Wicked waters

A Resilient Coastline of Malmö: Tactical Design in Limhamn

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Abstract

Malmö is a coastal city in the south of Sweden, constantly under pressure from the dual threat of coastal and pluvial flooding. The low- lying topography is making it particularly vulnerable to the impacts of present and future climate change. For this, no general solution is to be found. This project aims to resonate tactics for adaptable, livable and functional city development in order to adapt to flooding. At the same time as safeguarding existing coastal communities from flooding, the long-term vision is to explore innovative solutions, adapting inhabitants to sustainably live with water around them.

Following reading will take you through an theoretical framework and design process exploring ways to question conventional methods within the field of landscape architecture and urban planning, dealing with resilience for a dynamic seascape. Innovative and site-specific designs are tested on a site in Limhamn by using research through design methodology, in order to face the complex and long-term challenge of flooding, referred to as a wicked problem.

The final result is used to visualize an alternative transformation of where the old Cementa factory in Limhamn used to be by proposing small-scale interventions that combine influences of art, relational aesthetics, landscape architecture and technology. The gathered empiri is also used to propose a three-step tactical conceptual approach that could work as a framework for future coastline interventions. By highlighting the important interplay between research and design the conclusion that a more multidisciplinary collaboration is needed in order to create more resilient coastlines for future dynamic seascapes in Malmö can be made.

Keywords:

coastal development, resilience, seascapes, Malmö, Öresund, site-specificity, urban acupuncture, tactical urbanism

Sammanfattning

Malmö är en kuststad i södra Sverige, ständigt under press från hotet om höjda havsnivåer och återkommande 100-årsregn. Den låglänta topografin gör staden särskilt sårbar inför effekterna av nuvarande och framtida klimatförändringar. För detta finns ingen generell lösning att finna. Detta projekt syftar till att resonera kring anpassningsbar, beboelig och funktionell stadsutveckling för att anpassa sig till urbana översvämningar. Samtidigt som att skydda befintliga kustsamhällen från översvämningar, är den långsiktiga visionen att utforska innovativa lösningar för att anpassa invånarna till att på ett hållbart sätt leva med vattnet omkring sig.

Följande läsning tar dig genom ett teoretiskt ramverk och en designprocess som utforskar sätt att ifrågasätta konventionella metoder inom området landskapsarkitektur och stadsplanering, som handlar om anpassning för ett dynamiskt havslandskap. Innovativa och platsspecifika konstruktioner testas på en plats i Limhamn genom att använda forskning genom designmetodik (research through design approach), för att möta den komplexa och långsiktiga utmaningen med översvämningar, beskrivet som ett olösbart problem.

Slutresultatet används för att visualisera en alternativ förvandling av var den gamla Cementafabriken i Limhamn tidigare låg genom att föreslå småskaliga ingrepp som kombinerar influenser från konst, relationell estetik, landskapsarkitektur och teknik. Det samlade empiri används också för att föreslå en taktisk och konceptuell strategi i tre steg som skulle kunna fungera som ett ramverk för framtida ingripanden längs med kustlinjen i Malmö. Genom att lyfta fram det viktiga samspelet mellan forskning och design kan man dra slutsatsen att ett mer multidisciplinärt samarbete behövs för att skapa mer motståndskraftiga kustlinjer för framtida dynamiska havslandskap i Malmö.

Acknowledgement

I want to share my fullest gratitude towards my supervisor, Caroline Dahl, for the support and inspiring guidance throughout this project.

Thanks to friends, family and colleagues for well needed and fulfilled every-day life outside of studies.

During most of 2022 at Malmö University, I was in a group project working with Limhamn and flooding, which has led me back to the important topic once again.

Finally, I Would like to highlight that place has, undoubtedly, been the back-ground imagination for some of the worst of recent conflicts. This thesis means to focus on places where the privilege of discussing how the process could look and what to focus on when is available, without neglecting the reality of communities in acute situations with need for direct support of necessities.

Fig. 1 Malmö 2024

Fig. 2 Malmö 2024

Fig. 3 Malmo 2024

Fig. 4 Malmö 2024

Fig. 5 Malmö 2024

Fig. 6 Malmö 2024

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1. Introduction

2024-01-30: I am reading an electronic article about flooded areas in southwest Scania, Sweden, caused by high water levels in the lake Ringsjön and continuous rain for the past weeks. People are leaving their homes, together with the belongings possible to bring. The abnormality of the situation in this geographical area makes it worth broadcasting on television news. A part of a community is flooded, this time severely. Other areas are affected too. In Lomma harbor, boats are almost flushed on land because of the temporary sea water rise. All of a sudden the telephone screen switches to commercials, and I can no longer see the article. "*SEAMLESS CHARGING*". A car company introduces "seamless charging" for your electric car just as I was reading about people losing electricity in their homes because of weather. The contrast is almost comical. A news feature that paints up both a dystopian picture of the present time, but also an utopian picture that shifts the reader's focus to the good times to come. Or, are we trying to convince ourselves that we are living in the best of times in our high technological society, while denying the true reality of natural catastrophes affecting people's everyday lives?

As much as smart innovations, such as solar and wind energy or virtual reality and apps, can contribute to better solutions, sometimes on a global scale, the need for protection from and adaptation for unforeseen climate changes on local scales, rapidly increases at the same time. Previous statement mainly applies to regions where extreme natural catastrophes might not have happened just yet. We have not yet adapted as much as is needed. We will probably never know the exact right way to either. The recent global pandemic, as a prime example, has taught us that we can't wait for a catastrophe to happen until we act, we need to provide solutions for possible future wicked scenarios all the time. And still make places as comfortable and livable as possible. If it so be seamless electrical charging for your car, or those solar panels on rooftops, or the local farmers market on Sundays, or that lowered football field in the square, or that rainbed by the lake, or that curb extension on that street, or painting that wall green. Weaving together high technological smart cities with local, small-scale interventions, will hopefully create a more seamless, adaptable co-existence between the two, as a part of an adaptable, livable city.

1.1 Background

Cities today occupy 3% of the Earth's land surface, but in 2018 inherent 55 percent of the world's population. That corresponds to 4.2 billion people. By 2050 that number of urban population is expected to reach 6.5 billion (UNDP 2024). According to own calculations, gathering the most updated numbers online, 25,6% of Scanias population live in the urban parts of Malmö, which corresponds to a surface area of approximately 0,7% of the land surface of Scania (Länsstyrelsen Skåne 2024; Malmö Stad 2023 & Region Skåne 2023). This means a lot of people, in a very small geographical area, are affected by possible flooding and other climate changes. But, it is also a reason for developing new strategies for how to use and deal with existing

Fig. 7 Geographical context

seascapes and flooding within the city's dynamic landscape in a manageable way. Simultaneously, the positive aspects of access to sea and rain water, in urban coastal cities like Malmö in southern Scania, needs to be considered in an uncertain future.

As Malmö is experiencing increased flooding risk caused by climate change, many examples of coastal, pluvial and fluvial flooding have been documented in the last ten years. Länsstyrelsen Skåne has been working on producing a risk management plan for flooding in the Malmö area, with a focus on prevention, protection and preparedness including flood forecasts and systems for early warning (Länsstyrelsen Skåne 2021). Seven regions have been included in the risk management plan, amongst them Malmö, in order to manage their common threat of coastal flooding and present measures that need to be taken. The long-term goal is to reduce the negative impacts from flooding regardless of reason, until the year 2100 (ibid). The report presents a basis for how to reduce the possible adverse consequences of flooding for human health, environment, culture and economy. Although, risk management maps that have been produced before writing the report do not include combined effects of sea levels and flows in watercourses and also not flood impacts in case of torrential rain. The risk management report for the seven Scanian regions therefore aims to also include measures for pluvial flooding, but acknowledges that proposed protective measures need to be further developed and specified in order to protect future human activity and the environment in Malmö (ibid). Legislations and regulations are in some cases causing stagnation of the process of physical protection on a large scale moving forward and therefore more strategic development on smaller scales are crucial, in order to slowly adapt to more intensified flooding and create a livable recreational environment. Where to start implementing risk management actions can also be hard to decide. I have taken critical points, derived from SCALGO maps (see figure 8, 9 & 10) into consideration when developing a starting point. A critical point is a geographical area where intervention is stressed to be made in order to prevent flooding, mainly coastal. The points change in size, until they disappear as the impact of an intervention decreases (SCALGO 2024).

The existing background and data of past, present and possible future floods available online makes it worth thinking about how various test beds, strategies, models and prototypes could be developed and designed in order to reimagine the future coastline of Malmö. There is no longer a way to neglect climate changes within the Anthropocene. But, it is tough to foresee the future outcomes of it, therefore a more adaptive way, starting from the grounds of radicant design methodology of urban planning and landscape architecture is being lifted in this project. That means, proposing every site as unique with site-specific needs (Bourriaud 2009).

Fig. 8 Risk of coastal flooding +2m sea-level rise

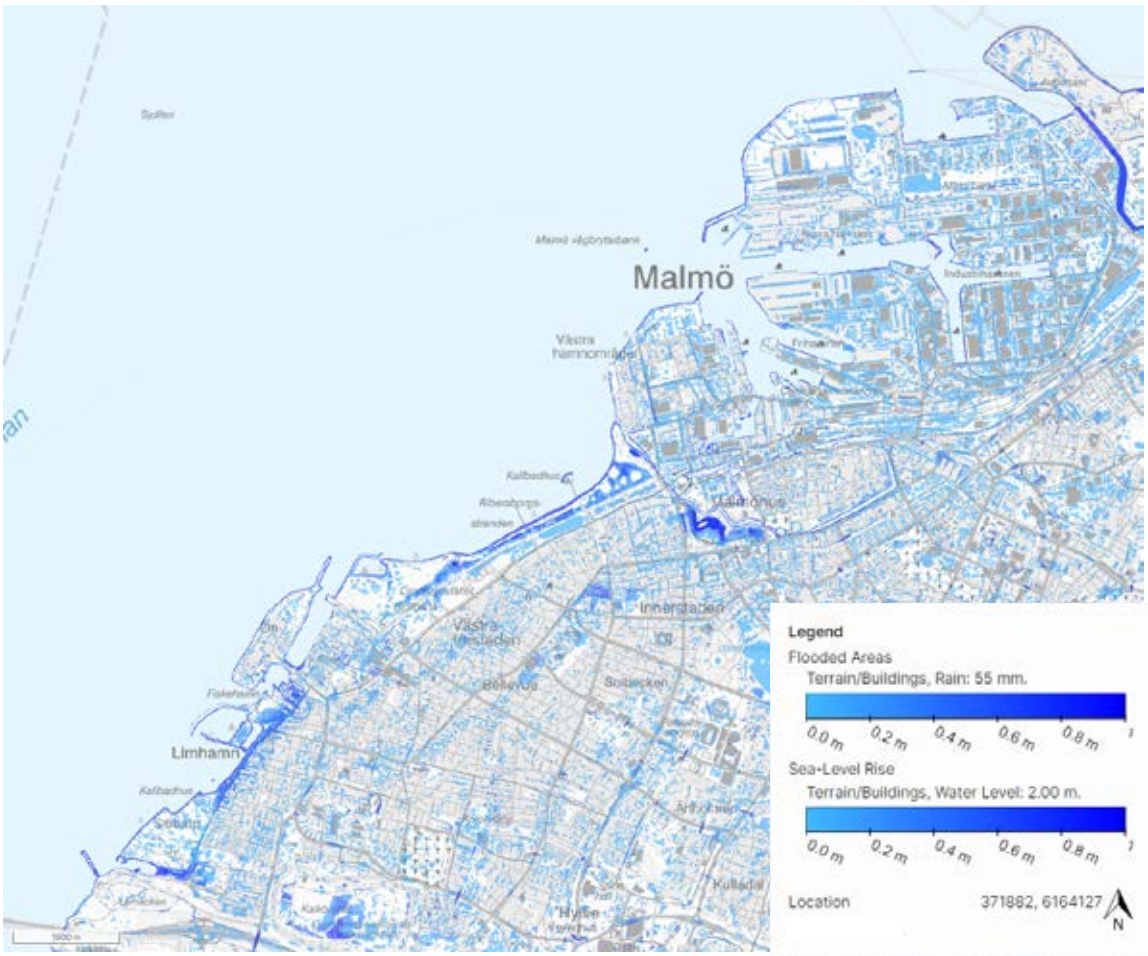


Fig. 9 Risk of flooding +2m sea-level rise & 55mm rain

Fig. 10 Critical points - Malmö Coastline

1.2 Seascapes

"Developing planning and management schemes for the use and conservation of seascape areas is a difficult task because of social and political differences in societies, with their plurality of priorities."

(Pungetti et al. 2022)

Gloria Pungetti (2022) highlights the importance of various seascapes, and the gaps still to cover in order to be able to contribute to healthy seascapes, coastal and fluvial. As water is the most prevalent component of the Earth's surface, humans and nature depend on its functions everyday. Although it is human activity that threatens coasts and seas globally, and conflicts with nature reservation (ibid). Landscape design in coastal areas and urban planning, as well as political decisions need to find a way to cooperate to develop manageable and resilient urban coasts. For sustainable seascape futures,

"Sustainable seascape development should consider economic needs and technological advancements in tandem to formulate policies that capture the intrinsic seascape values of local communities, and as a consequence, obtain the latter's support."

(Pungetti 2022 p. 11)

The complexity of the subject becomes transparent as debate about the concept of seascape carries out in different ways, but offers a transdisciplinary and multicultural approach thanks to knowledge from various backgrounds. Seascapes have the potential to comprise such an important part of the nature connections or daily doses of nature we need (Beatley 2022). The diversity and different dimensions of seascapes offers a way to design the land-sea interface both onshore and offshore, in the same way. It is important to see opportunities to allow future planning and sustainable use of the coast and shallow waters (Pungetti et al. 2022). In line with Länsstyrelsen Skåne (2021) and Pungetti et al. (2022), the final goal should be to adapt frameworks in order to tackle present and future challenges and support sustainable management of our coasts and oceans.

1.3 Site description - Limhamn

The chosen site (specific geographical area), where a site-specific design proposal for this report has been developed, is located in Limhamn, close to the marina (Småbåtshamnen). It is a coastal area with an industrial background that today, mainly consists of hard surfaces directly connected to the waterline and is exposed to harsh microclimates, usually consisting of hard winds and rain. The main building structures on site are six silos, historically used for industrial purposes as a cement factory, called Cementa (historical anchoring), creating a unique spatial experience (Sydsvenska dagbladet 2020). The site itself is not inviting you to stay longer for any social interaction, it functions more as a pass and a landmark. The silos are otherwise surrounded by new housing developments and offices, as well as a supermarket, restaurants and is facing a constructed island that is connected to the site by a car and walking bridge. During the last ten years (present

context), Limhamns sjöstad has rapidly developed into a bustling neighborhood with various projects (Malmö Stad 2024). The six silos remaining of the old factory are doomed to be taken down and rebuilt into new apartments, as it looks right now (Malmö Stad 2023). Hence its location, the area functions as a gateway to the sea. Activities like diving and fishing in Öresund are possible, and greener areas connected to small fishing huts next to the site are used for exercise and dog walking, besides smaller industrial activities. Changes and challenges directly connected to climate are still very tangible, and the whole of Limhamn is facing present and future flooding challenges. The capacity to create a common place with social interactions while combining it with flood adaptive interventions is seen as a great potential for this site.

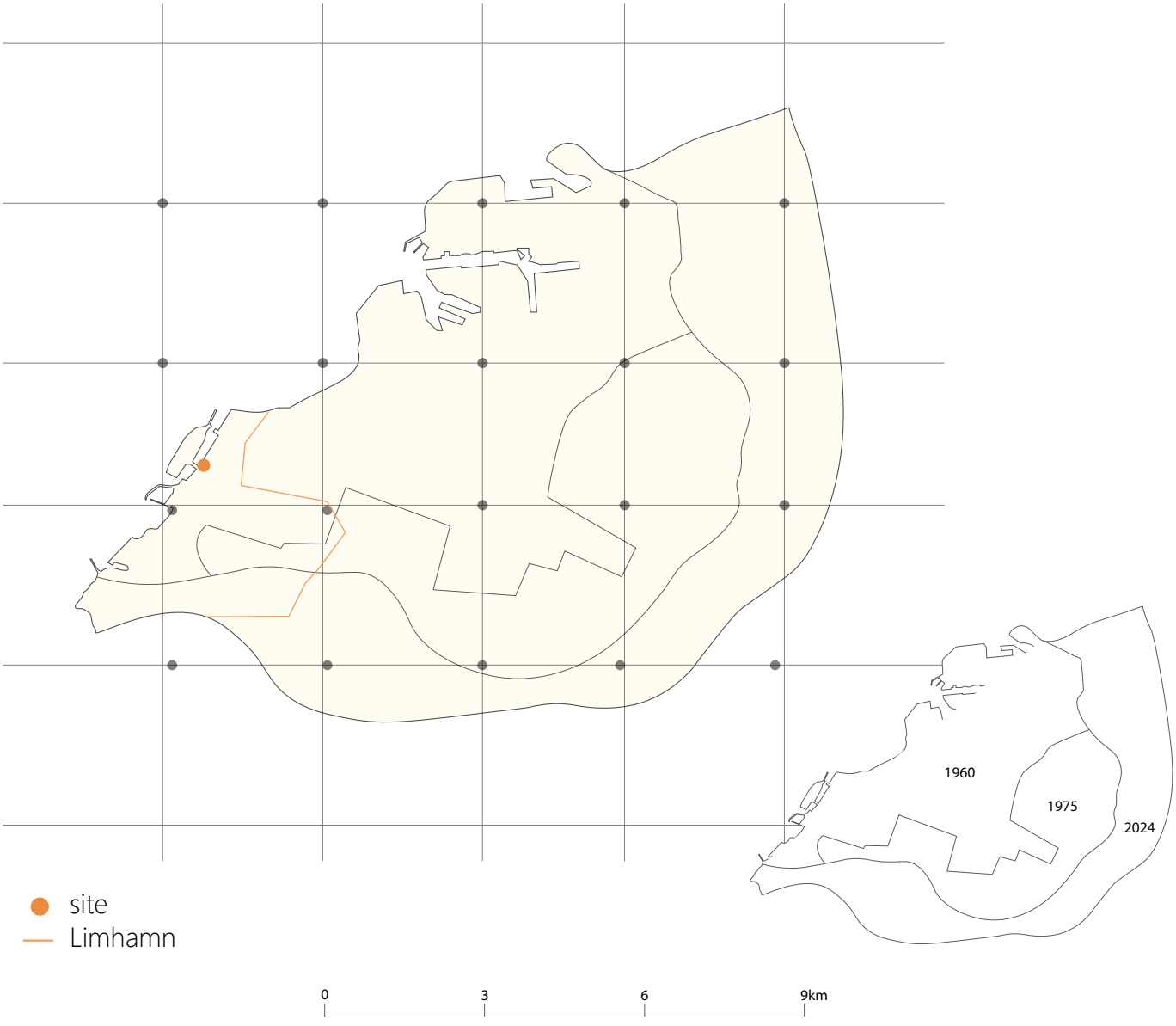


Fig. 11 Malmö urban expansion

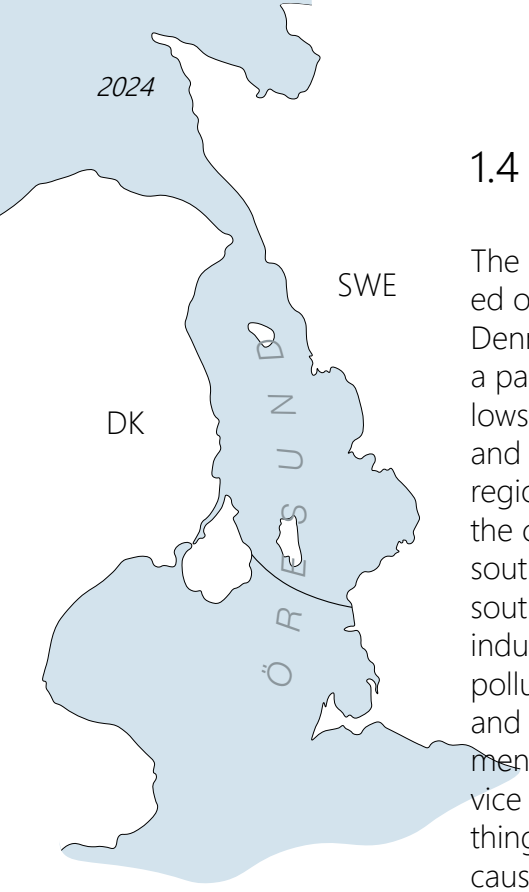


Fig. 12 Öresund

1.4 Site desciption - Öresund

The site is directly connected to the coast of Öresund, the hourglass shaped ocean Between Kattegatt and Östersjön, physically dividing Sweden and Denmark. Although, it works as a connecting area in many ways, opening a passage to Europe with the Öresund bridge, finished in 2000, which allows passengers to get from the center of Malmö to Copenhagen by train and car in only 35 minutes (Skånetrafiken 2024). As implied, the Öresund region is a metropolitan region with around four million people living near the coast. Ferries and shipping boats constantly cross Öresund, in both south and north directions, and private commercial boat traffic between the south of Sweden and Denmark is common. Historically, from when Malmö industrialized its coastline, the human impact of the sound has consisted of pollution and consumption, and has meant bad conditions for animal life and vegetation growth. As Michael Palmgren (2021) at Naturum Öresund mentions in a digital lecture, every activity on land affects the ocean and vice versa. When some of the first sustainability goals developed in the 90s, things changed for Öresund. Measures were taken to stop the pollution, caused by humans, of the ocean. Despite the high activity that Öresund has, the ocean has begun to be repaired since the 80s. Palmgren (2021) stresses that this is not solely because of human change of mindset and mentions two of the most important underwater heroes. Large mussel banks, on the Öresund bridge pillars for example, cleans the water and makes it clearer. In clearer water, eelgrass beds can grow and thrive because of sustainable fishing methods that excludes trawling. Eelgrass areas are important as breeding ground for fish and for absorbing carbon dioxide (ibid). Today, life below the surface is stressed by the quickly shifting water streams that pushes salt water from Kattegatt and oxygen rich water from Östersjön, but that also creates a dynamic fitting for a rich animal life and biodiverse growth (ibid). The model for a marine protection that was developed during the 90s and continued until today has shown how responsibility taken can save one of the most important resources in the region, the ocean, and also attract migrating fish species such as tuna, dolphins and wales (ibid). Öresund can historically be seen as a conflicting area between human activity and animal/vegetative life. Changing this during the 90s has opened up possibilities for evaluation and discussion about the future of the Öresund region.

1.5 Terraviva competition

The design formalia of this thesis is based on the framework of the competition *Tactical urbanism - the revolution of public space*, that is annually presented and this year open for all interested in participating until April 2024. The topic invites not only people already working in the field, but also students, to contribute to the discussion of how to strategically meet future challenges, by designing places. The task includes various perspectives to be taken into consideration: designing for a specific site, taking actual societal changes and processes into consideration, as well as trying to have a prospective approach for how future events may play out. The emphasis lies on aligning the site proposal with the overarching goal of creating tangible

beneficial changes in the public realm.

The main goal of the competition is stated as follows: *"experiment with site-specific case studies that can work as open laboratories to test novel approaches on urban transformation. The challenge is to consider new urban scenarios in which short-term solutions in shared places may become potentials to face long-term challenges"*

(Terraviva, 2024)

Terraviva (2024) aims to be presented to designs that, in some way, relate to Sustainable development goal 11: *Sustainable cities and communities* (UNDP, 2024). UNDP (2024) highlights goals and strategies needed to be taken into consideration in the present state of our societal situation. Cities are developing and becoming more influenced by technology and smart city solutions and with it increasing inequalities and societal gaps. The need for affordable housing, accessible transport systems, safeguarding cultural and natural heritage, air quality, access to green and public spaces are all supporting links to creating inclusion, resource efficiency, mitigation and adaptation to climate, disasters and inequalities (ibid).

1.6 Aim, objective & research question

The aim of this project is to shed light on exemplifying how to create a site-specific tactical design in Limhamn, in order to create innovative solutions for flood adaptation and a resilient coastline. The design is meant to embody, based on the site's capacity, a contemporary adaptive strategy for urban environments in Malmö. At the same time, the proposal is meant to proposedly bridge together high technological solutions, public art and small-scale interventions by projecting gathered information using various methods and emphasizing the advantages of a multidisciplinary approach to landscape architecture and urban planning. In addition, ways to consider a present and future acceptance of changes in the landscape and utilization of seascapes is reflected in this project. The main question to be answered is:

How can small scale interventions, exemplified by a site-specific tactical design proposal at Limhamn sjöstad, create resilience for expected and unforeseen complex challenges such as coastal flooding?

1.7 Delimitations

The design proposal for this report will be conducted within the workframe given by the competition brief produced by Terraviva (until 12th of April) and the study as a whole within the timeframe of 20 weeks, given by SLU. Considering this, the detailed design proposal is limited to one chosen geographical area in Malmö. As always when designing, the aim is to include as many groups of people as possible. With that said, awareness of universal design not being for every person in every place, is acknowledged.

The design proposal in itself is solely based on what is considered to be the potential of the chosen site in Limhamn. My personal opinion that adaptable flood protection in Limhamn Småbåtshamn might be needed is based on site analysis and site visits that were made during this project, as well as experience from a previous group project conducted in 2022. Empathize is put on site-specific design and acknowledges that every site might produce different needs.

The methods used are chosen to be able to conduct a design proposal and master thesis within the timeframe given, but also after considering this specific case. The triangulation of literature studies, site visits and design proposals makes a good combination for a research through design approach but it also applies a subjective character to the project. In other cases, other methods might have been more beneficial and legislation documents closer studied.

Available flood protection structures, methods and strategies are not further presented in this thesis, in order to put more emphasis on innovative novel thinking methods and site-specific approaches to complex challenges within a geographical area.

2. Methodology & material

2.1 Framework, approach & method

This project is based on a qualitative methods approach using literature review, document studies, observations and designing a proposal that also illustrates my design process. Trying to approach a complex challenge such as flooding, I have based my project on the framework of design thinking by using design research as an approach and research through design as methodological technique.

Design thinking is a mindset and framework, rooted in qualitative research. It is usually explained as a non linear, iterative process, described in five steps coined by the Hasso- Plattner Institute. Design thinking can be used to understand users needs, challenge assumptions, redefine problems and create innovative solutions. Also, to identify problems or challenges with human-centered needfinding and site-specific needs. Urban planners and designers increasingly use this framework in order to stress a more multidisciplinary way of working (Lydon & Garcia 2015). The five-step thinking process recognizes that design is a never ending process and the steps further explained are not meant to solely be linear (Hasso-Plattner institute).

- *Empathize: Understand for whom you are really planning or designing.*
- *Define: Identify a specific opportunity site and clearly articulate the root causes of the problems that need to be addressed.*
- *Ideate: Research and develop ways to address the defined problem.*
- *Prototype: Plan a project response that can be carried out quickly and without great expense.*
- *Test: Use the build–measure–learn process to test the project and gather feedback.*

A strategy used by Sakichi Toyoda to optimize the company manufacturing process is called *"the Five Whys"* which can be adapted to the design thinking process (Lydon & Garcia 2015). It is always of importance to take a minute and ask ourselves why we are doing something, but sometimes it demands more or less than five questions.

Design research is an approach that can be used with both quantitative and qualitative methods in the process of gathering, analyzing and interpreting data and insights to inspire, guide and provide context for designers (Fraser 2021). It is meant to be focused on solving a problem or question as the process of a design becomes a part of research (ibid).

Coined by professor Christopher Frayling (1993), *research through design* is a research approach and methodological technique that takes advantage of the unique insights gained through design practice to provide a better understanding of complex-oriented issues in the design field. It means making research and designing simultaneously and trying to produce knowledge through the architect's tools and working methods, instead of more conventional ones (ibid). As design and architecture became a bigger part of the research field in the 90s, Frayling (1993) stressed the need for the act of designing being the essential component of research to solve a particular problem or framing of question. He also proposed research *for* and *about* design, and together with research through design the three techniques usually depend on each other when using them in a thesis (ibid).

The research through design approach has been less established than research for and about design because specific issues are difficult to translate into transferable universal knowledge and projections are hard to evaluate (Prominski & Heggern 2019). The most common mode of working in developing urban landscapes - designing - might not be seen as adequate for scientific knowledge production. Prominski (2019) aims to resolve this dilemma and states that designing has enormous potential for innovative research, if embedded properly in the research process. Prominski (2019) argues for how design research that uses research through design should be structured to match common research criteria.

The research common criteria he mentions is transferred from the most prestigious German research- funding institution, the Deutsche Forschungsgemeinschaft. They have following demands for all research proposals submitted to them:

- *First, to be original, every proposal needs to pose a new research question*
- *Then, the question has to be relevant and responding to it will result in an advancement of knowledge*
- *The knowledge has to be of scientific significance, thus the proposal has to reflect on the scientific context in a critical way and place itself in relation to it to prove its value*
- *Finally, broader impact has to be demonstrated by showing how the knowledge can be communicated and transferred generally*

The Art and Humanities Research Council Summarizing states their demands on applicants in a similar way. This would mean that all common research should include original research questions and reflections on the scientific context, use appropriate methods and advance and transfer knowledge to achieve an impact (Prominski & Heggern 2019).

How can then design research fulfill these common criteria in a thesis? The design practice project and design research differ in that way whereas in a professional context, the landscape architect almost never has to present

the scientific relevance for a specific case. Whereas in a thesis, the research through design inquires to be embedded in a more complex strategy that presents methods and theoretical background as well as a reflection. Prominski (2019) proposes the following key aspects of design research which a thesis has to address in order to fulfill commonly accepted research criteria. Each moment appears several times during the course of a thesis, rarely in a linear sequence.

- Original moments - this moment reflects the quality of the research question of a thesis. An original research question, Prominski (2019) states, derives from the candidates intrinsic motivation and not from something external such as a governmental research programme. This subjective decision has partly to do with the making of a good design. The research question usually has to be rewritten along the process in order to align with the theoretical and empirical knowledge. The openness for changing the original driving force is essential in both research and design. The better the idea or question is, the better design and result there will be. It is important to differentiate between a research question and a design question in that way that research questions raise fundamental issues related to human experience in the world.

- Reflective moments - These moments are closely connected to original moments and have a research about design approach. Once the thesis has a perspective, the writer needs to reflect on the scientific context. What theories and methods could be useful? What research has been done before? Are there any cases that could help answer the question? The reflective moments relate to the topics background in the shape of existing research and methodology and do not include forward-looking effects of designing. The reflective moments usually take up the most time within a thesis and are essential for evaluating whether the research work truly addresses a new original question.

- Projective moments - As the word "project" implies, projective moments aim to project things that do not so far exist, as a part of a design proposal. It can be said that design researchers see the world as a project. These projective moments have potential to concretise unknown futures, they create new ways for things to relate based on certain assumptions and premises. The projective moments integrate subjective intuition with objective rationality and include feedback loops with project-specific reflective moments to achieve a degree of inner truth in the design process. The projective moments have unique exploratory potential, particularly if existing theories or cases do not provide enough knowledge or insights to answer the research question. In order to contribute to communication of transferable knowledge, projective moments have to be evaluated in regard to the original moments.

- Transfer moments - Transfer moments help the projected design to contribute to knowledge and understanding on a broader scale. Transfer moments shift the findings into a level of general validity and broader impact. They are necessary in which the findings resulting from the

original moment and those of reflection and projection are related to each other and transferred from the state of being a loose collection to a more or less coherent whole. The specific projections are translated into communicable knowledge such as rules, tools, formats, comments, principles etc for research designers to further apply these insights for their own purposes.

- Empty moments - The moments above have all been goal oriented so far. But every report written also includes empty moments, in which goals are no longer in focus because thoughts and feelings drift away from the research topic. These moments are usually felt or seen as unproductive or negative. Though there is research showing positive aspects from moments of emptiness. American neuroscientist Marcus Raichle, has made studies of the brains of test persons, showing the importance of intrinsic activities (Prominski & Heggern 2019). He acknowledged that most of the brain functional activity is devoted to intrinsic activity, not goal-directed activity. Hille von Seggern has also stressed the importance of empty moments in a design process in order to finally arrive at an "aha" moment (IBID, 2019). Hans Loidl and Stefan Bernard stresses the importance of activities like listening to music, dreaming and physical movement in combination with educational activities. These moments are not external from the report written and can have positive aspects important for the thesis, and could even be used methodologically. The sense of emptiness can be celebrated as a creative stage of the process.

2.2 Literary research

To base my work theoretically and identify fields of knowledge that are relevant to my project, literary research was conducted by examining subjects about site-specific design, radicant design, planning for uncertainty, wicked problems, relational aesthetics, relational thinking and small scale interventions that are referred to as urban acupuncture, tactical/temporary urbanism. Most of the literature is available as printed copies but was mostly studied as e-books or as pdf because of the simplicity to orient oneself and make highlights in the text between reading different chapters. Most of them were found on Perlego (2024).

2.3 Document study

Research about the chosen sites background and future development was sporadically studied through digital articles, as well as precedent projects were studied online to gain further inspiration for the design process and understanding of the site. The competition program from Terraviva was downloaded from their website, to be read as a pdf.

2.4 Site analysis

For this thesis a study area selection in Malmö was considered, to be able

to choose a site to design. The selection of areas was first categorized into industrial areas, coastal areas and areas at the geographical border between city and rural land, from my own previous experience of the landscapes close by and within Malmö. The geographical delimitation was decided to Malmös coastline and the landscape typologies where the ocean and land interplay were divided into industrial, urban and vegetative. This helped make relevant site analysis and building narrative on a city scale. To discover the site's functionality, materiality and capacities, site analysis using various techniques was conducted with the help of site visits, observations, sketching, photographing and mapping. Planned site visits were conducted during the beginning of 2024 and involved cycling, walking or riding the bus past and around the site area. It also involved entering the site from different directions to experience the existing spatiality.

2.5 Designing a proposal

The design proposal is based on findings from site analysis and literary research and is demonstrated by sketches, model building and digital visuals. The framework and rules set by the competition brief creates a realistic and site-specific design proposal. During the course of designing, various theoretical backgrounds were projected onto the proposal in order to test them.

The concept of *relational aesthetics* was more or less subconsciously used and tested during the design process of this project. Nicolas Bourriaud (1998), the main front figure of the concept that originates from the concept of relational art and installation art in format, describes it as trying to seek establishment for intersubjective encounters, literal or potential (ibid). Relational art seeks to create social interactions, whether it be with the subject or next to it, rather than in a privatized space between the artwork and the viewer. Bourriaud (1998) also states that contemporary artists within the field seek to learn how to inhabit the existing world in a better way, rather than trying to long-term change their environment. Instead of a future utopian agenda, they seek to only find provisional solutions in the here and now, as Bourriaurd (1998) refers to as functioning "microtopias".

Relational aesthetics can be seen as a direct response to virtual relationships of the internet and globalization, which on the one hand have prompted a desire for more physical and face-to-face interaction between people, while on the other have inspired artists to model their own "possible universes" (Bourriaud 1998). Relational art sets up situations in which viewers are not just addressed as a collective, but are actually given the opportunity to create a community, however temporary or utopian this may be. The DIY, microtopian ethos is what Bourriaud (1998) perceives to be the core political significance of relational aesthetics.

Material used in the design process consists of both physical objects: pen, pencil, paper, wire, tracing paper, thread, sewing machine, scissors, printer and pastel crayons, and digital tools: Sketchup, V-ray, SCALGO, Illustrator, Photoshop, Indesign, Vattenatlas and a scanning app called Notebloc. The freedom of being able to use various materials and digital tools has deve-

loped a creative mindset and a variety of expressions in the process and resulting design. No particular order of how the various techniques were used exists, instead they very much overlapped each other and returned during the whole design process, both in the form of projective, reflective and empty moments.

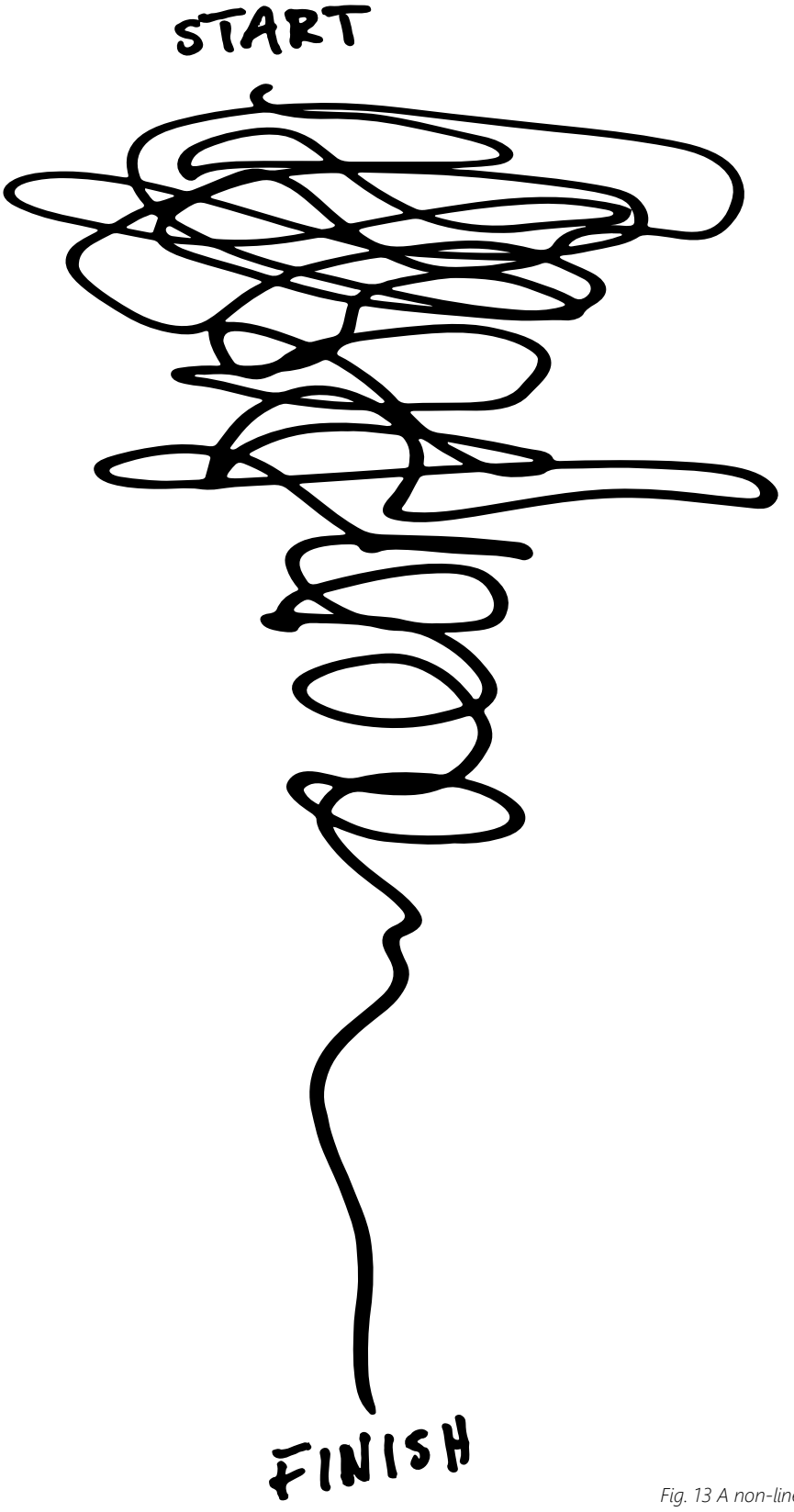


Fig. 13 A non-linear process

3. Theoretical foundation

3.1 One “true” narrative - facing the fact of matter

It is important to remember what time we live in, when this thesis project is published. Many examples of current governments tell us a story of the probable inevitability of globalism. Without distinction, they tell us a story of the inevitability of a particular form of neoliberal capitalist globalization which we are experiencing at the moment (Massey 2005). According to social scientist and geographer Doreen Massey (2005), that includes a combination of glorification of the (unequally) free movement of capital on the one hand, but with firm control over the movement of labor on the other. In its current form, globalization is not the result of a law of nature. It is a project. On a global scale, the capitalist West has become that of a “true” or “best” narrative, with the development of high tech innovations and smart cities (ibid). Pointing at differences around the globe, these governments will tell you other countries (usually mentioned as development countries) will eventually follow along with the capitalist West. That they are just “behind” (ibid). That they are just in the earlier stage of the only narrative that is possible to be told. Informal urbanism for example, is nothing of acceptance in the global North. This dualistic division between “us” and “them” in what is collected into one narrative instead of many, is what forces inequalities of space to rise. It reduces simultaneous coexistence to place, and determines the purpose of space (ibid). Malmö is geographically located in the global north and is proving itself to becoming more developed, high technological, ecological and a Scandinavian metropol. But, at the same time its population is expanding very fast and local climate changes are becoming more tangible. New housing developments are causing little consideration to historical heritage values in some places as well as gentrified areas are not reducing economic gaps that are prominent between the districts in the city. Rainstorms and temporary sea-level rise is causing damage to structures almost every year. In order to build a livable city, we need to take these challenges seriously, possibly learning from other places on how to adapt on smaller scales as well as on a city scale.

On a global scale, we are now setting the scene for a planet meant to adapt to different changes over time. While places usually are claimed, or rejected, there are most often shared assumptions concerning spatiality, authenticity, security, coherency (Massey, 2005). On a city- scale, Malmö, as most other urban areas of all time, is facing challenges and changes. It is vital that we do not neglect these, but try to adapt to them in a strategic way that, so far, have been crucial to existing places already faced with social or environmental difficulties. Usually informal or temporary structures, which do not fit into the modernist schedule of *order or control*. As Professor Flavio Janches (2019) discusses, the conceived “otherness” of informal urban settlements must be washed out and instead, learned from. Anthropologis and professor, Arturo Escobar (2018) discusses the possibilities that design has to change the one folded eurocentric narrative into the re/emergence of the pluriverse. That means a world where many worlds fit within. As Janches mentions, this also implies drawing from other worldviews and implies the

existence of many worlds somehow interconnected. The human world is connected to the natural and spiritual world, these kinds of worlds co-exist in space and time (ibid). He states the development of technology that comes from the shift to the modernist world during the 1900s is to be held highly responsible for this change to a homogeneous look at the *right* world, the human techno-modern world. But a change can happen. Some examples of design solutions are brought up as Escobar (2018) explains it, seeds to a radical design imagination. This is giving people more power to design or be in control of their own world. Here, examples in *the global south* reflect design solutions (often from local communities or between them) that lead to a more autonomous design and contribute to the transnational conversation on design (ibid). The pluriverse theory acknowledges proof of another world than that existing is possible, another narrative is possible. Escobar (2018) wishes to contribute to acknowledging people's ability to shape their own worlds through relational and collaborative tools and solutions, which is discussed within the stems of contemporary Latin American epistemic and political experiences and struggles (ibid).

It is essential that we as planners, designers and architects consider people's everyday life as well as possible contingencies in an inter relational world that is constantly changing, and is way too often neglected in large scale master-planning (Till 2009). The value of human and ecological well-being is affected when *"the plan"* does not meet the expectations set many years ago. The distance between functions and needs is just one of many rifts that contribute to the gap between architecture as it wants to be and architecture as it is (ibid). That means to look beyond the conventional master-planning, and find new strategies in order to make more site-specific urban development. But also to not neglect how one intervention can cause disturbance in other social, economic and ecological contexts of the city. Synonymous to the critique from Henri Lefebvre towards modernist ideas such as grandiose Le Corbusier villas, "*The fact of the matter (people's needs) is nowhere to be found in them*" (Till 2009 p. 42). Revitalizing the local idea of needing to change the one "true" holistic narrative is a task of complexity that is possible to explore in unpredictable times by testing and evaluating new ideas and concepts. If we continue relying on making 20-year master plans for cities like Malmö, we will be diving straight into the trap of uncertainty that is laid in front of us. Even our high technological society will be facing challenges. Learning from other places and designing for more resilient and adaptable coastlines in Malmö and Limhamn is a discussion worth taking in order to reconstruct the current Western mindset towards informal urbanism and homogeneous city development.

3.2 Designing for (in)tangible uncertain time(s)

Just 20 years ago (from 2024) our world looked different, and especially, the site looked different (Kahn & Burns 2021). Climate change is producing more extreme weather, drowning some sites and creating new ones. Professor Andrea Kahn and architect Carol Burns (2021) stresses the emergence of complex problems that go beyond conventional boundaries to be in need of new ways of thinking and new conceptual tools. Professor of Science of

Design, Horst Rittel and professor of City Planning, Melvin Webber referred in 1973 to these types of complexity as *wicked*, as unsolvable. Ever since (and surely before), *wicked problems* have led the search for scientific basis for confrontation of social policy to failure, because there is no definite definition of a wicked problem (Ritter & Webber 1973). In the context of Malmö and Limhamn, flooding can be seen as a wicked problem, with no common solution for all places. Wicked problems function as with no ends in a causal chain that links interacting open systems together, such as forces from a pluriverse, if to refer back to Escobar. Every wicked problem is essentially unique. Planning and master planning cannot be a solution to a problem of this nature, there cannot be a true or false solution, only better or worse examples, Ritter and Webber (1973) explains and as the problem itself, a design is probably going to function better if it has no defined end to it. This is also because decisions usually are made in a room of people with ideological predilections. Their assessments of proposed solutions can therefore only be expressed as *good or bad* (ibid). An open ended design proposal can therefore be considered and further discussed through various ways of looking at the world.

In 2000, climate scientists Paul Crutzen and Eugene Stoermer made the observation that humankind had become a global force and suggested the emergence of *the Anthropocene* as a new geological era (Sijmons 2021 see Kahn & Burns 2021). Today the concept can be recognized in many scientific publications, as well as the minds of the general public fed by the popular press. Natural and human processes in the Anthropocene are seen as linked together (ibid). It is recognized that we cannot withdraw unlimited resources and upon which we can dump waste forever. The question to ask ourselves is how to deal with this new era in time.

Australian philosopher and science writer Clive Hamilton has molded four distinct attitudes, or philosophical views, towards the Anthropocene that may help designers and planners (and everyone else) navigate in the new era (Sijmons 2021 see Kahn & Burns, 2021). Two of them, *denialism* and *ecomodernism*, are dominating in current environmental debates, whilst the other two, *posthumanism* and *anthropocentrism* 2.0, each demand a paradigm shift in thinking about the world (ibid). The latter two, remains largely terra incognita for the design community. Sijmons (Kahn & Burns 2021) questions if these four worldviews necessarily will produce four different angles on site, aware that understandings of site will always be a complex interaction between characteristics and the eye of the beholder.

- Denialist: *people that could be uninformed, but usually just denying that humankind has any impact on global systems, let alone climate.*

- Modernist/ecomodernist: *The modernist ideal of everlasting progress is kept alive and follows the belief of "the best is yet to come", similar to that electric car company. Economic growth can coexist with reducing the ecological footprint, and if growth should produce problems, rational solutions will be found. Ideals in utopian terms are formulated by modernist politicians and designers.*

- Posthumanism/ontological pluralism: *Humans are supposed to take a few steps back in order to recognize their place as a small cog in the web of life spanning the whole living planet. This philosophical strand examines the ethical implications of expanding the circle of moral concern and extending subjectives beyond the human species.*

- Anthropocentrism 2.0: *As an extension 2.0 of Anthropocentrism, Clive Hamilton reintroduces the concept divergent from posthumanism with the notion that humans have caused a catastrophe with unimaginable impact and must be made accountable. It means to resituate the anthropos from the center of domination over nature to the center of responsibility and stands by the belief of "the worst might still be avoided".*

Hamilton explores the possible implications for professional attitudes, responsibilities and ethics in the light of the Anthropocene, using the site as an interface. Implications are driven by societal problems brought on by the Anthropocene and the ideological tidal movements and political reactions to these shifts (Sijmons 2021 see Kahn and Burns, 2021). The conclusion is to put effort into embracing pluralism, one way of looking at the world, does not count out another. As practitioners, we have to take sides in the fierce debates inside, and between, the four schools of thought on the practical challenges connected to the Anthropocene condition (ibid). Reading the site in the Anthropocene will mean reading the myriad of processes involved. As Diedrich (Kahn & Burns 2021 p. 176) states: *"no single discipline can claim to solve globally entangled problems alone"*, opening for a conversation about the importance of transdisciplinarity.

3.3 Contingency

Architect and writer Jeremy Till (2009) reflects and discusses *contingency* and *low-fi architecture* not as trends or experiments to face reality, but as necessary to design for people's needs in everyday life. The modernist era (with all the architects that truly believed in its consensus) has before been accused of diminishing these. Simply explained because contingency does not fit into the ideal scheme of things. But they are not solely all to blame for the concept of control and order. Vitruvian philosophers, architects or planners have for a long time imagenaged the physical elements in environments to not be disturbed by contingencies (Till 2009). They believed, if one wants things regular, repeatable and predictable, one needs to do something about it since contingency itself can't do anything about it (ibid). In the "modern" project, contingency cannot be tolerated, be it architecture, political, social or philosophical (ibid). Till proposes the opposite. He refers to Hegel and his *Science of Logic*, in which he states that contingency must be established in the rule of logic; or as he puts it in the book *"For Hegel reality would not be self-sufficient if it did not contain its own irrationality"* (ibid p.38). With all due respect for great thinkers and architects, Till proposes progressive, reconstructed alternatives towards a design process acknowledging unpredictable events that will take place in space and time (ibid). We can no longer take anything for granted. It is quite simple, imagining the fact that things could be otherwise than they are.

Our role as architects must therefore be to deal with contingency. Designers, planners and architects can not work in solitude thinking they will solve the problem, they are as much dependent on others (Till 2009; Sijmons 2021 see Kahn & Burns 2021). We cannot either calm the societal flux (original users, new users, time, historians, new technologies, weather, events and critics) by trying to control space or time in any way. The purpose is to try and balance those colossal forces that are ever changing. As is research. Research is contingent and often crosses over the borderlines of their own disciplines (Till 2009). Till (2009) continuously stresses that flux should be the norm and not the exception. Looking at the design process, he adores those who look first and then think (adapting design to uncertainty of the reality) rather than those who think first and then look for places to impose their thinking (ibid). With all said, there are different views on modernism and also events in time that we will never fully understand. In order to design for uncertainty, conversation is needed.

3.4 A plea for shift - contemporary adaptive strategies

Conversation has been raised by many, usually in order to change something, to propose a paradigm shift or to spread awareness of what is, what has been or what could be. Although opinions are not always a part of the same movement, it is a part of a movement. Usually thought of as progressive and dynamic.

Every period of time has different needs, and societal changes rule this. Hence, it does not mean our modern high-tech *"Smart cities"*, all over the world, are wrongly developed, but it may cause a risk for architects and planners to slowly lose interest in the local or human scale, as architect Jan Gehl (2013) describes as one of the cornerstones of a socially sustainable and livable city. *"The visions and thinking are large, just like the scale"*, Gehl (2013 ch. 2.3) states and stresses the need for small-scale thinking. This very much is inspired from Henri Lefebvre's philosophy about *the right to the city*, where emphasis is put on how space should be shaped and governed by citizens who inhabit it (ibid). Urban acupuncture movements all over the world hosts great hands-on examples of citizen driven projects that have in later days taken a step into the web of masterplanning. That is the type of influence small-scale design may have on larger thinking processes.

When designing, a process of analysis usually needs to be done and there are many ways of doing it. Searching for alternative approaches to particularly harbor transformation, design researcher and writer Lisa Diedrich (2013), as well as Kahn and Burns (2021) proposes new disciplinary methods for making site-specific designs in order to elaborate framework for analysis. Diedrichs research is motivated by the idea that new landscape architectural approaches could enrich the professional knowledge about site-specific design. The goal is to stop the trend of homogeneous planning and design proposals for harbor transformations, such as the site in Limhamn. The research refers to a theoretical position characterized by a pragmatic framework, which identifies a site as a *dynamic relational construct* (Kahn & Burns 2021). It stresses the need to visit for example Limhamn and Malmö in order to

discover the specific needs for developing seascapes. One might find out some sites are not in direct need and they can be left alone for now, but it could be a part of a bigger development strategy or work as an inspiration for another site. Diedrich (2021 see Kahn & Burns 2021) writes about Kahn and Burns and explains their way of thinking about the site. It is much more than the area given to the designer from a client. When exploring it, one realizes it is a part of a bigger connected network and influences. At the same time, the site in question will influence other places when being designed or changed. Kahn and Burns proposes the site as consisting of three areas: *area of control* (corresponds to to the site within its property lines), *area of influence* (systems and forces that act upon the given site even if they do not take place within its boundaries) *and area of effect* (defining the domains beyond the given site that are impacted by design) (Kahn & Burns 2021).

It is uncertain when large housing projects will take over the existing site in Limhamn. But when and if it does, a historical landmark will be vanished and replaced with a ridiculously high tower of expensive apartments. This new landmark will affect both the local community of Limhamn as a district and the whole city of Malmö. Diedrich (2013) stresses an alternative approach to the global *tabula rasa* (a complete make-over) in harbor areas, is to suggest site-specific design and promote design as transformative and not static. As by urban acupuncture, designers are free to add dots within the area of control, as to mark smaller interventions. It can also happen that the dot might be broadened and made bigger in order to define the controlled site and make a less restricted frame. The areas of influence are hence included in the area of control. No matter what, a site needs considerations on all scales, zooming in and out on material and immaterial boundaries. This is a way of understanding the site in all its complexity as a trans scalar figure.

Landscape architect Ellen Braae (Kahn & Burns 2021) also proposes design as transformation, rather than creation from scratch. She highlights that since the Renaissance design has been associated with creating new forms on a blank sheet of paper, culminating in the *tabula rasa* approach of the modern movement in the 20th century. Countering this position, postmodern design has tended to preserve historic forms up to museum-like states. Both *tabula rasa* and *museumification* can be understood as equally site-repressive extremes; both underscore the need for site-specific alternatives (ibid).

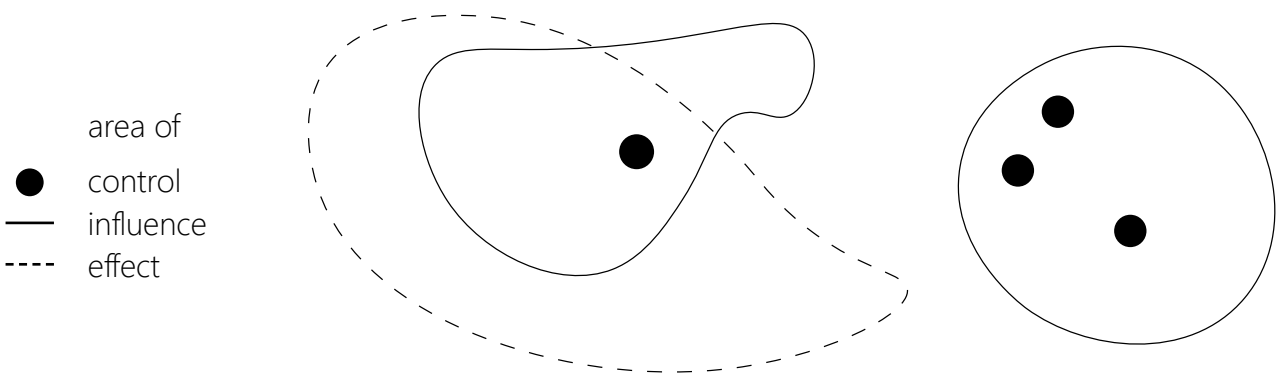


Fig. 14 Area of control, influence & effect

Professor and writer Jane Wolff (2021 see Kahn & Burns 2021), states that design representations have always mediated between landscapes *as they are* and *as they might be*. Contemporary transformation projects could be aimed by defining the site as a dynamic relational construct, *by radicant design thinking* (Bourriaud 2009). Kahn and Burns (2021) propose to distinguish between *site thinking* (a mindset that is general and proper to every discipline or designer) and *thinking about site* (thoughts about a concrete plot of land in its physical condition). The act of design, rather than formalization of a static site, means one can learn about designers' site thinking by unpacking their thinking about the site through the study of their design projects (ibid). It makes it possible to identify if the site is conceived as a blank condition (tabula rasa), shrine to history (museumification), physical figure (site specificity), evolving construct (radicantity), a combination of these, or something else (ibid). These are all ideas focusing on site specificity on a local scale, as well as thinking about places as ever evolving and changing. For the latter, adaptive and tactical urban design is needed. Flooding is seen and described as an ever evolving process, affecting the site in various ways depending on intensity, making the coastline of Malmö into an evolving construct. In some way the chosen site in Limhamn for this project consists of both the evolving ocean and the physical historical figures on land and how they interplay and interact with each other.

It is not only when thinking about a specific site or place that relational connections are made. It is all types of networks and interplays. Professors and writers Quentin Stevens and Kim Dovey (2022), develops a critical analysis of the diversity of tactical and temporary urbanism approaches by using *assemblage thinking* and *actor-network theory*. *Assemblage thinking* is relational thinking (the identities of places, people and things are not fixed, but constituted by connections, flows and alliances between them, as mentioned before) and emerges from the philosophy of Gilles Deleuze and Felix Guattari (1987). It has later been developed to raise the prospect of understanding the city as a space of possibility (Stevens & Dovey 2022). *Assemblage thinking* has also been adapted by philosopher Bruno Latour (2005), who has spawned the *Actor-network theory*, which focuses on forms of non-human agency embodied in the material world (ibid). According to Latour (2005), insights come from examining dynamic relationships among networks of actors and how these relationships emerge, stabilize and transform over time.

3.5Urban acupuncture, tactical urbanism & relational art

I have always been fascinated by acupuncture. This medical, healing, almost bizarre tactic, no one I know has ever tried. But don't we all have a hope that with the prick of a needle, diseases and bad conditions may be cured? According to clinics, acupuncture helps increase the *energy flow* (translated from Chinese *Qi*) that is connected by "pathways" in our bodies. Specific places thereby can help revitalize an entire area surrounding it, and improve our overall health (Hopkins Medicine 2019). Triggering healthy responses that can lead to positive chain reactions within the city is what Urban acupuncture is about (Lerner 2014). Cities today are exposed to stress in various

ways, only to, again, mention rapid urbanization and climate change as two impactful global challenges in Malmö. The way an area copes relies majorly on how the city is planned or unplanned to function. Architect, urban planner and former mayor and governor in Brazil, Jaime Lerner (2014), states that *"Everyone knows that planning is a process"* , which may seem like a brief assumption to make, considering the complexity of views on planning and designing. But he is right, it is a process. A process that seldom brings immediate transformation, how good it may be (ibid). But it has to take time, because it includes multiple actors and long-term guidelines. That does not mean the city in question, meanwhile, needs to suffer from back pain in any matter. The risk management goals Länsstyrelsen Skåne aim to reach long-term will need help from more short term development. We cannot just sit back and wait for transformation to happen, because it is never still. As a stinging needle prick, a simple, focused intervention can increase new energy flow, or even contribute to the planning process. Just as the body, the society consists of interconnected systems that need engagement, and sometimes even change. A quick, adaptive design in the public realm may demonstrate the possibilities of a space/place that motivates the idea to spread into other places (ibid). Even if it is out of dire necessity or out of desire for improvement. The secret of acupuncture is that it needs to be quick and precise, thereby tactical (ibid).

Stevens and Dovey (2022) refers to *temporary* and *tactical urbanism* as *t/t urbanism* and argues that it`s the most transformative global innovation in urban design and planning in recent years. T/t urbanism usually involves the design of semi-fixed elements of public-space, which have long been recognized as central in human-environmental studies (Stevens & Dovey 2022). Quickly transforming spaces, as they are performed by t/t urbanism movement, holds a hope for an innovative and resilient urban design. However, the concept raises some problems and questions. There has been little critical analysis of the varied assemblages of actors and interests in different t/t approaches and how they engage with the wider public interest (ibid). T/t urbanism projects have also been criticized for being interventions only solving short term problems, almost as a "cover up" in order to delay long-term problems. This also includes the use of unsustainable amounts of material for no reason (ibid). While temporary transformations by definition do not last, they don't always revert to a space's pre-existing form, but may morph into something new. A further critique, previously mentioned, of t/t urbanism is based on theories of urban informality in cities of the Global South, where tactics in the temporary transformation of public space are widely regarded as a normal part of everyday urban life (ibid). There are critiques towards the ways t/t urbanism in the Global North is biased towards desire-based informality and implicitly denigrates need-based informality in public space, as well as being constrained by Global North thinking (Stevens & Dovey 2022). From an assemblage perspective, there is no dichotomy between desires and needs (a need can be understood as an intensive and compulsive form of desire), and as urban designer, Stevens and Dovey (2022) seek to focus more strongly on the analysis of spaces as well as physical design and the role of spatial contexts, materials and design approaches.

Stevens and Dovey (2022) seek to better understand t/t urbanism synergies with the neoliberal economy, but also its capacity to incrementally transform forms, uses and meanings of public space. They point out the most distinctive contributions as the emphasis on tactics: approaches that are initiated by citizens to bypass the conventional project delivery process and municipal bureaucracy by visually demonstrating the possibility of change (Lydon & Garcia 2015; Stevens & Dovey 2022). Therefore, they are tactical in the sense that they squeeze between and within larger-scale strategies, both as a "violation" of rules and a production of new rules. This aligns well with the assemblage view of practice which focuses on the development of new connections, models and flows, and the breaking down of old ones (Stevens & Dovey 2022). It is worth thinking of it as a response to the polarizing effects of neoliberal urbanization, not going back to old habits. As Saskia Sassen (1996 p. 639) puts it:

"informal activity is not the failure of regulation or a return to older modes ... it is part of advanced capitalism."

There is a global trend toward the temporary and the tactical that has become one of the key urban design strategies of the twenty-first century (Stevens & Dovey 2022). Tactics are meant to infiltrate strategic systems, but are also productive in that they seek to discover potentials and possibilities of latent capacities (ibid). It can be linked to what Colin McFarlane (2011), calls *tactical learning*, the use of everyday practical knowledge can be seen as part of an engagement with the city as a learning assemblage (Stevens & Dovey 2022). T/t urbanism is a movement that celebrates the city as a dynamic space of possibility and becoming, rather than a static sense of being. The concept enables a high level of creativity and innovation because it uses the city as a testing ground where new forms of thinking can be implemented without the danger of permanent failure (ibid). A temporary framework can enable us to increase the range of experimentation and speed up the learning process (ibid). As in the *actor-network theory*, this is an approach that treats the world as a complex human-environment assemblage, where both human and non-human elements have agency (ibid). If the temporary use on a site is successful, it may be permitted to co-exist and operate in synergy with new changes as the long-term use (ibid).

As previously mentioned as an unconscious conceptual tool in the design process of this work, relational aesthetics and first and foremost, art have some of the same attributes that t/t urbanism usually opens up to: open-ended, interactive, small scale, utopian and the artworks creates more or less hypothetical possible scenarios of social interaction. There is though a constant debate concerning who relational art might be for. Relational art may involve static artworks such as artist Liam Gillicks hanging sculptures or interactive performances such as artist Rirkrit Tirvanijas Untitles 1990 (Pad Thai) from 1990, as art historian Claire Bishop (2004) discusses in a volume of October. As Gillicks work seeks to investigate hypothetical possible scenarios of social interaction, Tirvanija insists that the viewer of his work be physically present, eating his Pad thai in a communal situation (Bishop,2004).

Fig. 15 Rirkrit Tirvanija`s "untitled 1990 (pad thai)", New York 1990
Photo: Mary Manning

Fig. 16 Liam Gillick`s "(The What If? Scenario) Discussion Platform", London 1996
Photo: Liam Gillick

Considering the work of art as a potential trigger for participation is not new. Most important to mention for this context might be writer and philosopher Umberto Eco`s *The open work* (1962). Eco expresses the opinion that every work of art is possibly "open" as it may produce an unlimited range of possible readings (Bishop 2004). This contradicts Bourriaud's (1998) perception of relational aesthetics, since he thinks such artworks require literal interaction and that the structure is the subject of matter. Eco regarded the work of art as a *reflection* of the conditions of our existence in a fragmented modern culture, while Bourriaud sees the work of art *producing* these conditions (Bishop 2004). Further, Bourriaud (1998) expresses the need to evaluate not only aesthetics, but to judge the "relations' ' that are produced by relational artworks in order to evaluate its success. He proposes to ask ourselves "does this work permit me to enter into dialogue?" and "could I exist, and how in the space it defines?". Bishop (2004) further questions the democratic value of relational aesthetics and proposes to further investigate questions as "who is the public?" "how is culture made, and who is it for?".

The quality of the relationships in "relational aesthetics" are never examined or called into question. When Bourriaud argues that "encounters are more important than the individuals who compose them," I sense that this question is (for him) unnecessary; all relations that permit "dialogue" are automatically assumed to be democratic and therefore good. But what does "democracy" really mean in this context? If relational art produces human relations, then the next logical question to ask is what types of relations are being produced, for whom, and why?

(Bishop 2004 p.65)

I do think we need to acknowledge the limitations of what is possible as to being called art in the public realm. At the same time trying a multidisciplinary approach, merging together the knowledge of the artfield with the design process of urban planning and landscape architecture can open up for more dialogue. Trying to weave together t/t urbanism with relational aesthetics, that already have artifacts in common, with our supposedly high technological society in order to propose multiple small scale and adaptable interventions in Limhamn will be envisioned next.

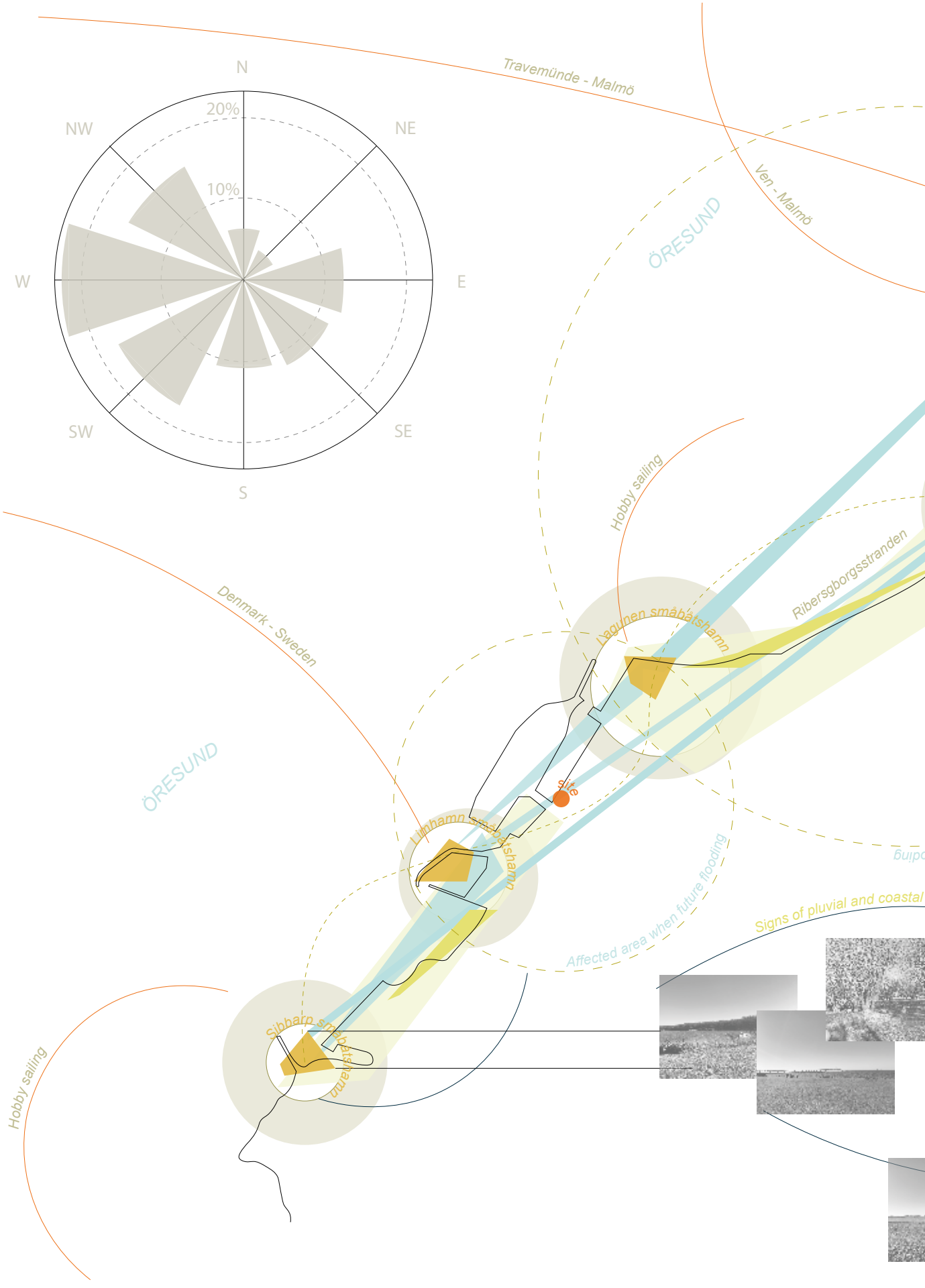
4. Wicked waters in Limhamn

4.1 Site analysis

In combination with conducting theoretical research and document studies, site visits and producing visual material has shaped a design proposal for the site in Limhamn where the old Cementa factory used to be. In this chapter the results and parts of the design process are visualized and described. The order of the material is structured to be easy to follow in this context, but does not necessarily reflect the reality of the process. As it is here, you will be able to follow the site analysis, conceptual experimentation, inspiration findings and the final design proposal.

The final project proposes a three-step strategy for development in coastal places around Malmö, and testing it on the site in Limhamn. The three steps can be used as a methodological tool that conceptually can be applied to places in order to create tailored designs and spread knowledge by creating a closer relation between human recreation, nature and smart city solutions. The phases are meant to be developed at every site with a current critical point in Malmö. Those locations will change over time and the interventions may not happen simultaneously at every site.

Fig. 16 Site visit in Malmö by biking - 2024-02-17


N
NE
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SE
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SW
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20%
10%
Travemünde - Malmö
Ven - Malmö
ÖRESUND
Hobby sailing
Ribersgborgsstranden
Lagunen småbåtshamn
Denmark - Sweden
ÖRESUND
site
Limhamn småbåtshamn
Affected area when future flooding
Signs of pluvial and coastal
Sibbarp småbåtshamn
Hobby sailing
0
1

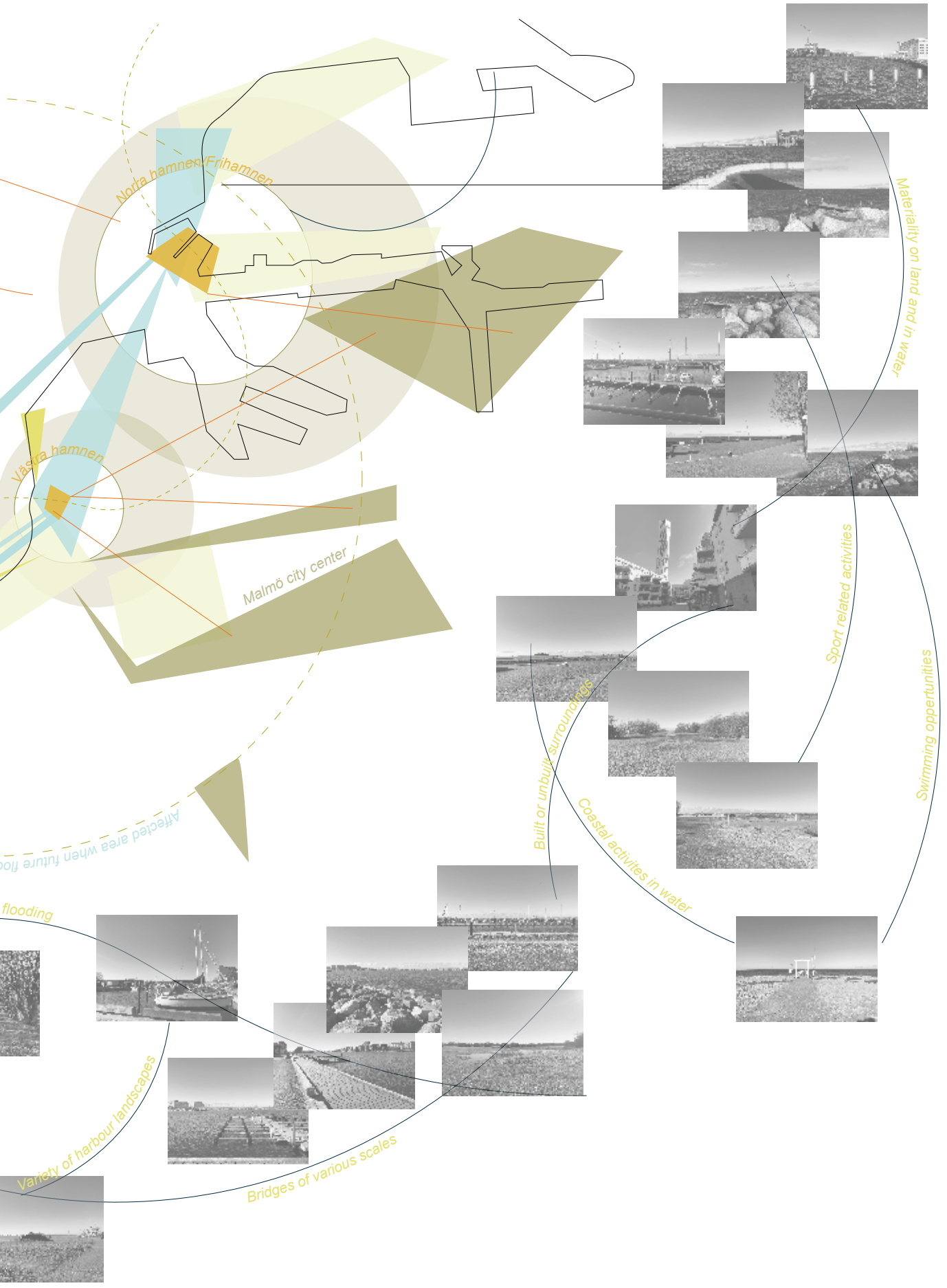


Fig. 17 Coastal relations in Malmö

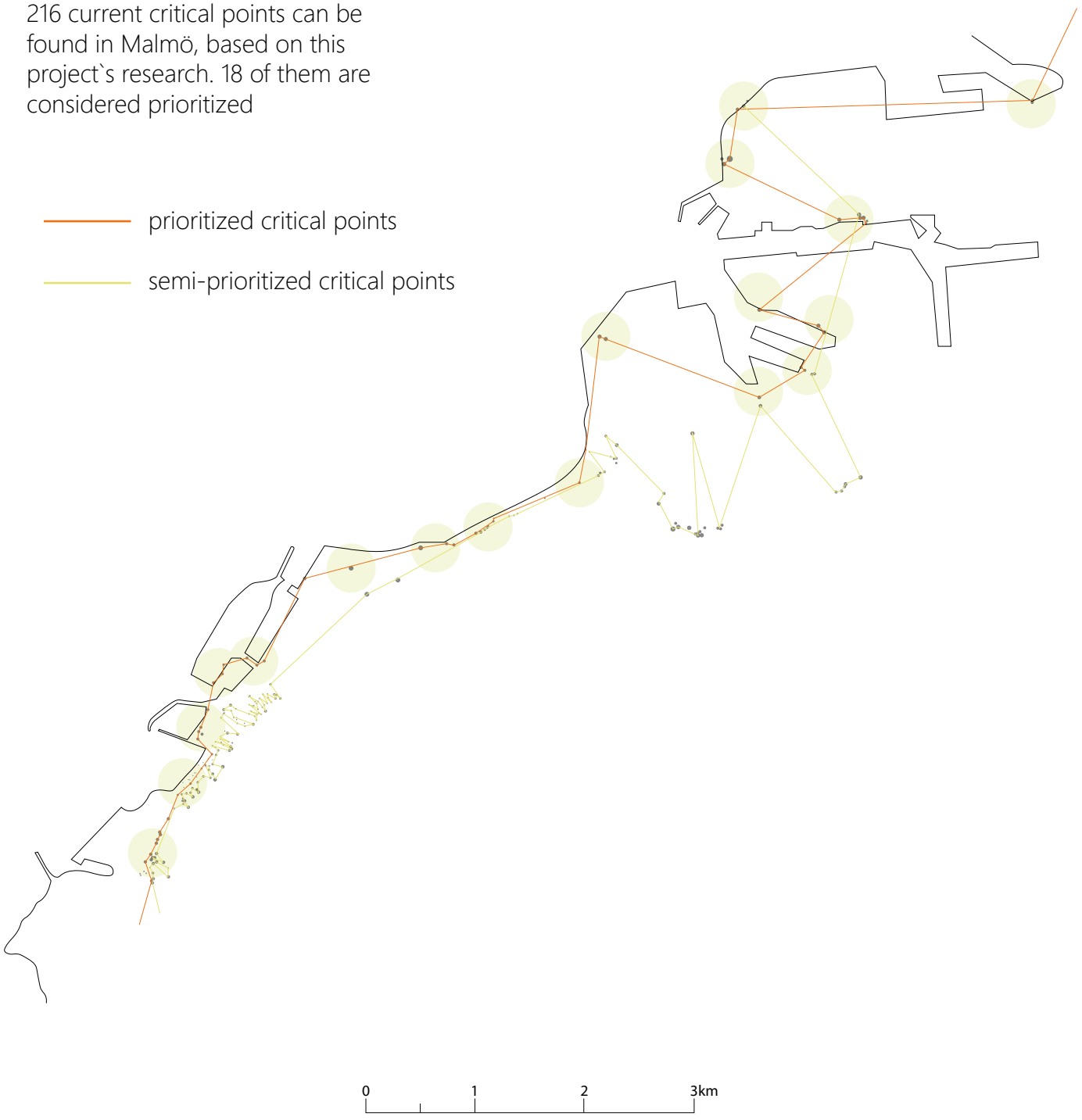


Fig. 18 Critical points in Malmö

A simplified map of critical points and in what geographical scale developing inteventions by them could affect the rest of Malmös coastline

Fig. 19 Areas of control, influence & effect - Malmö coastline

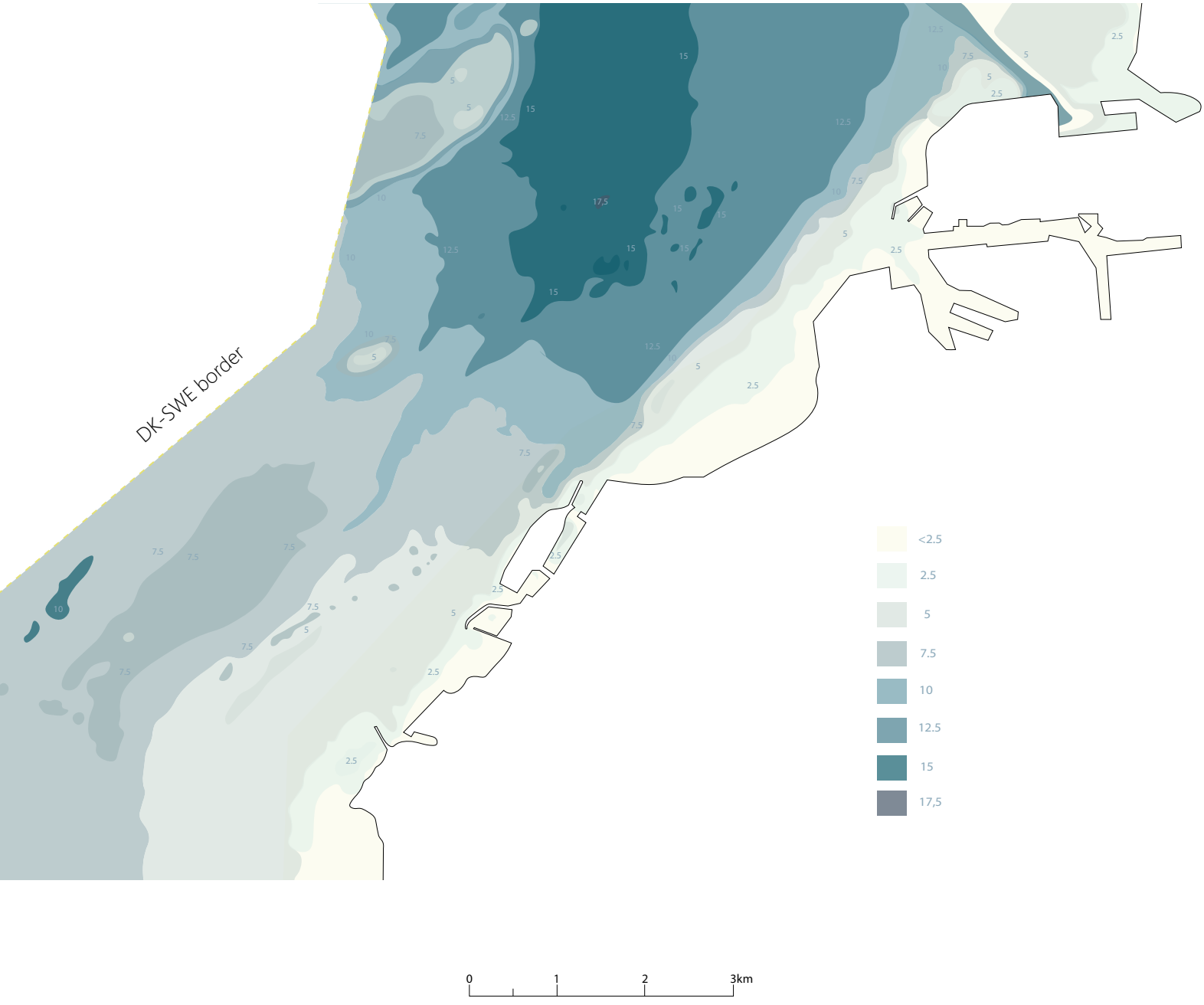


Fig. 20 Öresund sea level depths

Fig. 21 Öresund - functions

Three main landscape characteristics alongside the coast of Malmö can be recognized: industrial, vegetative and urban. The various characteristics of the coast, and how land and water interplay, demands site-specific urban development. Sections to the right show existing and possible landscapes.

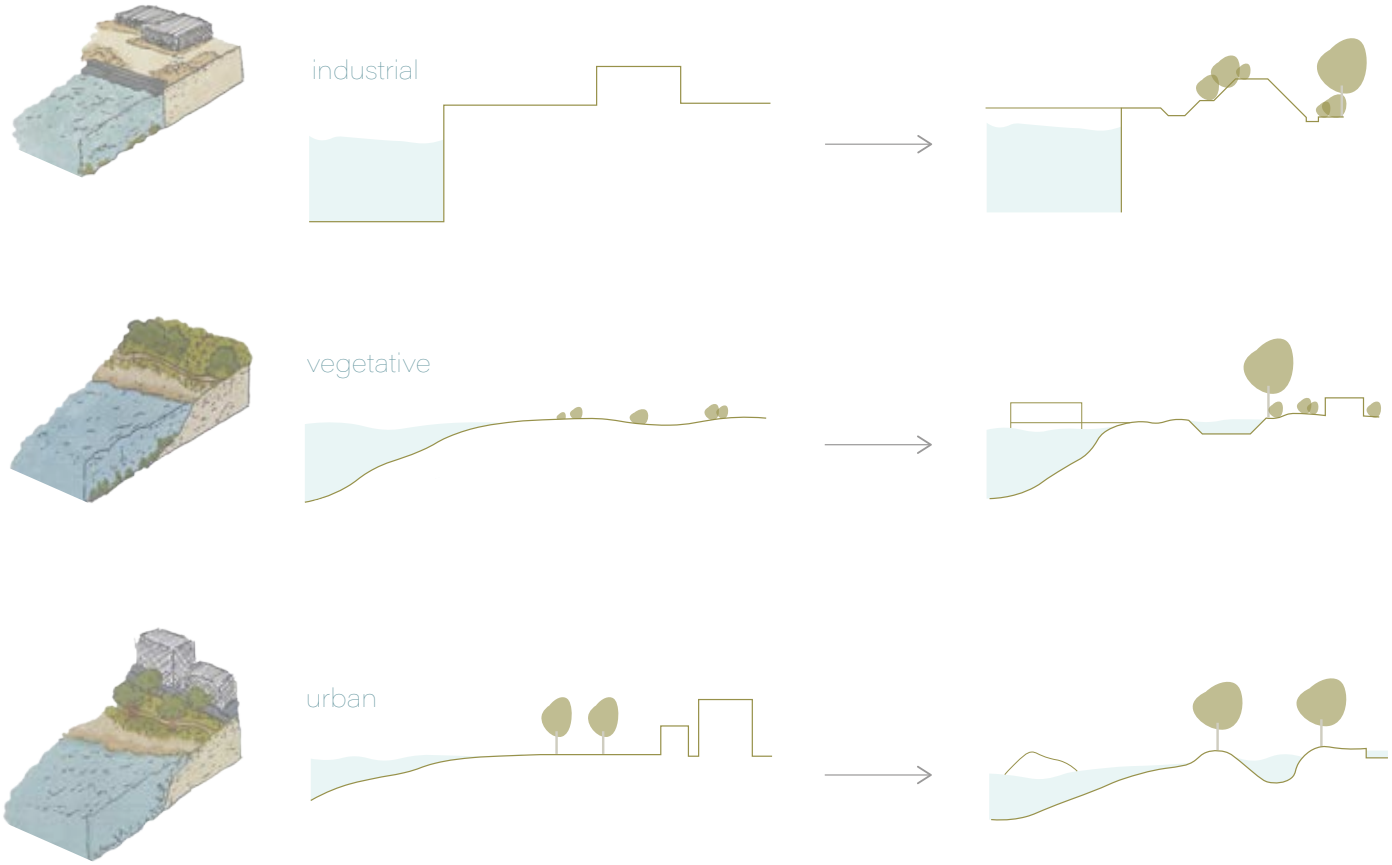
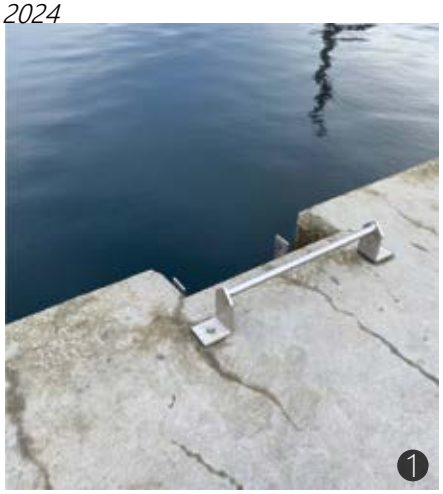


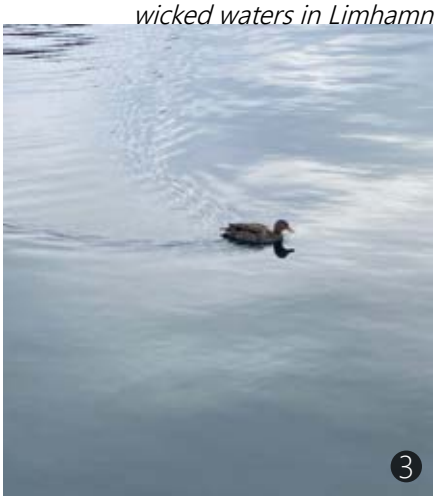
Fig. 22 Water and land interplay typologies in Malmö

The three landscape characteristics are geographically placed along Malmö`s coastline in order to detect similar sites. It is important to acknowledge there are more types of landscapes where water meets land in Malmö, but these are the most preminent. As seen in the map, the site in Limhamn has a industrial character.

Fig. 23 Critical points in relation to Malmö coastline and cityscape

Fig. 24 Site visit in Limhamn 2024-02-13





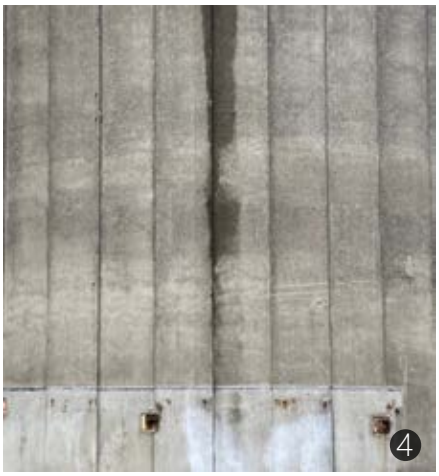


Fig. 25 Traces of water in Limhamn, se fig. 24 for locations

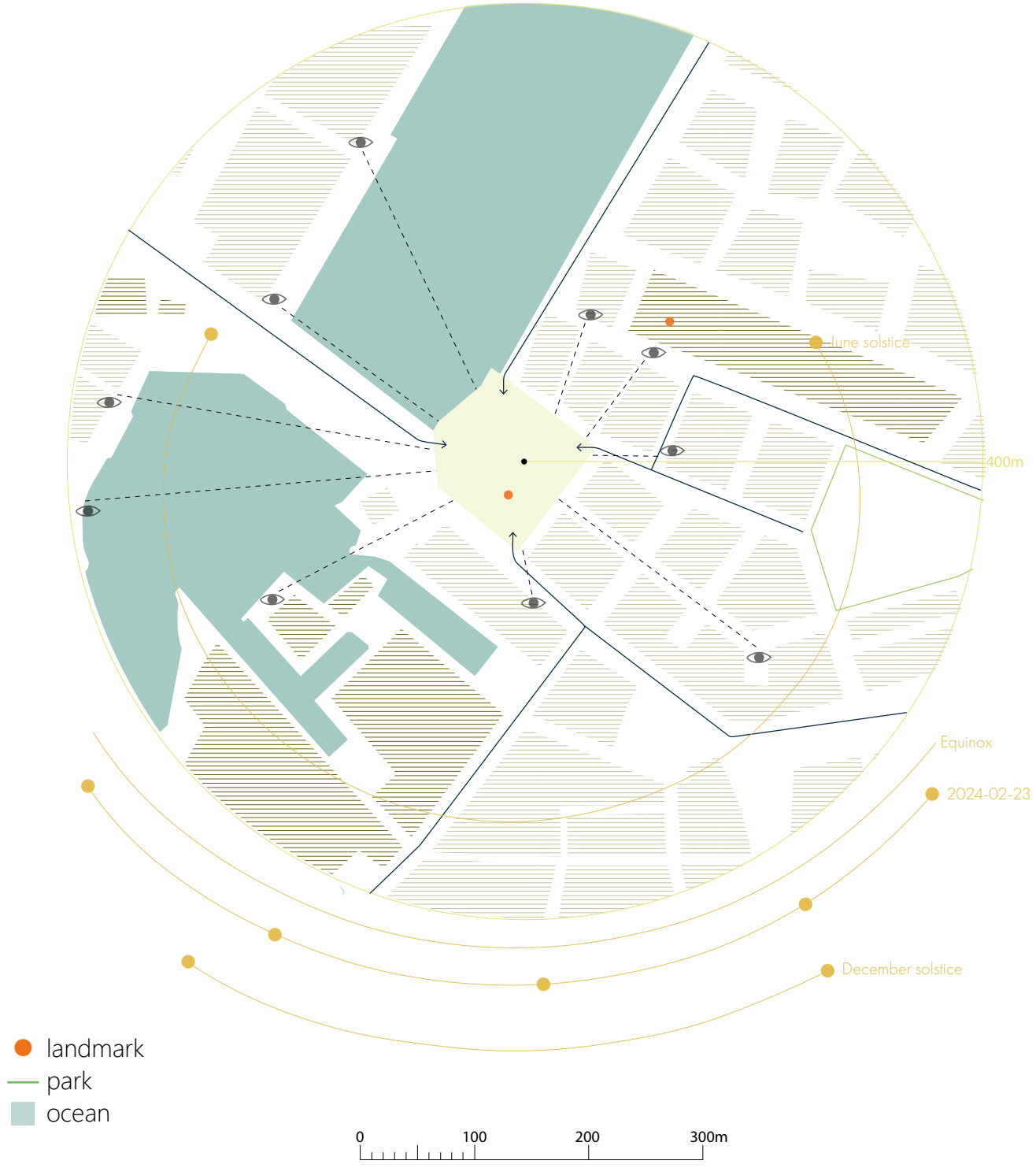


Fig. 26 Compiled site analysis Limhamn neighbourhood scale

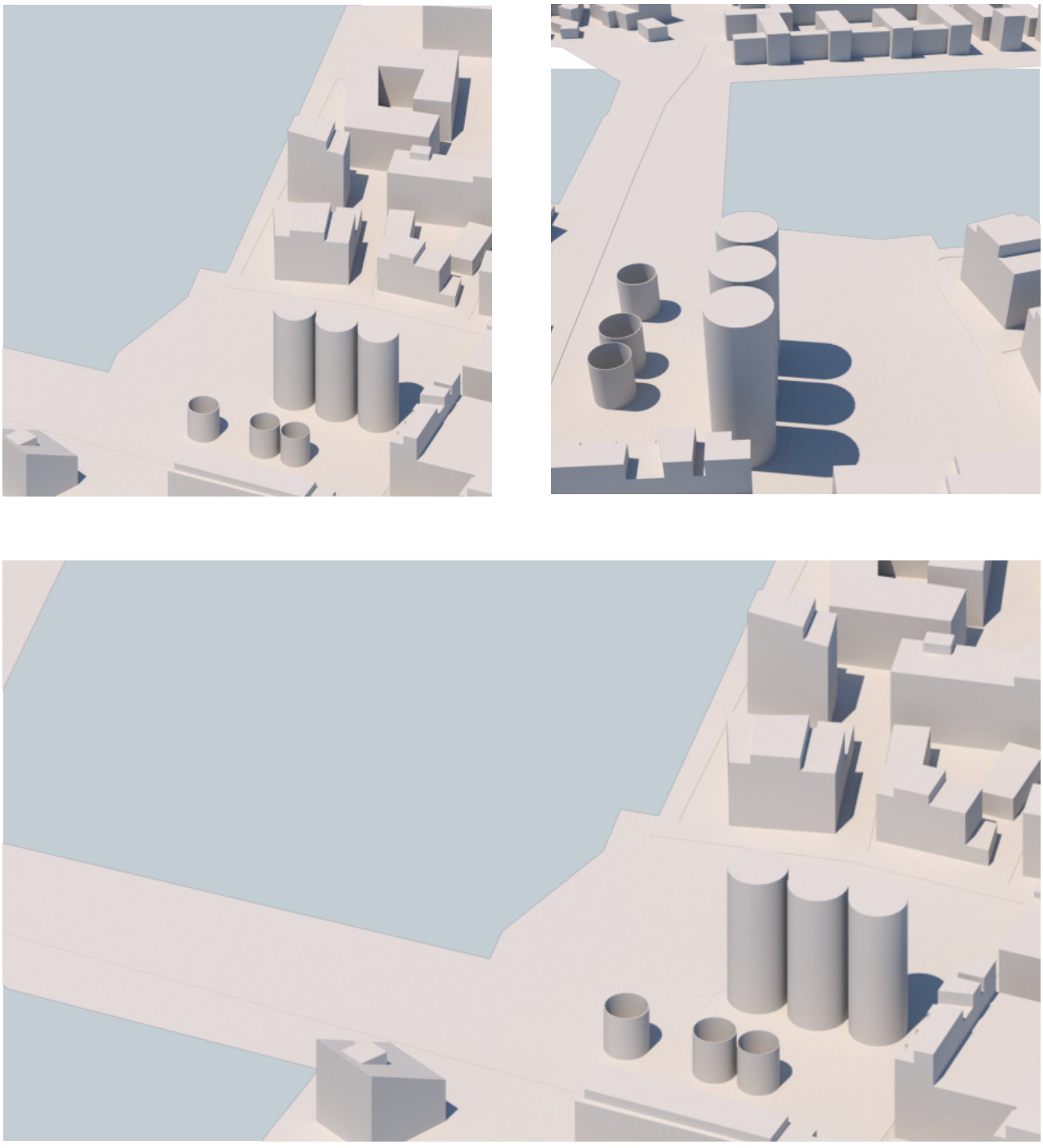


Fig. 27 Sketchup model of site - exploring spatiality

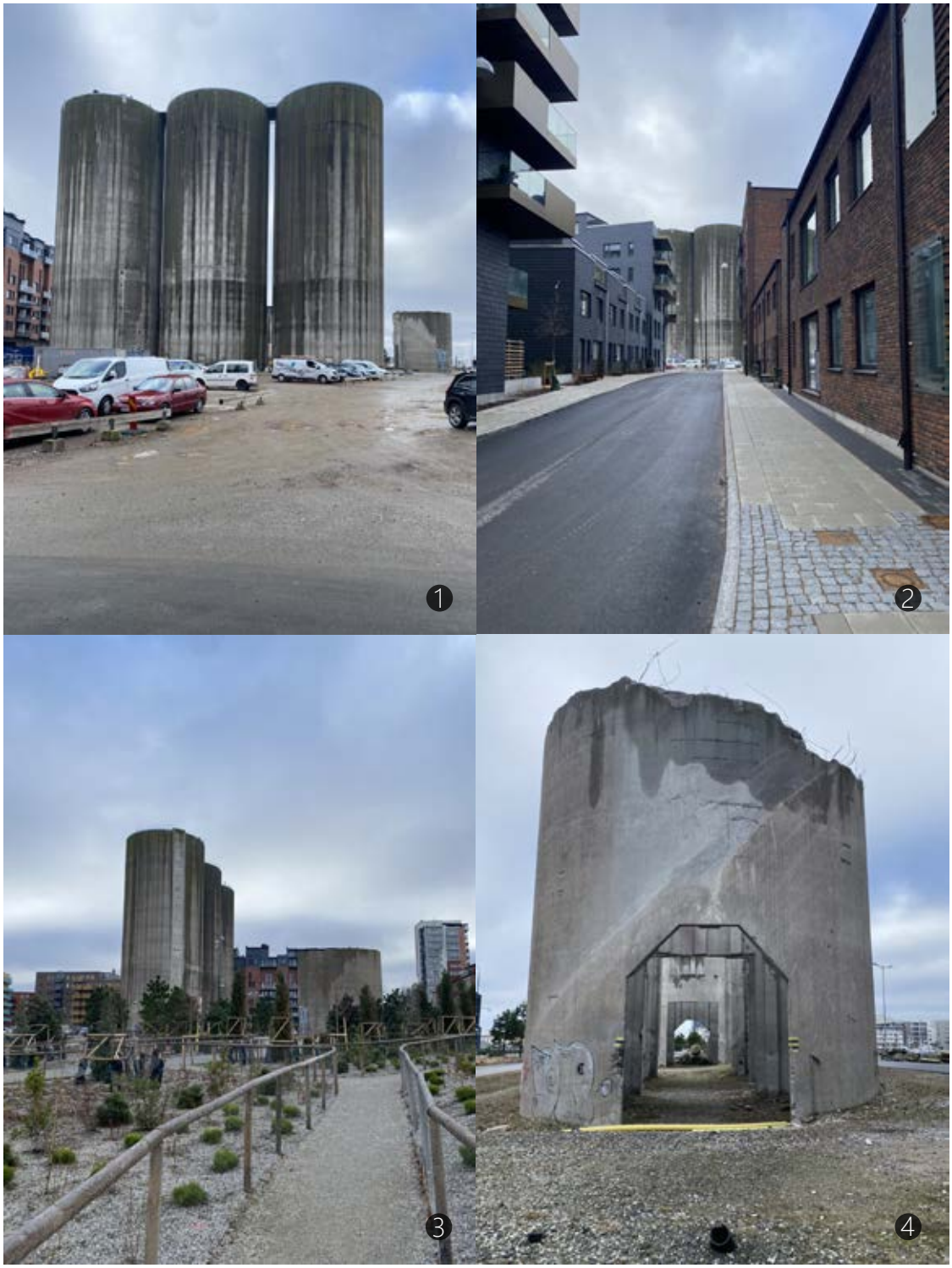
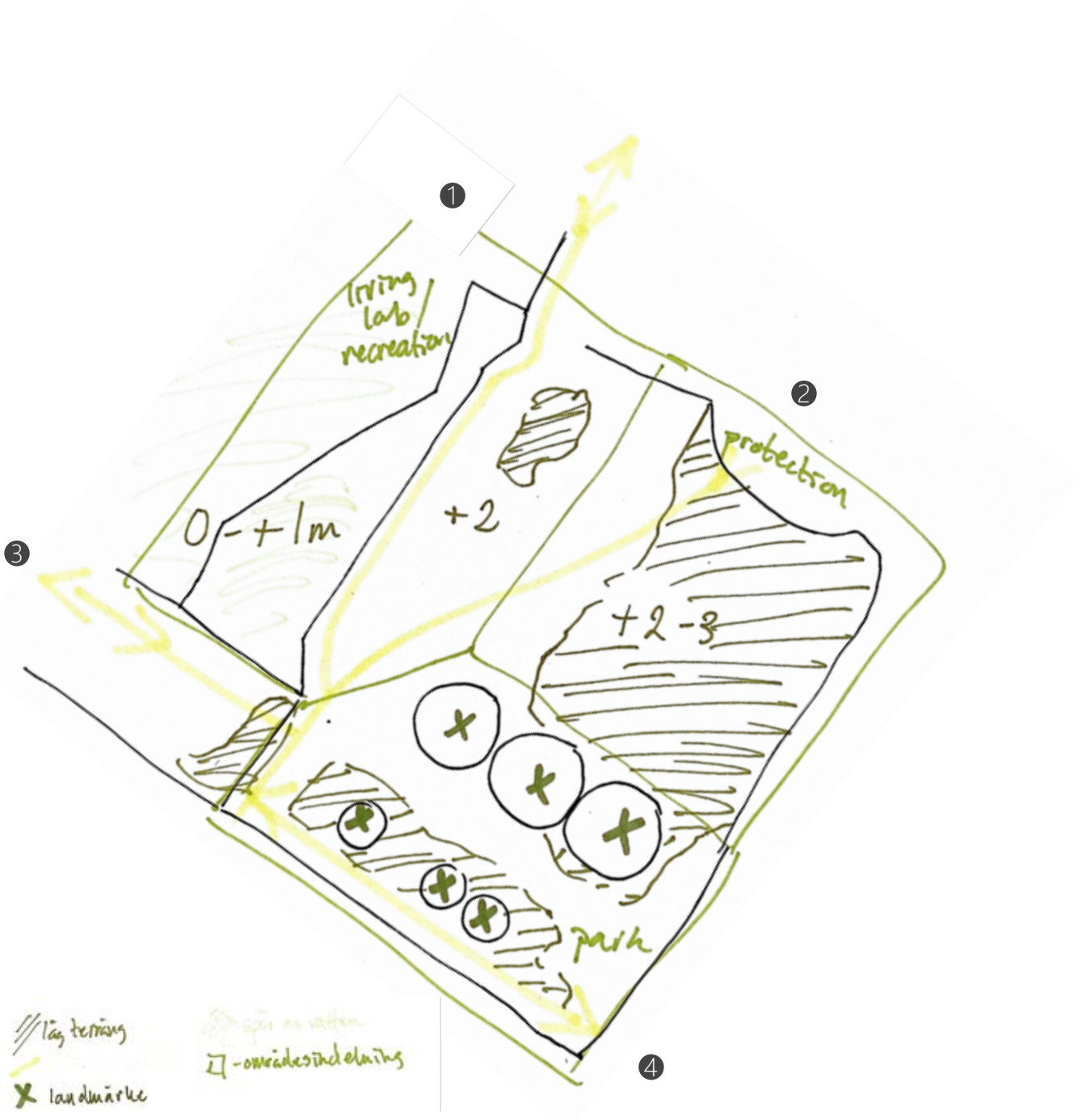


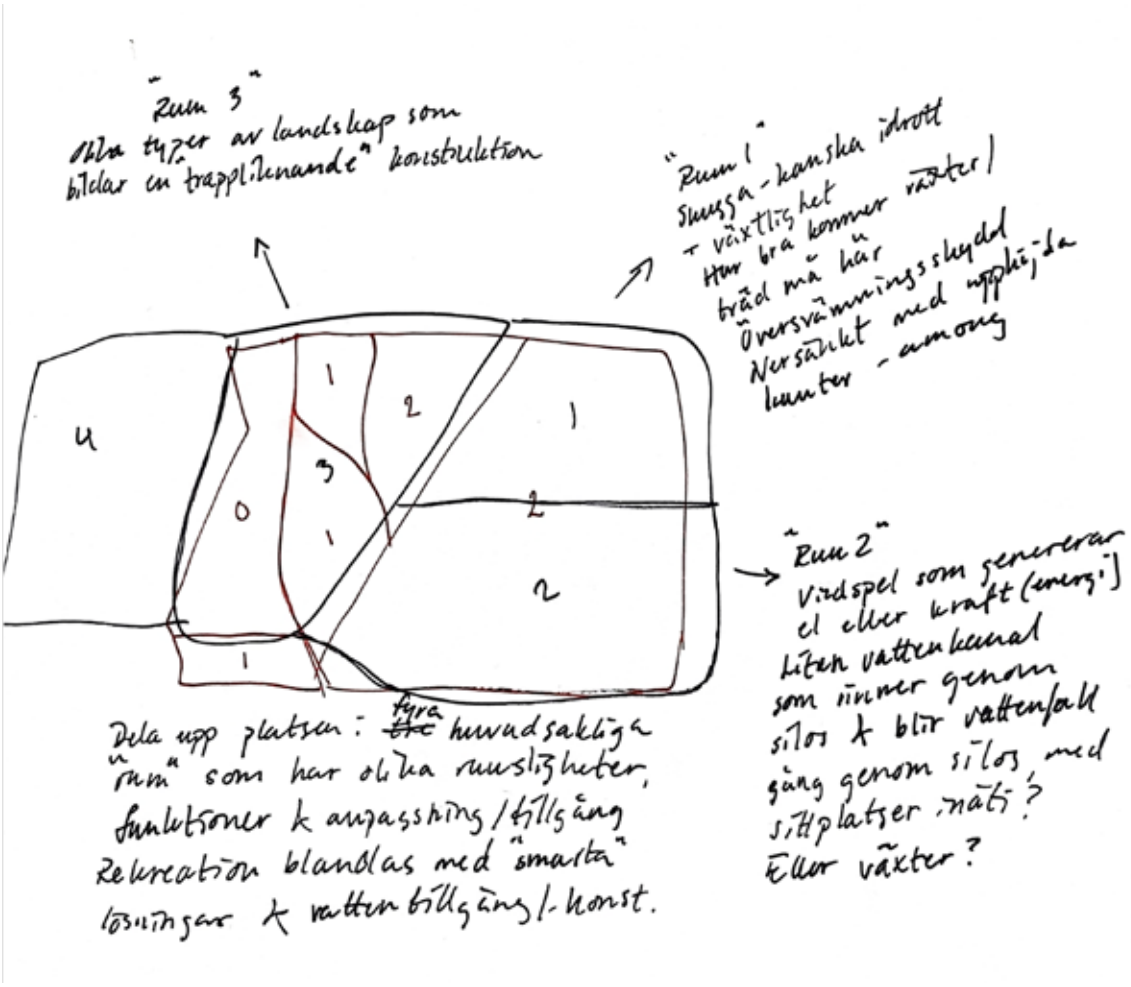
Fig. 28 Spatiality approachinh the site from different directions, see fig. 29



legend translated:

low terrain	traces of water
pass	area "division" (based on spatual
landmark	experience)

Fig. 29 Sketch of site analysis, local scale



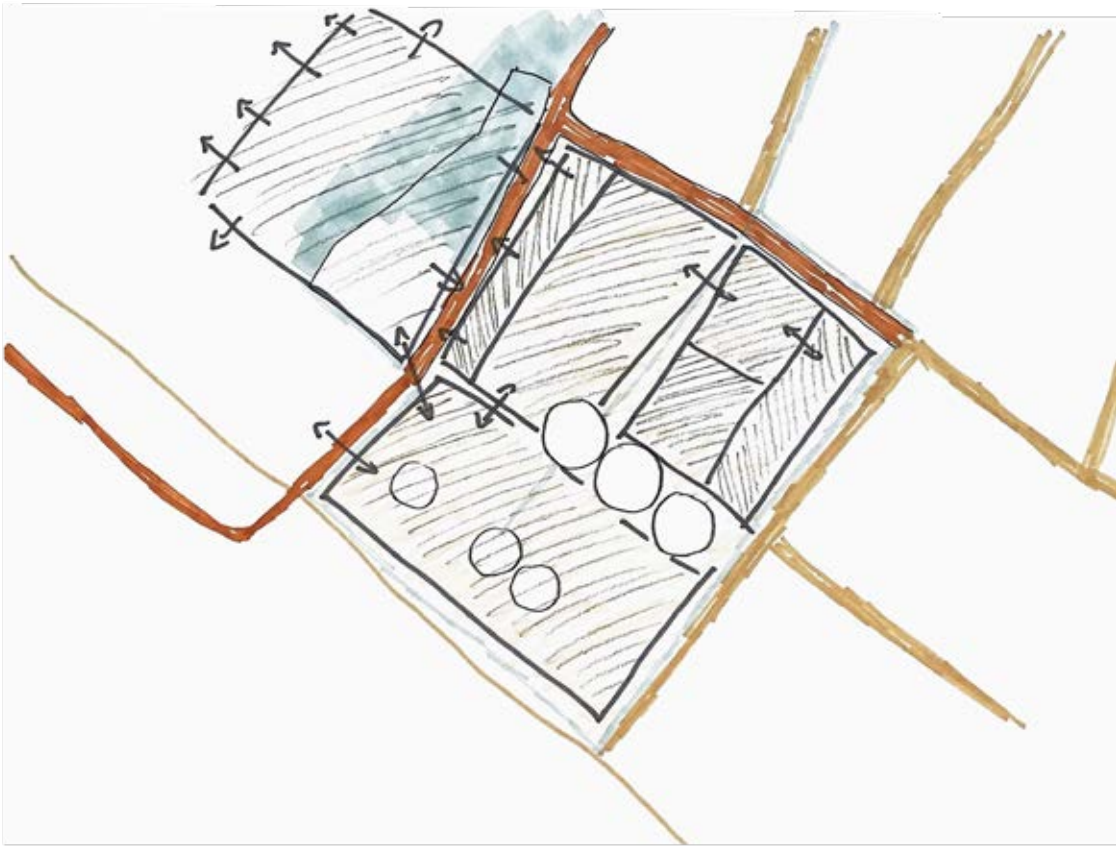


Fig. 30 Sketches of how to conceptually connect the various spatial "areas" of the site

A compiled site analysis show some of the physical preconditions of the site on a local scale. The site analysis showed where all used to create a site-specific tactical design.

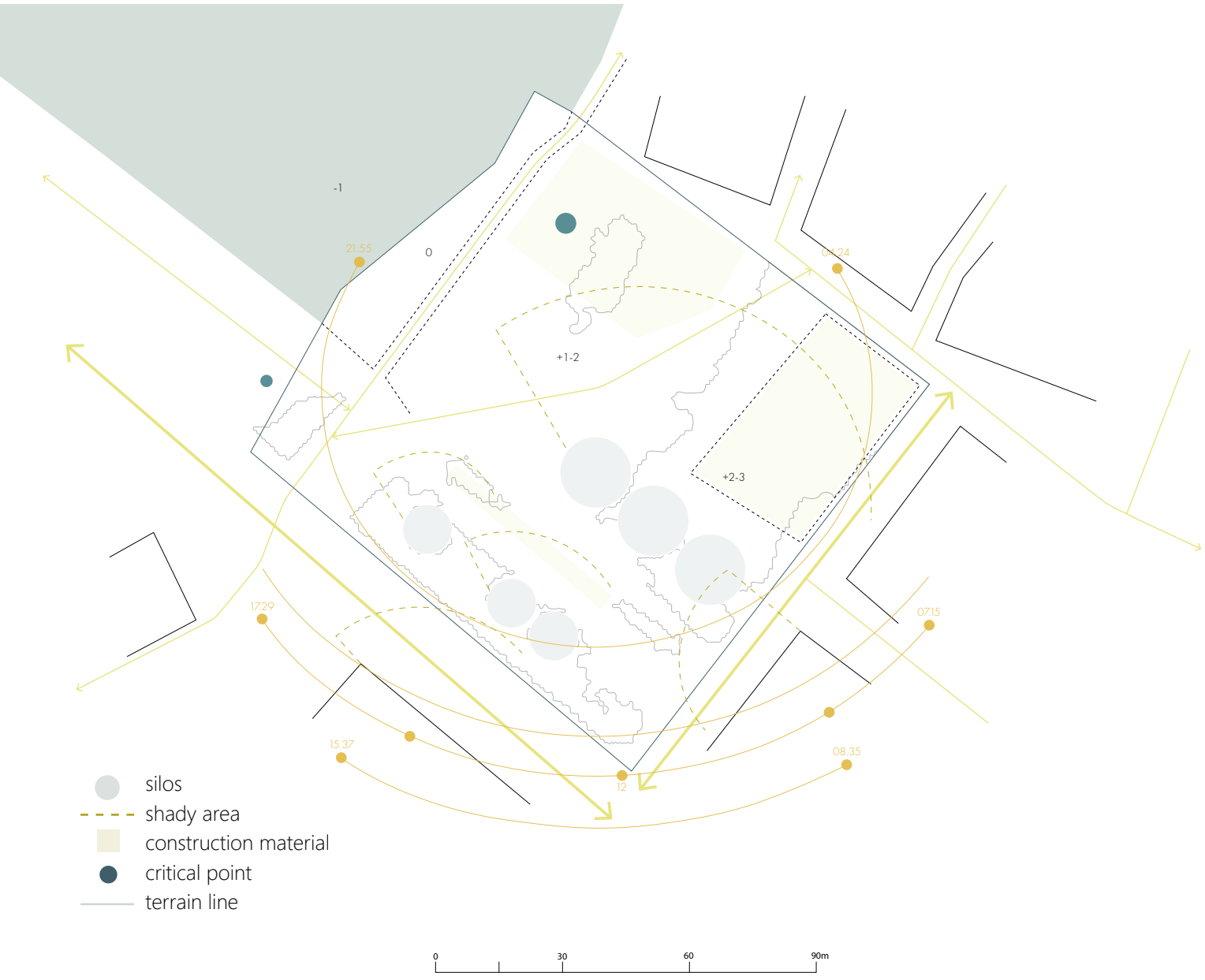


Fig. 31 Compiled site analysis - local scale

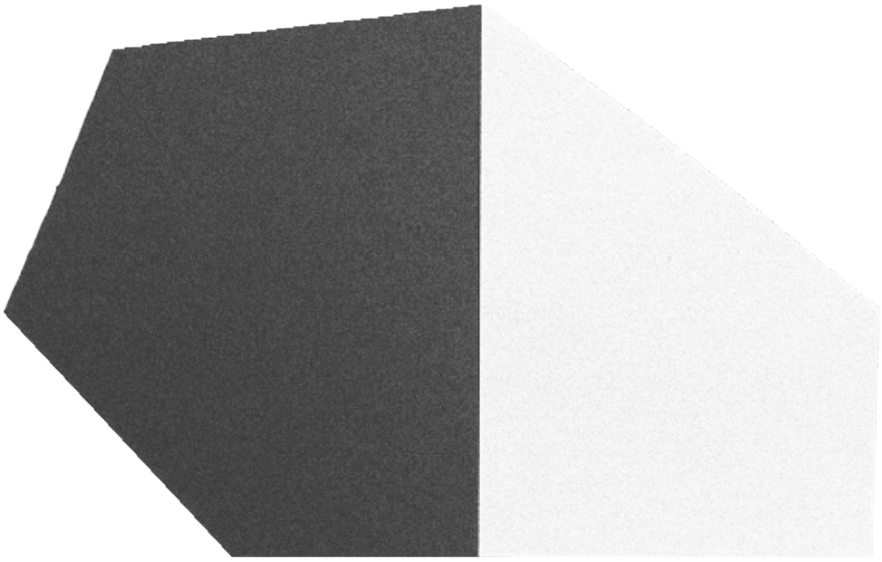
4.2 Concept

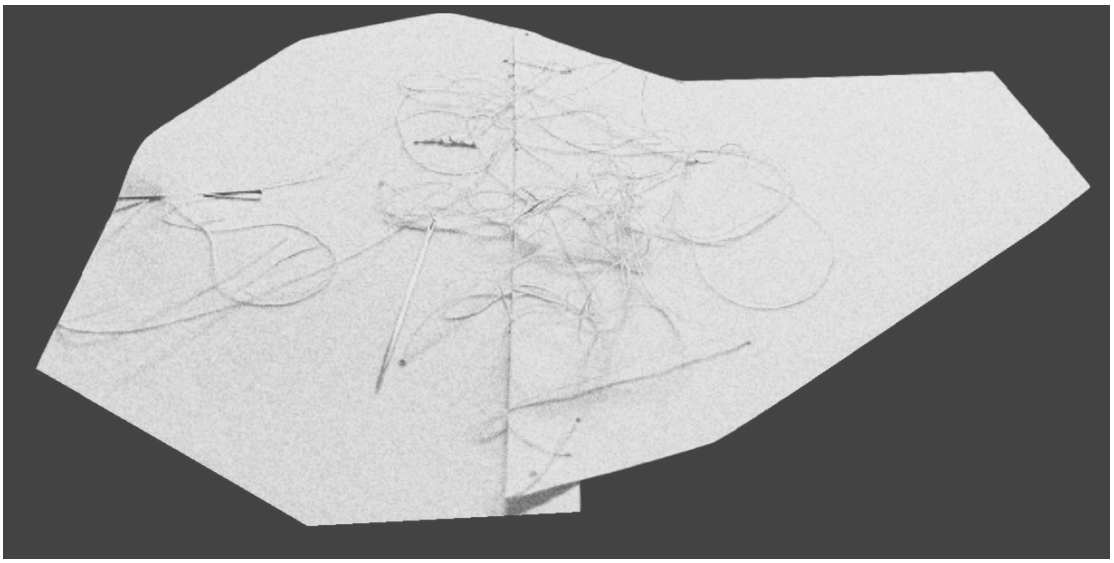
The intangible threads of a problem so wicked as flooding is in this case converted into a concept. In the making of an adaptable and livable city the lines between dry and wet need to be blurred, in order to be sewn back together in various constellations that will expand the opportunities for us to live our daily lives.

Malmö is a coastal city in the south of Sweden, constantly under pressure from the dual threat of coastal and pluvial flooding. The low- lying topography is making it particularly vulnerable to the impacts of present and future climate change. For this, no general solution is to be found. Wicked Waters aims to work with adaptable, livable and functional city development for uncertain future scenarios by combining the not so visual activity in the sea with the very visible life on land and normalizing a dynamic coastline. At the same time as safeguarding existing coastal communities from flooding, the long-term vision is to adapt inhabitants to sustainably live with water around them.

The process of physically modelling the conceptual weaving process, in dynamic coastlines, acknowledges that the process might need re-weaving from time to time. The development process is hence not meant to be linear or perfectually structured. That implies the relations between various factors and stakeholders needs some playroom in order to reach a more resilient solution dealing with seascapes.

The shown models in this section visualizes how land and water could interplay in dynamic landscapes and how conventional mindsets about coastline development can be re-imagined by letting water become a larger part of the urban context of Malmö. The method of using models resultet in machine sewn paper pieces as well as sketches.





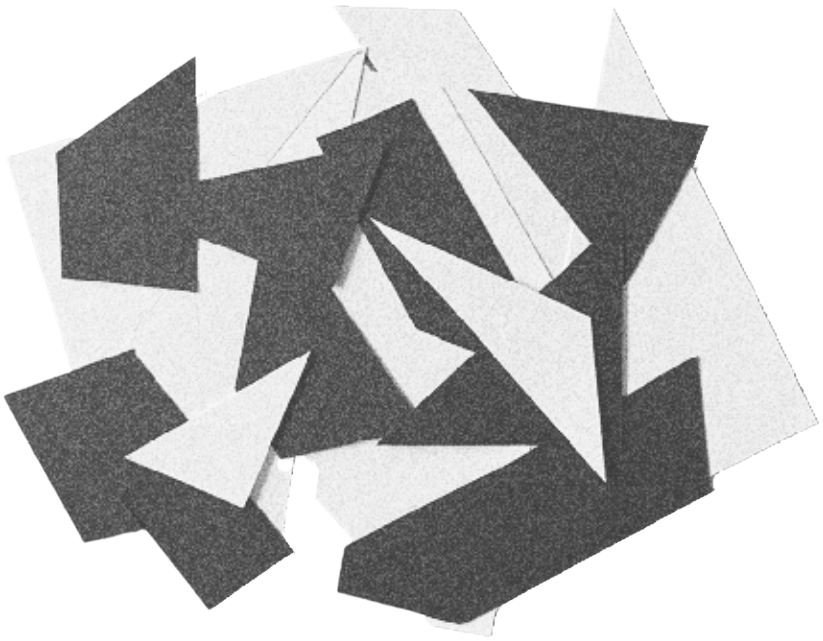


Fig. 32, 33 & 34 Process models of concept

Fig. 35 Process model of concept

Fig. 36 Process model of concept

Fig. 37 Layout sketch & 38 Conceptual model - machine sewn


12.5
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4.3 Inspirational projects

Various precedent projects with relevance to the subject have been studied in order to gain further inspiration for the design proposal of my project. A few, presented next, have made a larger impact on my thought process. They consist of both previous group work and flood adaptational projects by vulnerable coasts and urban areas in Malmö, Denmark and the Netherlands. Together, the projects have helped formalize a program and contributed to materialistic choices.

Harbor Bo01, Malmö (fig.39)

The housing fair "Bo01" was arranged in Malmö in 2001. Amongst other temporary projects, a new city district was built with an ecological profile in mind, where small water streams and various building types are integrated in the Western harbor area (Malmö Stad, 2024). At the same time a smaller marina, called Harbour Bo01, was developed in between the Bo01 project and Ribergsborgsstranden, by Sydväst architects. The ambition was to create interesting level differences between the quay and sea water, using stairs, ramps and slopes (Sydväst, 2024). The quay is connected to green park elements in the west and connects to a part of Malmös green coastline. The marina also has a sea water bassain in the east that is dominated by a waterfall that connects the city's water channels with the ocean (Sydväst, 2024). The projects care for simplistic aesthetics, connecting the place to the water and local waterfall system has become an inspiration for my project.

Climate - Resilient neighborhood, Copenhagen (Østerbro) (fig.40)

The multiple projects within the Climate - resilient neighborhood program were developed to find answers for how to efficiently deal with flooding and damage caused by stormwater flooding, causing costful damage (Klimakvarter, 2024). The projection in Østerbro is meant to function as the demonstration project for the city of Copenhagen and means to inspire the rest of the city when it comes to finding solutions for torrential downpours (Klimakvarter, 2024). To avoid water damage, so far, greener streets, rain beds, florid courtyard gardens, richer fauna and landscaped streets have been implemented in the spirit of seeing rainwater as a useful resource, instead of a problem (Klimakvarter, 2024). A radicant design thinking strategy that let´s water become a natural element of the urban coastline and creates greener and livable outdoor environments for the city's inhabitants.

Quays of the river Scheldt, Antwerp (fig.41)

One of the successful projects that has been developed recently, in Antwerpen, Belgium, is the reconstruction of the Quays of the Scheldt. With various architectural offices involved in the design, a new expression of the public place has evolved with the intent to also protect the inner city from high

water flows with the help of a dyke. The dyke divides the quay into a "submersible river side" and a "dry side", whereas the first mentioned consists of large open spaces and harder surfaces with temporary usage, whilst the other one faces the city with green spaces and walking paths for informal use (Landezine, 2021). The openness of the developed site invites you to use the place as you please, in a unique urban landscape.

Fig. 39 Harbour Bo01
Photo: Marja Diaz

Fig. 40 Climate-resilient neighborhood
Visual: Tredje Natur

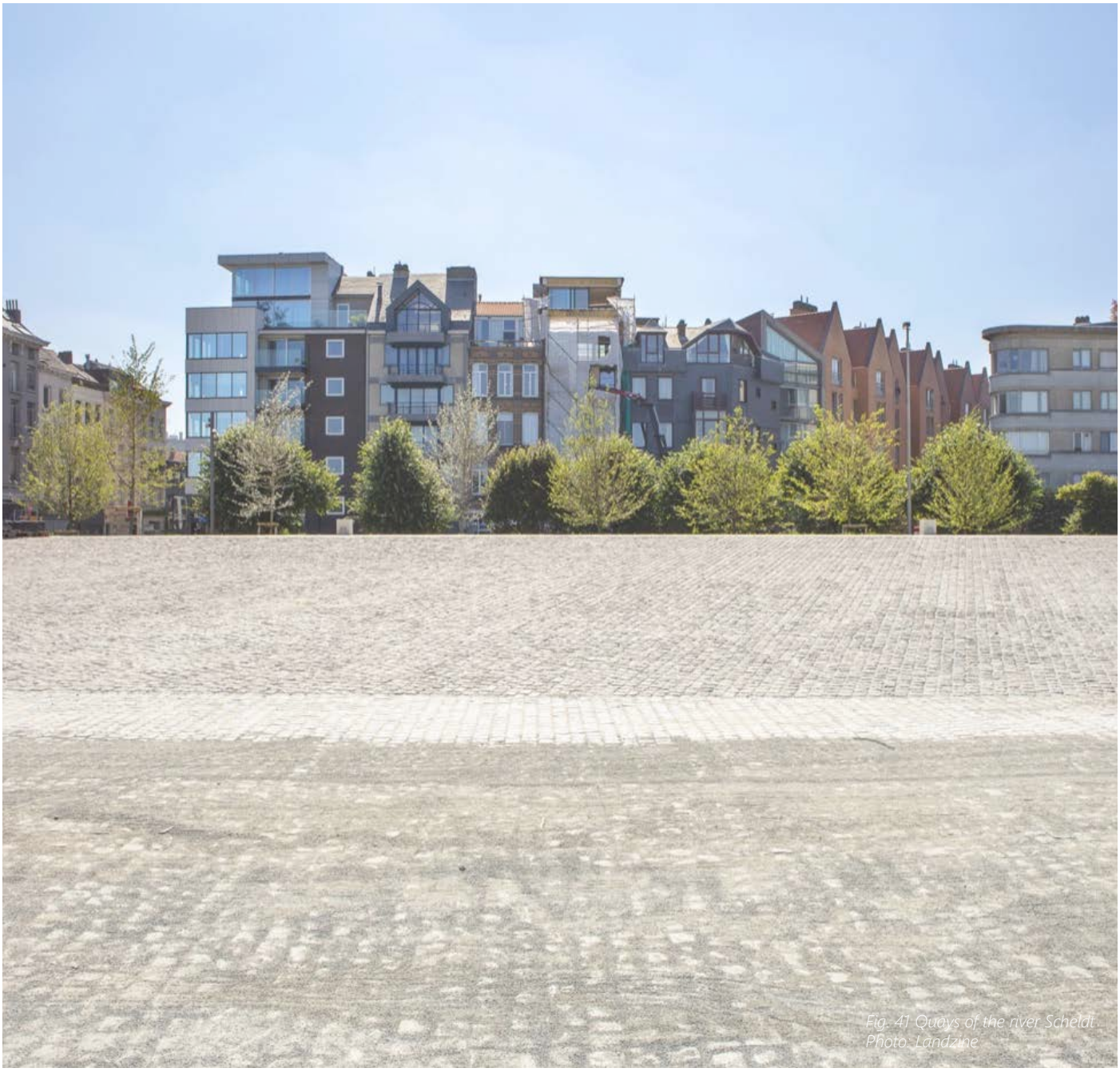


Fig. 41 Quays of the river Scheldt. Photo: Landzine

4.4 Phase one - communication

In phase one, wind turbines are installed on every site containing one or more critical points, functioning as a macro communication tool. The turbines can be placed on the ground, floating in the water or on top of buildings. Its purpose is to reflect light to become visible and awaken interest for bypassers or from a longer distance, but also to generate electricity from the harsh winds Malmö is normally facing.

The site in Limhamn is currently used as a parking lot and storage for construction material, not very welcoming for recreational purposes. On site, three old production silos are kept and left for no current use. That is the perfect place to install three wind turbines to generate electricity for the future structures. The public is invited to contribute in the making of parts of the wind turbines, reusing local materials from the various sites. In Limhamn, piles of sand and small stones are being used to add hanging elements.

Fig. 42 Site in Limhamn after implementing phase one

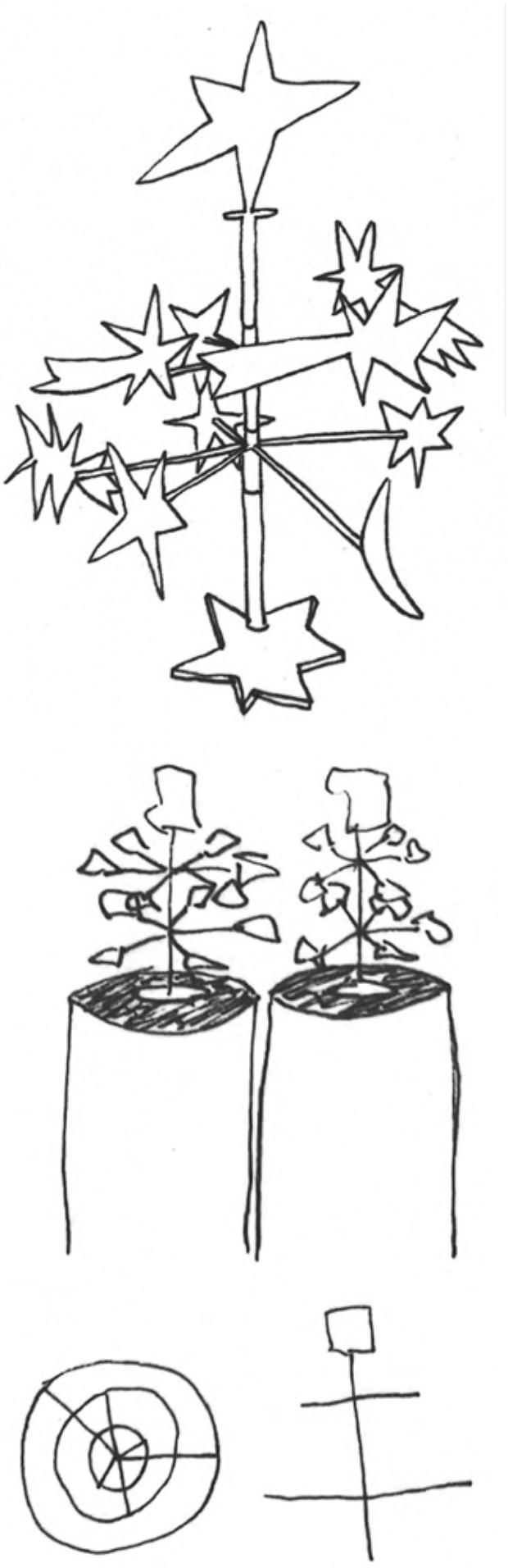


Fig. 43 Process sketches of wind turbines to be used as main communication tool

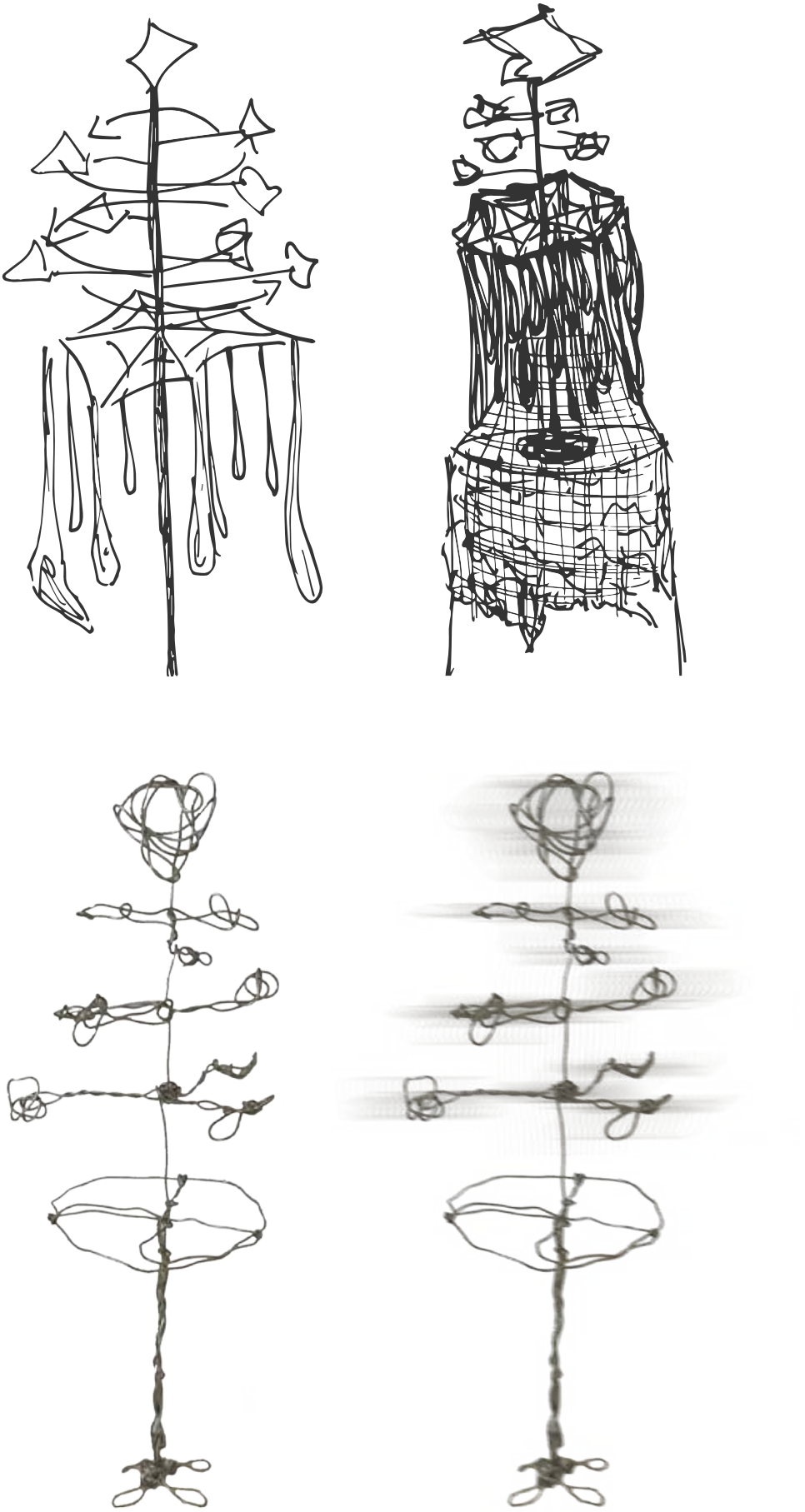


Fig. 44 & 45 Process sketches and models of wind turbines to be used as main communication tool

Fig. 46 Process model/sketch

Fig. 47 Process sketch - how to use materials on site

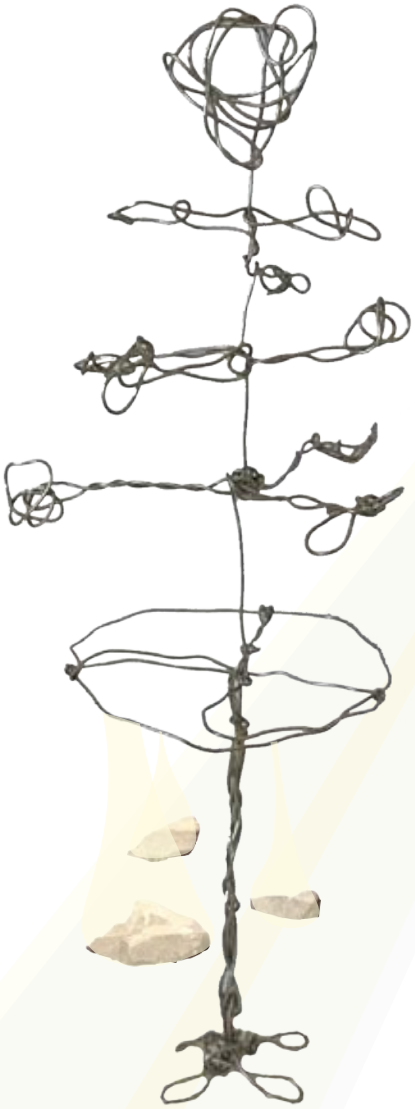


Fig. 48 Process sketch/model

4.5 Phase two - activation

Next, conditions for recreation and social use of the site are taken into consideration, in order for people to actually want to stay and use it. At the same as time the first flood preventing elements are developed. The preconditions will differ from every site and therefore a more site-specific approach is needed, although some elements may be modular or areas are being left "open" for it to be temporarily used in different ways. Some common things like seating and lighting may not vary very much on each site and can even be moved between them.

In Limhamn lookout spots, stairs, tensile climbing nets and rainbeds are added in order to socially activate the site and to handle runoff water from rainy weather. The stairs is an example of a multifunctional area for temporary use, but also naturally used for seating, and a flood protecting element because of its higher elevation.

Fig. 49 Site in Limhamn after implementing phase two

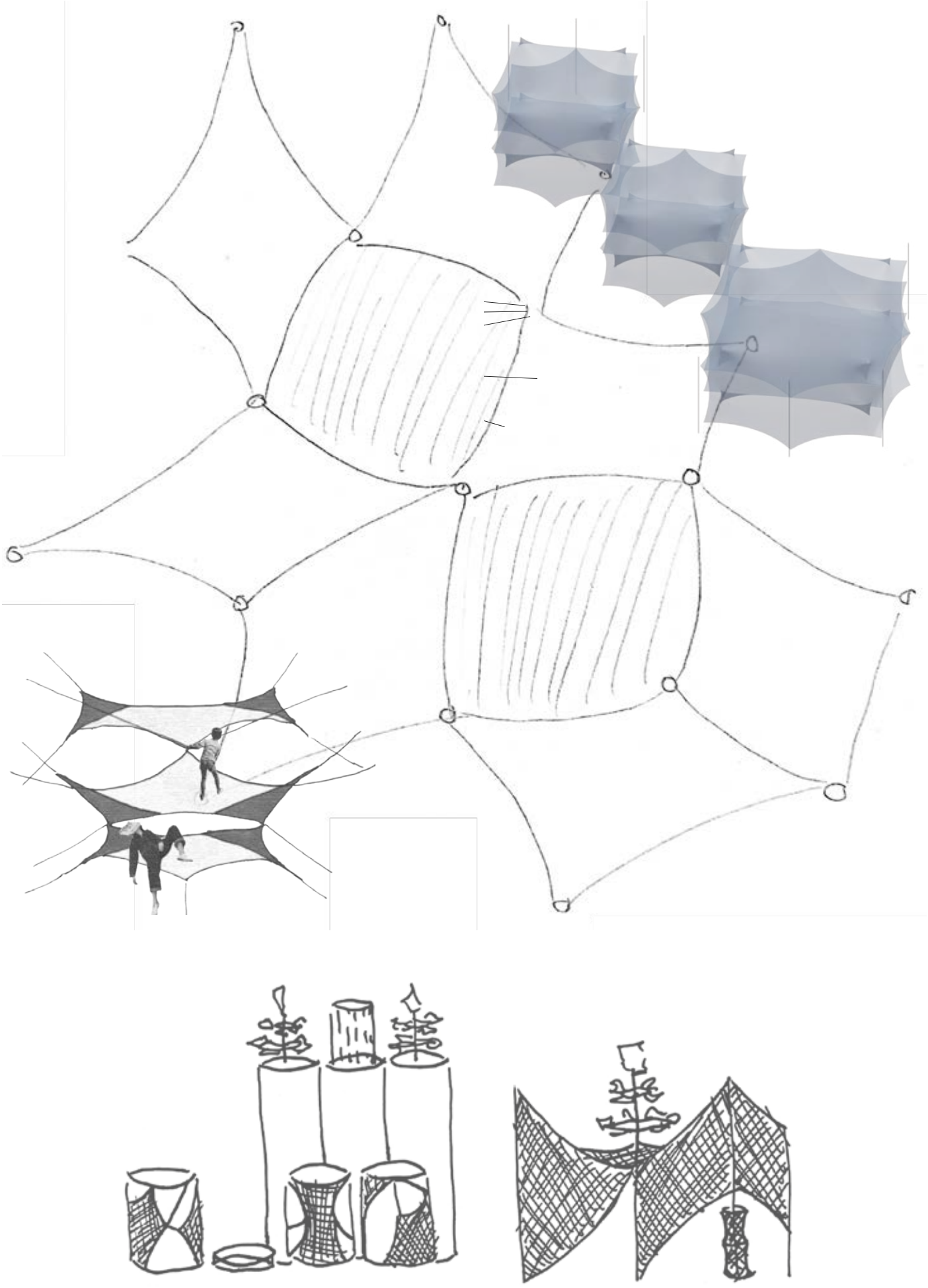


Fig. 50 Process sketches of tensile structures

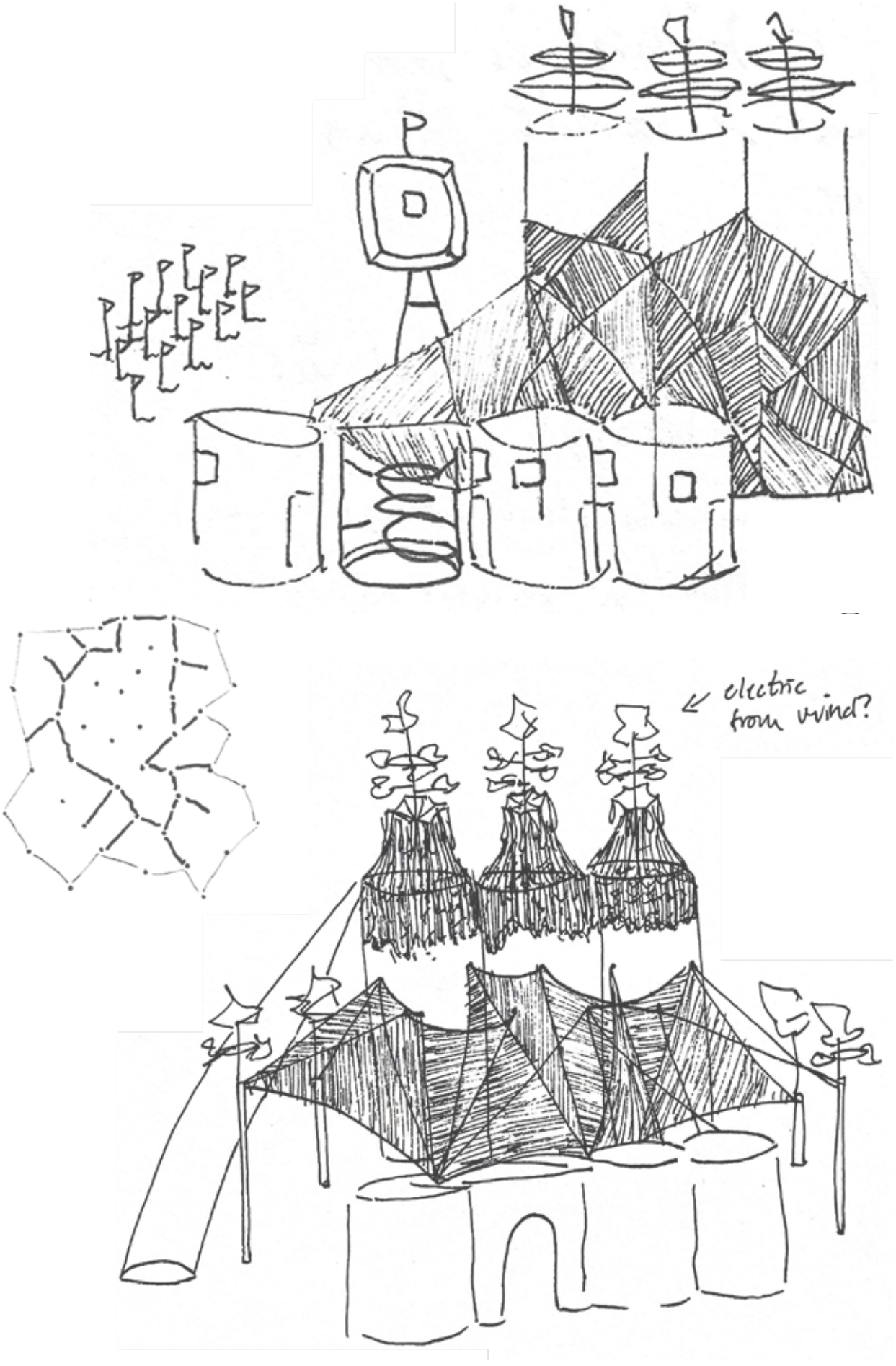


Fig. 51 Process sketches of tensile structures placement in Limhamn

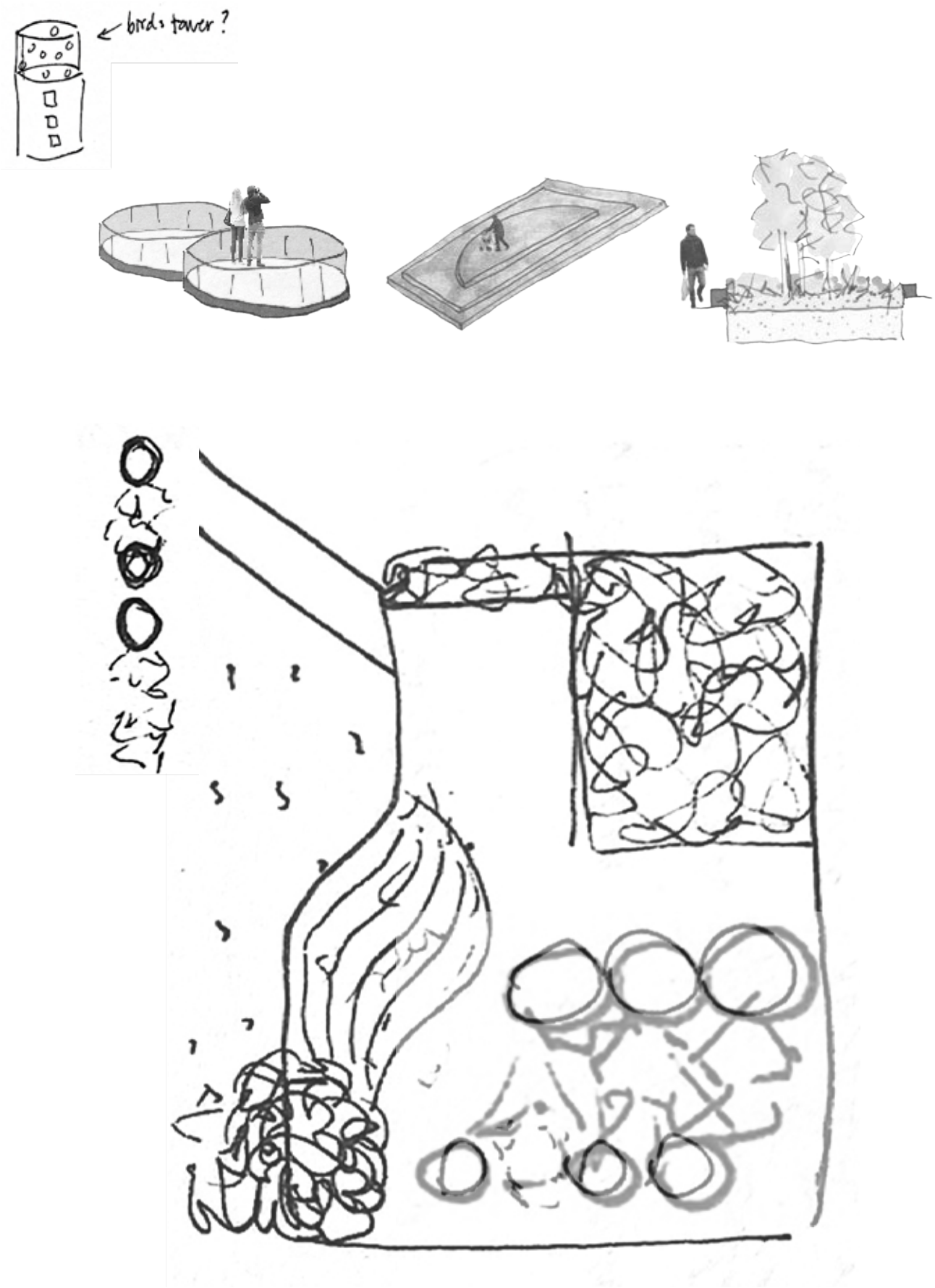


Fig. 52 Process sketches various functions and potential plan of them on site in Limhamn

4.6 Phase three - landscape adaptation

The landscape and terrain is further analyzed in phase three of the project in order to elevate and sink the ground in places where it is most fitted to do so. On higher ground, elevate more and on lower ground, sink even more, in most cases. These interventions have to be site-specific in order to both prevent damaging flooding and to create a livable and usable space. The elevated areas in Limhamn are meant to lead the water down to lower grounds like rain beds, a square, a pond around the smaller silos or creeks surrounding the site and leading water back to the sea.

To connect land and sea more a bridge mimicking the outlines of three silos is constructed to be used for walking, swimming or fishing. The project has now led to an open ended opportunity to weave together land and water even further, at the same time as protecting the site from flooding and activated an unused area.

Fig. 53 Site in Limhamn after implementing phase three

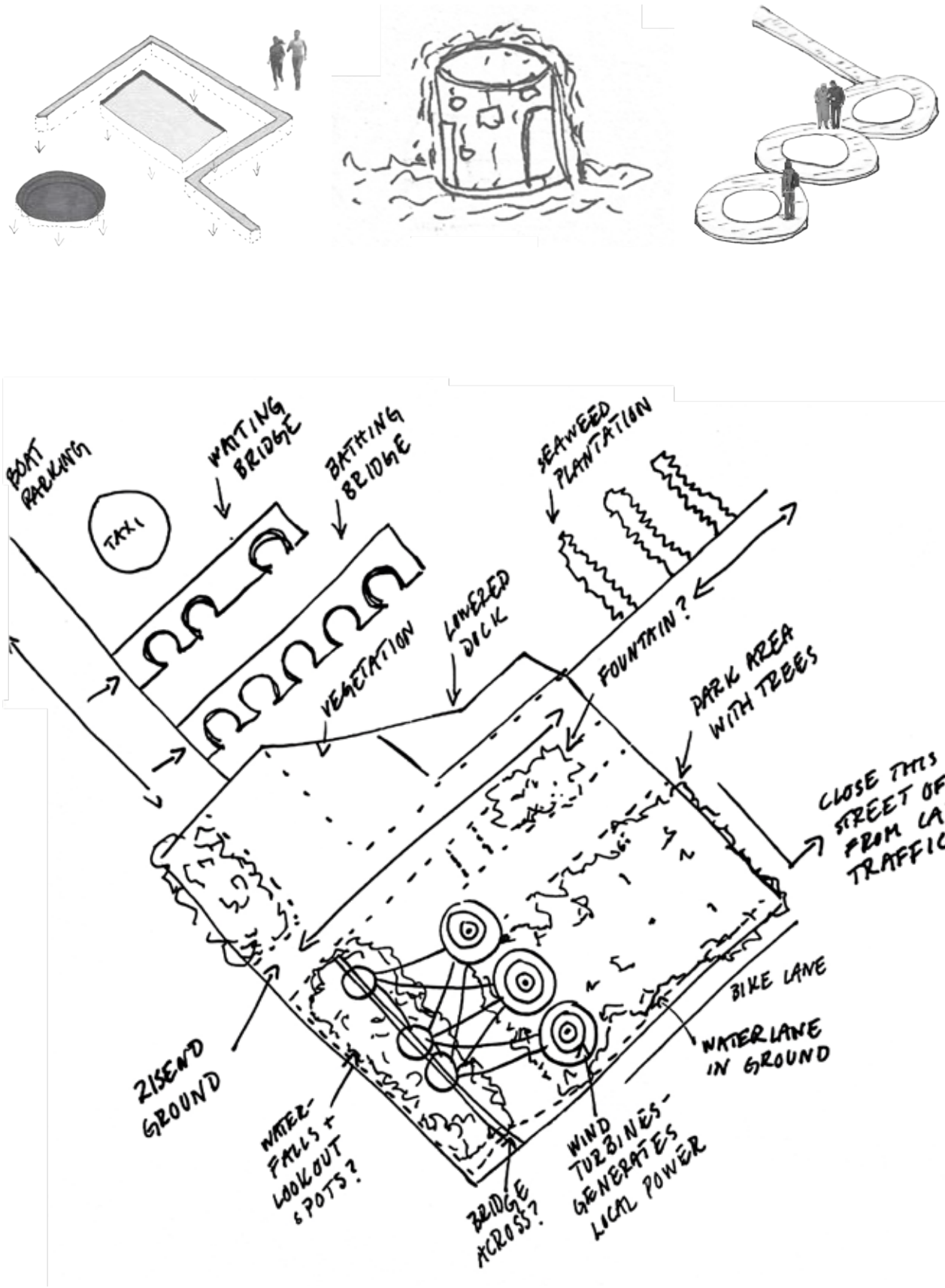


Fig. 53 Process sketches of functions and landscape adaptations in Limhamn

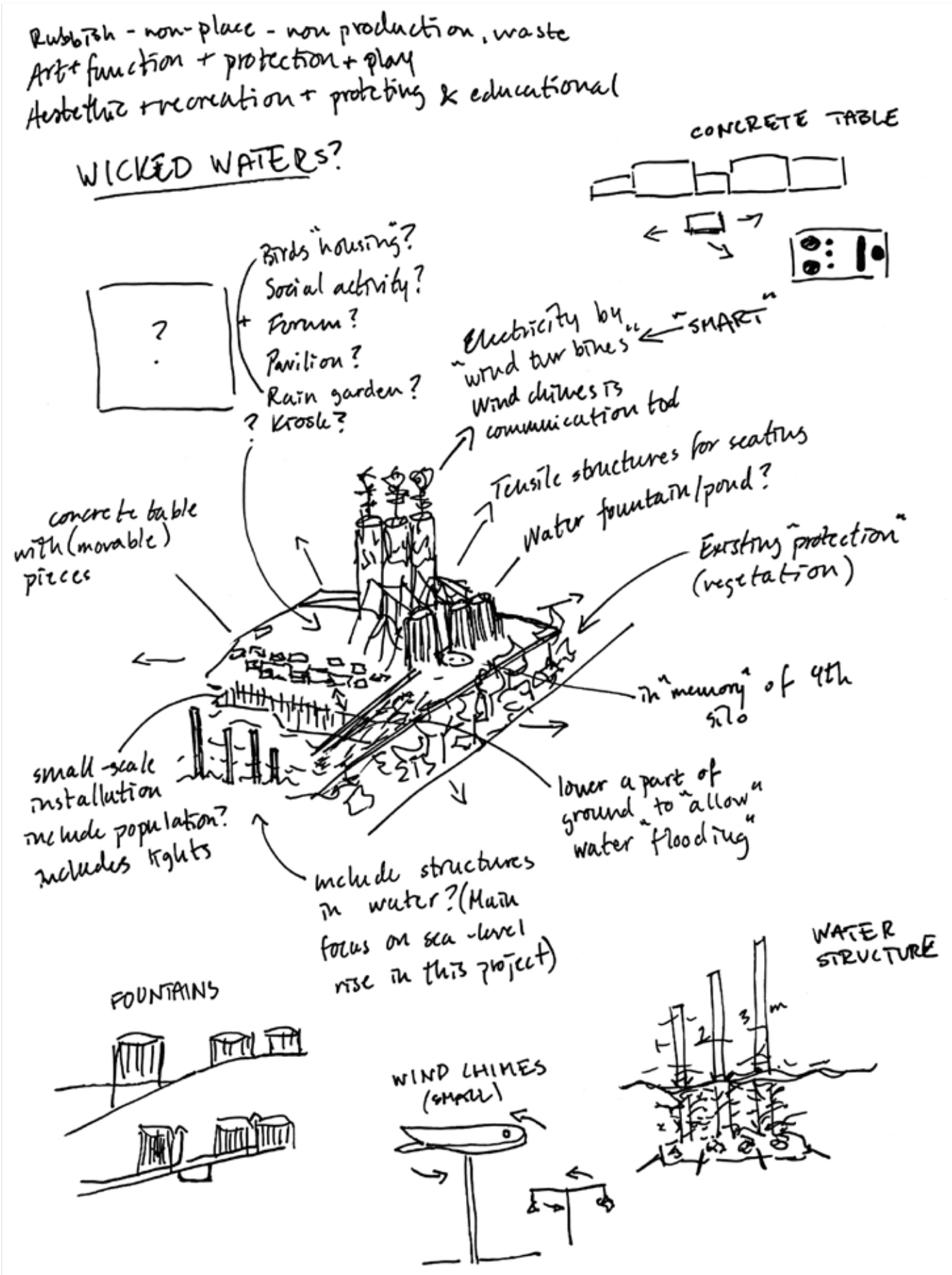


Fig. 54 Process sketches of further potentials in Limhamn

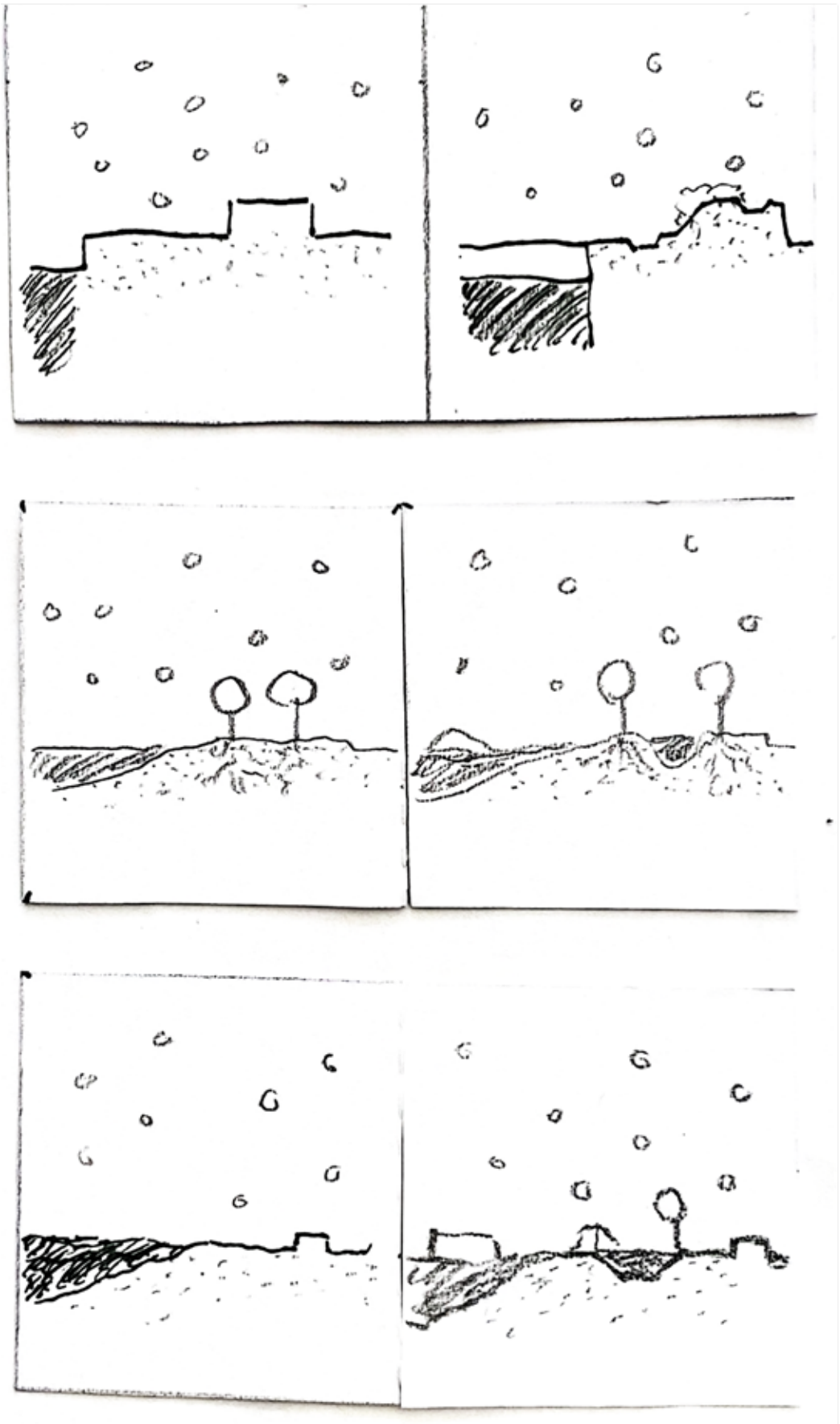


Fig. 55 Process sketches of how to make landscape adaptations

4.7 Vision

The long term vision for Malmös coastline is to tactically be developed, basing strategies on site-specific needs at every sight. The three-step method is working as a framework within larger planning strategies in order to develop more sustainable urban seascapes. In Limhamn the cultural heritage represented in the existing silos lives on in a more lively context. The borders between land and water have begun to become less and less clear and various usage areas are being explored both on land and water. Floating activities such as saunas and bridges are used in combination with water taxis to take you to other parts of the city. In terms of ecology, new ways of trying floating wetlands in combination with seaweed plantations for example creates a greener environment in contrast with moving water and solid concrete surroundings. The site creates a more lively neighborhood and lets inhabitants use the place for various activities. Somewhere in Malmö the next site begins its journey towards the same vision.

Fig. 56 Vision for site in Limhamn after implementing all three phases

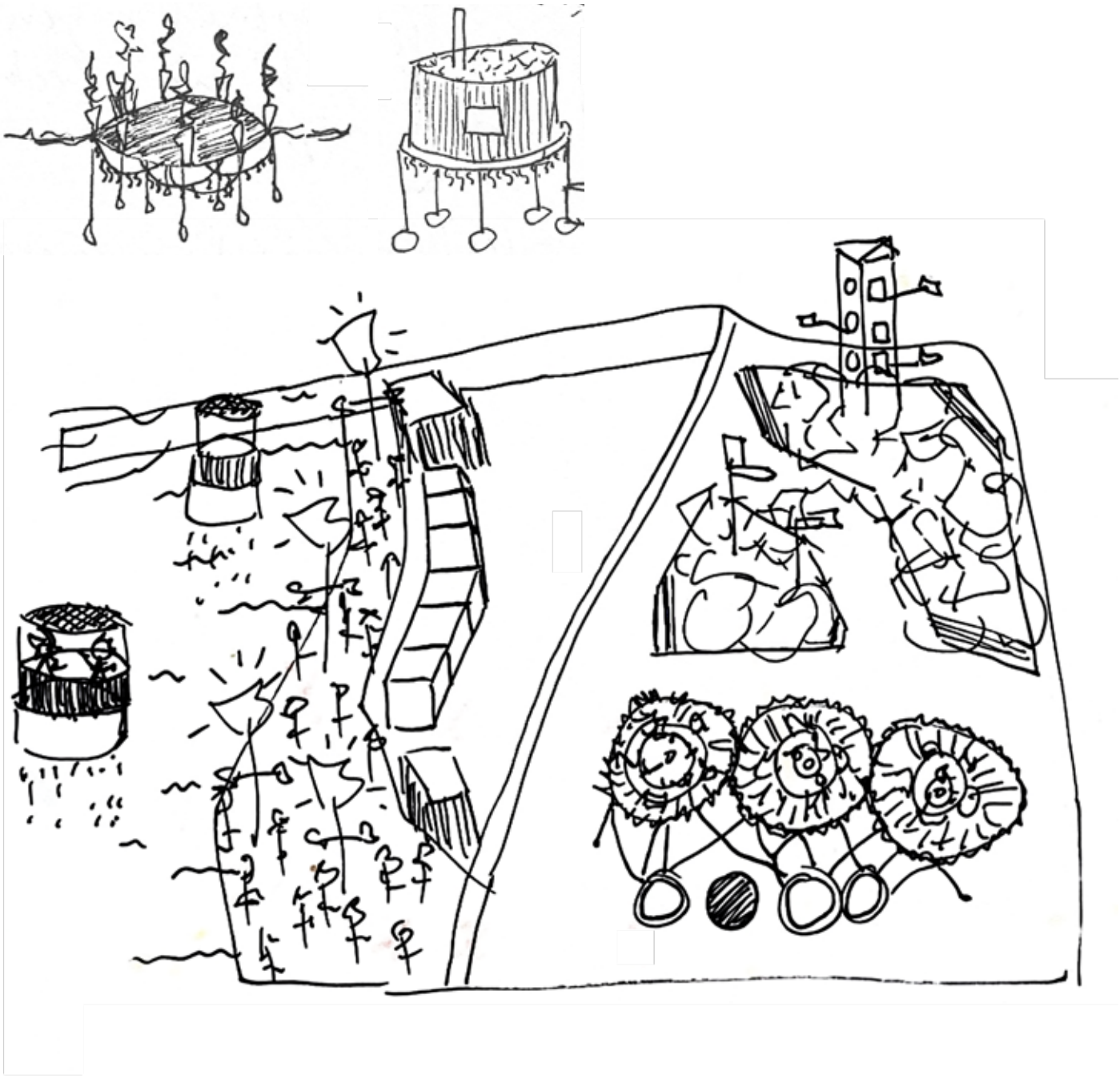


Fig. 57 Process sketch of vision for Limhamn site

Fig. 58 Process sketch of vision for Limhamn site

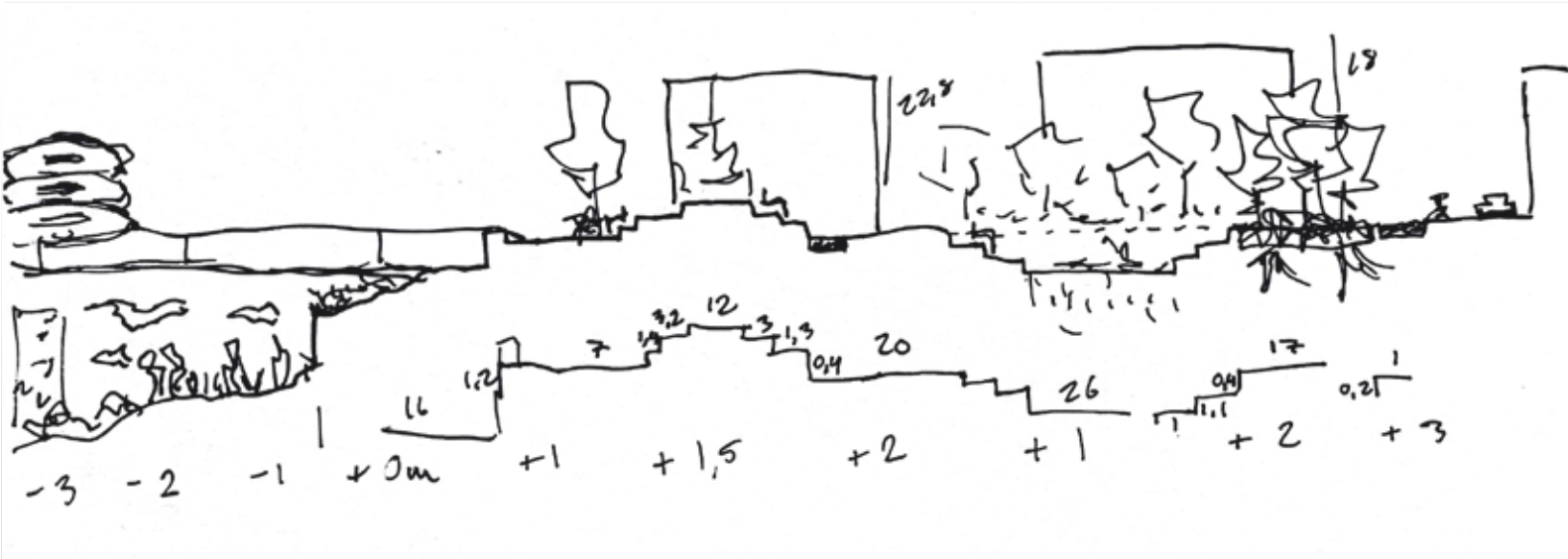


Fig. 59 Section sketch of landscape changes being made in Limhamn and how it creates hight differences

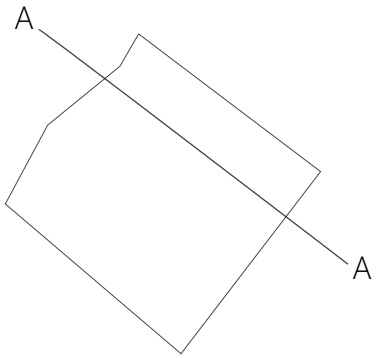
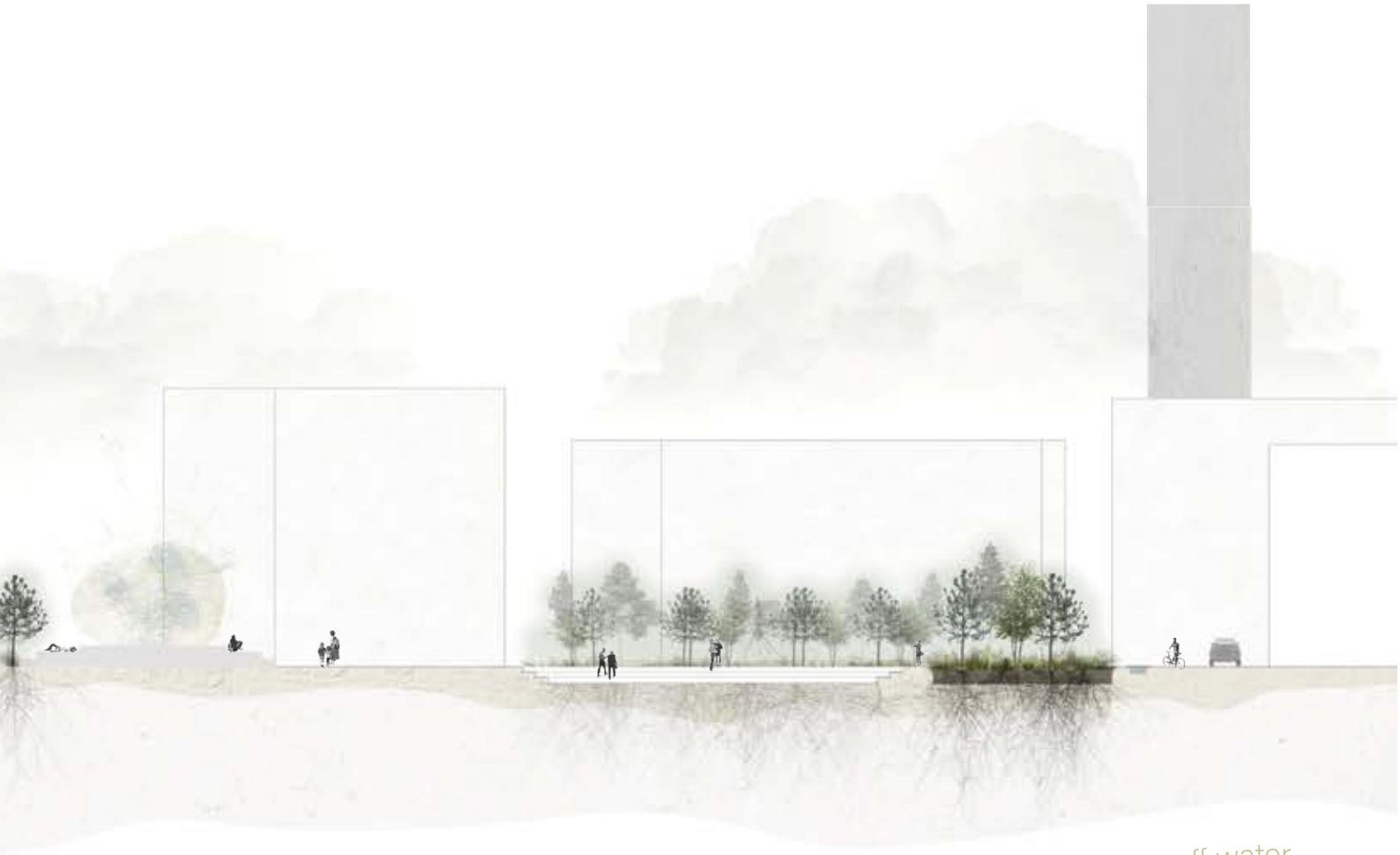


Fig. 60 Section A:A of a more resilient future on the site of the old Cementa-factory in Limhamn


tree
multifunctional stair
open area
lowered square
rainbed & creek for runoff water

5. Reflection & conclusions

The research question of this project is as follows:

How can small scale interventions, exemplified by a site-specific tactical design proposal at Limhamn sjöstad, create resilience for expected and unforeseen complex challenges such as coastal flooding?

During the course of the development of this project, questions and reflecting thoughts have appeared. The more prominent ones are reflected in this final chapter. In general, one can state that all types of city development are subject to conflicting interests and dilemmas. Planners and urban designers are constantly presented to various conceptions of what successful landscape planning should mean in terms of politics and subjective opinions. Our inherent, personal worldviews often contradict or differ from one another and to find a common universal solution to these sorts of wicked problems, as flooding is, I would argue is a very convoluted task.

In summary, this project responds to the research question by theoretically and visually emphasizes the importance of questioning how to work with flooding with a usual comprehensive plan, and instead testing contemporary strategies and methods in order to develop more adaptable solutions to face a changing climate in Malmö. To emphasize a new way of thinking, is almost always to be critical towards a prior conventional method and it should be acknowledged that change takes time. Urban acupuncture might not always be successful in practice, but has potential if done in a thoughtful way, combining it with adaptive strategies and methods. As to mention, radicant design thinking shifts the focus towards the design process rather than a finished correct result, erasing the differences between process and design. It acknowledges a pluriverse and a site-specific way of designing that could lead the way for more places to do the same.

5.1 In what way does the project answer the research question?

The diversity of opinion, concepts, material, methods and applications on seascape and flooding illustrated in this project, aims to provide an example of adaptable tactics needed to face future challenges, and take a step towards further research development for the sustainable future of Malmös coastline. Using design thinking and research by design approaches in this context has resulted in a project that could contribute to further formulate the ever ongoing discourse of urban planning and seascape development, especially in Limhamn.

Being inspired by urban acupuncture and tactical urbanism has resulted in showing possibilities of making small scale installations, in relation to the coastline of Malmö, and elevational changes in the site's ground. Both fixed, semi-fixed and open spaces are presented in a context that blends together relational art/aesthetics with the built environment in order to create pos-

sibilities for interactive meetings between humans, nature and water. The larger open spaces, such as rainbeds, a sunken square and a large elevated staircase makes the site more adaptable to flooding and changing local climate, but functions as social and ecological vegetative elements. They are resilient to various situations on a site-specific scale. Smaller installations such as wind chimes, climbing nets and water elements are meant to mainly create possible interactive meetings and produce local energy to the site and can be tested more as temporary and innovative elements to create resilience to the functions of the site.

The overall concept of adapting to and living with future seascapes, using tactical urbanism as a tool, makes an inspiration for questioning conventional approaches and methods used. A short-term intervention, placed within a framework for delivering long-term change is in general likely to be successful. The point is to accept the limitations of a typical 20-year plan and build in a flexible way in iterative feedback loops so that shifting priorities and conditions can be accounted for. The design proposes three phases that are meant to be tactically integrated into a larger strategic strategy. This way of trying to infiltrate larger plans and to use a more experimental approach is a usual way of going when using t/t urbanism as mentioned. In summary the design is visually demonstrating possibilities to change in line with discovering potentials and capacities that can be found on different geographical scales. The way to create resilience for unpredictable wicked problems, such as flooding, is illustrated by proposing letting water become a part of the city and in our everyday lives. In conclusion, to allow dynamic change and changing seascapes rather than trying to protect ourselves from them.

Further expressed as an important contribution to successful tactical urbanism, this project was conducted on a site with base conditions that can be found elsewhere, as illustrated from water/land typologies within Malmö. This opens up the possibility of using the conceptual framework of the project on another site. Hence, it relates to various scales globally and locally. Also, as discussed previously, a division of a site into three different areas (area of control, effect and influence) implies that the site always needs to be considered in relation to its surroundings and time to understand the complexity of a place. Although, the final design proposal in Limhamn has a more site-specific character. As a result of analyzing individual terrain conditions, existing structures, materials, spatiality and surrounding buildings, decisions on site-specific interventions, in order to create resilience to flooding, could be made.

In terms of finding new fitting methods for adapting to uncertain futures, the subject of the project aligns well with the character of a wicked problem and discusses how to face flooding, although it is just one example out of multiple. Wicked problems demand conversation and mutual understanding for a dynamic design process. One of the most complex challenges faced in this project was how to balance the design result between an open-ended conceptual result and a fixed structure. It creates an understanding wanting to thrive for a “solution” for global and local complex problems, or solely a “finished” result. The phases are meant to be used as a benchmark within

the concept of blurring the lines between land and water on various scales.

5.2 The design in relation to the Anthropocene

The subjective character of this project in combination with the context of the various world views in the Anthropocene discussed in the text, a self-reflective opportunity opens up. What way of seeing the world in the anthropocene does the project answer to?

Eminent in this thesis, the aim is to spread awareness and inform about climate change and human impact on global systems, the world view of a denialist can easily be counted out, as is the case for most research. Instead, I try to highlight ongoing climate change as a wicked problem that humans have had great impact on.

The belief of "the best is yet to come", as described as modernist or eco-modernist, in many cases originates from economic growth in urban areas of often wealthy northern cities and countries. It can be about sustainable electricity or new ways of micro farming, and it usually benefits humans as well as trying to reduce the ecological footprint. It causes a risk of greenwashing a lot of times, although the cause can be good. Everlasting progress also implies that the process is linear. It means every process is moving forward, towards a better place, at all times, which contradicts with what is actually true. We, as students or professionals, usually make design proposals to improve something, to exemplify the best version of a site. But the rest of the content of the project still problematizes linear progress and states humans as accountable for climate changes. The visual representation of Wicked Waters might align with the more optimistic way of viewing the world. Especially the wind turbines and waterfall. Those are elements that may seem to represent a more "utopian" future of the site in Limhamn. That realizes the fact that an already "high technological" society is very influential in the way we think. Beautifying a wind turbine, making it a communication tool might not be conventional. On the other hand, there is an interesting underlying discussion about mixing low-fi communication solutions with art and technology at the same time to come up with innovative urban planning.

Generally, the project does not propose that humans are supposed to fully step back in order to let nature and ecosystems thrive. But, it proposes that we, to some extent, are supposed to adapt to climate changes and flooding, not the other way around. There is an acceptance of us as having the greatest impact on climate. To learn to live with water and on water, at the same time as protecting us from damages caused by water. Looking at Malmö and Limhamn, we are already, and have for a long time, been using the ocean as a resource. The knowledge of our dependency and impact of our seascapes should be enough to tactically adapt to future floodings and create a resilient coast. This project accepts that we are somehow still one of the front figures, but discusses that we need to recognize a pluralist world. An example of improving biodiversity in the design proposal is the rainbeds and floating wetlands.

How does the project respond to Anthropocentrism 2.0 then? Well, the acknowledgement of humans being the main reason for climate changes is not fully transparent. But it reflects how we are responsible to find a way to live with short-term and long-term impact. This project does not paint up a dystopian future of any kind, but problematizes flooding in present and future time and pointing out ourselves as responsible to fix it. That includes, accepting the dynamic seascapes as a way of having to adapt to future coastlines as "the worst might still be avoided". The concept developed for the design proposal resonates well with this worldview.

Reflecting over the four various worldviews in relation to my project acknowledges that not all research or opinions are black and white, as this project in itself shows tendencies of the three latter mentioned. It could be a reason why many wicked problems cannot be "solved" with a universal approach. We all have different worldviews, but looking more into detail, we all might have a variety of worldviews depending on the situation. Every small-scale intervention might differ in this context because of trying to find influences from various fields of knowledge as well. A further strategy to discuss this complex conversation could be to exemplify a project using the four described worldviews in the context of the Anthropocene as the starting point to later evaluate how four examples of the same project could differ with advantages and negative impacts.

Projecting site-specific design and tactical urbanism in the design proposal felt like an efficient way to create innovative solutions that can be tested. Although, during the process of this work, I realized myself floating away more and more from using the materialistic temporary aspect when designing installations and rather shift to focus more on temporary possible meetings and interplays that could be gained from the installations proposed, as Bourriard refers to as relational aesthetics. Some of these consisted of leaving space completely open for the users to decide the place's temporary function. The critique towards t/t urbanism, sometimes being blamed for using unnecessarily much material or only solving short-term problems made me decide to try to use more durable ways of creating spatiality and using materials that can be found elsewhere in Limhamns surrounding.

5.3 My process

The methods and concepts used for this project have supplemented each other but yet presented me to both limitations and advantages. The empiri collected from literature studies, site visits and the design process is very much an outcome of a time-based project, but it does not mean it can contribute to further discussions and research within the field of landscape architecture. The project becomes speculative in the sense that no information or site qualities is gathered from other times of the year, as well as already tested flood-protecting models are not evaluated, except for extracting some inspiring design guidelines from mentioned projects in Scandinavia and Belgium. Unconscious subjective choices, thoughts and edits surely also colors the way this project unfolds and it is important to not neglect both positive and negative aspects from it. Adding a more interacti-

ve method or similar would probably have shaped the project in a different way, also aligning more with the concept of inclusion, collaboration and co-creation that is usually deeply rooted in tactical urbanism. On the other hand, the iterative process I want to highlight, using these methods, can be clearly explained and visualized since it was experienced by myself. Also, the differences between an academic or professional design proposal and researching through design, highlighted by Prominski, becomes transparent as I apply the designing tool to both of them in this case. A longer timeframe would have made the design project itself more justice in terms of detail level, where an even deeper understanding of the site could give a more narrow approach to site-specific needs as well as building a more rooted concept. Although, the project could be found important in order to further professionally establish and normalize the research through/by design approach for landscape architecture and urban planning.

I found myself at ease finishing the two A1 posters to hand in as a competition proposal for the Terraviva competition, the finite result was conducted. The design was, during the process, influenced by a theoretical background I had read for this report. There were moments in the process of projecting text into design. But, looking back, I merely spent a second thought of what it could actually mean for Malmös coast and future flooding the days after the competition hand-in. Not until, I once again, returned to editing my written text and reading new text, as well as writing about the design itself. It is prominent that already professionally designed projects also need evaluation of some kind, most preferably from a multidisciplinary perspective, in order to be adaptable for other places. The continuously evolving landscape makes this project contribute to the discussion, evaluation and critical debates, as well as every other research by design project can. That explains very well an important role landscape architects have in order to open up for contemporary adaptive strategies in urban planning and landscape architecture.

It is hard to say if the project would have looked different or contributed to different conclusions and results if I didn't approach the design initially as a competition proposal. It might have resulted in using another approach towards designing for wicked problems, or discussing a whole different topic. It is also uncertain how much of a finished design proposal in forms of visualizations, sections and process sketches I would have delivered. As I mentioned, this project contributed to realizing the difficulties of balancing developing conceptual framework together with an aligning design that seemingly illustrates fixed forms. Not setting the goal for the design to follow the format of two A1 panels, would probably have made me more focused towards conceptualizing some sort of risk management plan or similar, still in connection to the same subject.

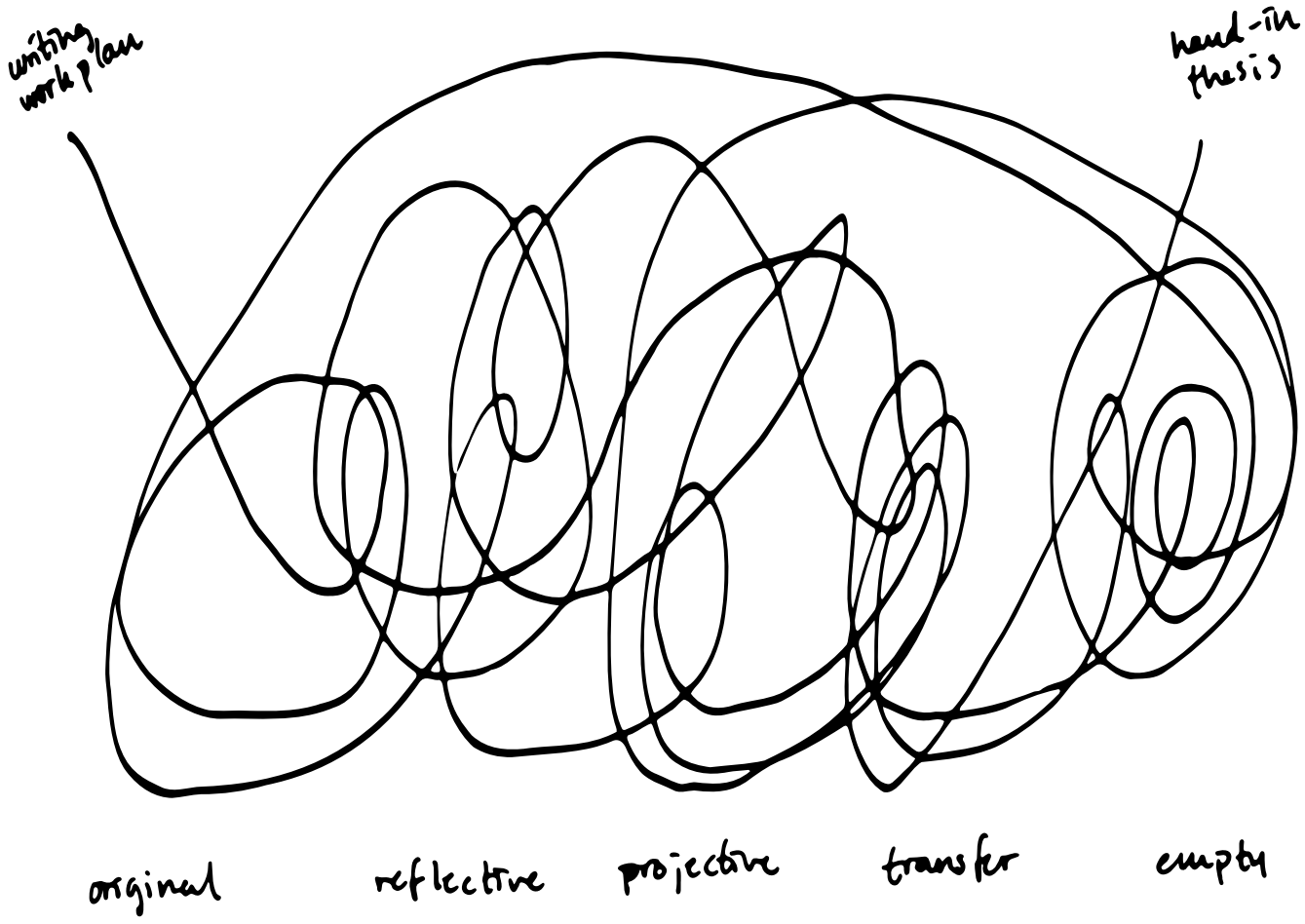


Fig. 61 Trying to demonstarcte my iterative process

5.4 Final reflections, looking forward

Although, designing for a site varies in a lot of ways, and how the landscape matters for us as architects, landscape architects and urban designers varies too. Some may focus on a site's physical values, while others treat it as conceptual terrain. Both physical conditions and abstract concerns have been considered important contributing factors in the design process, and in a professional context it opens up the need for a multidisciplinary approach to landscape architecture. The final goal for the use and function of present and future seascapes must be to provide an integrative framework for a way forward, to help tackle the challenges still to be faced and achieve sustainable management and development of our urban coasts and oceans. It has to happen at all scales, big as small. In a world of intangible wicked threads we must face the responsibility of formalizing a sustainable future, living with and accepting dynamic landscapes. Weaving and re-weaving these ever changing landscapes with social, environmental and economic needs. A question to further ask ourselves and explore is how we can learn from other places and disciplines when planning for uncertainty.

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Photography references

Fig. 15 Rirkrit Tirvanija`s "untitled 1990 (pad thai)", New York 1990 , Photo: Mary Manning Available at: https://www.momaps1.org/events/318-rirkrit-tirvanija-s-untitled-1990-pad-thai

Fig. 16 Liam Gillick`s "(The What If? Scenario) Discussion Platform", London 1996, Photo: @Liam Gillick Available at: https://liamgillick.info/1989-1999

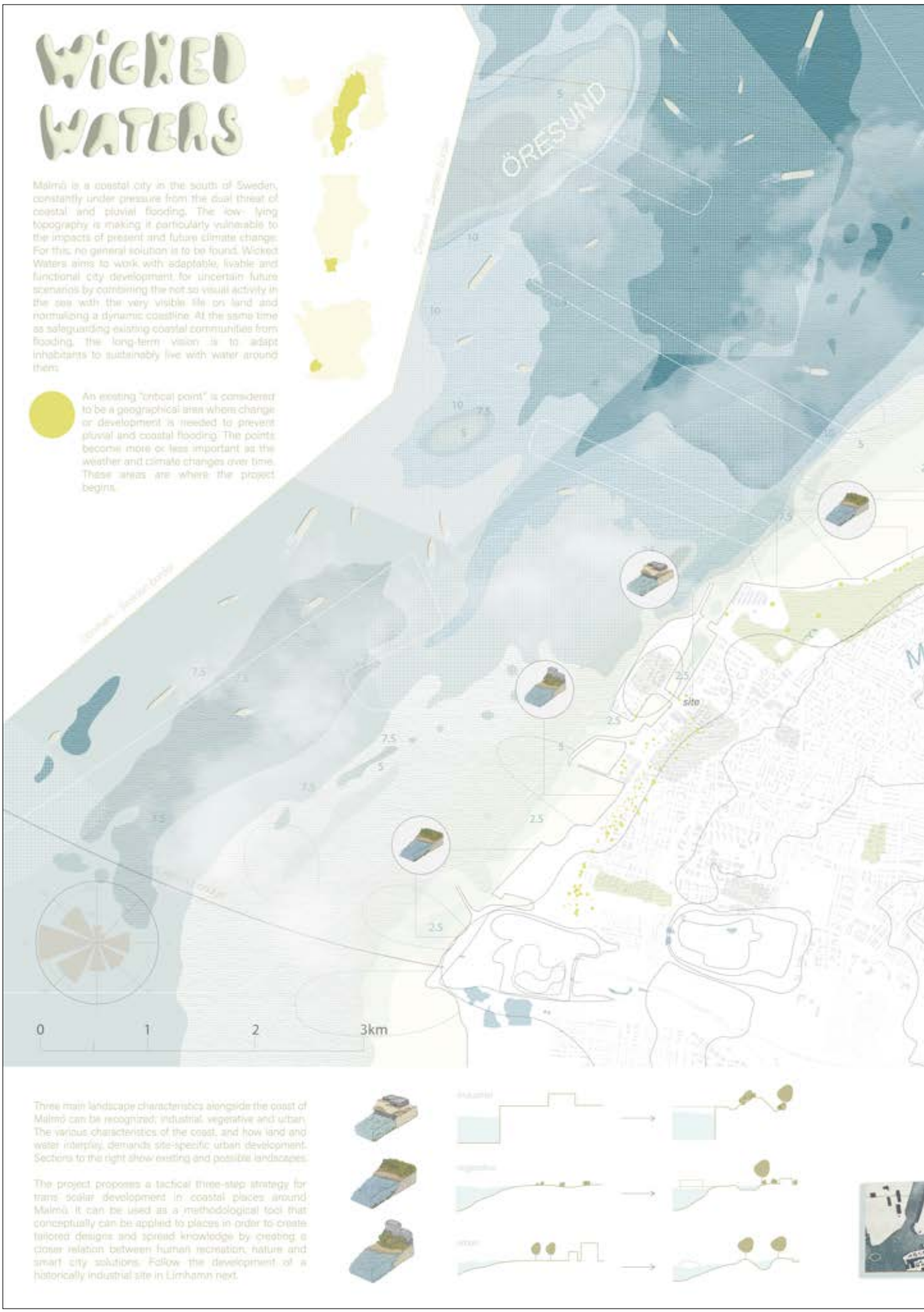
Fig. 39 Harbour Bo01, Photo: Marja Diaz Available at: https://sydvast.se/projekt/hamnen-bo01/

Fig. 40 Climate-resilient neighborhood, Visual: Tredje Natur Available at: https://klimakvarter.dk/en/om/ [Accessed 18 Apr. 2024]

Fig. 41 Quays of the river Scheldt, Photo: Landzine Available at: https://landezine-award.com/quays-of-the-river-schelde-sint-andries-en-zuid-antwerp-2/ [Accessed 18 Apr. 2024].

Other photographies and visuals, sketches, models, collages: @Anna van Amersfoort

6.2 Appendix A - submitted design proposal board part one, original size: A1

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commercial fishing
hotel
museums
eel grass
critical point
larger green areas
waterbodies
flood delays (populated areas)
CONCEPT
The intangible threads of a problem so wicked as flooding is in this case converted into a concept. In the making of an adaptable and livable city the lines between dry and wet need to be blurred, in order to be sewn back together in various constellations that will expand the opportunities for us to live our daily lives.
As a macro communication tool for the project, wind turbines, neatly designed with a reflecting surface will be installed on every site. They are modular and will represent how public art and smart city solutions can be combined and wake awareness on a local scale. This will be the first step of weaving together sea and land for a more seamless future for Malmös residents.

Appendix B - submitted design proposal board part two, original size: A1

PHASE ONE
communication

In phase one, wind turbines are installed on every site containing one or more critical points. The turbines can be placed on the ground, floating in the water or on top of buildings. Its purpose is to reflect light to become visible and awaken interest for bypassers or from a longer distance, but also to generate electricity from the harsh winds Malmö is normally facing.

The site in Limhamn is currently used as a parking lot and storage for construction material, not very welcoming for recreational purposes. On site, three old production silos are kept and left for no current use. That is the perfect place to install three wind turbines to generate electricity for the future structures. The public is invited to contribute in the making of parts of the wind turbines, reusing local materials from the various sites. In Limhamn, piles of sand and small stones are being used to add hanging elements.

PHASE TWO
activation

Next, conditions for recreation and social use of the site are taken into consideration, in order for people to actually want to stay and use it. At the same time the first flood preventing elements are developed. The preconditions will differ from every site and therefore a more site-specific approach is needed, although some elements may be modular or areas are being left "open" for it to be temporarily used in different ways. Some common things like seating and lighting may not vary very much on each site and can even be moved between them.

In Limhamn lookout spots, stairs, tensile climbing nets and rainbeds are added in order to socially activate the site and to handle runoff water from rainy weather. The stairs is an example of a multifunctional area for temporary use, but also naturally used for seating, and a flood protecting element because of its higher elevation.

PHASE THREE
landscape adaptation

The landscape and terrain is further analyzed in phase three of the project in order to elevate and sink the ground in places where it is most fitted to do so. On higher ground, elevate more and on lower ground, sink even more, in most cases. These interventions have to be site-specific in order to both prevent damaging flooding and to create a livable and usable space. The elevated areas in Limhamn are meant to lead the water down to lower grounds like rain beds, a square, a pond around the smaller silos or creeks surrounding the site and leading water back to the sea.

To connect land and sea more a bridge mimicking the outlines of three silos is constructed to be used for walking, swimming or fishing. The project has now led to an open ended opportunity to weave together land and water even further, at the same time as protecting the site from flooding and activated an unused area.


57578
deeper water for boat traffic
improved sea life
artificial island
bridge
existing wetland
tree
multifunctional stair
open area
lowered square
rainbed & creek for runoff water