

# Portfolio

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**MA Interior, Architectural And Spatial Design**





## Manifesto

In my view, the creation of space should primarily focus on practicality. The design and development of a space are often driven by the need to address specific issues or challenges, which space designers are tasked with considering.

Beyond this level, space is not merely a physical entity; it also serves as a vessel for emotions. A successful space design must not only meet functional needs but also evoke emotional resonance and psychological satisfaction.

On a concrete level, the interplay between a space's structure and function is key to creating the most comfortable environment.

On an abstract level, the interaction between a space's historical and cultural context, user needs, and environmental influences is essential for creating a harmonious atmosphere.

## Synthesis Project - Problem-Solving Oriented

For all students, the Synthesis project represents the opportunity to use the Custom House as a vehicle, selecting a design direction based on individual interests and applying the learning acquired during the postgraduate phase. On this basis, for me personally, I aim for my design to address real-world issues by **responding to social problems** that I identify. Therefore, my Synthesis project is problem-solving oriented and combines my interest in **exhibition design** to create an immersive, narrative-driven exhibition space.

I want to provide visitors with a unique experience in the spaces I design, employing narrative and storytelling techniques to allow them to connect with the essence of the architecture. This Synthesis project involves deconstructing real spaces and, through the reshaping of spatial forms and the use of appropriate spatial language, reconstructing environments that integrate history, culture, and social memory.

## Synthesis Project Outline

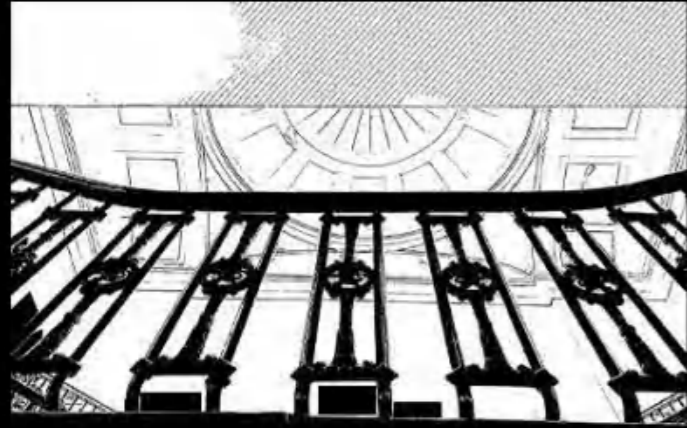
This design project involves renovating the Custom House into a shipbuilding history exhibition space, utilizing the theoretical principles of interactive narrative architecture. The narrative backdrop centers around Leith's shipbuilding industry post-World War II, succinctly chronicling its historical trajectory. Drawing from this historical context, I will curate appropriate exhibits and spaces that integrate ship structures and shipbuilding techniques into the spatial design. The final deliverables will include detailed technical drawings of floor plans and sections to articulate the specific layout of the exhibition spaces. Additionally, storyboard-style illustrations will be employed to blend narrative elements with visual scenes, enhancing the immersive experience of the museum.



# Storyboard

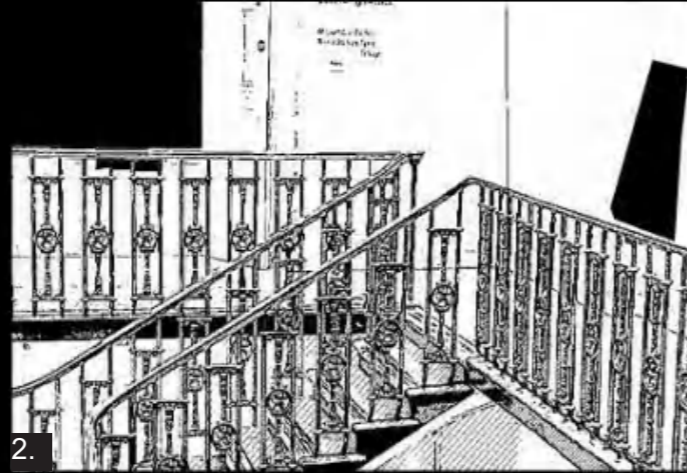
In this project, the custom house will be transformed into an immersive narrative exhibition space. As visitors enter, they will be transported into a story about the shipbuilding industry in Leith from the past century.

The story below will be narrated from a third-person perspective.



1.

Entering the main entrance of the Custom House, visitors will start in the atrium, a transitional space between the story and reality. Walking up the atrium staircase towards the entrance on the east side of the first floor symbolizes the journey of boarding a ship.



2.



3.

## Introduction

It is now 1946, and World War II has just ended. You are a ship repair worker, arriving at a cargo ship to carry out repairs. Here, you will uncover the hidden secrets of Leith's shipbuilding industry.

When visitors reach the entrance on the east side of the first floor, an introductory text on the wall will guide you into the story of the 20th century. Visitors will transform into the shipbuilder John as they enter the exhibition hall.



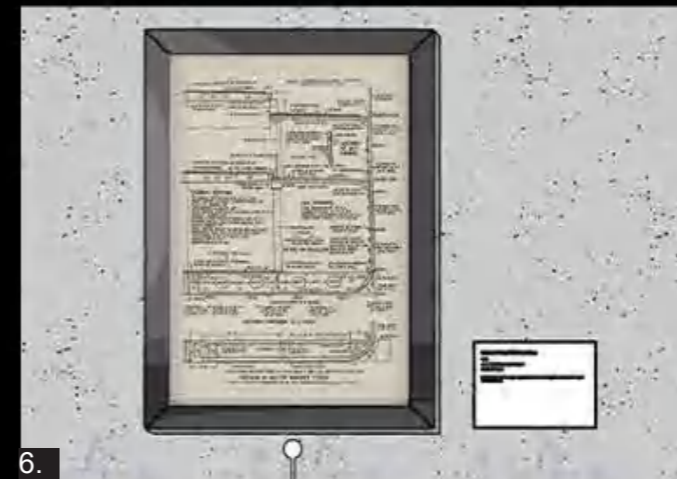
4.

Sunlight pours into the atrium, catching John's eye with its brightness. The space, which resembles a ship but isn't quite in its shape, captivates him and compels him to move forward.



5.

He notices lines on the floor that resemble the lofting lines of a ship, extending up the walls. Unsure of their meaning, he looks to either side, searching for answers.



6.

White lines on the walls connect to a sketch of a ship design, which are more complex than current ones. "This might be something from the future!" John thinks to himself. On the other side of the lines, John notices a pattern template fixed to the railing. He crouches down to examine it closely.

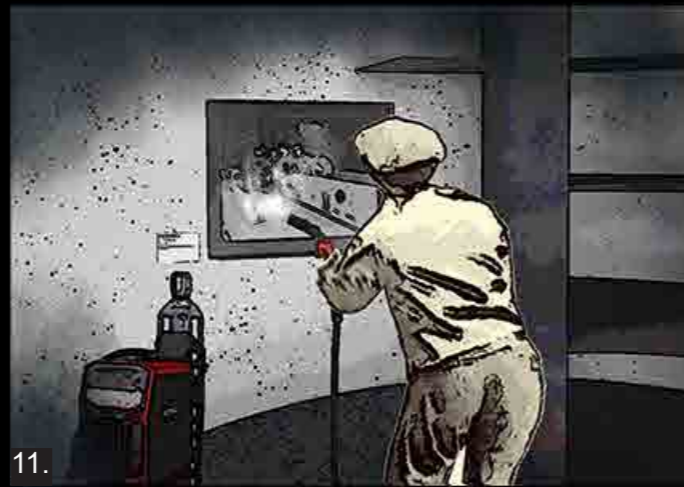


7.





8. Rising to his feet, John moves forward, his attention drawn to the flickering light behind a door. He steps into the room, where dim lighting on the machinery flickers, beckoning him to come closer.



10. This is a machine labeled "welding machine," which John has never used before. The machine has a note that reads, "Press the button to turn on the flashlight." Holding a modified flashlight, John uses it to illuminate a photograph on the wall, which captures workers operating welding machines. This intrigues him. A nearby introduction states that, after the 1950s, welding technology will gradually replace riveting.



12. Feeling astonished, John senses he has glimpsed a secret of the future. He exits the room and returns to the bright atrium, where the exhibits downstairs catch his attention. He searches for the way to the hall downstairs. Following the light and sound, he moves toward a series of screens.



14. John sits down to watch the screen, where a rolling display shows the memoirs of workers from the same shipyard where he once worked. He realizes that in the future, the shipbuilding industry in Leith will decline, and his own Henry Robb Shipyard will close. Unable to believe what he has seen and heard, he is determined to find more evidence of the future within the building.



15. Following the light downstairs, John arrives in a space filled with models of new types of ships.



16. Standing in the hall, John looks up at the sunlight pouring in and thinks, "This resembles the structure of a cargo hold." The vastness of the space makes him feel small and insignificant.





17.

He examines the ships closely. The display labels indicate that they were built by Henry Robb Company in the mid-20th century. The size of these ships is significantly larger than those of today. John realizes that these ships are approaching the limits of what Leith's shallow bay can accommodate.



22.



23.

Following the information on the timeline, John walks to the other side of the corridor, which leads to a dimly lit room. Inside, rust-colored display stands are positioned. He steps closer to read the text on the stands.



18.

He turns around and sees an iron structure interspersed throughout the hall. He walks toward it.



19.



24.

### The 1980s

Since the 1980s, Leith's shipbuilding industry has been in decline. The global economy shifted shipbuilding to lower-cost regions in the Far East, making it difficult for traditional shipyards in high-cost areas to compete. Technological advancements and changing market demands further disadvantaged these older shipyards. Additionally, the lack of sufficient government support and investment in the UK, coupled with economic recessions, weakened the industry. As the UK economy transitioned towards service and high-tech sectors, traditional manufacturing, including shipbuilding, became marginalized. Stricter environmental and safety standards also imposed high costs on outdated shipyards. Furthermore, increased local and international competition, with other UK ports and global shipbuilding centers vying for limited orders, exacerbated the situation. These interconnected factors collectively led to the decline of Leith's once-thriving shipbuilding industry.

The text describes various factors that affected Leith's shipbuilding industry in the late 20th century, all contributing to its decline. John's emotions are a mix of sadness and nostalgia.



20.



21.

He notices a timeline on the wall detailing the evolution of ship engines at Henry Robb Shipyard. It shows that diesel engines will eventually replace steam engines as the primary power source for shipping. In the corner of the space is a model of a diesel engine, surrounded by comprehensive information. John becomes engrossed in the display.



25.



26.

Next to the text, photographs show shipyard workers protesting, striving to protect their jobs and the shipbuilding industry in Leith, yet unable to withstand the tides of change. In this spiraling room, John falls into deep thought, wishing he could do something for the industry but feeling utterly powerless.





27. The final photograph in the exhibition shows the locked gates of Henry Robb Company at its closure. John's heart fills with sadness. From this moment, he resolves to document the history of Leith's shipbuilding industry. This way, even though the era of shipbuilding in Leith has ended, the stories and history of what happened here will be preserved for future generations.

28. Photo: Mid-20th century aerial view showing Leith Docks and Henry Robb shipyard. <https://www.edinburghnews.scotsman.com/>



29.

### Postscript

The content and historical basis of this story are inspired by book "Leith-Built Ships Volume 3." As the book states, "This is the story of a mighty industry, but one which nonetheless had begun its decline. In the century from 1893, this nation went from producing 80% of all the world's commercial ships to producing no commercial ships at all." However, we can collect historical records and share its former glory and stories through exhibitions, ensuring that more people can learn about this significant chapter in history.

## Models Of Important Spatial Elements

Each stage of the story corresponds to an important spatial element. The following photos are 1:50 scale models I made based on real materials. The exact dimensions of the actual objects will be shown in the subsequent technical drawings.



In storyboard 1  
Atrium handrail, made of mild steel and glass.



In storyboard 9&11  
Display rack symbolizing the fore peak, made of mild steel.



In storyboard 15&16  
Decorative column in the atrium, made of mild steel.



In storyboard 18&19  
Ladder connecting the atrium and the corridor, made of checker plate mild steel.



In storyboard 23&26  
Spiral display rack, made of steel corten.



Combination Of Various Elements