



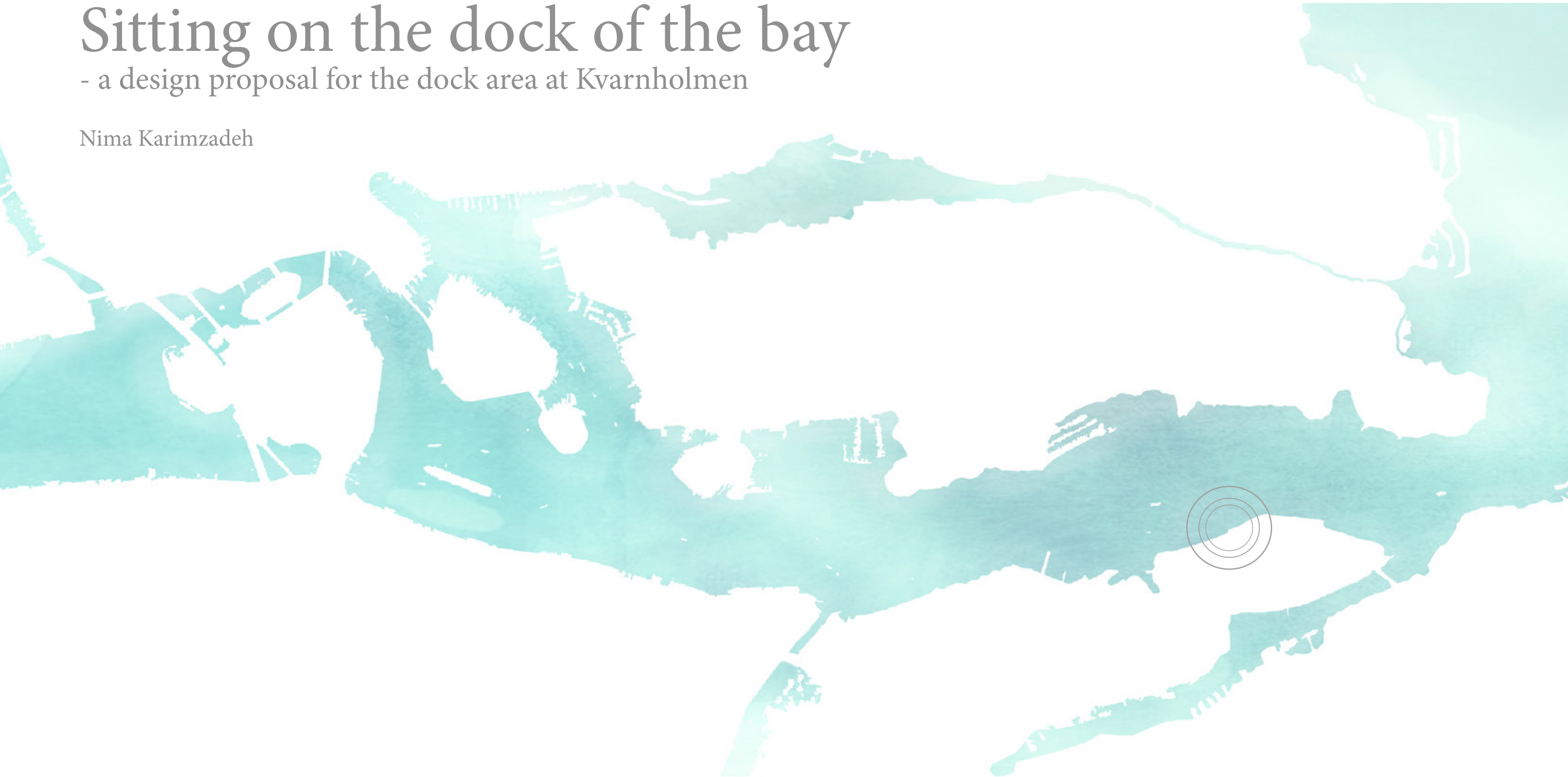
Sveriges lantbruksuniversitet
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Sitting on the dock of the bay

- a design proposal for the dock area at Kvarnholmen

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Seeing the sea,
open to the ocean,
waiting by the water.

Reflections by Nima Karimzadeh

Abstract

As cities grow larger we as landscape architects need to be aware of their urban limits and potential. Stockholm is a city that is located in an archipelagic landscape, historically a city benefiting from its transportations made on water, but today a city no different from others, with the majority of its transportations made on land. Addressing the United Nations sustainability goals the thesis aims to use design as a tool to create a public space that contributes to a sustainable development in the growth of Stockholm. The design proposal values spaces in relation to sustainable means of transportation and enhances city dwellers experience of the landscape in which they live. The chosen site is located around the ferry station at Kvarnholmen in the municipality of Nacka in Stockholm. The method for the thesis is a combination of the tools used by a landscape architect, resulting in the method of design. The methods used are a literary study, a study of three reference projects in Stockholm, a summary through a board of quotes, inventory, site visits and analysis, sketching by hand and in model, playing with words as a method for exploration through improvisation, the development of design principles, description of a conceptual idea and the process of designing. The result is greatly influenced by the historical aspects within the literary study as well as by the site visits and improvisational exercises with words. The result of the thesis is presented in two parts, one masterplan for the site and one zoomed in proposal for the ferry station. The design explores the land approaching the sea and the potential public spaces it poses. It also questions the border between architecture and landscape architecture as it's perhaps a result of occupational habits and not always a designers understanding of a space. The thesis discusses the subject of time and spending time and how we as designers might approach the terms. The proposal is limited as it does not consider financial aspects. The design does not include a consideration of the sea life and further environmental impacts.

Sammanfattning

Introduktion

I takt med att städer växer ställs högre krav på deras infrastruktur och funktioner kopp-lade till det större invånarantalet. FN har utvecklat 17 globala hållbarhetsmål av vilka två är direkt relaterade till utvecklingen av hållbara städer och infrastruktur (UN 2016). För att kunna säkerställa en hållbar utveckling tror de att vi behöver se över hur vi byg-ger och använder våra urbana utrymmen (UNDP 2017).

Stockholm är en stad belägen i ett unikt landskap som skapar intressanta möten mellan stad och vatten. Staden är byggd på öar som främst är sammankopplade med broar och landburen trafik. För att säkerställa att Stockholm som stad har en hållbar utveckling anser jag att vi som planerar och gestaltar miljöer behöver ta hänsyn till dess naturliga landskap och den potential det innebär. Staden har historiskt vuxit tack vare båt-buren trafik och transporter, färdmedel som innebär mindre trängsel i stadsrummet och lägre kostnader i infrastruktur. Vattnet skapar stora möjligheter i staden bara vi väljer att se till dem. Dessa kantzoner i den urbana miljön skapar även intressanta platser för offent-liga ytor och uppehåll, platser där vi ser ut över ett vattenlandskap och staden.

Platsen

Den valda platsen är den norra kajen på halvön Kvarnholmen i Nacka, öster om cen-trala Stockholm. Kajen har idag en enkel båthållplats samt en bil och cykelväg längst vattnet. I anslutning till hållplatsen finns idag odefinierade hårdgjorda öppna ytor och en tillfällig parkeringsplats längs en skuren bergskant. Kvarnholmen Utveckling AB som äger marken och driver projekten i området har visionsbilder på platsen där den täcks av en byggnad med en rak väg framför. Arbetet syftar därför till att undersöka huruvida en plats som så lätt kan bebyggas på grund av skugga och starka vindar istället kan ska-pa en offentlig miljö där besökare uppmuntras spendera tid och uppleva landskapet.

Syfte

Undersöka hur ett kajområde med starka vindar och skugga kan gestaltas för att skapa en offentlig plats där besökare kan spendera tid.

Frågor

Hur kan en offentlig yta utomhus skapas kring båtstationen på Kvarnholmen?

Hur kan kajen på Kvarnholmen gestaltas om den offentliga ytan prioriteras över en byggnad?

Hur kan en yta gestaltas i vilken allmänheten skulle vilja spendera tid utan krav på kon-sumtion eller inomhus bekvämligheter?

Hur kan en offentlig yta på Kvarnholmskajen gestaltas för att uppmuntra besökare att spendera tid på platsen?

Avgränsningar

Arbetet är begränsat till området kring båtstationen på Kvarnholmen. Platsen valdes då den dels har en båthållplats för en av de befintliga båtlinjerna i SLs trafik. Faktumet att platsen bebyggs under tiden för arbetet bidrog till dess aktualitet. Ytterligare faktorer som bidrog till valet av plats är Kvarnholmens historia, dess läge i relation till centrala Stockholm samt att det bebyggs för fler boende som kommer behöva resa kollektivt från platsen.

Metod

Arbetet genomfördes med design som metod, detta innebar att arbetet fann stöd i åtta olika metoder. Metoderna för arbetet var en litteraturstudie, där dokument rörande platsens historia, demografi och politiska intressen undersöktes. För att få ett bredare perspektiv samt en förståelse för kajer studerades tre referensprojekt i Stockholm i sam-tal med landskapsarkitekter på Sweco. Därefter skapades en citattavla, som ett redskap för mig som gestaltar att extrahera information och föra vidare den i processen. En en-kel inventering och analys genomfördes genom platsbesök och notering av upplevelser på platsen. Under arbetets gång utfördes skisser för hand samt i modell som ett sätt att utforska idéer, skala och form. Som en utveckling av den enkla analysen gjordes impro-visationsövningar genom ”fri lek med ord”. Metoden användes för att skissa med ord och utforska platsens egenskaper genom flödesskrivningar samt dikter. Därtill utveckla-des design principer, generella och applicerade, för att klargöra vad gestaltningsförslaget skulle åstadkomma. Som ett stöd i gestaltningsarbetet utvecklades en konceptuell ide som skapade ett ramverk för tankar kring platsen och dess utformning. Den nionde metoden var själva gestaltandet av platsen och alla kompromisser och ställningstagande det innebär.

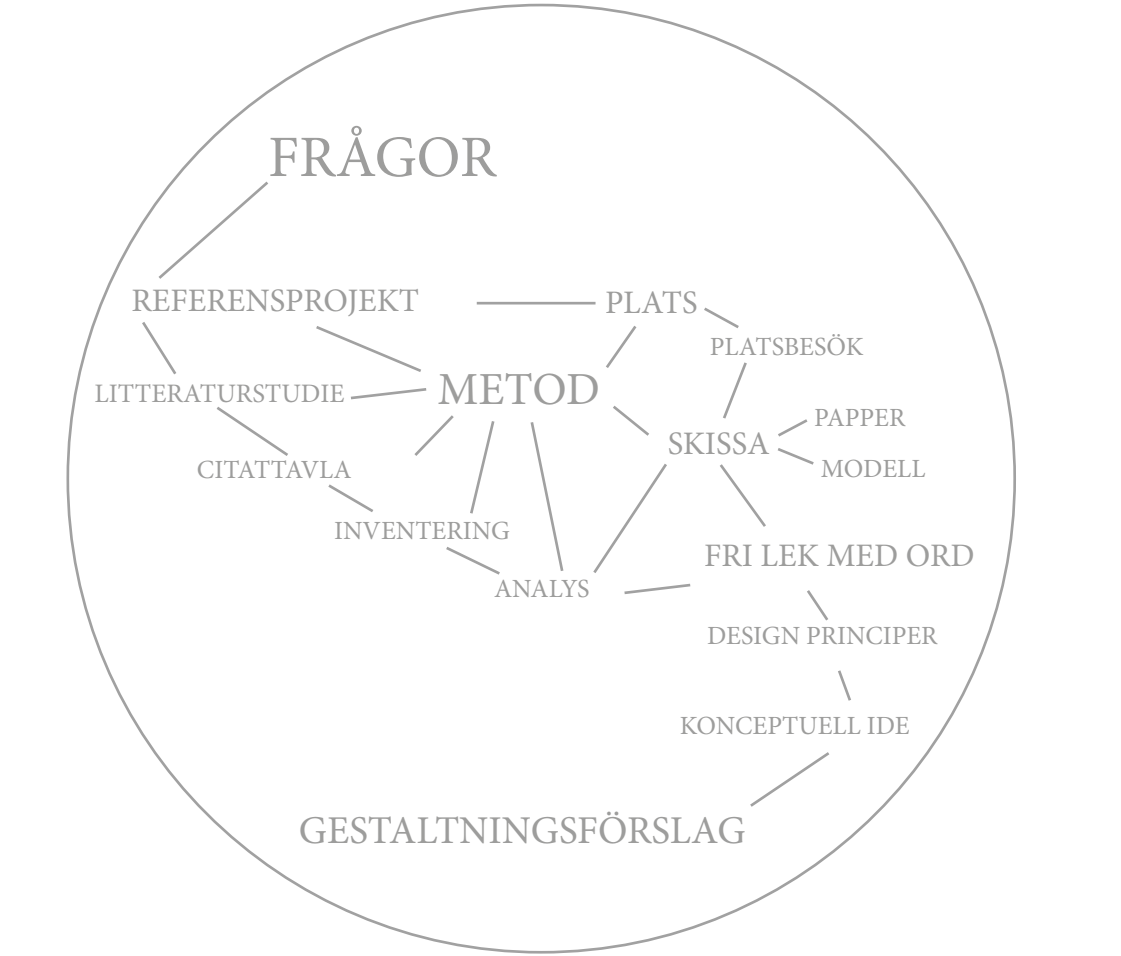


Figure 1.
Figuren visar arbetets gång från initiala frågeställningar till gestaltningsförslaget.

Litteraturstudie

Studien klargjorde att Kvarnholmen har en rik industriell historia med många intressanta aspekter som kan integreras för att bevara platsens historia i framtida utveckling. Det framgick att Nacka kommun har en vilja att skapa nya offentliga platser, något de idag inte har. En artikel visade även att stadsarkitekten tror att det behövs skapas flotta offentliga rum för att skapa offentligt liv i kommunen. Ett examensarbete kring pendelbåtsresenärers preferenser gav en antydan om vad båtpendlare uppskattar under sin resa.

Referensprojekt

De tre referensprojekten som valdes var Slussen, Strömkajen samt Vassparken & Observatorium. Studerandet av Slussen gav insikt i mängden perspektiv som behövs i gestaltandet av kajer, Strömkajen gav en förståelse för omtanke kring historiska aspekter samt breddning av kajer. Projektet Vassparken & Observatorium gav insikt i förståelsen för naturliga förutsättningar på en plats samt bidraget av ett konstnärligt uttryck på platsen.

Inventering, platsbesök och analys

Platsbesöken präglade arbetet djupt då det ledde till att inventeringen och analysen utfördes utifrån upplevelsevärden. Betydliga karaktärsdrag som identifierades och togs vidare i arbetet var platsens närhet till vatten, dess vyer, betydliga skugga samt tuffa vind.

Fri lek med ord som metod för utforskning genom improvisation

Att utforska platsens karaktärsdrag genom fri lek med ord skapade fria tyglar i arbetet inför gestaltningen. Metoden möjliggjorde för oförutsedda kopplingar och gav en djupare förståelse för potential i platsen och därmed gestaltningen.

Design principer

Arbetet resulterade i sex generella principer och åtta applicerade. Principerna utvecklades utifrån litteraturstudien och bakgrunden till arbetet och fungerade som ett program för gestaltningen. De uttryckte bland annat att gestaltningen ska vara flott och uppmuntra offentligt liv, att gestaltningen ska bidra till upplevelsen av båtresor, kommunicera platsens naturliga och industriella historia, skapa plats för en kulturell byggnad samt en restaurang då KUAB som äger maken har den viljan.

Konceptuell idé

För att utveckla den komplexitet platsen innebär skapades ett ramverk i form av en konceptuell idé om att återskapa berget som kan tänkas funnits på platsen. Idén syftar till att skapa miljöer i terrasser, platser för utsikter i olika höjder och med olika orientering. Idén fördelades i två skalor, en storskalig som trycker på en struktur och tanke om hur berget gradvis möter vattnet, och en mindre som talar om variation och transparens. Transparens i den mening att platserna är tydliga och kommunicerar ett budskap till brukare.

Gestaltningförslaget

Förslaget presenteras i två nivåer, en övergripande plan för hela området samt en fördjupning i området närmast färjestationen. Gestaltningen föreslår en utbyggnad och uppbyggnad av strandkanten. Förslaget innefattar en underjordisk restaurang med fönster i linje med vattnet, en stor trappa som tillåter invånare att röra sig i nivå med vattnet, två mindre byggnader i anslutning till hållplatsen för att möjliggöra bekvämligheter och skapa en småskalig torgliknande yta. Förslaget föreslår även en större byggnad för någon form av kulturell aktivitet med en trädgård ovanför som en förlängning av ett närliggande parkstråk. Förslaget är endast ett övergripande förslag och mycket utrymme finns för detaljerad gestaltning.

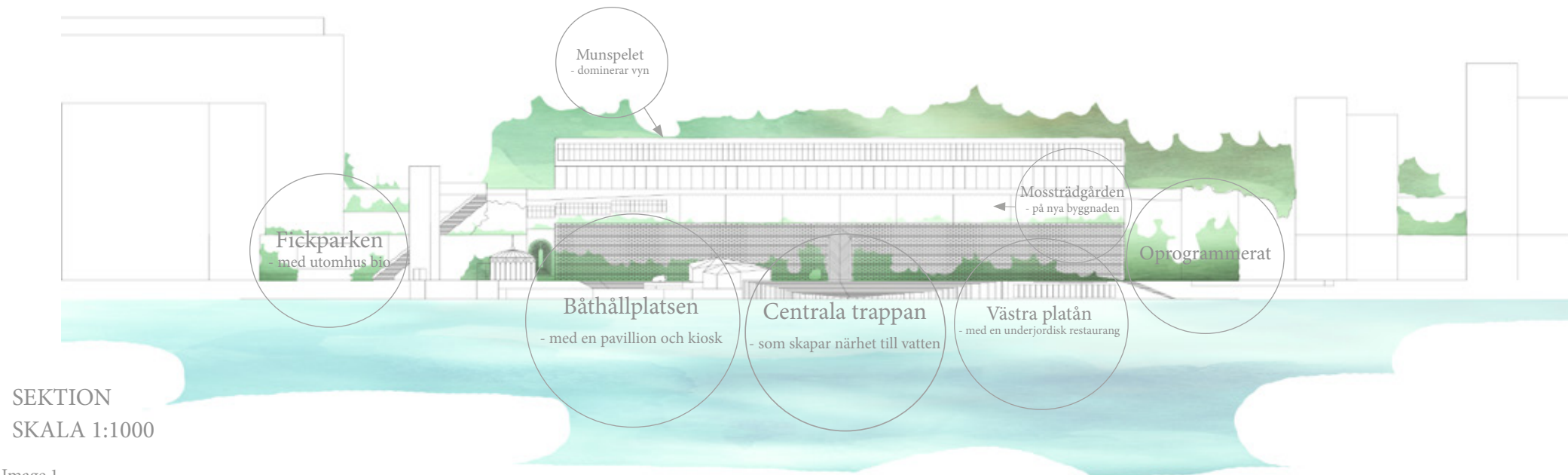


Image 1.

Bilden visar en vy över gestaltningförslaget för den norra kajen på Kvarnholmen.

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Introduction

As landscape architects our role is to create spaces for the public; spaces in which we can play, travel, relax and experience nature meanwhile considering urban functions for everyday life. Our role is not to be specialists, but rather generalists, thus being able to grasp perspectives of great width, helping us to design solutions for the current and future societies.

Stockholm's unique setting in the landscape makes for interesting meetings between the built environment, nature and the sea. Its history, size and location make for exciting possibilities in various spaces like few other cities possess. However, I believe that many places in the city have yet to live up to their full potential.

As the city of Stockholm continuously grows rapidly, new systems and ideas need to develop to cater to the everyday life of its inhabitants. Through this master thesis I will design a space in relation to a dock, exploring the meeting between city and sea and propose a new public space in the urban context. By exploring the subject I wish to find aspects in relation to the dock that can add to the experience of the city, accentuating the meeting of man and nature, land and sea. Through a multifunctional design, I wish to create space for activity and urban life, as well as increasing the opportunity for sustainable public transportations.

The chosen site for the project is located in Kvarnholmen, a peninsula in the municipality of Nacka, Stockholm. The area is currently being developed by a company called "Kvarnholmen utveckling AB" (KUAB) who also own the land. Plans have been made for most parts of the peninsula but the area surrounding the dock has not yet been thoroughly investigated. Visions and images that have been developed for the site show a large building covering it with a straight promenade and road along the shoreline. The design that's portrayed in the images creates a simple built solution to the sites natural setting, a windy dock area with heavy shadows from a cliff.

By addressing the site and the wants of KUAB and the municipality of Nacka I wish to create a design that values the potential in a public space that could be created, rather than private activities within a single building. Examining whether a public place where we might spend time could be created on a site that otherwise easily is motivated to house a building. The thesis thus explores the potential to create a public space on a site that might not have the apparent circumstances expected of a public space in Scandinavia.

Background

In the development of our increasingly exploited cities; higher demands are to be expected of our infrastructure and functional spaces connected to the enlarged population. The rapid growth of cities demand innovative ways of solving problems that are both old and new as they occur in a new context. The United Nations have developed 17 sustainable development goals of which 2 are related to the development of sustainable cities and infrastructure (UN 2016). They believe that by the year 2050, two thirds of all humanity will be living in urban areas and that a sustainable development of our urban areas “cannot be achieved without significantly transforming the way we build and manage our urban spaces.” (UNDP 2017).

As the capital of Sweden, a country experiencing a period of great economic growth, Stockholm is one of the fastest growing cities in western Europe and is believed to continue this historic growth the coming decades (SR 2013). Therefore, the development of sustainable infrastructural efforts play a great role in the city's future physical expression. Stockholm is a city made up of islands connected by bridges. However, the amount of boats used in everyday transportations are surprisingly low compared to other means of transportation (SLL 2013).

Travels on water could play a leading role in meeting the demands of public transportation and act as a fundamental complement to current means such as the metro, bus and tramway systems (Stockholms Hamnar 2015). As opposed to land based means of transportation, boats and ferries usually produce less pollution and conduct less traffic jams as well as opposing significantly lower demands on investments in infrastructure, since their ways, the water, is already existing (Stockholms Hamnar 2015).

Dock areas in Stockholm generally make for interesting places in the cityscape as they create images of the city and places they serve. Docks and shorelines are places that reveal themselves for everyday travellers or tourists on boats, either arriving or passing by through the archipelago. These places house great history and context in the development of societies throughout centuries. The docks and harbours in and around the city were portals for the importation and exportation of goods and people, they created jobs and financial prosperity, led to geographic exploration and the development of companies, residential housing and social services. Today these places no longer play the same cultural role as they once did, however they could once again serve the city in its strive for a sustainable development. In today's setting, many of the docks once placed outside of the city now make for relatively central places that are being exploited, with good conditions for commuting. Residential projects with sea view apartments increase in Stockholm, much like in other cities, and therefore also the number of residents that potentially could commute by boat.

The city's location in the landscape, at the edge of the archipelago, forms a cluster of islands. The intense scattered nature of the land shapes and the meeting of the lake Mälaren and the bay of the Baltic Sea, lay ground for the centre of the urban area of Stockholm. The natural setting in itself poses interesting meetings of terrains, rocks and trees in direct contact with the sea. The dynamic nature of the water and the static nature of the cliffs and shorelines. In the midst of this versatile interaction of elements an increasing exploitation of the city demands space from all current occupants. Increasing the static elements and reshaping the shorelines. This process has been going on for centuries and is in no way new, however the escalating rate stresses the issues of the future. As a part of the architectural society in Sweden, I believe it is our role to influence and steer the urban development in a direction that enhances and deepens the urban complexity rather than passively allowing for mundane spaces to be built in the sole purpose of increased housing.



Image 2. Stockholms Stad 2004. Source: http://kartor.stockholm.se/bios/dpwebmap/cust_sth/sbk/sthlm_sse/DPWeb-Map.html (2018-02-06)

Map of the inlet showing central Stockholm and the meeting of the lake Mälaren with the brackish water of the Salt lake, which is connected to the Baltic sea.



Image 3. Nacka kommun. Source: webbkarta.nacka.se/ (2018-01-16)

Image showing the landscape of Stockholm and the archipelago. The lines separate the different municipalities that together make the greater urban area. The highlighted area is the municipality of Nacka, where the peninsula of Kvarnholmen is located.

Introducing the space

The area I have chosen to work with in this project is a peninsula called Kvarnholmen, east of central Stockholm, part of the municipality of Nacka. The area has a rich industrial and modern architectural history and is today being developed through several residential and commercial projects.

The site is located on the northern shoreline of the peninsula and has features similar to the entire northern shoreline of southern Stockholm. Its meagre vegetation, intense topography, windy conditions and functional urban activities characterize the area, much like others along the horizontal coastline. The thesis specifically focuses on the area around the ferry station at Kvarnholmen.

Aim

Examining how a dock area with heavy wind and shade can be developed to create a public space where visitors would be able to spend time.

Questions

- How can an outdoor public space be created on the dock at Kvarnholmen?
- How can the dock at Kvarnholmen be designed if the public space is prioritized over a building?
- How can a space be created in which the public would want to spend time without the demand of consumption or indoor comforts?
- How can a public space on the dock at Kvarnholmen be developed to encourage visitors to spend time on the location?

Limitation

The choice of site partially relies on the fact that the area has a dock, with a station for one of the few ferry lines going through Stockholm as a part of the public transportation system. Another aspect is that of time, the area is currently being built with several new residential buildings through different developers, with prices equivalent to those in central Stockholm.

Additional aspects are the areas cultural values and history, as well as its natural setting in the landscape. These aspects all make for interesting and current discussions valuable in designing an urban space in Stockholm.

The site is limited to the ferry station and surrounding dock. The depth of the dock varies from ca 40-50 meters, and the length of the project area is around 170 meters, resulting in an approximate size of 8 500 square meters.

The thesis is limited in both time and resources, therefore resulting in a series of drawings, sections and illustration plans of the site. The plans and sections will be presented in different scales. A general plan for the area will be proposed as well as a more specific design solution for the space closest to the ferry station.

The thesis is conducted with design as a method, commonly including a financial aspect in the process. However this project does not consider the economical portions, creating freer boundaries within other aspects.



Image 4.
Image of the inlet and central Stockholm. The circles mark the positions of different islands.

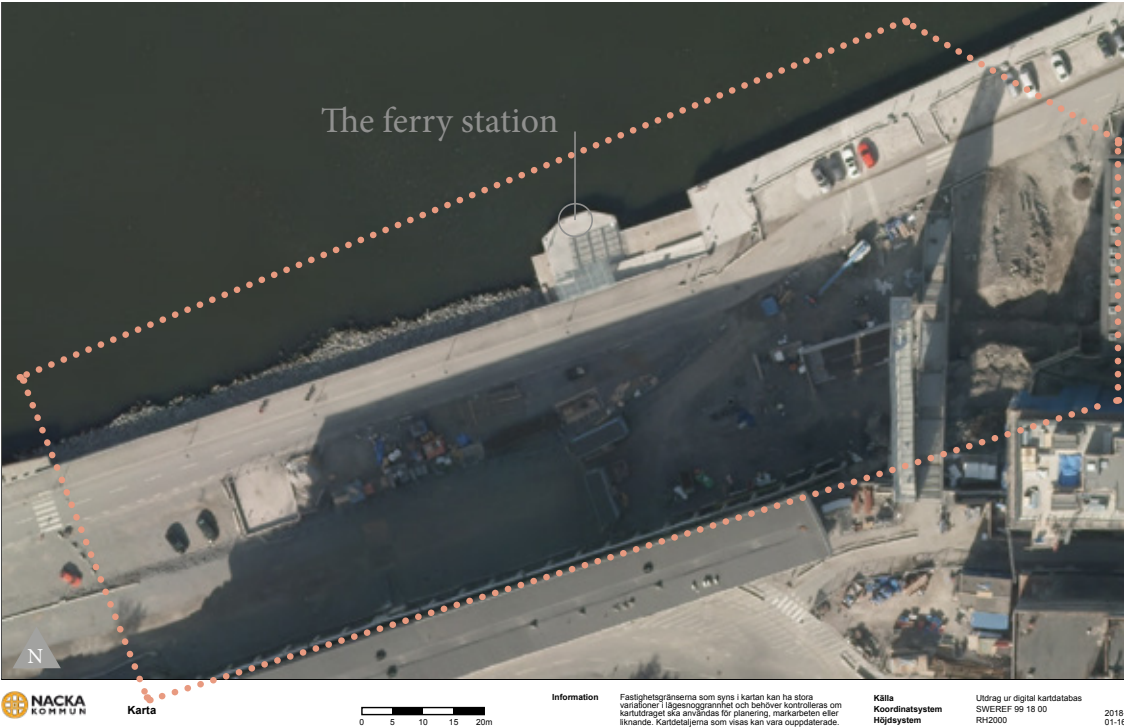


Image 5. Nacka kommun. Source: webbkarta. <https://webbkarta.nacka.se/> (2018-01-16)
Map showing the physical limitation of the site around the ferry station.



Image 6. (2017-10-11)
Photo of the site, taken from the western part of the site, overlooking it to the east.

Method

The method for the project was a combination of the tools a landscape architect uses in the design process, thus resulting in the method of design. To understand how design could be used as a method and to create a basis for the thesis the book *How designers think – the design process demystified* by Bryan Lawson (1980) was studied.

Firstly the thesis found support in a limited literary study of documents relevant to the site, giving insight into the history of the space, statistics and information about the users, and the political directions. An additional study was then done, reviewing 3 reference projects in Stockholm, expanding my personal repertoire as a designer as well as giving insight into designing urban coastal spaces. The study of reference projects also allowed for unforeseen perspectives to be considered later in the design. The studies were then summarized and exhibited in a board of quotes, functioning as a tool for remembering key words going forward. Then an inventory was conducted, including site visits and an analysis, stating the sites key features and valuating them. Throughout the process sketches were carried out, exploring ideas and problems that occurred while studying the space. By also building models and exploring with cubes, the method also investigated scale, sense of room and the built environments physical meeting with the sea. Commencing with the design proposal, improvisation and “free play” through words were used as a method, following the ideas of professor Stephen Nachmanovitch (1990). The studies and design ideas were then summarized into general and applied design principles, setting the frame for the concept and design to be developed.

List of methods

Literary study

Study of reference projects

Board of quotes

Inventory, site visits and analysis

Sketching, by hand and in model

Playing with words

Design principles

Conceptual idea

Designing the site

Literary study

This part of the method aimed to create a basis for me as a designer to understand the space through different perspectives. It functioned as a starting point in the design process, gathering knowledge to begin to formulate questions. The study was limited to three aspects, the history of the space, the spaces political directions and the people using the space. These were chosen to study since these aspects might otherwise be difficult to study if not through documents. The primary source of information were political documents concerning Kvarnholmen, those in turn lead to other documents, books or websites that increased the width of the information. The history of the space was greatly studied through the book *Kvarnholmen – En unik historia* (Ångström, 2013) resulting in only the perspectives and historical interpretation of the writer. The study of the political documents were done through the municipalities’ website and the document of *Fundamenta* (Nacka kommun, 2016), the words of the city architect were included to add more specific and concrete ideas to the otherwise general political tone. The study of the people using the space was partially done through general statistics of the residents in Nacka. To further receive an understanding of the people using the ferry station a study of a master thesis examining preferences of boat commuters on the ferry line passing the dock was done. The study has no direct relation to the space but rather commuters experience on the boat, and has been used since it gives information about the current users of the ferry station and boat commuters in general.

Study of reference projects

Since I personally did not have any experience of designing dock areas, an expansion of my repertoire was necessary. The aim of using this, as a part of the method, was to create a basis for understanding design problems and solutions that might occur in similar projects and learn from other landscape architects. The study was limited and only included project in Stockholm, since landscape architects included in the projects were available for conversations. It was also through conversations with landscape architects at SWECO in Stockholm that the projects were chosen to study.

The information received in the projects “Strömkajen” and “Vassparken & Observatorium” were mainly based on conversations with the landscape architect Christina Sellberg, who has been actively involved in both projects. The project of “Slussen” however gave limited information through conversations with the landscape architect Anders Falk, since he is positioned as a project coordinator in some aspects and has not worked with the design of the site. Therefore the information was mostly received from Foster & Partners website, as they won the master plan for the project area.

The places that I choose to study have been characterised in different roles based on the simple words of professor Bryan Lawson, that an architect is not an engineer, a social scientist nor an artist, but carries the perspectives of all (1980). Therefore I choose three projects that were all in connection to the waterfront, geographically limited to Stockholm, relatively current in time but designed with different focuses.

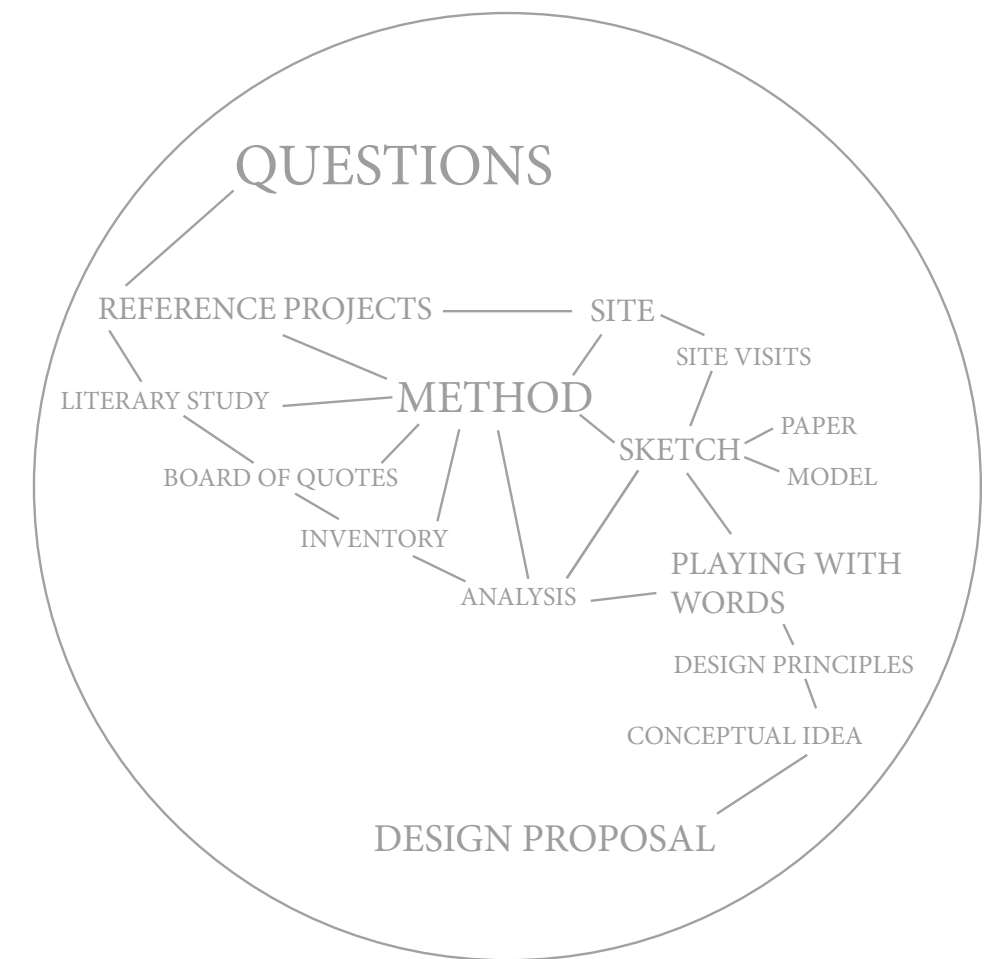


Figure 2.

Figure showing the design process for the thesis, from initial questions to proposal.

Board of quotes

Concluding the studies and moving forward with the site, the information extracted needed to be summarized and made easily available for me as a designer to look back to, hence a board of quotes was developed. The board was developed through extractions from the text in two steps. Firstly I reread the literature study and the study of reference projects, highlighting the key sentences. I then collected all of the sentences in one document, again highlighting the essence of each sentence, resulting in an exposé of extractions. The words and quotes were then displayed on a board, positioned to connect to each other, and given a size based on their degree of specification, larger if general, smaller if specific.

Inventory, site visits and analysis

The inventory of the space was made through research online, an interview and site visits, documenting the site and spaces through video, photographs and notes of the experience. The inventory strived to cover as many aspects of the physical space as possible. The research online gave information about the historic values, geology, climate and sea levels.

Through site visits the features of the site were documented, the traffic and connecting spaces were recorded and the landscape experienced. The first site visit was conducted on the 11th of October 2017 at 11 o'clock and lasted for 2 hours. I chose to approach the site by using the ferry, allowing me to experience the waters and shoreline, entering the perspective of the boat traveller. It was a sunny Wednesday with clear skies, the temperature was just a few degrees Celsius. At the time of the visit the site was fairly empty. The visit began and ended at the ferry station. During the 2 hours on site I walked across the site taking photographs, some videos, and notes. At some places I sat down and wrote about my experience when I felt the need to explore an idea. I walked around the site and tried to approach it from different directions to experience it differently. My second site visit was done on the 31st of October, at 10 o'clock and that time I chose to go by bus, approaching the site from the northern bus stop behind the Harmonica. The second visit lasted for an hour and the weather was similar to the previous visit. The second visit was primarily done to re-observe what I had previously experienced and noted to see if my experience was correctly documented. The purpose of the second visit was also to see if I could experience anything else, if perhaps I was not fully present during my first visit. Besides the two longer site visits several smaller ones were conducted, supporting ideas and refreshing a sense of scale while processing solutions. In connection to one of the site visits I also visited the office of Kvarnholmen Utveckling AB, leading the development of Kvarnholmen. A conversation with Anna Hjalmarsson who is responsible for communications at KUAB, confirmed some aspects of the inventory but also gave insight into current plans and desires within the site.

The method for the analysis was chosen based on my personal desire to explore other methods, meaning that a simple method would be sufficient as it would play a smaller part in the process. By stating the spaces experienced strengths and weaknesses a simple analysis was made. The aim of using the simple method of analysis was to clarify elements that could be either used or prevented in the design. By stating the aspects I realized that the definition of strengths and weaknesses is highly subjective and that perhaps a different way of exploring them and the experience of the site could create further potential in the design. Therefore the analysis only made for a small part in developing the design.

Sketching, by hand and in model

Throughout the entire process of the project, sketches were made to explore ideas and solutions to problems that arose along the way. As the initial stage of the process, gathering information and studying reference projects, came to an end the amount of sketching increased. At that stage in the process ideas of combining the spaces history and potential, wants of users and developers had reached a point where a few cards were on the table. As the inventory and analysis were conducted, this however, reached a culminating point, increasing the amount of sketching to a peak where I as a designer felt drained and surrendered to the possibility that a solution must have been reached. Going through sketches in search of a solution I realized that the sketches of the designs best suited for the site needed to explore the scale further. To be able to sketch and explore the spaces within the site the method of model building was chosen. By creating transparent cubes I explored different levels in the site, extending from the mountain and reaching the shoreline. The cubes enabled volumes, buildings or vegetation, to shape and occupy the site, creating different rooms and functions. The method gave great insight into the scale of the place and was appreciated since the cubes acted as abstract strokes in sketching in three dimensions, never acting as fixed solutions.



Image 7. (2017-10-09)

Photo of the cubes used, exploring scale and volumes in model.

Playing with words (as a method for exploration through improvisation)

As a result of the simple analysis an alternative method was chosen for exploring the features of the site. In his book *Free Play*, the musician and author Stephen Nachmanovitch explores the concept of human play and improvisation as a method for exploration (1990). He argues that when we play, freely and unhindered, we as artists explore our world and the subjects within it. In true improvisation we can channel our inner source of inspiration and create, and by doing so we can also develop and learn about ourselves but also about the art we strive to create within the worldly context. In his book Nachmanovitch also explains how the language and our words probably are the best and most developed tool we have for improvising and playing, consequently exploring. According to Nachmanovitch we already do it, when we discuss, when we are sarcastic, when we speak before thinking, and many more situations. Even though we might develop other tools for playing and exploring such as sketching or an instrument, we might still be far better at our greatest tool, the language. If perhaps we do not have other refined tools, we always have our language. (Nachmanovitch 1990)

As a part in my design process I chose to explore the main features of the space by exploring them through words since it might be my most intricate tool. Improvising and playing freely to enter the elements true meaning to me and to the space. From the inventory, site visits and analysis I developed six significant features that I chose to explore through words as a complement to the analysis and to accelerate my design process through improvisation. The features were: the wind, the views, the water, the meeting of land and sea, the shade and the ferry station. The features were chosen based on their high degree of influence on the space's character. The improvisational writing was then made at different times during the course of the project. Many times at the end of a day, when I would sit on the train on my way home I would commence a thought based on one of the features, which then resulted in an half an hour to one hour of intense writing resulting in a poem-like text. From my handwritten notes I then extracted parts that I chose to present in the thesis. The writing had no boundaries other than that of the feature it aimed to explore, therefore the paragraphs all differ in structure and shape.

Design principles

To create a platform from which the design could consider the site, the background and the studies a series of general design principles where developed. The process of developing the principles found support in the board of quotes, naturally the entire texts where reread and considered in the procedure. Expressing applied principles was then necessary to create direct links showing how to achieve certain ideals. This step required much thought as it's where the design is narrowed down into its main focuses. It was in this part of the process that I personally found support in having studied reference projects. By understanding previous problems and the way they where addressed allowed me in some cases to imitate the solution or understand the process of thinking in the same pattern.

Conceptual idea

The design principles create a formal, rigid and almost political foundation for the design, but to create an abstract and aesthetic basis, communicating all the aspects of the space, a conceptual idea was thoroughly expressed. To fully express the complexity of the site the concept was divided into different dimensions. One that considers large scale aspects and one that handles details and symbolism. The conceptual idea creates the abstract foundation on which the design relies; however it does not always cover the proposals aesthetics. The aesthetics and idiom used in the proposal thus became a result of the space's architectural history, the industrial era, the turn of the century and the functionalism. By relating to the existing architectural tracks within the area the new additions strive to complement the space.

Designing the site

Using the summaries, board of quotes and design principles as a point of reference the design process aimed to achieve the objectives they pose. The conceptual idea then became the framework through which this was achieved. Designing however, as explained by Lawson, almost inevitably means compromising. The expressed objectives can at times be in direct conflict, making the designer choose to optimise one whilst the other suffers (1980, p. 88). As such there is never a perfect design solution but rather a series of compromises that the clients and users might prefer. How the design then was developed relied on the judgment of me as a designer and the stated objectives. Whether the proposal actually achieved its purpose can only be told by the clients, users and by time.

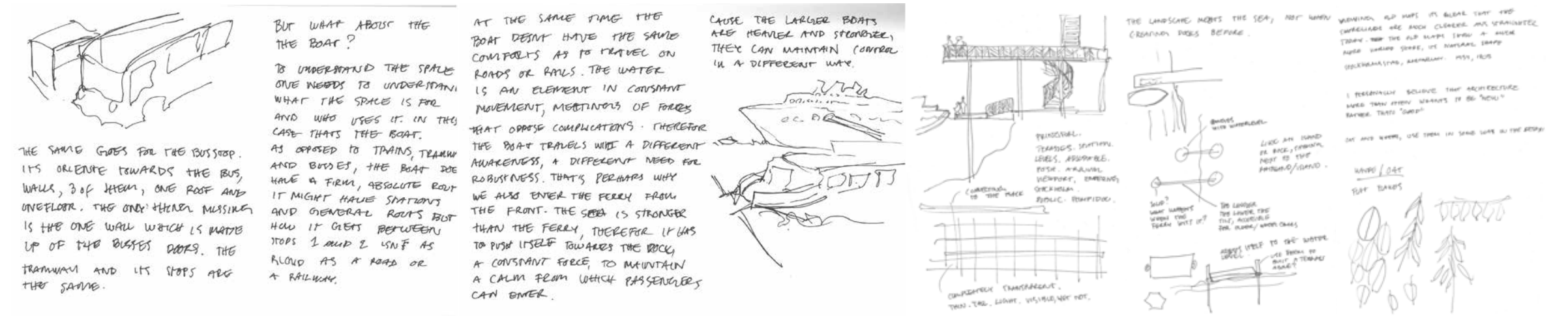


Image 8.

The image shows how the writing was done together with sketches.

Result

Literary study

The design is built on the nine different methods presented in the previous chapter. The result is thus that of the methods and the design which will be presented at the end of this section. Below the different methods are carried out, commencing with the literary study followed by the study of reference projects, board of quotes, inventory, site visits and analysis. Sketches are presented alongside the other methods. Finally the play with words is done, paving the way to summarizing the full extent of the methods into general and applied design principles and developing a concept.

The literary study explores a series of documents relevant to the space, its history and development. Initially the history of Kvarnholmen will be studied, then documents from the municipality of Nacka, the city architect of Nacka and finally general statistics of Nacka and a study of a master thesis conducted in 2014 that examines the ferry line passing Kvarnholmen.

The history of Kvarnholmen

To understand a place, its context, development, potential and character it's important to understand its history. When analyzing a landscape an inspection of old maps is usually done, though when possible a literary study of a places history might also be of assistance in understanding its genius loci, therefore I have chosen to study its history in both aspects in this thesis, commencing with the literature.

The history of its name and development

The peninsula of Kvarnholmen is originally an island and has a recorded history reaching back to the 16th century. The island was formerly called “Finnesön”, believed to be named after the population from Finland who occupied parts of the island (Ångström 2013). Later, in 1621, when the first industry was established in the area, near the island, it was called “Hästholmen”. Its name “Häst-holmen”, meaning “Horse-Islet”, probably comes from the early 17th century when horses from the Baltic countries would graze on the island, waiting to be chosen by drivers for carriages in Stockholm. It wasn't until the 1930s that its name was changed to “Kvarnholmen”, as a result of postal problems, thus naming the island after the thriving milling industry, as “kvarn” means “mill”. The Island has a strong history connected to the industry, as implied by its name. (Ångström 2013)

In 1871, as a result of the escalating land costs and building regulations in Stockholm, a factory was established on the outskirts of the city, next to “Hästholmen”, its operation was the development of the substance “super phosphate”, commonly named manure (Ångström 2013). The new substance revolutionized the agricultural sector in Sweden, thus the industries producing it grew. The initial factory was built in wood, however, after a great fire in 1889 a new brick building was instated (Ångström 2013). In the same period the Stockholm based company “Tre Kronor” bought land on the island to start another factory (Ångström 2013). In 1897 a grand brick facade was built, laying the ground for what came to be the centre of the Swedish baking industry. To fit the vast complex of a factory, silo, mill, dock and warehouses 14 000 cubic meter of the island rocks had to be broken through explosions. The excess masses were then used to reshape the landscape and adding to the shoreline, creating a dock and a space for the industries. Kvarnholmen, and the company, grew large and delivered dry goods to the entire country, as well as other countries. The island's location right at the entry to Stockholm made for great conditions transportation wise and the dock was heavily used (Ångström 2013). The growing factories created jobs and activity on the island and led to the construction of several worker residences in the early 20th century. The company “Tre Kronor” also built a boat, locally, to be able to ship flour and products to the city, the boat was actually Sweden's first electrical ship (Ångström 2013).



Image 9. Holger Ellgaard 2010. CC BY-SA 3.0. Source: https://commons.wikimedia.org/wiki/File:Kvarnholmen_2010x.jpg (2018-01-25)

Image, view of Kvarnholmen from the island of Djurgården showing the facades of the industrial buildings

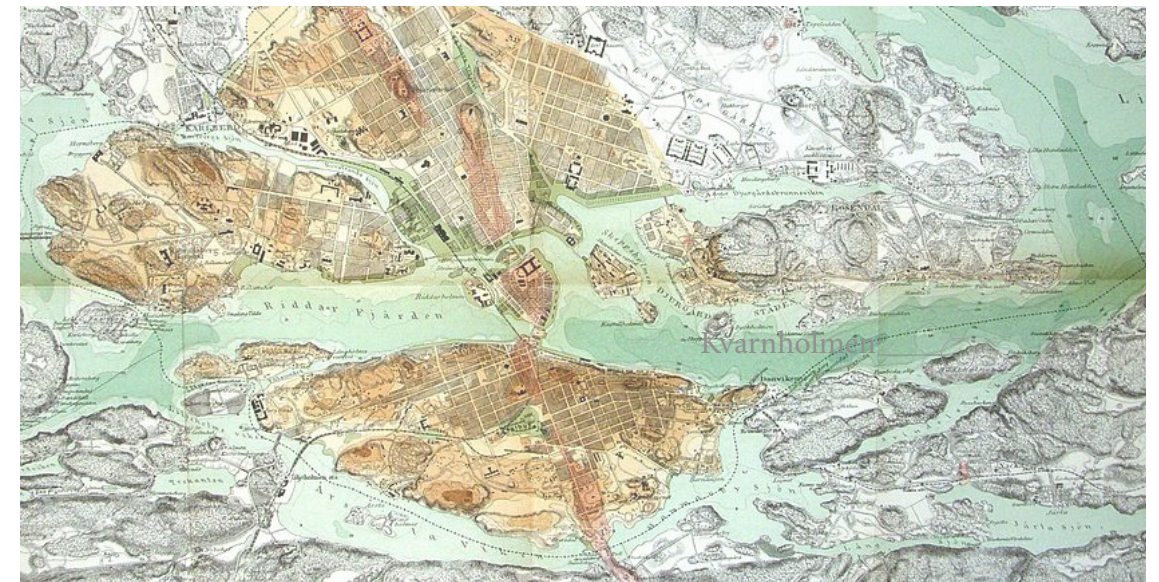


Image 10. Stadsingenjörskontoret och Sjökarteverket 1897. CC BY-SA 3.0. Source: https://commons.wikimedia.org/wiki/File:Svindersviken_Hästholmen_1897.jpg#/media/File:Stockholm_h%C3%B6jd_djup_1897.jpg (2018-01-25)

The image shows an old map from 1897 presenting heights and depths in the landscape of Stockholm.

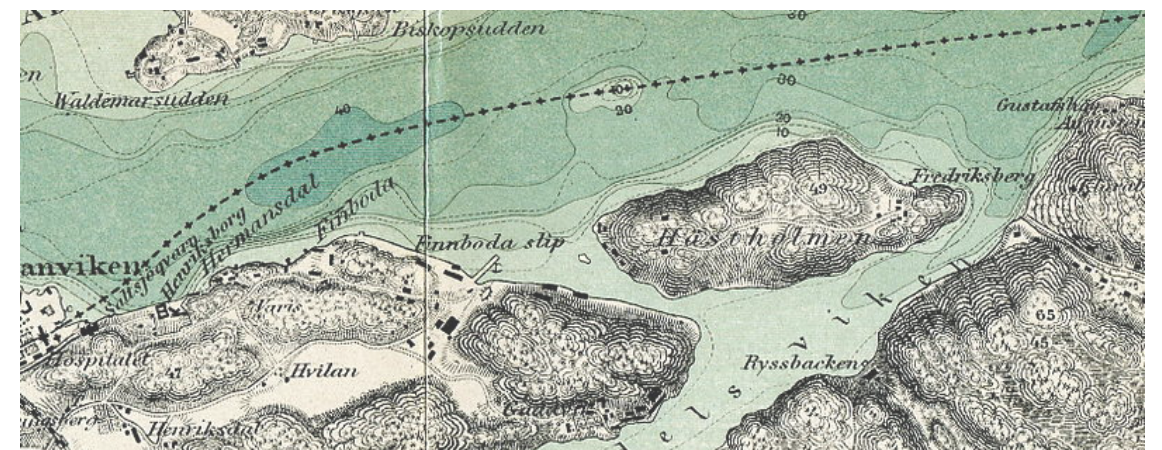


Image 11. Stadsingenjörskontoret och Sjökarteverket 1897. CC BY-SA 3.0. Source: https://commons.wikimedia.org/wiki/File:Svindersviken_H%C3%A4stholmen_1897.jpg (2018-01-25)

The map shows the old island of “Hästholmen” which is now the peninsula of Kvarnholmen

The 20th century

The 20th century was a period when much occurred on the island. At the turn of the century a shipbuilding yard was founded on the island's west side, the company produced some of Sweden's most famous yachts, but ended their production in 1926 (Ångström 2013). In the 20's a company called KF bought several parts of the island, owning almost all of it, in 1922 they took over the industry created by "Tre Kronor" and spent a year renovating the facilities and the mill, making it the most efficient mill in the world (Ångström 2013). Big parts of the development of Kvarnholmen through KF lead to the development of functionalism in Swedish architecture (Ångström 2013). The company had an architectural firm for the development of the island, they based their designs on rationality and function. The firm had a vision to create a miniature society where technology and urban development could grow in coexistence with innovative architecture. Amongst industrial buildings and structures the firm built a bridge to the island, for the first time connecting it to its surrounding by other means than boat (Ångström 2013). The vision for the area resulted in the development of even more residential buildings for workers, as well as commercial and green spaces. The projects even received some international recognition during the Stockholm Exhibition in 1930, for their functional architecture (Ångström 2013). The development of the residences on Kvarnholmen where in fact inspired by the German exhibition Weissenhof Estate in 1927 (Ångström 2013), where architect like Mies van der Rohe, Le Corbusier, Walter Gropius and Josef Frank participated in the projects.

The post-war period

The factories and KF continued to grow rapidly, adding a bread factory, oat mill, and developing its production of pastas during the 30's (Ångström 2013). However, much like the rest of Europe, the Second World War and the 40's posed a large setback. It wasn't until the 60's that new demands for efficiency arose, new machinery was added and the area further developed which lead to the joining of the island and the mainland. The new headquarter was added, a modern building using the popular elements of concrete, steel and glass, called "the harmonica". The architect, Olof Thunström, placed the building on the top of the landscape in the west end to give visitors a direct overview of the area and at the same time allowing for views of Stockholm. The site meant a small yet long lot and was thus the main factor for the building receiving its shape. The design is inspired by the European functionalism trends and the choice of material likewise (Ångström 2013). The elevated glass structure allows for great views, floating on concrete pillars that also make for a simple construction, as the site was otherwise hard to construct a foundation on. As the building is 100 meters long and located completely visible when entering Stockholm by boat, "the harmonica" has also been used for commercial signs (Ångström 2013).

The modern day

In the 80's the company started showing less profit and by 1992 the factories were shut down (Ångström 2013). After the closing of all the industries that had shaped Kvarnholmen's past centuries came a new era. The old industrial amenities were now empty and new activities started to develop in them. The peninsula became home to television and music studios, warehouses, ateliers and schools (Kvarnholmen Utveckling AB 2017). In the 90's the area's future was widely discussed but it wasn't until the early 2000's that a complete vision was developed for the area. KF, who still owned great parts of the old island partnered up with the real estate developer JM to develop the area into a new urban area with housing, offices, service, greenery and communications to the city. In 2012, JM finished the first new built apartment building on the north side of the peninsula and Kvarnholmen's population increased with 50 %.



Image 12. (2017-10-11)

The Harmonica

The space's political directions

What wants and needs in development has the municipality of Nacka expressed?

The city architect

On the municipality's website they've posted an interview with the city architect Eva Maria Persson, portraying her perspective and wants for the development of the city (Nacka kommun 2016). In the article, she expresses what she believes defines a city today. She says:

"Typical for a city is the public space, that belongs to everyone. Typical for a city is a constant flow of people. We are alone together. Accessibility and communication are fundamental for the city's flow" – Eva Maria Persson (Nacka kommun 2016, translation by Nima Karimzadeh)

The quote above comes from the development of a document called "Fundamenta", a series of fundamental principles established by the municipality to ensure the development ideas and vision of the municipality through exploitation and growth in the city (Nacka kommun 2016). Persson believes that we are in the process of developing new kinds of cities. Previously we planned for walls and protection, later for commerce and caravans, but today those perspectives are gone. Even the commerce that is a large part of the modern society has been shipped off to peripheral locations specialized for shopping. As have many other activities extracting experiences from the city, however Persson believes that we now are going towards a leisure based city, one where we first and foremost spend time in the public space (Nacka kommun 2016).

Persson continues to state that a city is its public life, where she believes environments can partially be vitalized through the design of buildings and spaces, as they are the walls and floors of the public realm. She believes that perhaps some elements in the city need to be "posh" to attract and encourage public life. The municipality of Nacka does not have a tradition of creating public spaces and she believes that it is now necessary to develop a few posh public spaces in the new districts of the city. The article ends with a quote saying that the interpretation of a city largely concerns individual emotions, and that fact is inevitable. However, Persson believes that there are principles for creating beautiful spaces and that those principles last over centuries (Nacka kommun 2016).

Fundamenta, the guide based on the municipality's vision:

In 2014 the city of Nacka developed a document of guidelines and principles as an urban strategy based on their vision for the municipality; near and innovative. The document lays the foundation for development and urban projects and needs to be implemented in all projects (Nacka kommun 2014). The document begins with the previous quote from Eva Maria Persson and continues:

“Public life is the meeting of residents, workers and visitors. Meetings that are crucial for the city's development. It is from our history and cultural environment that people receive a context. The city is a whole”(Nacka kommun 2014, translation by Nima Karimzadeh)

The municipality of Nacka has developed seven fundamental concepts, or as they are called, fundamenta, from which future projects shall be developed. The seven fundamenta are the following:

Context, Urban Space, Urban Streets, Urban Greenery, Block Shapes, The City's Objects, Characteristics. Since not all of them affect this project I have summarized and extracted what is relevant from each fundamenta below:

Context

The document states that the flow of people and public venues are the city's primary features. Paths and nodes make the prerequisite for the urban space and should be designed to be easily oriented, clear, multifunctional and transparent. Intersections for public transportation should be designed with great care. Consequently, the city shall encompass the complexity of public life. The city is a place of movement, a scene to watch and to be watched on. (Nacka kommun 2014)

Urban Space

The public spaces characterized by openness, function and meaning where everyone is included and allowed to meet and integrate are the most important urban spaces (Nacka kommun 2014). Specific places should be identified, developed or created to emphasize the value of the public realm. Playgrounds should have a clear part in the public spaces. The urban space should be allowed to change over time. Large unprogrammed spaces allow for spontaneity and temporary activities. (Nacka kommun 2014)

Urban Streets

The street design should mainly be based on function, content and traffic, however the streets potential as a public space should also be highlighted. Main streets should allow for bicycle commuting and smaller local streets should be designed for lower speeds and on pedestrian terms. The document states that the urban street is a room in which the buildings create the walls. (Nacka kommun 2014)

Urban Greenery

Nacka is surrounded by large green areas as well as vast waters, the city should have systems of parks and seaside promenades maintaining or creating spaces for recreation. Greenery is also explained as decorative elements incorporated in urban spaces and on buildings, creating alleys, new rooms and movement and allowing for biological diversity. The possibility of handling stormwater and heat islands, creating wind protection and urban farming through urban greenery should be explored. The document also states that the way to the water should be clear. (Nacka kommun 2014)

Block shapes

Refers to building blocks and is thus not included due to irrelevancy to the project.

The City's Objects

This concept emphasizes the value of detail, stating that the city's objects show ambition in receiving people. Choice of material, plants, lighting, urban furniture, public art etcetera make for the experience of quality and care. Public art that changes over time is crucial, and lighting can contribute to creating safety and character in the environments. (Nacka kommun 2014)

Characteristics

The design and aesthetics of the urban space shapes its meaning. The urban landscape should be seen as a whole, where the current, past and future creates its character. Every district should have a characterizing space, old or new, and innovative shapes and solutions should challenge aspects of both small and large scale. Environmentally friendly solutions should be made clear. (Nacka kommun 2014)

The people using the space

Another aspect of understanding the space and how to design it is by knowing whom it is being designed for. By studying demographics for the area and the municipality of Nacka, I hope to receive knowledge of the people using the space. However, information concerning new residents cannot be considered as they do not yet inhabit the peninsula. Apart from the general statistics I've also chosen to study the specific group of people who commute by boat to receive an understanding of how to develop parts of the site. I've chosen to study a master thesis that analyses boat commuters' preferences on the ferry line that stops at Kvarnholmen. The thesis includes all stations along the line and gives relevant information of the group of users.

General statistics of Nacka

The municipality of Nacka has a population of just over 100 000. Almost a third of the population inhabit the island of Sickla, which is located closest to central Stockholm and connected to Kvarnholmen. The municipality is one of the fastest growing municipalities in the county and country with an average population age just under the national average, indicating its popularity amongst families with young children. (Nacka kommun 2017)

The new housing in the municipality consist mainly of apartments, 57 %, but also a relatively large amount of houses, 37 %. Only a third of the new apartments are rentals, indicating that two thirds are possibly condominiums. (Nacka kommun 2017)

Statistics from the population in the ages 25-64 years show that the percentage having a tertiary education reaches 49 % in Nacka, in comparison to 45 % in the county, showing a slightly higher population of educated inhabitants. The average yearly income in the ages 20-64 years also show higher numbers, approximately 17 % more than the county average. (Nacka kommun 2017)

Summary of the master thesis

"Analys av pendelbåtsresenärers preferenser i Stockholmsområdet, från ett passagerarperspektiv". Translated; "Analysis of boat commute travelers preferences in the Stockholm area, from a passenger perspective". By Anton van Berlekom (2014).

In 2014, master student Anton van Berlekom wrote his thesis at "The Royal Institute of Technology, School of Architecture and the Built Environment, Transport Science, Traffic and Logistics". He conducted a study measuring the experience of passengers on the commuting ferry line "SjöVägen" in Stockholm. In his work he uses a stated preference method to collect data on the passengers of the line travelling from Nacka strand to Nybroplan, a total of 160 collected responses. The factors van Berlekom chose to examine through the inquiry were: travel time, seating, tables, services and bike allowance. In conclusion, his results show that the travel time, seating possibilities and services on board were significant factors in the boat commute experience.

Extracted information relevant to the project

The study showed that there was an equal distribution of the genders, 51 % women and 49 % men that used the ferry line; therefore it was not preferred by a specific gender. Statistics concerning the age of the passengers show that the largest group travelling were of the ages 50 years and higher, just over half of the passenger number. The age group 0-19 were meanwhile underrepresented and make for only a few percent of the travellers. (van Berlekom 2014)

93 % of the travellers in the study walked to the dock to commence their boat commute. 4 % biked and 3 % travelled by either buss or car to reach the station. The analysis showed no larger differences between the genders other than indications in the valuation, showing that the men tend to value seating on board higher and women value services (such as the café, toilets, Wi-Fi and power outlets) higher. The results showed that seating was of significant value for elder and that travellers from the stations further away from central Stockholm had a lower valuation of time in their travel (van Berlekom 2014).

Van Berlekom notes that the most common way of transport from Nacka to central Stockholm is by buss to Slussen and thereafter by metro. In the text he refers to a survey done by SL (Stockholm County Council) in December of 2012 where it was predicted that 20% of the travelers on SjöVägen previously commuted by car. (van Berlekom 2014)

Van Berlekom states that travelers travelling longer distances value time four times less than other passengers on the line. Travelling time seems to be valued differently on boats as it is not always the fastest way of transportation, but a study comparing the form of transport to others is necessary to draw any form of conclusion. The fact that boat commuting does have some form of other values concerning the experience of the travel is something brought up in the thesis and also brought up in prognoses for traffic planning developed by the County Council. (van Berlekom 2014)



Image 13. Sjövägen 2013. Source: <http://www.sjovagen.nu/web/page.aspx?refid=2> (2018-01-25)

Map showing the route of the ferryline "Sjövägen".

Study of reference projects

The designer draws from his/her knowledge, references and perspectives. To enable greater width and complexity in the design process designers continuously expand their repertoire, their library of reference projects (Lawson 1980). The purpose of studying reference projects in this case was also to achieve a deeper understanding of contemporary challenges and how landscape architects have met these through designs. Thus, in this thesis three projects in relation to the shoreline in Stockholm have been chosen to study, broadening my personal repertoire and the depth of the design process related to the space in Kvarnholmen.

Slussen – representing the engineering
Large scale and functionally steered
Landscape: terrain difference, urban, public

Strömkajen – representing the social science
Varied scale and historically steered
Landscape: flat, urban, public

Vassparken & Observatorium – representing the artistry
Small scale and recreationally steered
Landscape: varying terrain, urban, semi-public

The words only imply focus areas expressed as guidance in the study; doubtlessly the design takes all aspects into consideration in each case.



Image 14.

The image shows the locations of the reference projects in relation to the site.



Image 15. Jan Ainali 2012. CC-BY-SA-3.0. Source: https://commons.wikimedia.org/wiki/File:Slussen_flygfoto.JPG (2018-01-25)

Image of Slussen from 2012, before the current constructions



Image 16. Robert England 2014. CC0. Source: <https://pixabay.com/sv/stockholm-grand-hotel-vid-vatten-1042893/> (2018-01-25)

Image of Stömkajen after completion. Photo taken in 2014



Image 17. Escuilo 2014. CC-BY-SA-3.0. Source: https://commons.wikimedia.org/wiki/File:Sickla_udde_flygfoto_2014-09-20.jpg (2018-01-25)

Image of Vassparken & Observatorium after completion in 2014

Slussen

Motivation

Slussen is a large project involving several smaller projects and spaces with a complexity that is rare. It has been chosen as one of the reference projects since it allows for questions and aspects on a large scale. By studying the project, I wish to gain knowledge in the shape of interdisciplinary perspectives.

In 2009 the internationally renowned architectural firm, Foster and Partners, together with Berg Arkitektkontor were appointed to design the masterplan for Slussen in central Stockholm (Foster and Partners 2009). The project area consists of the space between the islands of Gamla Stan and Södermalm as well as the meeting and regulation of the lake Mälaren and the Baltic Sea.

The case

The main reason for initiating the project was the lacking quality in infrastructure connected to the water and transportations in the city (Foster and Partners 2011). Throughout history, Slussen's main function has always been to regulate water levels in the lake Mälaren and create a link between the islands. Ever since its establishment in 1648, Slussen's continuous renovations with almost 100 year intervals have all been made on that basis (Falk 2017). However, for this 4th renovation and construction of the area, the city of Stockholm have taken the opportunity to develop this central space into a new and interesting destination in the city (Foster and Partners 2011). Foster and Partners express the wish to create a balance between pedestrians and vehicles while “enhancing the public realm with easier access to the waterfront” (2011).

The concept

On the projects website Foster and Partners write: “The concept for the project is to create a modern urban quarter at the heart of the Stockholm archipelago and a dynamic new civic destination” (2011). The masterplan is planned to provide pedestrian and bicycle routes, an accessible quayside and new public spaces, meanwhile transforming existing infrastructure to manage floods and water level regulations and meeting transport interchange (Foster and Partners 2011). The firm also states “The masterplan scale and grain consciously preserves the city's character at this historic location”.

The proposal

The central feature in the design is a new public space called “The Water Square”. It's a space arranged within the area of the floodgate and along the quaysides of the islands. The design suggests wider and longer public spaces along the waters and a below ground separation and isolation of the transport interchange, creating all pedestrian areas (Foster and Partners 2011). The Square on the southern part of the project area, Södermalms Torg, is integrated through a large terraced glass structure connected to the underground transportation hub. The surrounding grounds to The City Museum are extended over the transportation level, creating space around the historic Katarina elevator and connecting a new park to the waterside. The central location facing Gamla Stan and some of Stockholm's finest facades, make a magnet for great contemporary architecture, elements such as new roads and pedestrian bridges will however become feature elements, integrated in this new dynamic quarter (Foster and Partners 2011). The design proposes several terraces along the south quay, allowing for extensive views over Stockholm (Foster and Partners 2011).

Interpretation and reference aspects

The project is based on infrastructural renovation projects and problems. The design and the want to create a new public space is a dimension added to this, making for interesting design solutions.

The overall shapes and language of the design and meeting with the water is very traditional, it could be a result of functions or habits. The new urban landscape has few natural references. However the design has created more functions and values related to the main aspect and function of the space, which is the locking of the floodgate.

Any larger historical references or attempts of preservation are not visible in the design, even if the firm acknowledges that it's a historic site. However, the generous extension of the museum and new park, consequently highlighting the historic elevator, creates another new historic space in the urban context.

Even though the proposal suggests several new public spaces, the design mainly focuses on the southern parts of the project area. Studying the sun, which is an important aspect of designing in northern parts of the world, the northern quay make for great afternoon conditions, yet no more than a simple promenade has been designed. The vast open spaces along the northern seaside do not offer any goal points or variation in the experience of the space.



Image 18. Länsstyrelsen Stockholm 2012. Source: <http://www.lansstyrelsen.se/Stockholm/Sv/nyheter/2012/Pages/lansstyrelsen-handlagger-overklaganden-av-nya-slussen.aspx> (2018-01-25)

Strömkajen

Motivation

The space has been chosen as it is a historical place in central Stockholm. Strömkajen is one of the most visited docks in central Stockholm and was established in the 1800's (Sellberg 2017). The dock, and connecting area, were renovated and finished in 2013 as a result of its lacking standard (Sellberg 2017). From the project, I wish to gain knowledge of designing with consideration to historical and cultural aspects in Stockholm. The space is small and long, it houses functions such as stations for several popular ferries as well as creating a social meeting point. The space contains several scales in an urban context with relatively flat terrain. The project was also nominated for the prestigious Swedish landscape architectural award "Sienapriset" in 2016.

The case

The project is a result of the municipality of Stockholm's interest in renovating the space along the waterfront. The place had declined and was heavily used by cars and the municipality wanted to create spaces for recreation along the seaside in Stockholm. The mission was to dismantle the parking spaces as well as decrease the space given to cars and traffic on the dock, thus ensuring better conditions for pedestrians and visitors. The municipality wanted a space that increased the connectivity in the area, a space that increased the ability to promenade through the city, and add recreational aspects such as resting, to enjoy the waters and views. The challenge was to fit the amount of boats and ferries that needed to stop along the dock as well as all the technical functions and services the dock needed to possess for the ferries. This aspect was very important to consider as the ferries pay fees that constitute a large income to the company "Stockholms Hamnar", that manages the city's docks. (Sellberg 2017)

The concept

The main idea for the project was hence to create a large recreational space with less traffic, focusing on the pedestrian experience and the continuous operation of the ferry lines. The space was to consider its history, the buildings and facades on one side and the water and the boat traffic on the other. As the dock is placed in front of Grand Hotel and the National museum and looks over to the royal palace across the waters, it was important to maintain an open character. It was also a historical reference to keep the space open, as urban docks have historically always been free of vegetation and larger volumes as they've been places for loading and unloading goods. (Sellberg 2017)

The concept developed for the small service buildings along the space was "jewellery". The brass detailed small buildings were the only ornamentation of the space and were thought to appear as jewellery decorating the historical open space. (Sellberg 2017)

The proposal

To accommodate the new ideas for the public space, the dock was almost doubled in depth. As a result of the 100-year long perspective commonly used when developing docks and the want to increase its accessibility, the decision of extending the space was necessary. The proposal suggests several stops for ferries along the shoreline and some additional space for further development of the operations. Large parts of the space are made into large steps towards the water as a result of the differences in height but also to create optional seating along the space, in addition to conventional seating places. The open character is also a result of the space being oriented in several directions, one towards the water, two alongside the shore in both directions and the fourth towards the buildings of public character towards the city. The design suggests several large benches functioning both as seating but also as storage units allowing access to technical ameni-

ties and spaces in culverts constructed under the surface. (Sellberg 2017)

Interpretation and reference aspects

The design is simple, considerate of the historical aspects of the space and the large populations that use the space. It incorporates many occupations well hidden within smart functioning details.

The only aspect of the space that creates a new architectural dimension are the brass buildings. The "jewellery" as intended is the only obvious dimension when approaching the space. But perhaps the innovation rests in that all the modern amenities and functions have successfully been hidden within the simple expression of a 19th century dock.

The space handles several scales from the surroundings very simply, through splitting the room by the usage of different granite stone materials and slight terrain differences. The addition of the buildings also creates some activity and scale in the space during the few moments a day the public is absent. I personally believe that more could have been done considering seating and resting opportunities, a strength is it not being vastly programmed, but some places within the space could have been more enhanced. Only small areas allow the visitors to rest and experience the views the space holds. According to the landscape architect, the traditions and cultural directives steered the project heavily (Sellberg 2017).

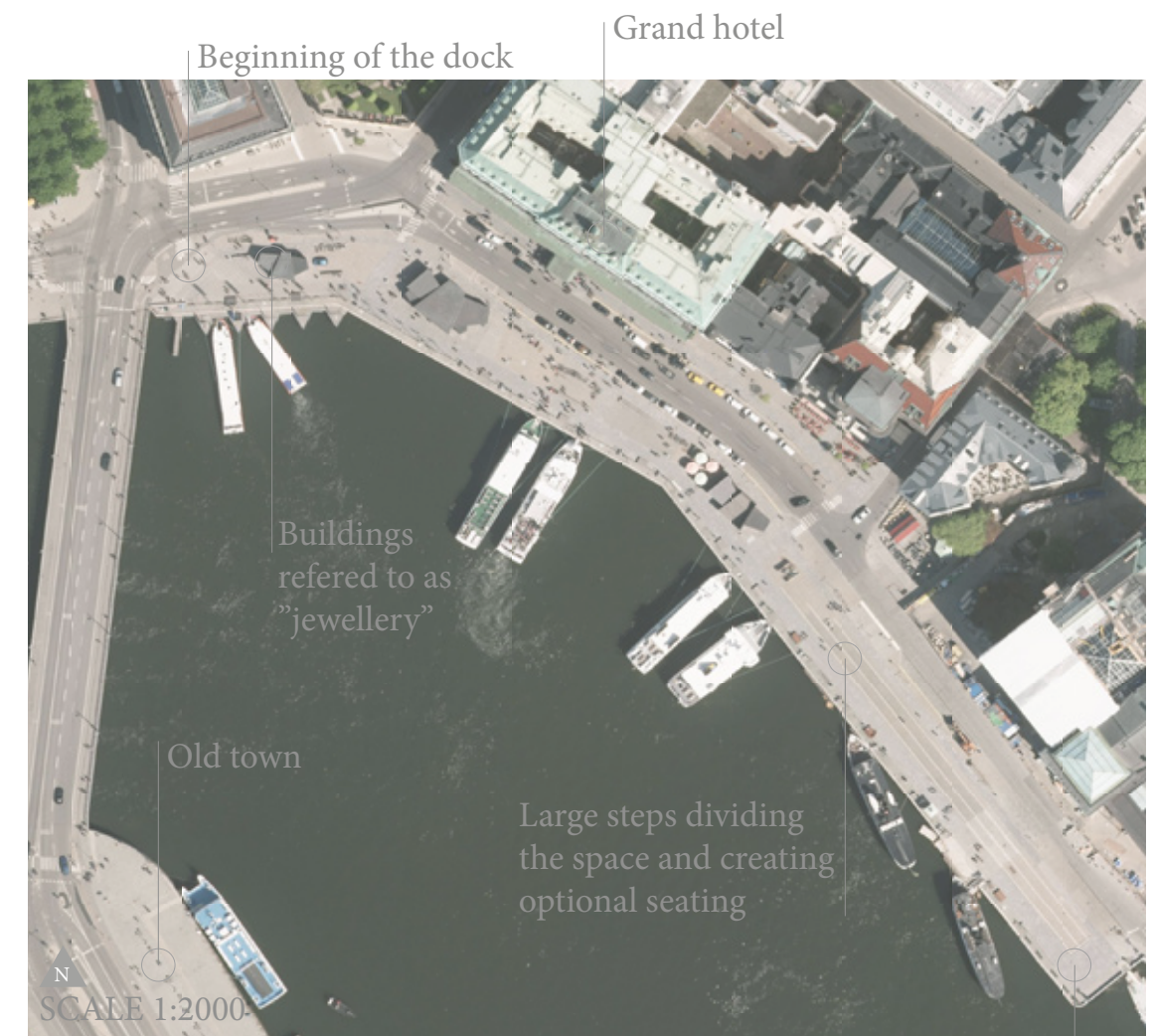


Image 19. Stockholms Stad 2015. Source: http://kartor.stockholm.se/bios/dpwebmap/cust_sth/sbk/sthlm_sse/DPWebMap.html (2018-02-07)

Image of Strömkajen after being rebuilt.

End of the dock

Vassparken & Observatorium

Motivation

The park and recreational space is located in an area that underwent major urban development in Stockholm (Sellberg 2017). The project is located in a large residential area that's still being developed with new built apartment blocks, new streets, new docks and public spaces along the waters. The site is in direct proximity to residents in the area and makes for interesting aspects from their perspective. By studying the project I want to understand how I, as a designer, can approach a place and use design to incorporate solutions and artistic additions. The space has a different scale in relation to "Slussen" and "Strömkajen" and functions more like a semi-public private space for people in the area. The "Observatorium" that's located next to the park is an element produced by an artist, also making the project interesting to study. The project was awarded "Sienapriset" in landscape architecture in 2006.

The case

The space needed to accommodate the area in creating a recreational place along the shore. However, when the project began in the mid-90's the industry began to consider the tide and dealing with the changing waters differently in designing. It became a mission in the project to allow for larger differences in water levels without affecting the space negatively. Another aspect of the assignment was the nearness of the public space to the private. The surrounding residential buildings facing the space needed to maintain their privacy meanwhile enabling an interesting space for the public. (Sellberg 2017)

The concept

The reed became the foundation for the proposal. The design considered the natural elements in the environment, using some of the vegetation available and strengthening its character, as well as using the dynamic aspects of the water and the ever-changing shoreline. The idea to create a recreational space within the reed came from the simplicity and function of the vegetation. (Sellberg 2017)

The proposal

By increasing the already existing features in the space the proposal emphasizes the dramatic experience of the shoreline. The almost field-like impression of the intense reed adds to the experience of nature in the newly built area. The reed also imitates and flirts with visitors in the environment as they exaggerate the presence of the sea through the participants' associations. The piers and bridges allow visitors to walk through the reed and experience it up close. The design of the walkways and the vegetation allow the water levels to change without changing the space.

Observatorium was a piece developed by artist Gunilla Bandolin and was not made in relation to the connecting park. The design of the artistic addition collaborates with the design of the park, both in idea and execution. The pier and the space enhance the presence of water and the visitor as an observer in the landscape.

Interpretation and reference aspects

The space responds beautifully to the problems of function and conventional spaces along the shorelines. The clever usage of the obstacles posed by the water levels as well as questions of the public and privacy discreetly hidden within the design of a seemingly simple and natural space make for a great design. The proposals greatest beauty lies perhaps not in what is visible to the visitor but in what is not. It is rather what the visitor feels, hears, experiences and doesn't experience.

The fact that an artist created a piece that could be interpreted as landscape architecture and that relates to the park is perhaps a lucky coincidence. Nonetheless, the result is a varying space, enhancing the experience of man in nature within an urban context. The

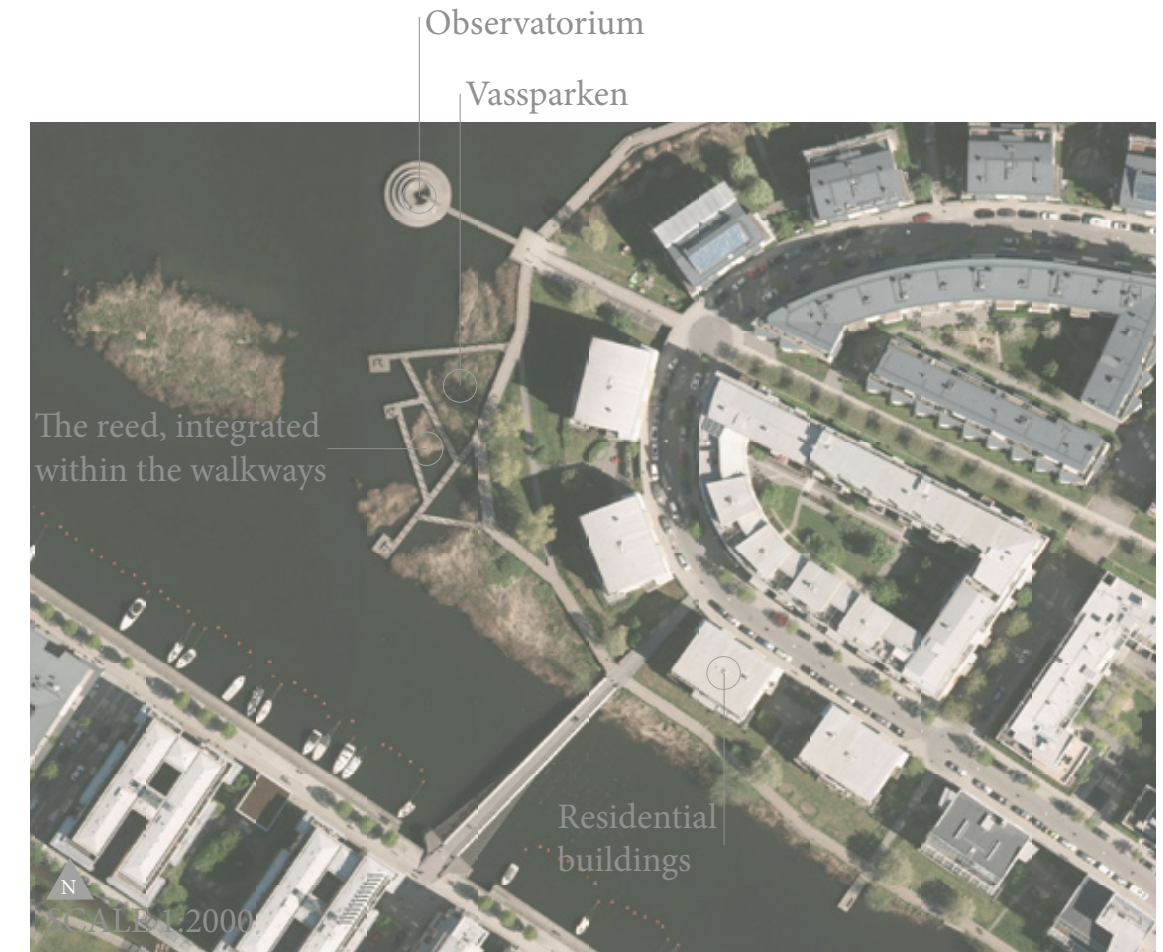


Image 20. Stockholms Stad 2015. Source: http://kartor.stockholm.se/bios/dpwebmap/cust_sth/sbk/sthlm_sse/DPWebMap.html (2018-02-07)

Image of Vassparken & Observatorium some years after construction.



Image 21. Bengt Oberger 2011. CC-BY-SA-3.0. Source: https://commons.wikimedia.org/wiki/File:Gunilla_Bandolin_Observatorium_08.JPG (2018-01-25)

Image of Observatorium seen from the park

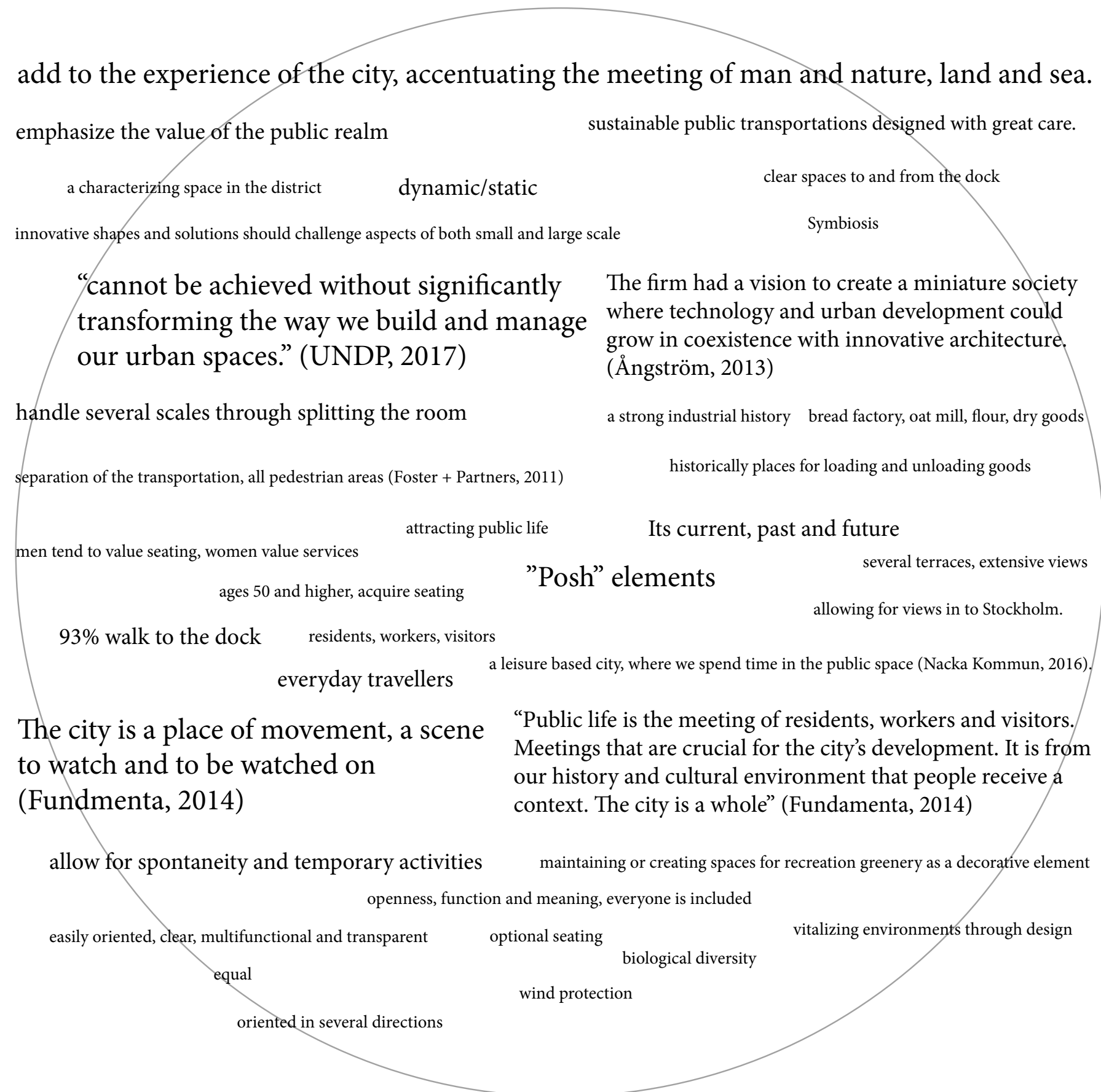


Figure 3.

The figure illustrates a process of working with texts concerning the site thus limiting the project to certain aspects.

Inventory

The area

The site is located on the peninsula of Kvarnholmen in the northern region of the municipality of Nacka. The place is near both central Stockholm and Nacka, 3,5 km from central Stockholm and 1 km from Nacka Centrum. Different real-estate developers today mutually own the entire island and the project for developing the island is led by a project office called “Kvarnholmen Utveckling AB” (Hjalmarsson 2017).

Historical values

The place is of national interest as it creates an image of the city of Stockholm and the archipelago when entering from the sea. The space's visibility in the landscape requires consideration of the surrounding as well as its history. The northern dock of Kvarnholmen is a great part of Stockholm's industrial history and development since the 1800's. However the island's history reaches back to the 1500's and should be valued as a historical site in Stockholm. (Nacka kommun 2005)

The industrial buildings along the northern side of Kvarnholmen are of great value to the space as they create the historical image of the island. Above the site, the building “The Harmonica” is of great value as it was once the office of KF and is a part of the architectural functionalism developed at Kvarnholmen. The building must not be covered and must be allowed space in views of the island (Nacka kommun 2005). The old buildings in relation to the unique landscape create the settings for a valuable place in the municipality of Nacka.

The landscape

The space is greatly affected by its large scale dramatic landscape features, the steep rock, terrain differences, the water and its vegetation typical for the eastern Swedish archipelago. Its greatly characterized by the height of the mountain, the extensive wind conditions and the sea.

The site itself has very limited vegetation, almost none. However the entire northern shoreline of the island does have some deciduous mixed with some conifers sporadically creating small groves of vegetation.

The site is heavily shadowed as it is placed on the north side of the island, next to a large cut rock with buildings above and behind. The scale of the space is large as a large steep mountain, the sky and the sea set the physical boundaries. The space's relation to the archipelago is made clear by its extensive views towards central Stockholm and the national park and island of “Djurgården” on the opposite side.

Geology

Much like great parts of central Stockholm and the areas along the inlet, the area has a rock foundation of granite with a thin layer of clay (SGU 2018). Since it's a post-industrial space the terrain has probably been changed and soils might have been added to the space.

The location of the dock is a result of the dramatic landscape; the depth of the inlet in close relation to the shoreline allows for larger boats to pass and has thus been suited for boat transportations.

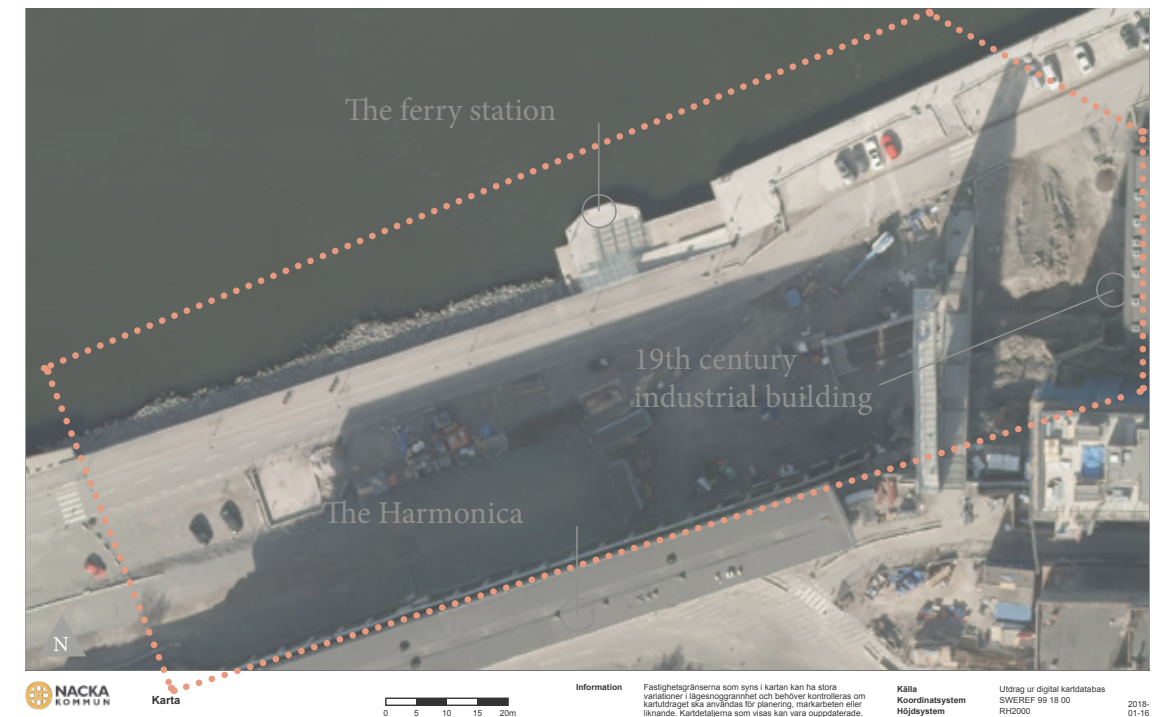


Image 22. Nacka kommun. Source: <https://webbkarta.nacka.se/> (2018-01-16)

Image of the site showing the historical buildings and the urban landscape



Image 23. (2017-10-11)

Photo showing the height of the space and the heavy shadow.



image 24. (2017-10-11)

Photo taken from the ferry, showing how visible the site is

Climate

The entire site is heavily shadowed because of the steep mountain and its northern direction, only allowing for some sun during the days early hours. (Hjalmarsson 2017)
The area, like other seaside areas, has a cushioned climate with fewer daily and yearly variations than inland places. The aerodynamic conditions however exceed what's considered normal in the region, making it exposed to winds. (Nacka kommun 2015)

The sea level in the area is believed to decrease with 0.2 cm annually till year 2050, as a result of a higher increase in land rise. According to Stockholms Hamnar, after 2050 the sea level will increase. The sea level can however have great variations over shorter periods of time, approximately up to 1 m over 24 hours. (Granqvist 2017)

Traffic

The space has one road that allows for cars to access the northern parts of the peninsula. The road allows access to residents along the entire northern shore, as well as visitors. Today the space is used as a large parking space for visitors. There are no busses or any type of public transportation on the road, and the road is not heavily used, it mainly functions as a place of access and is necessary as such (Hjalmarsson 2017).

The public transportations in the area are the bus stop that's located on a parallel street behind the harmonica, above the dock, accessed through the large stairs or elevator on the eastern part of the space. The main form of transportation is otherwise the ferry station located on the north-eastern end of the space.

Connecting spaces

Even though the island of Djurgården is separated from the area by the water it's connected through its visual proximity. Whilst the dock at Kvarnholmen is wrapped in shadow, the sun covers the grounds of Djurgården. The sea also poses an interesting space, visibly available from the dock but physically separated.

East of the space the dock and promenade continues and connects to a varied path going around the island's shoreline. The eastern dock is equally shadowed and hosts large open spaces with extensive views. The eastern side also offers a mezzanine level of parks and yards passing behind the residential and historical buildings, connecting to the space beneath the Harmonica. West of the project area, several residential buildings are to be developed. Four large residential buildings partially clad in tiles, aesthetically referring to the islands industrial character reach a maximum height of 10 levels. (Hjalmarsson 2017)

Current plans

Before the start of the developments in the area approximately 200 people lived on the peninsula. The current plans are to add 3500 apartments, as well as making new places for work and services, estimated to attract another 1000 people, making the total population to around 7000. (KUAB 2017)

The old bay that was filled during the 70's, will partially be restored. The current plans suggest a new canal be dug, recreating the island and again connecting it with a bridge. Several of the old buildings are to be restored and used for new purposes. The mills and factory buildings along the entire northern dock have been rebuilt to apartments. The oat mill and silos will be restored and used for cultural occupations and offices, and the harmonica will also be used for commercial businesses, such as offices, restaurants and an exhibition hall. Today the building is being used as an office for Kvarnholmen Utveckling AB. (KUAB 2017)

The chosen area for the thesis is planned for some sort of building hosting cultural activities, in what form is not yet known. The reason for placing a building there is due to the heavy shade and wind, but also a solution to adding underground parking which is much needed in the area. According to Anna Hjalmarsson at KUAB, the office had intentions to build and establish a Michelin restaurant at the eastern part of the site as an attracting point in Kvarnholmen. The idea of a restaurant is still greatly considered as a finer public place on the island. (Hjalmarsson 2017)

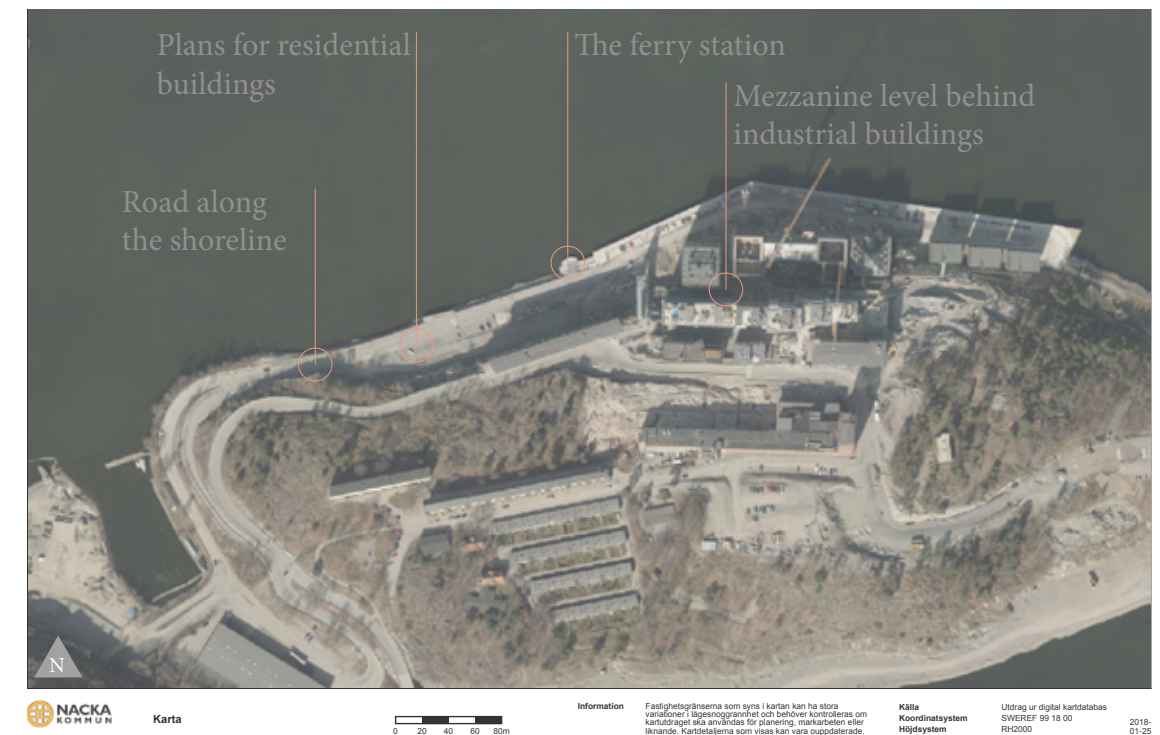


Image 25. Nacka kommun. Source: <https://webbkarta.nacka.se/> (2018-01-25)

Image of Kvarnholmen before the current constructions.



Image 26. (2017-10-11)

Photo showing the view of Djurgården from the site

Analysis

The analysis is conducted by stating the experienced strengths and weaknesses on the site. By analyzing the space in this manner, I wish to extract its values and unique features, setting the prerequisite for design solutions. The lists of the experienced strengths and weaknesses are a result of the inventory of the space as well as several site visits where I personally noted my experience of the physical space.

Experienced strengths

- Large scale (Grand)
- High ceilings in the experienced room
- Views
- Flexible, manmade setting
- Unique urban environment
- Public transportation from the sea
- Shadow, potential summertime
- Several directions

Experienced weaknesses

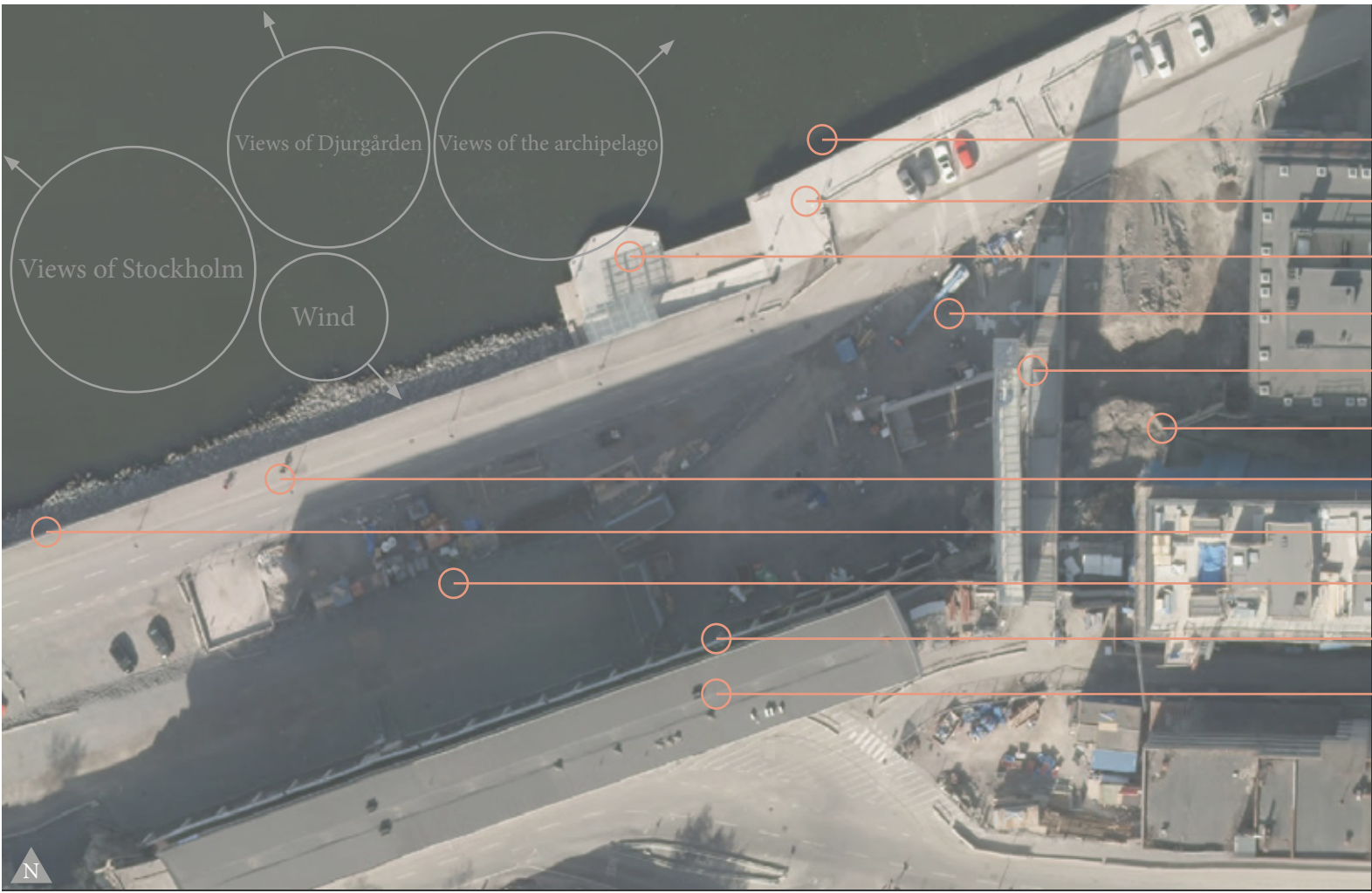
- Large scale (Empty)
- Dark/Shadowed
- Cold
- Windy
- Hard static features
- Abandoned - little public activity
- Lack of terrain within the space
- The road along the shoreline and the direction it imposes on the space

When valuing the space’s different characters and features many of the aspects overlapped in both categories. The subjective quality of the features makes for interesting design tasks. In assembling the key features, the heavy shadow that covers the space contributes to characterizing the space deeply and makes for an interesting aspect to explore. The subject of “the shade” appears greatly interesting in this specific project since it’s located in Scandinavia, a region in the upper northern part of the hemisphere where sunlight differs largely in seasons, making the sunlight of great value during the winter.

The palpable connection to the water in itself creates interesting discussions of where the sea meets the land. The static frontier that the city fashions in the meeting with the natural and dynamic element of the sea and the possibilities it poses for urban life, sets a foundation for the design of this space.

Another aspect that demands attention is the wind. The severe aerodynamic conditions create a space we typically might not prefer to spend larger periods of time in. However, the experience of the wind differs largely depending on season and temperature.

The views enabled by the landscape, the sea and the inlet in the archipelago form an interesting space of value in the urban cityscape. The space offers grand views in every direction from the peninsula, making it multi-oriented with boundless design possibilities.



Plan image of the site showing a simple analysis

- Visual access to the water
- Connecting dock slightly extended
- Exposed station, no shelter from the elements
- Heavy shadow covering the majority of the site
- Elevator and staircase enable easy access to the space
- Higher level of parks
- Combined pedestrian/bicycle lane along road
- Fence, creating distance from the water
- Large space open space mainly used for parking
- High wall, building on top of cut mountain
- The Harmonica, visual dominance

Playing with words

This is done as a part in the design process allowing for actual matters, possibilities and restraints to be developed by using the space's natural features as experienced by me. The exploration through words helps me as a designer to see beyond the spaces physical boundaries, but also functions as a tool in counteracting my personal limitations and patterns of thinking by displaying them, thus enabling a more elaborate design process.

To design we need to challenge, question, combine, extract, interrelate and see subjects. We constantly have to try to solve problems, through different ways. In our role as designers we do not have systematically processed methods for developing solutions, those are the roles of scientists and engineers (Lawson 1980). Our process and motives are hence what gives us different results than those of a scientist. In design, we explore, examine, evaluate in irregular ways as the task we start off with continuously changes along the process.

The features significant for the space that are explored through words are:

The wind

The views

The water

The meeting of land and sea

The shade

The ferry station

The exploration and improvisation:

What we see

Islands. Islands of buildings. Islands of trees. Separated. Connected.

It depends on perspective. The mighty sea, can you see it? I only see the surface. Can I then really say I see it? That's what we all see.

So it's the image of the sea we see? Whose image?

Does whatever is beyond the surface see us? I only see myself.

The shore

Interactions. Constant.

When hitting the shores.

When hitting each other.

Waves.

Direction. Directions.

Constant. Constantly changing.

They, it, create the robust contrast of the land.

The mighty sea

Isolation. Fear.

I can't walk, I can't cross it, that and the sky. Yet I do, I do, don't I.

Where is the limit if not where we can't go? Can't. Can. We go there.

How do we see it?

Blue. Big. Scary. Infinite. Moving. Nature. Complete. Grand. Life. Unknown. Disconnected yet connected physically and emotionally. Trust, it needs to be trusted. Why even question it? We don't question the land? Is it because we can't explore it? But we do. Not the public though. Does the unknown frighten us?

My friend

I can hear it. I see it just as well when I close my eyes. The image. The image of the sea. And I feel it. The wind travels on it. It gathers force, as if they are friends, before it hits me as if to wake me, remind me that I'm one of them. I'm a part of nature. I too have unknown powers. But not like them. They are powerful. I must bow. But just as the wind and the sea are friends perhaps I could be too? Friends with the sea? If I accept that the sea is greater than me. That I must accept the current conditions. The nature of the sea. Then I don't have to be afraid of it, I understand its power, greatness, character and terms. I may cooperate with the sea, but on its terms.

The land and the sea

How does nature allow entrance to the sea? Islands. Islands let us use the surface. No. Its not the sea, islands are land. They don't penetrate the surface. They are separate. Is there anything connecting them? Are we as participants in the landscape what's connecting them? Perhaps. In fact, the land is weaker than the sea. The sea covers the land. It lays on the mountains we can't see. So its supported by the land? The land must then be the foundation, the source, the solid ground of our existence? Perhaps. If I knew I wouldn't be here.

Are they maybe friends then? Like the wind and sea? Perhaps. Just because they might be friends it doesn't mean we are. The sea can hurt us. The sea can hurt us in ways the land cant. Or if the land can that's different.

The land is our territory, we know it, the sea isn't ours, its not our realm. It belongs to someone else. But we use and explore it just as we do the land. What's the difference? Conditions. I don't understand its conditions, its nature, not in the same way.

Sea vs. Land

It's not solid.

I can't experience it like I can the land.

I'm never in it unless I'm exposed to it.

I don't have to be exposed to the land.

It's always flat.

Usually vast.

End. It's the end of land. (does it have a beginning?)

Swedish sea. Differs like the landscape in different regions.

Cold. Dark.

It can freeze. Wintertime. Then its solid.

I don't trust the ice.

Windy, the great lady

The sea is a stage. Empty. No. It's the stage for the wind. Our landscape doesn't allow much place for the wind, we have few dry lands and cities are covering our fields. And our fields have a productive purpose that can be turned to capital. But they are safe for now, the sea is too. We can never take the sea. It takes us. It captures us. With help from the wind. Its friend. Our friend. Windy. Putting on a spectacle on her stage.

Throwing shade

Every morning you appear, every night you disappear. You are just as present as the sun, yet I don't value your presence. The sun gives life, it gives me joy, it's good for me, it gives me warmth and energy. What do you present me with? The absence of sun? Perhaps not, that is the role of the darkness and the moon. But what is your purpose? Or do you not have one? Are you just a menace, an evil force taking sunlight from me? Maybe I'm being harsh, maybe your shy? Why do you hide from the sun?

50 shades

You are the grey scale to the black and white presented to the earth by the sun. I understand, you create spaces where the sun might not be directly present but rather indirectly. You create complexity in our environments, by doing so you also enable life, a variety of lives. You shelter, nurture, prolong and value time differently. You set other rules and conditions for life, settings that for some are better, you're the underdog hero nobody appreciates.

Shadowed

I walk away from you, constantly, I go towards the sun, away from you. During the day that is. At night, I don't notice you, you still exist but the nuances are fewer. Why is that? Or is it even so? Hot summer days I search for you, then I even create you. Maybe that's my problem, I want you on my conditions. Ironically you follow me wherever I go, you are the only one I can always count on during the day. Why can't I then appreciate you? The abundance of your presence in relation to the northern climate, the ways of urban life have perhaps blinded me to your values.

Its not you, its everyone else

Never have I met somebody as misunderstood as you. Nobody ever talks about you. Not here at least. The few times your mentioned the conversation isn't actually about you, it's about everything around you. The absence of sun, the cold, the lack of human activity, the access of water and humidity, but none of these are actually your characters, they are a result of the conditions you enable.

The sun and the shade

Do you even exist or are you just the anti-space to the sun's existence? If you exist does this make you a parasite? Or do you have a deal with the sun? Are you living in symbiosis?

The completion of a room

How do we experience the coming and going of something as large as a ferry or boat? Just look at other means of transportation. The platforms. When the trains aren't present the room consists of a roof and pillars attached to the long and plain platform. Based on the surroundings the visitor meanwhile might have views of the surroundings. It might even be a calm and pleasant experience.

Just upon the arrival of a train the sound levels take over, as well as the air tunnel effect. When the train stops a large number of people either get on or off. Nonetheless the room receives its lost walls. The room is complete.

The same goes for the bus stop. Its oriented towards the bus, walls, three of them, one roof and one floor. The only thing missing is the one wall, which is made up of the buses doors. The tramway and its stops are the same.

The nature of the boat

To understand the space one needs to understand what the space is for and who uses it. In this case that's the boat. As opposed to trains, tramways and busses, the boat doesn't have a firm, absolute route. It might have stations and general routs but how it gets between stop one and two isn't as rigid as a road or railway.

At the same time the boat doesn't have the same comforts as to travel on roads or rails. The water is an element in constant movement, meeting of forces that oppose complications. Therefore the boat travels with a different awareness, a different need for robustness. That's perhaps why we also enter the ferry from the front. The sea is stronger than the ferry, therefore it has a constant force pushing towards the dock, maintaining a calm from which passengers can enter.

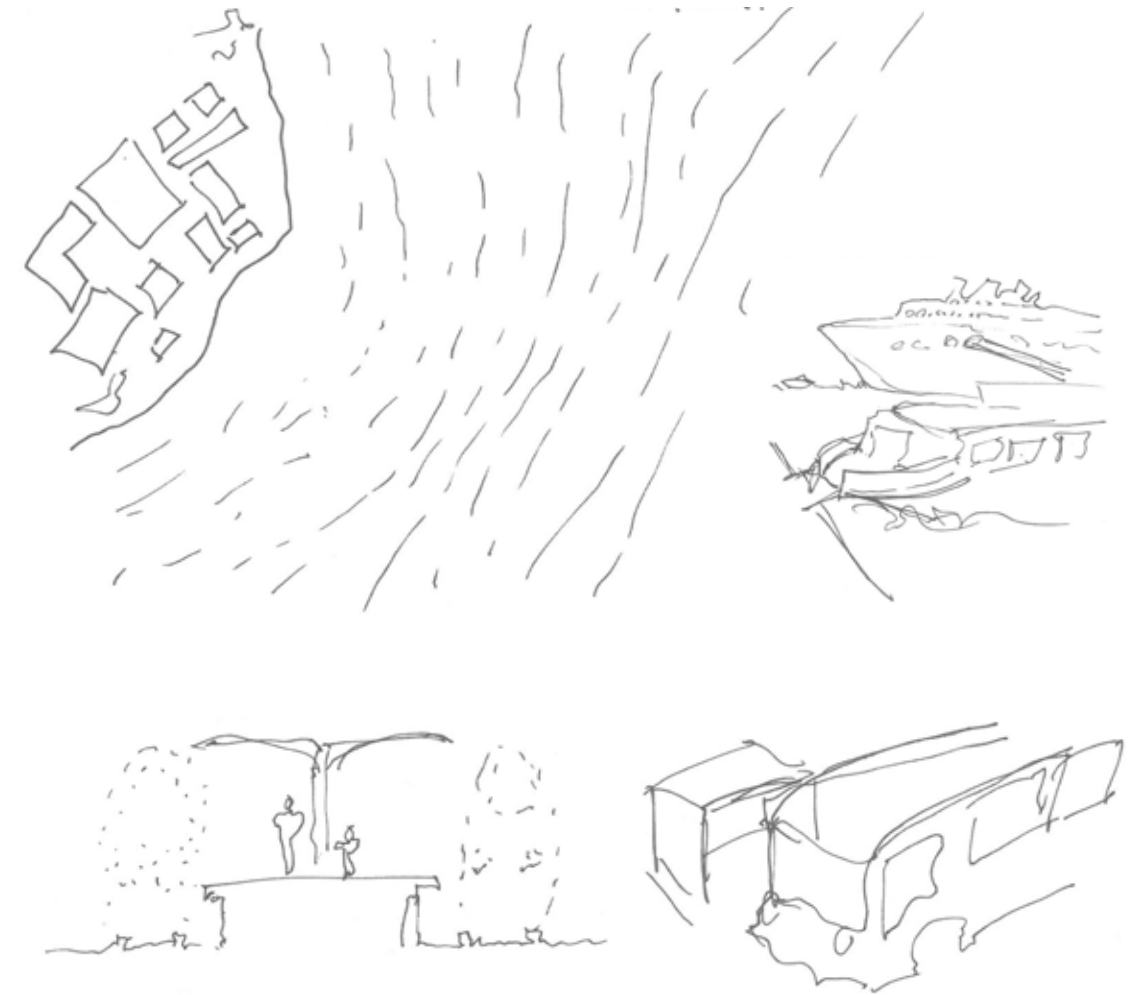


Image 28-31.

Sketches produced in relation to the exploration of the features

Designing the site

Introduction to the design

At first glance, the site's majestic natural settings, the height of the room, the shadow, the water, the views and the striking element of the wind communicate the places character. However, in retrospect, having studied not only the physical landscape but also its history, urban context and potential future role in Stockholm the exciting complexity and possibilities of the space are not lost upon me.

Summarizing the many aspects of the literature study, study of the reference projects, the inventory, the analysis and the play with words into a proposal might be the most difficult and subjective part of the design process. Extracting information, prioritizing aspects, creating a hierarchy of the dimensions creating the place and aesthetically communicating these are, in my opinion, perhaps the designer's biggest effort.

In my effort to achieve a holistic and elaborate design proposal I've developed a programme of general and applied design principles for what I wish to achieve.

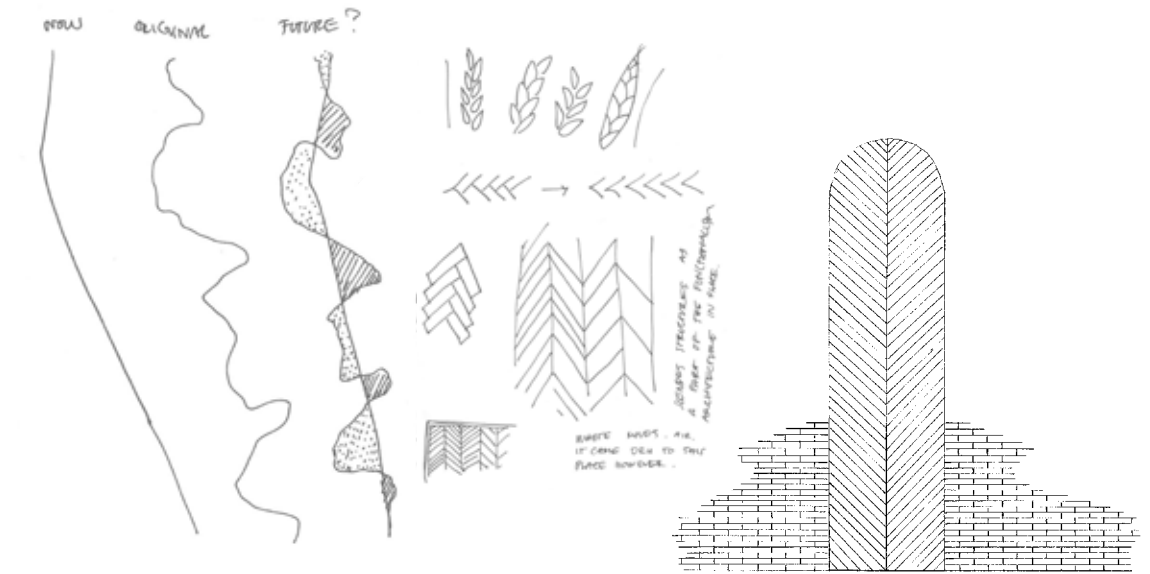


Image 32-34.

General design principles

Design a posh public space within Nacka, encouraging public life

Create a space that accentuates its features, emphasizing the natural elements as a complement to other urban spaces

Through an aesthetically considerate design create a unique space in Stockholm

Add to the experience of boat commuting, valuing spaces in relation to sustainable means of transportation

Communicate the history of the space, natural and industrial, to create and preserve dimensions in the urban environment

Create places for residents, workers and visitors of all ages. Consider KUABs want for a building housing cultural activities and a building for a Michelin restaurant.

Applied design principles

Use materials and elements that are valued and associated as classical and of high quality, in vegetation and construction

Incorporate the artistic addition in the landscape design to create an attractive space

Add design elements that are subordinate to the features of the place, letting the landscape and nature steer the design

Develop and use an idiom, a concept and a philosophy for design solutions, based on the site.

Create a comfortable and aesthetically pleasing ferry station, with shelter from the elements, enhancing its role as a sustainable mean of public transportation

Use symbolic historical references in the detailed design, materials, expression and usage of the space

Split the room into several spaces through scale and materials to create a diversity of spaces attracting different groups of people

Integrate buildings that are to be added by making them a part of the public space

Conceptual idea

To achieve a holistic design the concept of the proposal has been thoroughly developed and explained in different dimensions.

Recreating the mountain

The overall concept aims to recreate the complexity of the bedrock, natural terraces meeting the waterfront, blocks and shapes playing and diffusing the shadows. The mountain symbolises a foundation, on and in which places appear. To communicate the landscape's physical history and create a large-scale foundation for ideas concerning volumes, the wind and the shadow, I've chosen to recreate the hypothetical mountain and coastline in the archipelago that might have existed before the industrial era. The concept will be explained in two dimensions below, one addressing the large scale structural ideas and the other the small scale transparency.

Large scale structure

By using a large scale conceptual form of biomimicry I wish to create a series of spaces within the site that increase its complexity, much like a natural shoreline. The concept that carries the design proposal thus communicates the site's natural and industrial history but also explores the built environment in its meeting with the natural landscape. The large scale structure of the site strives to connect to the surroundings in volumes, adding and removing large volumes from the site to create a gradual approach of the static elements reaching the water. The idea is to divide the site into smaller spaces that cascade their way towards the shoreline.

Small scale transparency

The different rooms that the large scale structure implies creates the opportunity of variation on the site. The smaller spaces can thus, in the design, focus clearer on fewer aspects, aware that other spaces in close proximity function differently. Much like the idea of the natural mountain, with its groves, its bays, its hills, the different spaces encourage great variation.

Attempting to converse the valuable history of the space in relation to its future, considering its features and its possibilities, I believe it needs a degree of transparency in its smaller scale. Transparency in a sense that the space is easily read by visitors, that it is understood, its context today and through time. It seeks not only to recreate the volumes of the bedrock but also to increase associations to the water. By creating a moving, penetrable reflecting surface that invites the visitor, the concept allows for the experience of many different aspects in the site.

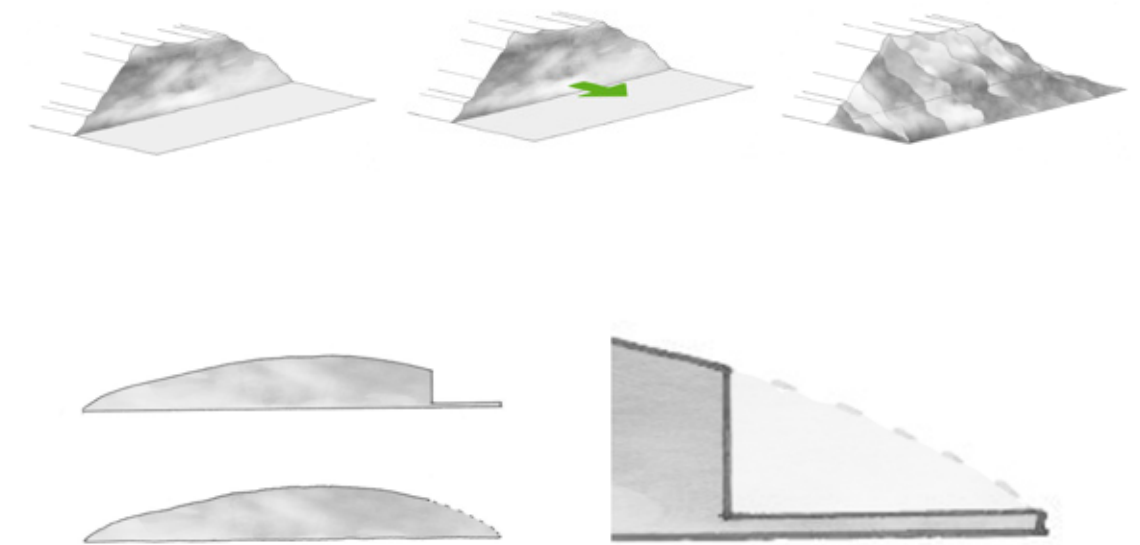
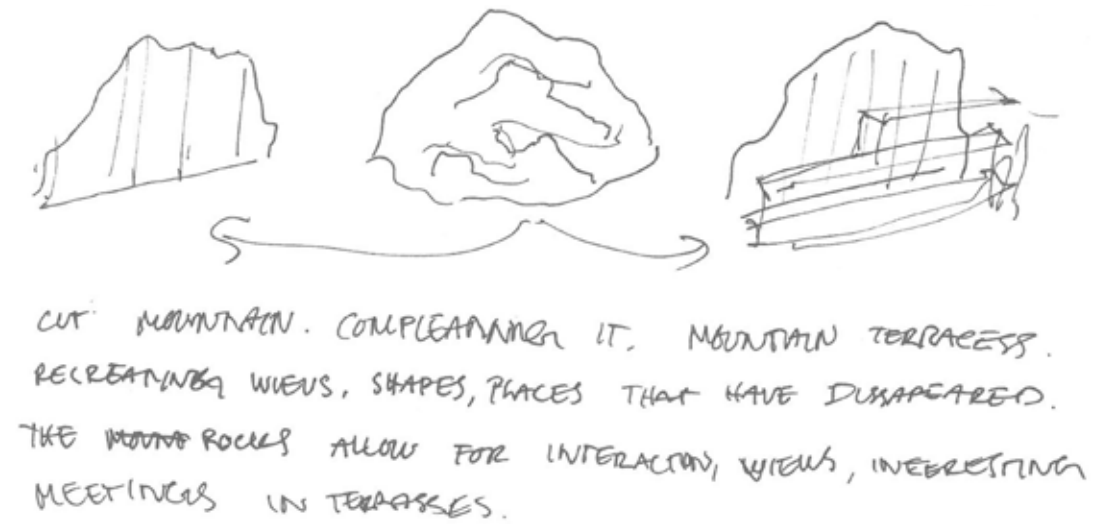


Image 35-37.

Sketches and images produced while developing the concept.

The design proposal

The design proposal is divided into two, one large scale description of the different spaces in the site, and one detailed design showing one of these spaces. The masterplan addresses the entire site, followed by a design proposal for the area surrounding the ferry station.

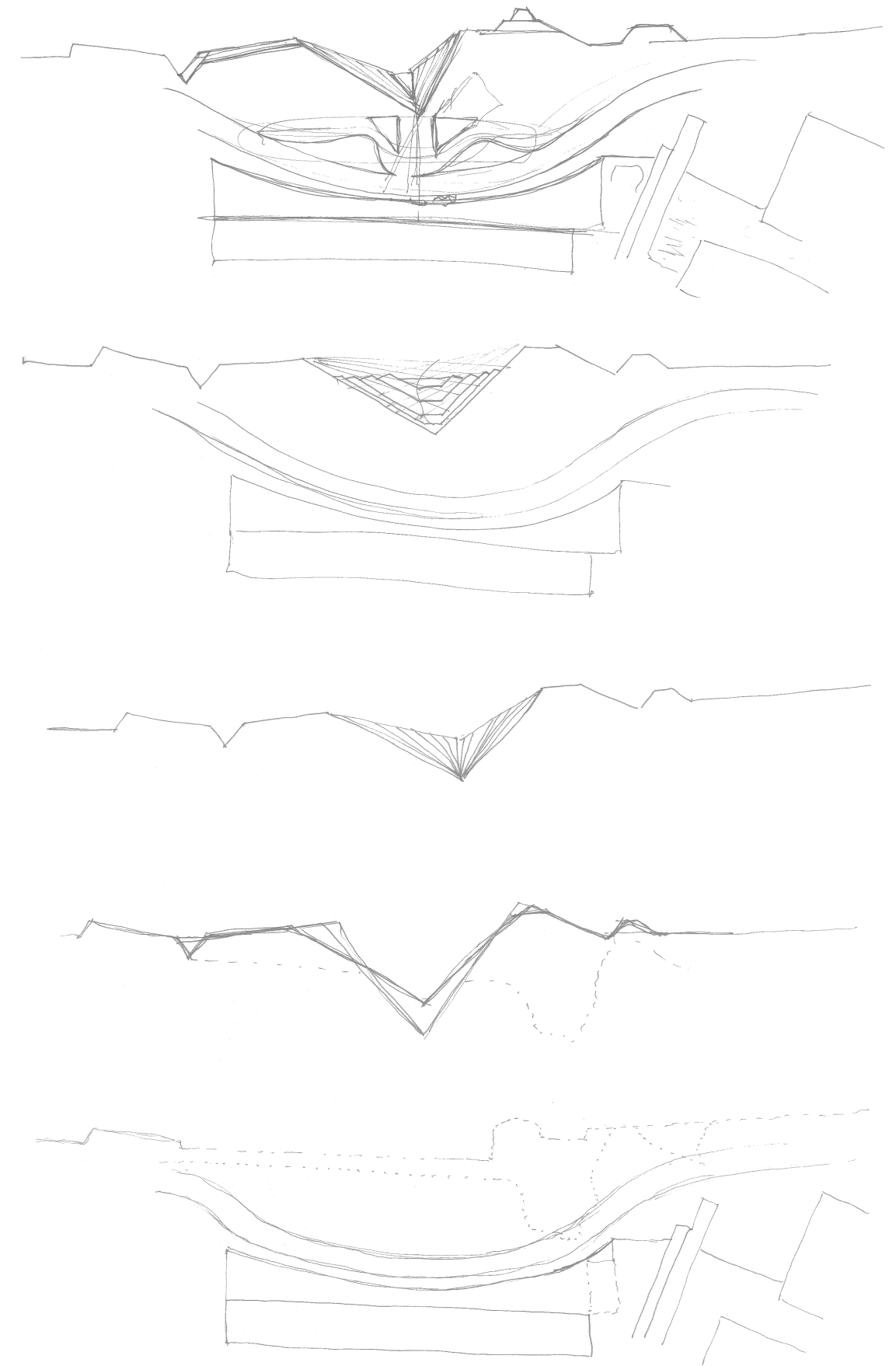


Image 38.

Sketches exploring the shoreline and the development of the site.

Overview

KVARNHOLMEN

- a design proposal for a masterplan and a ferry station

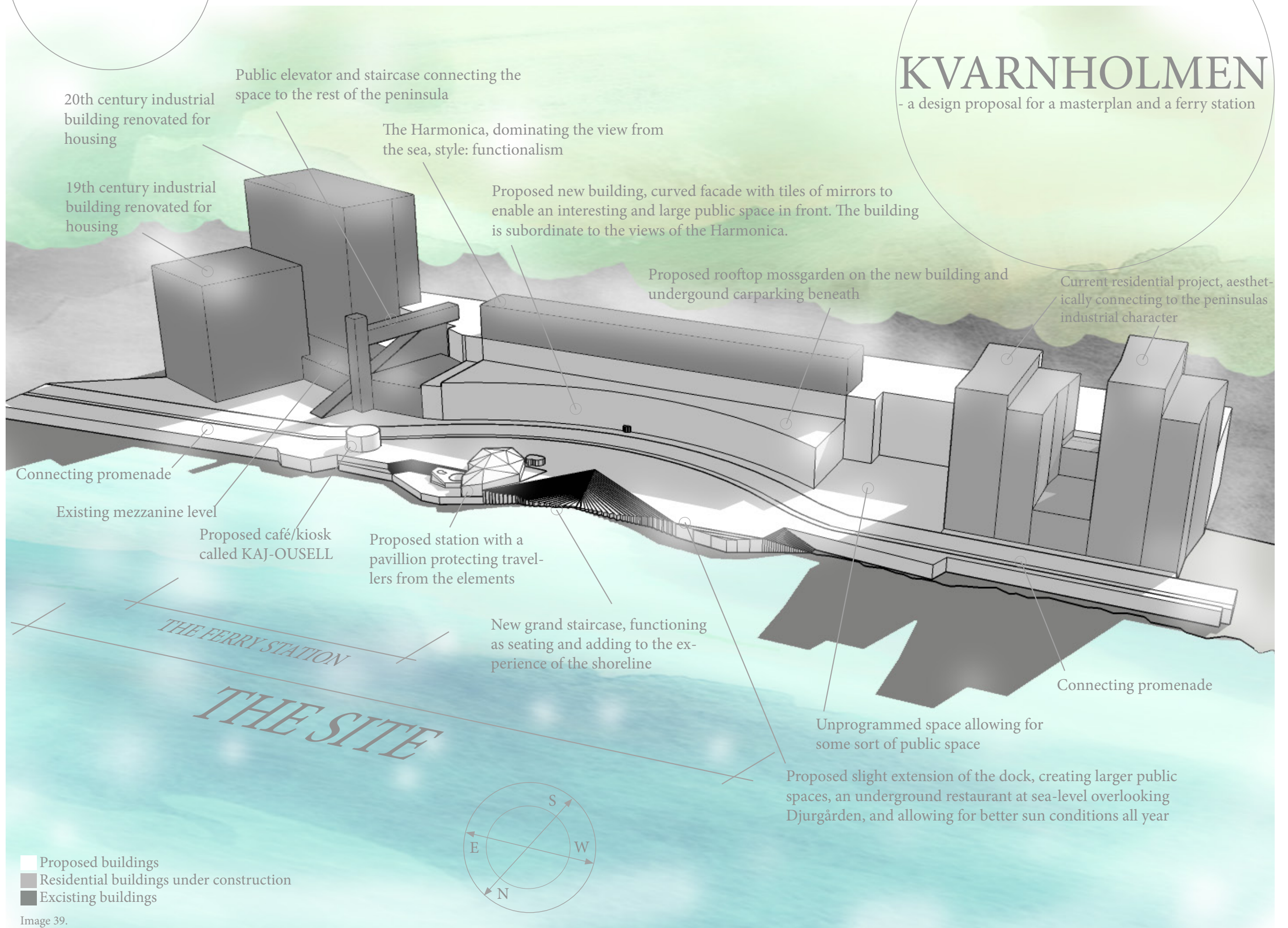


Image 39.

The masterplan



Image 40.

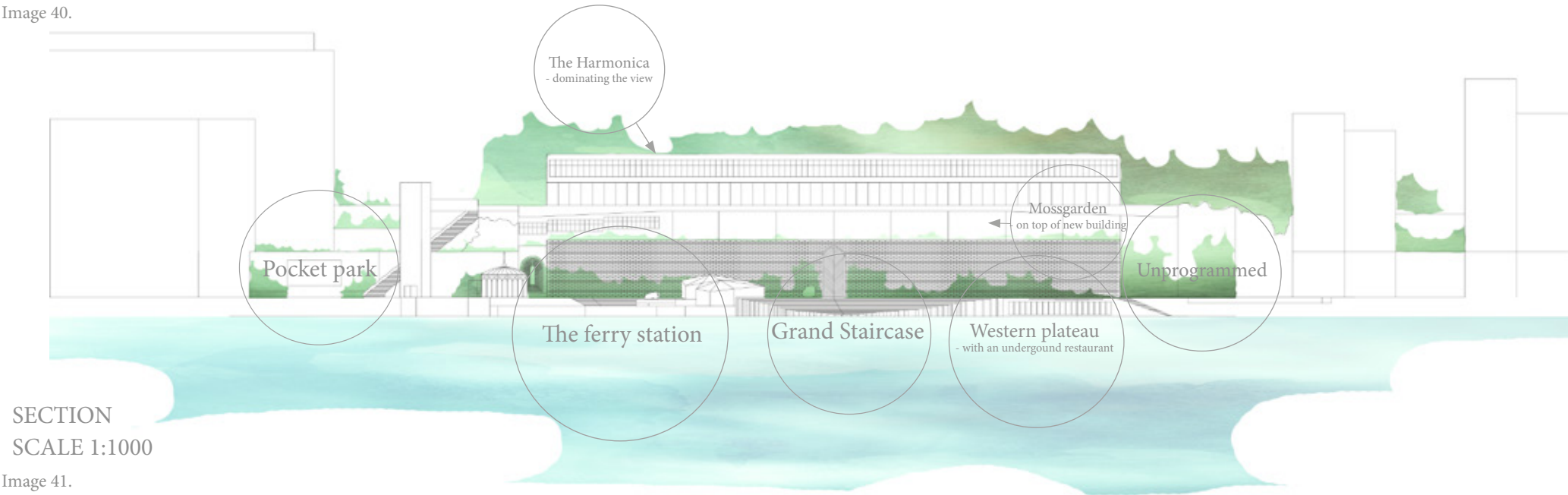


Image 41.

Following the concept of recreating the mountain, the site needs to be divided into smaller spaces, allowing for views, variation and complexity. The site has been divided into three terraces from the waterfront inwards to the peninsula, but also into three rooms stretching from east to west. The three terraces can be viewed as strokes of paint and the rooms as different nuances within them.

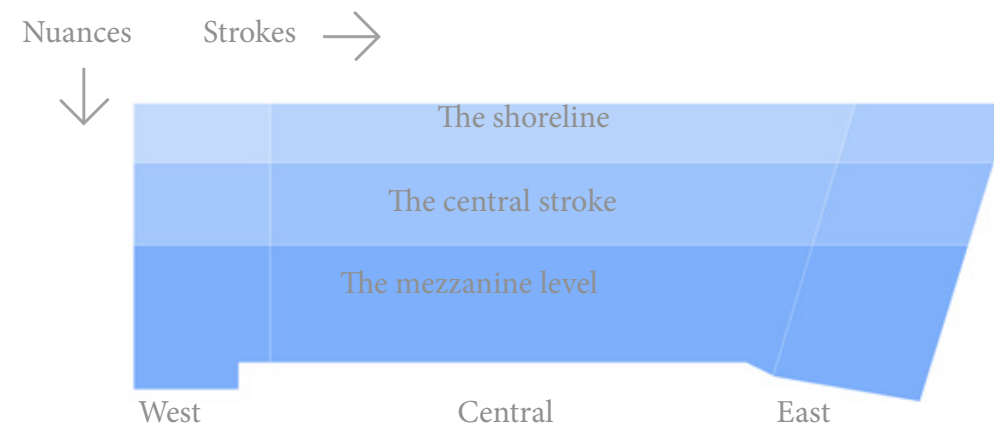


Figure 4.

The north-south direction

The reason for which the site has been divided into three is based on the mezzanine level existing in the eastern part of the site, allowing for a continuing park or recreational area at a height along the southern side. The space closest to the water is defined as the space with most beneficial sun conditions, allowing for resting and seating and low intense activities. The area also needs to handle the dynamic meeting of the water. The area in the middle caters to the functions of movement and traffic crossing the site and connects to the rest of the peninsula.

The east-west direction

The western part is divided into one space, a result of the gap between the Harmonica and the new 10-story apartment building, as well as the shoreline's views of central Stockholm. The eastern part has a clear three-walled room created by the barrier caused by the large stairs and elevator. The space also allows for views away from the city and along the inlet of the archipelago. The central space is partially a result of the dominant presence of the Harmonica, but also the direct orientation across the waters to the island and nature reserve of Djurgården.

The schematic division of 3 times 3 results in 9 spaces on the site. However one of the spaces is the current mezzanine level, which will not be altered, but rather connected to. In the western part, the central space that handles movement and traffic is limited to such an extent that it doesn't handle much more, making the design focusing on the remaining seven spaces.

Applying the schematic division onto the site, considering views, sense of room, physical boundaries and functions allows for this division.

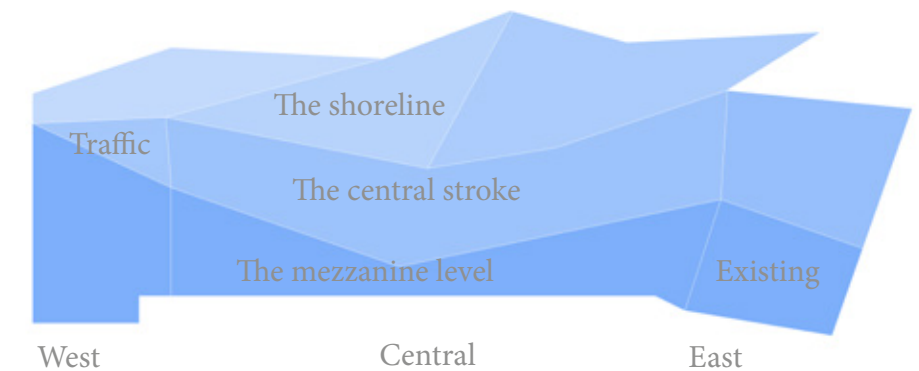


Figure 5.

The strokes and the nuances

Below the three main strokes of the site are explained: the shoreline, the central stroke and the mezzanine level. Then the nuances are described: the western, the central and the eastern part.

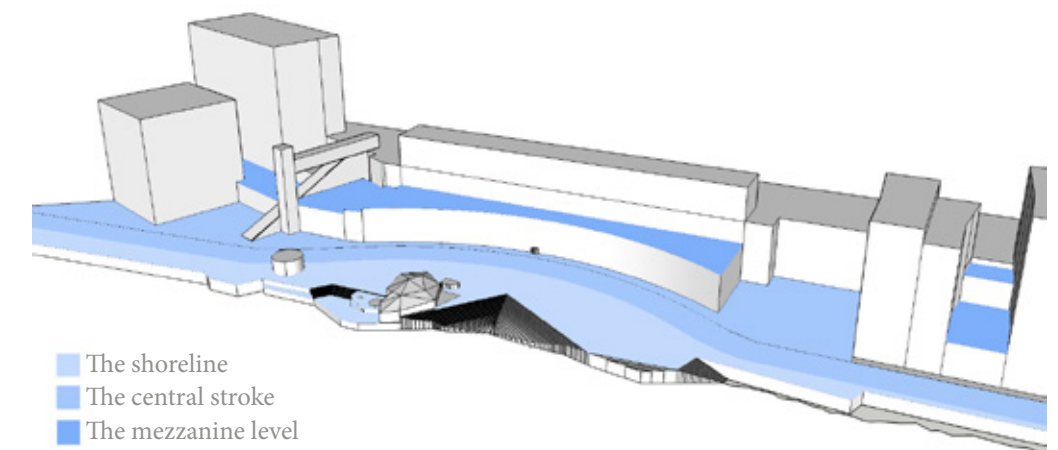


Figure 6.

The shoreline

The shoreline handles the three spaces along the site's northern part. Stemming from the idea of recreating the mountain, the shoreline needs a varying shape. Studying old maps shows that the sizes of the curves meeting the water occurred in different scales, both large and wide but also small and sharp. Creating this variation of scales is essential in achieving diversity in the edge zone. In natural systems diversity is crucial for long-lived results. Applying this to our urban context, complex environments striving for diversity and catering to different demographics might possibly result in more socially sustainable spaces.



The shape of the shoreline thorough time



Figure 7.

Just as the bedrock carefully approaches the water, slowly losing height and through different angles, the static elements of this design aim to imitate this. The shoreline will be the lowest level on the site, containing stairs and seating approaching the water. The different scales allow for a series of small spaces along the three rooms of the edge zone, creating places for different people with different agendas for visiting the space.

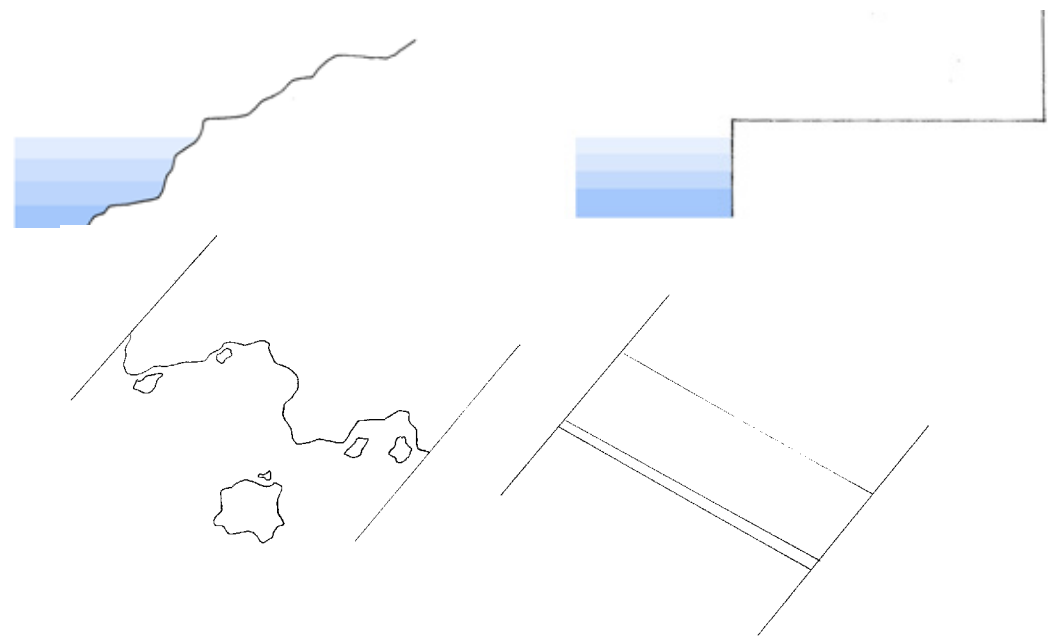


Figure 8-9.
Sketches exploring the shoreline, natural mountain vs constructed dock

The sketches below examine the orientation of the spaces in relation to the large-scale curves and shapes of the shoreline. The final proposal suggests some extension of the land to create an interesting shoreline and add spaces with beneficial sun conditions.

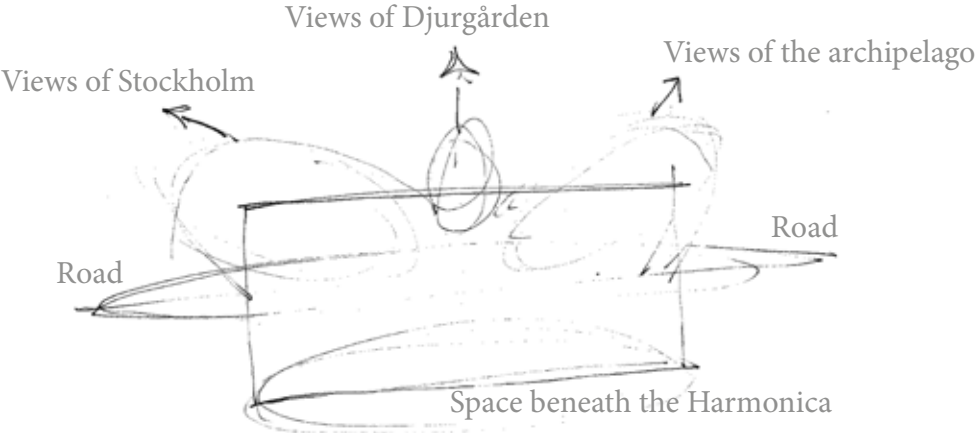


Figure 10.
Sketch showing the sites directions

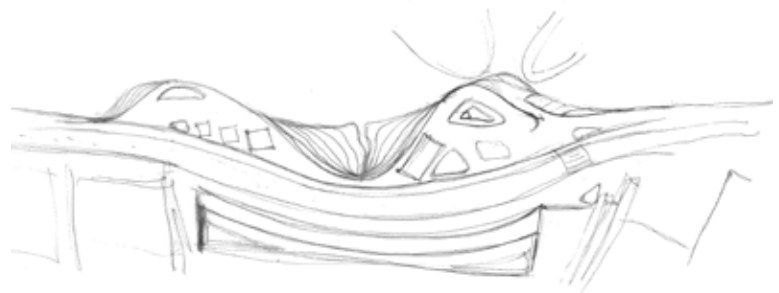


Image 42.
Sketch showing the proposed shape of the site

The central stroke
The space links the connecting sites to the design and allows for pedestrians, cyclists and cars to pass. The space is shaped based on a hierarchy, placing the urban space along the shoreline first, pushing the road inwards. The pedestrian zone reaching the shoreline is allowed a large areal to enable unprogrammed spaces and room for decorative elements such as vegetation and public art. The bicycle lane is connected to the road, concentrating the passing activity and making clear separations in the space. The curved road also functions as a speed reducing element, making the driver aware of the environment.

The mezzanine level
The space along the southern part of the site will be linked with the mezzanine level connecting in the east. The prolonged recreational space and park will be supported by a long building of the same height as the current level. The space below the Harmonica towards the cut mountain rarely sees sunlight and is suited for a building. As the KUAB project office is currently interested in finding occupants for some sort of cultural or artistic activity, the building ought to reflect this character.

Allowing the road to curve the shape of the building it adds to the experience of the public space in front. Using the space's features and unique setting, the building is proposed to be covered in tiles of mirrors. Since the sun is almost completely absent, this is one of few spaces where a building could have such a façade without causing dangerous reflections. The idea of having a mirrored façade plays with the views around the space, bringing in a panoramic foundation reflecting the island of Djurgården into the space. The façade also imitates the reflections that occur in the water and brightens up the space. The material of the building indicates the built environment's inferiority to the landscape, a sort of anti-building resting beneath the Harmonica. The curved façade will only have one large door, located in the middle, making a simple yet noticeable impression. The door is designed as a reference to the wheat, one of the grains that were once supplied to the island during the industrial era of Kvarnholmen. The building will also contain underground parking for visitors.

The mezzanine level and park that's placed above the proposed building ends in line with the Harmonica, allowing the Harmonica dominance of the room and allowing the western space to be used at the current level.

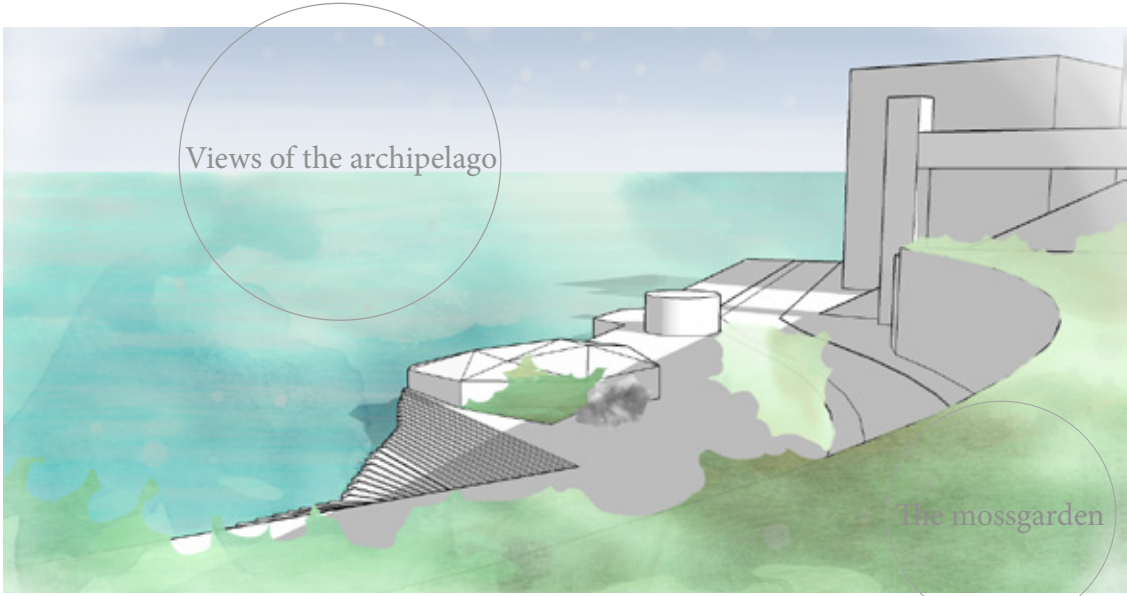


Image 43.
Image showing a perspective from the moss garden on the new building and mezzanine level overlooking the space below.

The western part

At the edge of the mezzanine level, where the new building ends, a low level space reaches the mountain. The room creates an interesting space and makes a part of the rock available for interaction. The space is proposed to be unprogrammed, providing a space for the new population at Kvarnholmen to shape it. The space is proposed to be public and function as a place for people that might not have been considered in the other parts of the masterplan. How it is to be developed should be addressed after the social establishment of residents in the area.

Using the existing terrace in the connecting western site as a reference point, the shoreline continues and exaggerates its shape. The space is extended to take advantage of the sunlight and creates spaces that offer views of central Stockholm. The extended platform contains an elevator taking visitors underground to a restaurant located under the square. The restaurant has windows meeting the sea, creating an exciting location day and night time for people to visit Kvarnholmen.

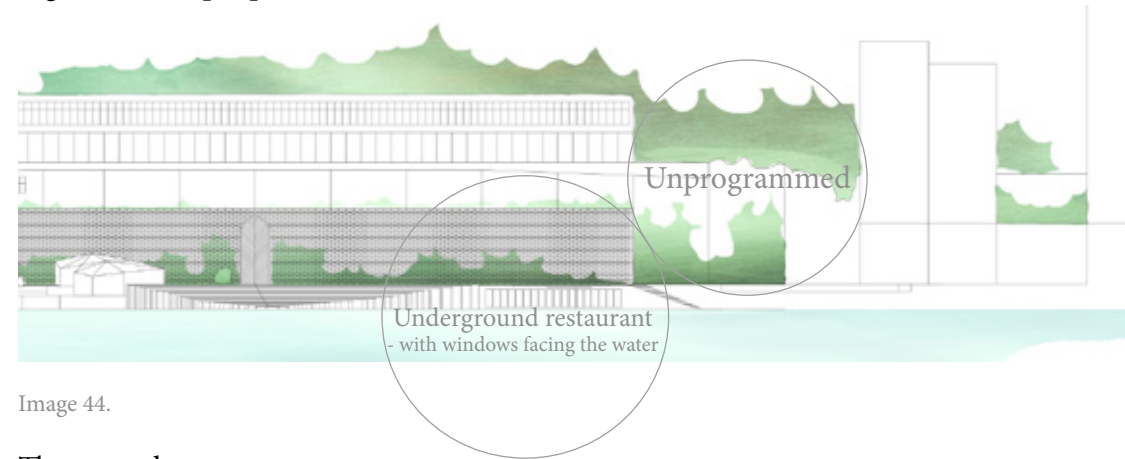


Image 44.

The central part

Within the mezzanine level the space is proposed to be an extension of the existing park to the east. The space is located above the proposed building, making it impossible to plant larger trees, therefore the extension is designed to be a moss garden. Creating a decorative space with vegetation suited for the light and climate. The space can also function as an extension of the new building under, having an exit above and into the space, allowing it to be used for temporary exhibitions or events.

In front of the building, a small crossing for pedestrians is located over the bicycle lane and road, accessing the entrance of the building. Along the bicycle lane, on the edge of the pedestrian areas, islands of vegetation are scattered, imitating natural groves and adding volume and pillars in the room.

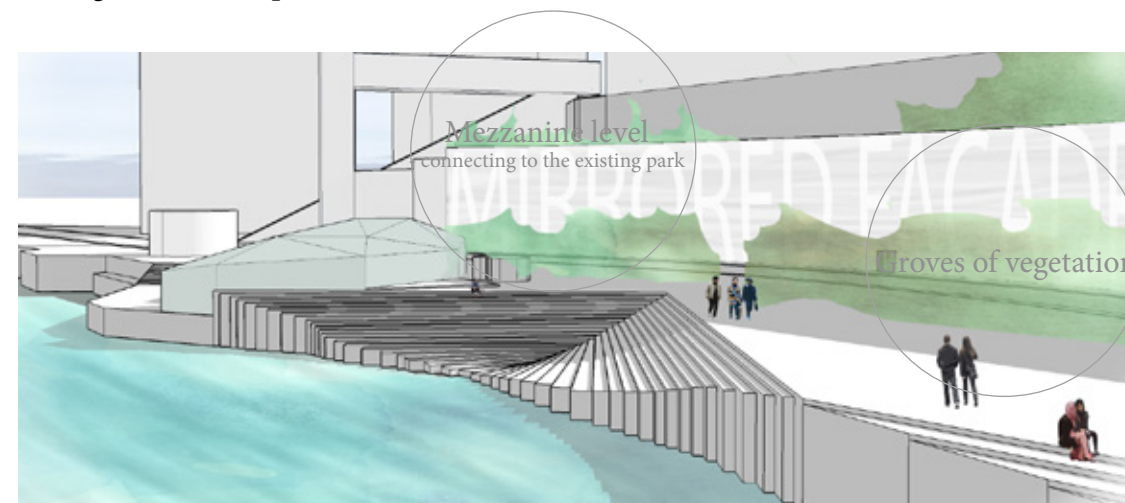


Image 45.

The central shoreline is perhaps the most majestic space in the proposal. Deriving from a central axis from the grand door of the building, a large staircase of more than 20 steps slowly approach the surface of the water. The staircase is designed to function for seating and for the public to reach the water. The steps gradually decrease in height and increase in depth when reaching the surface, thus showing and enhancing differences in water levels throughout the day and year. This space allows visitors to experience the very edge of the urban context and interact, visually and physically, with the dynamic landscape. Each step of the staircase is cut in a different place, creating a curved and irregular edge meeting the sea, permitting the waves to hit the static surfaces as if though they created and shaped them.

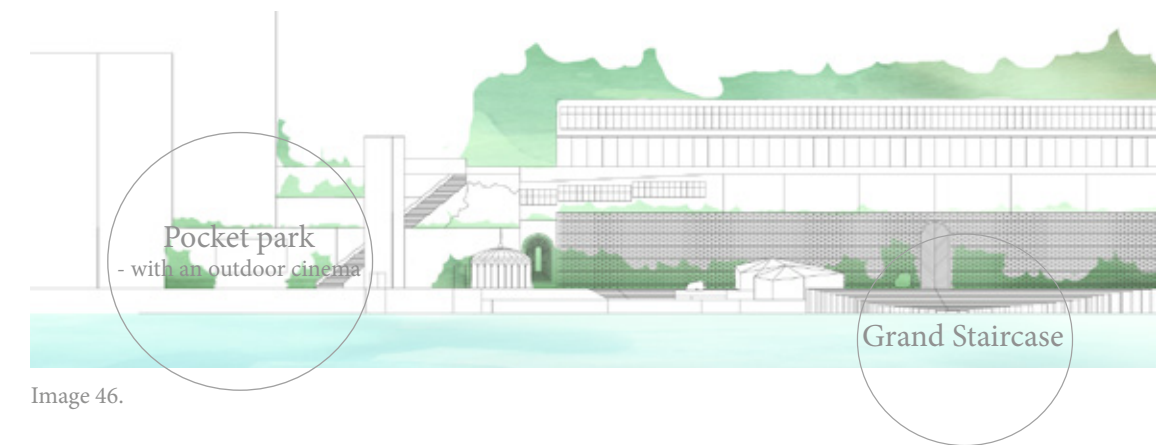
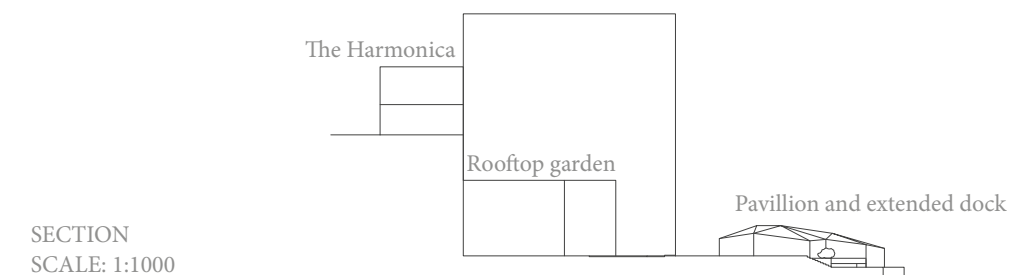


Image 46.

The eastern part

The space to the far east has a clear separation from the site making it suited for some sort of separate function. The room is large enough to house some vegetation along the sides as well as open spaces in the middle. Using the shade and dark conditions in the space, the design proposes an outdoor cinema within a pocket park. Climbers and plants in combination with a polished rectangular concrete surface being added on the wall of the mezzanine level create the background in the space. The space in front of the concrete wall will allow for some permanent seating along flowerbeds, but the room will be left open creating opportunity for the public to claim space for unplanned activities.

The eastern part suggest an extension of the dock, considering a future increase of usage. The space imitates the current shape of the station with smaller modifications and strives to connect the new shoreline to the existing. The space is proposed to have a large pavilion, functioning as a shielded public space but also a pleasant waiting room for people awaiting the ferry. This multi-functioning space allows for comfort and protection from the elements for all visitors during the year, specifically catering to the older population. The area around is designed to create a meeting place, a public space that encourages social activity.



SECTION
SCALE: 1:1000

Image 47.

The artistic addition

Referring to the project “Vassparken & Observatorium”, where the artistic addition enhanced the space and cooperated with the landscape architecture, this proposal invites an artistic element.

The addition is an extension of the concept, “recreating the mountain” and adds to the small scale transparency. The entire site is proposed to be decorated with large and small granite blocks. The rocks will claim the space, making visitors experience the constant battle between the natural landscape and the built environment, making it transparent. The rocks take no consideration to the boundaries set in the spaces, stating that this belongs to them, to nature, and that we are just current occupants of the space. Chunks of granite are to be placed through the wall of the new building, in the pavilion, on the central staircase and on the open spaces, demonstrating how art and architecture can cooperate to create moving environments.

This addition will increase the philosophical and symbolic substance of the space, amplifying the dramatic setting and creating an interesting public space in the city. It also connects to the building, its cultural and artistic activities, creating an attraction to Kvarnholmen.

The vegetation

In general, the vegetation consists of local species, re-establishing the flora that has been removed and replaced by buildings. The purpose of using local vegetation is not simply for that reason. By choosing plants and species we relate to the archipelago and the sea, the space increases the visitors’ sense of place. Flirting with our perception of natural shorelines to create emotions connecting us to the space.

The frugal flora of the eastern Swedish archipelago sets the tone for the planting design of the space. Even though there might be few species, the design suggests an abundance of them. Each space has been given a species that will be featured and highlighted, where the plants characters overlaps with the character of the space. By designing in this manner, the spaces take advantage of specific characters in vegetation and create clear differences between the spaces, making them easily read.

From west to east

In the unprogrammed space large individuals of pine trees such as *Pinus sylvestris* and *Picea abies* are proposed, stretching high up in the dark space near the rock. The trees are chosen, as they make a solid impression and are always green, creating a living element.

Along the entire shoreline specimens of *Salix alba* var. *sericea* with split trunks elegantly rest along the seaside. The trees are chosen for their light silver leaves and the species’ preference of proximity to water. The species indicates water and its foliage swiftly moves with the wind, creating gracious movement in the space. Deciduous trees also add to the experience of seasonal change along the shore.

The pocket park and its classical romantic expression make space for *Quercus robur* and *Calluna vulgaris* to clutter the flowerbeds. Adding *Hedera helix* and *Clematis* *Atragene-group* ‘Violet purple’ in the bed and on the frames on the wall creates a soft, intimate and warm space.

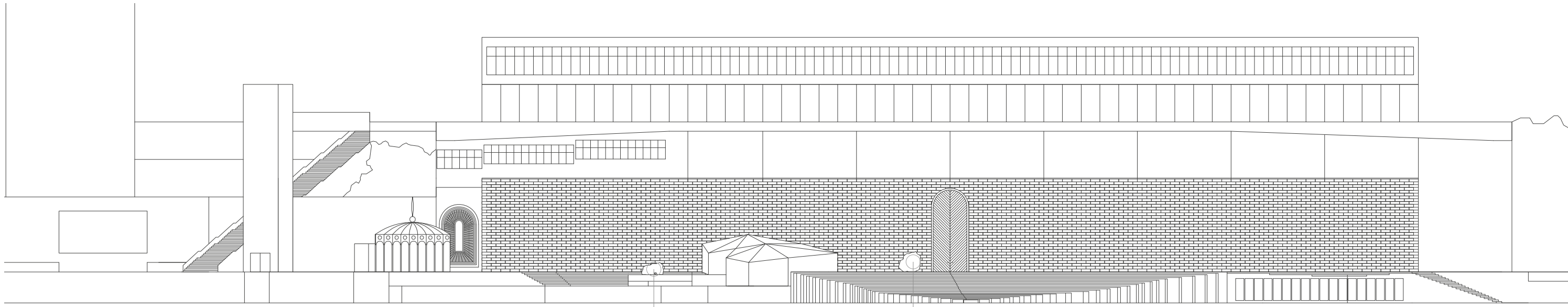


Image 48.
View of the entire dock, showing the added built elements

The ferry station

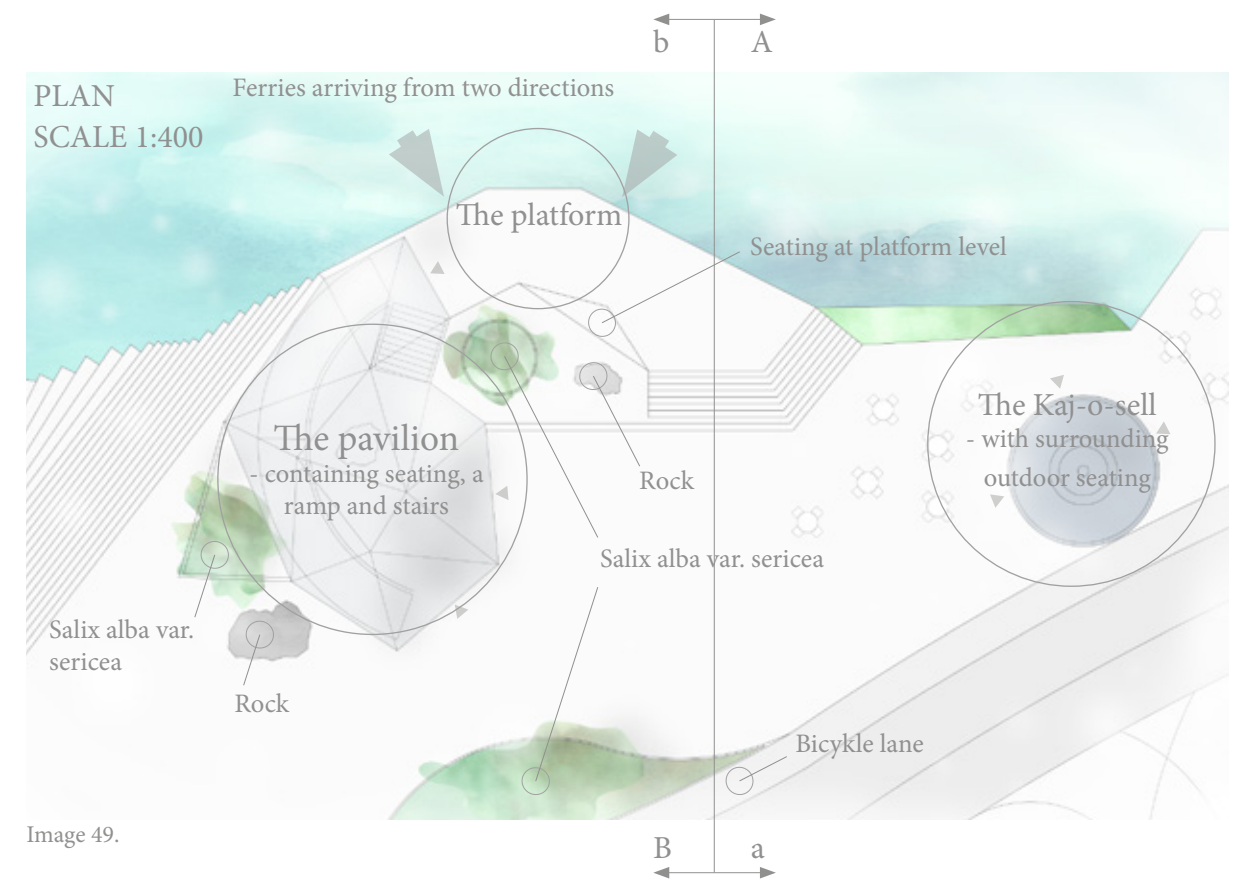
Diving from the masterplan, the detailed design of the ferry station displays a suggestion of how to develop one of the spaces in the site. The proposal focuses on the main relevant general and applied design principle and considers the ones applied to the entire site.

General design principle

Add to the experience of boat commuting, valuing spaces in relation to sustainable means of transportation

Applied design principle

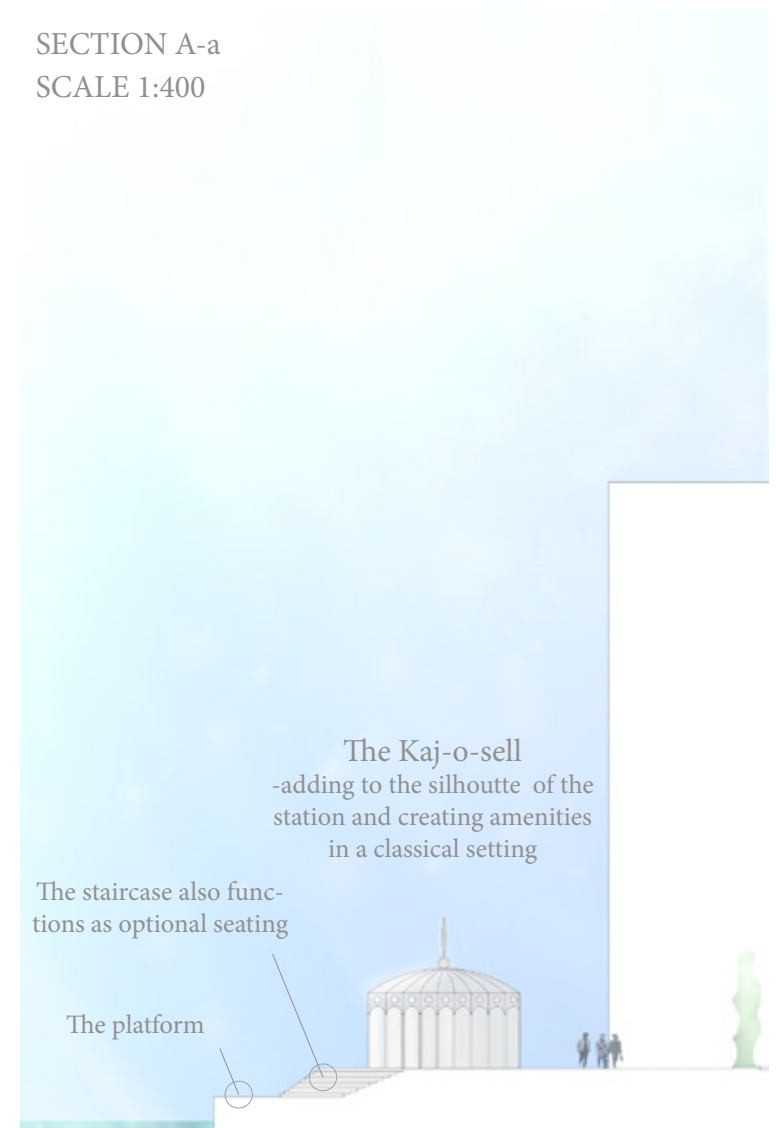
Create a comfortable and aesthetically pleasing ferry station, with shelter from the elements, enhancing its role as a sustainable mean of public transportation



The ferry station and its surroundings are designed to create a meeting place, a public space that encourages social activity whilst allowing visitors to enjoy the experience of waiting by the water. The proposal suggests two smaller buildings, one for travellers awaiting the ferry, and one café/kiosk for all visitors. The space contains several levels, gradually approaching the water and the ferry.

By adding two smaller buildings the proposal allows for the Kaj-o-sell to function as a building housing activities for people voluntarily spending time at the seaside, whereas the pavilion caters to travelers. While the two volumes create two very different expressions they interact, creating a small-scale piazza character on the site.

SECTION A-a SCALE 1:400



The pavilion

The ferry station is proposed to contain several large changes from its current state. Firstly, the design considers the experience of waiting by the water and values boat commuting just as highly as other means of transport by adding a pavilion, sheltering travellers from the elements and creating a space of comfort. The design of the pavilion aims to imitate the shape of a rock through a puzzle of glass triangles. Inside, the space contains a large curved ramp, allowing for wheelchairs to easily access the ferry platform. The space also offers seating, decorations and a staircase, functioning perhaps mainly as shelter from the elements.

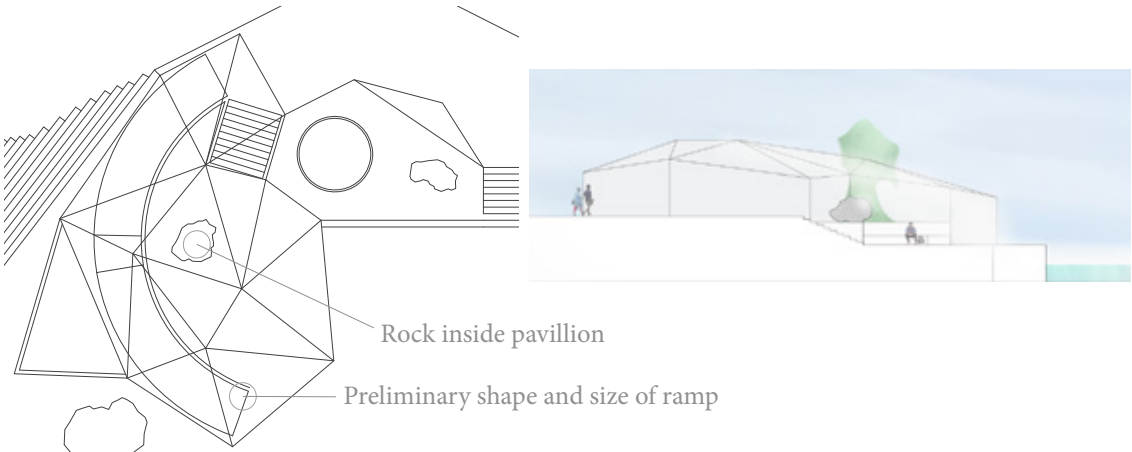


Image 52-53.

The Kaj-o-sell

The name “Kaj-o-sell” refers both to the site and the shape of the building. The round building and its classical features aim to function much like a carousel in the site. The building has a central, round counter inside with glass doors in every direction reaching the outdoor space. This allows the space around to interact with the building and the activities within them. The integration of the word “Kaj” is due to the location and that “Kaj” is the Swedish word for dock, and the end separation of “sell” indicates the activity within. The design of the building also adds to create a small-scale silhouette of the ferry station at Kvarnholmen by its exaggerated roof and detailed design.

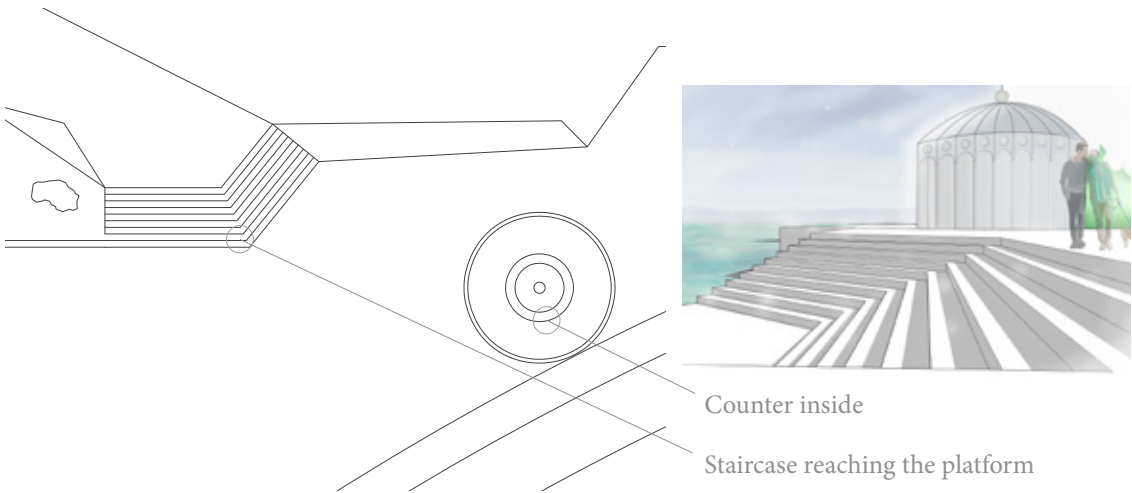


Image 54-55.

The platform

The platform for reaching the ferry is the lowest space in the site. Its designed to have three main sides, allowing for boats from both directions to access the station simultaneously and allowing for space between them. The shape is a direct replication of the current station but enlarged to enable the usage of larger ferries in the future.

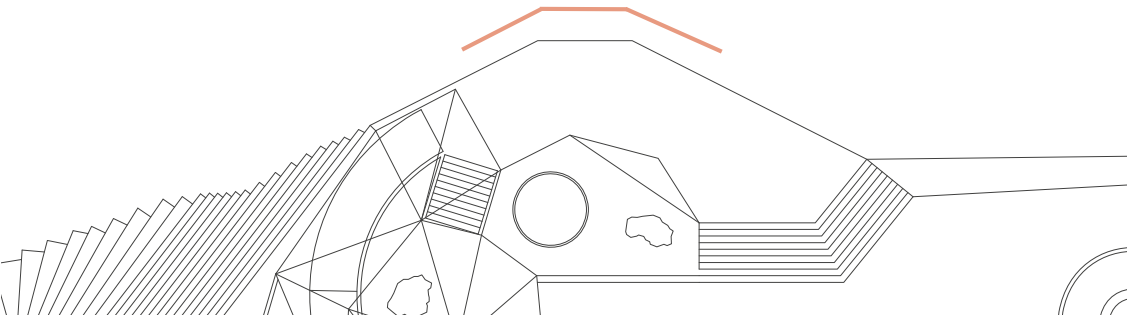


Image 56.



Image 57. Nacka kommun. Source: <https://webbkarta.nacka.se/> (2018-01-16)

The new design uses the shapes of the existing platform but enlarged

Discussion

Reaching the aim

Below a series of discussions connecting to different aspects of the design and the process are presented.

The aim of the thesis was to examine how a dock area with heavy wind and shade can be developed to create a public space where visitors would be able to spend time. Simply answered the thesis achieved just that, examining the dock and its conditions and proposed a solution involving a public space where people might spend time. However the issues could have been further investigated.

The aim expresses creating a space where visitors would be able to spend time. Whether a visitor would be able to spend time in the space is clear through the fact that a public space was created rather than a building, with both indoor and outdoor seating. The spaces expect little of the visitors and offer comforts, therefore making them able to spend time there. Like most questions concerning the public and landscape architecture this is a hypothetical case, just because a site is created that offers what I as the creator believe the public would appreciate, creating settings to make it accessible, it does not mean that people will use the space for the same purpose.

The entire foundation for the aim is shaped from my belief that a larger outdoor public space is preferred on the site rather than a building. Visitors and future residents in the area might however not agree, claiming that shops and cafes indoor are just as public, thus in fact suggesting that this thesis did not reach its aim and actually created a space where many would not spend their time.

Claiming to design a space where visitors would want to spend time is a fairly difficult assignment. How we as visitors spend time comes back to how we individually live and manage and value our own time. It also relates to what we expect of our time and as such what we might spend it on. As shown in the survey from van Berlekoms thesis people value time higher when travelling shorter distances, perhaps when in a rush, something not akin to the lives in urban areas. But also as expressed by the city architect of Nacka, Eva Maria Persson, the city is a space created and referred to by our individual emotions, so perhaps there is something we as architects can achieve by studying time, emotions and individuals. All aspects that this thesis would have benefited from examining more if time had been an endless resource.

Interpreting the results

The design for Kvarnholmen strives to recreate complexity in the shoreline and to add to the existing types of dock areas in Stockholm. The strength in the proposal lays not in its aesthetics, but rather in its hierarchy. The design creates an experience and allows for increased usage of the ferry as a part of the public transportation system, creating public spaces around it and strengthening its position. It's considerate and aware of the possibilities in both small and large scale urban planning and urban designing.

Through the process, studying the history and appreciating the role of boats and ferries in Stockholm before the car and the industrial revolution, clarified that design ideas do not need to be something new but rather – as in this case – be something old in a new context.

Another hierarchy within the proposal that addresses the subject of designing is the landscapes directions of the built environment. As landscape architects we are often highly aware of the walls created by buildings and in many cases we learn to accept the conditions and restraints they pose. Why do we in our profession accept this? In

developing areas we are the designers with a trained understanding of the large scale and public spaces and should as such, based on our qualifications, set boundaries and restraints for the architects who develop an understanding of the building. The industry in which we as designers' work can in this sense need a shift of power, removing it from one source and adding it to the other. In the design for Kvarnholmen the building is designed with materials and details that add to the experience of the entire space, considering the history, natural elements, and role in Stockholm, a result of understanding the landscape. If the façade of the building speaks to the space in front of it, does it then not belong to that space? As designers, we need to understand and respect our strengths and weaknesses, working cross-borders to serve society and not ourselves. I believe that if there is to be a definitive line of where landscape architects and architects meet it's in the façade, not on the steps outside.

One aspect that has not been dealt with in the thesis is that of economy. The design proposal and process takes no seeming consideration to the subject of finance. This was completely intentional as that was not the focus of the thesis. However, as architects, the financial aspect is one we cannot avoid, insisting to be addressed. The design presented in this thesis might be perceived as costly and expensive, then again I would like to question our perspectives. How do we choose to define costs? Is it expensive to build a space for three generations for the cost paid by less than one? Dock areas are built to last at least for a century, to achieve a long lasting aesthetic its necessary to create considerate details in the design. If the construction of a space demands a lot of resources but doesn't deliver on the aspects stretched over time, that expense might not be motivated and thus seen as a negative cost for society. Then again, if a design considers many aspects such as: management, social sustainability, recreation and health, public and private transportations, and does so over time, that expense should be considered a positive cost being handled over a longer period of time.

How it became

The method of the design certainly affects the result. Since design is a method incorporating a vast spectrum of aspects and tools, the outcome of the process differs greatly. In the case of designing Kvarnholmen the method lead to two aspects almost completely steering the result: the experienced natural features of the space and its history. These became the core of the design as a consequence of the methods used. Since the space is greatly characterised by its heavy shadow, height, wind, views and waters, the site visits and writing sessions easily led to the exploration of these features. They might have claimed focus during the visits, allowing me to forget other features. Had the space been studied through photographs the result might have been completely different. Nevertheless, the fact that the site visits allowed me as the designer to experience the intensity of the space and the inevitable presence of these features led me to create a design that plays to their strengths. Reassuring my belief that all architects must incorporate site visits in all projects.

The other aspect is that of history. I have a personal interest in history and a belief that the understanding of our environment and ourselves can be made clear through history. Our past reveals patterns, patterns that make our nature, our culture and enable a forthright insight into our future. Just as nature holds secrets, information and knowledge beyond the mind of the simple visitor, I believe that cities and our urban spaces need to create complexity. By choosing to study and include a large part of the history of Kvarnholmen I've directed and composed the design, choosing the parts that have been included.

The methods

Literary study

The literary study functions not only as a method for broadening the perspectives considered in the thesis but also as the limits set by them. The book "Kvarnholmen – En unik historia" is a book developed by KUAB, the company owning the entire island currently under development. Using the book as the only source of historical information creates a superficial yet wide basis as what's included in the book might also be of interest to KUAB. The book promotes the island and its history, increasing interest in the peninsula. However, the fact that such a book has been written enabled easily accessible information for me to use in the thesis. The book is also given to all residents moving to Kvarnholmen as a gift, allowing the same information to be given them.

Study of reference projects

The study of reference projects have perhaps given the greatest insight in shaping the final result. By allowing each project a main focus I have been able to directly learn specific design aspects in each case and use them. The informal conversations with the landscape architects involved in the projects allow for questions, answers and topics to evolve and take shape as the conversation develops. As opposed to structured interviews I believe that open questions and informal conversations create a wider base in discussing design work, permitting the designer to express the scenarios him-/her-self. In this case, the conversations gave different information and resulted in three projects of different character and different degree of information and insight. The projects of "Vassparken & Observatorium" and "Strömkajen" both involving Christina Sellberg gave a much higher degree of information concerning the design objectives, thus influencing the design proposal more. Whereas conversations with Anders Falk concerning "Slussen" gave no insight to the physical design but rather the diversity of perspectives needed when designing an urban, historical coastal site, therefore influencing the design process.

Board of quotes

The board of quotes is not only a tool for me as a designer to summarize information but also a display of the subjective extractions made by the designer for the reader to see. The words and phrases highlighted in the process of developing the board were done with objective intentions but cannot be seen as that. The information it summarizes is that of my choosing and the evaluations choosing the words presented are those influenced by my personal references. The personal factor is one that cannot be avoided in designing, and I do not believe one should strive to avoid it, but the designer who in this case is a landscape architect, has a responsibility stretching further than the personal level, thus demanding an awareness of the choices made.

Sketching by hand and in model

Sketching throughout the process of the design has been a simple way of exploring ideas and solutions. The method however, does have its restraints. The designer's technical ability to transform an idea on to paper creates one limit I personally reach when sketching. My lack of technical skill in drawing sometimes creates a barrier in the process of extracting an idea or exploring it visually. Therefore the additional method of sketching in model functioned well in complementing my personal limits in the matter. The process of moving cubes to explore scale and sense of room imitate children playing with Legos. The method has its limit as it depends on squares, not allowing different shapes.

Playing with words

The improvisational practice through "free play" with words set the foundation for the conceptual idea and design of the site. The process of freely surrendering to the words around a site, allowing the space to communicate through me and my personal references of their meaning enables me as a designer to start questioning, comparing, evaluating and handling what I feel, see, smell and taste. The method does however not suit everyone, but in my case I believe I got to use one of the tools that I can view as a skill.

Consequences of the design

The design suggests that parts of the shoreline be extended to allow for more beneficial sun conditions. Technically, this would mean a more difficult construction than if the design had considered the current line. The large parking space, tunnel and restaurant located underground also pose a technical inconvenience, however within an attainable level. The large granite blocks scattered over the site and in the façade demand craftsmanship and care from its builders. The curved building with tiled mirrors also demands new materials to be developed, considering the slightest inconvenient light reflection. Instead of creating convenient conditions for every participant in the process, the design suggests slight inconveniences for every role taker, resulting in a space that allows for opportunities for the visitors, not the creators. Even though the building process of creating a space is to be considered in the design, I do not believe it overrules any subject in the design process. The building process makes for a fraction of the time a space stands, and should be considered as such. Easily reasoned by a student such as myself, perhaps I might change opinion after working for a few years, but as of now I believe architecture should claim more space in the discussion of building socially, aesthetically and environmentally long living spaces. Just as Bryan Lawson states that the designer borrows the perspectives of the social scientist, the engineer and the artist (1980), I wish to add that the designer gives just as much back to these roles. Without the designer adding, comparing, evaluating and recreating, the subjects of the others would not be clear, and not valued. Who creates the interesting tasks and challenges for the engineer? Who collaborates with social scientists and develops new ideas for studies? Who encourages and gives space to the artist? Unfortunately the only role not receiving recognition and value is that of the designer, perhaps because design doesn't achieve as clear results. Because the results of design aren't always measurable as they do not always belong to measurable methods. Perhaps, like in landscape architecture, the result of the design is experienced and seen without being noticed.

Final words

As the landscape architecture programme is an education supposed to prepare students for work, this thesis has been a form of project letting me as a student develop my designing skills and explore the landscape through a proposal. For as Lawson expressed it;

Design is a highly complex and sophisticated skill. It is not a mystical ability given only to those with recondite powers but a skill which, for many, must be learnt and practised rather like the playing of a sport or a musical instrument. (Lawson 1980, 6)

Through this I've learnt that I, as a designer, can never stop learning, and should never want to stop learning about the society, the environment, and everything around us that we affect. Because when we change something, we are responsible for the outcome of that change, and the more perspectives we carry, the better we can position ourselves in designing changes, hopefully achieving holistic design methods.

In conclusion, I believe that landscape architects could play a leading role in changing the construction industry and the fundamental ways of how we build today. We can add perspectives to enable innovation, claiming space in discussion and introducing a shift of power to be able to achieve some of the sustainability goals set by the United Nations.

Further studies

We can create shadow but can we create sunlight?

How can landscape architecture and design create an emotional impact among users?

Can poetry be used as a method for designing public spaces?

Can we as designers affect the way the public values time?

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