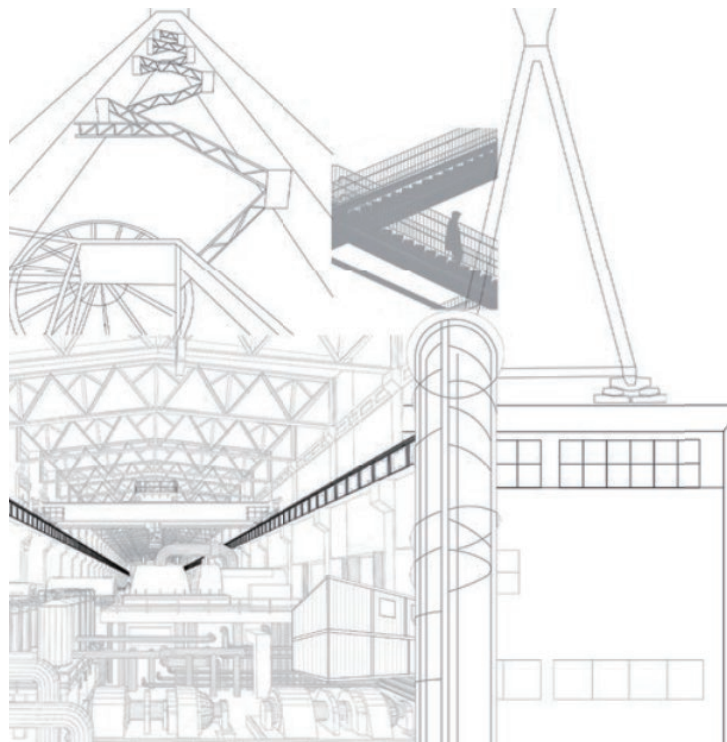


Semiotics in architectural transformation

An exploration of the industrial culture in the Lindholmen region

Architectural Experimentation



Shilu Xu

Master Thesis 2025

Chalmers School of Architecture + Department of
Architecture & Civil Engineering

Examiner: Daniel Norell

Supervisor: Naima Callenberg

Student background

Title.....Semiotic in architectural transformation
Author..... Shilu Xu
InstitutionChalmers School of Architecture
+ Department of Architecture & Civil Engineering
Profile..... Architectural Experimentation
Theme.....Before and After Building
Examiner..... Daniel Norell
Supervisor..... Naima Callenberg
Year.....2024-2025



Shilu Xu
+46 764543002
shilu@chalmers.se

Chalmers University of Technology
M.SC Architecture and Urban Design
2023-2025

Beijing University of Technology
B.SC Architecture
2017-2022

Abstract

The purpose of this article is to explore how the history and culture of Gothenburg are reflected in the city's development through the renovation of buildings around abandoned industrial facilities. The ruins protection strategy is formed by combining the design theory derived from urban exploration with semiotics. Through architectural renovation, urban industrial sites are reused on the basis of preserving industrial ruins.

The site of this thesis is chosen near an old crane in Lindholmen. The architecture of the site is characterized by an unique industrial factory surrounding, with decayed building facades. And the purpose of the thesis is to study, in the context of abandoned industrial facilities, how to transform the site to concentrate on the city's history and culture and visualize its potential value.

The structure of this thesis is from theory to practice. The theory of counter space provides a perspective on how to deal with ruins so that they may "regain their value." The site is a collection of ruins and industrial facilities. Due to the unique industrial environment and history of the site, the thesis will use semiotic theory to apply the industrial elements and shipbuilding history into the architecture.

The outcome of the thesis is an architectural transformation of an existing building, where the design will be a collage/assemblage of deconstructed existing elements and added ones, connected to the surrounding. The result is a pragmatic function of a restaurant with the old industrial facilities, while showing the history and culture of Gothenburg.

Keywords:

Urban exploration, counter space, ruin protection, semiotic, transformation



Figure 1: Erisberg crane in Gothenburg 2024

Contents

Abstract	4
Introduction	6
Purpose	7
Research Questions	7
Sustainability	8
Delimitation	8
Background	11
Context	12
Theory	14
Situation	28
Design Exploration	43
Reflection	74
Bibliography	75

I. Introduction

Purpose

The aim of this thesis is to explore how the historical culture of Gothenburg has been reflected in the development of the city, by studying the transformation of buildings around abandoned industrial facilities. This thesis also studies the meaning behind industrial ruins as symbols and their relationship with history and culture.

The study is based on a harbor area of Gothenburg called Lindholmen. In order to enhance people's sense of identity with the history and culture of the site, it can use a historical and cultural image to promote the development of local economy and culture. It is also hoped that this design method will help in ruin protection and urban development.

Research Questions

How can a transformation of industrial sites integrate the symbolic qualities of industrial elements to preserve and build upon cultural characteristics?

How does architecture relate to semiotics and how can semiotics become a tool for design?

Sustainability

In terms of sustainability, this thesis studies the relationship between architectural transformation and urban context, and promotes the image of the city on the basis of saving resources and reducing waste.

Good project transformation can increase the life of the building with the minimal energy consumption. And enhancing city image can promote city tourism and even economic development. (Hunt, 1975)

I hope the study of individual cases can be gradually extended to the application of urban.

Delimitation

In the study of ideology, due to the difference of people's growth experience and cultural environment, some people may have a special understanding of the same thing that is different from the general concept. This small group of people will not be considered in this study.

Methods and Tools

Literature Review

Through reading literature, the author analyzes the achievements of semiotics in the field of architecture, and seeks the connection between semiotics and architectural design and urban design.

Case study

By analyzing the concrete city or building project, and learning semiotic theory used in its design technique is studied.

Historical Analysis

By studying the historical background and development process of the port of Gothenburg, semiotics is used to analyze how the architectural design is affected by social, cultural and technological factors. And having plan for the future development of the city.

Field Research & Observation

By investigating the surrounding buildings of lindholmen site, studying architectural form and spatial characteristics. And look at the elements of the environment that can represent the characteristics of the site, such as cranes, ships, trusses. And then apply it to architectural design.

Collage

The use of diagrams to describe the architectural communication model can more intuitively analyze and explain the connection between semiotic theory and architectural design concept. The elements that can represent the unique characteristics of lindholmen are studied and applied to the architectural design.

II. Background

Context

As a major industrial city in Sweden, Gothenburg has historically been known for heavy industries such as shipbuilding. There is no denying that the industry in Gothenburg has a brilliant shipbuilding history. In the middle of the 19th century, due to the demands of trade, ships began to become larger and larger, and due to the steam-powered ships, they could travel upstream along the Gota Älv River. (Lindhilmen Science Park AB) This necessitated the construction of docks along the river. In the second half of the 19th century, Sweden's export industry developed rapidly, leading to an increase in cargo traffic at the ports. This rapid development of shipbuilding industry, large cranes, ship masts and various smoking chimneys have become the unique landscape of the port, and some of the unique structures and factories have been preserved to the present.

With the change of global industrial structure, traditional industries have gradually declined, resulting in some industrial facilities being idle, forming many industrial sites. Along Göta Älv, there are numerous factory districts, the closest to the city centre being the Eriksberg, Lindholmen and Ringön areas. Of these three areas, only Eriksberg has been fully developed, becoming a modern area of accommodation and business. (Ivanoff, 2024) Although Lindholmen has successfully transformed into a science park, there are traces of old factories along the river that have not been transformed. The Ringön area is changing the economic chain through artistic means, attracting more customers through the spontaneous activities of the users of the site, but there are still many industrial facilities on the site. These facilities include a variety of large cranes and workshops, as well as stacked containers. Some of these facilities are still in use, and some have become an old industrial symbolic element.

These industrial elements are important parts of Gothenburg's industrial culture. We could discover the composition and character of Gothenburg through urban exploration and find the qualities of architecture that connect the past with the present. By studying the role of industrial heritage in this process, which, combined with appropriate transformation, we can continue the urban history and heritage protection. When people pass by these sites, they can not only learn about the golden age of shipbuilding in the past, but also find that it has practical functions and potential future.

One of the most interesting aspects about Lindholmen is that there is a "contradiction" inside, the area is transformed into a new technology park with modern skyscrapers and other buildings, but in the middle of these new buildings are old industrial facilities. The park has also intentionally retained parts of the factory structure and facade, and given new functions. Therefore, I want to take it as the research object, and hope that this research method can be applied to various similar architectural transformation.



Figure 2: Industrial facilities in Lindholmen

Theory

Urban Functionality

In order to understand the situation of a city, it is necessary to define the function and nature of it. In *Assaying history: Creating temporal junctions through urban exploration*, (Garrett, 2011) talks about urban exploration (urbex) is used to explore the functionality of cities. He divided it into four aspects: official planning, informal uses, temporal junctions of time, and symbolic significance. I will explain these four concepts in the context of Gothenburg.

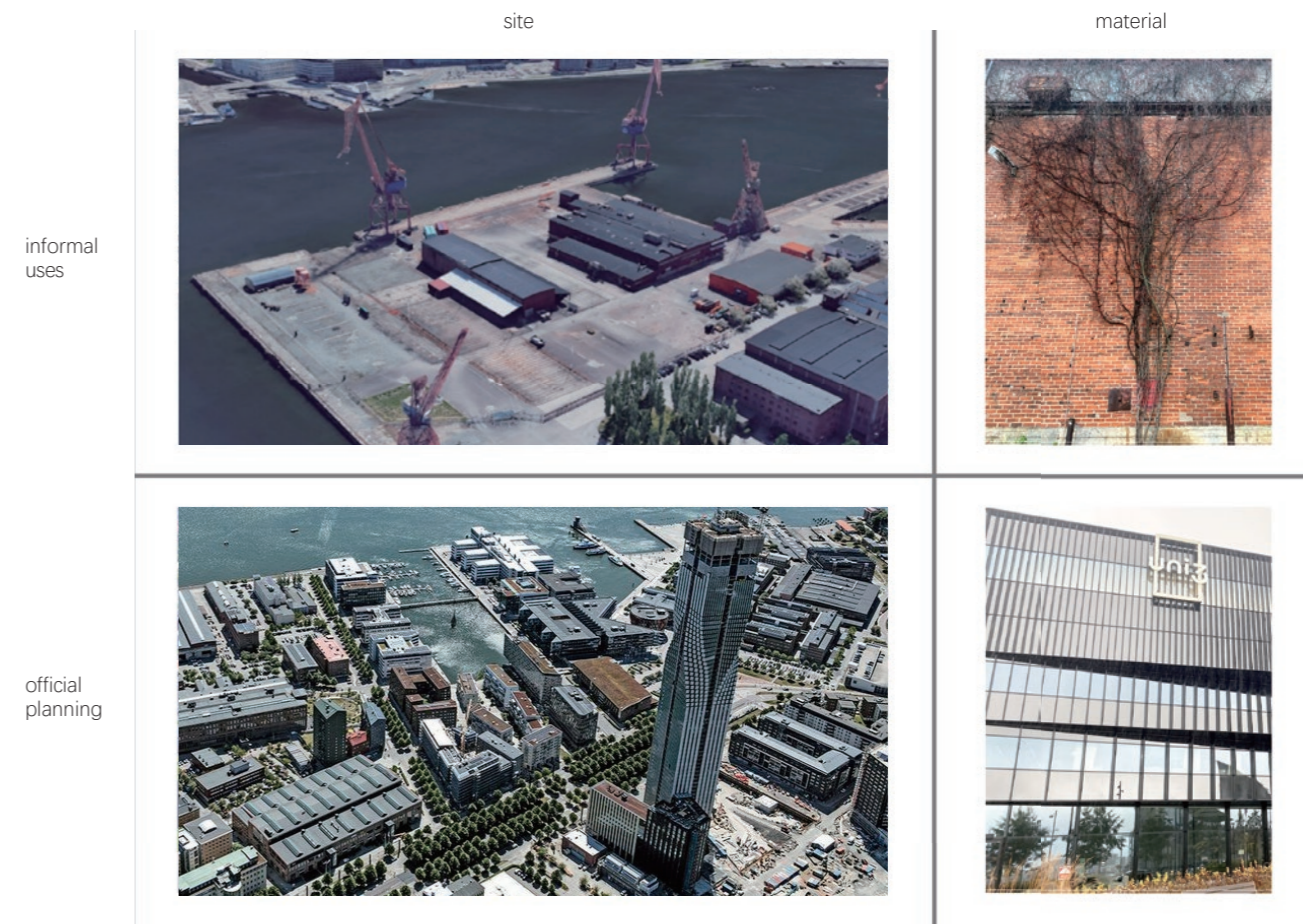
According to Garrett, the functionality of cities is often given to specific uses by planners and governments, such as housing, commerce, and transportation. At the same time, there are abandoned buildings, underground tunnels, factories and other abandoned or not widely used spaces in cities, which reveal the other side of urban functions - which space is not only used according to official planning, it is called Informal Uses. They are flexible and have multiple possibilities.

Among these spaces, abandoned buildings are defined as ruins. Ruins are the remains of a civilization's architecture. The term refers to formerly intact structures that have fallen into a state of partial or total disrepair over time due to a variety of factors, such as lack of maintenance, deliberate destruction by humans, or uncontrollable destruction by natural phenomena.

Along the river bank in Lindholmen, there are actually many Informal Uses area. They are not completely abandoned, or unused spaces, but have static functions such as warehouses and parking lots. Utilization rate in these building is much lower than the official plan.

These Informal Uses area hold profound significance. The decaying structures are more than remnants of a bygone industrial era—they are laden with symbolic meaning that reflects the socio-economic transformations of the city. As visual and spatial signs, they communicate narratives of labor, progress, obsolescence, and memory. These ruins served as both loss and potential: they mark the disappearance of a once-dominant industrial economy while simultaneously opening space for reinterpretation, artistic intervention, and urban reimagination. (Orlova, 2025) Through their material presence, the ruins engage the viewer in a silent dialogue about time, identity, and the layered meanings of urban space.

Figure 3: Urban Exploration



Counter space

Tim Edensor in the book *Industrial Ruins: In Space, Aesthetics and Materiality* (2005), explains the concept of "ruin as counter-space" is developed to describe how ruins challenge the prevailing spatial order and functional norms.

"Ruins are counter-spaces where the rigid order of the city dissolves, allowing for improvisation, exploration, and the aesthetic appreciation of decay." (Edensor, 2005, p. 12)

Edensor sees industrial ruins as a classic "counter-space." This means that ruins stand in opposition to the logic of planning, order and production of capitalist urban space. "Formal" Spaces in cities are often strictly regulated, such as office buildings, shopping malls, and transportation hubs, whereas ruins are "outliers" of this order, unregulated, unpredictable, and even challenging.

Edensor emphasizes that the character of the counter space in ruins is not only functional, but also sensory experience and aesthetic character. In contrast to the orderly modern architecture, the ruins present an "aesthetic of disorder," with a state of decay, corruption, and vegetation erosion that contrasts with the mainstream urban aesthetic. In addition, the ruins allow people to experience the space in different ways, such as exploring, climbing, touching and listening, in contrast to the controlled urban environment.

The informal uses area in Lindholmen can be understood as resistant, disordered spaces that challenge the dominant logic of capitalist urban planning. These ruins disrupt the orderly, functional aesthetic of the surrounding high-tech redevelopment, offering a stark contrast through their decay and material fragmentation. They embody multiple temporalities—where the past lingers and resists being overwritten—while also providing a creative refuge for artists and subcultural expression. However, as Edensor warns, such spaces risk being reabsorbed into the system—as heritage sites or creative districts—thus losing their oppositional potential.

Temporal junctions

Garrett also proposed the concept of "temporal junctions", emphasizing the superposition of past, present and future in urban space." Other scholars have analyzed these viewpoints in detail, in Edensor's explanation, ruins are places where temporal distinctions are blurred, where the past and present merge in unpredictable ways, generating hybrid landscapes that unsettle dominant spatial and historical narratives." (Edensor, 2005, p. 17)

This aligns with temporal junctions by emphasizing the co-presence of multiple times within industrial ruins, challenging linear urban development narratives.

"Decaying structures offer a palimpsest of time, where material remnants invite speculation about past use, present neglect, and possible futures." (DeSilvey, 2017, p. 92)

DeSilvey introduces curated decay, a concept similar to temporal junctions, where historical sites exist in a state of managed transformation rather than restoration, allowing past and present to coexist dynamically.

For example, an abandoned factory, which was originally a production center and later became a ruin, is given a new function by the intervention of urban explorers (such as a place for photography, adventure or historical research). This "interleaving of time" breaks the traditional view of urban function and makes the space more dynamic.



Figure 4: Temporal Junctions in Gothenburg

From Industrial Icons to Cultural Significance

In *Explore Everything: Place-Hacking the City*, Bradley L. Garrett delves into the symbolic significance of urban exploration by challenging conventional perceptions of urban spaces. He describes urban exploration as a means to "recode closed, secret, hidden and forgotten urban space to make them realms of opportunity." This act of 'place hacking' transforms restricted areas into sites of adventure and personal meaning, thereby altering their symbolic roles within the urban environment.

Garrett's experiences with the London Consolidation Crew (LCC) further illustrate this concept. By infiltrating spaces like abandoned Tube stations and the London Post Office Railway, the LCC reclaims these areas from obscurity, highlighting their historical and cultural significance.

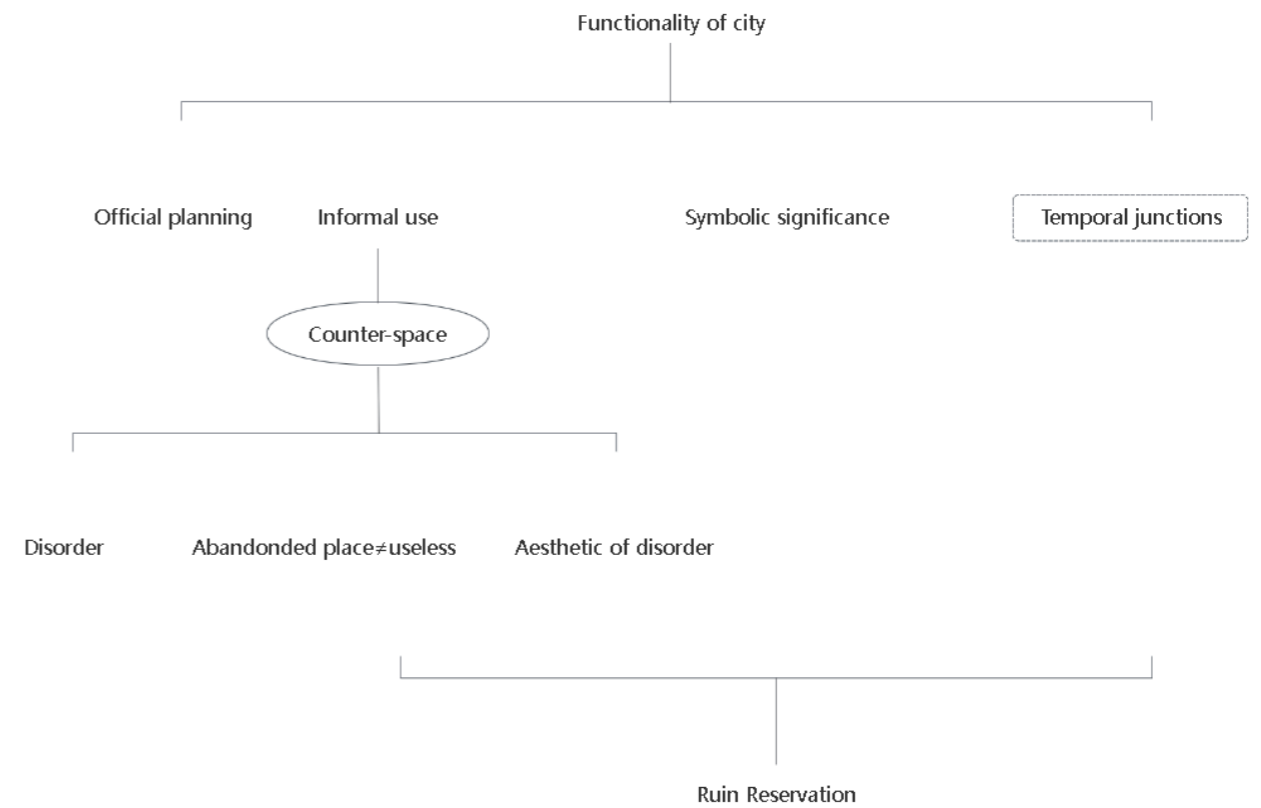
Garrett gives new functions on the basis of the old forms of Industrial icons, so that its historical and cultural significance is valued. This paper will also use this method to explore the space of the Lindholmen region, discover the symbolic meaning of industrial ruins in it, and develop new functions and forms, so that these industrial ruins can retain historical traces while emphasizing cultural significance.



Figure 5: The Postal Museum

The structure of theory

These theories form a research method of ruins protection. First of all, through urban exploration, the informal space of the city will be found. Combined with Edensor's counter space theory, I will summarize the symbolic significance of these ruins, and found the aesthetics of the ruins while preserving this disorder. Then I will sum up the characteristics of the city at different times in history, and transform the ruins and give new functions to the site, thus retaining historical and cultural significance.



Approaches

In order to study the symbolic significance of ruins, in order to preserve their aesthetics and history, semiotics will become the method of study.

Semiotics is defined as the study of signs. Beyond this brief definition, scholars in the field of semiotics have defined it more broadly in the spirit of American philosopher and semiotician Charles William Morris (1901–1979) as the “science of signs” (Morris Citation, 1938).

Semiotics is the study of the communication between creators and readers through symbols. It can be seen as a form of transmitting information. The message is sent by the transmitter, the creator, and received by the receiver, the reader. This is the most basic information transfer model of semiotics.

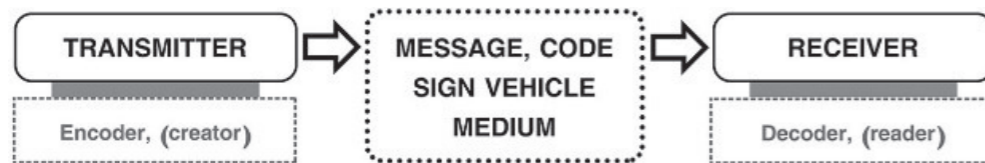


Figure 6: The communication channel of information theory. Source: (Abdullah, 2024)

There are two primary legacies for semiotics; one is the European theory founded by the Swiss semiotician and linguist Ferdinand de Saussure (1857–1913), who used the term semiology to form a link between linguistics and social psychology (Figure 4a)(Chandler Citation, 2022).

Concurrently, the American philosopher Charles Sanders Peirce (1839–1914) established the American tradition and described semiotics as focusing on logic and meaning, as well as linking linguistics to philosophy(Figure 4b) (Martin and Ringham Citation, 2000).

Peircean semiotic is triadic, including sign, object, interpretant, as opposed to the dyadic Saussurian tradition (signifier, signified).

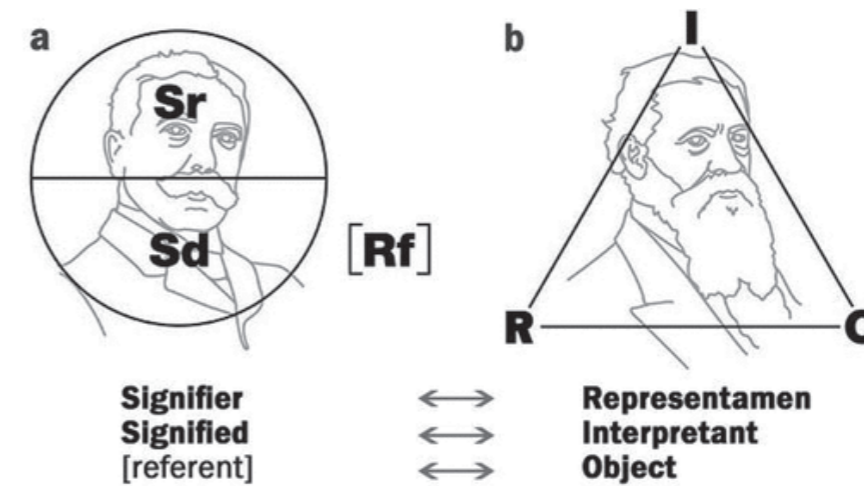


Figure 7: Saussure' s dyadic model (a) and Peirce' s triadic model of semiosis (b). Source: (Furlong-Clancy Citation, 2015).

To explain the difference between the two theories, I will use the crane in Gothenburg.

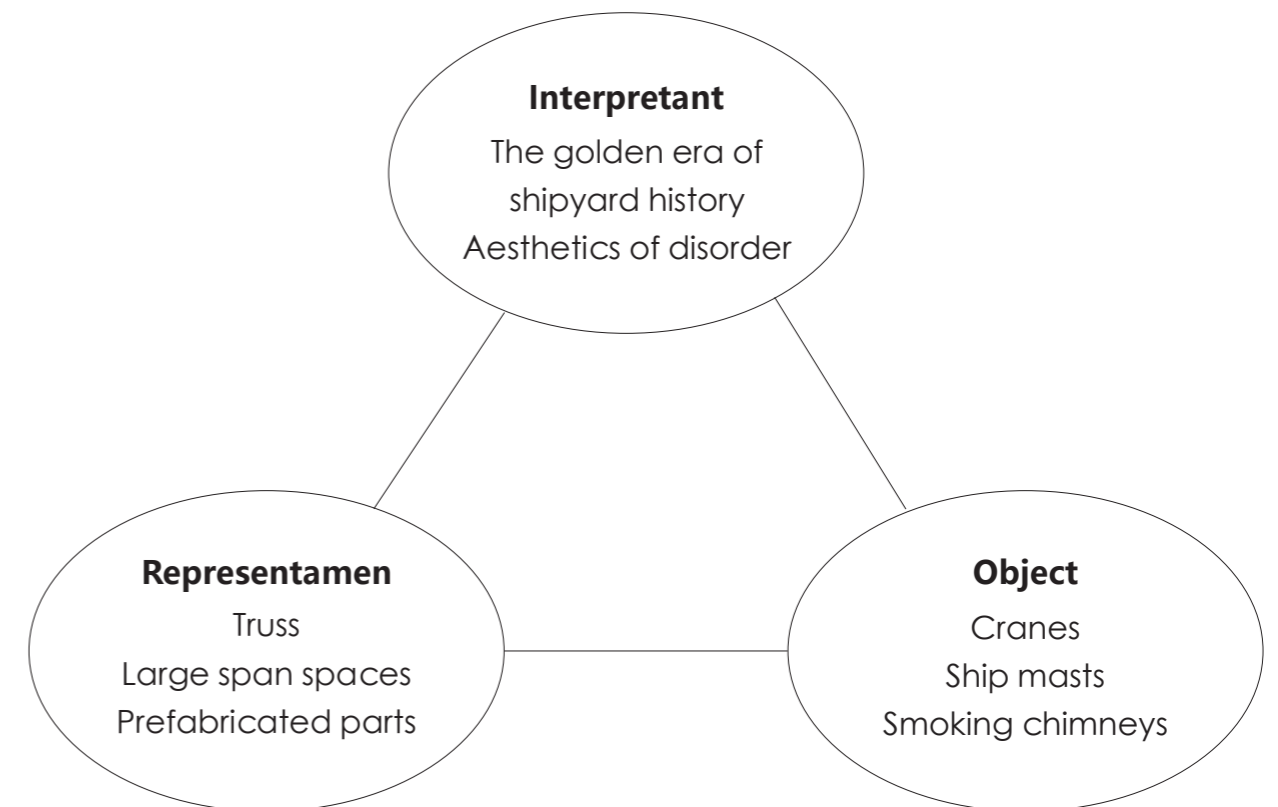
For example, the Lindholmen area is full of old industrial facilities, structures, etc., which can be seen as a symbol of the old shipyards, enabling the reader to recall Gothenburg's unique shipbuilding history.

Saussure's dyadic model is used to explain structure. The crane itself is a signifier, and signified refers to the allusion of the crane in human psychology as a machine to build ships. Using Peirce's triadic model of semiosis to explain the structure, the crane itself is the object, the shipbuilding machine is the representamen, and the crane reminds people of shipbuilding history of Gothenburg is an interpretant.

Compared with the simple communication model, Saussure's theory adds the analysis of ideology, and his research model is suitable for the interpretation of artificial symbols. Therefore, this paper uses Saussure's model in the selection of architectural design theory.

Saussure's model in the context of Gothenburg

In addition to the crane used as example earlier, there are numerous industrial facilities in Gothenburg that can be studied.



Analytical framework used in architecture context

Architecture presents a particular challenge to semiotics considering the assumption that architectural substances do not communicate (Eco Citation1997). The unique part in the field of architecture is that it is basically designated for the realization of functions and not often used for communication. While this is the primary function of the building, it also has a secondary function of promoting "mass communication". (Abdullah, 2024)

Umberto Eco's semiotics of the denotative and connotative (Primary and secondary architectural communication) can be used to describe and determine the nature of relations and integral parts of the framework regarding the phenomenon of architectural communication.

Eco differentiates between the primary communication of architecture (denotation) and secondary communication of architecture (connotation). Thus, he believes that semiotics, as a tool, is important in interpreting meaning in architecture by exploring the "semantic layer." Figure on the right demonstrates the analytical framework of the study, which links the different levels of building interactions to the denotation and connotation dimensions of Eco's semiotics model.

Primary function: constitutes the tangible aspects of the building including the actual function, material characteristics and structure, which are defined as "denotation".

Secondary function: constitutes the intangible aspects of the design concepts and hidden messages of poetic, politic and socio-cultural dimensions as responses to the context and society. These qualities are defined as "connotation" in semiotics.

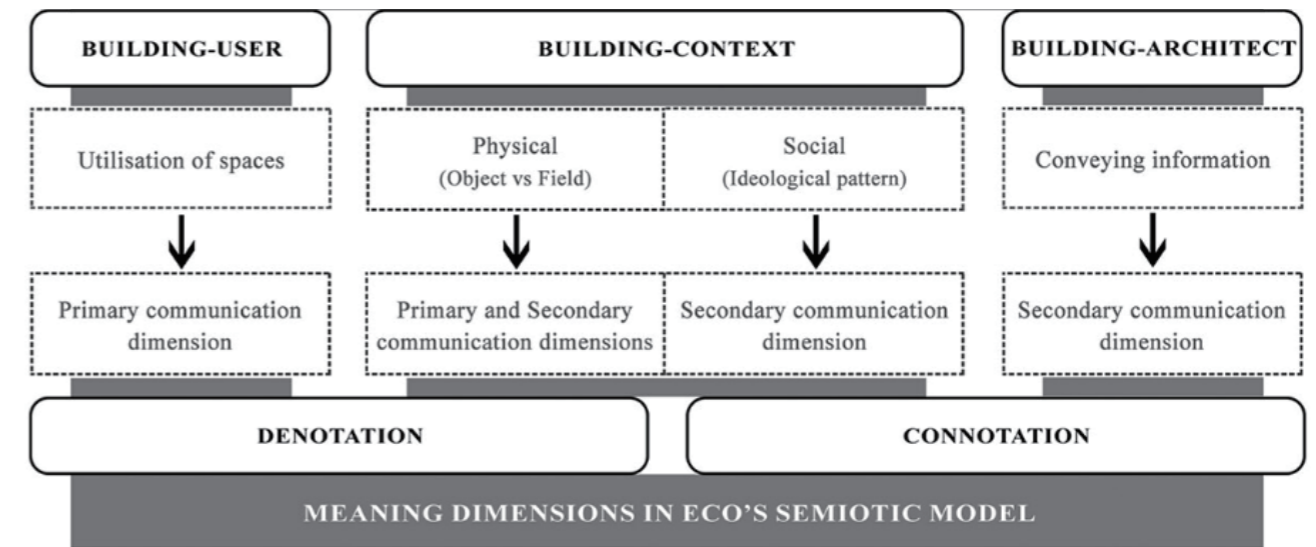


Figure 8: The proposed analytical framework developed using Eco's semiotic model and building relation levels of the phenomenon of communication.
Source: (Abdullah, 2024)

Example of using semiotic in architecture design

To understand how semiotics is used in the context of architecture, I will explain it with an example.

The Jewish Museum in Berlin

"The official name of the project is 'Jewish Museum' but I have named it 'Between the Lines' because for me it is about two lines of thinking, organization, and relationship." — Daniel Libeskind

According to Daniel Libeskind, the primary architectural communication is the floor plan, it is based on two lines: the building's visible zigzagging line and an invisible straight line. And the secondary communication are four different sources of inspiration Libeskind mentions for his design. They are prominent Jewish and non-Jewish Berliners stand for the connections between Jewish tradition and German culture prior to the Shoah. Libeskind plotted their addresses on a map, and a network of lines emerged from which he developed the structure of the building and the windows.

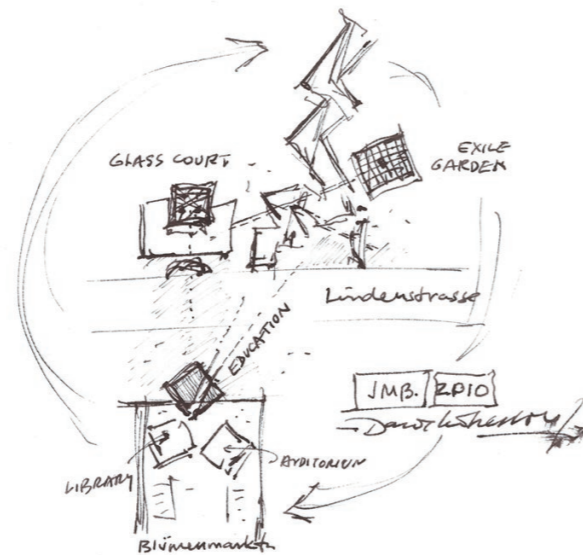


Figure 9: Sketch of the Jewish Museum © Daniel Libeskind

As a creator, Libeskind's design concept is the location of the pioneers on the map, using their connections to generate shapes.

Most readers, however, interpret it as lightning or a hexagram.(the star of David) They believe that Libeskind uses the religious symbol "The Star of David" and emptying its triangles from its centers of gravity to embody the meanings of loss, absence and death.

The reader interprets the plan as a six-pointed star representing suffering. Here you can see the difference between creator and resder's understanding, but also the similarities between the outcome of remembering the Jews and the sad history.

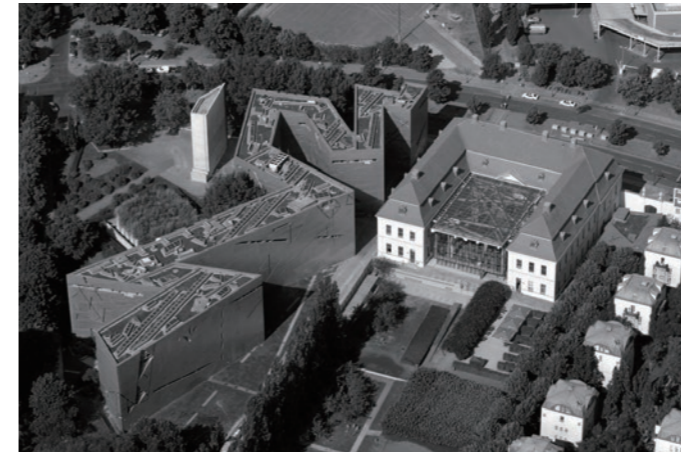


Figure 8. Aerial view of the Jewish Museum Berlin, Libeskind Building
© Jewish Museum Berlin. Photo: Günter Schneider

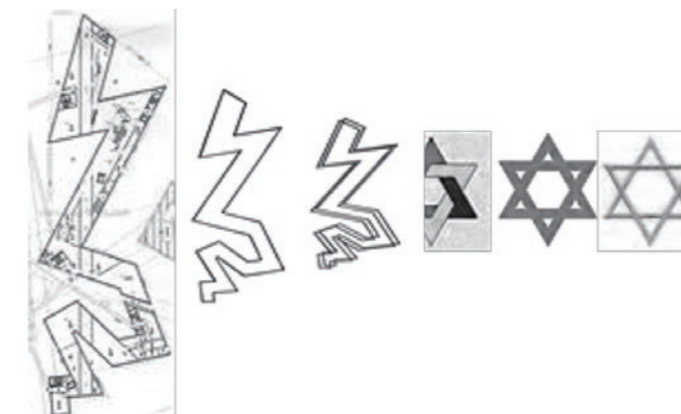


Figure 10: Readers's understanding as the srar of David.
Source:Houssam Bahgat (2023)

III. Situation

History of shipbuilding

To understand the urban functionality, I will develop a urban exploration. First, there is a golden age of shipbuilding of Gothenburg, therefore many ports and harbour have been kept.

The history of the Port of Gothenburg dates back to 1620. It was 18th century before trade with East Asia really gathered momentum. This was due largely to the Swedish East India Company (SOIC), which was founded in 1731. The company was finally closed down in 1813.

In the middle of the 19th century, ships began to grow in size and thanks to steam power they could make their way up the Göta Älv river. This made it necessary to construct quays along the river. During the second half of the 19th century, Swedish export industry developed quickly, resulting in higher freight volumes at the port.

Due to the rapid development of the shipbuilding industry, in this era, large cranes, ship masts, and various smoking chimneys became a unique sight in the port.



Figure 11: The shipyard depicted on lithographs in Sweden's Industrial Establishments (1875).

Urban Functionality

In the urban development of Gothenburg, a multi-centered and multi-functional urban structure design has been formed (Styhre, 2022). This structure is not only a response to the traditional urban centralization model, but also aims to solve the problem of "urban diseases" caused by excessive concentration of functions.

By arranging educational, medical, commercial and residential functions in different areas, Gothenburg has achieved complementary functions among regions and a rational distribution of the population, enhancing the overall resilience and quality of life of the city.

However, due to Gothenburg's history of industrial shipbuilding, even with government planning and regional transformation, there are still informal use spaces as industrial facilities and ruins in several areas along the river. For example, Ringon, Eriksberg and Lindholmen.

Transformation in informal use spaces

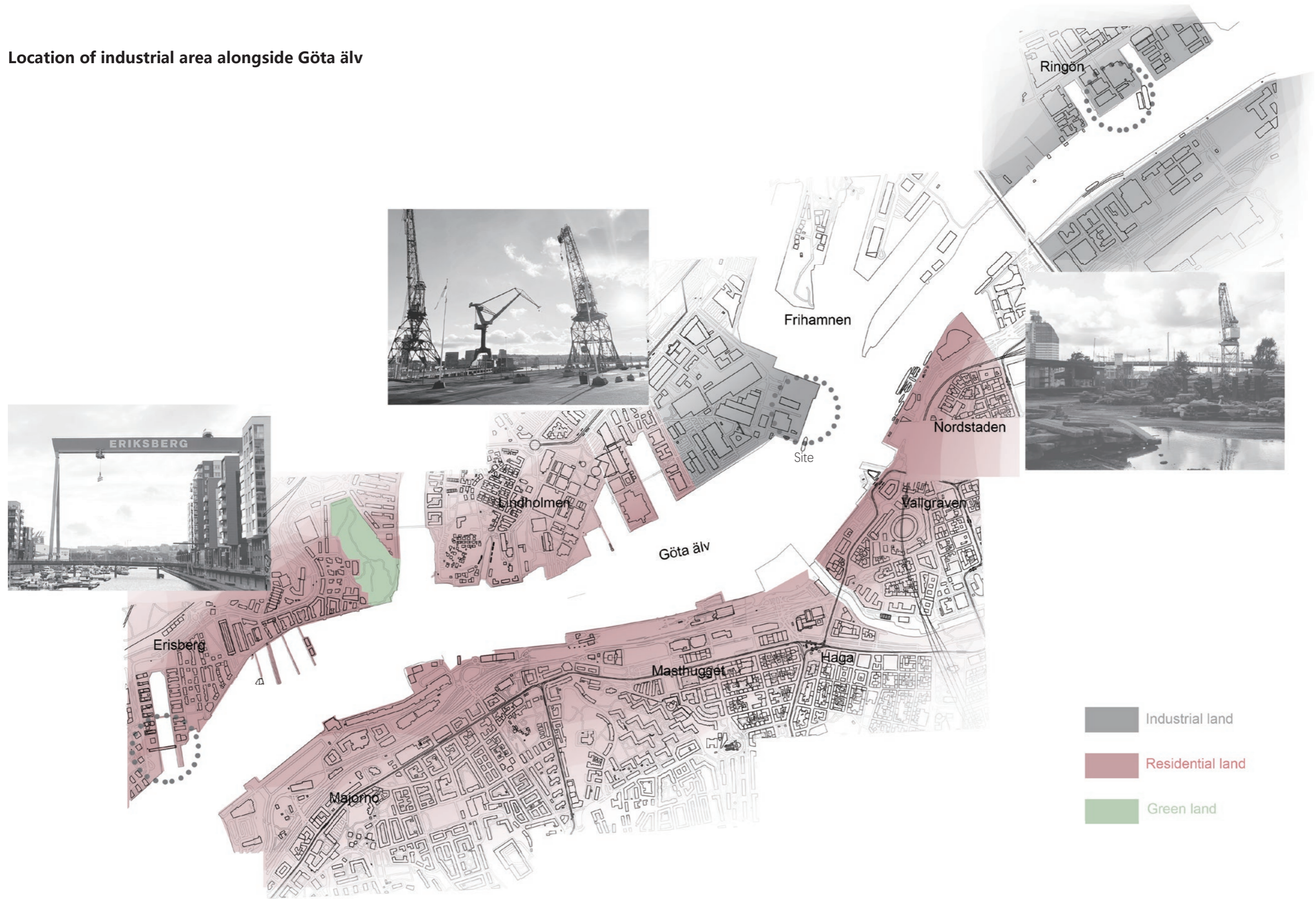
Different regions have their own solutions for these informal use spaces.

- Ringön Industrial Area: Once a purely industrial zone, it is now home to artists, DIY creators, and underground cultural movements, featuring graffiti, music studios, and independent workshops. So the old industrial facilities were reused.
- Old Industrial Docks (e.g., Eriksberg Shipyard): Previously abandoned docks were used for urban exploration and skateboarding before gradually being redeveloped into residential and commercial spaces. And its huge industrial crane was left as a memorial.



Figure 12: Ringön Industrial Area @Gustav Grall

Location of industrial area alongside Göta älv



Lindholmen



1960

As for Lindholmen, according to the analysis of satellite images from different eras, the Lindholmen area still had many shipyards in the 1960s, but after the shipbuilding crisis of 1970, its shipyards were gradually replaced by other buildings. Since the industrial decline began in the 1990s, the municipal government has been promoting a "transformation from industry to knowledge".



1975

Lindholmen is one of the regions that have successfully transformed. It is home to research institutions from Chalmers University of Technology and the University of Gothenburg having campuses here, as well as R&D centers established by companies such as Volvo, Ericsson, Semcon, and RISE.

However, in the areas along the river, there are still a large number of industrial facilities and buildings that have not been used and remain in their original state without planning.

Since Erisberg is surrounded by residential areas which has been better renovated, and the Ringon area has basically been transformed. Therefore, the reason why I choose Lindholmen as the research object is that it has many sites and projects that can be studied.

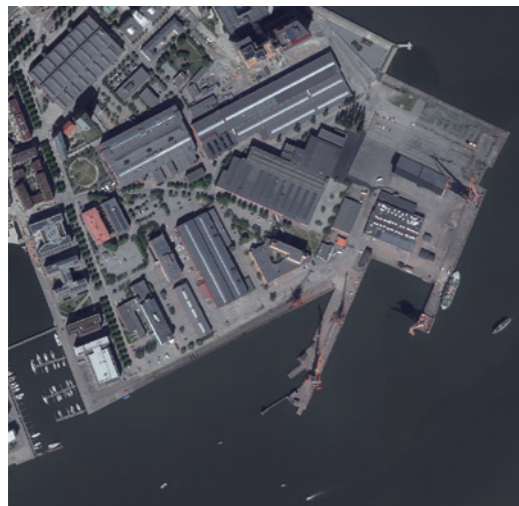


Figure 14: The satellite image of Lindholmen harbour
Source: Lantmäteriet (LM)

Counter Space in Lindholmen

The urban renewal in the Lindholmen area did not completely eliminate the industrial heritage, but allowed the old industrial structure and modern architecture to coexist, showing a contrasting but organically integrated urban landscape. The rusting steel structure, the cement walls of the old dockyard and the glass-walled technology building juxtapose to create a landscape where industrial heritage meets modernity.

In terms of function, Lindholmen also presents a diversified phenomenon of multiple functions co-existing. It has the Karlatornet, Gothenburg's tallest skyscraper, as well as large parking lots such as RE Forradet, a converted factory. This reuse of industrial ruins, rather than complete demolition, allows other informal Spaces on the site to allow the coexistence of old factories and modern buildings, so that the sense of unfinished and time traces are preserved.

Figure 15: Buildings in lindholmen



In the Lindholmen area, commercial buildings and skyscrapers are concentrated in the area near the bus stop. However, along the river are unplanned construction sites. The construction site is surrounded by five huge cranes, three of which are gathered together. The buildings along the river look like containers and old factories. The building I chose to renovate has been marked in red, and the buildings nearby have been planned as new buildings with collective office functions called the Yard.

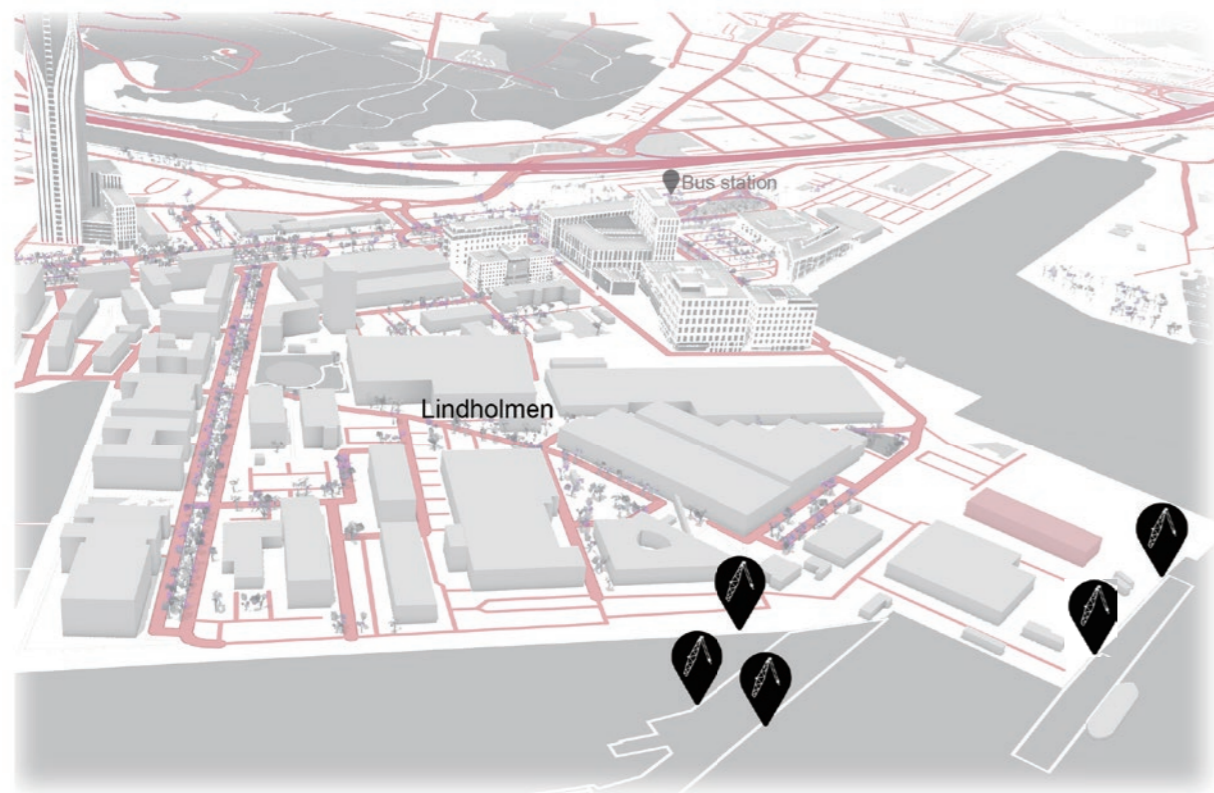


Figure 16: Location of cranes in Lindholmen
Source: Mapbox

There are two transportation options in the Lindholmen area: one is the bus in the central area and the other is the port along the river. The aggressively developed Lundbyvassen on one side; and its counterpart in Götaverkens, left untouched since early 21st century. (Lundin & Palo, 2024)

In the figure, the population density is distinguished by colors, gradually decreasing from orange to green. It can be observed that people gather on the main street, while there are the fewest people by the river.

However, after the Yard project, the population concentration along the river will increase significantly. At the same time, the distribution of restaurants and beverage shops was analyzed. There are almost no restaurants in the area along the river. Therefore, I set the function of the renovated building as a restaurant.



Figure 17: Lindholmen area

Aesthetic of disorder

As the Lindholmen area has preserved a large number of original industrial plants, many metal structures and doors and Windows have long been mottled and rusted under the erosion of time. Some have even been covered by the spread of plants, presenting a scene that has been forgotten by time but still tenaciously exists. These relics that were once industrially produced now, under the intervention of natural forces, present a unique beauty where desolation and vitality coexist.

To convey this aesthetic quality that lies between order and chaos, I attempted to collage and reorganize these rusty and plant-entwined elements with other representative structures and materials in the site. In this way, I not only hope to restore the true historical layers and spatial memory of Lindholmen, but also intend to express a rediscovery and reinterpretation of the old industrial landscape.



Figure 18: Aesthetic of disorder
(Elements from Lindholmen)



Figure 19: A no-functional factory building

Symbolic significance

Cranes in Gothenburg

Over the years, people have passed the crane in trains, on bridges, on the canal and so on, and may not have given much thought to its significance. The crane have been city skyline. (Hans, 2024)

These cranes have become visual symbols of the city's industrial history, witnessing Gothenburg's gradual transformation from an industrial center in the middle of the 20th century to a modern city.



Figure 20: Cranes in Gothenburg
Source: FOLKEZINIPHOTO

Eriksberg crane

The Eriksberg Crane (Swedish: Eriksbergskranen) is a full gantry crane in the Eriksberg district of Gothenburg, part of the former Eriksberg shipyard. It is a listed building, and is considered to be one of the city's main landmarks and an important relic of its industrial and maritime heritage. (Wikipedia)

The Eriksberg Crane has become an important part of the Eriksberg area, part of the city skyline, documenting Gothenburg as one of the great shipbuilding cities of the past. When people look at this machine, and recall this period of Gothenburg's history, this is the concrete expression of the communication model in semiotics. Due to the difference of people, the interpretant produced by each person may be different, but the representamen presented by crane is the same, that is, the history of Gothenburg.



Figure 21: Eriksberg crane
Source: CC BY-SA 4.0

The history of Erisberg



<p>1876</p> <p>In 1876, Eriksbergs Mekaniska Verkstad AB was formed.</p>	<p>1959</p> <p>The original construction dock was built in 1959, and as ships grew larger and production became faster, larger construction docks and more powerful lifting equipment were needed.</p>	<p>1968</p> <p>The crane beam was manufactured by NOHAB in Trollhättan in 1968, eight sections in total, and transported by barge to Gothenburg.</p>
<p>2012</p> <p>The crane has been a building monument according to the Cultural Environment Act since June 25, 2012.</p>	<p>2010</p> <p>The lighting of the crane it was awarded the 2010 Award of Excellence by the International Association of Lighting Designers.</p>	<p>1979</p> <p>The dry dock and gantry crane were used for many years until it was closed in 1979 due to the shipbuilding crisis.</p>
<p>←</p>		
<p>1969</p> <p>It was completed in 1969 as part of Eriksberg's shipyard</p>		

IV. Exploration

Form

In Counter Space of Lindholmen, the architectural style is deeply influenced by industrial vocabulary. The exterior facades are mostly composed of rusty textures or oxidized iron skins, presenting a rough yet solid aesthetic feature.

A large number of containerized modular buildings are adopted in the area, which are stacked and combined in a standardized way.

In addition, there are many external high-rise spiral staircases distributed in this area. These staircases are made of metal materials and have an appearance similar to the chimney devices of the industrial age.



Figure 23: The image of factory structure in Lindholmen

Surface

The industrial material also retain the characteristics of the factory, consisting of iron sheet and brick. Some of these surviving buildings were given new functions, others were not, and gradually became industrial ruins. These ruins stand in stark contrast to the emerging tech park, emphasizing these factory spaces as counter space.

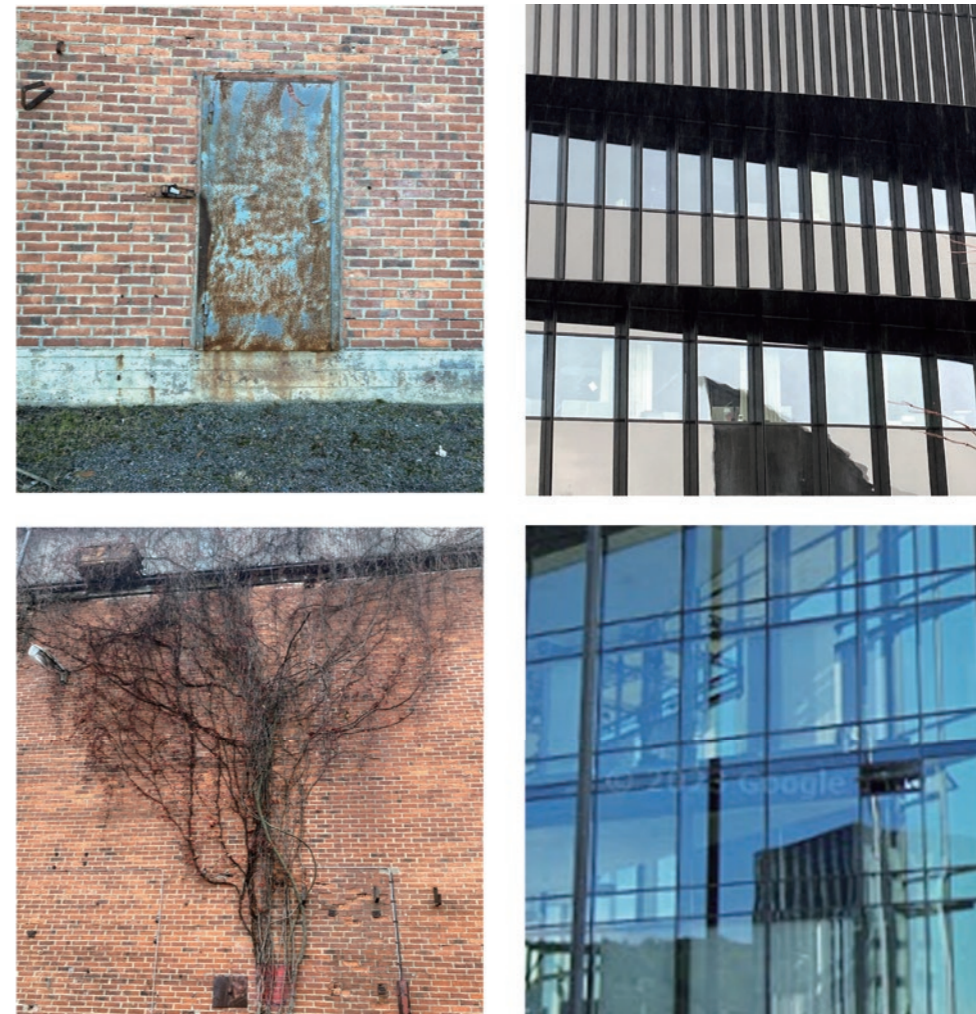


Figure 24: The image of surface in Lindholmen area

Site elevation



North facade



When conducting research in Gotaverkens, I found that the oldest and larger building on the site was a warehouse. It is a highly secretive company Einride, who works with the development of autonomous vehicles. According to the company, the premise is in poor condition and they are discussing with the owner of the plot (the municipal company Älvstranden Utveckling AB) to demolish and make a new construction. (Lundin & Palo, 2024)



South facade



East facade

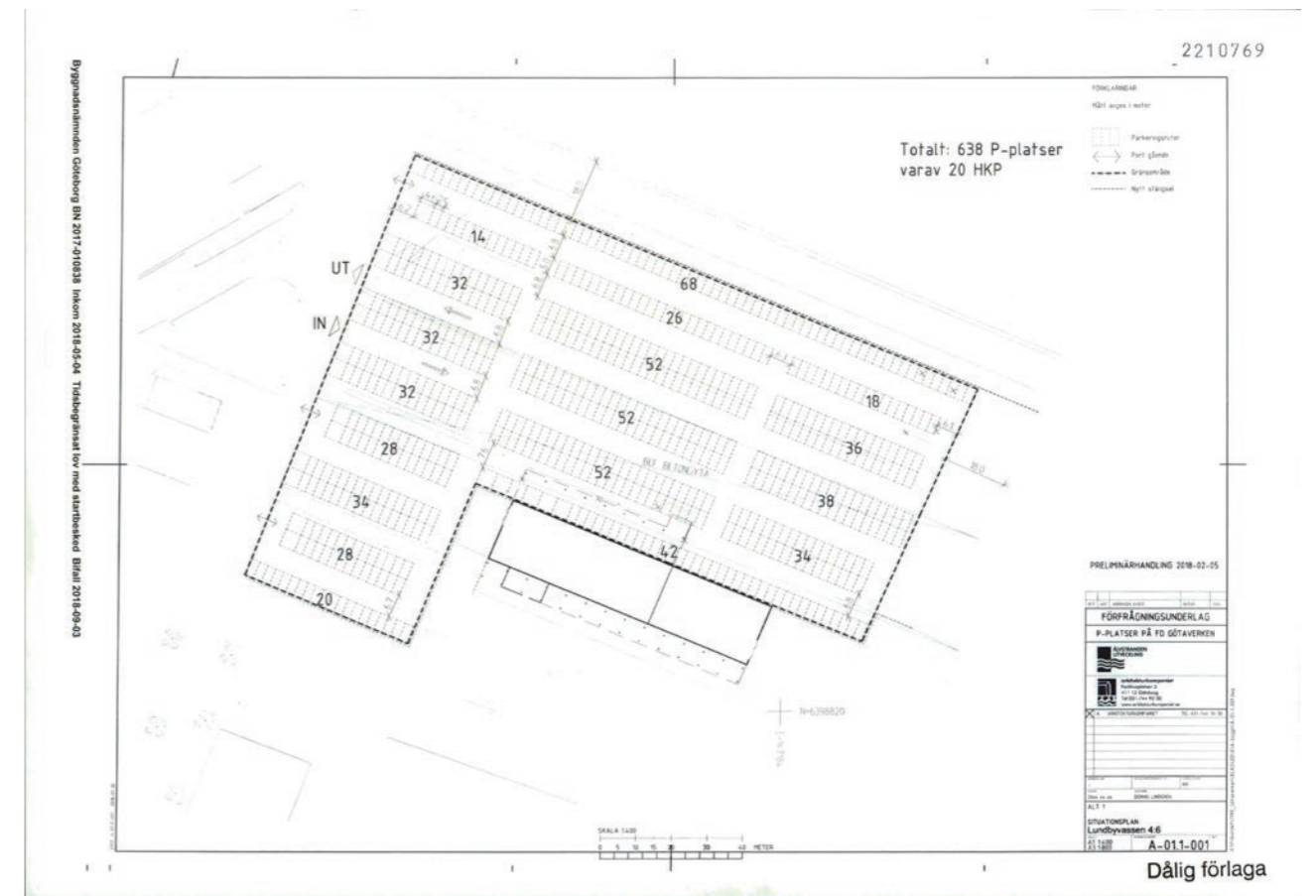


Figure 27: The plan of brewery and parking lot
Source: Lantmäteriet

Jessica Lundin & Pia Palo / MSS1



West facade

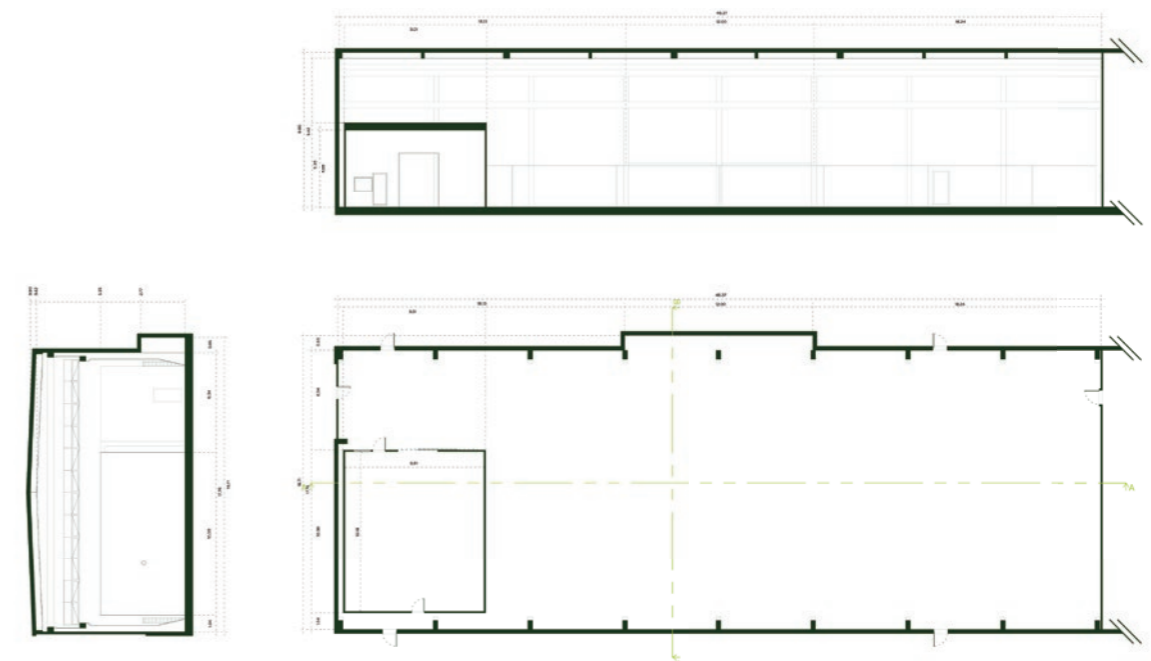


Figure 28: (fig. 6) Källfördäkt, part rented by Einride
Plan and section drawings, scale 1:200

Surroundings

The site is a beam-column structure. The nearest building to the site is the newly developed comprehensive office project the Yard, which has attracted a large number of workers who want to concentrate on their work. The confusion of the combination of traditional brick and industrial corrugated steel creates a disorder beauty, so the combination is kept to perpetuate the confusion between material conflicts.

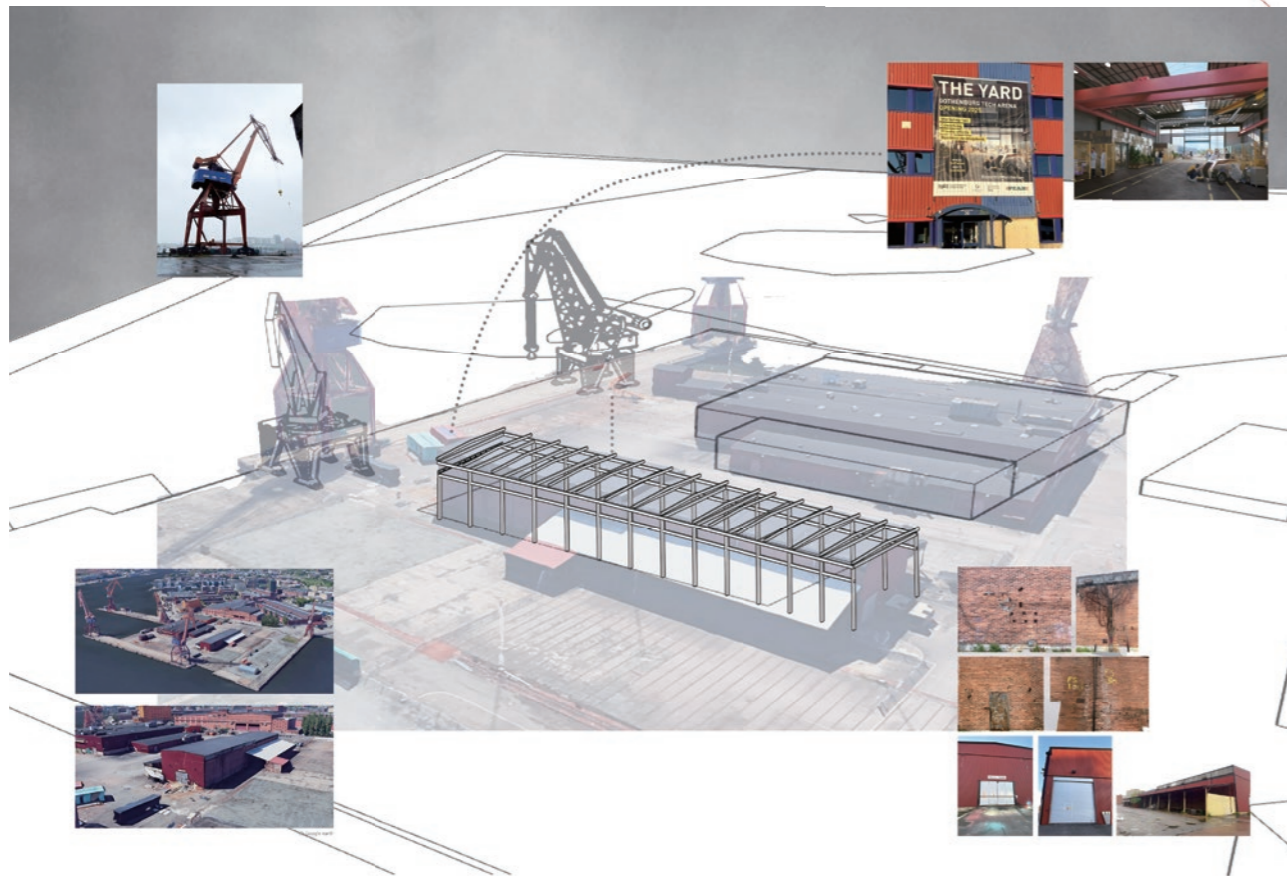
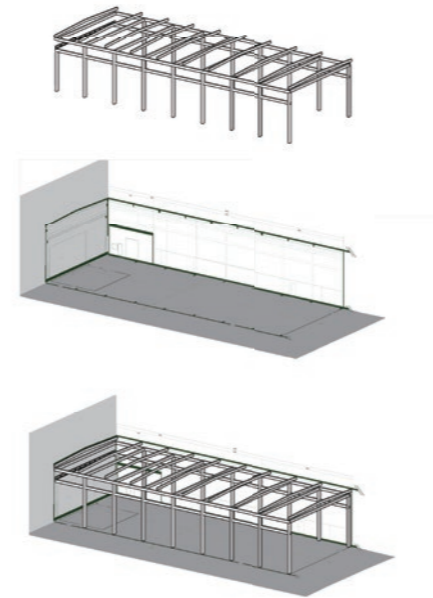


Figure 29: Götaverkens Area

Under the Yard, there is a brewery that also takes cranes as important character. The private brewery with a number of brewers inside and a corrugated metal exterior. Outdoor wine tables are occasionally set up outside the building for customers to enjoy, and they will enjoy the huge cranes, canals and the city beyond.

This operation mode is also intended to be applied in the renovation building.



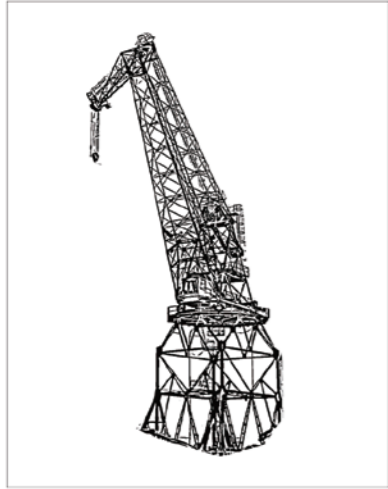
Figure 30: The cartoon of brewery
Source: Fermenterarna Bryggeri AB



Figure 31: The image of brewery
Source: Google map

Semiotic Exploration

Object



Representamen



Interpretant

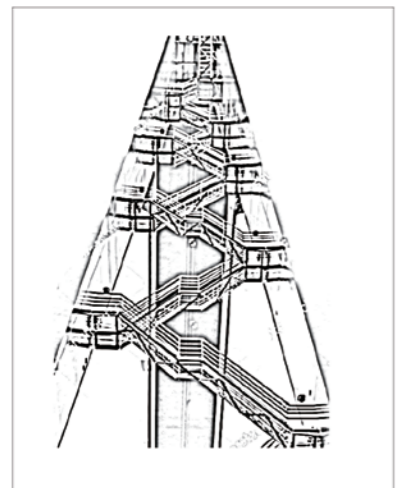
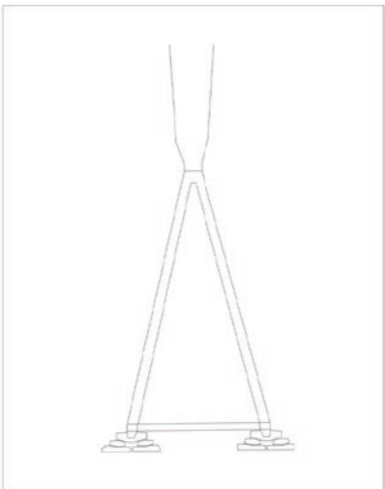
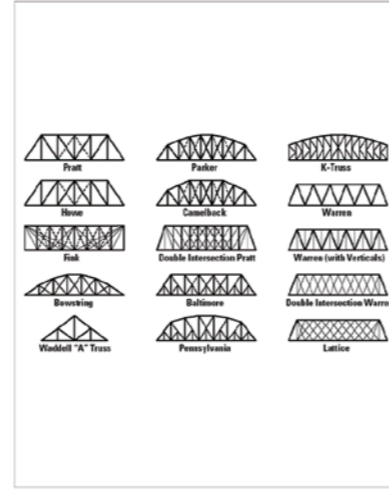
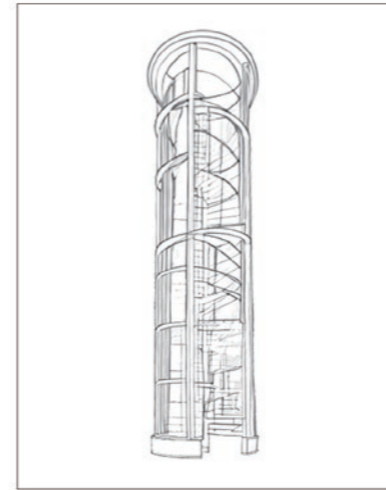
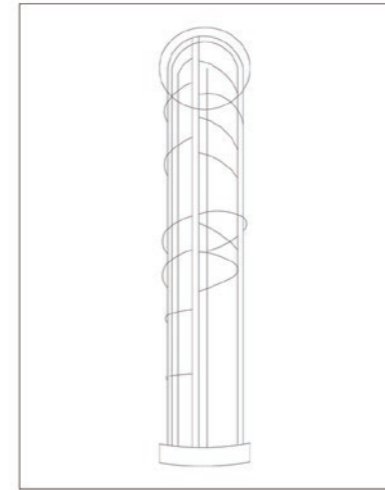


Figure 32: The image of unique factory elements in Gothenburg
Source: Photo& Pinterest

Object



Representamen



Interpretant

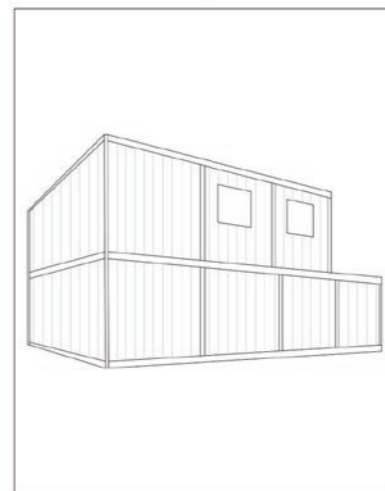
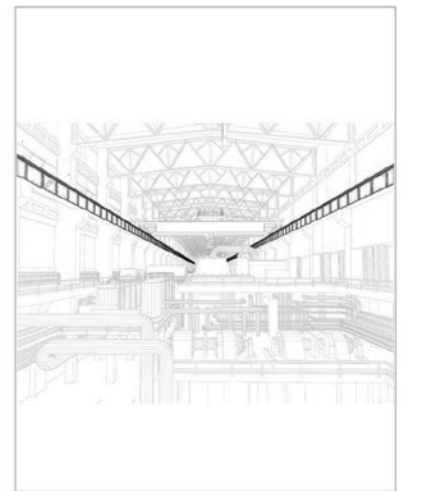
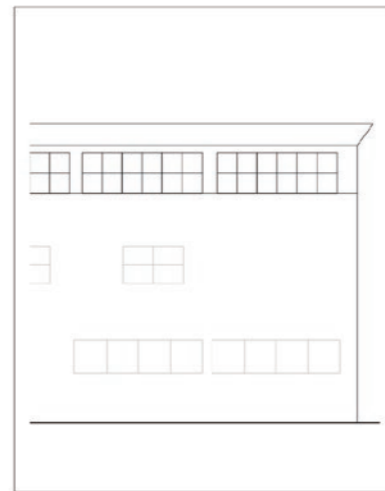
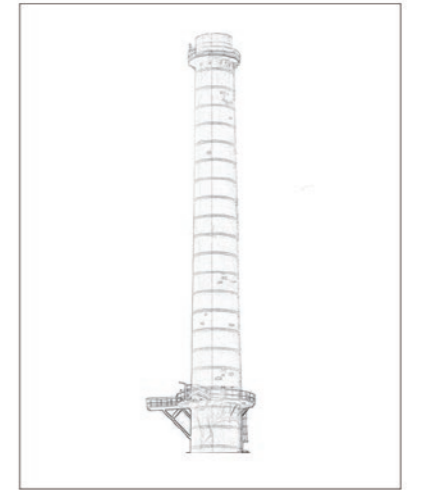


Figure 33: The image of unique factory elements in Gothenburg
Source: Photo& Pinterest

Elements Collage

In order to understand the industrial elements and how to use them in architectural design, I extract and collate the obvious industrial elements within the site to form a concept map. This technique of extracting elements reveals that industrial forms - such as pipes, chimneys or machines - not only serve as visual subjects, but also as symbols carrying historical, cultural and ideological meanings. These elements point to specific socio-economic periods and labor structures.

Meanwhile, Edensor's counter space theory provides a crucial framework for understanding this collage as spatial resistance. The combination of industrial debris has undermined the planned aesthetics of the science park and instead created an aesthetic of disorder. Therefore, collage becomes a counter-narrative space - a place where forgotten, marginalized or outdated elements are reactivated.

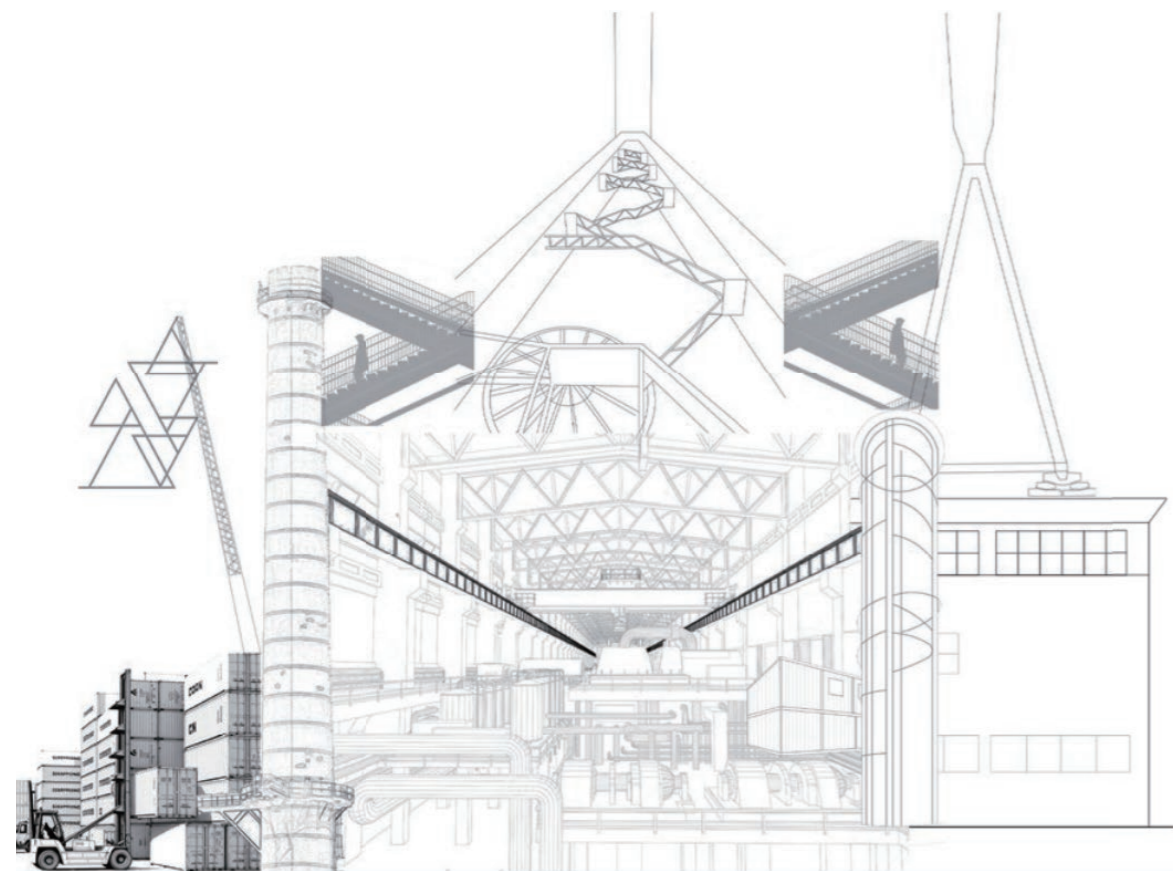


Figure 34: Industrial elements collage

The usage of crane

The crane is an important element in the site, and I plan to utilize it in two different ways. First of all, as the backdrop of the building, the crane is not merely a physical structure; it has become a symbolic device, enabling the users of the building to engage in interaction. Through this interaction, a process of creating meaning was formed, evoking the memories of Gothenburg's golden industrial age. Against this backdrop, the crane, as a symbol, its form and existence carry the connotations of labor, progress and the Marine heritage of the city. Users who interact with the crane participate in a kind of dialogue and communication, and the machine becomes a channel for accessing and interpreting historical narratives.

The second method is to integrate the crane as an internal architectural element. This includes using the structure of the crane as part of the building's structural system or embedding its components into the spatial organization of the building. The crane has transformed from an external memory symbol into a functional symbol of the building itself. It symbolizes not only through its history but also through its transformation the adaptive reuse and the continuity between the past and the present. Among these two roles, the crane transcends its utilitarian origin and becomes a temporal connection in architectural language.



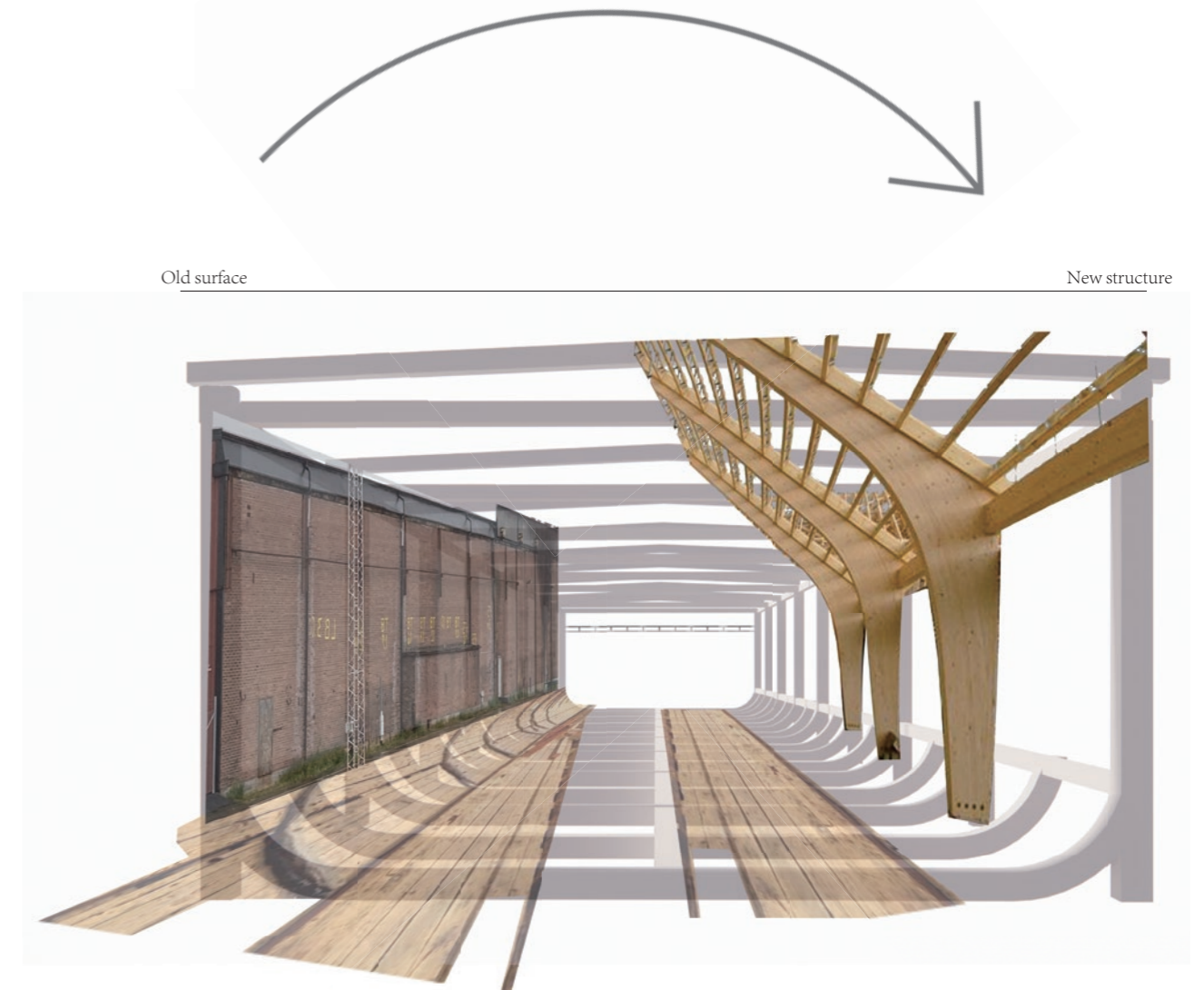
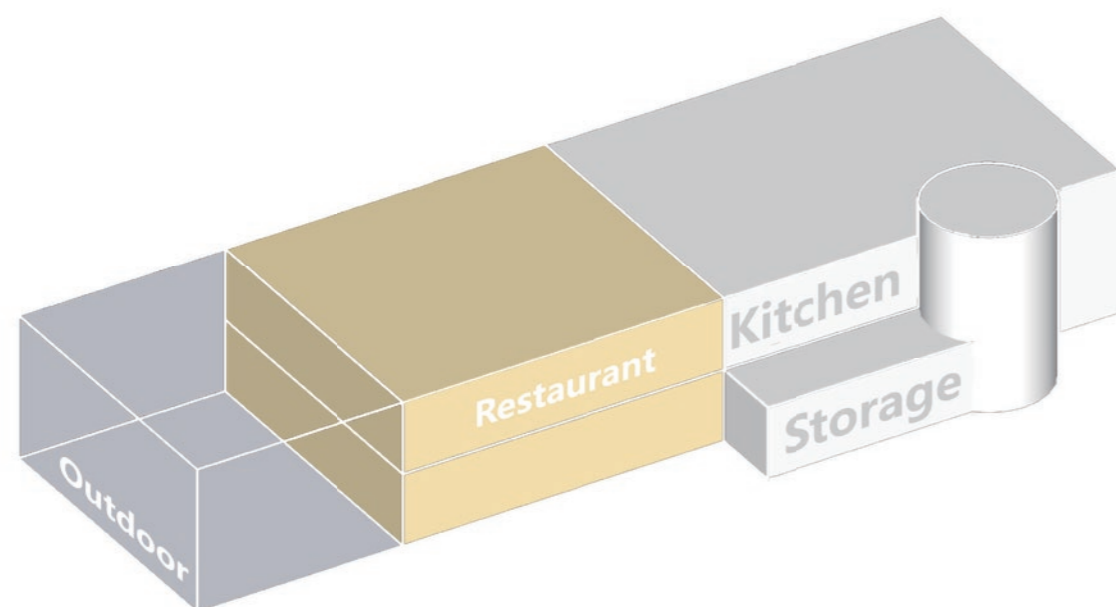
Figure 35: Crane as background

Conceptual Design Sketch

My simple vision for the scheme is to function a restaurant near the water, exposing the existing structure for more interaction with the crane. The interior function is to retain part of the original warehouse and add a dining room, kitchen and toilet.

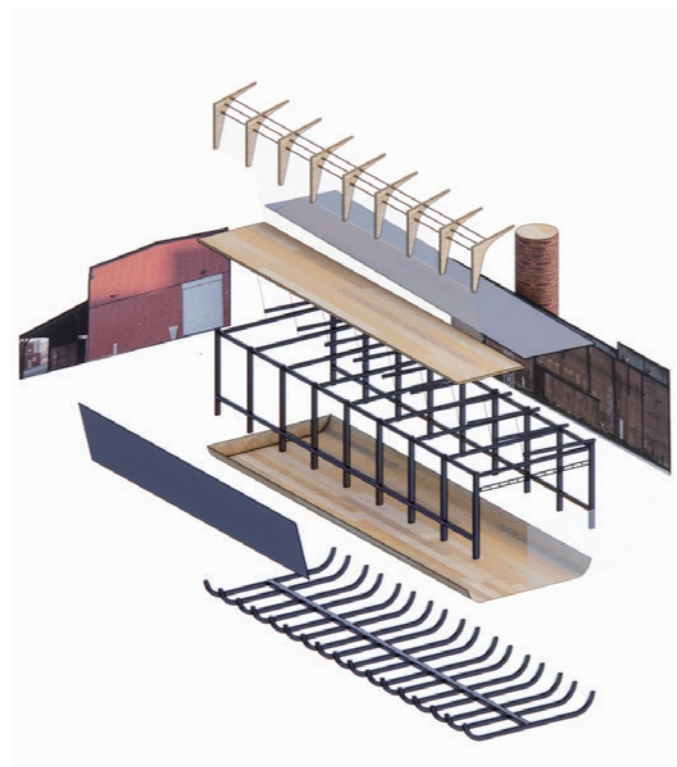
The structural aspect is to allow Temporal junctions, that is, to allow the site to show both the past and the present. I understand that the structure and facade of the ruins themselves will reveal the past, so I will design new structural pillars that resemble sails. At the same time, in order to make the interior more interesting, on the basis of the original industrial structure, I added a base similar to the boat frame, and laid wooden boards to simulate the interior atmosphere of the ship. Through this design, people can feel the shipbuilding age through the semiotic information transmission.

The building facades retain the original west and north sides, and remodel the east and south sides. The reason is to retain the aesthetics of the combination of brick and iron materials and keep the two most representative facades. On the other hand, the two old facades are the first two facades that people will see. Only by continuing to observe the building can they discover the remodeled facades. This retains the characteristics of the site as a counter space in Lindholmen.



Elements Collage

In order to make the design concept more specific, I used an exploded view to explain the structural design idea of the building. I used the connection between architects, users and architectural environment in Abdullah's architectural analysis framework to think about the user's understanding as a designer and form communication between the building and the user. As a frame structure of the original factory function, the building itself has rigid materials and a large span space, which is illuminated by high windows. This lighting method is very similar to the space of ship's cabin. Therefore, I retained the large span space itself and added a cabin frame in imitation of the ship structure. And added a traction structure similar to a sail on the second floor.



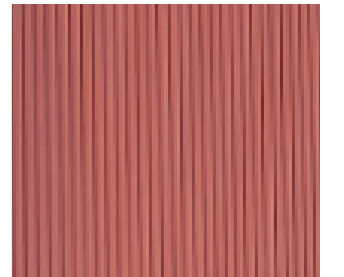
Aesthetic of Disorder

The west and north sides of the facade are retained, these are old elements of the building. A brick barrel structure is added as an external staircase, imitating a chimney. The bricks are recycled materials from the second-hand market.

The combination of these old elements and recycled material become the unique aesthetic of this new structure.



Brick



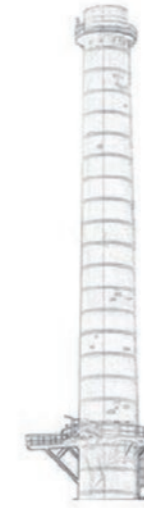
Corrugated sheet



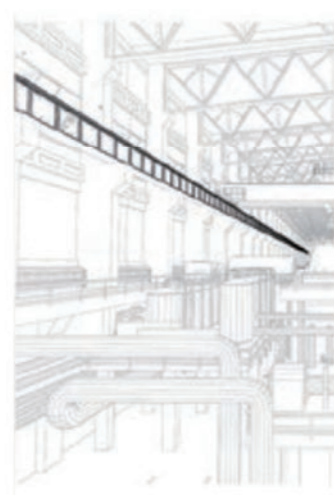
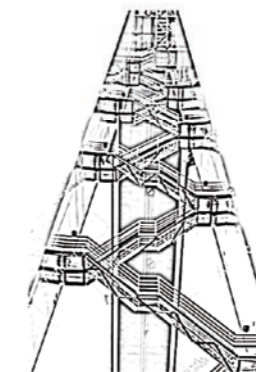
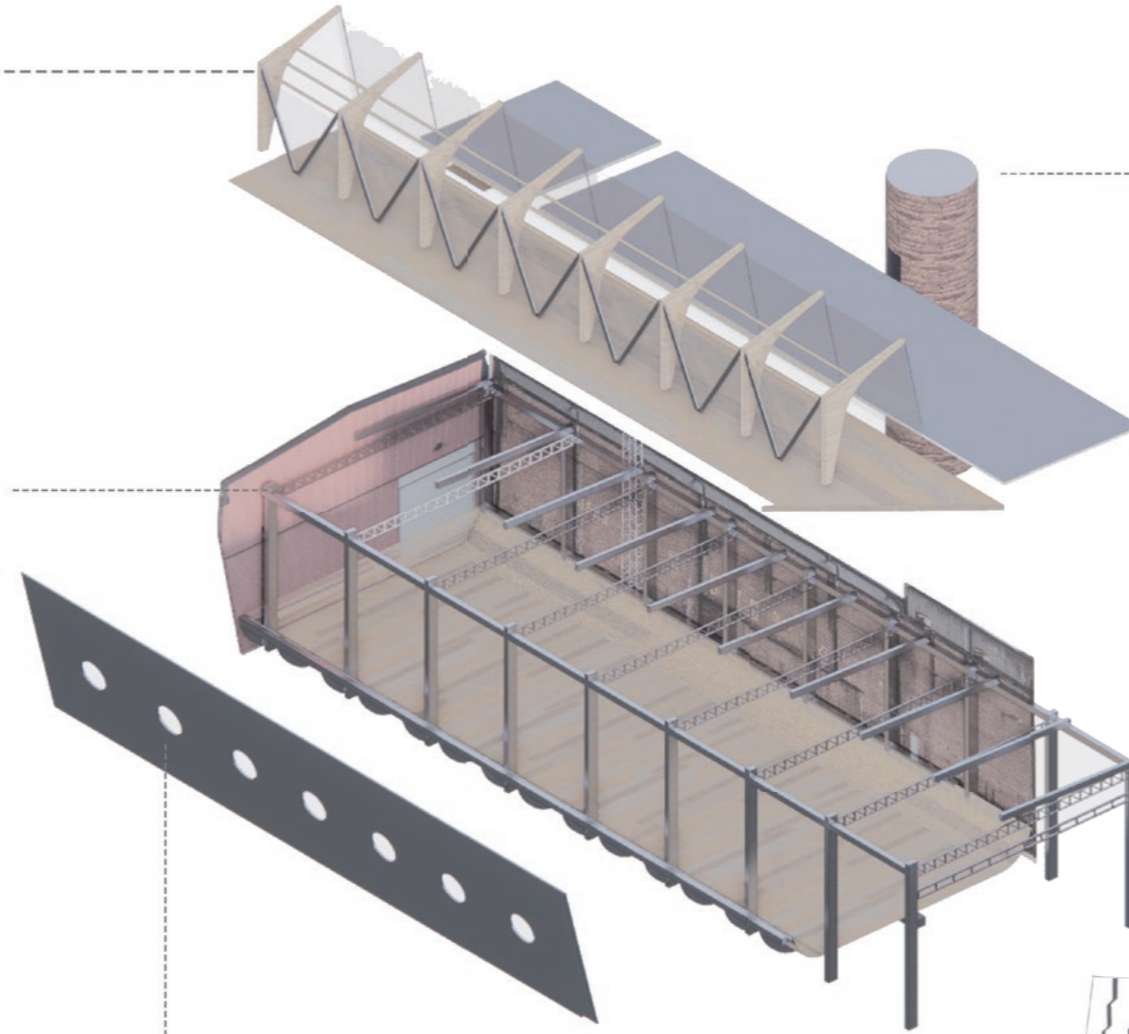
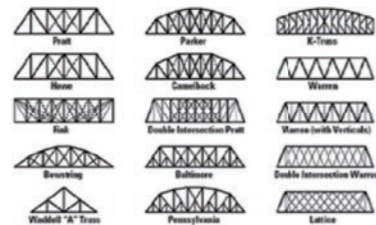
New elements for architecture



Corrugated sheet



According to the concept of "Temporal junctions", in order to break people's traditional perception of architecture and enhance the vitality of the city, the architectural renovation utilizes the symbolic elements extracted from old industries to create a half-new form. In contrast to the old buildings on the other side, this addition enhances the enjoyment in the building.



Steel

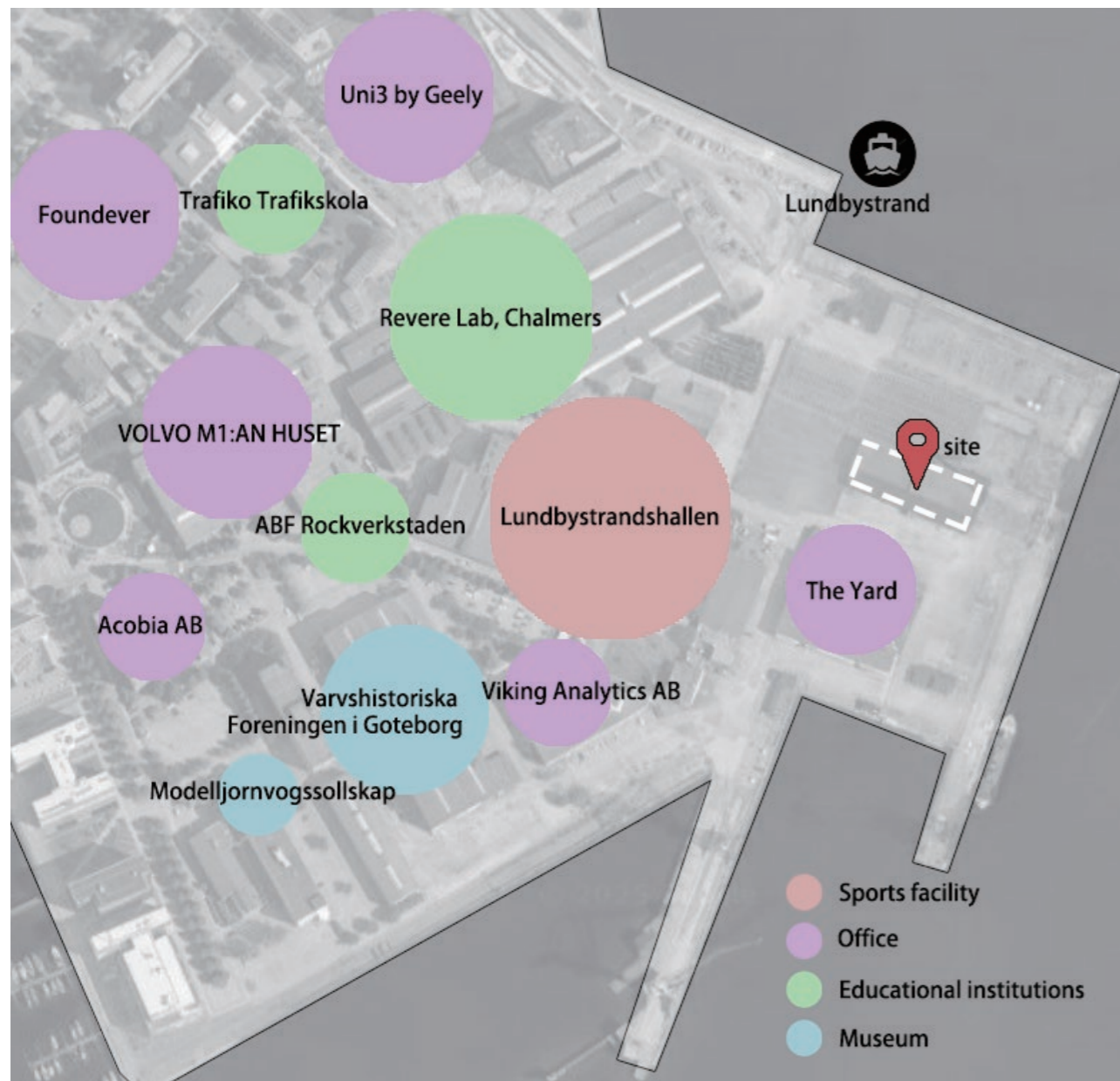


IV
Site analysis

As a science park, Lindholmen has the most enterprise office buildings. Therefore, the majority of the people using the site are office workers. This thesis has previously analyzed that the area adjacent to the ferry terminal lacks catering facilities. At the same time, the development projects around the venue, such as 'The Yard' and several sports buildings, have brought about many business opportunities and vitality. The Varvshistoriska Foreningen within a few hundred meters also serves as a public education building, further enhancing the shipbuilding history of the site. Therefore, by designing this area as a restaurant in the shape of a ship, not only is the local cultural history directly emphasized, but it also increases the usage frequency of the venue and brings vitality to the city.

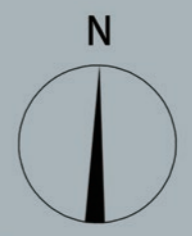
As the site is close to the river, the flow of people and vehicles is relatively simple. The car access is designed to allow vehicles to enter the parking lot and deliver goods to the restaurant, while people can walk around the building.

The two pedestrian entrances are also to enable the office workers of the surrounding buildings to reach the site more quickly, thereby enhancing the interaction between the people and the site.





Site plan



Revere Lab, Chalmers

Lundbystrandshallen

Logistics entrance

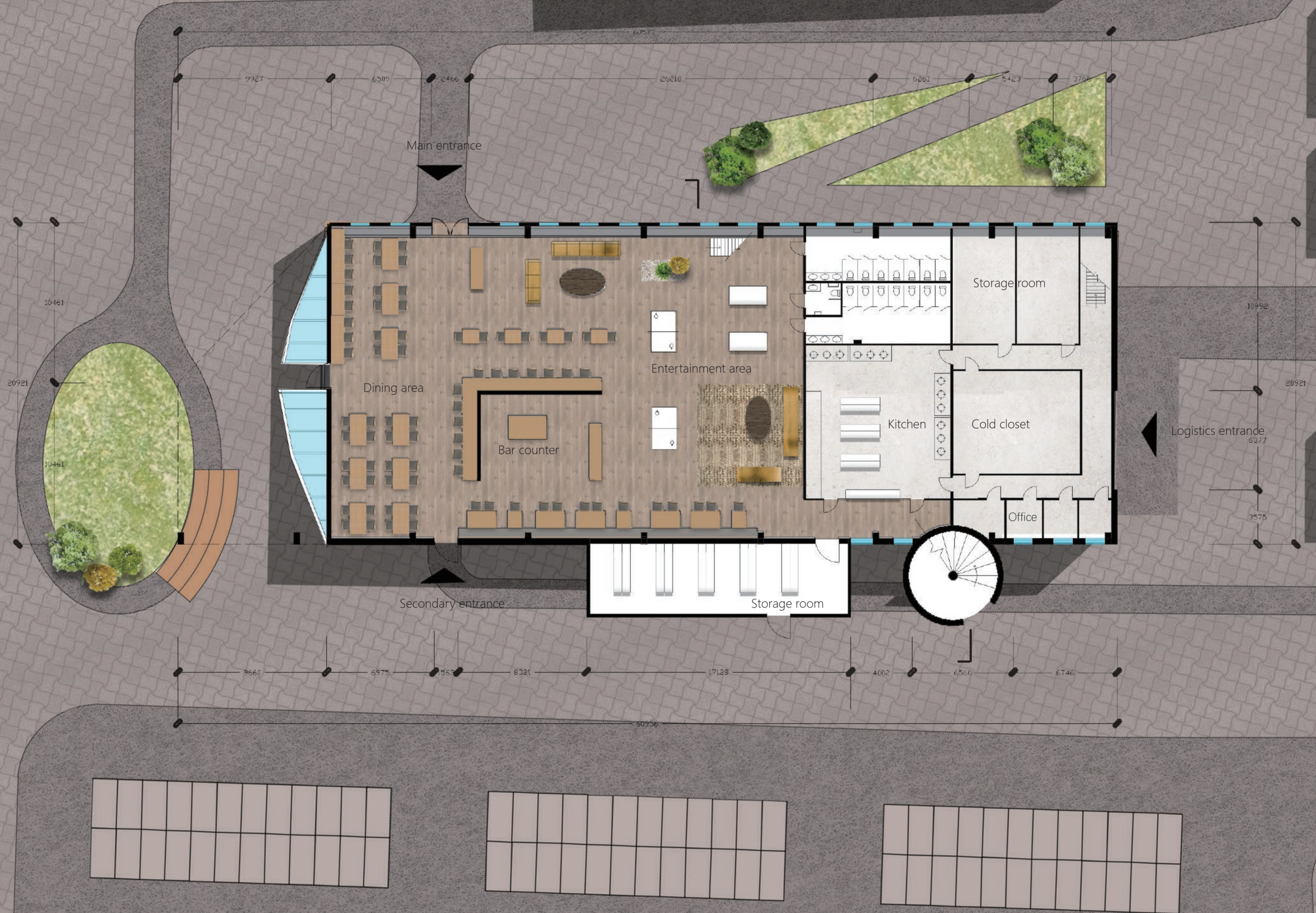
Secondary entrance

Main entrance

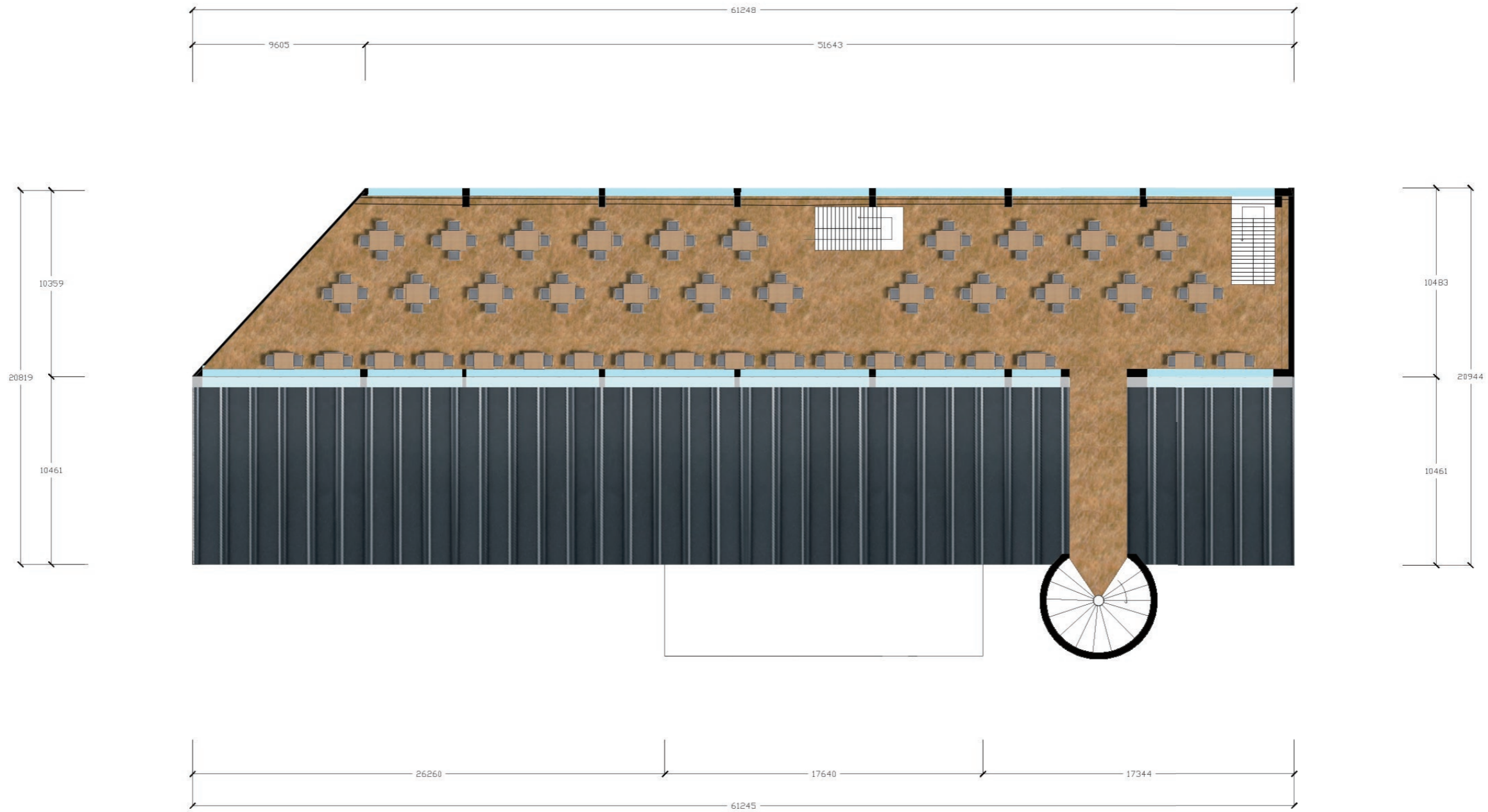
The Yard

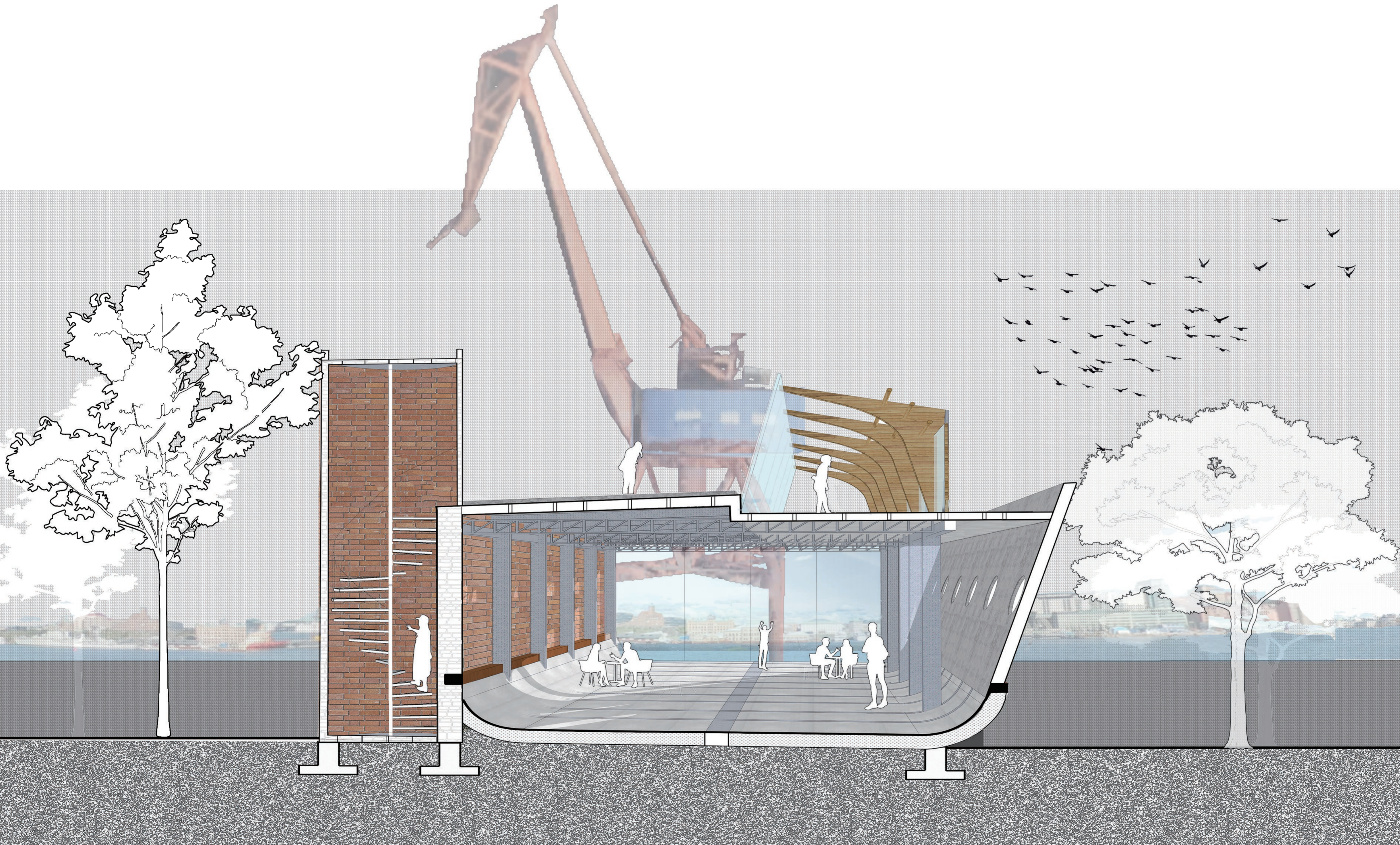
Regarding the site design, I have set the main entrance at one point on each of the north and south sides of the site. The north side is designed to be convenient for people coming from the station and by boat, while the south side is positioned to be close to The yard and to facilitate the access of people from the southern office area. The northern side of the site is occupied by small factories and stacks of containers. Therefore, it is considered to create a viewing area on the south side. As the counter space of Lindholmen, I still want to maintain its original industrial style and have not planted many plants. Setting up a wooden platform for the users of the venue and the adjacent building not only enables them to enjoy the scenery on the opposite side of the river and the cranes, but also allows them to bask in the sunshine.

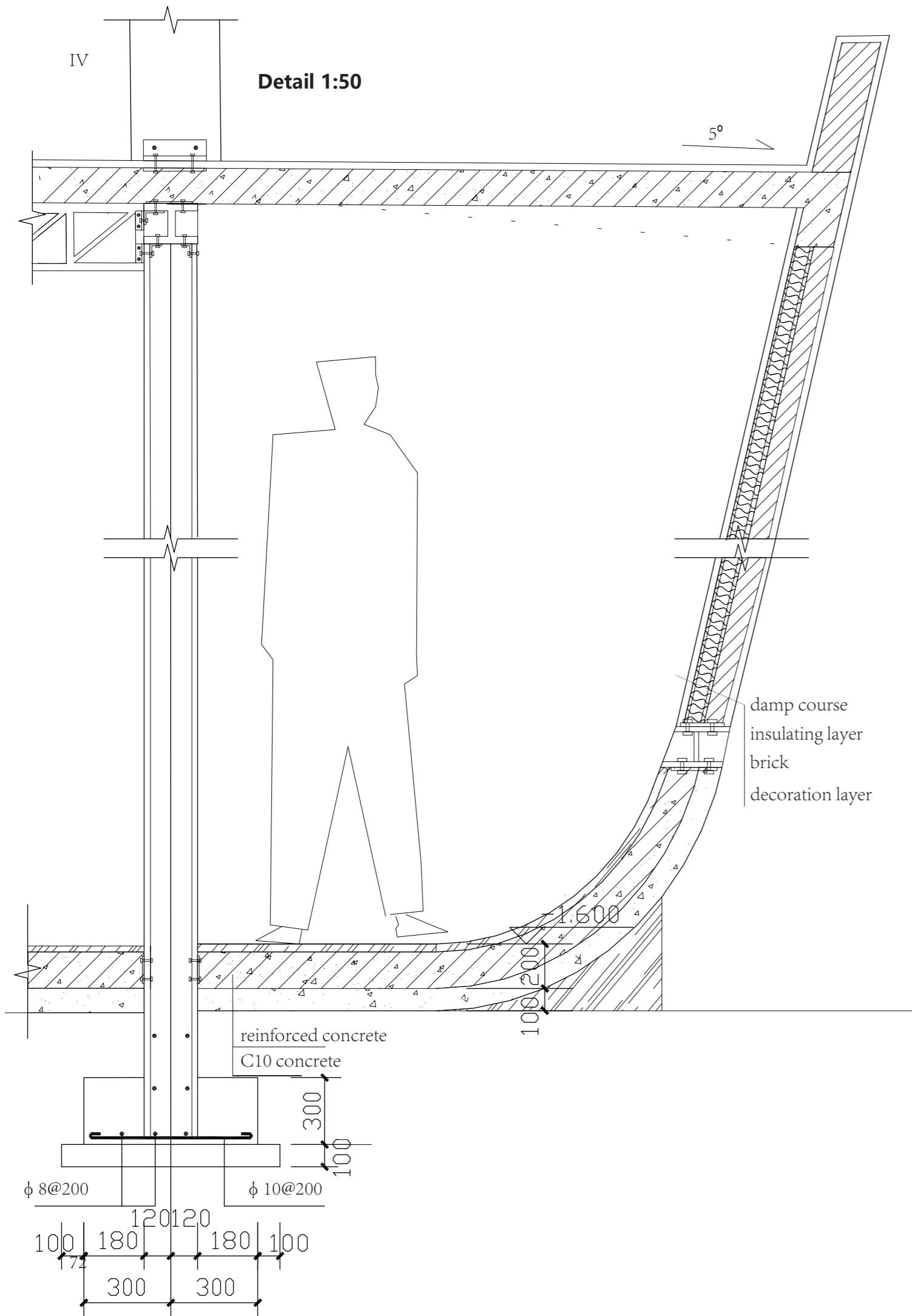
Ground floor plan 1:200



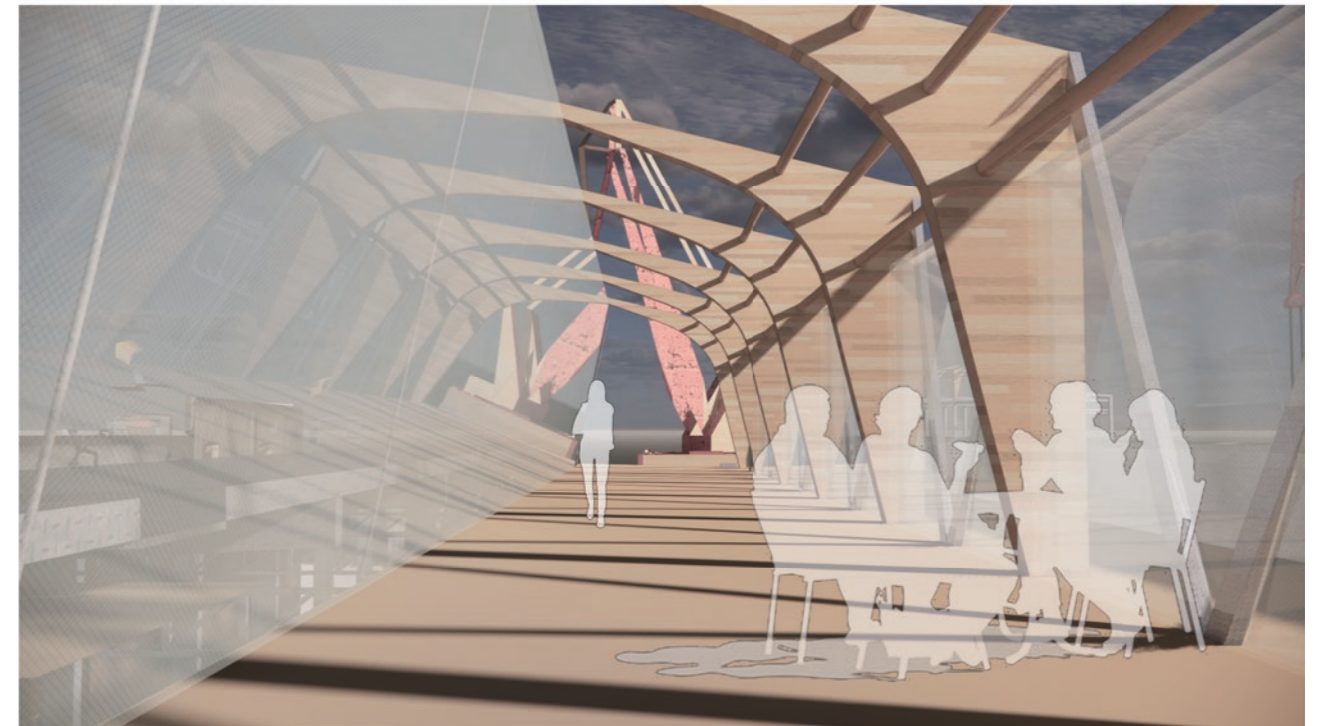
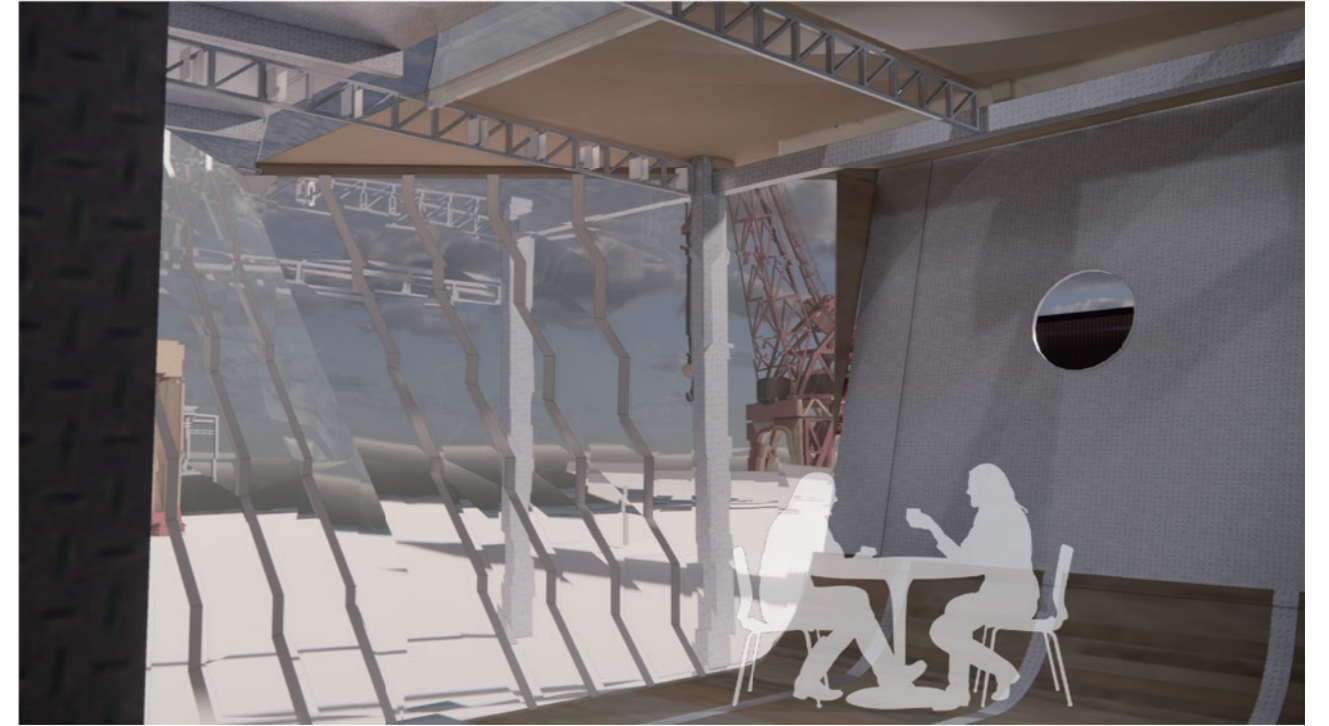
Second floor plan 1:200







Scenarios



Reflection

In this project, I have engaged with the industrial remnants of Lindholmen through the theoretical lenses of Garrett's *Urban Functionality* and Edensor's notion of *counter space*, both of which have allowed for a critical reading of the site as a temporal junction—an intersection where past materialities and present interventions coexist and inform future narratives. Through the integration of semiotic strategies in the design process, I have investigated how architectural form can act as a medium of communication, enabling a dialogical relationship between the designer, the user, and the environment. The emergence of *The Yard* in proximity to the site has already introduced new spatial dynamics and demographics, prompting a reconsideration of use, access, and identity. In response, I have proposed a programmatic adaptation in the form of a restaurant, a typology that invites public interaction and sustains continuity of place.

By extracting and recontextualizing key industrial symbols from the site's past, I have constructed a new spatial narrative that does not overwrite but rather amplifies the historical layers embedded in the ruins. This process has demonstrated how the symbolic dimension of industrial elements can serve as carriers of collective memory, allowing cultural values to persist while evolving through design. Semiotics, in this context, has functioned not merely as a representational tool but as a methodological framework that guides formal and conceptual decisions. Unlike conventional renovation strategies, which often neutralize or aestheticize ruins, this approach has foregrounded the interpretive potential of material decay and symbolic association, advocating for a preservation of meaning as much as of matter. Ultimately, this project has underscored the broader relevance of semiotically informed design in architectural practice, offering an alternative model of adaptive reuse that bridges disciplinary theory, spatial experience, and sociocultural continuity.

Bibliography

- Abdullah, H. K. (2024). Exploring the meaning in parametricism: a semiotic approach. *JOURNAL OF ASIAN ARCHITECTURE AND BUILDING ENGINEERING*. <https://doi.org/10.1080/13467581.2024.2358207>
- Chandler, D. (2022). *Semiotics: the basics*. Routledge.
- Hunt, J. D. (1975). Image as a factor in tourism development. *Journal of travel research*, 13(3), 1-7.
- Martin, B., & Ringham, F. (2000). *Dictionary of semiotics*. Bloomsbury Publishing.
- Morris, C. W., & Carnap, R. (1938). *International Encyclopedia of Unified Science: no. 2. Foundations of the theory of signs (Vol. 1, No. 7)*. University of Chicago Press.
- Jencks, C. (1991). *The language of post-modern architecture / Charles Jencks*. Academy Editions.
- Venturi, R., Scott Brown, D., & Izenour, S. (1977). *Learning from Las Vegas : the forgotten symbolism of architectural form / Robert Venturi, Denise Scott Brown, Steven Izenour*. MIT P. <https://www.jmberlin.de/en/libeskind-building>
- Hunt, J. D. (1975). Image as a factor in tourism development. *Journal of travel research*, 13(3), 1-7.
- Edensor, T. (2005). *Industrial ruins: Space, aesthetics and materiality*. Berg Publishers.
- Garrett, B. L. (2013). *Explore everything: Place-hacking the city*. Verso Books.
- Zukin, S. (1995). *The cultures of cities*. Blackwell Publishing.
- DeSilvey, C. (2017). *Curated decay: Heritage beyond saving*. University of Minnesota Press.
- Abdullah, H. K. (2024). Exploring the meaning in parametricism: a semiotic approach. *JOURNAL OF ASIAN ARCHITECTURE AND BUILDING ENGINEERING*. <https://doi.org/10.1080/13467581.2024.2358207>
- Chandler, D. (2022). *Semiotics: the basics*. Routledge.
- Hunt, J. D. (1975). Image as a factor in tourism development. *Journal of travel research*, 13(3), 1-7.
- Martin, B., & Ringham, F. (2000). *Dictionary of semiotics*. Bloomsbury Publishing.
- Morris, C. W., & Carnap, R. (1938). *International Encyclopedia of Unified Science: no. 2. Foundations of the theory of signs (Vol. 1, No. 7)*. University of Chicago Press.
- Jencks, C. (1991). *The language of post-modern architecture / Charles Jencks*. Academy Editions.
- Venturi, R., Scott Brown, D., & Izenour, S. (1977). *Learning from Las Vegas : the forgotten symbolism of architectural form / Robert Venturi, Denise Scott Brown, Steven Izenour*. MIT P. <https://www.jmberlin.de/en/libeskind-building>
- Styhre, A., & Brorström, S. (2022). Syndicated leadership in urban development projects: the case of the River City Gothenburg project. *Construction Management and Economics*, 41(5), 387–401. <https://doi.org/10.1080/01446193.2022.2137881>
- Ivanoff Erik. (2024). *Reclaiming the Southern Shoreline: A regenerative transformation along Göta Älv in Gothenburg, Sweden*. Lund University Department of Architecture and Built Environment.
- Orlova Vasilina. (2025). *Inconsolable Narrative, Chapter 9: Siberian Ruins*. <https://vasilina-orlova.medium.com/inconsolable-narrative-siberian-ruins-49befb28c5a4>.
- Palo Lundin & Pia Jessica. (2024). *Liquid Conflict*. Chalmers University of Technology MSS 1 - Before Building.

Image Source

Figure 3: Google map

Figure 4: <https://www.archiposition.com/items/05360f35e2>

Figure 5: <https://theconversation.com/reopening-londons-mail-rail-why-its-so-hard-to-recreate-the-thrill-of-exploring-urban-ruins-54423>

Figure 43: <https://jp.pinterest.com/pin/32088216097721731/>

