ataraxi

PLACEMENT PORTFOLIO

Architecture



Luka Mitchell

Studying *Architecture BArch (Hons) Degree*

At *Loughborough University*

In *Second Year*

Looking for *Paid International Placement*

Contact for CV or any additional info if not already provided.

I appreciate various architectural styles and am passionate about integrating biophilic design into my projects. I admire neo-classical styles but prioritize client needs regardless of the style.

With experience satisfying strict briefs and tight deadlines, I have brought many architectural visions to life through my rendering skills and collaboration with multiple businesses.

Toolkit

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Academic Project
Residential

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Academic Project
Residential

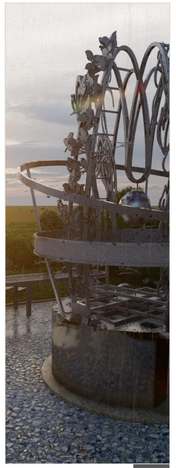
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HOLISTIC TECHNICAL REPORT 07

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TATA STEEL SCULPTURE 09

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Sculpture

HOME

1

Academic Project
Residential

The Home Project took me to Laxton, a remote, historical village in the midlands. During the project, I overcame many challenges to ensure the client received his desired lived experience.

My client's profession, being a ceramic sculptor and environmental activist, introduced various values and construction techniques that proved to be integral to the design's fruition. These were realised through the implementation of biophilic design, material selection and aesthetic features depicting elements of his career.

Inclusion of a workshop on site enables my client to become fully immersed in his craft and seamlessly progress with his projects, as opposed to commuting to a traditional office.





Abstract Site Experience Models



Concept Drawing

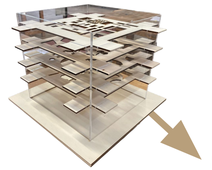


Precedent

'***Living Blocks***' = blending nature and architecture.

Credit - Lawrence Parent's Instagram:
https://www.instagram.com/lawrence.parent/





Exploration of how nature intertwines with architecture (represented as complex layers) via plant growth. Discovery of the potential relationship between the two worlds.

Concept Model



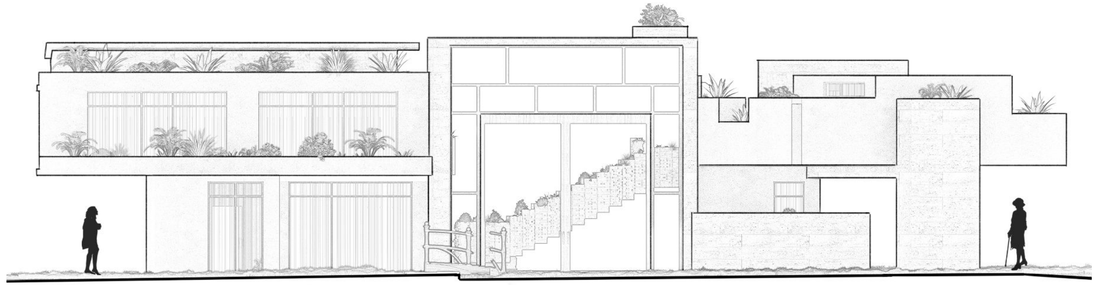


Front Elevation

Scale 1:100 @A3



Rear Elevation

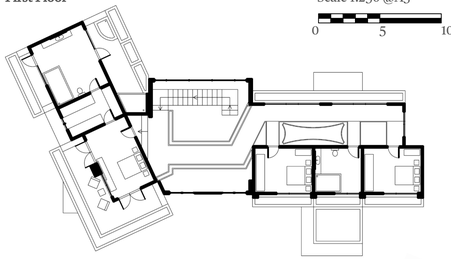




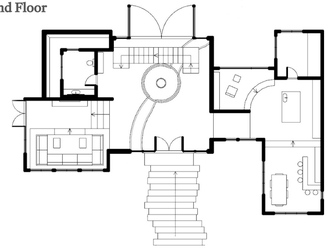
First Floor

Scale 1:250 @A3





Ground Floor





Laxton boasts rich natural qualities, which are also of great value to my client, hence I ensured to embed them into the core of the design.

The natural stream on site has been redirected to pass through the main entrance, allowing its sound to resonate through the home. A tree sits atop a miniature interior island, indicating harmony amongst the once-separated worlds.

Architecture is often static, while nature is constantly transforming.

By incorporating planters throughout the structure, flourishing miniature gardens span the exterior, blurring the lines between architecture and nature. This design evolves with the seasons, providing habitats for wildlife and creating a self-sustaining ecosystem.

ADAPT

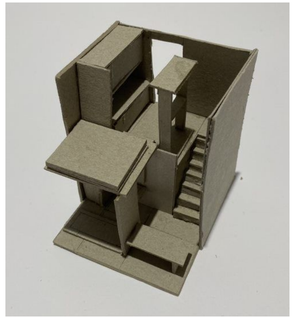
2

Academic Project
Residential

University accommodation with communal facilities are common, however there has been a significant shift towards rooms with amenities included. To address this trend, I adapted my residences into a self-sufficient miniature studio apartment at the cost of only a few extra metres.

Despite working within very restrictive boundaries, I reorganised the layout of my space for maximum efficiency. Intensive use of scaled working models helped me realise the design potential through a main facade with interchangeable extension modules.

This approach allowed me to create a functional and aesthetically pleasing living space that caters to modern demands.

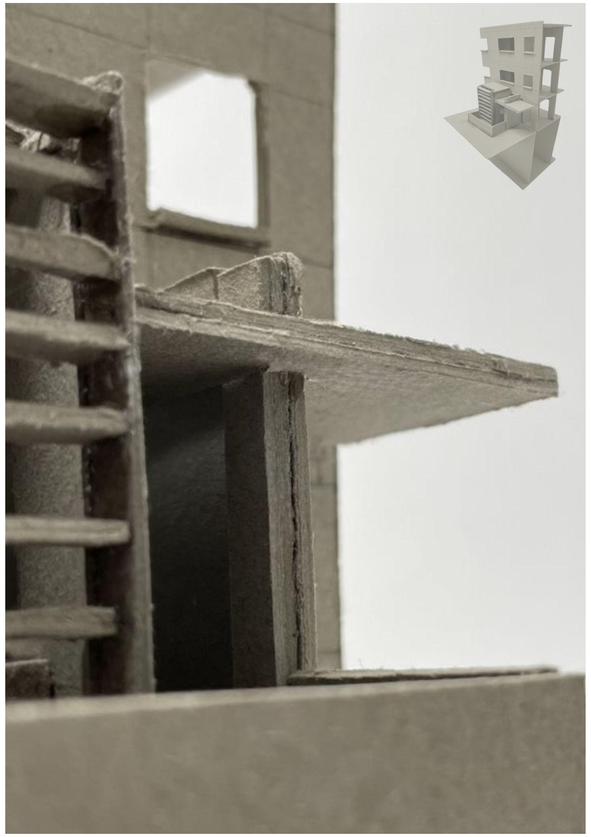






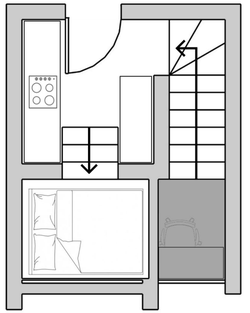




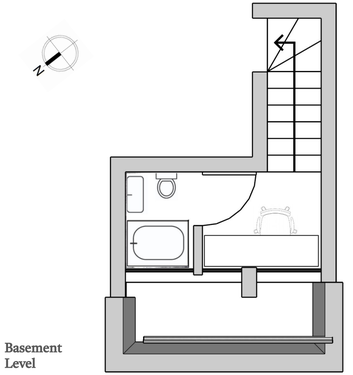


Scale 1:50 @A3

0 1 2m



Ground Floor



Basement Level







REPORT

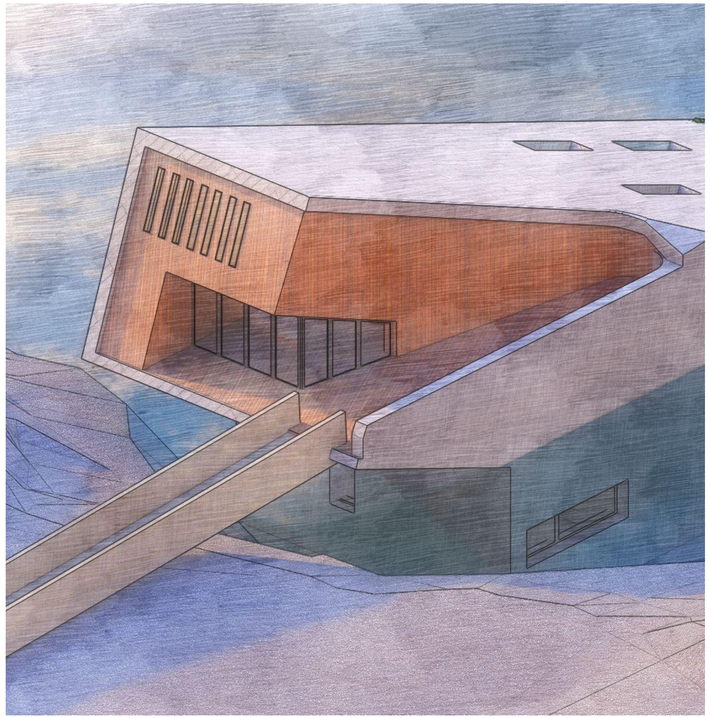
3 Academic Project
Retail

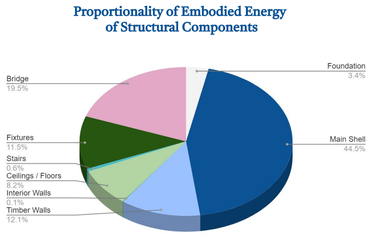
Technical performance of buildings can be crucial to their success and lifespan. Therefore, I conducted an analysis of a real world case study, an underwater restaurant in Norway. I took an approach considering 3 main areas: environmental, daylight and material.

I began with a basic visual interpretation of the structure, making only rudimentary judgements, however I required actual data.

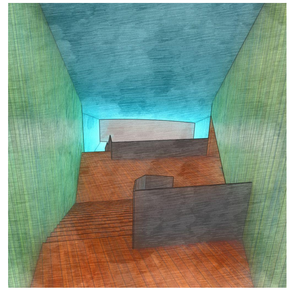
Deriving from the structure's technical drawings, I created a 3D model replication of the structure with very little uncertainty. This enabled the use of virtual simulations to obtain accurate results.



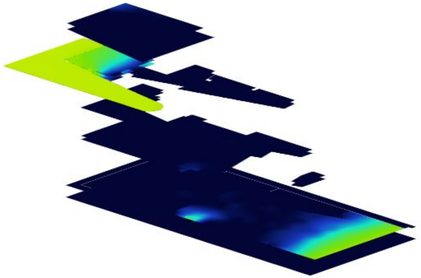




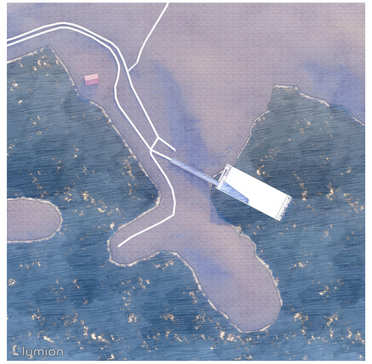
Rebuilding the existing structure in CAD facilitated the calculation of individual building components. With detailed information on materials, dimensions and masses, it is possible to determine the embodied energy of these elements. This can help identify flaws in material selection and application. For instance, the bridge, though small, signficialty contributes to the overall carbon footprint.

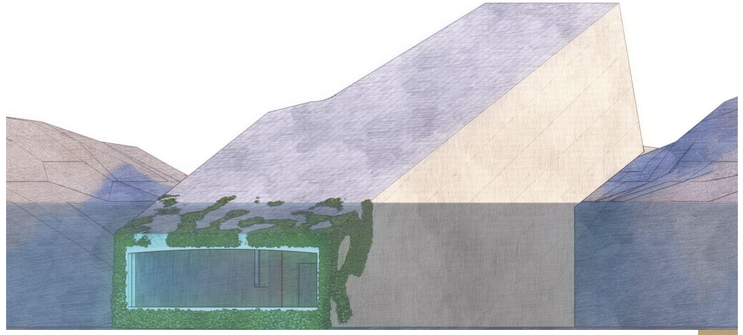


Use of rendering software such as Lumion allowed for in-depth experimentation with light dispersion across the interior spaces. With the primary window fully submerged in the ocean, a mystical deep blue hue envelops all exposed surfaces. This simulation process aids in identifying areas, or 'dead zones,' that do not achieve the desired lighting effect.



Advanced lighting simulations provide detailed insights into light sources and their intensities as they disperse throughout the building. By using these simulations alongside modifications to the model and the addition of extra windows, I was able to determine ways to enhance the overall experience. While the process is more complex than previous analyses, it yields far more valuable results.





TATA

4 **Professional Competition Project**
Sculpture

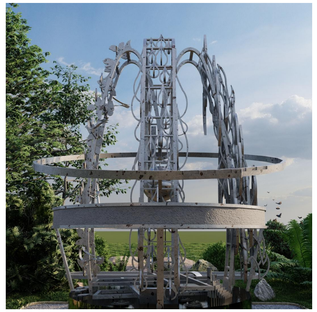
During my A-Levels, I undertook the challenge of designing a sculpture for the Tata Steel Shotton Works 125th Anniversary. I dissected the brief and ensured to create a design that would satisfy all points, such as honouring the deep heritage of the site.

Via transforming the client values into physical forms, I reached a structure with 3 main pillars resembling history, sustainability and product. Assembling and displaying the forms in CAD enabled me to adopt photorealistic rendering for optimal design communication.

Following a pitch to the judging panel, a series of requested changes and a stringent elimination process, I emerged victorious for the competition.









The subsequent months saw me frequently attending the workshop to oversee and aid in construction. Upon design completion, a grand unveiling event was held on site and streamed live to international viewers. I take great pride in this opportunity for enabling me to gain valuable industry insight and experience, deepening my understanding of the design and construction process.





