the visualisation of it and with it the fourth wall of the monitor is gone. This project was about rethinking how we think and produce spatial production through the utilisation of VR as a design tool.

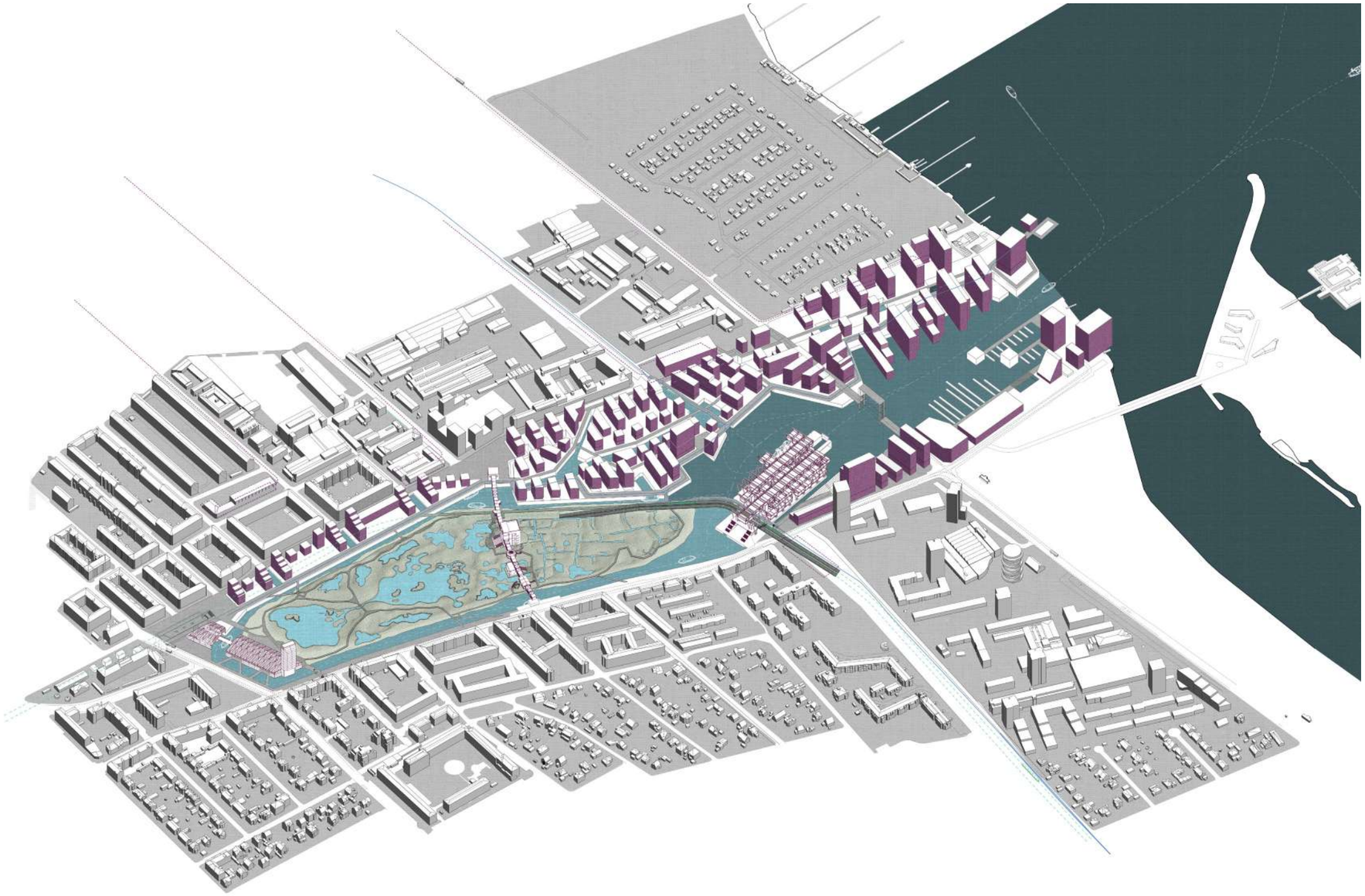
THE COURTYARD

DIGITAL SPATIAL DESIGN

Virtual reality is a new digital medium that lets users immerse themselves in 3D worlds. I believe it has the power to change the way people interact with information, and it is already offering a profoundly powerful way to tell stories, represent architecture, and share ideas. This can be sociological, technological or simply economic. Virtual Reality provides a new medium that allows us as Architects to immerse ourselves in designs before they ever materialise. This provides an incredibly powerful tool to allow us to iteratively design space from a first-person and for us to test the impact of design decisions to better refine the design. Together with a fellow University student we took up the challenge of designing and developing a VR demo level, for a competition, using Unreal Engine. The Courtyard project was our way of figuring out how to utilise Virtual Reality as a tool to design, model and spatialise concepts.

THE BALTIC CONNECTION

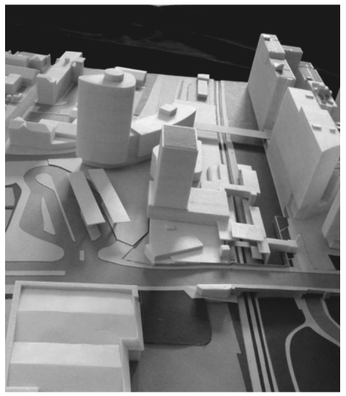




ØSTERSØEN'S STRØM

Civic architecture used to be something special; utilitarian buildings such as water treatment plants and pumping stations were objects of civic pride. Value management scratched joy and beauty off the list of building requirements and architects were deemed unnecessary luxuries on engineering projects. Civic infrastructure projects are typically designed as utilitarian facilities shunned to an industrial part of the city. Østersøen's Strøm challenges this notion by creating a water facility that serves as an attractive and lively urban space in the neighbourhood it's part of, celebrating the sites previous industrial history and juxtaposing it against the backdrop of a natural landscape that it produces as a by-product of the process involved within the industrial building. The building functions as a threshold device to the wetlands with the walkways that cut through the building and pull people from the city through to the wetlands and onwards to the Baltic sea.

RESIDENTIAL MASTERPLAN



PROJECT DETAILS

A residential led development in London comprising of 150 apartments with ground floor commercial units. The scheme consisted of the refurbishment of an existing underground station, the creation of residential apartments and new urban landscaping for the inhabitants and users of the space. The scheme demonstrates a holistic approach taken within the design process, one which factored in the multiple site constraints, challenging neighboring context and strict programme requirements.

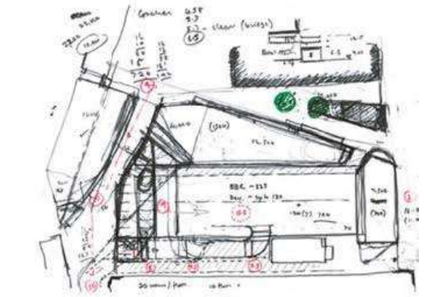
Role
Concept + Developed Design
2D AutoCAD Information Production
3D modeller
Visualiser
Model Making
Feasibility Study Report

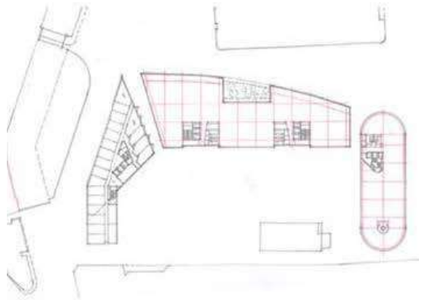
Status
RIBA Stage 1-2

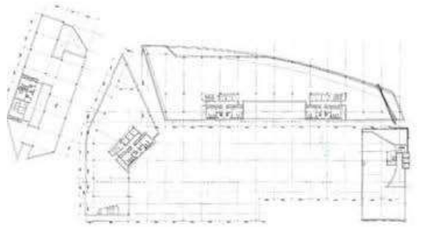
Location
London, United Kingdom.

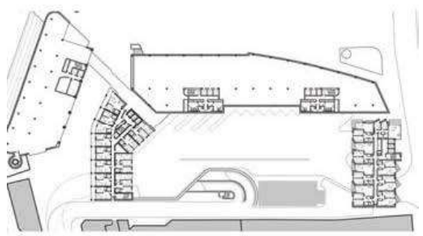
Skills
AutoCAD, 3DS Max, Vray, SketchUp, Indesign and Photoshop.

MIXED-USE MASTERPLAN









PROJECT DETAILS

The scheme is premised on cultivating and evolving the city centre's urban fabric, and, by understanding the relationships between what is being proposed and what is already there. The proposal was focused on regenerating the city's centre through three separate phases with each containing a cluster varying building functions. The design demonstrates an ability to adapt and flexibly respond to a variety of development requirements and building typologies.

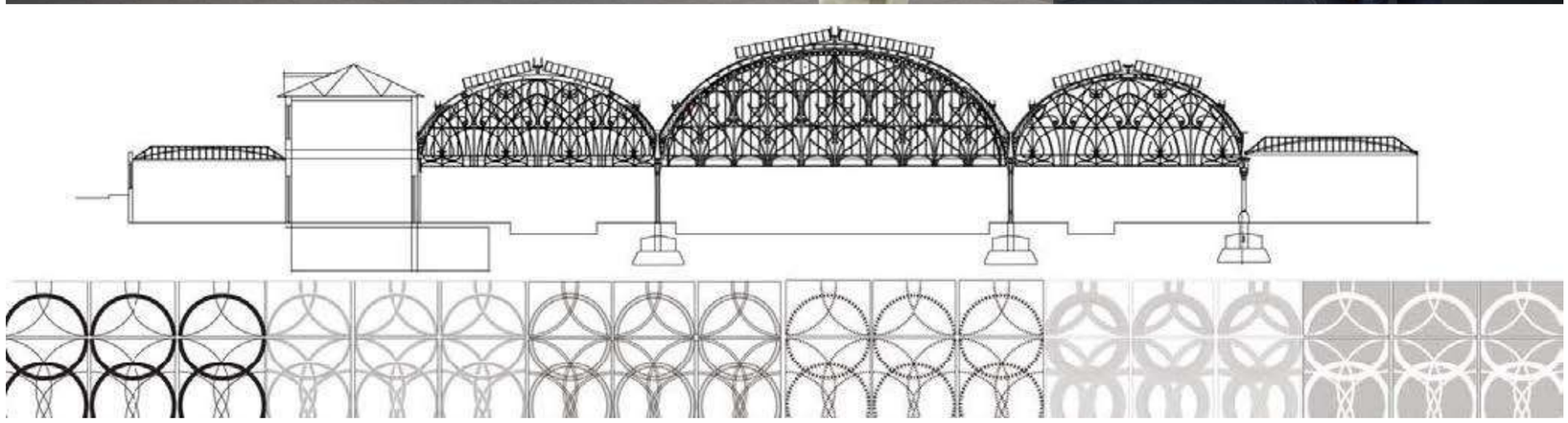
Role
Concept + Developed Design
2D AutoCAD Information Production
3D modeller
Visualiser
Model Making
Feasibility Study Report

Status
RIBA Stage 1

Location
Cardiff, United Kingdom.

Skills
AutoCAD, 3DS Max, Vray, SketchUp, Indesign and Photoshop.

RETAIL KIOSK



PROJECT DETAILS

A demountable kiosk structure incorporating a Network Rail information booth under the Paddington Station taxi rank concourse. Due to its location within a listed building development area the intention was to reference elements of the historic railway in a singular contemporary object that achieves a high level of craftsmanship. The patterned facade is a modern reinterpretation of the traditional ironmongery pattern found within the station.

Role
Concept + Developed Design
2D AutoCAD Information Production
3D modeller
Visualiser
Feasibility Study Report
Design Options Analysis
Pre-Application Report Production

Status
RIBA Stage 0-3

Location
London, United Kingdom.

Skills
AutoCAD, 3DS Max, Vray, SketchUp, Indesign and Photoshop.

T +44 [0] 7757 551597
E benjamincaspersmith@outlook.com