

THE THINGS WE HAVE IN COMMON.

The role of landscape architectural design in
transforming landscape edges into commons

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Author: Jantine Maria van Halsema | 4559886

First mentor: Saskia de Wit
Second mentor: Aleksandar Staničić

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Delft University of Technology
Faculty of Architecture and the Built Environment
Department of Urbanism
Chair of Landscape Architecture
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Introduction

0

Place & Memory

This project takes place in Den Helder, a small city located in the far north-west end of the mainland of the Netherlands. It was the chosen location of the Place & Memory studio, of which this thesis is a part of. The approach of the studio was to immerse ourselves into the site for a week, trying to take in as much information and experiences as we could, and find things that interest and intrigue us. We went in blank, with no design theme or purpose other than to understand more about Den Helder and what it needs as a place. We did so through different techniques, so I found myself interviewing the sea, having coffee at a neighbourhood centre, keeping a diary, repeatedly walking up and down the dike for a scoring walk, and taking an ice cold swim in the sea with an old couple that I had met there. Looking back at this week, these activities, and especially the ones involving surprisingly fun encounters, were not only the perfect start to explore the curious place of Den Helder, but have condensed as happy memories that I will keep with me.



Interaction



Land/Water

On the first day of our fieldtrip to Den Helder we walked an endless walk along the beach from the *donkere duinen* to *Fort Kijkduin*. Calmly we watched the waves rhythmically come ashore, and I started to notice the beautiful patterns that they cut out into the sand, leaving traces. After walking further north along the beach, the sea-dike slowly replaced the beach and dunes, changing the interaction between sea and land, leaving little room for dynamics and the leaving of traces. This interaction of water and land became my first fascination, whereafter I began researching further into the land-water edge.



People/Landscape

Within this space of the land-water edge of Den Helder, I noticed the interaction between people and their surrounding landscape as well, or the lack thereof. On the beach I noticed people making use of its qualities, feeling the sand, wind and water. Along the dike however, people merely walked along to enjoy the view from a far distance, a single spot could be found where people took a dip in the water. On the east coast there was even less interaction and connection with the coastal landscape, since it was hard to reach, far out of sight, and therefore probably out of mind. No people to be found. Hence my second fascination began to take shape: the interaction between people and their environment. I started to look further into the use of the land-water edge together with ways in which people interact with their natural environment.



People/People

Throughout my time at the faculty of Architecture I have had an ongoing interest in social interaction, and how design can (positively) influence this. In the latest years this has shifted towards a more specific fascination for social interaction in public space. I have come to believe that interactions between people in public space (as well as in 'third spaces'), are essential in society. To be confronted with 'the other', through even the smallest interactions, can help to include them in your horizon of acceptance, understanding and compassion and to move to a larger perception of 'we'. Therefore my interest or fascination for social interaction in public space unmistakably plays a role in the shaping of my thesis. It got sparked as well by reading about some (former) social problems in Den Helder, as well as its rich cultural diversity (which can sometimes lead to friction).

Neglected Landscape Values

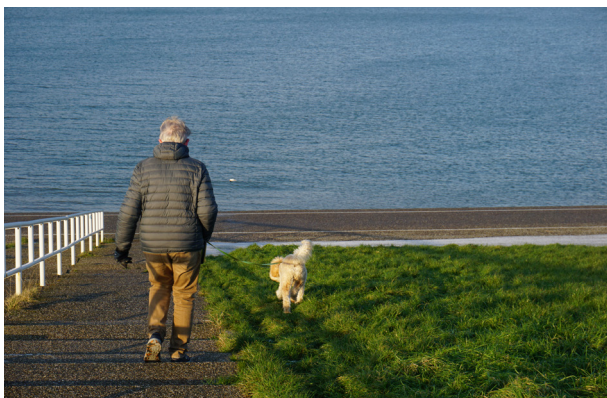
Den Helder is a city that is situated on the edge of land, causing it to be almost completely surrounded by water. With the North Sea on its North and West side, and the Wadden Sea on its East, it has a varied natural coastal landscape with different characteristics and qualities.

Historically Den Helder had a strong connection to the seas; it gave the city prosperity and established culture through activities of fishing and strandjuiten, together with naval activities which helped to establish its strategic importance.

However, currently the city has turned its back to the sea. Dikes, roads and canals create barriers, while the occupation by industrial and naval activities completely deny people access to parts of the coast. The inhabitants of Den Helder might not depend anymore on access to the sea for their livelihoods, but interaction with and experience of this landscape can bring many valuable, if not essential, qualities. Additionally, with current knowledge, the harsh land-water edge of Den Helder is not responding well to the ecosystems of the North Sea and the Wadden Sea. It largely eliminates processes of land-water interaction and the forming of gradients in the landscape, harming its value for other-than-human users of the landscape.

This large edge where land and water meet, holds a lot of value for both its human and other-than-human users. However, **the current design and occupation of the land-water edge do not respond appropriately to these**

social and ecological values of the landscape, leading to neglect and loss of care for the land-water edge.



PERSONAL STATEMENT ON LANDSCAPE

Landscapes can be considered essential to human wellbeing. They provide us not only with beautiful views, and the ability to experience natural elements and the forces of the earth, but they provide us with food and water, they clear our minds and keep us healthy. They ground us in place because they are unique results of natural circumstances and our human cultural expression. Because of their importance for everyone, landscapes can be considered a common good. They belong to no-one, and they belong to everyone. For the benefits we can enjoy, we should all take responsibility and take care of our landscapes to safeguard them and keep them healthy and accessible for all beings that are in need of them. For this we need to connect to our surrounding landscapes to care for them and be part of them, in order to sustain a sustainable human-landscape relationship.

Towards Common(s) Landscape

With the importance of landscape, and the idea of landscape as a common good in mind, I see the need to establish a new relation of importance between the people of Den Helder and the land-water edge in order to improve its social and ecological value and respond to the needs of the human and non-human user communities involved in this landscape.

Within commons theory, the conceptualisation of something as a commons, is a way in which a common resource can be protected from enclosure, overexploitation or neglect by connecting it to a community which uses, manages and (re)produces the resource in a sustainable and socially just way.

By conceptualising landscape as an important but threatened resource for both humans and non-humans, and connecting user communities to the landscape through care, responsibility and agency, a new relation of importance can be established which will increase the value of the landscape for the involved human and other-than human communities.

Therefore, in this thesis I hypothesise that applying commons' theory in landscape architecture can provide a way to protect the landscape as a valuable

resource for human and non-human communities, responding to and improving its social and ecological value.

Research Plan & Methodology

This thesis explores how landscape edges can function as commons in order to better respond to the needs of affected human and other-than human user communities of these landscapes, and how landscape architectural design can fulfil a role in their transformation. It originates in the experience of the land-water edge around the city of Den Helder, whose design and occupation limits its use by humans, flora and fauna, and is therefore not responding to the social and ecological value of this edge landscape. I argue that the application of commons' theory within landscape architecture can provide opportunities and design insights for obtaining sustainable and socially just landscapes that respond better to their social and ecological value.

This is expressed in the main research question:

**'What can be the role of landscape architectural design in transforming
landscape edges into commons?'**

To answer the main research question, a set of sub-questions is formulated:

SQ1: What are the commons?

SQ2: How can commons theory be used in the field of landscape architecture?

SQ2.1 How do landscape commons answer to the social and ecological values of the landscape?

SQ3: What is the social and ecological relevance of the edge?

SQ4: What design interventions can be done to transform landscape edges into commons?

The research will be conducted in three parts; consisting of site analysis, literature research and design research:

I The Edge: immersive site analysis

The analysis and understanding of the site (Den Helder), forms the basis of this research. Through analysis methods such as the score, sensory analysis and imaginary interviews a multi-layered understanding of the site is obtained. The focus on the land-water edge thereafter leads to the problem statement and main research question of this thesis.

II Commons: Theoretical framework

In order to gain a larger understanding of commons and commons' theory, literature research will be conducted on their history, current applications and underlying ideas. This will be supported by case studies that explain different principles and their underlying relations. (SQ1)

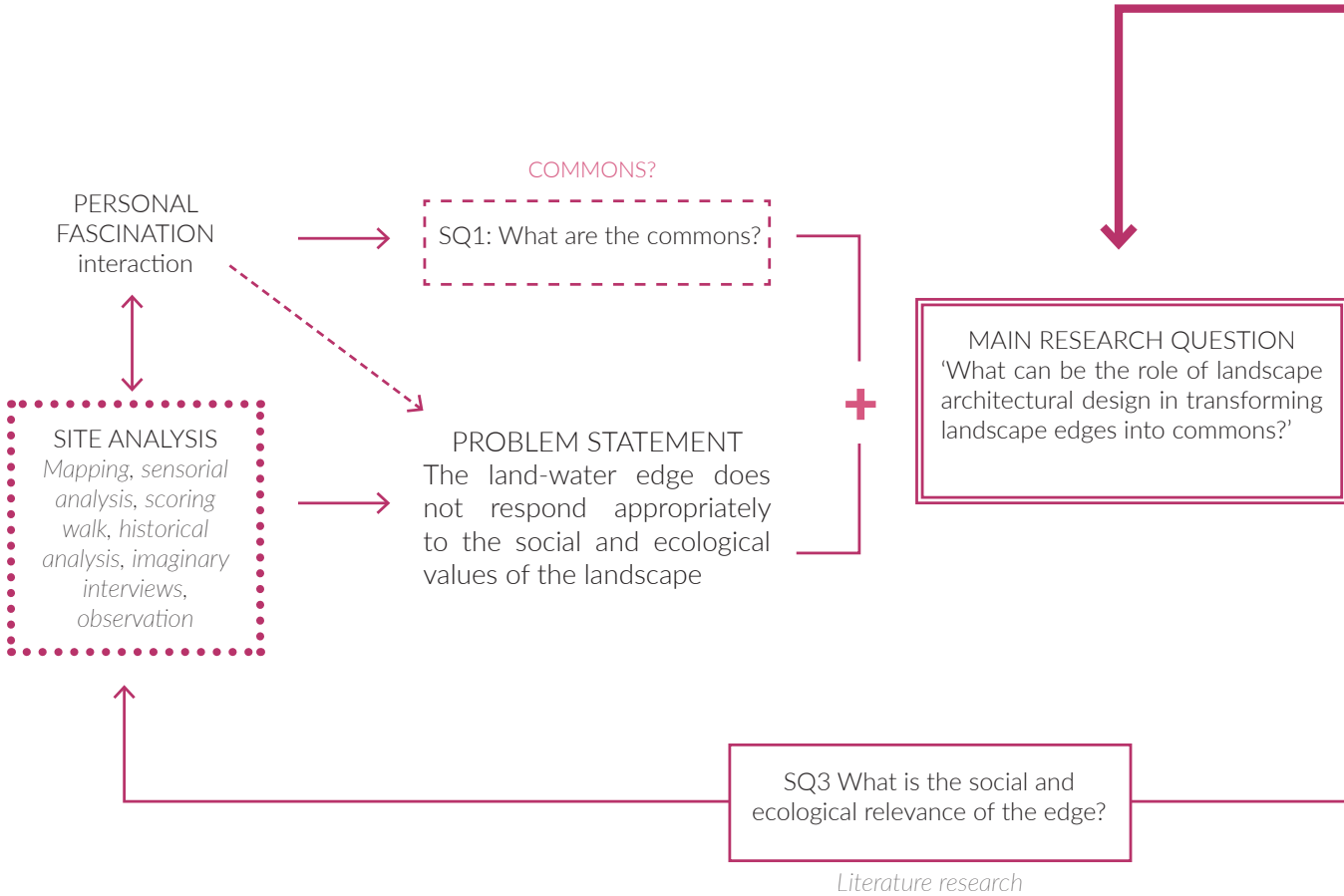
Thereafter, from general commons' theory, the step will be made towards the application within landscape and landscape architecture. This will be based on literature research in combination with case studies. Together with the general commons research this will form the theoretical framework of this thesis. (SQ2)

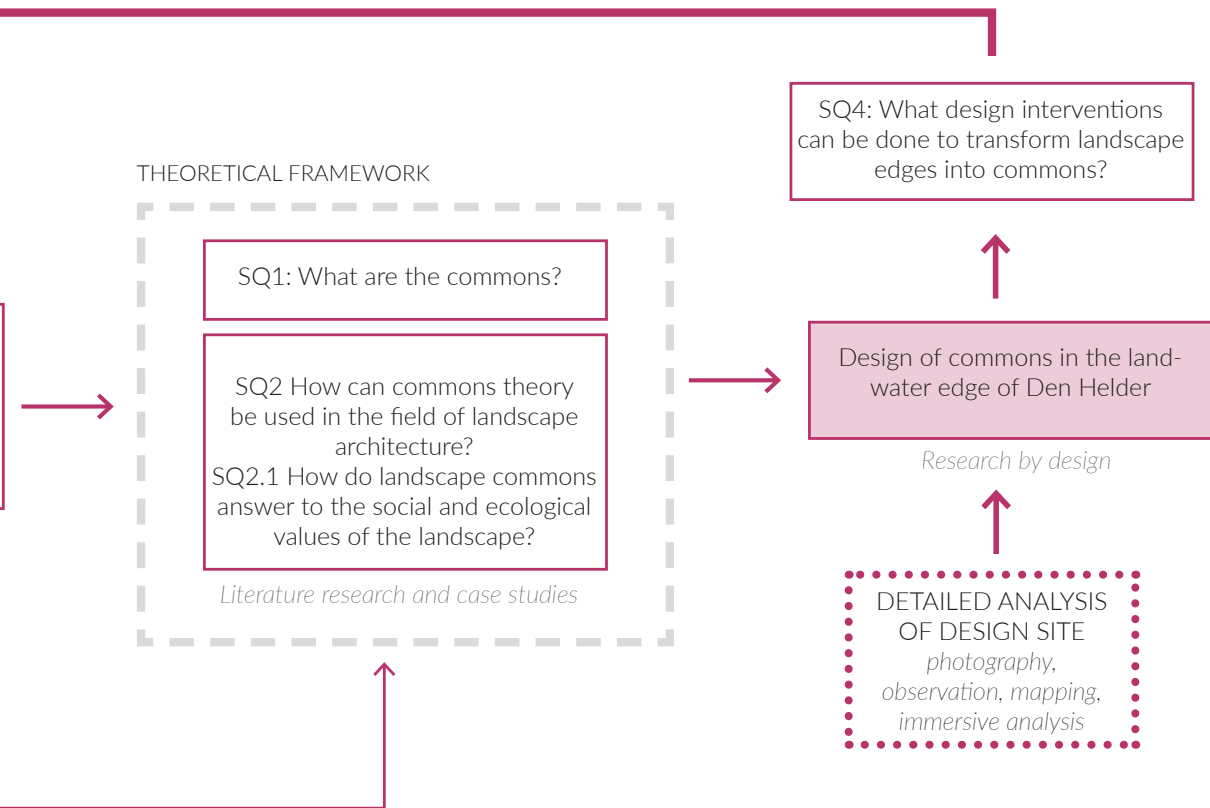
To establish the relation between the primary site analysis, and the chosen topic of the commons, literature research will be done on the social and ecological value of the edge, explaining its relevance for the commons. (SQ3)

III Commons in the Edge: Design research

Lastly, the general principles from the theoretical research from SQ1-SQ3 will be used as guidelines for a landscape architectural design in the land water edge of Den Helder. Through design exploration and research by design, design interventions will be made that will make the landscape edge function as a commons for humans and other-than-humans. From the interventions in the case study area of Den Helder, general design principles for transforming landscape edges into commons will be derived.(SQ4)

Methodology scheme





Reading Guide

The research will be presented in six chapters. Following the structure of the sub-questions, the first two chapters will explore the commons and their application in landscape architecture answering SQ1 and SQ2. Chapter three will establish the link between the commons and the value of the edge, and present the analysis of the land-water edge of Den Helder. In chapter four, a design site on the land-water edge of Den Helder will be used as a case study on how to transform landscape edges into commons for humans and non-humans. Chapter five will go into the social processes and community involvement that will transform the designed space into a commons space, and will reflect onto the role of design in the commons concluding with general design principles derived from the case study of Den Helder. In the sixth and final chapter, an answer to the main research question will be presented, followed by a reflection on the outcomes and overall research process.

Chapter structure

1. An introduction to the Commons (SQ1)
2. Towards contemporary Landscape commons (SQ2)
3. Den Helder, Edge of Land (SQ3 + site analysis)
4. Commons in the Land-Water Edge (SQ4 part 1)
5. Designing Commons & Commoning after Design (SQ4 part 2)
6. Conclusion & Reflection (RQ)

All images and photographs are made by the author unless stated otherwise.

Glossary

A

ACCESS/ACCESSIBILITY

the fact of being able to be reached or obtained easily
(Cambridge dictionary)

APPROPRIATION

making changes to something to adapt it to your own wants and needs,
making something one's own, creating a personal relation and creating a sense of care and responsibility

B

BARRIER

something (physical) that limits or obstructs access to something or someplace

C

COMMODIFICATION

the fact that something is treated or considered as a commodity (= a product that can be bought and sold)
(Cambridge dictionary, xx)
assigning value based on a singular quantifiable aspect, neglecting other important values or aspects which might lead to overexploitation

COMMON

belonging to or shared by two or more individuals or things or by all members of a group
(Merriam Webster dictionary)

COMMON GOOD

Something belonging to the community with a general importance for everyone

COMMONS

commons

a resource shared by a group where the resource is vulnerable to enclosure, overuse and social dilemmas (Hess, 2008)

new commons

new commons are various types of shared resources that have recently evolved or have been recognized as commons. They are commons without pre-existing rules or clear institutional arrangements (Hess, 2008, p. 1)

urban commons

urban commons are shared material or immaterial resources in an urban setting that are managed by a user community in a prosocial, participatory process called 'commoning'. Examples of urban commons are public spaces, community gardens, locally-grown vegetables and waste disposal facilities, or a sense of belonging, social networks, and knowledge.

Commoning

A cooperative process to ensure the access to and the maintenance of a resource, which in itself adds extra value for the commoners through the establishing of civic skills and social networks.

COMMUNITY

human

A unified group of people bound by shared interests, goals or characteristics

other-than-human

Group of plant- and/or animal species bound together by habitat, existing within the same ecosystem

D

DEN HELDER

A small city on the edge of land with strong cultural relation to the seas it is surrounded by, but with increasing barriers to interact with the surrounding sea-scape.

E

EDGE

Edges are interlocking forms or places of transition that enclose and separate different spaces. (Dee, 2004)

non-human perspective: Ecotone

Natural gradient between two different landscape types and habitats (Dee, 2004)

human perspective: social edges

edges provide safe and comfortable environments, especially in public space, where people tend to stay or gather, and can therefore be seen as potentially social environments.

ENCLOSURE

enclosure is the gradual or sudden decrease of accessibility of a particular resource. The reasons for enclosure are many: privatization, commercialization, new legislation, increased scarcity through overconsumption, which can be brought about from new populations, natural disaster, neglect, etc. (Hess, 2008, p.6)

H

HUMAN

A living organism of the human-species

I

INTERACTION

mutual or reciprocal action or influence (Merriam-Webster, x); meaning to become involved, or to have contact, with something or someone (Cambridge

dictionary)

landscape interaction

People/landscape: physically interacting with the landscape by influencing it and letting it influence you in multiple ways, being present and using all your senses to feel, enjoy and react to the qualities and properties of the specific landscape that you are in. Landscape/landscape: two or more landscape types physically influencing each other.

social interaction

When two or more people communicate or react to each other . It is the fundamental factor and foundation of social processes that create social groups and social structure (Kdkasi, 2023).

L

LANDSCAPE VALUES

social value of the landscape

Importance of landscape for people , felt through physical sensorial experience ,and use of the landscape. Providing wide-ranging benefits regarding personal and general societal well being.

use-value

A way in which the social value of the landscape can be reflected:

the available programming and human activity in the landscape, including recreation, agricultural use, tourism etc.

existence value

A way in which the social value of the landscape can be reflected:

The unique personal sensorial experience of the landscape reflected in personal appreciation and values

Intrinsic value

Human evaluation of landscapes for their geological and ecological characteristics and quality

ecological value of the Landscape

Importance of landscape for other-than-humans,

including plant and animal species. Applies to available conditions regarding food, shelter and reproduction.

M

MULTISPECIESWORLD

The understanding that other-than-human species are also active actors in the world that we co-inhabit. (S. de Wit, Graduation lab: Place and Memory guide)

N

NATURAL COMMON POOL RESOURCES

natural resources such as fisheries, forests and water basins, which are available for everyone

O

OCCUPATION

the possession, use, or settlement of land (Merriam-Webster)

OTHER-THAN-HUMAN

A living organism, being or entity, belonging to an other-than-human species
also referred to as non-humans, being any species that is not human

P

PLACE

"While the place in case of an architectural intervention is viewed from the perspective of the programme and even emerges from it, we can see the opposite for a landscape architectural transformation: here the place forms the point of departure, or the inspiration for the programme."
(S. de Wit, Graduation lab: Place and Memory guide: Sébastien Marot, 2003)

PLACEMAKING

As both an overarching idea and a hands-on approach for improving a neighbourhood, city, or region, placemaking inspires people to collectively reimagine and reinvent public spaces as the heart of every

community. Strengthening the connection between people and the places they share, placemaking refers to a collaborative process by which we can shape our public realm in order to maximise shared value. More than just promoting better urban design, placemaking facilitates creative patterns of use, paying particular attention to the physical, cultural, and social identities that define a place and support its ongoing evolution (What Is Placemaking?, 2007)

R

RESOURCE

a source of supply, support, or aid, especially one that can be readily drawn upon when needed ("Resource Definition & Meaning | Dictionary.com," 2020)

S

SENSORY EXPERIENCE

experience obtained from the use of one's senses, including smell, touch, hearing, sight and taste

SOCIAL CAPITAL

"resources that an individual can draw upon in terms of relying on others to provide support or assistance in times of need", requiring stable networks of social interactions within a given community (McGinnis, 2011, p. 176).

W

WADDEN SEA

A unique and dynamic landscape formed by tides and sedimentation. Its shallow waters, mudflats and salt marshes are areas of high biodiversity providing a home for many non-human species, fulfilling an especially important role for migrating birds. The landscape stretches from Denmark to the Netherlands and is declared UNESCO world heritage due to its unique qualities and ecological importance.

An introduction to the Commons

1

“To say “the commons” is to evoke a puzzled pause. You mean the government? The common people? That park in Boston? In politics and the media, the concept of the commons might as well not exist. Yet the commons is more basic than both government and market. It is the vast realm that is the shared heritage of all of us that we typically use without toll or price. The atmosphere and oceans, languages and cultures, the stores of human knowledge and wisdom, the informal support systems of community, the peace and quiet that we crave, the genetic building blocks of life—these are all aspects of the commons”

Rowe, 2013

Diving into the commons

The term commons is nowadays a widely used phrase to indicate concepts, movements, ideologies and ideas. It can be confusing to understand what is actually meant by the use of it since there are varying definitions of the word without a general agreed upon meaning. This chapter therefore serves as a first exploration on how I interpret the word commons and what definition or elements from the commons I take with me further throughout this thesis.

1.1 Origins in Landscape

The commons find their origin in landscape. The term comes from the English common land or common grounds with the Dutch equivalent of *gemene gronden*, often referred to as *Meent*.

In the European middle ages this term has been used to indicate a collectively maintained and used land (Avermaete, 2018). Such a Commons or *Meent*, was a stretch of uncultivated land shared among members of a surrounding community, often consisting of roughs, pastures, forested areas, or a combination of them. This large piece of land was often owned by landlords who would give out use-rights to peasants (Menatti, 2017), or was collectively owned by the surrounding community. The users, also called commoners, could use, treat and maintain the land for their personal benefit. In this way the land served as a common resource for people to sustain themselves. They did so by grazing their cattle, planting and harvesting crops and by foraging for food and firewood. In order to prevent over-use such as overgrazing, or an unequal division of yield from the land, organization among the commoners was needed to set rules on their use of the commons and to discuss matters of common interest (Z. C. B. S. & Artworks, 2014., Bodegom, 2016., Commons and Classes Before Capitalism, 2022).

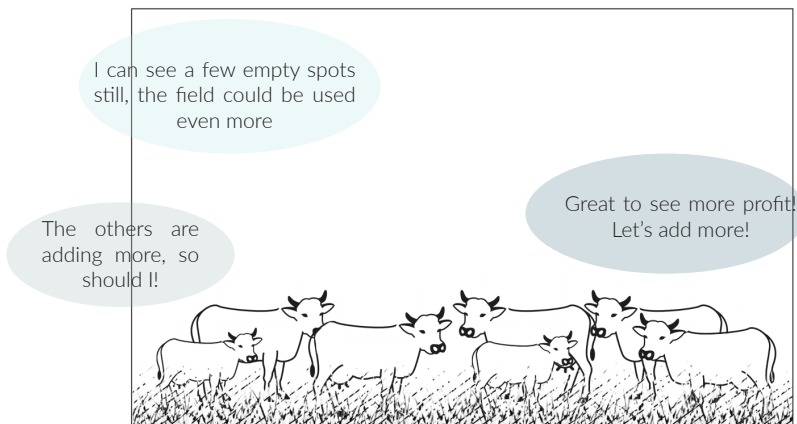
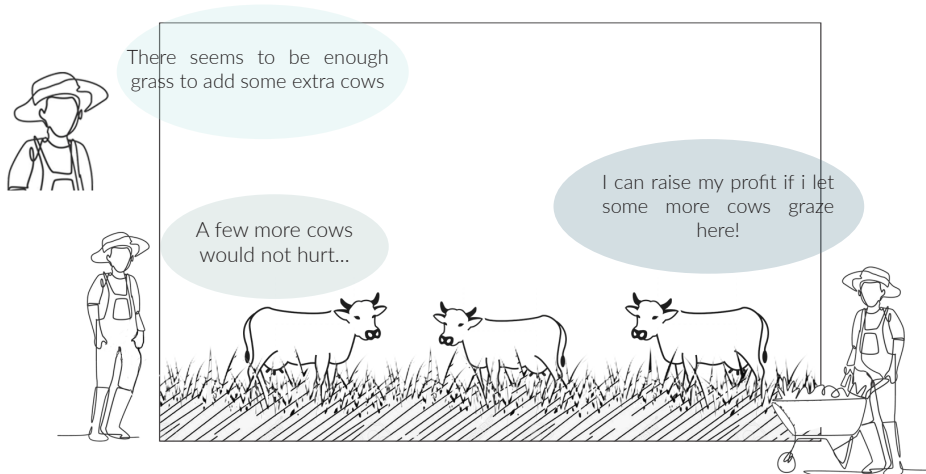
Outside the European context commons exist as well; actually 'an estimated two billion people depend upon commons commons as forests, fisheries, water, wildlife and other natural resources for their everyday subsistence' (Bollier, 2011). These communities manage their resources in an equal and sustainable way, that respects other users as well as the natural resource itself.

Gradually however, the commons principles of collective management, responsibility and use are being lost. In Britain the infamous 'enclosure of the commons', meaning the division, selling and privatising of the common lands, 500 years ago caused great change for the commoners, who had now lost an important source of livelihood (Dellenbaugh-Losse et al., 2020). This enclosure of the commons was driven mostly by private economic interests. In the Netherlands the existing commons were largely enclosed as well, due to the 'Markenwet' of 1886, which was set up to cultivate more land for private agricultural use (Bodegom, 2016). Moreover, we can see the enclosure of the commons in the dispossession of lands from indigenous communities, where all over the world their lands are being unrightfully claimed, sold and exploited for the private market.



Figure 1: Image of a commons: a pasture where cattle from the surrounding community could graze and crops could be planted and harvested.

Image source: (Hansnijders, 2023).



1.2 Tragedy and Governance

When speaking about commons it is almost inevitable to mention the infamous 'Tragedy of the Commons', as described by American ecologist Garret Hardin in 1968. In his article he sets out how individuals will always act in their own self-interest and neglect the collective good. He illustrates this through the example of an open pasture (see figure x). In this open pasture each individual user would try to maximize their own profit by grazing more cattle, leading eventually to ecological collapse of the pasture and therefore loss of the resource for the collective. Here the commons refers to the worldly natural common-pool resources, such as forests, open grazing lands and seas. No one owns these resources, and people cannot be excluded from using them (Hess, 2008; Banyan, 2014). This however makes them prone to overexploitation and depletion if unmanaged. Hardin therefore speaks rather of the tragedy of the unmanaged commons (Hess, 2008; Ostrom, 1990), however, this is not mentioned in his article and is therefore used widely to contest the idea that the commons could work. Hardin's article supports a pessimist view on human collaboration and our ability to communicate and work together for the common good, pushing for privatization of land and resources instead. This enclosure of the commons however, often leads

to commodification in which profit maximization is more important than sustainable management and assuring accessibility for its users, which is in fact the real tragedy of the commons. Modern enclosure of the commons can be seen in numerous resources such as drinking water, indigenous lands, housing and the internet. It means that once you had (free) access to something which now you have to pay for or cannot access at all (Dellenbaugh-Losse et al., 2020, p. 15).

Fortunately, there has been new interest in the commons principles and way of thinking on how to manage our shared resources just and sustainably. A well-known example is by Elinor Ostrom; in her 'Governing the commons' (1990), for which she has been awarded the Nobel prize for economics in 2009. Ostrom sets out principles to collectively manage these common resources in a sustainable manner without privatizing or enclosing them, aiming for participatory management of shared resources instead. Her work has caused a spark of interest in commons even beyond its traditional scope of natural common-pool resources.

Figure 2: Tragedy of the Commons; Theory explaining behaviour of people acting in their own self-interest neglecting the common good, inevitably leading to overexploitation and depletion of a resource.

1.3 The Emergence of the New Commons

When most people hear the word commons today, they might not even think of historic shared lands or the common worldly fisheries and forests, but have a totally different image of what they are and what they could be. This is because the term commons is nowadays widely used within many frames of reference within economic, social and political theory, as well as within creative industries, yet without a specific agreed upon definition (Avermaete et al., n.d., Hess, 2008). This creates a wide range of what can be understood as commons nowadays, varying from the historic natural resources that we have in common, to public space, internet, healthy food, medicine, culture, and housing. This can create difficulties in understanding what it really means when something is defined or conceptualized as a commons.

To better understand the newly emerging commons, that are often very different from the 'traditional' natural common-pool resource commons, Charlotte Hess (2008) wrote an extensive literature overview on these 'new commons'. According to her research, in the new commons the emphasis shifts from natural common-pool resources and property rights, towards governance (as advocated by Ostrom) and participatory processes. The range and scale within the new commons differs as well, ranging from small local commons such as urban gardens, to global commons such as the well-known Wikipedia. Within the diverse cases included in her research, naturally there were many differences, however a strong common denominator could be found; a sense of sharing, collective action, and joint-ownership. Furthermore, there is often a larger perspective on sustainability and responsibility for resources for now and future generations, as well as for communities elsewhere.

Yet, the question remains why people define or conceptualize something as a commons. Hess (2008) defined six entry points¹ to arrive at the commons, among these are the need to protect a resource from enclosure, privatization and commodification, and the desire to engage in commons like thinking and collaborative action. People are starting to recognize that certain resources are becoming scarce

and unavailable or privatized and commercialized, and are therefore engaging in collaborative action in order to protect these resources, or create new resources themselves without government or market interference. In this way, the commons in the new commons literature, has become both a term to indicate a (reclaimed) resource as well as the movement connected to protecting or creating it (Hess, 2008). The resource itself can be a material natural resource such as food or timber, much like the traditional commons, but can also be spatial such as green space in cities or affordable housing, the resource can even be immaterial such as knowledge, culture or internet.

[1] (A.) the need to protect a shared resource from enclosure, privatization, or commodification; (B.) the observation or action of peer- production and mass collaboration primarily in electronic media; (C.) evidence of new types of tragedies of the commons; (D.) the desire to build civic education and commons-like thinking; and (E.) identification of new or evolving types of commons within traditional commons; and (F.)rediscovery of the commons (Hess, 2008).



Figure 3: Collage of different 'new commons', ranging from material resources such as housing and food, to immaterial resources such as wifi and culture.

1.4 Beyond Resources

There is a difference however, between a shared resource and a commons; A commons without its surrounding community of commoners, who engage in its creating, managing and maintaining, is just a resource (Bollier, 2011; Dellenbaugh-Losse et al., 2020; Feinberg, 2021; IKA&Avermaete, 2016). Hence without a community, there is no commons. Commoning can be defined as 'the participatory social practice of co-governance which forms the basis for making a resource accessible, as well as maintaining, sharing, or spreading it' (Dellenbaugh-Losse et al., 2020, p. 21), which 'links a resource to its nearby community of users' (Feinberg, 2021, p. 18). These social practices can include the making of rules and protocols, defining values and norms, and setting collective goals (Bollier, the one used in ch2). Since every commons is different, with different resources and different surrounding communities, these practices also differ in every case. However, they must include participation, personal responsibility, transparency and self-policing accountability (Bollier, 2011). This kind of engagement based on solidarity, inclusiveness and cooperation, creates added value for the participating community including (Dellenbaugh-Losse et al., 2020).

Thus a commons is not just a resource; It is a resource including a community and their social practices created to manage the resource.



Figure 4: three pillars of the commons; resources, community and social practices

1.5 New Commons Cases

To illustrate and gain a better understanding of the relation between resources, commons and commoning (especially in the 'new' commons) in the following section two (spatial) example cases will be shown.

KALKBREITE (2014)

Affordable living space, Zurich

Decent and affordable housing is becoming more of a scarce resource, with rent and housing prices rising exponentially over the past decade, treating housing as a commodity to be exploited for profit instead of as a public good. Especially within cities this is a problem, where the need for housing is strongly increasing. Housing cooperatives following commons principles are trying to combat this problem by moving away from market driven designs and decisions. Through sharing space, listening to the wants and needs of residents and collaborating in producing common spaces, lots of problems are tackled and high quality affordable living environments are created which respond to the needs of its users.

Kalkbreite, a Swiss housing cooperative that emerged from the successes of the squatting movement in the 1980's, is working with commons principles of participative planning to address this issue and realize affordable and sustainable housing. Even before the cooperative was founded, the Kalkbreite project started with a participative planning process through simple mailing lists and workshops. The ideas generated from these processes were incorporated in the building design.

Sharing

A key method the cooperation of Kalkbreite uses to conserve the resource of living space is sharing. The sharing of space is essential to the Kalkbreite complex in order to keep the living costs low. In the design this means that rooms that are only occasionally used, such as guest rooms or office rooms, are not included in every housing unit, but shared among residents. For this reason, a large number of common rooms with different programs were created and individual space requirements have been strongly reduced. The same counts for the outdoor spaces. There are no private outdoor spaces, only a large shared courtyard and multiple rooftop gardens. The green spaces have different levels of publicity, making some spaces also available and free to use for residents from the surrounding area.

Joint decision making

Sharing spaces among a group of users requires certain organisation. Meetings among the residents and other members of the cooperation are held in order to discuss the common spaces regarding, cleanliness, events, and rules or sanctions. Furthermore, they discuss the use and function of the spaces to make them evolve according to the user's needs. This act of commoning helps not only to create a pleasant living environment, but also to strengthen the relation between the people involved.

Fig 5: Images from Kalkbreite complex.
top: shared courtyard, left: common inside space, right: facade. All images and information derived from: Genossenschaft Kalkbreite (2022) and Dellenbaugh-Losse et al. (2020, pp. 97–105)



“We also have four rooms whose function is agreed on together. At the moment we have a room for sewing and ironing, a weight room, a room for yoga and meditation, and a room for youths.”

- Urban commons cookbook p.97



DUSSELGRUN (2014)

Green space and food knowledge, Düsseldorf

Düsselgrun is a small urban garden near the central station of Düsseldorf. It combines the need for green space in urban areas, with the need to connect with our foodsystems and learn about healthy food. It started out as a gardening group of neighbours growing food on an abandoned plot, and became organised in 2014. Their goal is to grow vegetables, learn about food and nutrition, and to spread this knowledge. It is also an initiative to save green spaces in the city in a way that enables people to shape the city themselves and break the anonymity within it. The garden offers space for people to meet each other, to learn, share knowledge, ideas, perspectives and experiences to become a more solidary society. The garden is run by a small group of volunteers forming the core commoning group, however the garden is open for everyone to visit and join.

Learning by doing

The spreading and sharing of knowledge is an important factor within this urban commons. The active group of volunteers learns about planting, harvesting, different varieties of vegetables and nutrition, mostly by doing, and working together in the garden weekly and sharing knowledge among each other. Additionally, they organise events and workshops to spread the knowledge that they have gained. They provide classes on gardening, cooking, sustainability and healthy eating, both for kids and adults. Next to that the farm provides daytime activities twice a week as a structural activity for those who need it. In this way this commons benefits a larger community than only the people who are directly involved in its core group.

Connecting with other initiatives

This small urban garden tries to expand its reach even further through collaboration with other initiatives and collectives. They search for partners who are working with similar themes so that they can learn from each other. Furthermore, they are embedded in a larger system of coöporations such as beekeepers, seed banks, an organic farm, a composting group and other social ecological initiatives including a community association of the neighbourhood. They stress that learning from each other is essential. In this way anyone can start an initiative like this, without having to be a professional gardener.

Fig 6: Images from the Düsselgrun garden.
left: photo of people meeting in the garden, right: volunteers working in the garden, bottom: overview of garden. *All information and images derived from:* Monderkamp et al. (2022) Dellenbaugh-Losse et al. (2020, pp. 37–45)



“Cities can be pretty anonymous. A space like our garden offers the ability to meet other people, to learn, and to share knowledge, ideas, perspectives, and experiences”

- Urban commons cookbook p.45



1.6 Take-aways from the Commons

The commons remains a wide ranging topic, but to summarise and conclude this part of the researched the following take-aways are formulated:

- Commons is originally a term to describe landscape based, or natural common pool resources, accessed and managed by a surrounding community.
- 'The tragedy of the commons' by Hardin (1968) is a negative narrative on humans ability for cooperation and sustainable and just management of resources.
- New interest in commons like thinking is largely based on the need to protect shared resources from enclosure and commodification by market interference or privatisation, as well as the desire for collaborative action.
- The commons can take many shapes and sizes, but revolve around a sense of sharing, sustainability, just management and cooperation. The commons therefore consist of 1) a resource, material or immaterial, that is vulnerable to enclosure, overuse and/or neglect, 2) which is used and managed by a group 3) through a set of social practices and rules.

Towards Contemporary Landscape Commons

2

As in many other fields, the topic of commons is being appropriated within the field of architecture as well. For example, more and more work is being done on the subject of urban commons and the conceptualisation of the city as commons in line of thought with Henri Lefebvre's right to the city (1967). Knowing commons are traditionally landscape based, and seeing the many ways in which commons are now redefined and its principles re-used, left me wondering to what extent the ideas on commons regarding landscape have been broadened and re-used within landscape architecture. I found that the relation of landscape and commons is still mostly traditional, meaning it is based on accessing natural common pool resources, while the way we see, use and value landscapes (especially in western-capitalist societies) has been changing. Therefore I see relevance in exploring a contemporary relation between landscape and commons and including it in the field of landscape architecture.

2.1 Why Landscape Commons?

Before getting into the ways of relating the commons to Landscape (architecture), it is important to formulate the different reasons why it could be meaningful to look at landscape from a commons perspective.

Landscape is an important resource

Firstly, because landscape can be seen as a resource that is under threat of enclosure, privatisation and commodification. Therefore, in line with the entry points as described by Hess (2008), landscape can be linked to the commons in an attempt to protect it as an important shared resource.

In the past decades research has shown that landscapes and nature provide us with multiple other resources beyond the material;

Locally landscapes are important places for recreation and physical activity, and are therefore linked to health. Studies found that being in nature has significant benefits for our physical and mental health; it reduces stress levels and helps to recover

from mental-fatigue, positively influences physical activity, and can provide environments that facilitate social contact (Rugel, 2019). In addition, more recently the global importance of landscapes with healthy ecosystems has become unmistakably clear; now that more knowledge is available about ecosystem services and the importance of biodiversity for (among others) climate mitigation.

Beyond the necessity of landscape for humans, understanding that we live in a multispecies world, there is the necessity of landscape and natural environments for other-than-humans. Animal- and plant-communities need certain conditions to thrive, however due to factors such as climate change and

other human disturbances, habitats are shrinking and species are disappearing. Borrowing from the ideas of Bruno Latour (1993), these non-human inhabitants of the earth should have the same basic rights to exist as we humans do. Thus landscapes, their habitats and vital resources, should be protected.

While fortunately our knowledge about the multifaceted significance of landscapes for humans is increasing, and more and more we are acknowledging rights for other-than-humans, pressure on the availability, access and health of landscapes is increasing at the same time. In commons' literature the gradual or sudden decrease of accessibility of a particular resource is referred to as 'enclosure' (Hess, 2008).

This enclosure can be seen in landscape as well; Firstly, due to the commodification of landscapes. The commodification of landscape reduces it to a single, often productive or functional value, leading to overexploitation, and neglect of other landscape values. Examples of this are mines, agricultural monocultures and other destructive practices which neglect ecological value among others. Other reasons for the loss of landscape as a resource are privatisation, increased scarcity through overconsumption, and neglect (Hess, 2008).

Therefore, to protect landscapes as an important resource, we should understand it and treat it as a commons.

Stronger connection for better protection

A second reason to look at landscapes from a commons' perspective is because it can allow people to interact with their surrounding landscapes in new ways, generating new human-nature and human-landscape connections which can aid in their protection.

As discussed in chapter 1, after Ostroms' 'Governing the commons' (1990), there has been a shift towards sharing, participation, and collective action, responsibility and ownership in especially the 'new commons'. The active engagement in the activities of sharing, organising and producing the commons, creates a stronger relation with the resource that is based on more than the consumption of it. In the case of Landscape commons, this could result in a stronger human-landscape relationship. To be able to use and be an active agent in the landscape creates a more meaningful relation, which could help in their protection and conservation (Gerber & Hess, 2017). Because building a personal connection to your environment can evoke a larger sense of responsibility and care, and causes people to be more likely to adapt good practices to safeguard and protect it (Castiglioni et al., 2015).

Social wellbeing

Lastly, along with benefits for landscape, treating landscape as a commons can have positive effects for their surrounding communities as well.

For commons to work, there needs to be an involved community that creates and manages the shared resource(s), which calls for democratic processes of negotiation and rule- and decision making. The involvement in these practices, also called commoning, can be self-empowering since it allows to build skills for public engagement and cooperation (Dellenbaugh-Losse et al., 2020). Through these commoning processes individuals work together to form shared goals and a collective purpose for the commons, which binds them together as a group. This helps to create both an individual and a collective sense of identity (Feinberg, 2022). Along with this, due to the obtaining of rights and responsibilities within a group, and the feeling of contributing to a greater good, a sense of meaning can be created, reducing feelings of isolation and disempowerment (Campbell, 2009).

Furthermore, the shared interest in commoning forms a basis to sustain social interaction. From these interactions an environment of trust is created in which individuals can establish meaningful social networks, which forms the basis for *social capital*, an important factor in community wellbeing and resilience (Feinberg, 2022).

Social capital

resources that an individual can draw upon in terms of relying on others to provide support or assistance in times of need, requiring stable networks of social interactions within a given community (McGinnis, 2011, p. 176).

2.2 Inspirations for Contemporary Landscape Commons

In the following section two projects will be shown in relation to resources of nature and landscapes, and community management and connection to these resources and their environments. They do not work necessarily according to official commons principles, but have served as an inspiration for some of the principles that will be mentioned in the framework of *Landscape as Commons & Commons in the Landscape* in section 2.3, and include other valuable elements and characteristics that are worth mentioning in regards to a new approach for the care and management of landscape resources.

I have obtained information about these projects by visiting them and speaking to their founders/directors. Both visits have been very inspirational in showing how people can work together in order to care for and engage with their natural environment, and create added value for the community.

STADSBOERDERIJ OSDORP

Community/city farm, Amsterdam

Stadsboerderij Osdorp is a city farm in a neighbourhood in Amsterdam New-West. In its core it is what you think it would be; a farm in the city, which revolves around growing your own fruit, vegetables and herbs. However, this small farm right between blocks of apartment buildings, is way more than that. It is an important place for people in Osdorp to meet and engage with people from the neighbourhood, to enjoy a green environment, and to learn about nature and nutrition. Next to this it also fulfils various social functions such as a food distribution point for the food bank and a voting location.

Successfull outsider initiative

The farm is an initiative by Martin, who put forward his proposal to the municipality 9 years ago when there was an open call for this location. The core idea was to create a place for the community of Osdorp to meet and connect to one another and learn about nature and food. This idea did not only emerge from Martin's desire to run a social farm, but also from the necessity for such a place in the socially fragile area of Osdorp.

Martin started by just planting some crops, being in the space and trying to connect to the neighbourhood. Gradually he engaged more and more people and created a network of trust and familiarity which formed the strong basis of the place.

Since then the farm has grown and developed. Currently it is a place where people can go for a wide range of activities; from working in the garden or doing workshops, to sitting down for a chat and a cup of coffee or finding a cosy spot to do your school assignments.

Organisation and network

The place developed quite organically but has evolved into a professional organisation that is strongly embedded in the neighbourhood and within the networks of social organisations and the municipality. This means that currently there are a handful of paid functions for people that run the farm. Besides them there are many volunteers from around the neighbourhood who work in the garden, join and organise workshops, cook meals in the kitchen etc. Because of this construction there are many different levels of engagement; from volunteering every week in the garden, or organising events and contacting people to just visiting and enjoying the welcoming green environment once in a while.

Figure 7: Impression of the city farm which consists of a number of smaller gardens and holds various different functions related to food, sustainability and nature.

Photo credits: J.D. Heras Barros



Learnings

Stadsboerderij Osdorp is a surprising green and friendly oasis in the midst of a dense neighbourhood. Even as an 'outsider' I felt incredibly welcome here. It was very clear as well that a wide variety of people felt welcome and free to use this place, even if they were not necessarily interested in food or gardening. From my observations and my talk with Martin the following became clear:

- A successful place for a community does not have to emerge from the community itself, but does need to provide space for the community to be heard and involved.
- It can be valuable to have a handful of leading members who fulfil core tasks and engage in contact with the community and other organisations.
- A set of 'domestic' elements in the farm create a sense of belonging among the sheds, chickens and planted fields.
- Sometimes the only things you need to start collaboration and create a basis for community is a warm place to sit and a cup of coffee.

Relation to commons

This project can be related to commons because it is based on a strong concept of sharing and collaboration; The garden largely revolves around sharing knowledge, sharing food, sharing space and sharing each others company. Furthermore community engagement and being embedded in the neighborhood is an essential factor for the farm in order to respond to the needs of people in Osdorp and create added value for a large amount of people.

Figure 8: The city farm is a place where next to gardening activities many other things can happen; children can be seen playing in the garden while an old couple might just sit down to enjoy the sun.

Photo credits: J.D. Heras Barros



MÁXIMAPARK

Community managed city park, Utrecht

Máximapark is a large park on the West side of Utrecht enclosed by residential neighbourhoods. Already from the start of the design phase residents and surrounding organisations have been involved in the design and realisation of the park. Moreover, the maintenance of the park is arranged in a unique collaboration model between volunteering groups and the municipality. The volunteering groups work both on the maintenance and design, as well as the organisation of activities in the park. The collaboration with the municipality and other volunteering groups makes the park operate as a whole, while keeping an organised overview on local maintenance.

Connecting through activity

With many volunteering groups and options, it is easy to get involved in some way with the park. Some groups work weekly and others monthly, but often anyone can join occasionally or a single time since help is always welcome. One morning I joined the working group for the Japanese Garden to talk to the people and get an idea of the work they are doing.

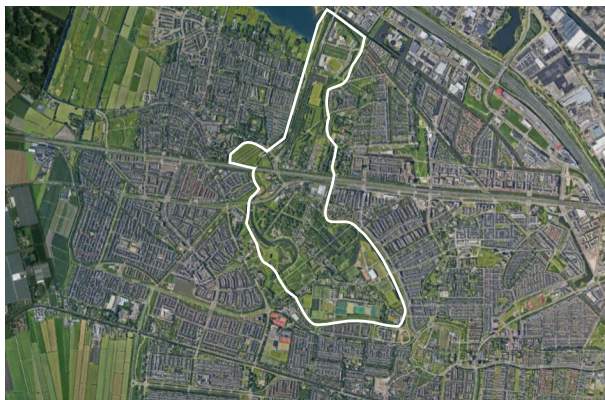
It was very easy to approach the group online. Anyone can contact various volunteering groups, and working days are advertised on the website. It was a morning of hard work, but also with cosy coffee breaks and small talk. The group of around 10 people works every other Saturday morning in the Japanese garden. The people I spoke to really enjoyed working in the garden because the volunteering gave them a sense of gratification and resulted in a stronger connection to and appreciation for the park. This gratification was also endorsed by people passing by in the park who would often engage in a little chat and thank people for the good work they were doing.

Therefore, both the physical volunteering work and the visibility for the surrounding user community enhances the relation to the park and its surrounding social environment.

Furthermore, working together in this group and working towards shared goals creates a connection between the people themselves and provides an opportunity to get to know people from your neighbourhood, make new friends and talk with people you might not meet otherwise.

Many volunteers mentioned that this makes them feel more connected to and embedded in their living environment, especially when they are new in the area.

Figure 9: Impression of a morning of work in the park with the Japanese Garden volunteering group.
Map source: Google maps



Learnings

Even though Máximapark is very large, the division in smaller gardens with connected volunteering groups create familiar spaces for people to feel personal connection to. The volunteering groups are very open and visible, decreasing the threshold for people to join which makes Máximapark a park for everyone. From this project I draw a few lessons:

- Being engaged in activities with shared goals creates a stronger connection to place, and provides easy opportunities to connect to the people you are working with.
- The visibility of care by the volunteering groups create a larger sense of familiarity with and appreciation for the park that goes beyond the active groups themselves. This together with the approachability and transparency of the volunteering groups, makes it easy for other people to become connected to the park as well.
- The organisational structure of the park requires communication with many stakeholders such as residents, volunteering groups and municipalities.

Relation to commons

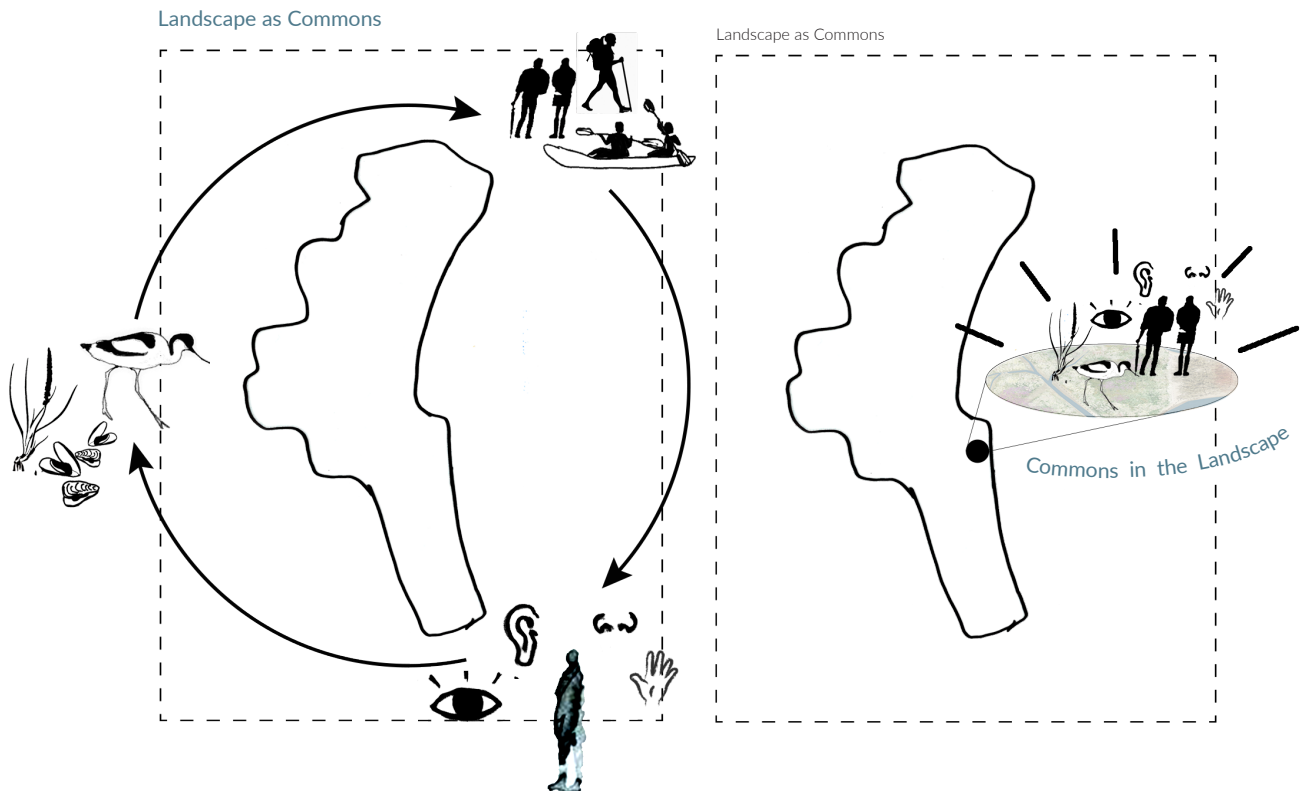
This project can be related to the commons since the park is a common resource for its surrounding community, and is managed and cared for by this same community as well. There is a strong sense of connection and care for the park through smaller scale volunteering groups. These smaller groups enhance personal connection and familiarity as well.

Figure 10: top: inside of the volunteering group's shed, bottom: people making use of the park.



2.3 Towards Contemporary Landscape Commons

Now that the reasons for looking at landscapes in relation to the commons have become clear, it is time to dive into the 'how' of connecting landscape to the commons in a contemporary way. Since commons remains an ambiguous term, indicating places, movements, resources etc. Landscape commons can also be interpreted in different ways. Therefore, the following section will set out Landscape commons in two parts; *Landscape as Commons*, and *Commons in the Landscape*.



2.3.1 Landscape As Commons

The first approach to landscape commons is Landscape as Commons. It is the larger conceptualization of Landscape as a complex entity with multiple values to both the human and other-than human communities related to them. To move towards landscape as a commons, is to move to a more integral way of looking at landscapes, exploring its multiple values such as the aesthetic, cultural, and ecological.

The research; *From landscape resources to landscape commons: focussing on the non-utility values of landscape* (2017) describes different approaches towards landscape in an attempt to create a model in which the different values of landscape are in balance, which would prevent enclosure, commodification and overexploitation and therefore lead to sustainable management of landscape as a commons. Their circular model exists of the following values; Use value, existence value and intrinsic value. Firstly, the model will be explained, whereafter its application within landscape architecture will be made clear.

Use-value

The model starts with the use-value. The use value of the landscape focusses on its human 'users'. It applies for instance to the use of landscapes for agriculture, but also for recreation. The use of landscapes creates a relation of meaning between the user (in this case human) and the landscape. However, the focus on the generalised use disregards the unique personal experience of a specific landscape. The focus on landscape as a resource therefore tends to generalise landscapes for their characteristics, with the risk of making them replaceable by other similar landscapes which provide the same resources or similar experiences.

Furthermore, valuing landscapes only for their use sets grounds for commodification and overexploitation. This can easily be imagined in cases of destructive agriculture or mining, but can also apply to recreation. Hopf (2006, p.16) for example

mentions; 'While the appreciation of nature has been the subject of recreation for a long time, today a shift towards the activity as the main subject can be observed; nature itself becomes a pure scene to activity'. In this case the focus on solely recreational activities, not taking into account other aspects of the landscape, can also have negative effects on for example soil, noise pollution, and vegetation. Hence, the use-value certainly is a starting point regarding landscape as commons, but is followed by the consideration of the other values.

Existence-value

To counteract the effect of the focus on use-value, the authors move to values that are derived from the personal experience of a specific landscape, and introduce the existence-value. It encompasses the visual and representational dimension of landscape, which are now often excluded in the discourse on commons and landscape (Castiglioni et al., 2015).

Gerber and Hess (2017) that the pleasure felt from the experience of the landscape is mostly aesthetic. Accordingly, if the visual perception of the landscape changes, the quality of the experience changes. Meaning; 'the value of the experience is closely linked with the existence of the landscape in question' (Gerald&Hess, 2017, p.716), therefore making it an existence-value. In contrast to the use-value, in the existence-value the landscape does not offer us a purpose, but its essence evokes something

inside of us. Other existence values that have this reflective quality include; affective, symbolic, identity etc. However, since the existence value is composed of personal experience, and therefore differs from person to person, it can be difficult to define this value among a group. For this reason it is seen as important to include a third value, being the 'Intrinsic value'.

Intrinsic value

Lastly, the inclusion of the intrinsic value attempts to move from the subjective aesthetic appreciation towards an objective appreciation of the unique landscape. By adding scientific knowledge that enables characterisation of the landscape, such as the geological, ecological etc., an objective basis for aesthetic appreciation can be formed. In this way the value remains related to the singular landscape, but consensus can be reached about its intrinsic value. The only pitfall for this value is that when this idea is taken too far, the presence of humans in the landscape can only be seen as a disturbance, hurting its intrinsic value. This could lead to, what the authors call, 'programmed death of the landscape'. Which would eliminate any relation of meaning for humans.

For this reason, it is necessary to move back towards the use value, in that the landscape remains an active place with meaning to humans, thus creating a circular model. Balancing between the landscape values of this model allows for the continuously evolving relation of meaning through use, while recognizing the other values by imposing limits on its use accordingly. This can only happen through processes of collective appropriation, collective decision-making and collective identity building (Gerald&Hess, 2017), completing the management of landscape as a commons.

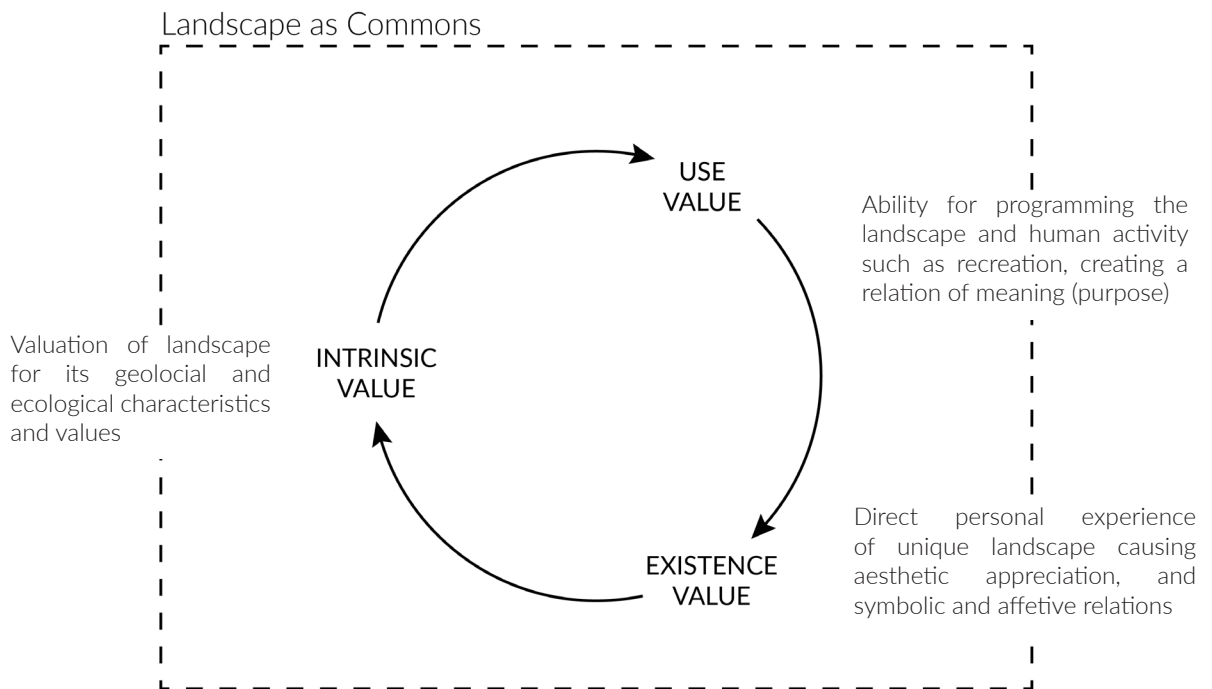


Figure 11: Circular model by Gerber&Hess (2017) showing the balancing relation between the use-value, existence-value and intrinsic-value. *Image edited by author.*

Use in Landscape Architecture

This model, although elaborately and eloquently put into words, in its essence reflects my own experiences and evaluations of the landscapes around me. Within landscape architecture as well these values are incorporated in the way we analyse and design; we look at how people use the landscape (use-value), at the combination of experiential and sensorial aspects (existence-value), and we look at the physical natural conditions that create habitats for other-than-humans (intrinsic-value).

The described model gives a theoretical basis to acknowledge these values of the landscape, explaining their significance. However, to take these values seriously, and to treat landscapes as something we have in common with other species than ourselves, the intrinsic value needs to be reassessed: instead of minimising conflict with the intrinsic-value, other-than-human species need to be treated as equal actors within the landscape, meaning designers have to actively include nature and non-human communities in our design to address the value of the landscape for these communities. In order to do this, landscape designers need to understand the needs of other-than-human species and look at landscapes from their point of view.

With this in mind, this circular model of landscape as commons can be used as an overarching framework when dealing with or designing landscapes, acknowledging ,reacting to, and balancing different landscape values.

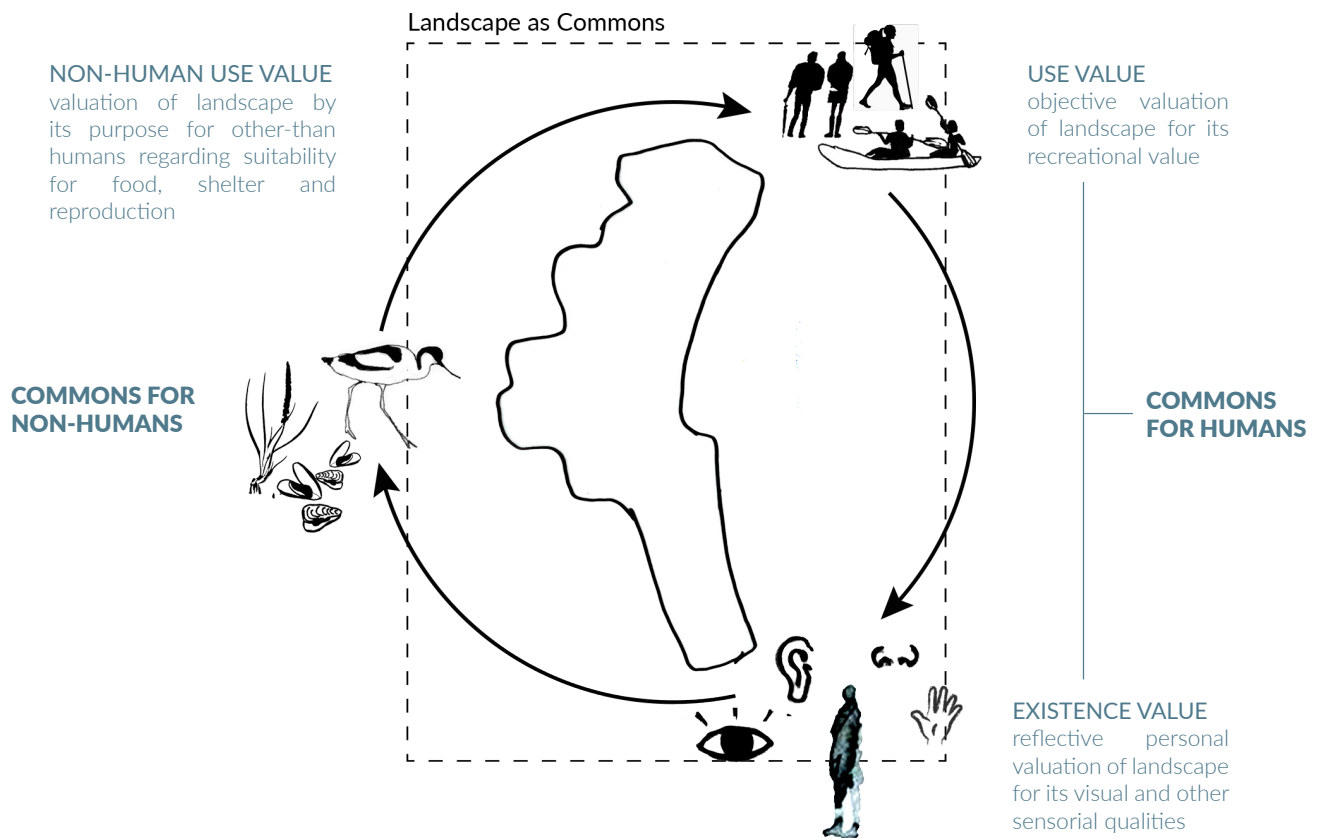


Figure 12: Circular model for balancing different values of the landscape, creating landscape as commons for human and non-human communities.

2.3.2 Commons *in the* Landscape

The second approach to Landscape commons is Commons in the Landscape. It is the physical manifestation of the commons as a place, which allows access to the landscape as a resource through (social) processes and collaborative action.

A place to connect

When referring to the commons, an essential aspect is the connected community that cares for and uses an important resource. In order to understand and experience the landscape as a valuable resource, there is not only the need for physical accessibility to this landscape, but also the need for recognisable elements that indicate its quality and importance to people and allows them to connect with the landscape. The difference between a perceived neglected landscape and a treasured one, can lie in the presence of indications of care (Nassauer, 1995). A commons in the landscape, where the element of care is so important, therefore should be a place where human intention is expressed. This intention can be expressed through possibilities for agency and group appropriation to allow the community to decide how to manage and create the landscape resources. This will evoke a sense of belonging (similar to Stadsboerderij Osdorp), care and responsibility for people to adopt the landscape as a commons.

This agency and responsibility makes the commons in the landscape different from public spaces, such as (natural) parks; In the commons a system of responsibilities and rights is made through participatory processes, defining how the users want to use, produce and govern the landscape as a resource (Dellenbaugh-Losse et al., 2020). This created agency helps to establish a stronger relation of meaning and connection with the landscape through activity and group appropriation.

This can also be related to theories of placemaking: because of their spatial aspect, 'urban commons' and 'neighbourhood commons', as well as the proposed 'commons in the landscape' can provide place-making opportunities (Feinberg, 2022). Involving the community of the commons into the actual making of the physical space reflects the idea that 'places that engage people, are places that the people are engaged in making (Brain, 2019, p. 179).

This way of approaching a landscape from a perspective with community engagement, will prove to be more socially just, allowing the community to use and adapt the space according to their needs. This creates opportunities for people to connect with their surrounding landscapes in new ways; It creates space for people that do not fit within the image of 'nature lover', 'hiker', 'birdwatcher' etc., to enjoy the landscape and use it as a resource in their own way.

For the designer of this space this creates a task of creating a starting point and intention, from where the new active users of the commons in the landscape will decide how they can appropriate the landscape to their needs, and simultaneously care for the precious resource.

Living landscape

A similar approach applies to the other-than-human user communities of the landscape. In order for the landscape to be meaningful to them, they need to be allowed to be active actors in the landscape,

appropriating and using it according to their needs. In this way the landscape can serve as a resource for the active plant and animal communities within it.

Unfortunately, often other-than-human species are not considered as active actors within the landscape. They are either forgotten and neglected as such, or natural appropriation is consciously prevented. Therefore as deliberate opposition to this, making the commons in the landscape equally serve humans and non-humans, the design of these commons should include the establishment of conditions that allow for natural appropriation. In order for humans to perceive this quality for non-human actors in the landscape, and maintain it, the processes and function for non-humans should be actively represented (Nassauer, 1995).

Together, the human and non-human actors involved make the landscape a living entity. The landscape is in constant change due to human and other-than-human interactions within it, for this reason it is important to create the circumstances that would allow for these changes to take place, both from a social and ecological point of view. In the commons in the landscape, this dynamic character of nature calls again for adaptability from the human community involved, that will have to react to the changing landscape. These forces together make that the space is not in a fixed state, but is shaped by the processes of human and non-human actors, creating essentially a common space (Stavrides, 2016).

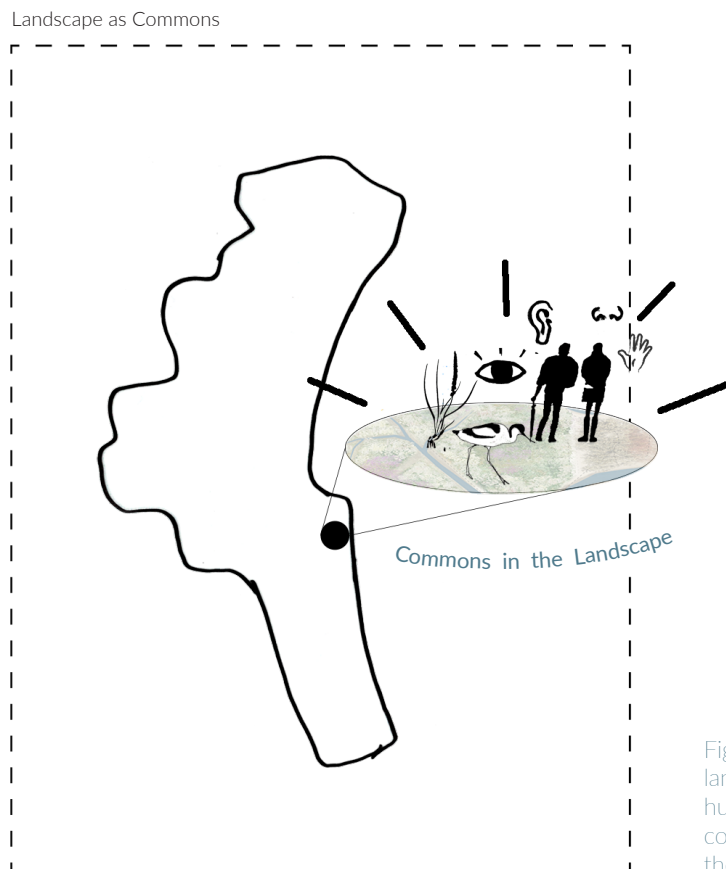


Figure 13: Commons in the landscape as a place where human and non-human communities can draw upon the landscape as a complex resource because of balanced landscape values.

2.4 Guiding Principles for Landscape Commons

This chapter argues that landscapes can be seen as a vulnerable and threatened resource for humans and other-than humans and that looking at landscapes from a commons perspective can establish communities that will aid in the safeguarding of landscapes, and provide added value for these communities by being active in the landscape to enjoy its resources and contribute to social wellbeing.

From literature research a theoretical framework is constructed in which commons theory is linked to landscape and landscape design.

Firstly, through the approach of Commons in the Landscape it becomes clear that landscapes can be evaluated in different ways. It provides a framework to acknowledge and balance the different values for human and non-human users, including the aesthetic and sensorial experience value for humans that goes beyond the resource approach to the landscape.

Secondly, Commons in the landscape operates within the larger frame of landscape as commons; it focuses on the commons as a place, providing principles/insights on important factors for creating commons in the landscape.

Together they generate a set of guiding principles to work with when considering a commons approach in landscape architecture:

- Design that allows people to connect to the landscape through programming (use value)
- Design that works with and strengthens experiential landscape qualities (existence value)
- Design that enables appropriation and change of the landscape by other-than human communities in order to respond to their wants and needs to make it function as a valuable resource, and to support landscape processes.
- Design that enables appropriation and change of the landscape by human communities in order to use and adapt the landscape as an important resource and create agency which allows relationships of care and responsibility to manage the commons.

Den Helder, Edge of Land

3

Importance of the Edge

The city of Den Helder, being situated on the north-western tip of the mainland of the Netherlands, is literally on the edge of land. The city is surrounded by the north-sea on the North and West, and by the Waddensea on the East. This land-water connection is significant to the city in many ways; Historically and culturally it has played a big role in the shaping of the city and its inhabitants, and currently still the connection to the sea is important for the navy and harbour activities. The literal land-water edge has distinct characteristics and connects in different ways to the city itself and the surrounding sea landscape.

The characteristics of this edge have led me to the commons, feeling it does not sufficiently answer to the values of the landscape and the essential roles it fulfils for both human and other-than human communities. In the following chapter the land-water edge of Den Helder will be explored and analysed, to gain a better understanding of its mentioned problems and qualities. However, before we dive deeper into the specificities of the edge, it is important to understand how the general condition of 'the edge' is relevant to the theme of the commons.

Building upon the theoretical framework presented in the previous chapter, that focussed on the social and ecological value of the landscape, the first part of this chapter will focus respectively on the value of the edge for human and other-than-human communities.

3.1 The Social and Ecological Value of the Edge

Ecotone

From an other-than-human perspective, edges can be highly valuable places or zones. They are zones of transition from one ecosystem or habitat to another, which means they often house species of both ecosystems, resulting in higher biodiversity. Additionally, the unique conditions of the specific ecological edge create a habitat for specialized species as well that mitigate between the different conditions of the adjacent areas, making them biodiversity hotspots (Turner et al., 2003).

Most landscape types that emerge from natural conditions do not have sharp or abrupt edges. Therefore ecotones naturally exist due to the gradual changes, both in time and space, in vegetation, topography and climate (Dee, 2004). However, because of human interference in the landscape, often these ecological gradients are erased. This can be seen for example in water edges, where the wet to dry gradient is reduced to a minimum or even completely erased by using non-porous materials and heightened edges. Hence, biodiversity decreases.

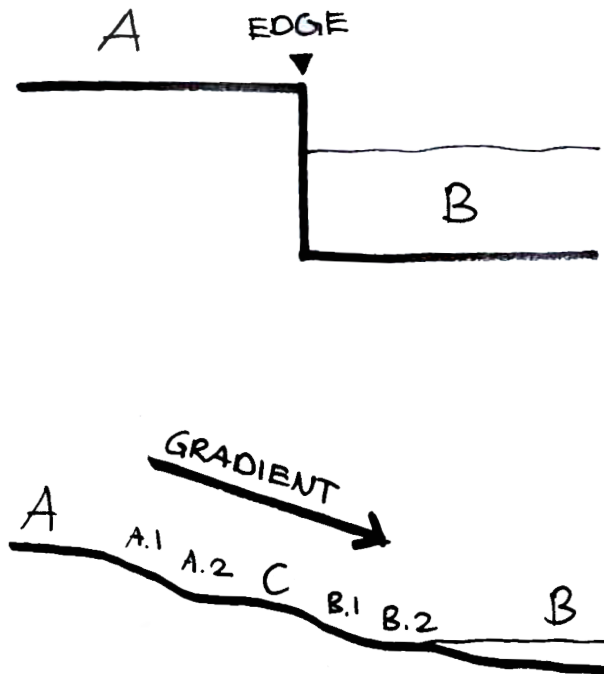


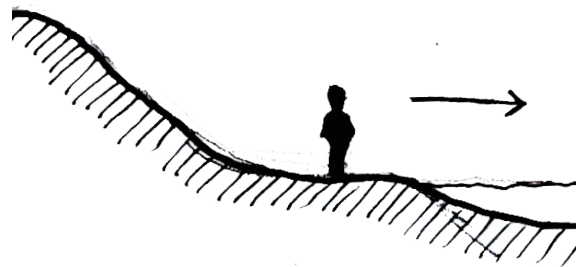
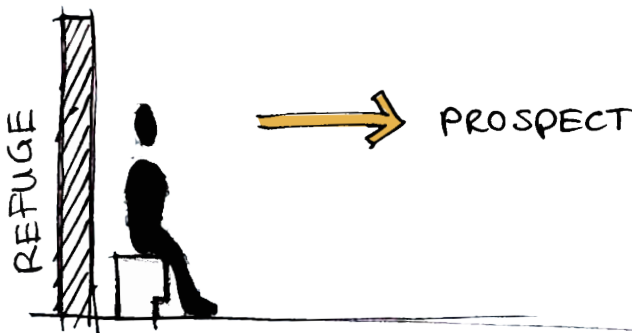
Figure 14: Diagram of a hard water edge versus a gradient. The gradient proves to be more ecologically valuable since it allows interaction between the two different habitats.

Edge effect

Looking at the value of edges from a human point of view, they are often places where people tend to stay or gather, and can therefore be seen as potentially social environments. By observing human behaviour in public space, it has been found that people tend to sit or stay around the edges of a space, rather than staying in the centre of it. Gehl and Rogers (2010) in their book *Cities for People*, define this as the 'edge effect'. They illustrate that in busy public spaces it makes sense to stay in the edge; when standing or waiting in the edge of a space it is more comfortable to stay outside the traffic stream, get some support from a wall and look at the scenery in front of you. Moreover, local climate tends to be better at the edges as well since it provides some protection from the elements.

However, even outside busy public spaces edges can be experienced as more comfortable and safe places. A theory to explain this behaviour is the 'prospect-refuge' theory by Appleton (1996);

The prospect-refuge theory explains how edges are favourable places to stay due to the fact that they offer a desirable view, which could be a stunning landscape, a safe overview onto a situation, a lively city square etc., while at the same time providing cover and safety on your other (vulnerable) side (Dee, 2004) This principle can be linked back to our ancestors; who 'sat with their backs against the back wall of their caves with the world in front of them' (Gehl & Rogers, 2010, p. 137).



It All Comes Together in the Edge

Looking at both the social and ecological aspects of edges, they can be seen as places of high value for both humans, flora and fauna. Edges are places where many things come together socially and ecologically speaking. They can be zones of concentration due to their high biodiversity and pleasant social environment when designed right. Therefore the edge conditions can be valuable for commons as well in creating spaces that respond to both the needs of human and non-human communities, creating vibrant and dynamic places.

Figure 15: Prospect refuge theory; Edges provide shelter on one side while allowing an open view on the other, making it a preferred place for people to stay.

3.2 Exploring the Edge

The edge condition of Den Helder was something that instantly sparked my interest. By tracing the land-water edge and observing, feeling, mapping, photographing, and analysing it, a better understanding of the edge as a whole and its different parts is created.



When mapping the whole city of Den Helder, the land-water edge can be separated into four large areas; A) the beach and dunes, B) the north sea dike, C) the navy harbour and D) the Wadden sea dike. The analysis of the edge will be presented by tracing these different areas as shown in figure 18.

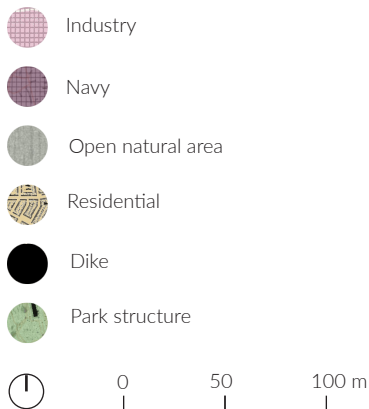
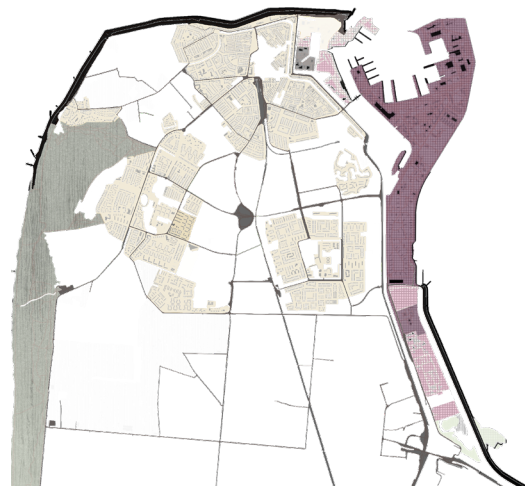


Figure 16 (left): Map of Den Helder indicating different use and programming of the city and landscape.
 Figure 17 (top right): isolation of edge areas in Den Helder, showing four large programmed areas.
 Figure 18 (bottom right): Different types of analysed edges.

A Beach and Dunes





A The Beach and Dunes

The beach and dunes form the long stretch of coast on the west side of Den Helder, bordering the North sea. The dunes and the sea together create an enclosed beach area. Free access to the dunes is prohibited because of the fragile state of the nature, but the dunes can be crossed by a few indicated paths. Overall this creates a strongly defined linear space, where people are disconnected from the city and can engage in an endless walk on the beach enjoying the landscape.

area engages all your senses, creating an immersive experience.

Furthermore, the dynamic character of the sea invites people to interact with it; to create their own traces that the sea takes away, or to move along the line where the water arrives.

By moving through this landscape its strong character and qualities can be felt. The force of the sea can be seen and felt in the waves, and the traces it leaves on the sand. While the rhythm of the arriving waves and the vastness of the sea view have a calming effect. The roughness of the landscape can be felt in the salty winds, and through the physical effort it takes to move through the sand. Moving through this

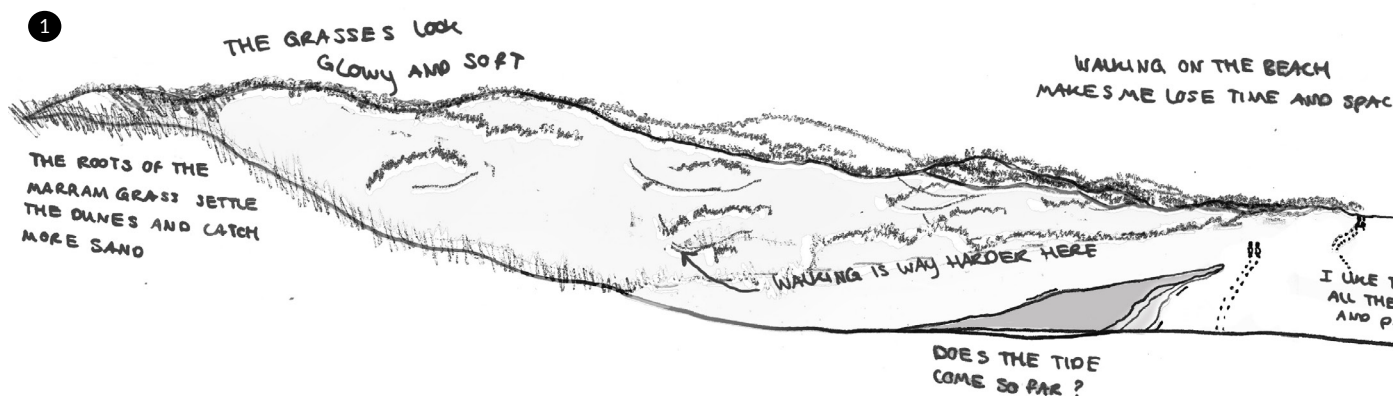
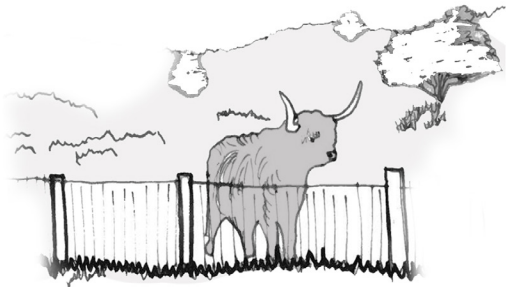


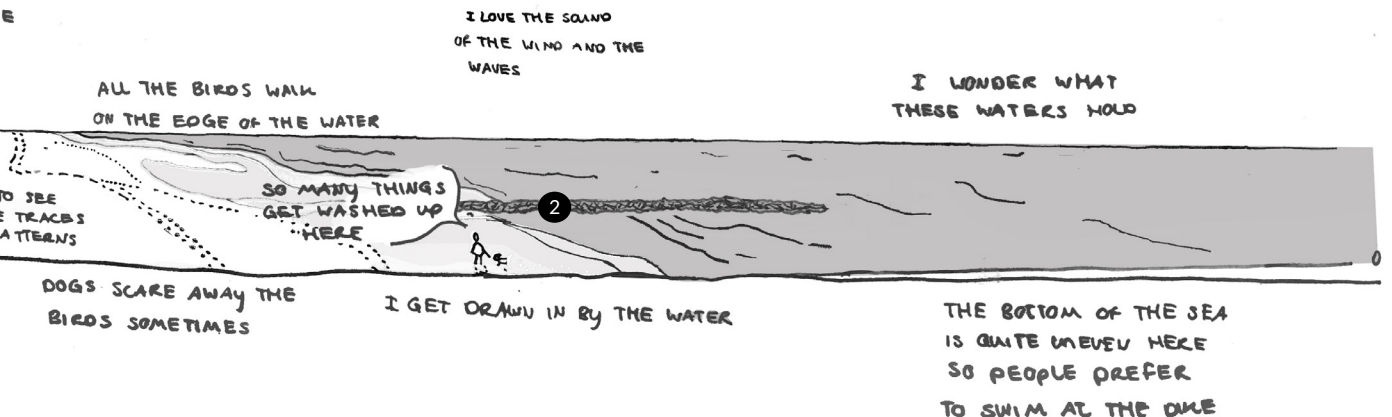
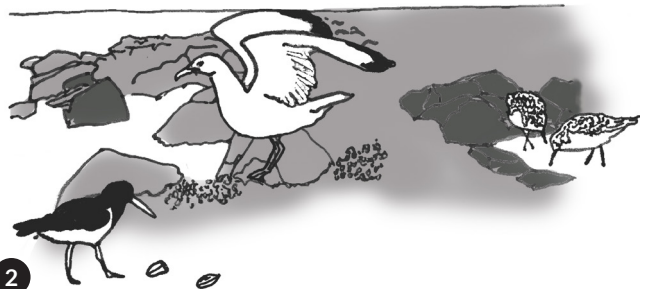
Figure 19: Section of personal experience of the dunes and beach on the west-coast of Den Helder.

This sea edge is a feeding hotspot for birds, hence along the beach many bird species can be spotted foraging for food. In the water edge large groups of wading birds such as the red knot or sanderling can be found. Also oystercatchers can be found along the rocks looking for shellfish while larger birds such as the European Herring Gull roam around in the sky.

1



2



Development of the Dunes

The Netherlands has been shaped by geological processes happening over thousands of years, changing significantly over time. The surrounding area of Den Helder has undergone significant changes as well with processes such as sea level rise, peat growth, tidal movements, and sand movements gradually shaping the landscape. The dunes have an important role in the shaping of the landscape, since they protect the inner land from the influence of the sea. They form the backbone of the land.

For a long period of time the area consisted of a large sand plateau, but over time a large peat area came to exist. At the same time the row of dunes protecting the inland was gradually getting smaller, until it broke around 1250. Because of this, the soft peat soil got taken away by the sea level rise and stormwaters. Around 1500 the northern tip of North Holland consisted of a series of islands formed by sea ridges, which were separated by sea channels. In 1610 the sand dike was constructed which connected the different islands (Gemeente Den Helder et al., 2021).



Traces

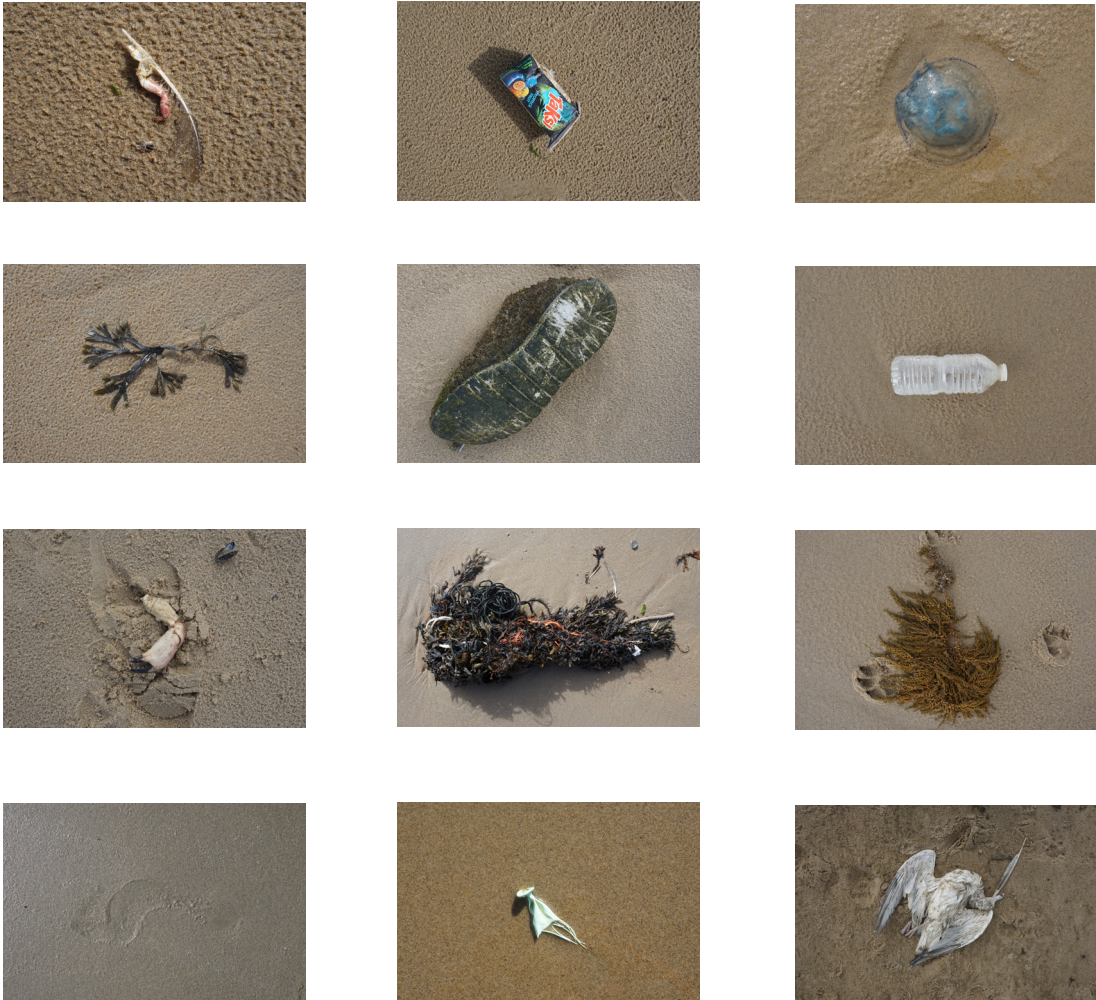


Figure 20 (left): Diagrams showing the development of the dunes (in black) along the north-west coast of the Netherlands, with general reduced width of dune row especially around Den Helder. *Image source: Gemeente Den Helder et al., (2021), edited by author.*

Figure 21 (right): Series of images of traces left on the beach by the sea.

B The Dike





B The Dike

When walking from South to North along the beach, the dike gradually appears, replacing the dune row from Fort Kijkduin onwards. This dike forms a big contrast with the beach.

It consists of basalt rocks at the base, followed by asphalt, including a road, and a grass carpet that covers the rest of the hill. The main space to move seems to be the large grass hill, where people are strolling and enjoying the wide view over the sea. There are a few benches to sit on, but mostly people can be seen moving along the dike by foot or by bike. The hard and strong materials of the dike of course protect the city from the sea, but they also limit land-

water interaction and the effect of the waves and tide. As well as the possibility to get near or into the water.

Few animals can be found looking for food between the rocks in the land-water edge, but generally not many animal and plant species can be spotted here.

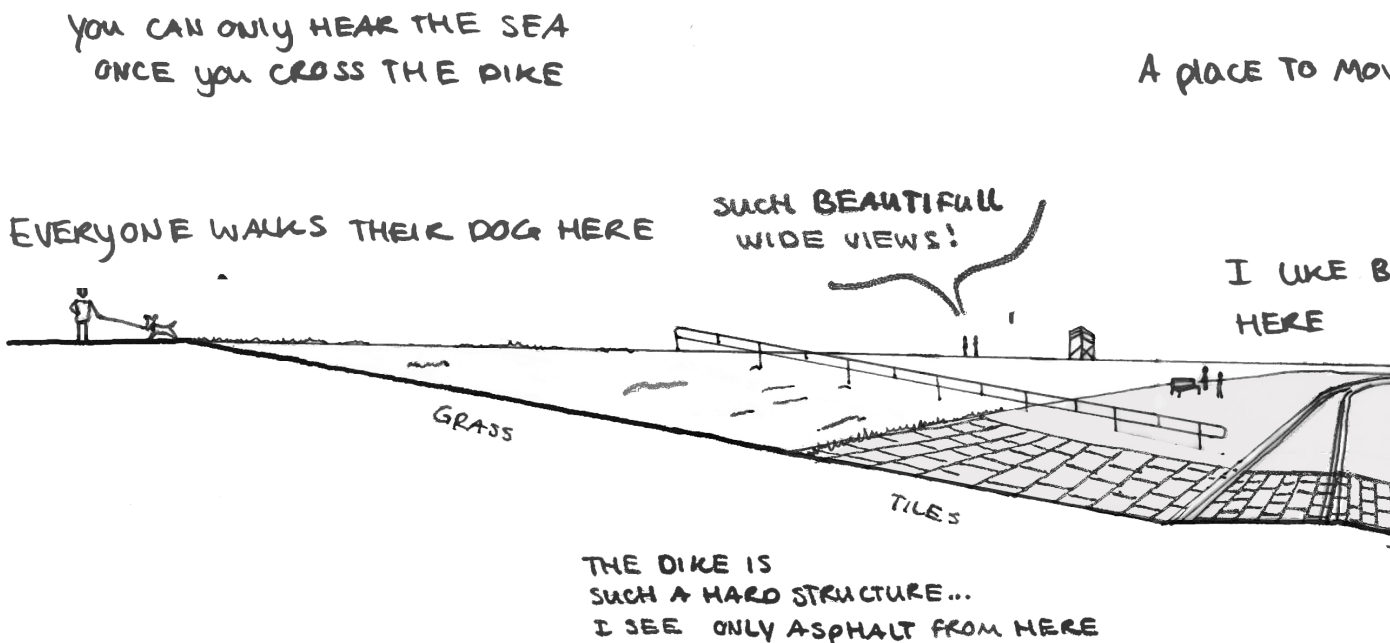
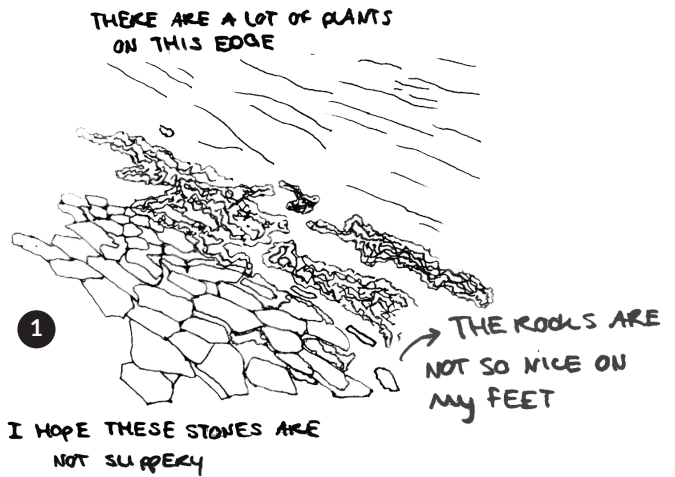
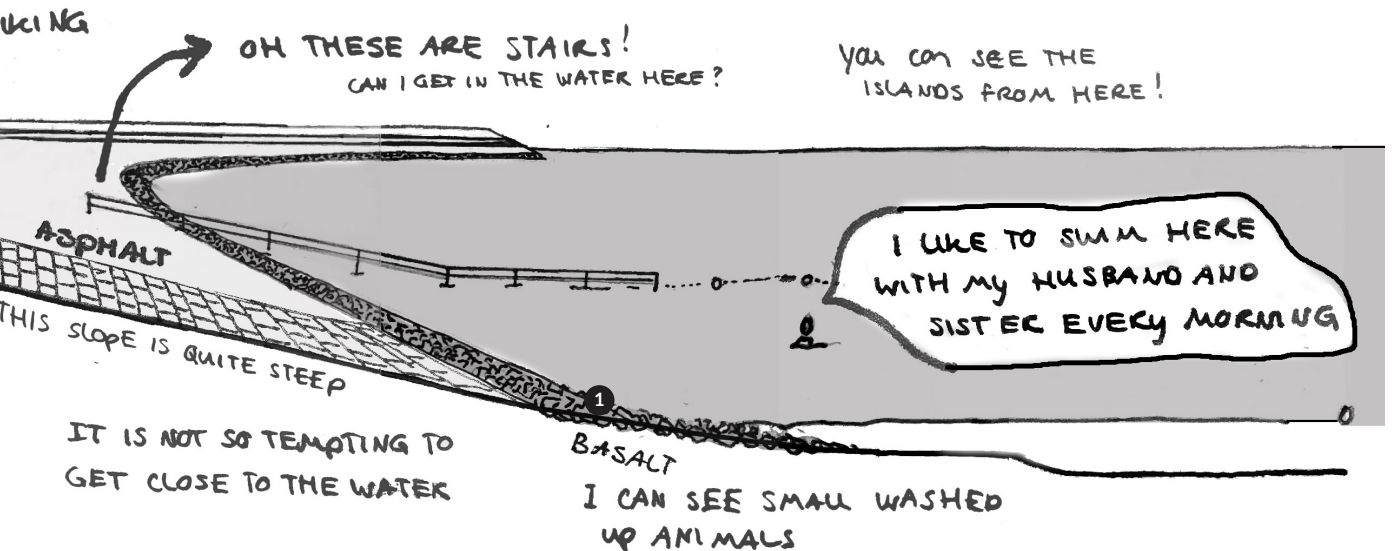


Figure 22: Section of personal experience of the sea dike on the north-west and north coast of Den Helder.



IE, NOT TO STAY

AN UNEXPECTED SWIMMING SPOT!



An Unexpected Swimming Spot

Just over the dike at Huisduinen, there is an unexpected swimming spot. This spot is part of a swimming club, that installed guiding poles to get into the water and placed a small changing room.

This spot is regularly used all year around by brave people who dare to face the sometimes ice cold water. This spot is preferred over swimming at the beach since the water reaches a suitable depth closer to the dike and the bottom of the sea is more even.

In order to enjoy this place the most they swim at certain moments in the day, when the tidal conditions are best.



Figure 23: Images of swimming spot on the North sea dike. Top: Guiding poles in the water, middle: Dressing room, bottom: People getting into the sea by holding onto the guiding ropes (Screenshot from movie by Pjotr Boomgaard, 2022)

Need for the Dike

Before the construction of dikes, the land was mostly protected by rows of dunes. However, because of erosion and storm floods the coastline kept moving back. This resulted in the full disappearance of the Northern line of dunes, making it necessary for a dike to be constructed. After multiple floods and the remaking of dikes, a stable version of the Helderse Sea Dike was established. The dike now remains on the same location as the sea dike of 1750.

After this period more and more reconstructions and reinforcements were done. New techniques were discovered but also reinforcement kept being necessary. In 1970 the dike was reinforced and improved again according to the Deltawet.

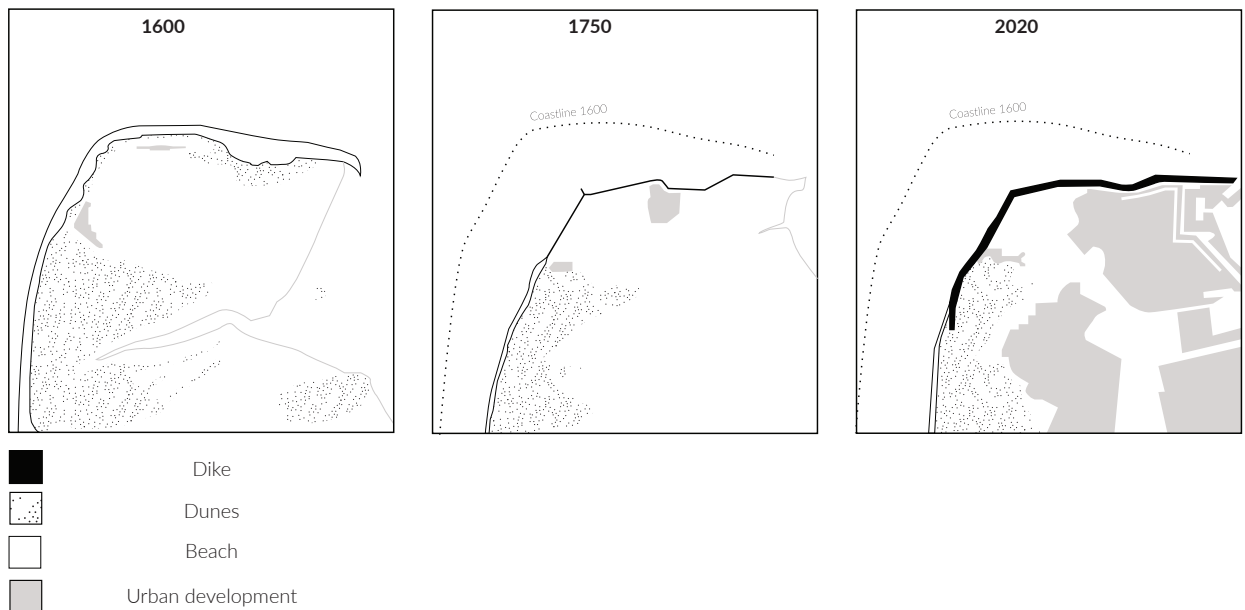


Figure 24: Diagrams of the development of the Northern coastline of Den Helder, which over time has strongly eroded and therefore needed construction of a dike.

Inside/outside

The large structure of the dike forms a barrier between the sea and the city of Den Helder. Functionally this makes perfect sense, since it protects the city from flooding. However, it also forms a physical and sensorial barrier.

The barrier of the dike can be crossed at specific points where there are designed ramps or stairs. These are often quite steep, and therefore not accessible for everyone.

Besides the physical barrier, the large dike forms a sensorial barrier. 'Inside' the dike (see 8), the sea cannot be heard, seen, felt or smelled. As if it is not even there.

On the 'outside' of the dike, this same barrier creates an enclosed space that focusses on the sea. This separation from the city helps to create an experience in which all of your attention goes to the sea view, the feeling of the strong wind and the sound of the waves.

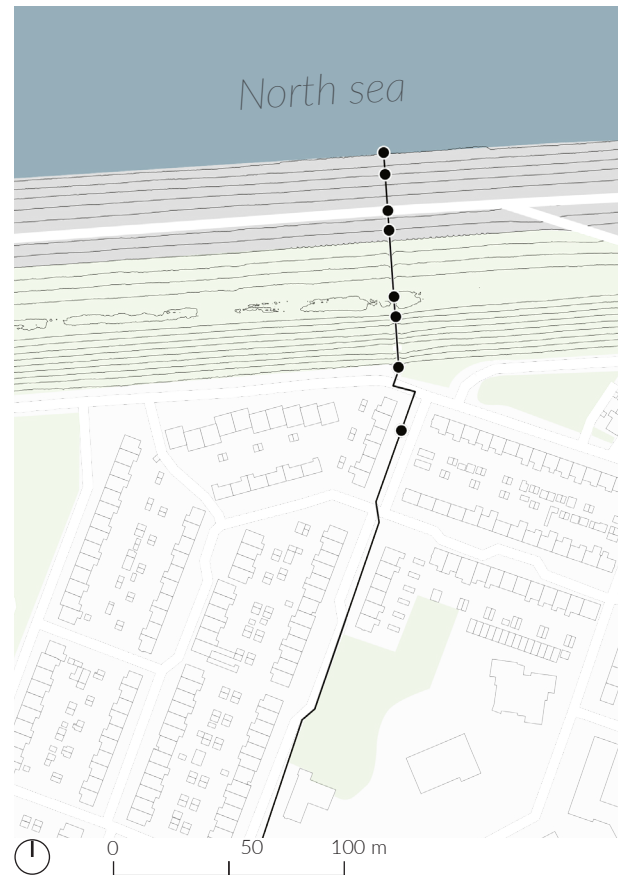
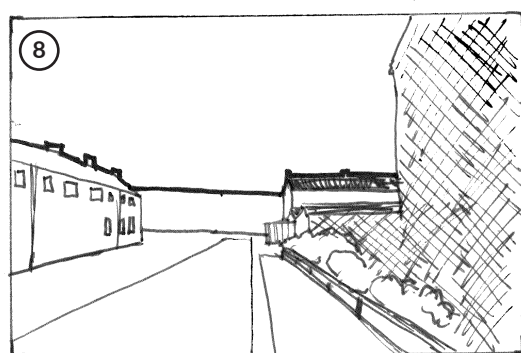
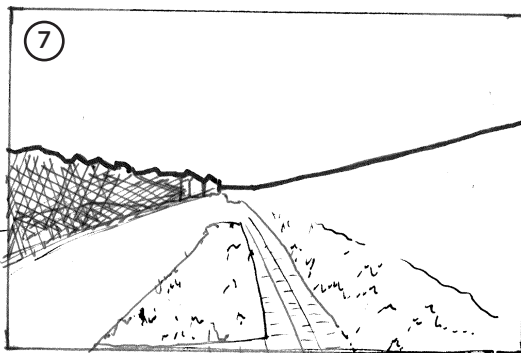
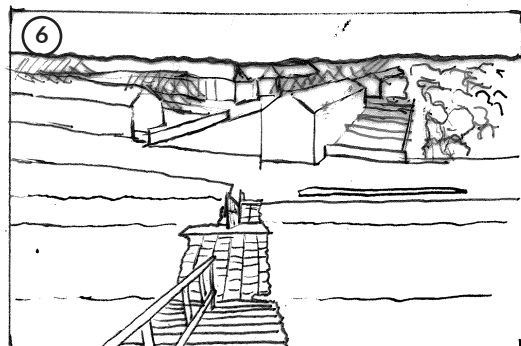
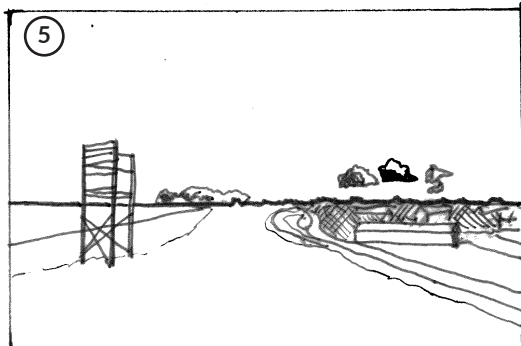
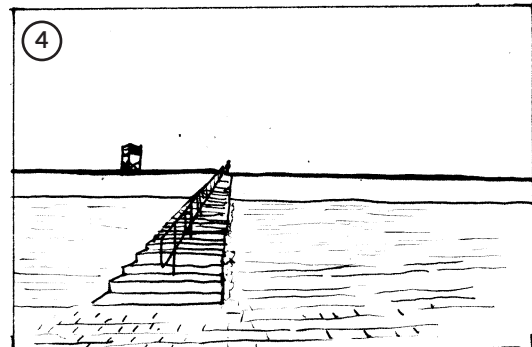
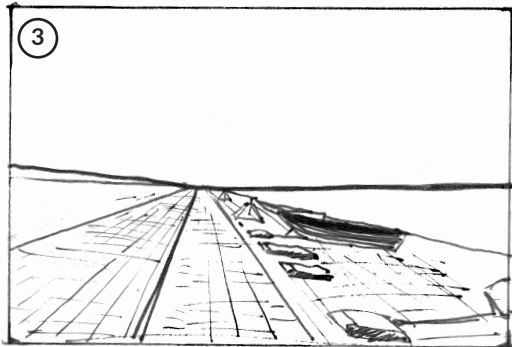
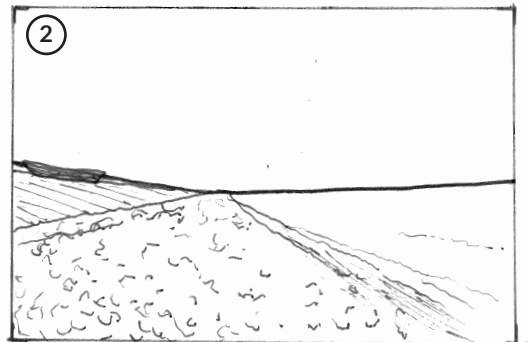
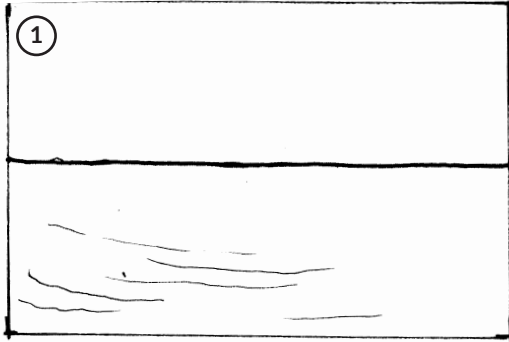


Figure 25: Left to right: section of the sea dike and the adjacent neighbourhood. Map of scoring walk over the dike. Sketches of scoring walk with focus on horizon and open/closed area.











C The Navy Harbour

The current navy harbour is private terrain, and therefore not freely accesible for people which are not connected to the navy. Unfortunately, this large new navy terrain forms the main east coast, bordering the Wadden sea. This makes that the Wadden sea can hardly be experienced by people from Den Helder, since it is physically not accessible.

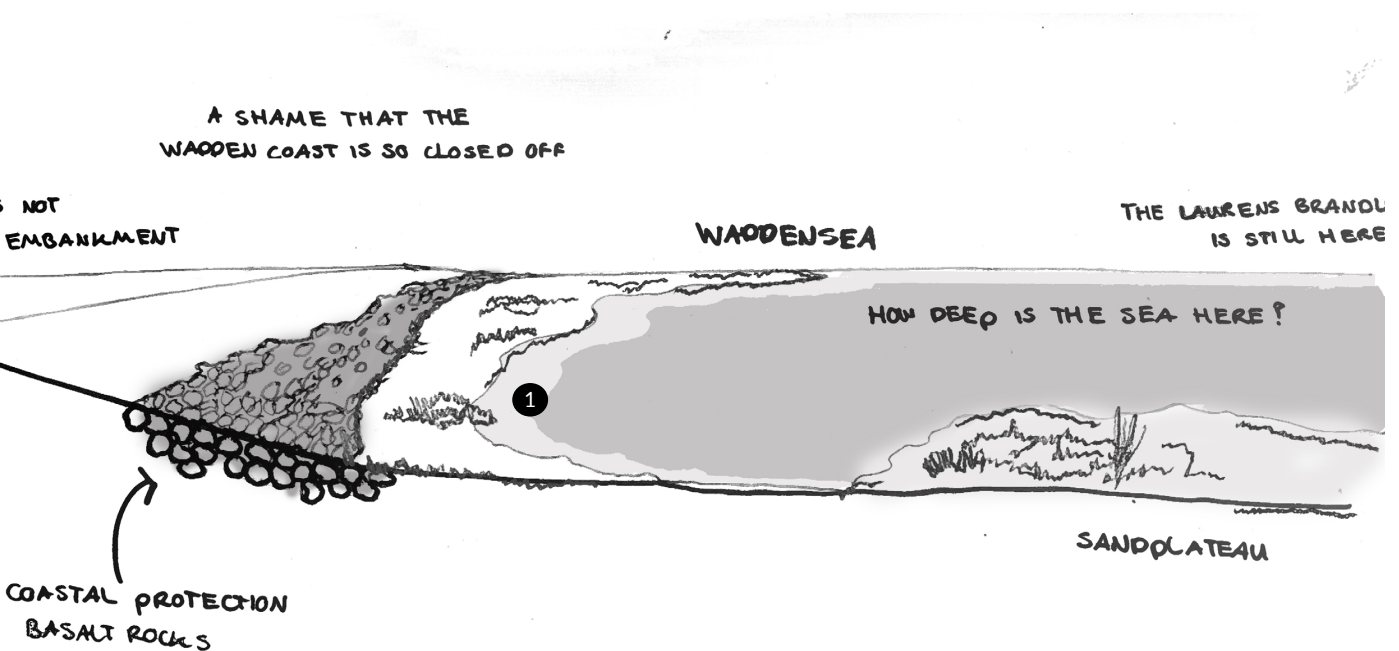
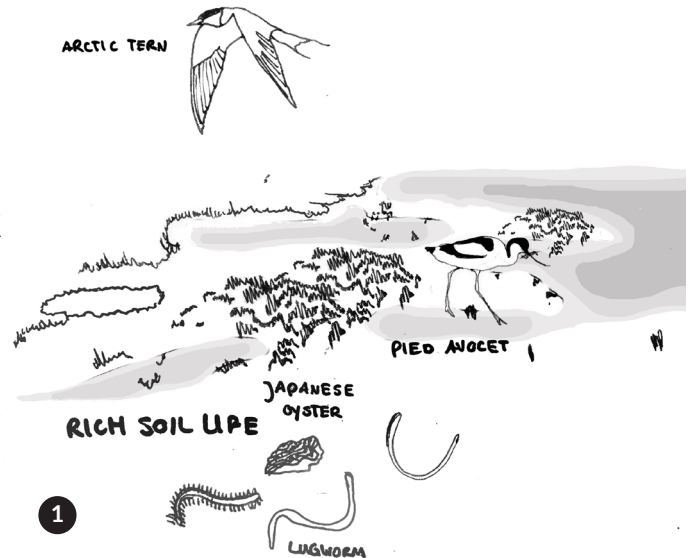
When looking at the actual navy terrain, only part of it consists of a harbour with docking places for the navy boats. The rest of the large area is occupied by hangars and other buildings, but don't directly relate to the water.

All of the terrain, is about 4 meters above sea level, making it safe from flooding. The adjacing Wadden sea has very moderate currents and force, therefore a large dike is less necessary.

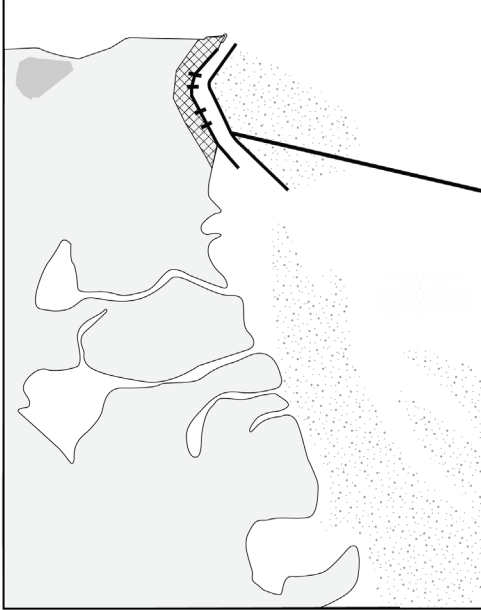
The actual edge, from what can be seen from aerial views, consists of basalt rocks and a small grass slope.



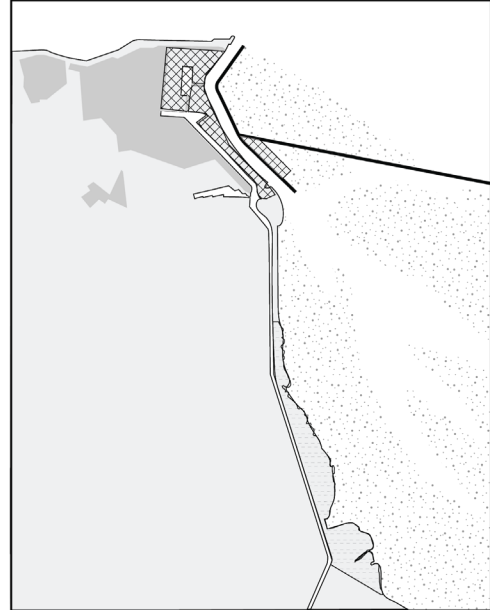
The sea side of this edge consists of sea channels and mudflats, or sandplateaus. This area, that runs dry and floods with every tide, has a very rich soil life and is therefore an important food source for vast numbers of migrating birds that stop here on their journey to the global south.



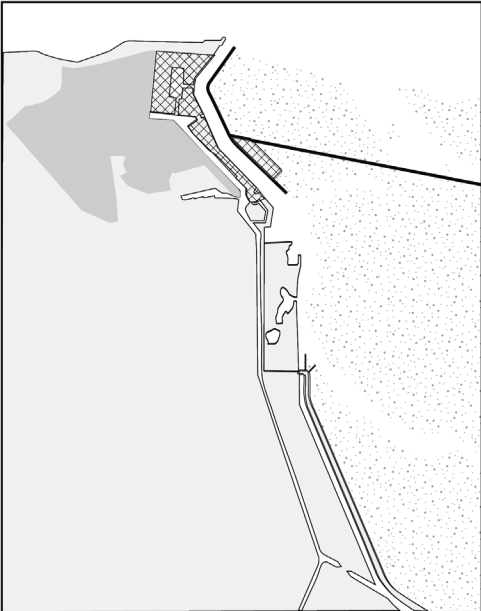
1800 new harbour



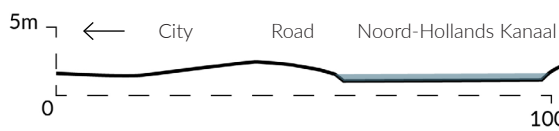
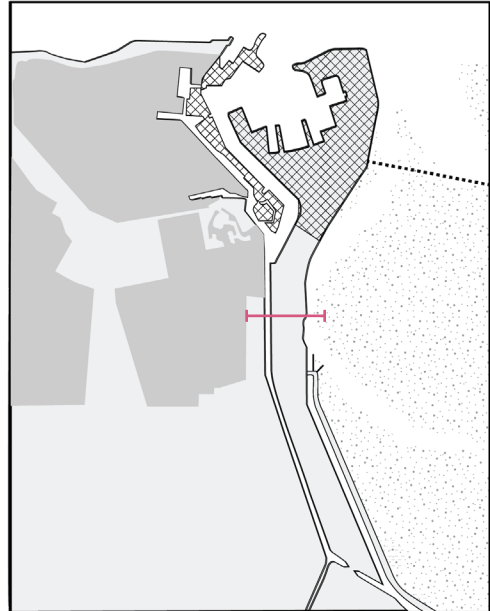
1850 construction of warf



1950 growth of harbour after the war



2022 current harbor with marine and industry



Extention of Navy Terrain

The development of Den Helder has been largely dependent on its important position for harbour activities such as fishing and trading, and its connection to the navy. Around 1800 the mayor decided to create a harbour in Den Helder, a dam construction was erected to control the tidal channel Nieuwdiep and keep it at a suitable depth for boats to sail in and out. Over time the harbour developed its quays and docks, supporting its activities of trade and fishery that especially flourished after 1851, when the restrictions on the harbour got lifted.

In 1949, after the second world war, the decision had been made to further concentrate the royal navy in Den Helder. This called for the construction of a new and larger harbour including a maintenance wharf, on the west side of the existing docks. Because of the growth of the navy fleet, more space was needed for the expansion of the navy harbour. For this reason, the construction of the 'new harbour' started around 1954. This was done on the east side towards the Wadden sea, where land was reclaimed to construct a large new harbour and other navy terrain, but also to house industrial activities related to the harbour.

- Dam
- Schorren
- Sand banks
- Urban development
- ▣ Harbor
- Dam relict

Figure 27: Left: Diagrams showing development of the harbour of Den Helder from the construction of the first harbour on the east of the city, to the current extention of the navy area along the full east coast. Bottom: principle section of southern navy terrain with earth covered bunkers.



D The Wadden Sea Dike





D Waddensea Sea Dike

The Waddensea dike is the only area from which the landscape qualities of the wadden sea coast can be fully experienced. From the dike you look outward searching for the sea, but instead encounter a large muddy surface that reflects the light similarly. Behind there calmly lies the Wadden sea. The boundary between the two is blurred, not sure where the sea begins or where the mudflat ends.

From the dike you descend towards the muddy sea, first passing through a small strip of vegetated marshland. The surface is quite slippery, and the plants have rough structures and textures that I had never seen before. The empty mudflat behind it

seems endless and dreamlike, but many interesting things can be discovered. The soil is full of life and birds can be seen foraging for worms and shells in the sand.

The whole landscape radiates a kind of serenity, with its slow processes that can be perceived in time, the lack of sounds from the sea, and the wide empty horizon.

Unfortunately, the dike area is not freely accessible because of the disturbance it will cause for the resting birds, therefore it can only be accessed with a guide.

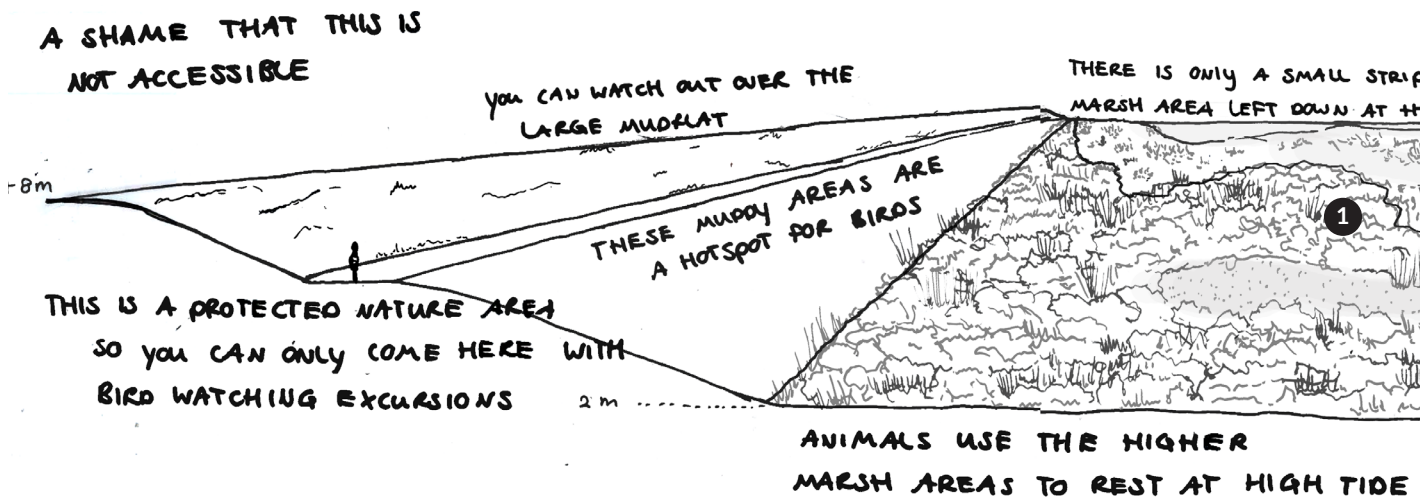
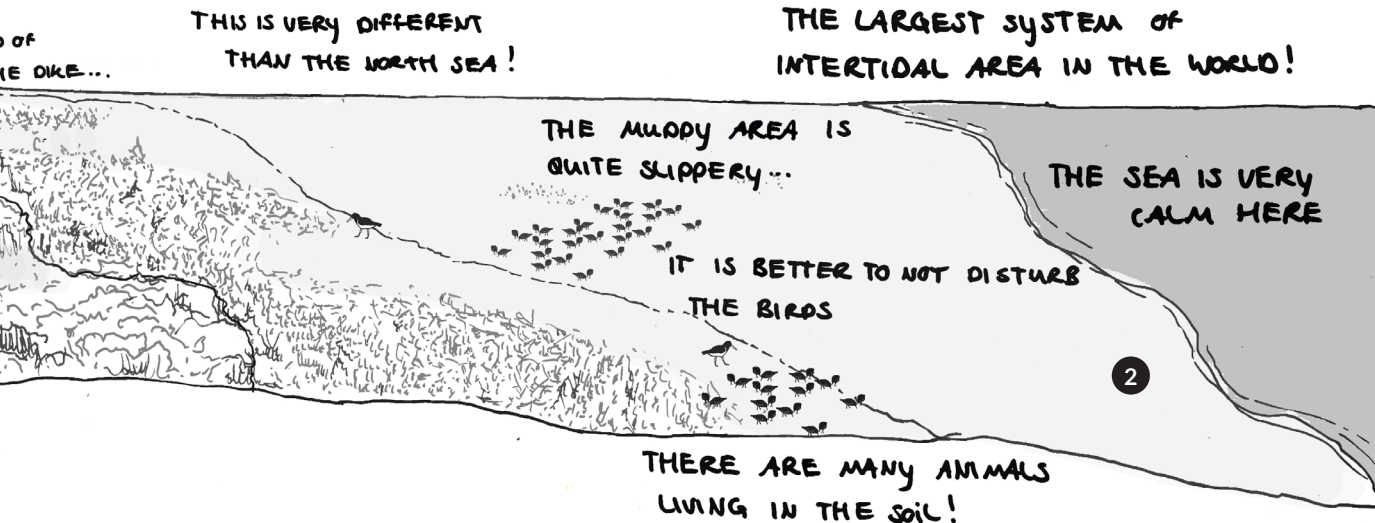


Figure 28: Section of personal experience of the Wadden sea dike

At the foot of the dike lies a small strip of marsh land, which further south grows into the larger salt marsh called 'het Kooihoekschor'. This strip of land is slightly higher than the large mudflat area further away from the dike, causing it to not be flooded every high tide. This allows very specific salt loving plants to grow such as saltwort on the lower areas and sea lavender and cordgrass on the higher areas. It proves to be a very valuable resting and foraging place for birds when the tide is at its highest.



Barriers

When zooming out and looking at these areas on city level, each area can be seen as a barrier between city and sea. However, some barriers are stronger than others;

The closed off dune area might not feel as a strong barrier, since it can still be crossed at some points (shown in yellow in figure 29) and ecologically connects to the sea behind it. In this way the landscape can be enjoyed while also safeguarding it.

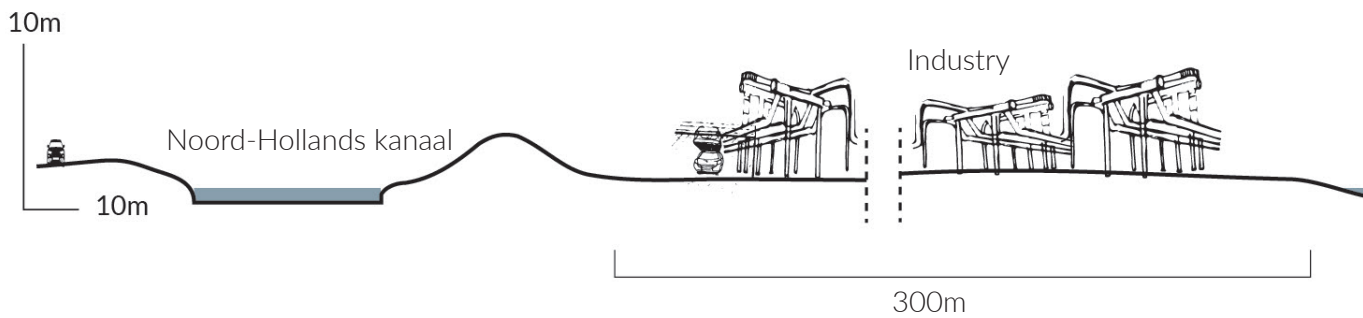
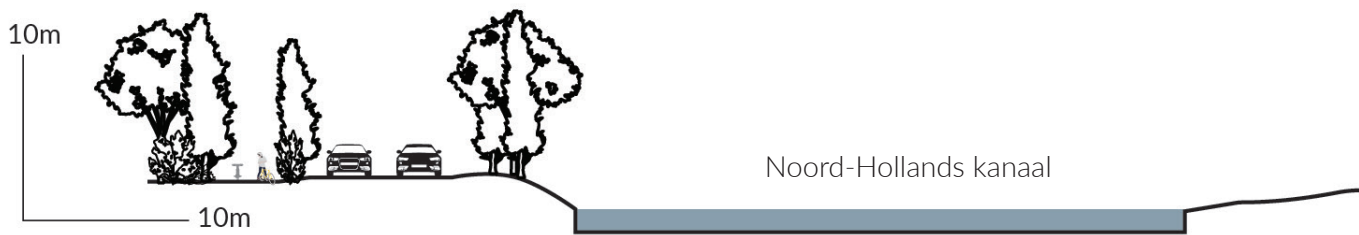
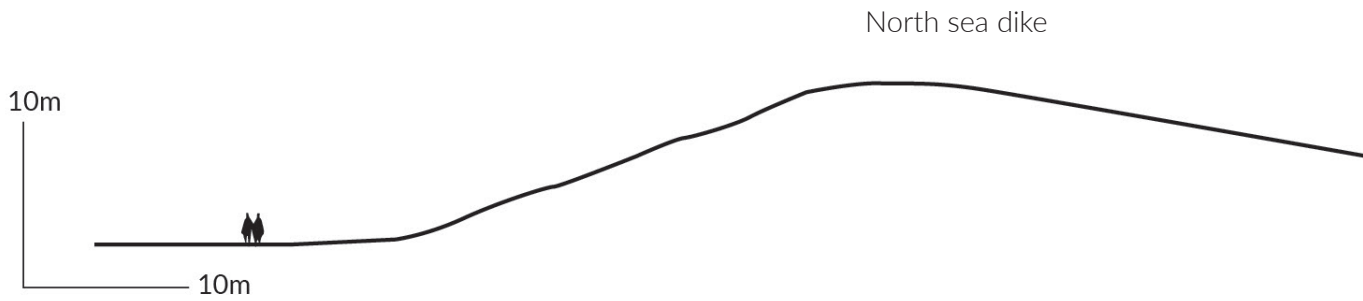
The dike is a forms a visual and physical barrier, however it can be crossed at several points. Nonetheless it forms a barrier for groups of people since the crossing points can be steep and far apart and are often not suitable to cross by bike.

The navy terrain and roads on the east form a strong barrier because of several reasons: the road and canal can be crossed, but the routing is unclear and far. The navy terrain on the other hand can not be crossed at all. Moreover, they form a large barrier because the landscape behind is totally hidden, and no signs of the presence of the sea can be found.



Figure 29: Map of Den Helder with edge areas as barriers between the city and the sea landscape. Some barriers can easily be crossed, while others require large efforts to be overcome or can not be overcome at all.







The large structure of the North sea dike forms a physical and sensorial barrier between the city and the sea. The dike blocks most sound, wind, smells and ofcourse the view.



On the east of the city there are multiple barriers towards the Wadden sea: a large road and canal from physical barriers that can only be crossed by a long detour. Rows of trees and a dike on the other side of the canal form visual barriers.

When the barriers of the road and canal are crossed, you encounter another one; occupation by private program such as industry and navy.

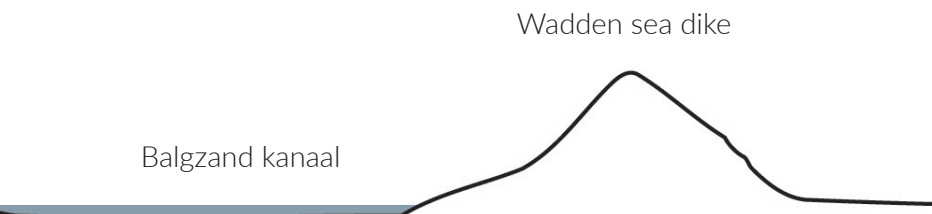


Figure 30: Sections of different barriers between the city of Den Helder and both the Wadden sea and the North sea. These barriers can be both physical, visual or in other ways sensorial.

3.3 Problem statement on Den Helder

From the analysis of the land-water edge of Den Helder the following problem can be concluded:

While in the west coast the landscape can be accessed and its qualities can be enjoyed, further north and east, dikes, roads and canals create barriers, while the occupation by industrial and naval activities completely deny people access to the coast.

The limited interaction with and experience of this landscape, neglects the fact that the landscape can provide many valuable, if not essential, qualities for humans. Furthermore, the limited use of the landscape prevents people from forming relations of importance and care.

Additionally, the harsh land-water edge of Den Helder is not responding well to the ecosystems of the North Sea and the Wadden Sea, since it largely eliminates processes of land-water interaction and the forming of gradients in the landscape. This is especially harming the value of the Wadden sea coast for other-than-humans, where the suitable conditions for flora and fauna largely depend on the gradients between land and sea.

Figure 31: Map of Den Helder showing the areas which make up the land-water edge, and the connections or disconnections between the city and the sea that limit certain experiences and reduce ecological value.



Commons in the Land-Water Edge

4

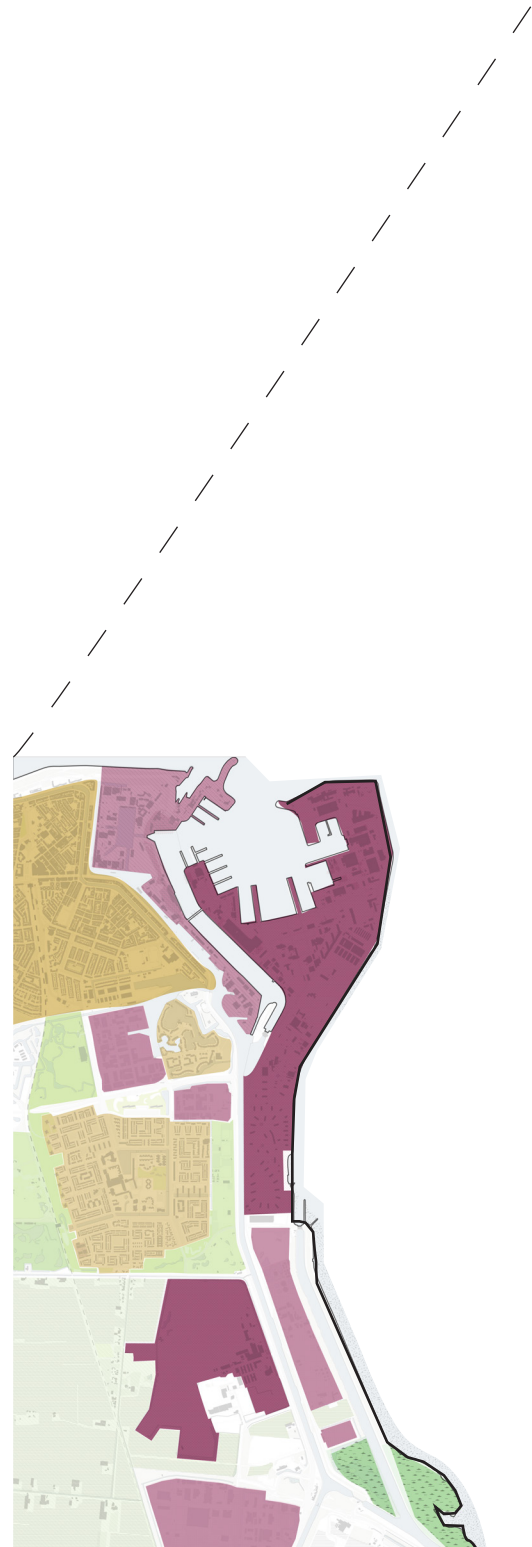
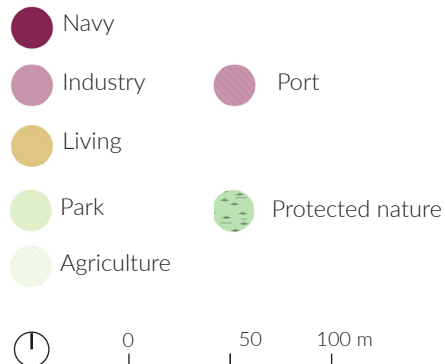
4.1 Lost Wadden Coast

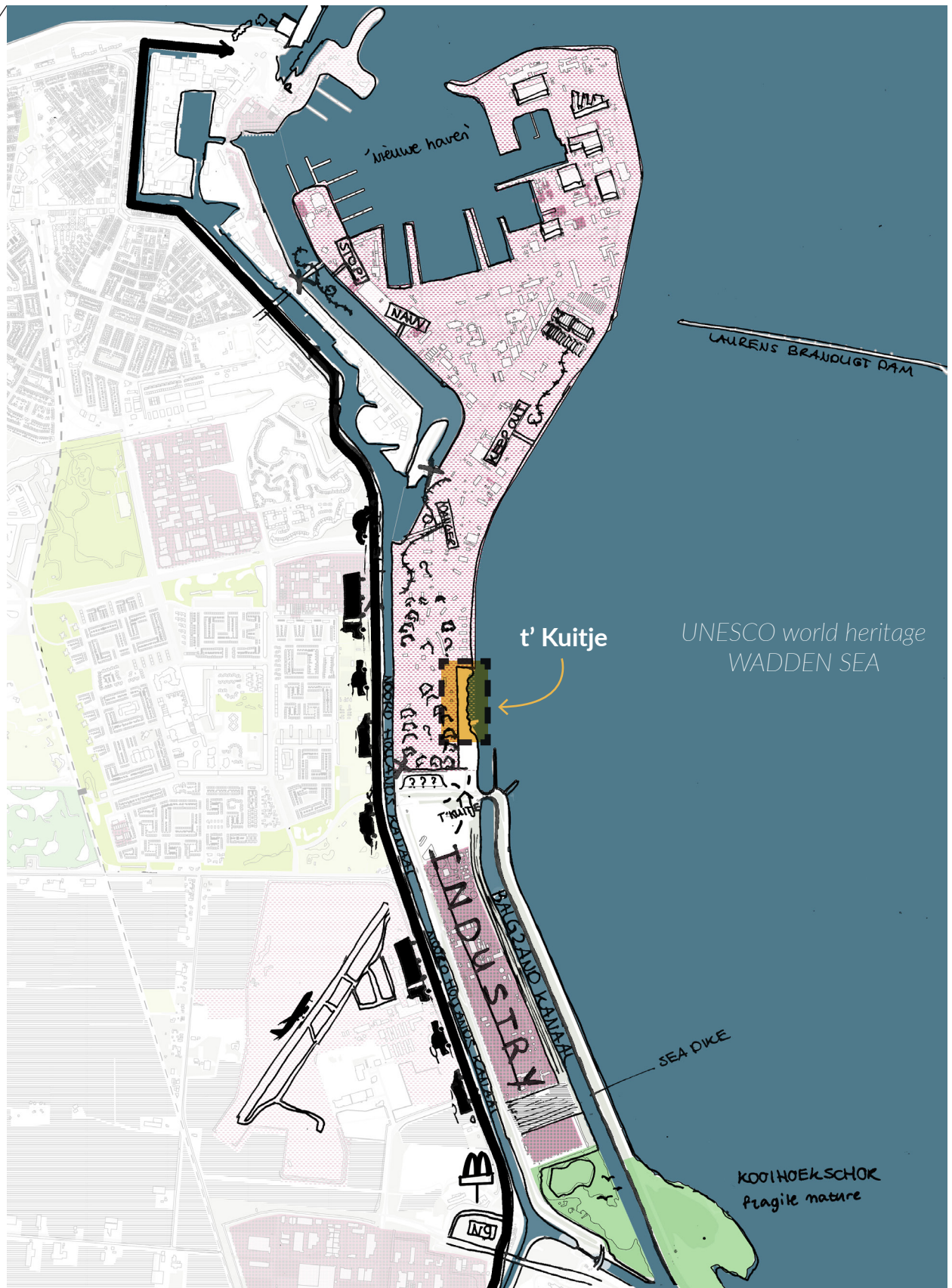
Citywide, the response of the land-water edge towards the social- and ecological values of the surrounding landscape is insufficient. However, specifically the way the east coast has been developed and occupied has made it lose its value for non-human and human communities of the area.

The coast is largely inaccessible due to large barriers, as well as occupation by private programming such as industry and navy. This results in a lack of relation with the Wadden coast, as well as lack of care for its aesthetic, and ecological values.

For this reason I will apply the Landscape Commons research from chapter two to this particular area, with the goal of increasing its value for human and non-human communities by allowing them to make use of, alter and govern the landscape as a commons.

Figure 32: Soft map of the east coast of Den Helder, bordering the Wadden sea. The area is largely occupied by navy and industrial activities, and is separated from the city by barriers such as a large road and the Noord-Hollands kanaal.





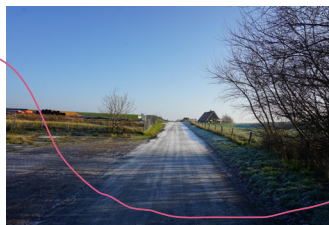
Looking for the Wadden sea

Within the east coast of Den Helder there is one place that has not been occupied or privatised. Here the Wadden sea can be freely accessed and experienced, and the landscape has an open relation with the sea. This place is called het Kuitje.

This hidden spot is hard to reach because of the separation of the whole East coast by the busy car road and the Noord-Hollands kanaal. From the city centre, a route of almost 12 kilometres (see figure xx) needs to be taken in order to arrive here. Whereafter the place itself does not provide a comfortable or

interesting place to stay. There is a beautiful open view onto the sea, but the lack of facilities and exposure to the elements do not allow for a long stay.

What struck me was the coming and going of a few cars, from where a single person would enjoy the view or spot some birds.



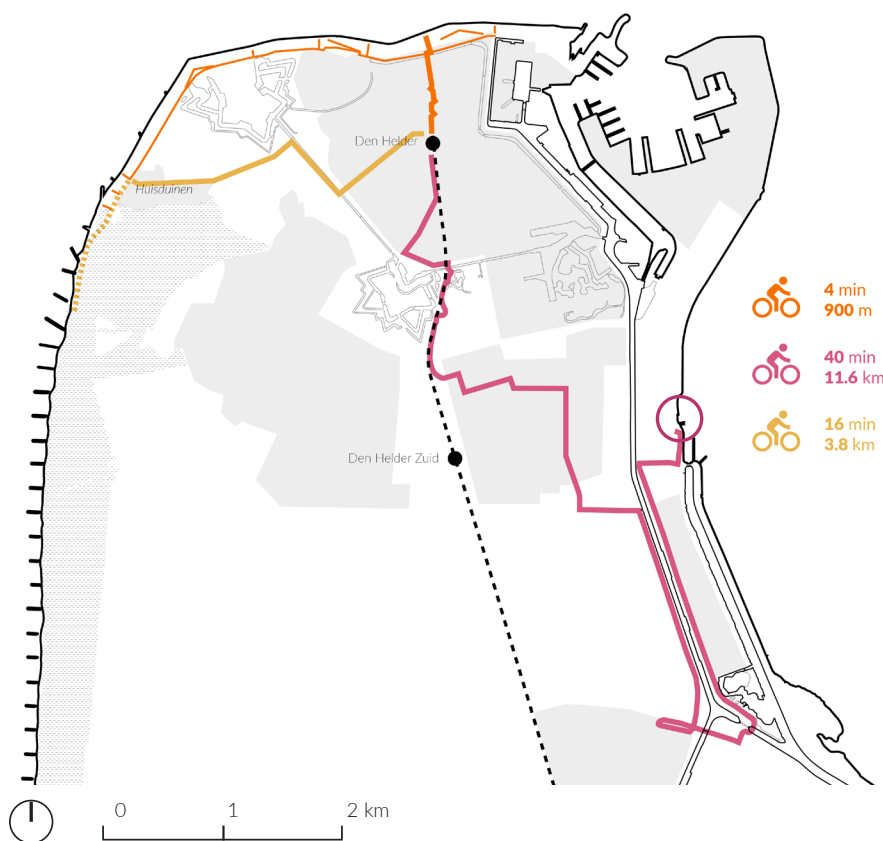


Figure 33: Map and images of routing towards the eastern land-water edge of Den Helder. The long route runs along a large car road, which can only be crossed after a few kilometers whereafter the coast still cannot be accessed due to private programming of the edge.

't Kuitje as Possible Place for Commons in the Landscape

This open and empty space of het Kuitje has potential to be transformed into a valuable place for human and non-human communities in Den Helder.

It is an empty and unoccupied space with clearly defined boundaries, making it suitable to be transformed to a commons in the landscape. The fact that even though the existing barriers, some people come to stay here for a few minutes shows the quality of experiencing the Wadden sea. Moreover, it has an open relation to the sea, without any dikes or other structures and is inhabited by non-human

species in the lower parts of the area, showing ecological value and potential.



Figure 34 (left) : Areal view of het Kuitje ("Luchtfoto 2022 Ortho 8cm RGB," n.d.) Edited by author
Figure 35 (right): Photographs showing experiential and ecological qualities of the site.

Connection with the sea



Experience and influence
of the tide



Important sea and mudflat
ecolgy



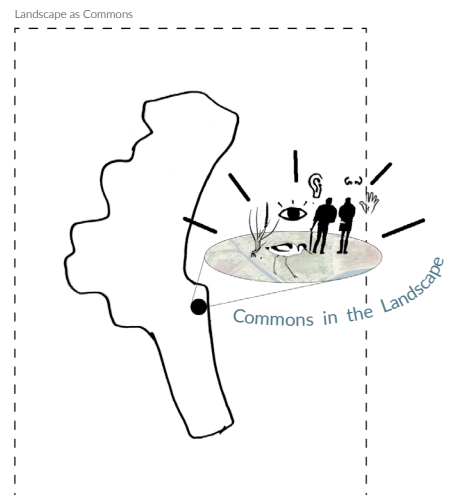
4.2 Commons in the Land-Water Edge

In order to increase the social and ecological value of the land-water edge in Den Helder, and make it function as an important resource for humans and non-humans, I propose to transform the landscape edge of het kuitje into a commons within the larger edge landscape. This commons will be a place where both human and non-human communities can make use of, create and take care of the landscape.

In the next part of this chapter, a landscape architectural design will be proposed that follows the guiding principles of the theoretical framework of chapter two.

These principles are:

- 1 Design that allows people to connect to the landscape through programming (use value).
- 2 Design that works with and strengthens experiential landscape qualities (existence value).
- 3 Design that enables appropriation and change of the landscape by other-than humans in order to respond to their wants and needs and function as a valuable resource.
- 4 Design that enables appropriation and change of the landscape by humans, to create agency for people to manage and care for their landscape commons and use it as a flexible resource, and creating connection through activity.



Site specific design aims

For the chosen site in the Wadden sea coast these principles translate to the following specified design aims:

1.
 - Create access to the land-water edge that overcomes the barriers between the city and the east coast
 - Create a place in the land-water edge where people can stay
 - Allow programming in order for the land-water edge to become a destination where people can connect to the landscape
2.
 - Work with open- and endlessness of the view to the sea, experience of the tide and slow processes of sedimentation and plant growth
 - Strengthen landscape qualities and characteristics of the Wadden sea coast related to its unique salt marshes.
3.
 - Create interaction between land and water in order to allow natural appropriation by the elements, flora and fauna and create a commons for non-humans.
4.
 - Create options for programming and interaction with the landscape by people, allowing them to use the landscape as a flexible resource for recreational activities and experience and to establish a relation of responsibility and care for the edge landscape.

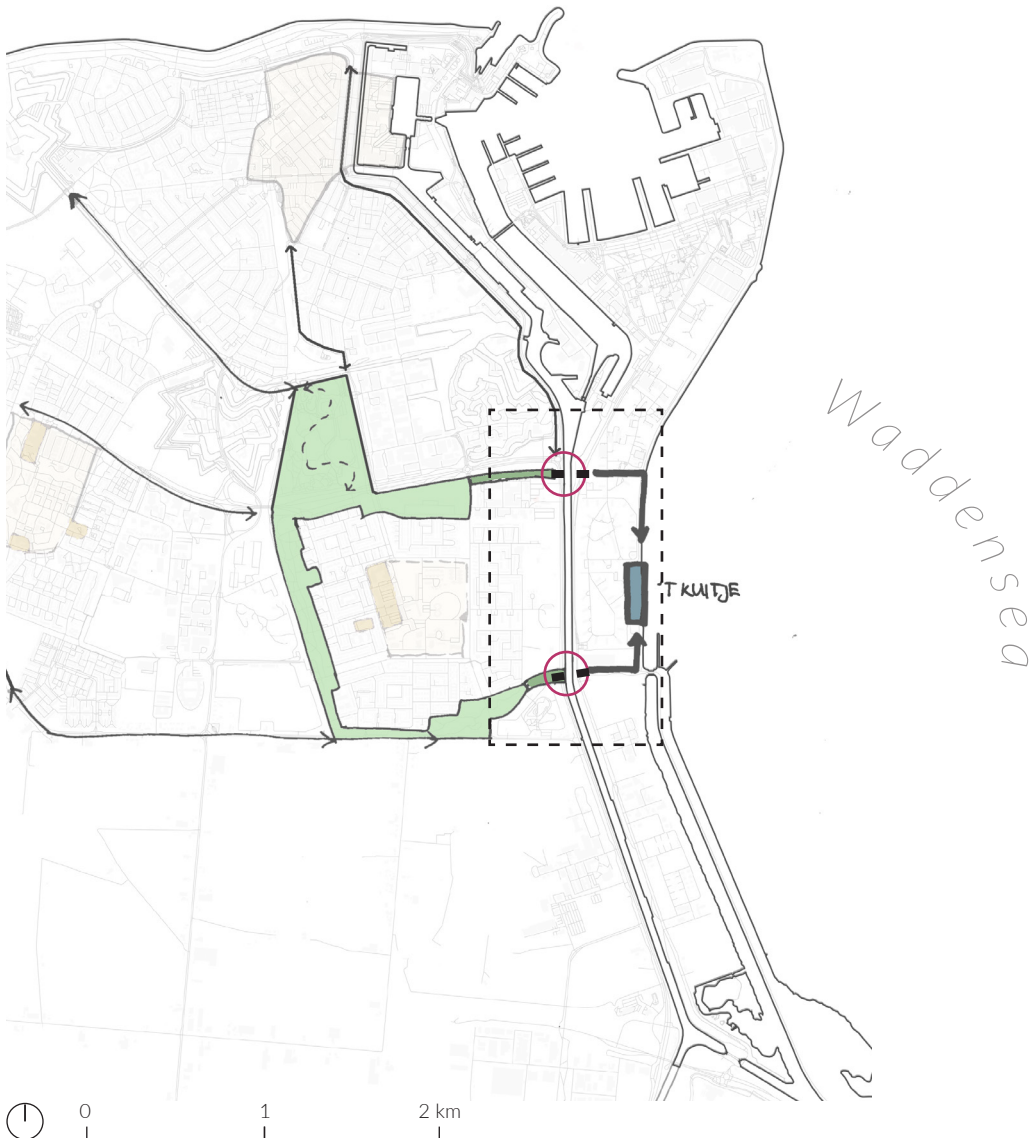
Connecting city to coast

One of the goals of creating commons in the landscape, is to connect the people in the city of Den Helder again with the Wadden sea, in order to use it and care for it. Therefore, an important part of the proposal is to make this area, that will be transformed into a commons, more accessible and connected to the city.

Figure 36 shows important routes, green structures and neighbourhood cores in Den Helder, with the east coast being clearly disconnected and left out, making het Kuitje hard to reach.



In order to make the commons accessible, a route needs to be created connecting the city to the land-water edge. The proposed route in figure 37 connects to the existing green structure of the city which is extended towards the east-coast. From there the current barriers of the road, canal and navy need to be crossed, bridged or pierced through to reach the actual edge of land.



Commons versus non-commons

When further zoomed in onto the area where the proposed route and commons will be, clearly can be seen how het Kuitje is enclosed by the navy terrain. There is an accessible road towards the south of the area, but this is also surrounded by fenced off terrains and industrial activities.

These areas express the opposite of what the commons should be; where the commons are places with accessibility, openness, agency and interaction the surrounding area is hostile, shuts people out and can not be seen or accessed.

The proposed connection runs through these non-commons areas, which requires a different design approach and expression than the design of the commons. The duality of these areas will be used to build tension towards the commons and communicate the different uses and characters of the parts of the route.

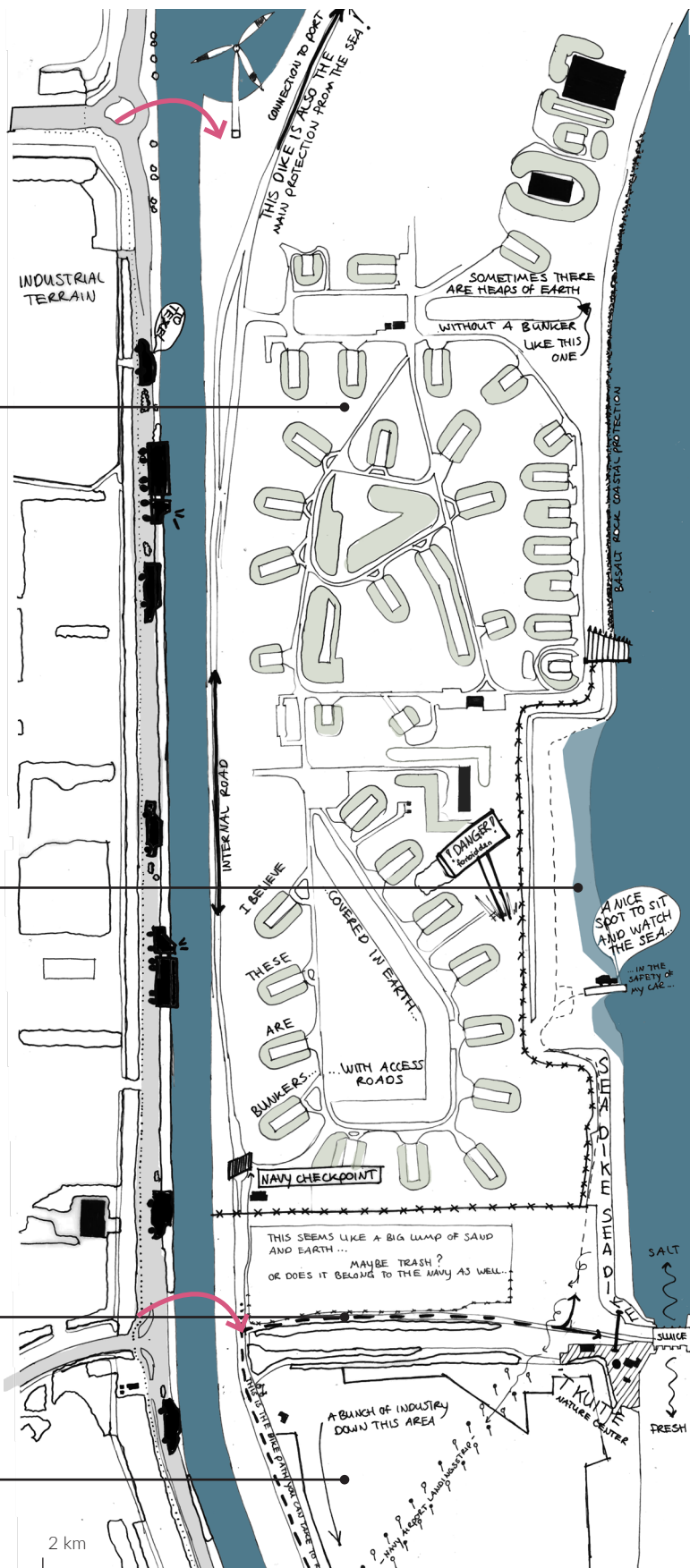
Figure 38: Soft map of site of intervention on the eastern land-water edge of Den Helder. The site for the commons, het Kuitje, is enclosed by hostile navy area. This area quite opposite to the commons requires a different design approach.

Navy terrain with earth covered bunkers

Proposed commons area
t'Kuitje

Existing accessible road

Industrial terrain



Closed path and open space

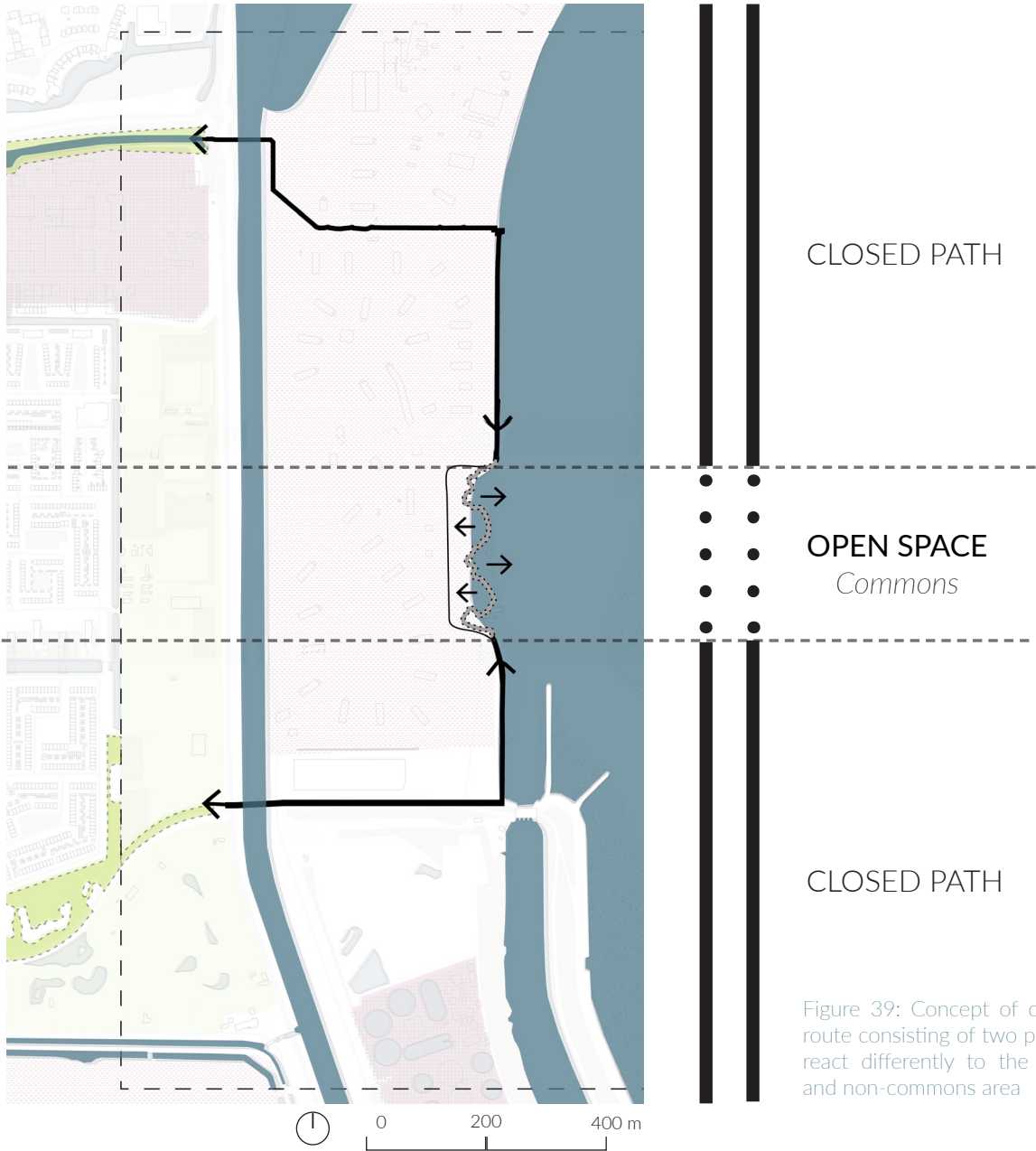


Figure 39: Concept of continuous route consisting of two parts which react differently to the commons and non-commons area

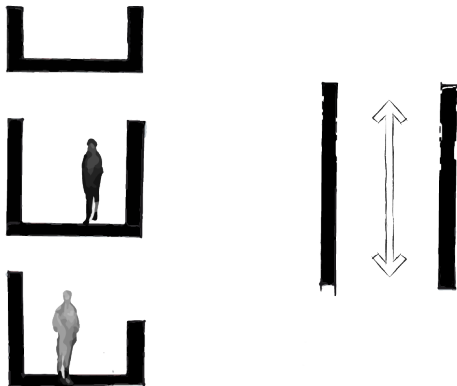
To bring together the two parts of the design intervention (the commons area and the connecting route to the city), the choice is made to create a continuous route that connects to the city and runs through the commons. This makes the route usable from two sides, with the commons as a central space to arrive at.

The continuous route responds to the underlying area in different ways to give expression to its commons or non-commons character. Accordingly, the proposed route consists of 2 parts: the closed path, and the open space.

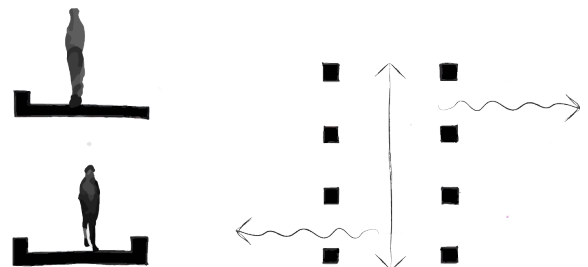
The closed path runs through inaccessible areas with the purpose of arriving at the commons. In response the path is linear, directional, static and closed. It expresses the lack of influence and accessibility to the surrounding area and forms a strong contrast with the commons.

In the open space, the route enters and crosses the commons. Here the path opens up and zigzags through the area allowing full experience of the landscape. The path itself includes adaptable spaces, allowing people to interact with their surrounding landscape and allowing people to stay instead of just passing through.

CLOSED PATH



OPEN SPACE



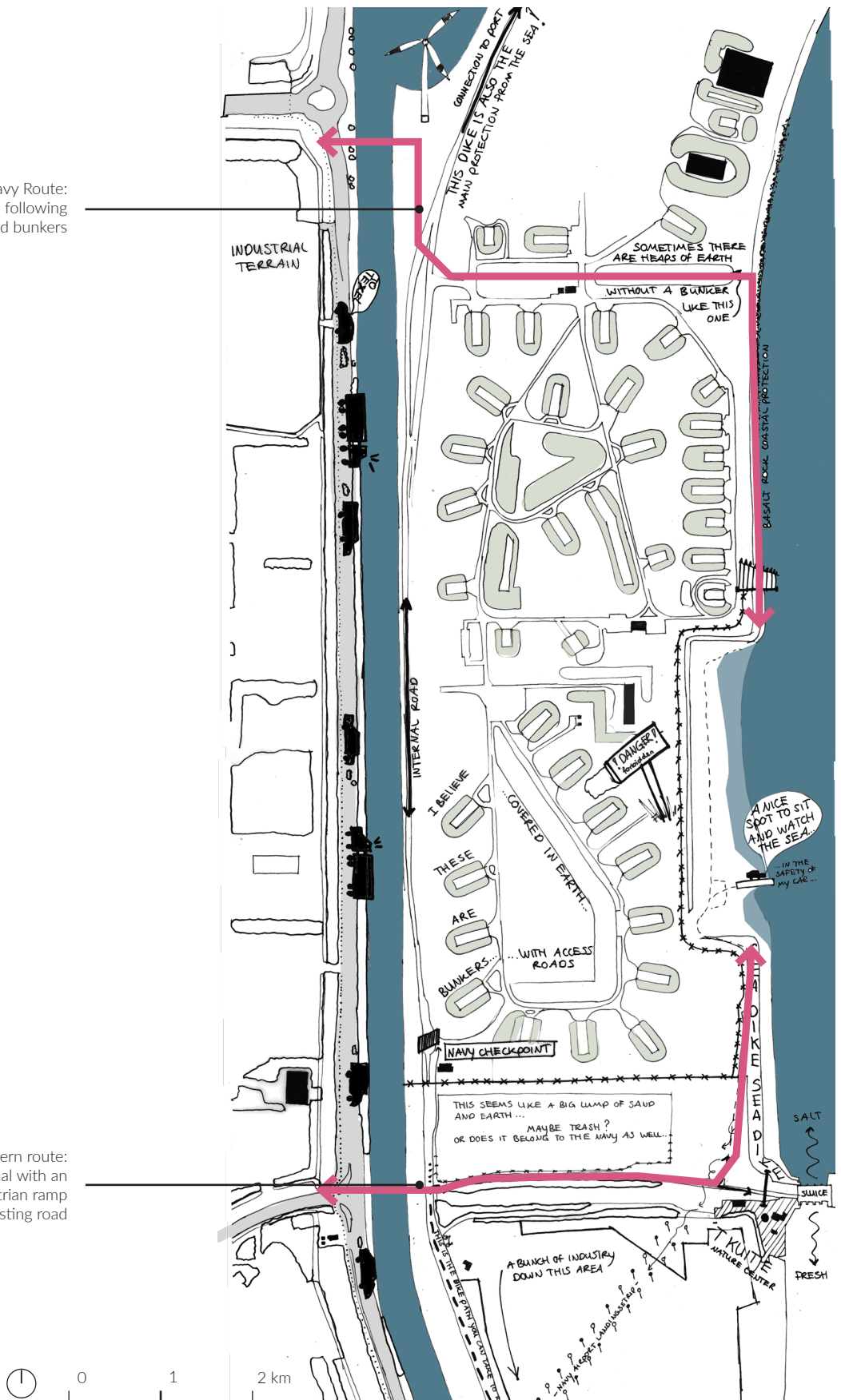
4.2.1 The Closed Path: Bridging Barriers

A connection to the commons will be established from two sides; North and South. Together these two connections will form the closed path. By connecting to the green structure of the city, two favourable places of the route have been chosen. Because of this, the Southern part of the route runs over an already existing accessible road. Besides the need for a bridge crossing the road and canal, this calls for minimal design interventions. For this reason, the main focus of the closed path will be on the design of the Northern part of the route, which will run through the navy terrain and therefore calls for a more sensitive and thought through design.

Figure 40: Trajectory of the two parts of the closed path, leading to the commons. The northern part runs through the navy area, while the south part runs over an already existing access.

Northern Navy Route:
Runs through navy terrain following
topography of earth covered bunkers

Southern route:
Bridges road and canal with an
accessible bike and pedestrian ramp
and continuous over existing road



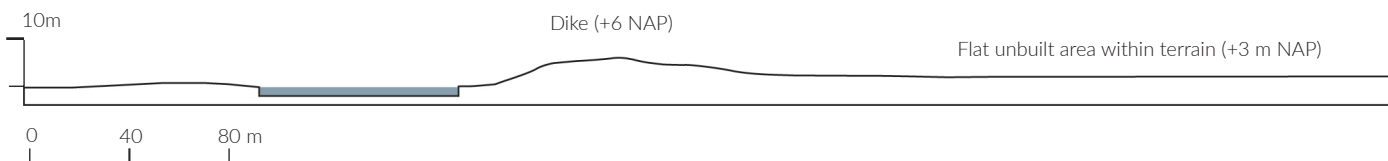
Curious navy landscape

Even though the navy terrain is inaccessible, an idea can be generated on the use, looks and character of this area. It largely consists of earth covered bunkers, which are most likely used to store ammunition. These structures look like green hills in an open space, creating a curious landscape.

The route will cross the area in the most direct way from west to east, on a place where it encounters the least amount of obstacles. This contributes as well to the linearity of the route and general expression of the closed path.

The route will follow the landscape, moving up and down, in order to cause the least disruption and allow people who walk the path to experience the topography.

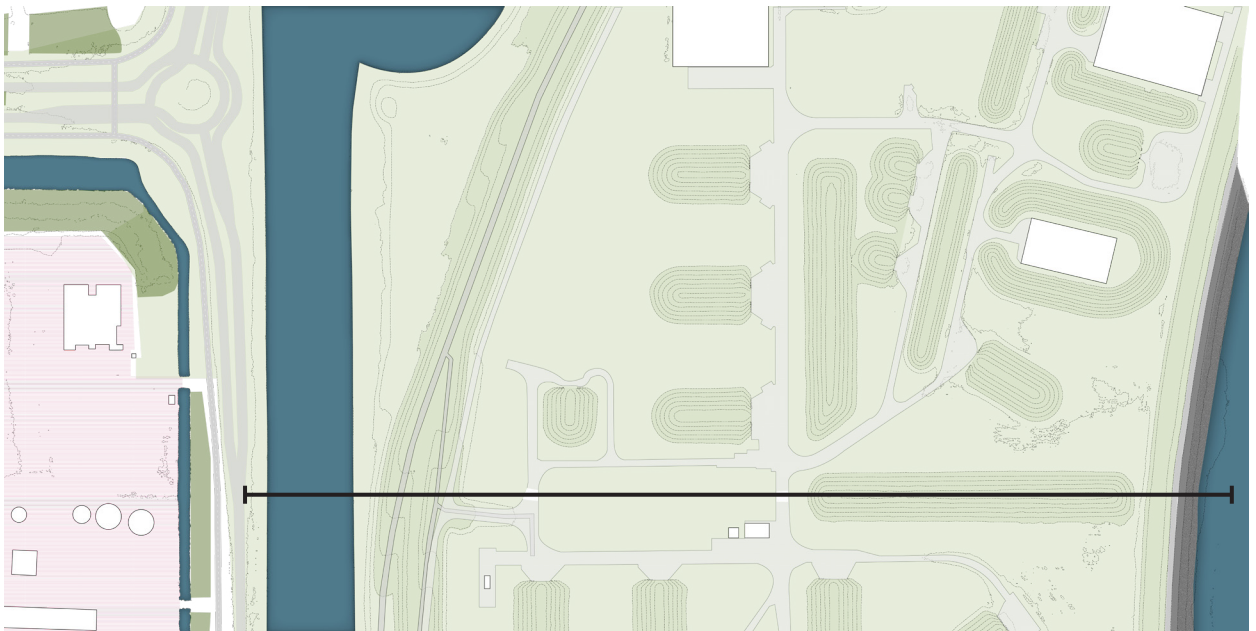
Section of navy terrain on place of route



Earth covered bunkers on navy grounds



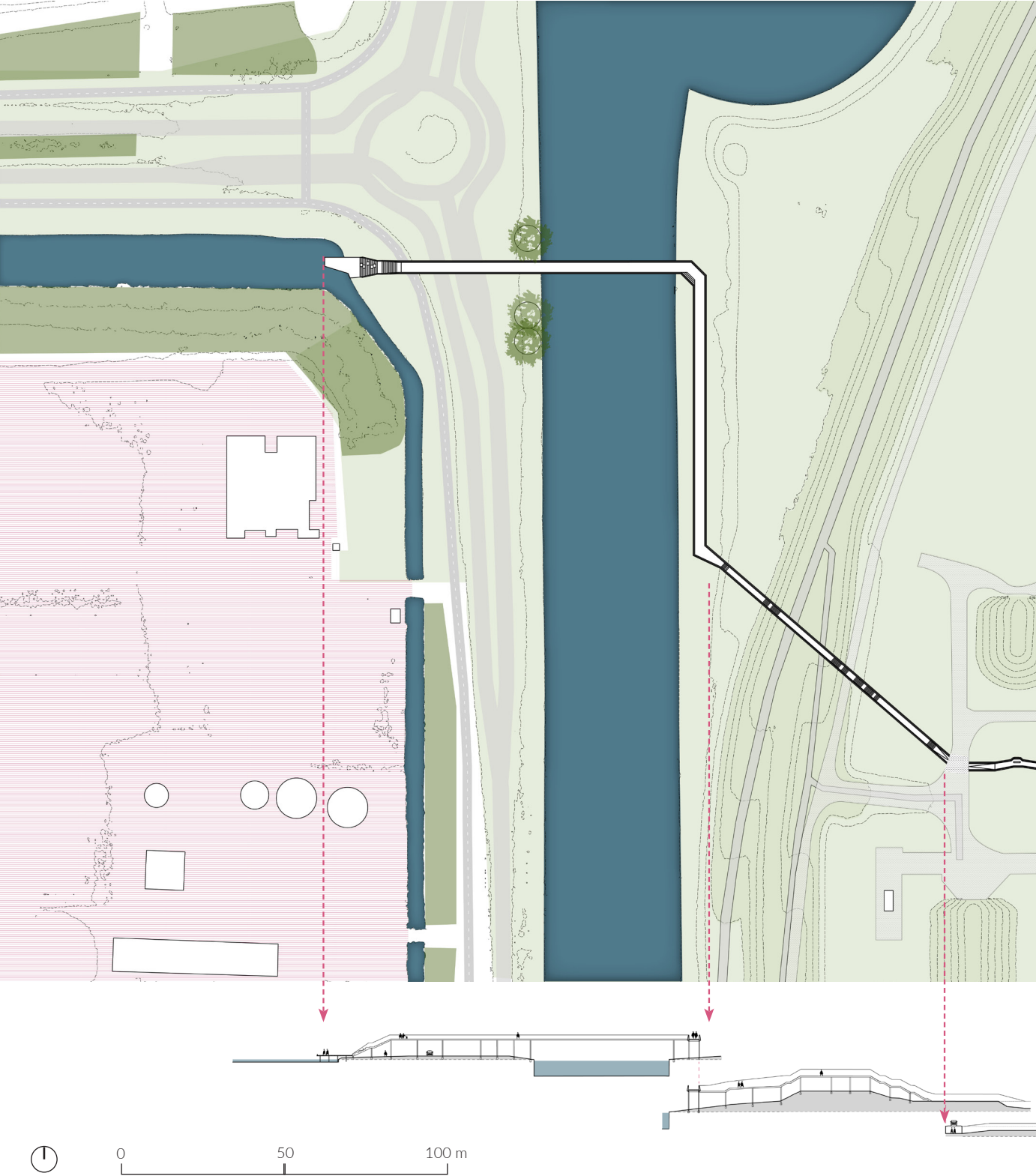
Location of route through navy terrain

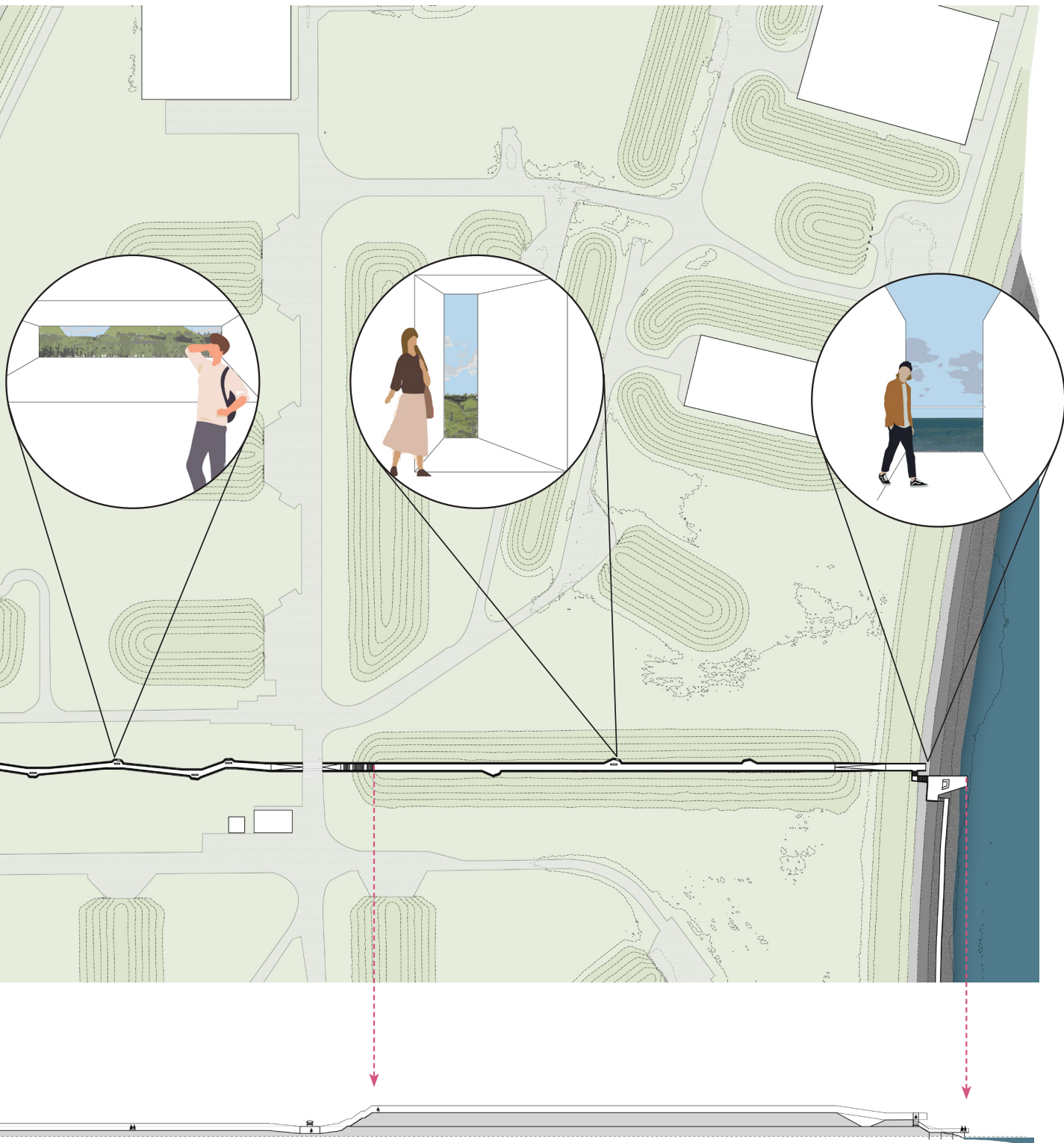


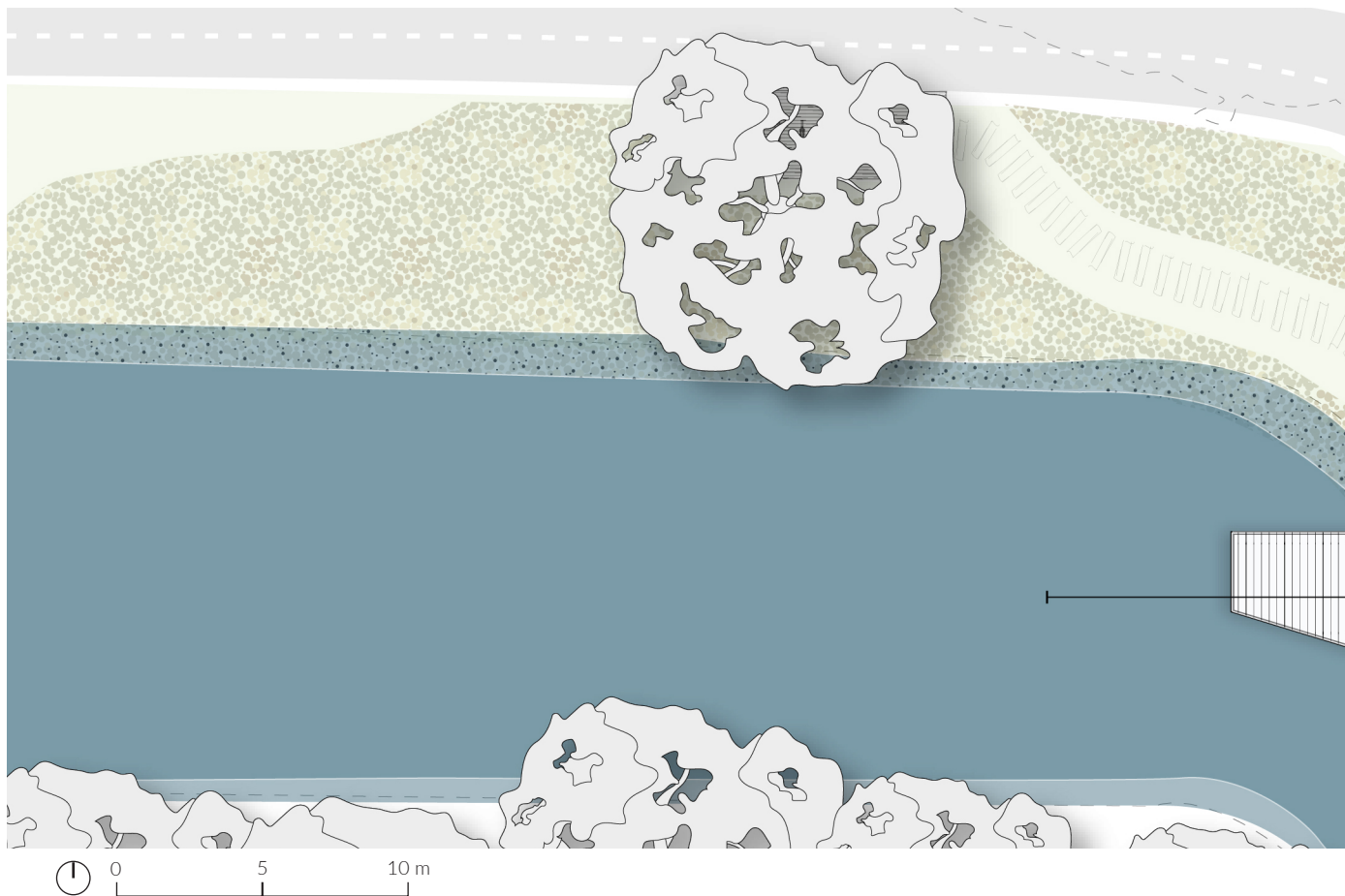
Constructed hill, seemingly without any
built structure underneath (+7 m NAP)

Wadden sea

Navy Route

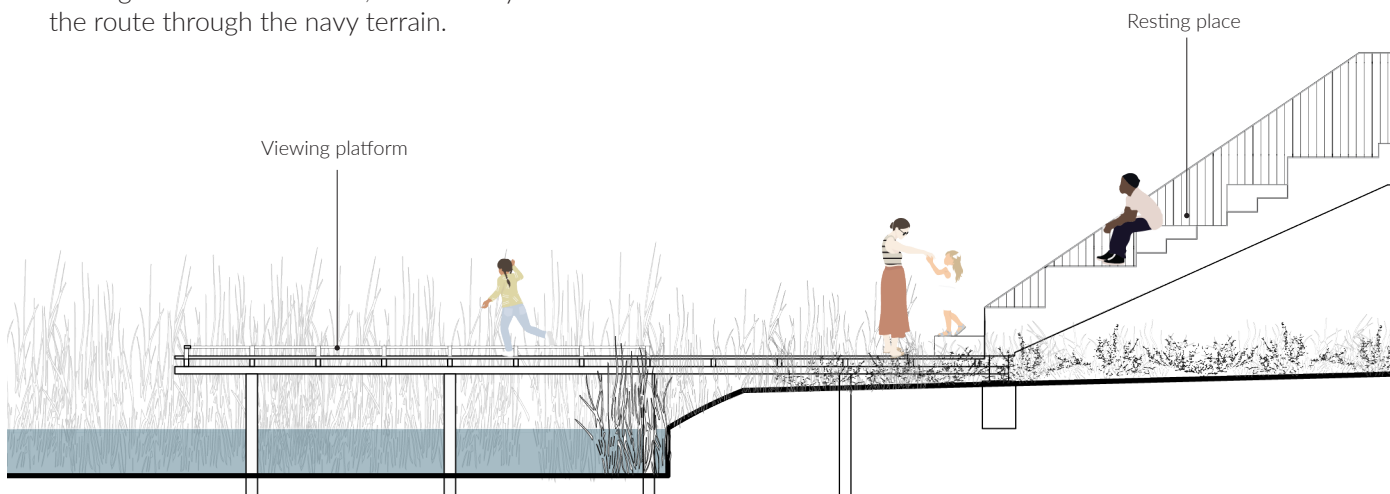


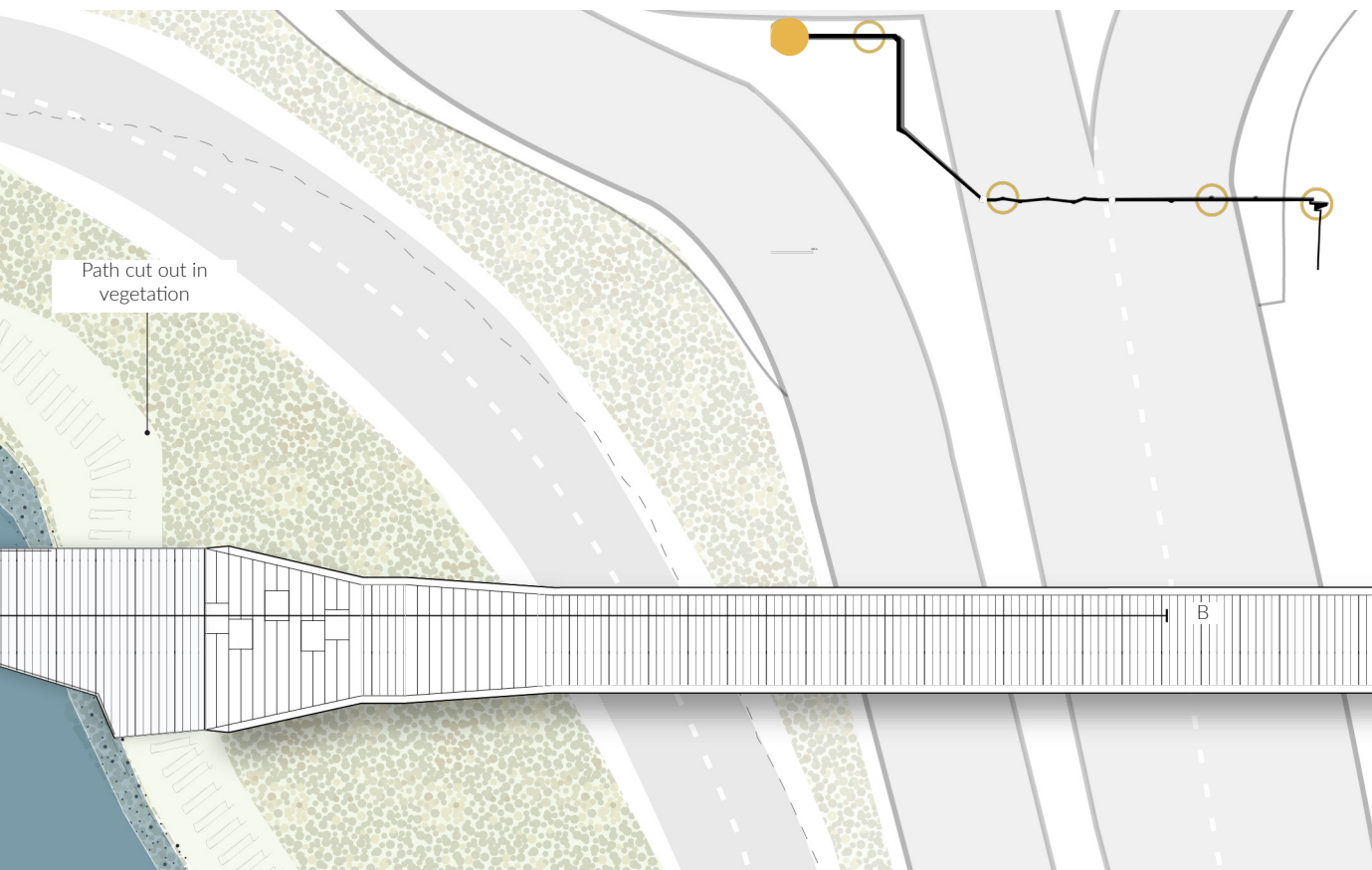


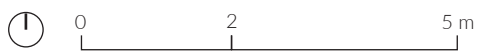
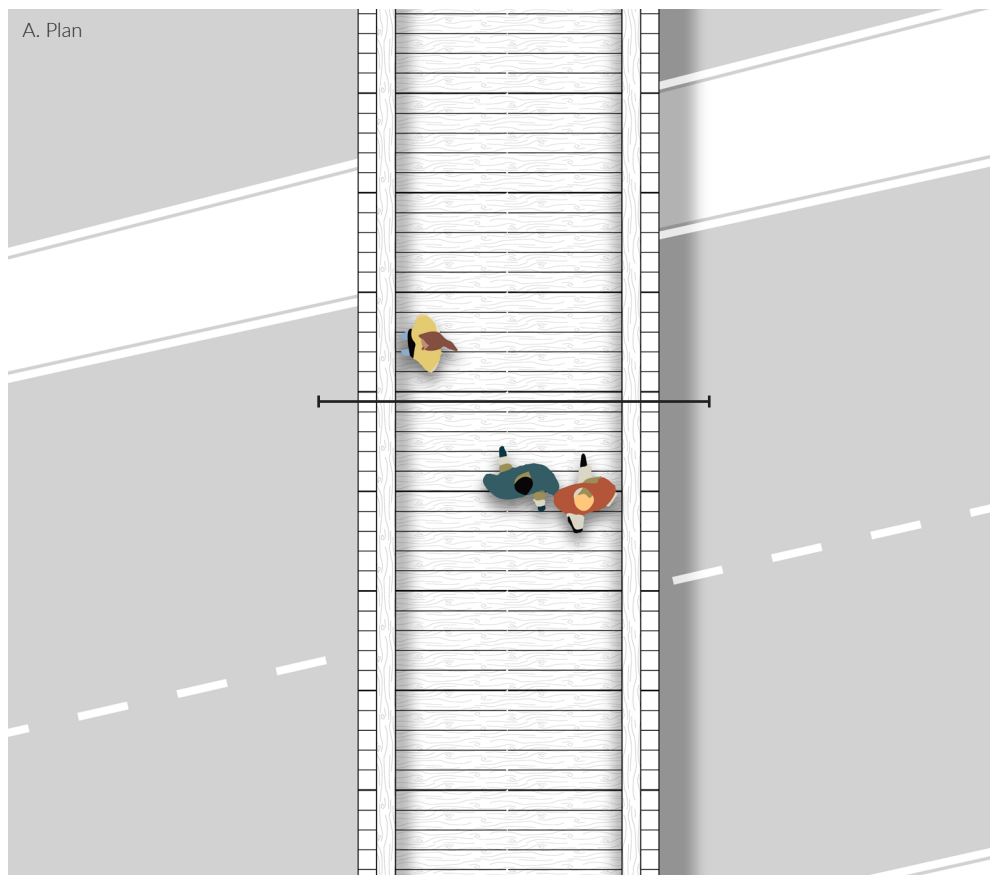


Starting point

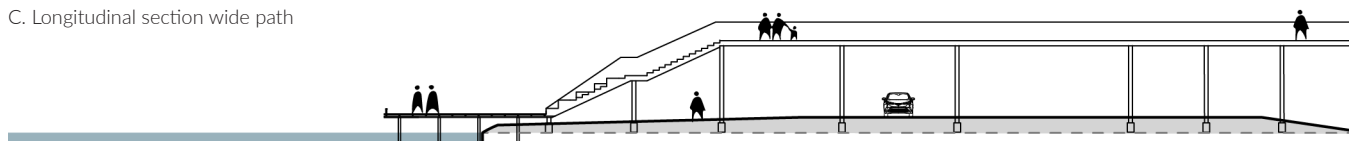
The path starts where the barriers begin, before the road and canal that separate the east coast from the city. The starting point is next to an important bike route leading to the city. Here people can park their bikes, walk over the mown path and take a quick rest looking out over the water, before they embark on the route through the navy terrain.

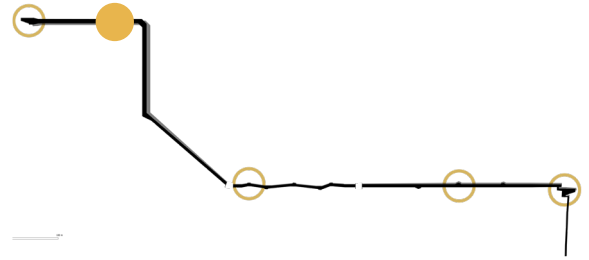






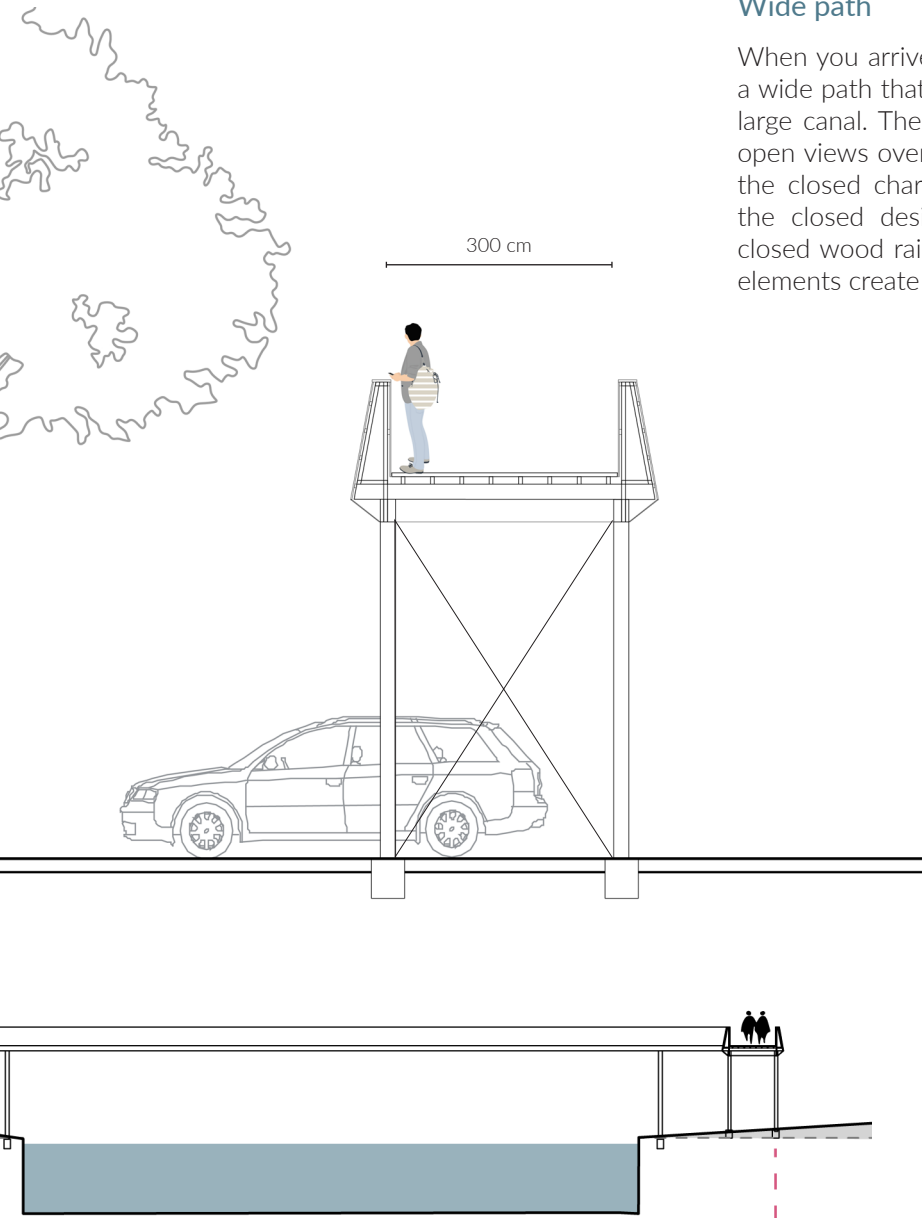
C. Longitudinal section wide path





Wide path

When you arrive on the top of the stairs, you enter a wide path that crosses over the busy road and the large canal. The railing is still low, in order to allow open views over the areas that you cross. However, the closed character of the path remains, through the closed design of the wooden elements. The closed wood railing together with the wooden floor elements create its own space crossing the barriers.



Lines through the Landscape

Case study: Luchtsingel

Location: Rotterdam, the Netherlands
Office: ZUS (Zones Urbaines Sensibles)

The luchtsingel is a 400 meter long pedestrian bridge connecting three areas in the centre of Rotterdam. The areas had been separated through large infrastructure networks which limited the pedestrian access and connectivity of these areas.

This self initiated project has proven to be very successful in connecting popular areas such as 'het schieblock' and 'de hofbogen'. Unique about this project is that it is the world's first piece of public infrastructure which is accomplished through crowdfunding. Individuals and companies were able to 'buy' pieces of the bridge, often engraved with their (company) name.

Besides the fact that this pedestrian bridge crosses such a large area and has a very inspiring origin story, I was inspired by its physical design. The robustness of the design makes the whole path feel almost like an object, more than just being a pedestrian route floating in the air, it becomes a space of its own.



Figure 41: Top to bottom: areal view of Luchtsingel, heightened walls of rail crossing, robustness of wooden elements creating its own space (Architectenweb, n.d.)

Case study: Moses bridge

Location: Halsteren, the Netherlands

Office: ROAD Architecten

The Moses bridge in Halsteren is part of a restoration of a fortress of the West Brabant Water Line, which is a defense line dating from the 17th century consisting of a series of fortresses. For the recreational function of the fort the construction of a bridge across the moat was needed. Historically however, this is a very inappropriate intervention, especially on the side of the fort from where the enemy would appear.

For this reason, the bridge was made invisible, by placing it like a trench in the water, blending in with the landscape.

The blending in of this path with the landscape and the sensitive response to the area with its sleek detailing is very inspiring. Furthermore, I appreciate the simple and straightforward design that gives a particular experience of the surrounding landscape and the topography of the fortress.

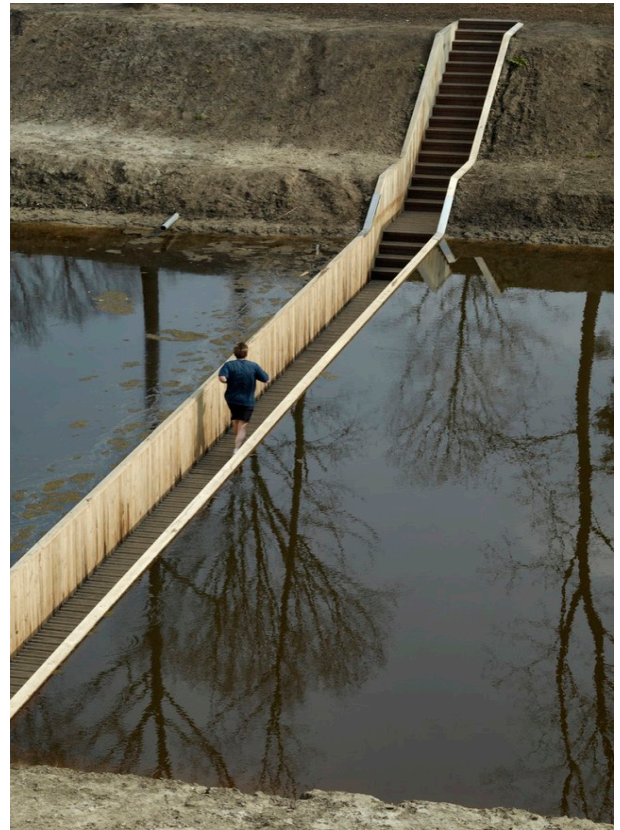


Figure 42: Moses bridge running piercing through the moat of the fortress, making it invisible from a distance. *Image source: (Jett, 2022)*

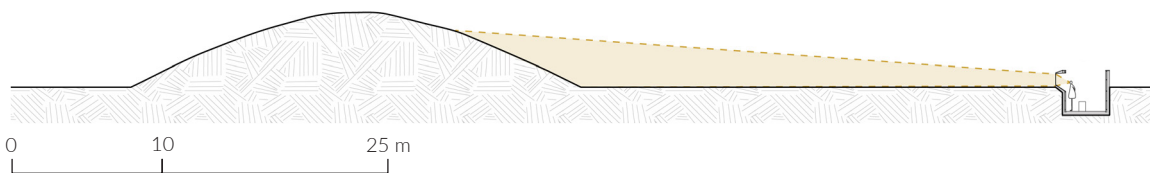
Building tension

Coming closer to the navy terrain, the wide path becomes narrower and the railings become higher. Once you enter the terrain, the railings have become walls, closing off the view onto the private navy area.

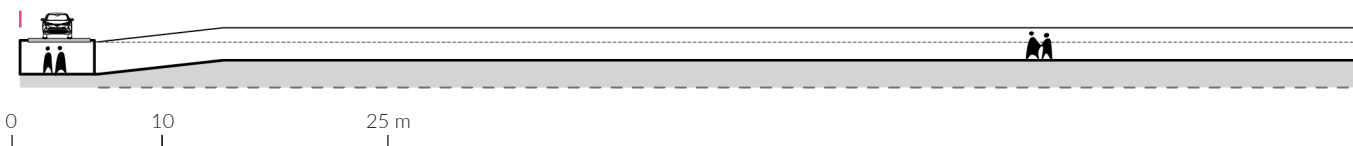
To not interfere with the activities of the navy, the path goes down and passes under the existing roads. The path stays half underground and becomes angular, not allowing people to see until the end of the path. At the end of every curve however, there is a small viewing point that allows a directed view onto the curious constructed hilly landscape.

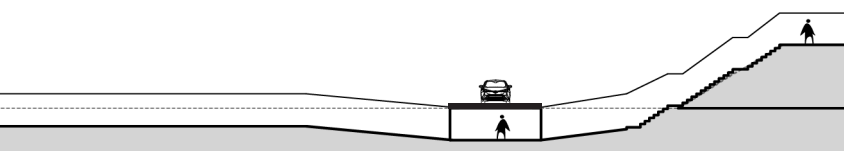
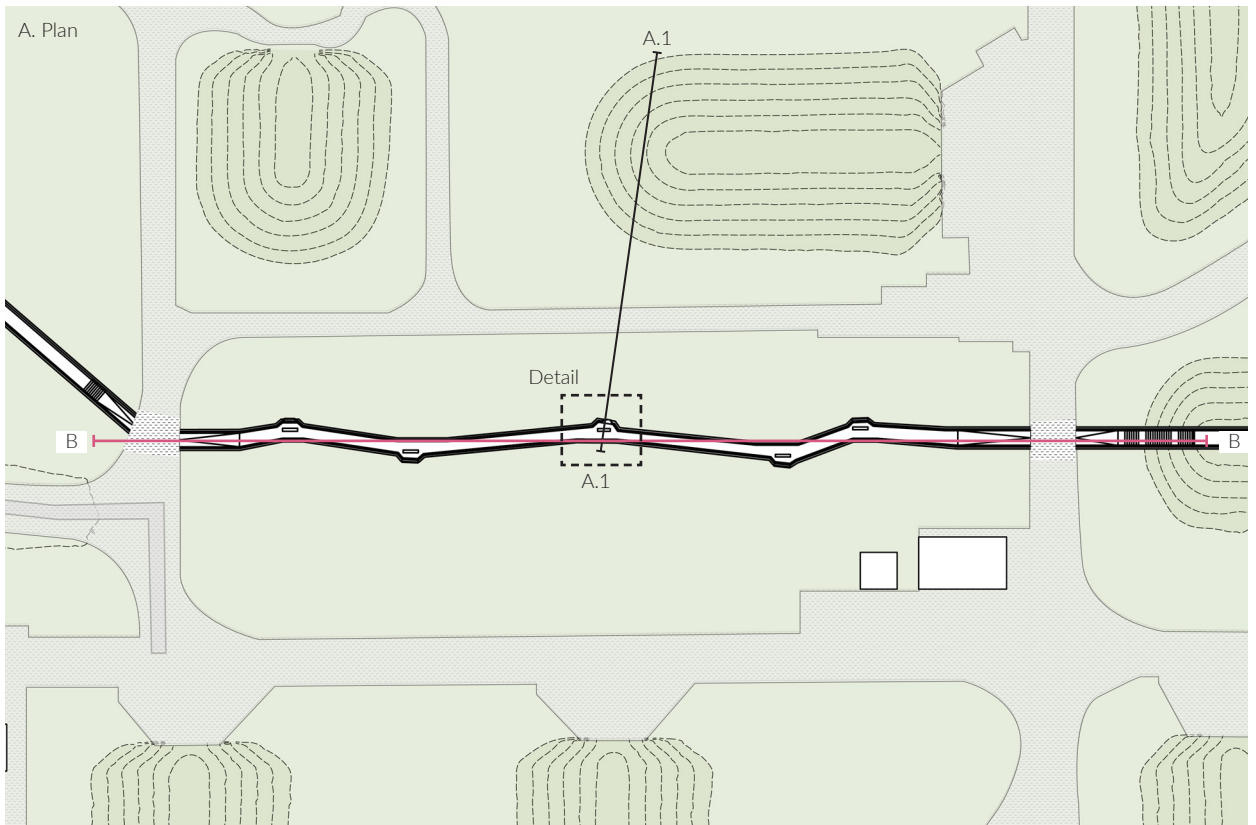
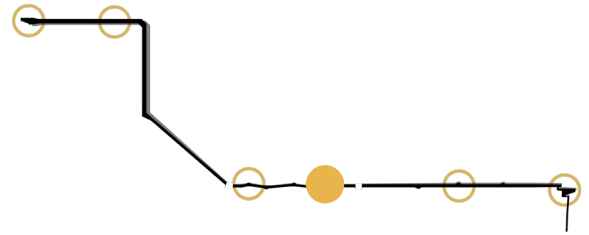
This part of the path, being narrower and lacking a larger overview, builds tension towards the end of the route and forms a strong contrast with the commons.

B. cross section A1 - view on hill



C. simplified longitudinal section BB





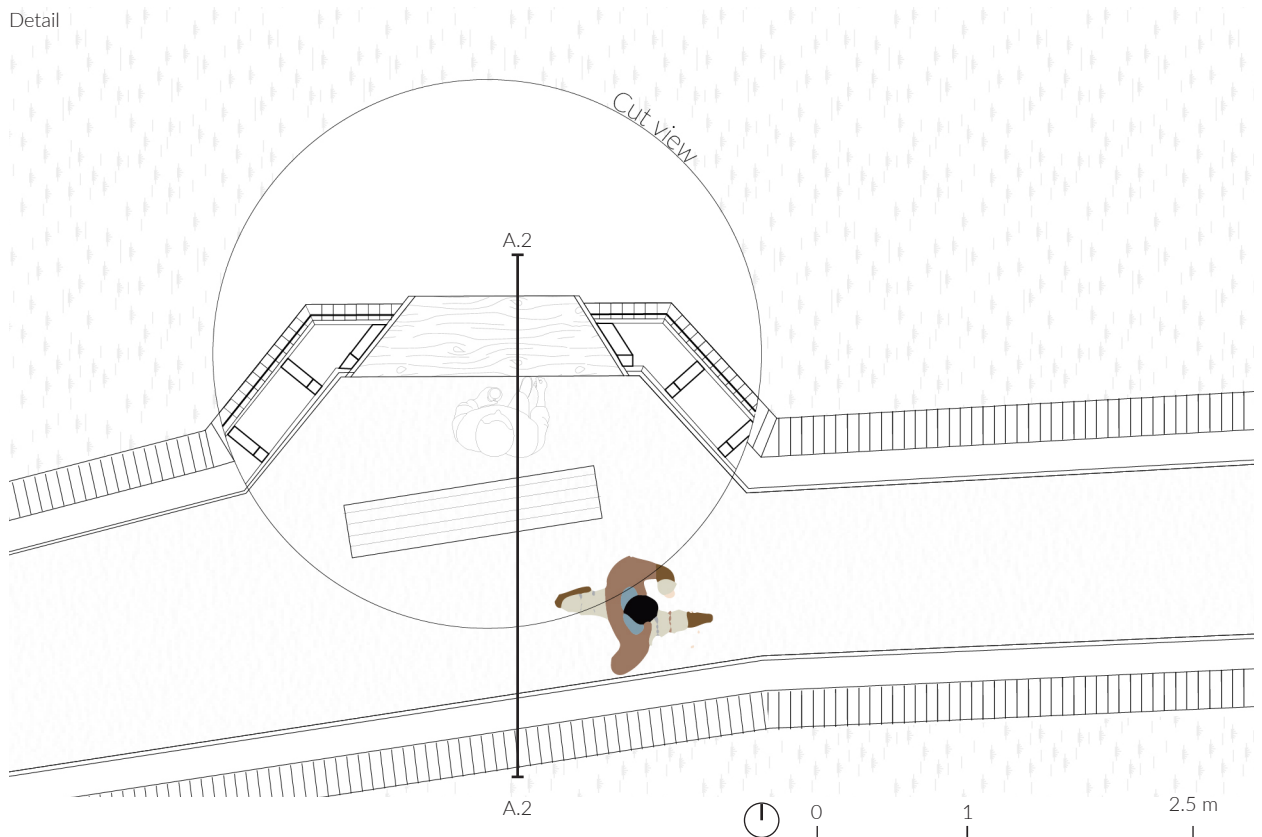
A glimpse on the navy terrain - looking up

The viewing points long the route provide a glimpse onto the landscape of the navy grounds. At these points the route becomes a bit wider, allowing for a small rest. Being 1.25 meters below the ground level of the navy terrain, the view is directed upwards, creating an almost distorted view onto the abstract landscape of green hills.

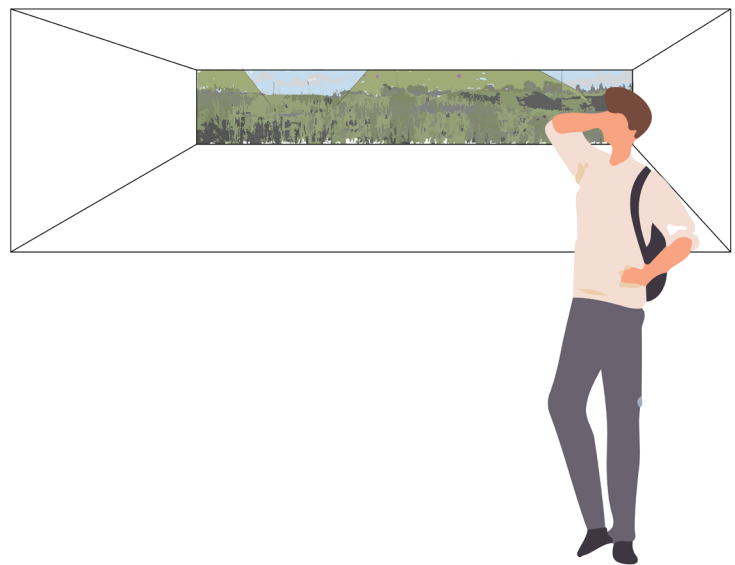
The use and experience of the closed path becomes very directed and limited in this way, allowing only for very specific views and a static experience of the landscape.

However, the views create curiosity about the navy terrain but at the same time express the lack of control, access and influence on the landscape.

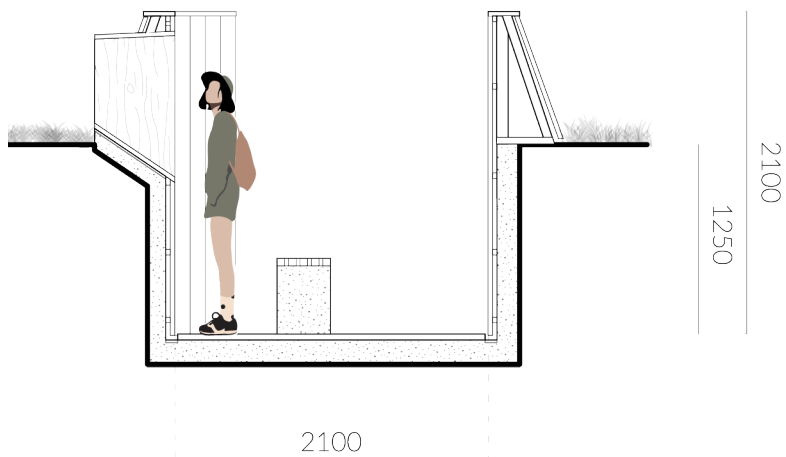
Detail



Framed view onto mysterious landscape



Section A.2

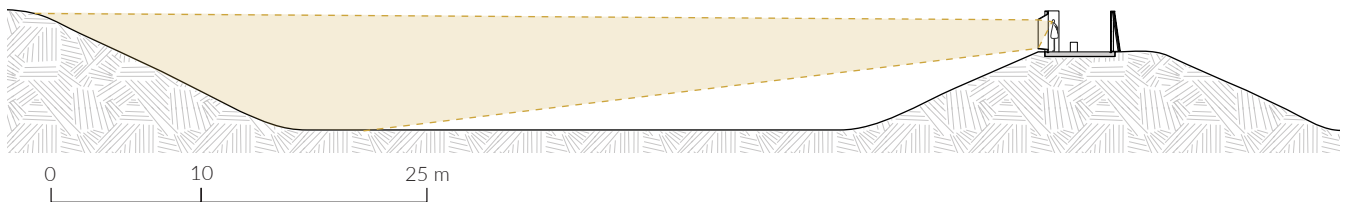


Nearing the coast

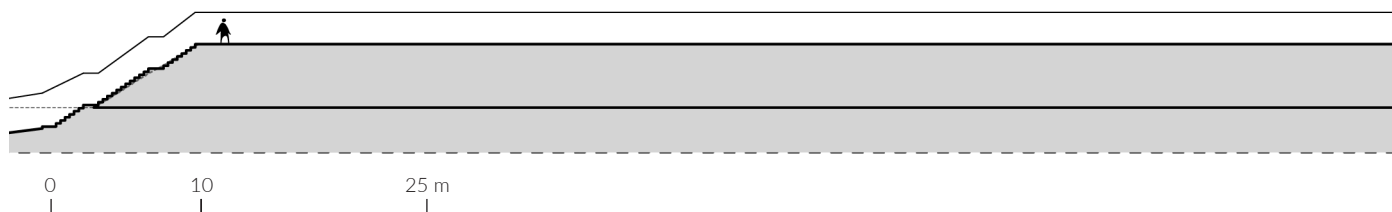
After being half underground, the path moves upwards following the topography of one of the constructed hills. At the top of the stairs you enter a slightly wider path that moves in a straight line over the hill. This allows for people to see the end of the route that opens up at the coast, this makes this part of the route feel less tense, anticipating towards the end.

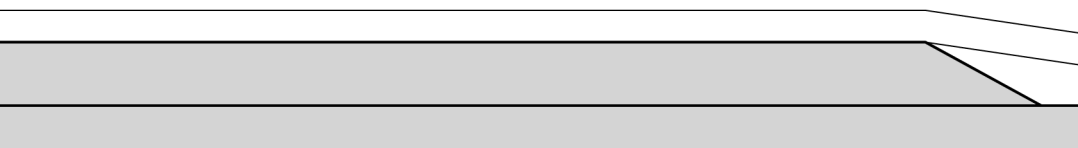
This part of the closed path has some constructed views onto the navy grounds as well. Similar to the previous viewingpoints, they align with the hills on the terrain. In this way the windows to the landscape only frame certain parts of these hills, without giving a larger overview on the terrain, the roads, and the entrances to the bunkers.

B. cross section A1



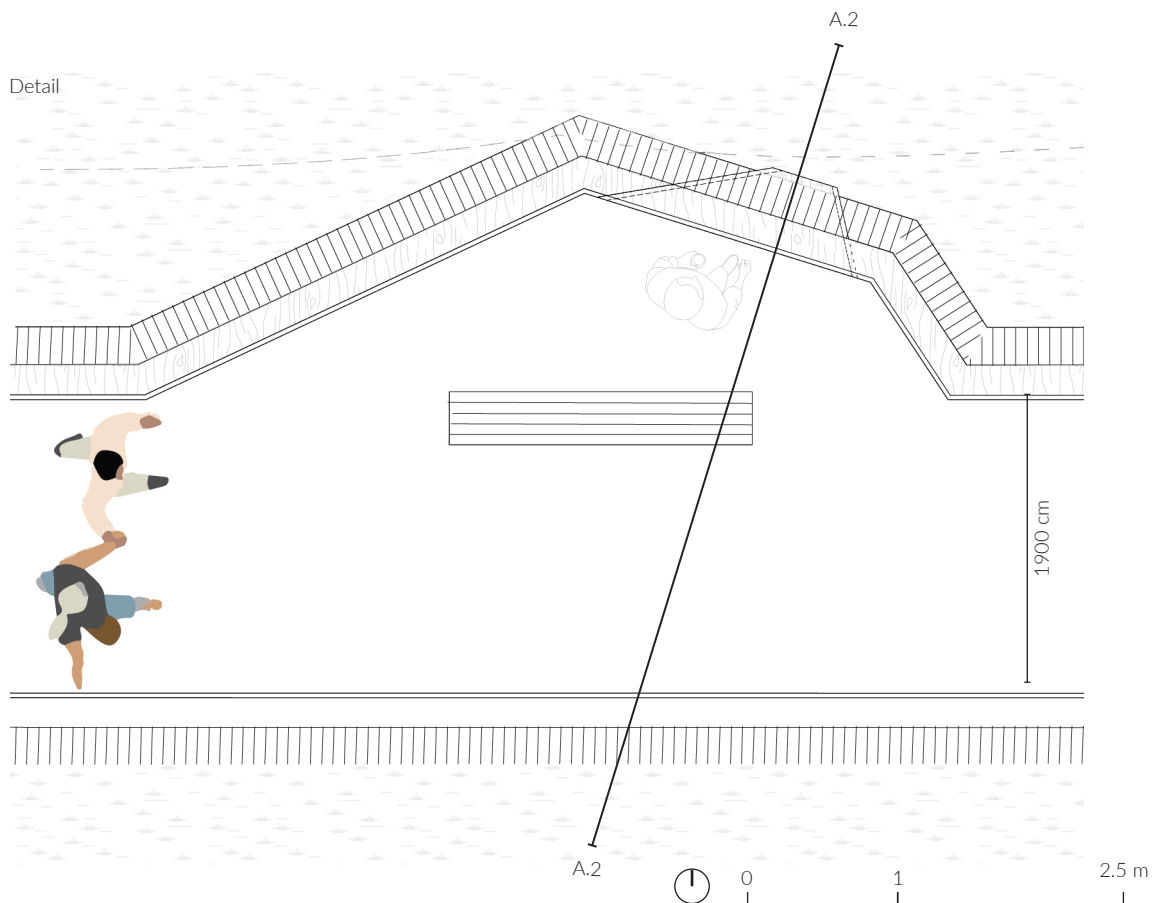
C. simplified longitudinal section BB



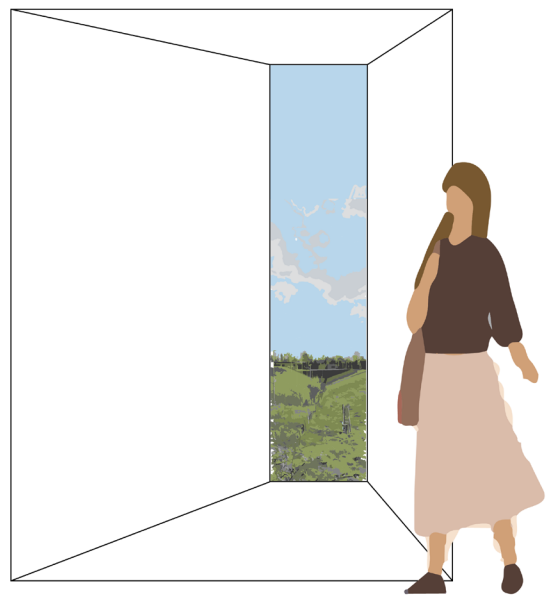


A glimpse on the navy terrain - looking down

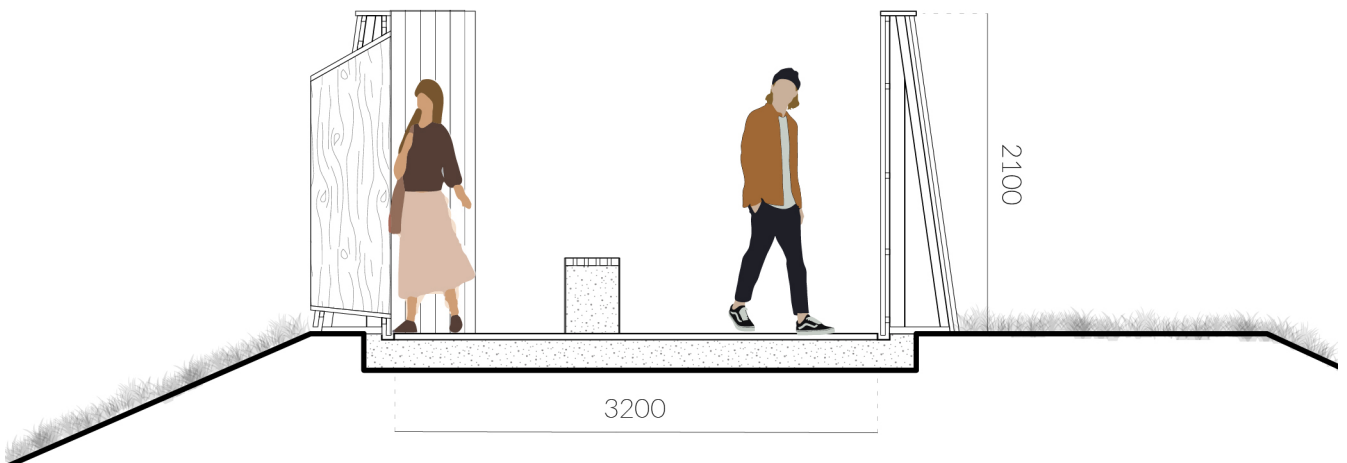
In contrast to the previous viewpoints, the visitor is now situated 4 meters above the ground level of the terrain. This creates a different perspective onto the landscape. The frames onto the landscape change with this perspective as well, now becoming vertical. This minimises the view onto the landscape, but still allows to see certain parts of the hills.



Famed view onto top of green hills



Section A.2



Opening at the sea

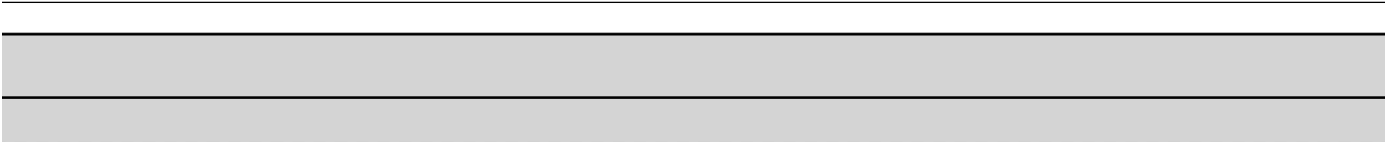
Coming closer to the end of the path, you become exited to see an opening in the horizon. At the very end of the path is a small viewing point where you can look out over the Waddensea from above. After having only limited views in this closed path, it is a delight that it opens up towards the sea when you leave the navy terrain.

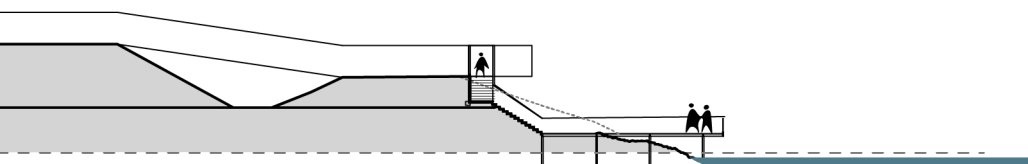
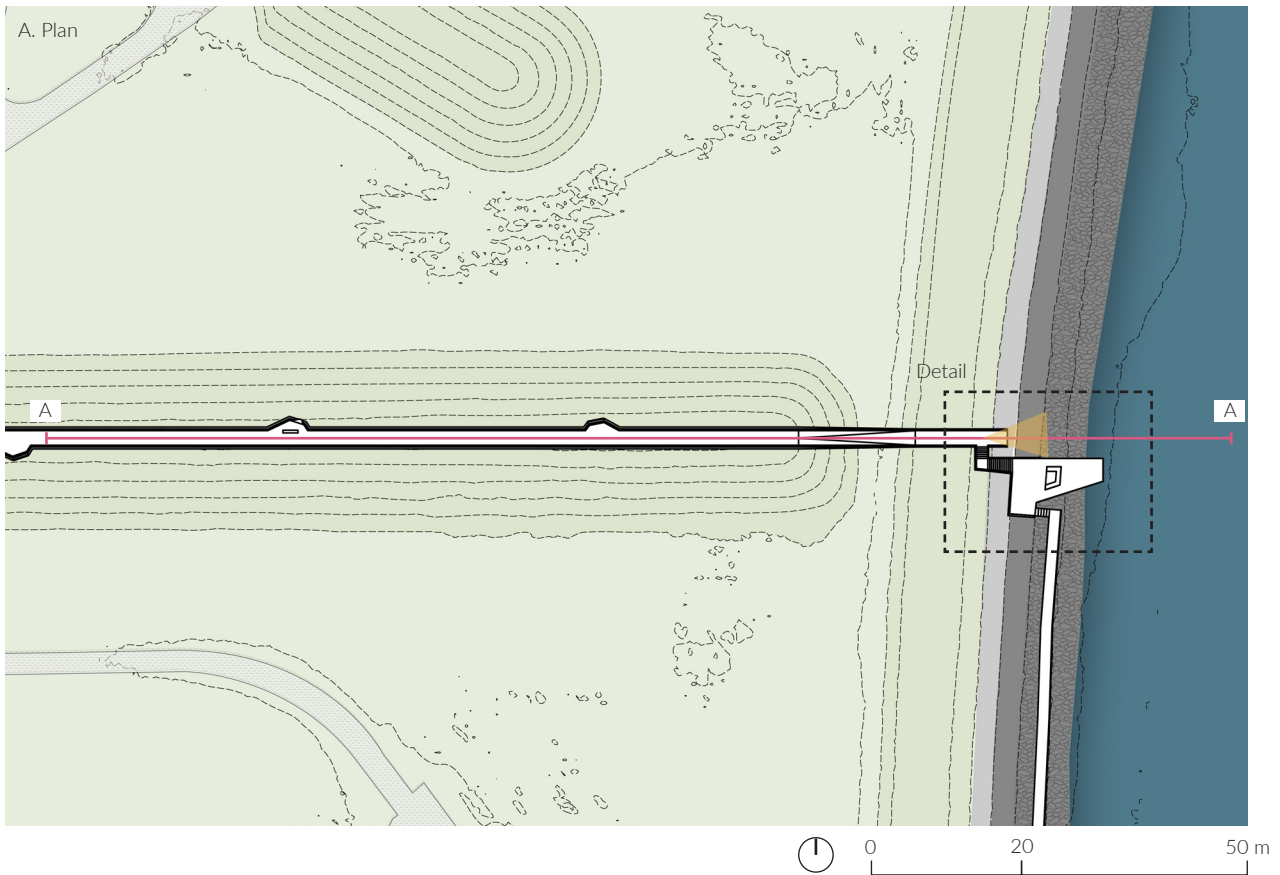
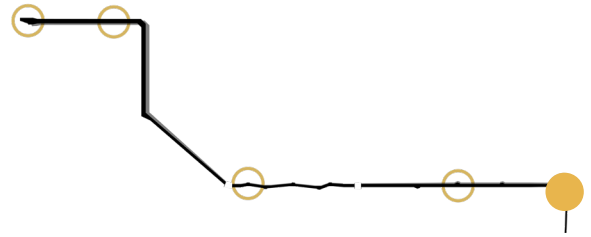
To your right you find a staircase, from wher you can enter onto a viewing platform.

C. View onto the sea from end of navy route



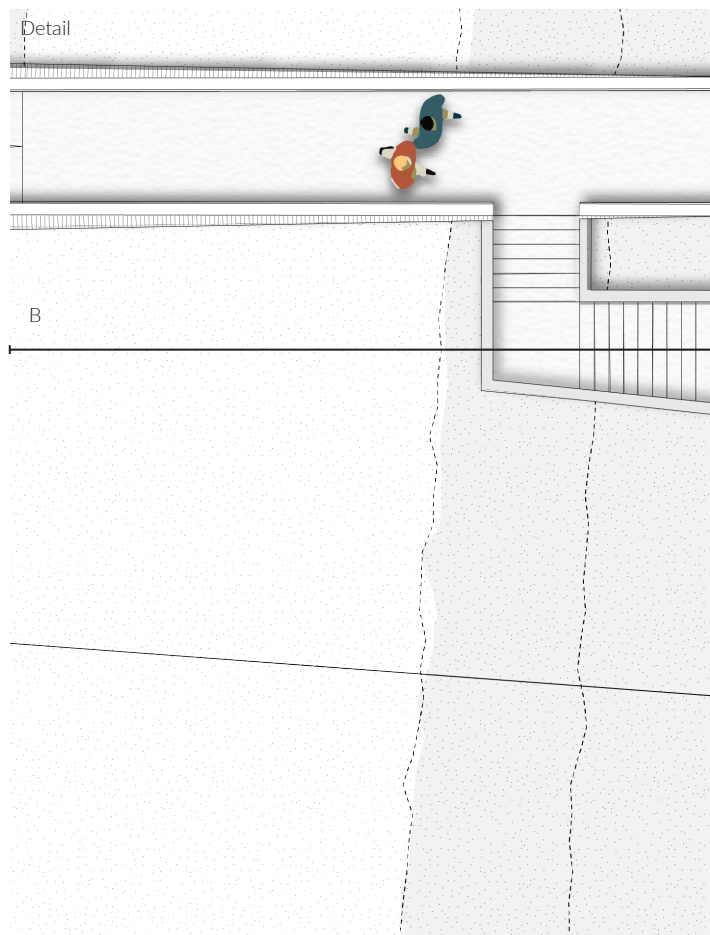
B. simplified longitudinal section AA





Viewing platform

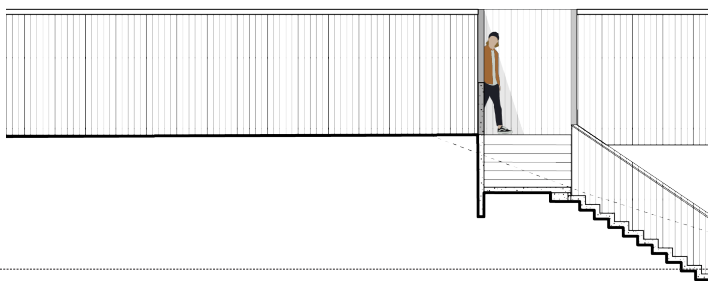
After moving down the staircase, going down the dike, you enter onto a viewing platform which is partly embedded in the dike. Here there is a place to rest and enjoy the open view onto the sea, before walking the last part of the closed path towards the commons. This last part of the closed path seems open because it visually is. However, it still only provides one direction to go into, not allowing people to move away from the path, and it still only provides options for a static experience of the landscape without much interaction.



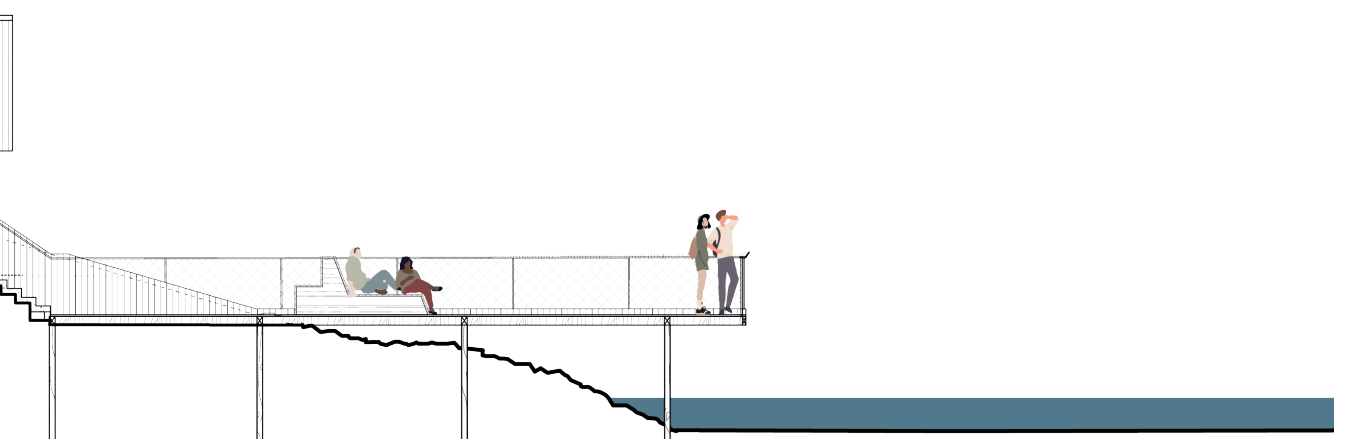
Section BB

+ 5 m NAP

+ 2 m NAP



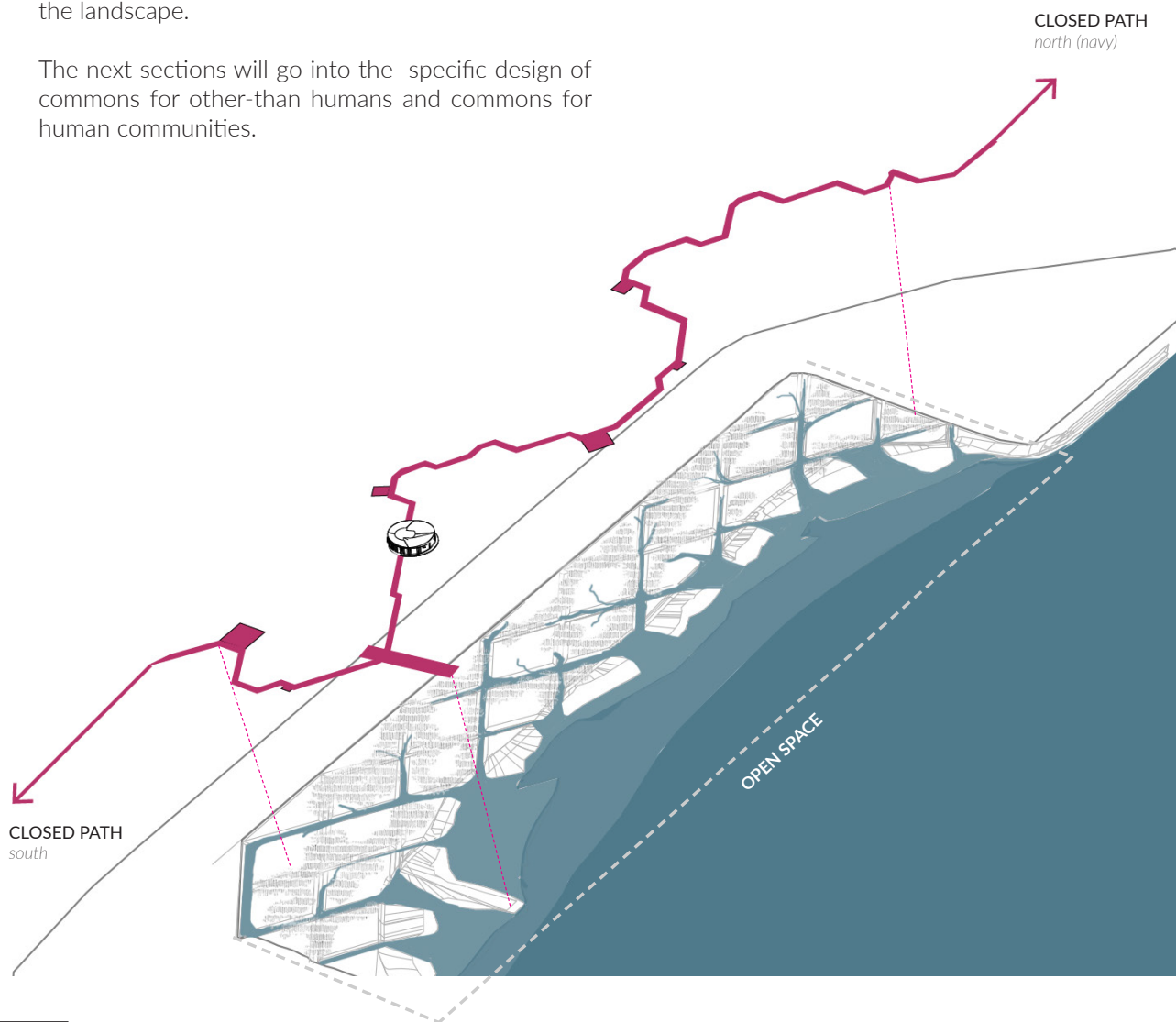
0 4 8 m



From Closed Path to Open Space

From the closed path you enter the commons. This transformed space allows for human and non-human communities to use, change and take care of the landscape. Where the closed path ends, the route opens up to allow experience of, and interaction with the landscape.

The next sections will go into the specific design of commons for other-than humans and commons for human communities.





4.2.2 Commons for Non-Humans

Looking at the current state of the area, the value for other-than-humans from the Wadden sea ecosystem that could possibly inhabit this edge landscape is quite low. This is caused by several factors:

Firstly, there is not enough salt influence on the soil to be suitable for flora species that are typical for coastal areas of the Wadden sea. Therefore, common species that are better adapted to these conditions take over the area. This is caused mostly by the elevation level and high edge of the terrain, which is too high for the high tide to reach.

Secondly, because of the lack of marsh vegetation, there is no suitable habitat for insects, and no food to find for larger, plant eating birds. Furthermore, the lack of vegetation causes the area to be very open, lacking sheltering or nesting places for birds and smaller animals.

Another big factor in the lack of value for non-human communities is the asphalt road in the area, which allows for even less flora species to use this edge landscape.

In contrast with the higher area, the lower area is already showing use and appropriation of the landscape by non-humans. This part of the edge landscape gets flooded at every tide, which makes it suitable only for few specialised species. These low-salt marsh precies prevent erosion of the land and form habitats for species of fish. The barren parts of the low-salt marsh are important places for birds to forage for food. Here they can pick out insects and shelfish from the muddy soil.

Figure 43 (left): Areal view of het Kuitje ("Luchtfoto 2022 Ortho 8cm RGB," n.d.) Edited by author

Figure 44 (right): Photographs of current situation of 't Kuitje

GOALS

In order to make the land-water edge act as a commons for non-humans, the landscape needs to fulfill the role of being an important resource that can be appropriated, adapted and changed through the processes by non-human communities. These processes accordingly should support the landscape itself.

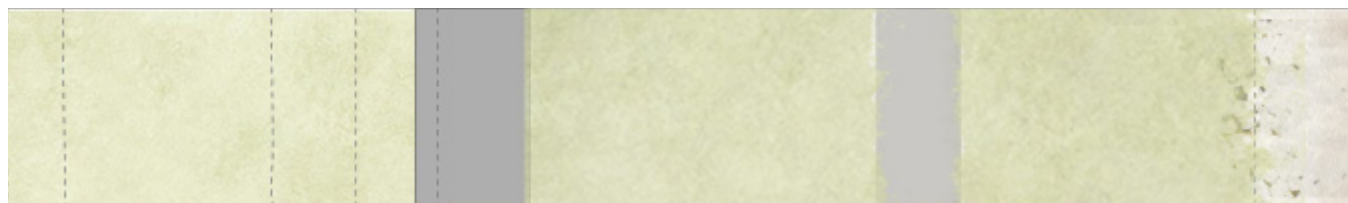
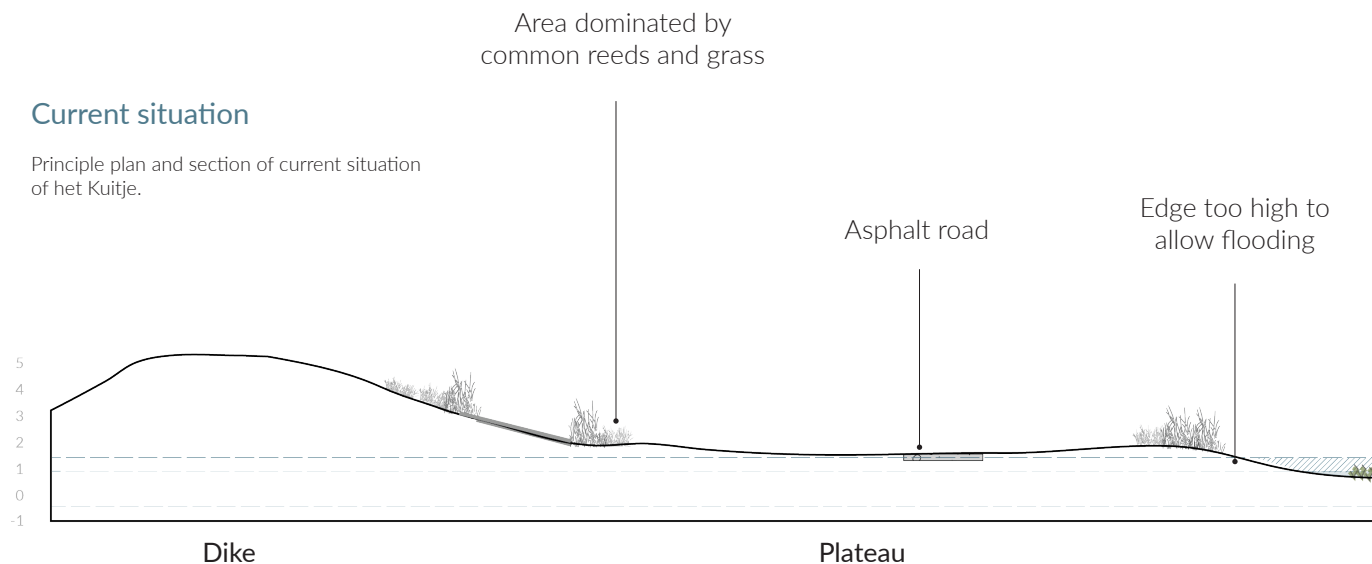
Through landscape architectural design suitable conditions will be created for local Wadden sea coast flora and fauna to inhabit the landscape.





Current situation

Principle plan and section of current situation of het Kuitje.



Due to the lack of salt water influence on this higher terrain the dominant plant species here are common reeds and grasses. Salt loving plants that are characteristic for the coastal area of the waddensea get no chance to grow since the area is not flooded on a regular basis. This results in an area with little relation to the waddensea, with limited value for local fauna and low biodiversity.



common reed, asphalt



Low marsh - pioneer zone
floods almost every high water

Mudflat
Floods every high water

Waddensea



glasswort, common cordgrass, animal traces

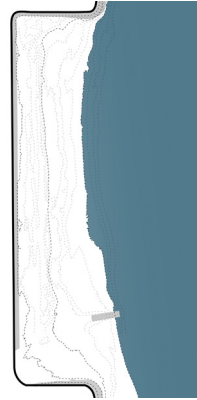
On the lower part of this area, a small strip of pioneer vegetation has emerged, with salt loving species such as annual sea-blite, common glasswort and saltwort. Within this lower marsh zone traces of shellfish can be found. The rest of the lower marsh, also called mudflat, floods with every high tide, therefore little to no vegetation can grow. However, this is an interesting area for wader birds to forage for shellfish and insects.

Allowing interaction between land and sea

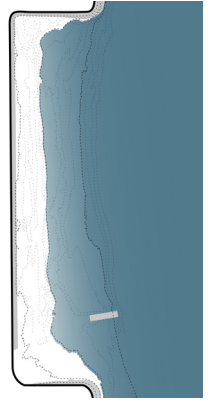
Current situation

Currently the edge and plateau are too high for the tide to reach and influence the land. In order to improve its value for non-human communities the water will be let in to create conditions suitable for salt marsh flora and fauna to appropriate and inhabit the landscape.

waterlevel +25 cm



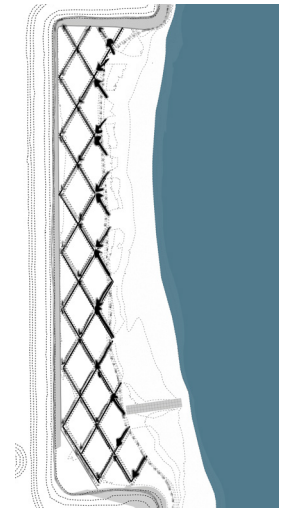
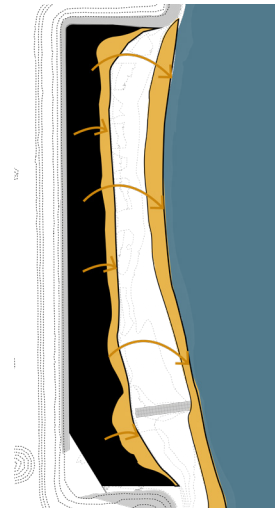
+75 cm



Soil distribution and creek structure

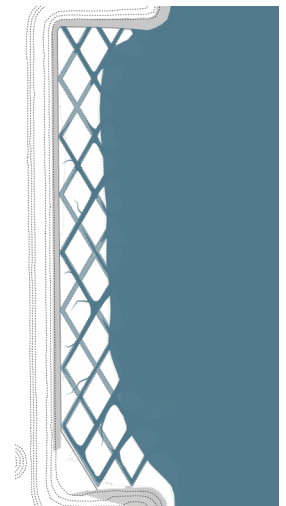
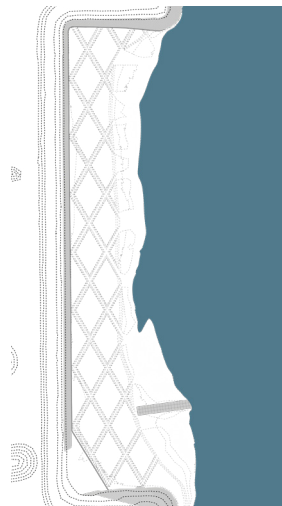
General conditions needed for a salt marsh to develop include sufficient salinity of the soil, and regular (at least monthly) flooding with sea water.

In order to allow monthly flooding at springtide the soil on the terrain is redistributed, bringing the height of the plateau from 2m to 1.2 m. The soil will be used to enlarge both the new marsh and mudflat area. Thereafter, a grid of shallow creeks is dug, to let water enter the area with the daily tide.



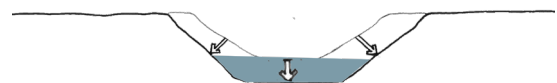
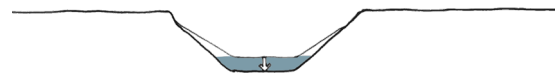
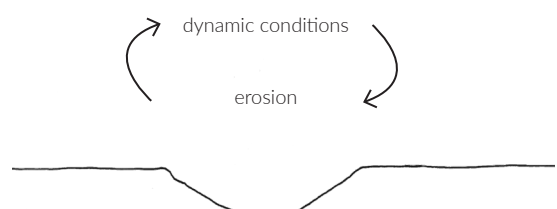
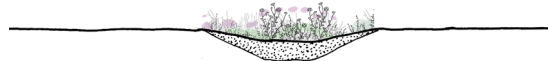
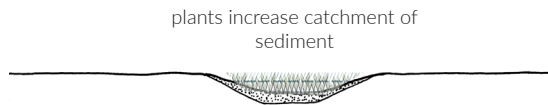
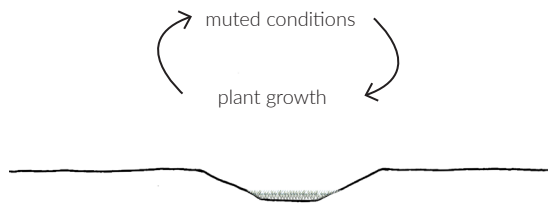
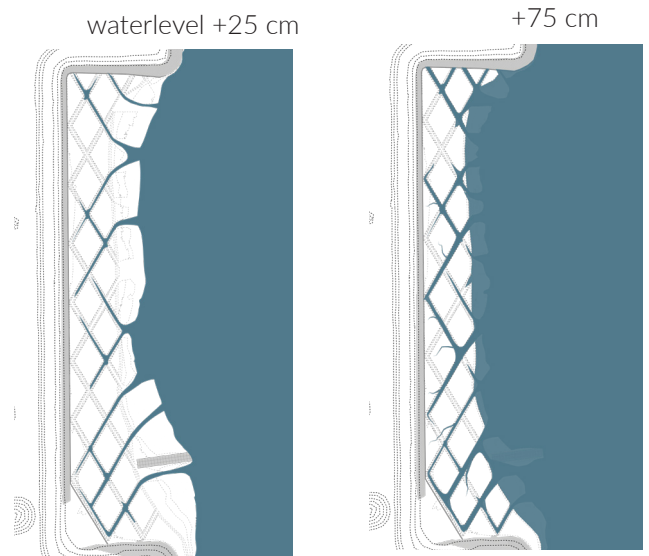
First waterflow within structure

With the creeks dug at around +50cm they will fill up every high tide (twice a day).



Creeks develop over time

Over time a more robust system of creeks will develop. Some existing creeks will erode by the forces of the water and become deeper, while others will become more shallow due to sedimentation processes and plant growth.



Guiding Structures

Case study: Renaturation of the River Aire

Location: Geneva, Switzerland

Date: 2002- ongoing

Office: Superpositions

The project 'renaturation of the river Aire' is a long running project in Geneva. The state of Geneva originally wanted to restore the river Aire to its original state, by destroying the existing canal. Studio Superpositions however proposed to combine a redesign of the canal with a large dedicated space for the river.

For the renaturation of the river itself, a large structure within the sand was created. The river flowing through this area encounters the sand structure and through its flow rearranges the soil and adapts and changes the original structure. After even one year, the grid structure had already been significantly modified, juxtaposing the cultural grid and the forces of nature.

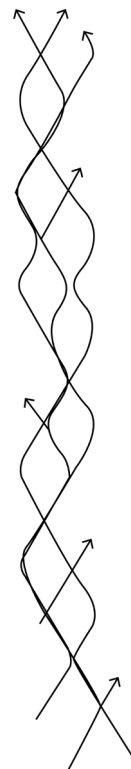
(Renaturation of the River Aire, Geneva, n.d.)

Personal Adaptation

I took inspiration from this idea of creating guides for nature to appropriate, change and create space. In the experimentation with different shapes and sizes of the grid, similar to the river project I found the diamond shape most suitable for allowing different varieties of meanders of the creeks as well as permitting proper infiltration of the area by sea water.

The size and depth of the structure has been adapted to size of the area, the height of the tides and the ratio of creeks to land.

River Aire



Commons in the land-water edge

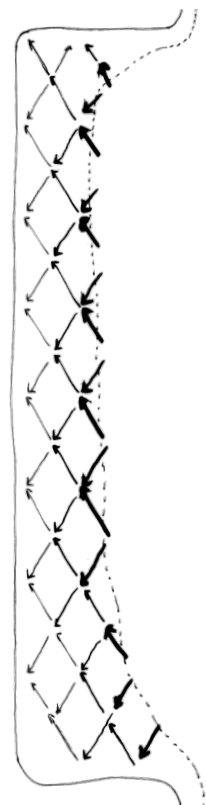


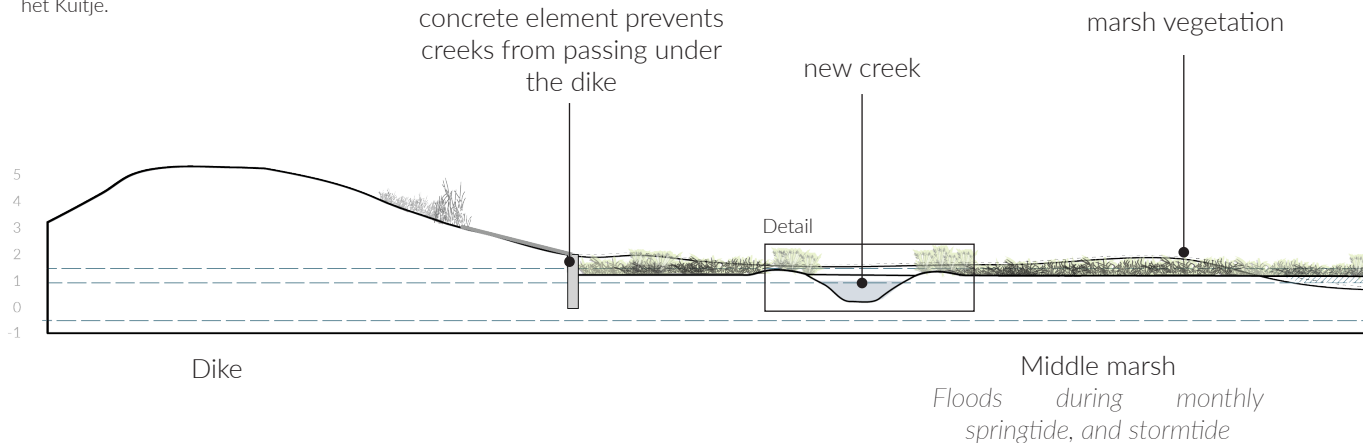


Figure 45 (left): Waterflow through the the structure of river Aire and waterflow through proposed structure in the commons in the land-water edge.

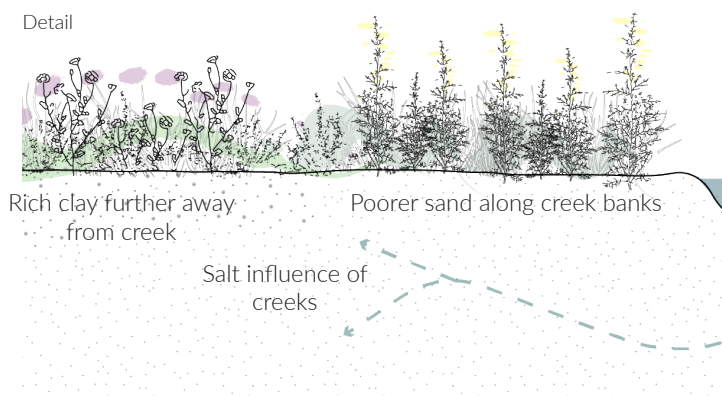
Figure 46 (right): Over the course of time, the original structure is overtaken and adapted by the river, showing the contrast between before and after, culture and nature. Image source: (Renaturation of the River Aire, Geneva, n.d.)

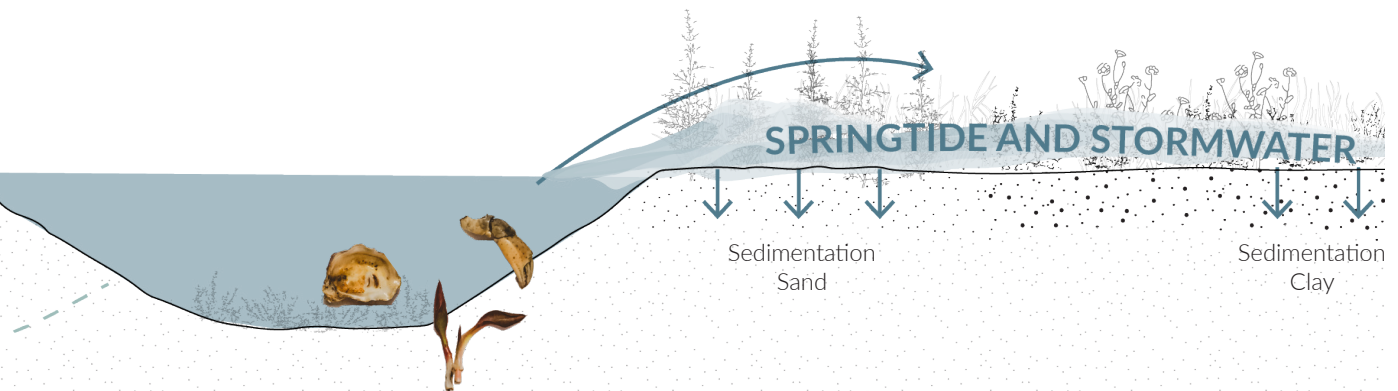
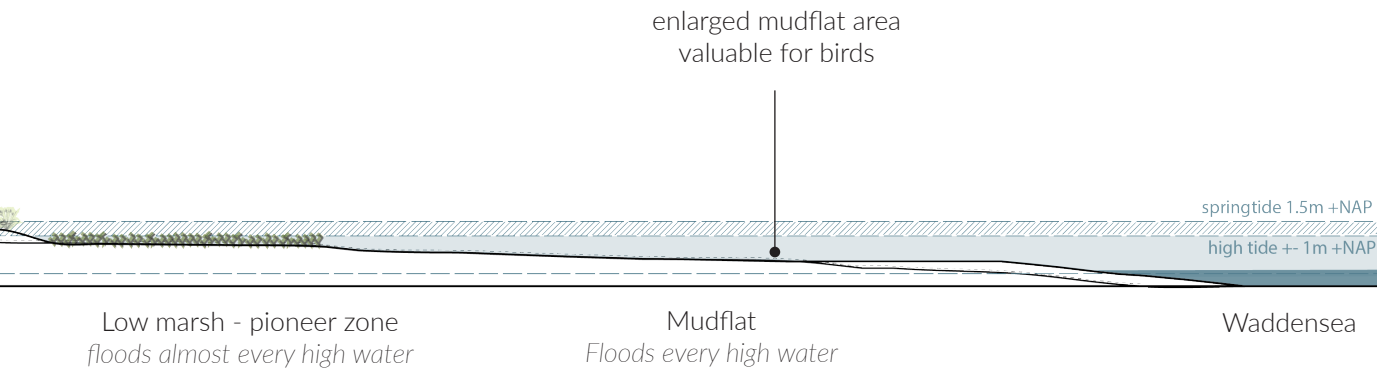
2-5 Years After Intervention

Principle plan and section of future situation of het Kuitje.



With the guidance of the grid structure, in the course of a few years the previously unsuitable area, will develop into a salt marsh with many plant and animal communities. Through natural processes such as erosion and sedimentation, a variety of microconditions will establish. The different soil composure and elevation will allow different non-humans to inhabit the landscape and alter natural processes that support the development of the landscape.





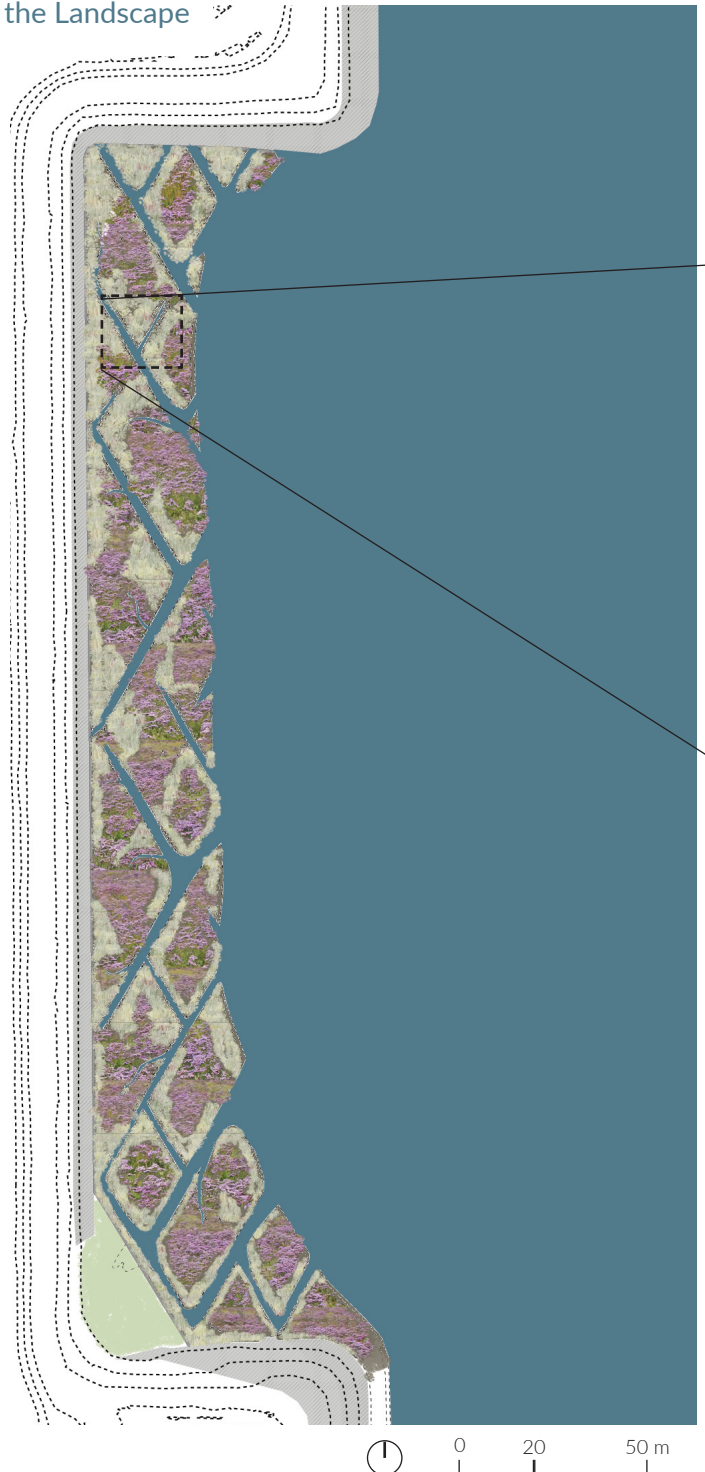
Flora and Fauna Respond to, and Influence the Landscape

The specific natural circumstances created by the waterflow evoke a response from non-human communities: now the conditions are suitable for them, making this edge landscape a valuable resource.

Plant communities will create patterns in the landscape with species like sea wormwood using higher, more sandy areas, while species such as sea lavender will find their place in the lower clayish parts of the marsh.

The combination of water conditions and flora will attract fauna to inhabit the commons in the landscape as well. Many migrating birds will find a resting or nesting spot here, and insects will be attracted by the wet vegetated marsh, inviting smaller birds and other animals as well.

These animal and plant species all fulfil their role within the larger non-human community in this land-water edge.



Marsh Arrowgrass

Tripsolium pannonicum

Settles on wet and nutrient-rich (clayish) areas

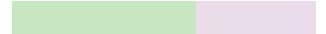


Marsh Arrowgrass

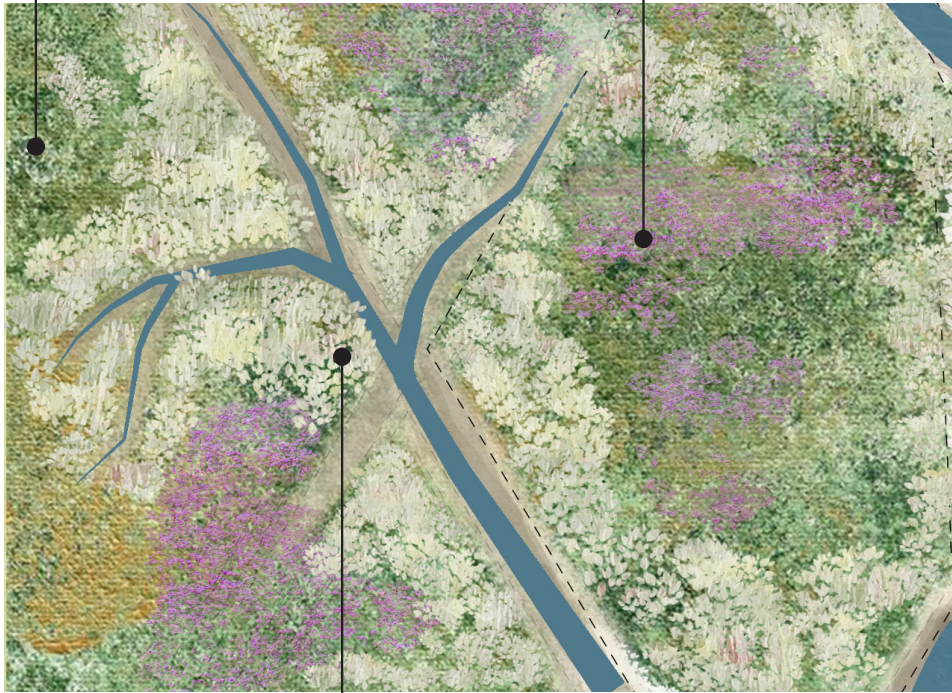
Common sea lavender

Limonium vulgare

Settles on lower lying patches away from the creeks where there generally is more clay sedimentation



Sea Lavender



Sea Wormwood

Artemisia maritima

Sea Purslane

Atriplex portulacoides

Inhabit higher sandy places in salt marsh areas such as the sandy banks of marsh creeks. The roots of these species strengthen the creek banks, aiding in the settling of the creeks in the landscape.



Sea Wormwood



Sea Purslane

4.2.3 Commons for Humans

Looking back at the *Landscape commons* framework introduced in chapter two, the value of landscape for humans consists of two components:

Firstly, the use value, being the relation of importance with the landscape obtained through use of the landscape, by for example recreational activities. By allowing use of the landscape, it can function as a resource for human users.

Secondly, the existence value, being the value derived from the personal experience of the landscape which results in a unique reflective value of for example aesthetic appreciation, or identity an symbolic relations.

Currently, the area is mostly empty space. This technically allows people to use the space however they want. However, in reality it is an unused area that can be explored for while, but is not interesting or comfortable to stay for a longer period of time. For this reason, the few people that come to enjoy the view onto the sea stay seated in their cars.

This makes the use-value of the landscape very low, causing it not to have meaning for people. Furthermore, it limits the existence value of the landscape since the conditions are not suitable for people to enjoy the experience of the landscape. Lastly, the lack of any signals of human care make that this land-water edge feels like a neglected landscape, which reduces the perceived quality of it.

GOALS

In order to transform the land-water edge into a commons for humans, a new relationship of care and importance needs to be established.

Through landscape architectural design, the landscape will be unlocked as a valuable resource. By allowing and enhancing the experience of specific landscape characteristics and qualities and creating recognisable structures for humans to make use of and appropriate, suitable conditions will be created for humans to care for and use the landscape as a commons.

Figure 47: Photographs of current minimal and limited use of empty space.



Access and Experience

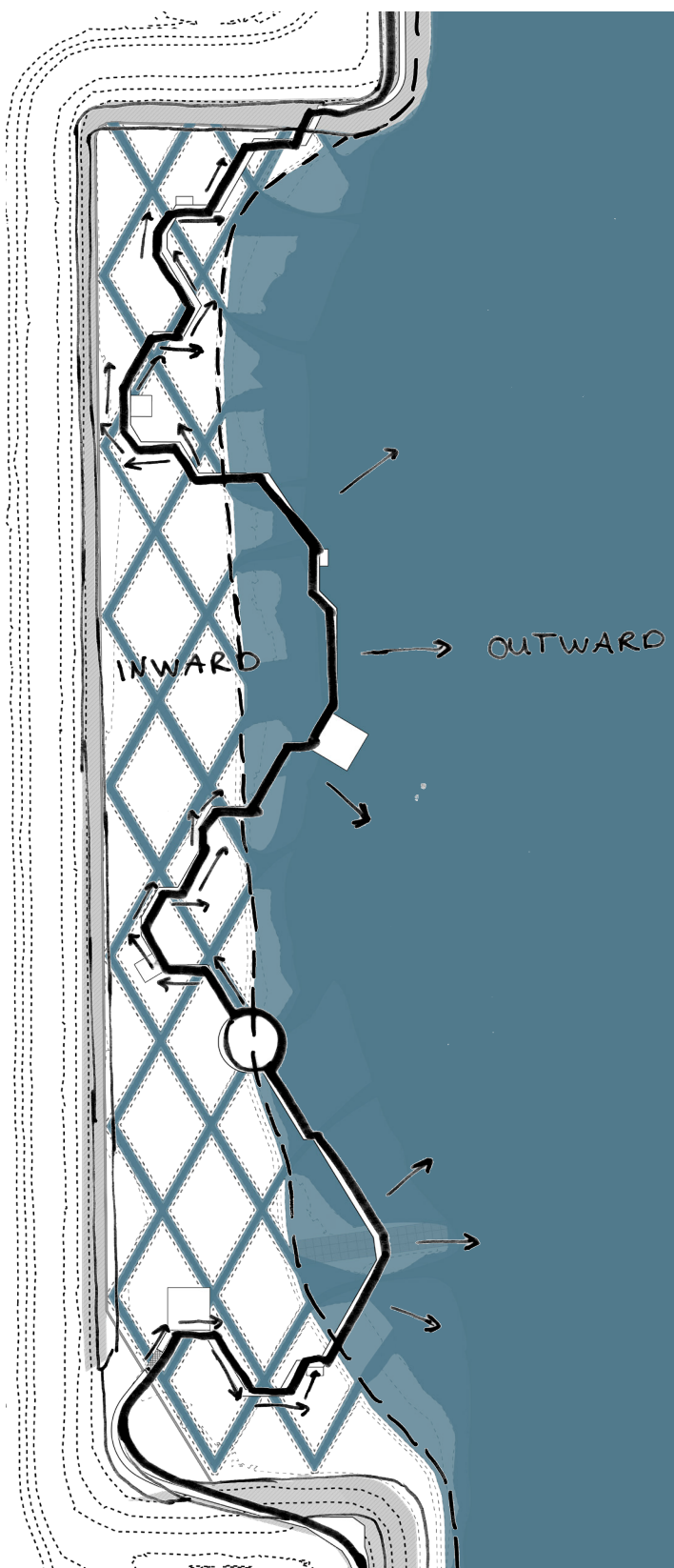
To allow access onto the developing marsh a boardwalk over the landscape is constructed. This boardwalk forms a continuous route together with the closed path, but in this open space has a very different character and design resulting in a totally different experience of the area.

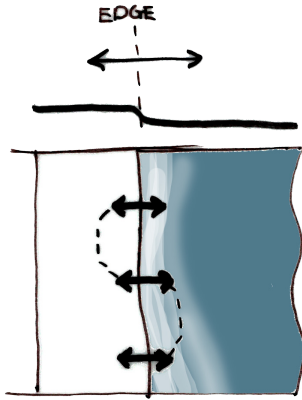
The course of the path moves from side to side, allowing the experience of the distinct lower and middle salt marsh.

The language of the path mimics the underlying water structure, but while the water structure changes, the path remains the same, becoming a remnant of the initial artificial creek structure.

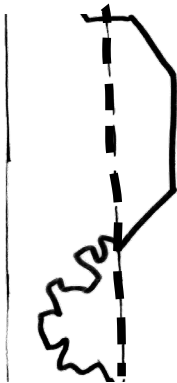
Furthermore, the path reacts to the character of the different marshes: in the high marsh on the left, the path is more angular and consists of shorter stretches, creating an inward focus on the dynamic and vibrant quality of the marsh. On the low marsh on the right, the boardwalk consists of longer more straight parts, allowing to focus outward onto the open quality of the lower marsh and mudflat and the view onto the empty horizon of the Wadden sea.

To protect the value of the commons for other-than-humans, the boardwalk floats over the landscape. Furthermore, at the 'entrances' to the commons the path runs lower through the creek, making the area inaccessible for humans at high tide. At this time the mudflats have disappeared under water, causing wading birds to use the commons to rest.

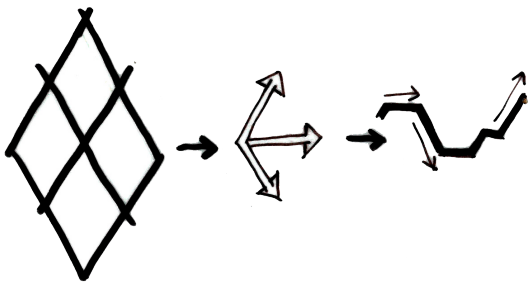




Moving over the edge experiencing qualities of middle and low salt marsh



The path responds to different qualities
inward vs. outward

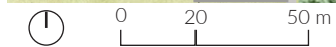


The layout of the path answers to the
underlying grid



The path disappears in the creek when the tide is at its highest, making the commons a resting place for bird.

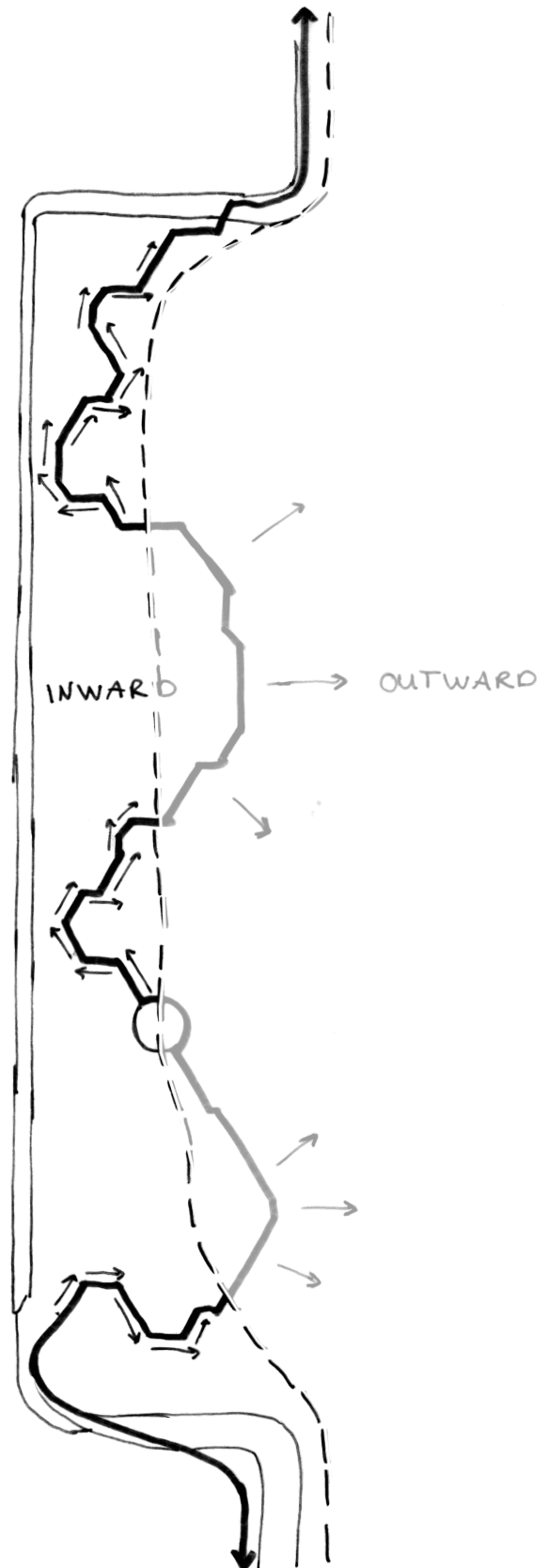
Meandering over the Land-Water Edge

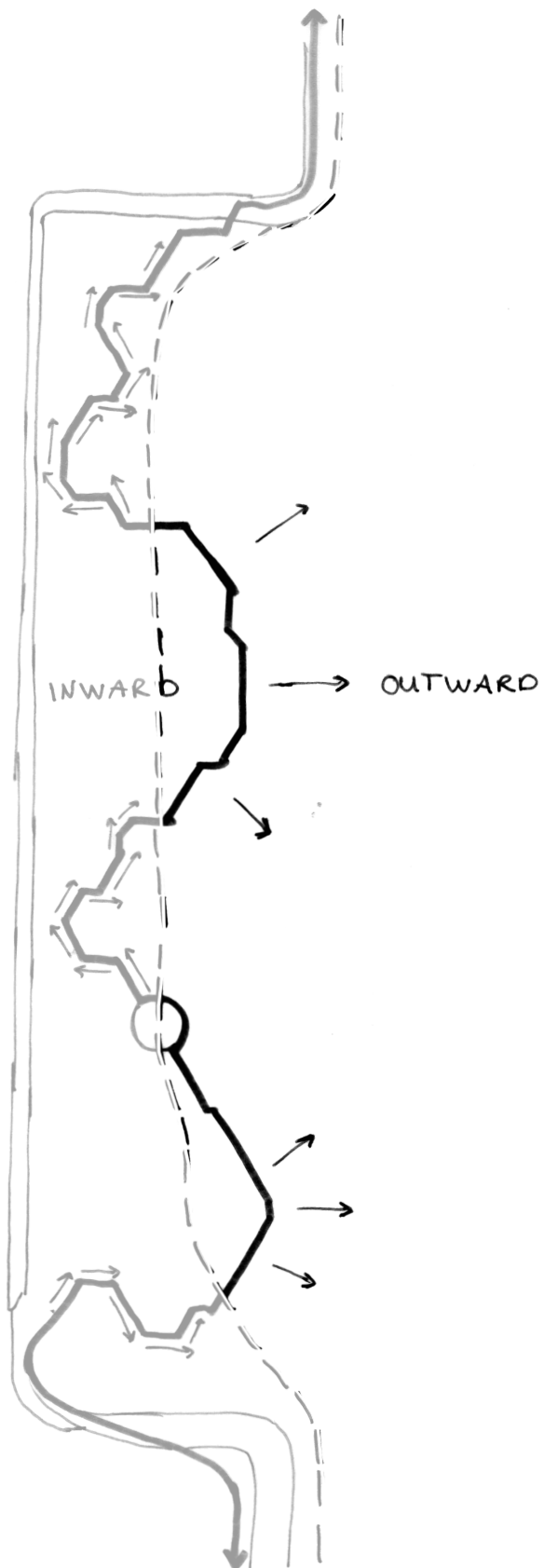




Experiencing the vibrant quality of the middle marsh



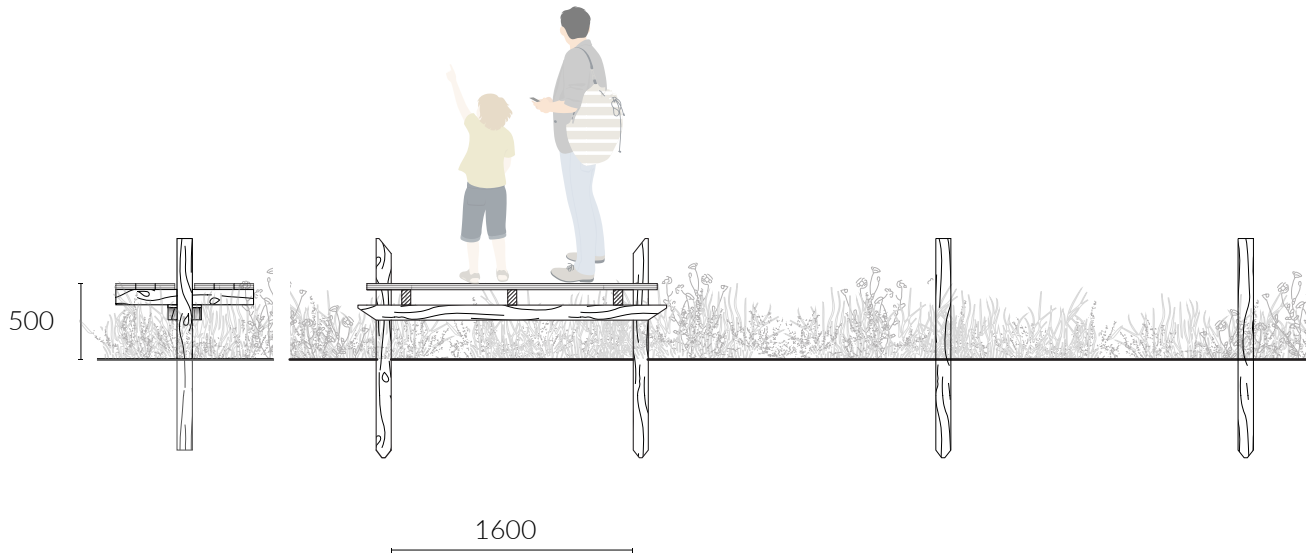




Experiencing the open mudflat and wadden sea

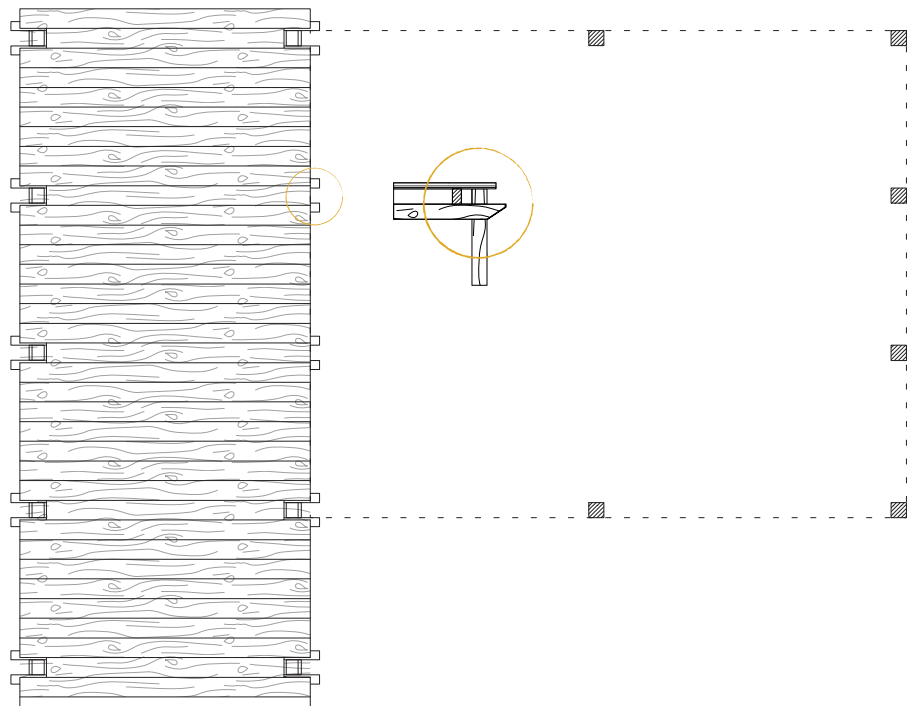


Inviting for Interaction



The boardwalk in the open space expresses openness and incompleteness through its open wooden structure. The beams and poles are extended beyond the layer of planks, giving it an unpolished and unfinished character.

Where the spaces for appropriation are situated, the extended poles along one side of the path disappear, opening towards a set of poles that form a frame in the landscape adjacent to the path. The frames are an invitation for humans to react to the landscape, respond to and make use of its qualities in a way that suits their wants and needs.



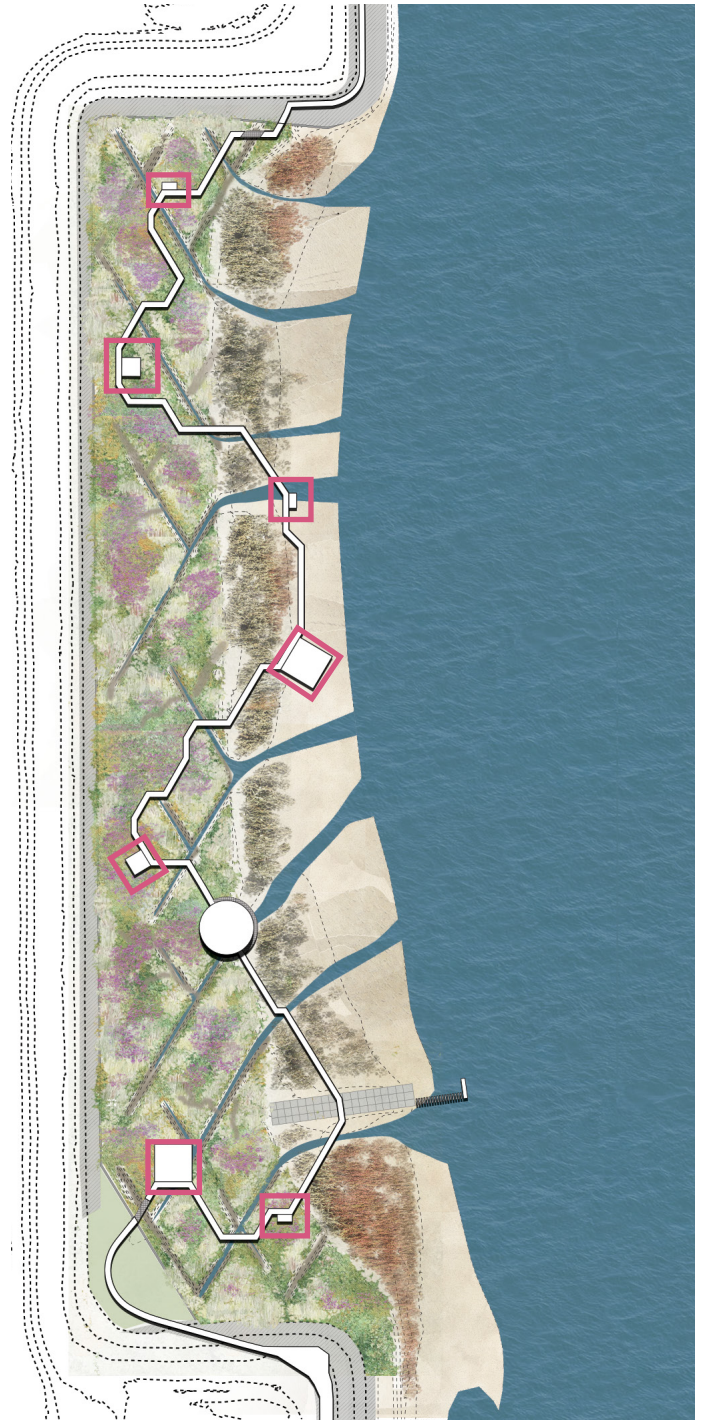
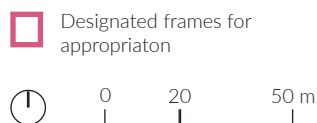
Frames for Appropriation

Common spaces for the human community

For the landscape to operate as a valuable resource for human- users, an extra layer to the design of the path is added: the enabling of different uses through group appropriation.

At specific points along the path, the path opens up towards the landscape, encountering a frame of poles marking a space to use and appropriate by humans.

These spaces invite the human community to engage and interact with the landscape. Within these spaces people are allowed to democratically decide on the program and use of the framed space. In this way they can react to the specific circumstances and landscape qualities present in the framed area. Moreover, it creates flexibility in the program of the landscape, which can be adapted according to the wants and needs of the human community. Hence within these spaces people can draw upon, and create various resources in the landscape such as recreation, relaxation, health, education etc., making it a flexible common resource for the human community.



Collaboration and Activity

The creation of program in these spaces calls for engagement with each other and with the landscape. In order to construct these spaces, the human community needs to engage in collaborative action to democratically decide on the program and join forces to realise the built space. These practices of forming shared goals and creating something together form a situation from which new social relations can develop.

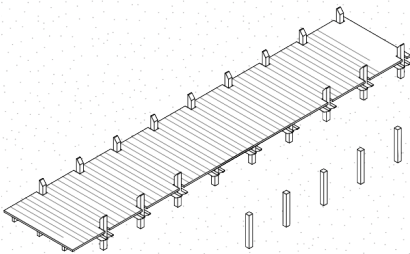
For the communal appropriation of the landscape the community will need to debate on the program of the landscape spaces, where they will discover and discuss landscape qualities and characteristics to respond to and make use of.

The appropriation, engagement and use will create new personal relations of importance and a sense of belonging in the landscape, which will consequently evoke a sense of care and responsibility for the landscape.

In this example on the right, the community decides to make a bird observator in one of the frames in order to enjoy the landscape and observe bird life, thus the space becoming a resource specifically for that. However, in these spaces they can decide to do whatever they want, and can change it over time, adapting it to their needs and creating a common space together.

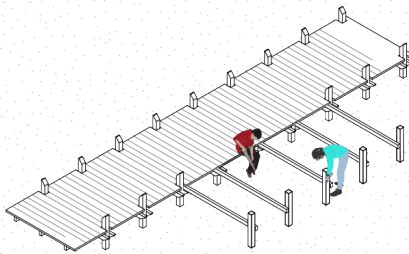
1.

Designated frame for appropriation



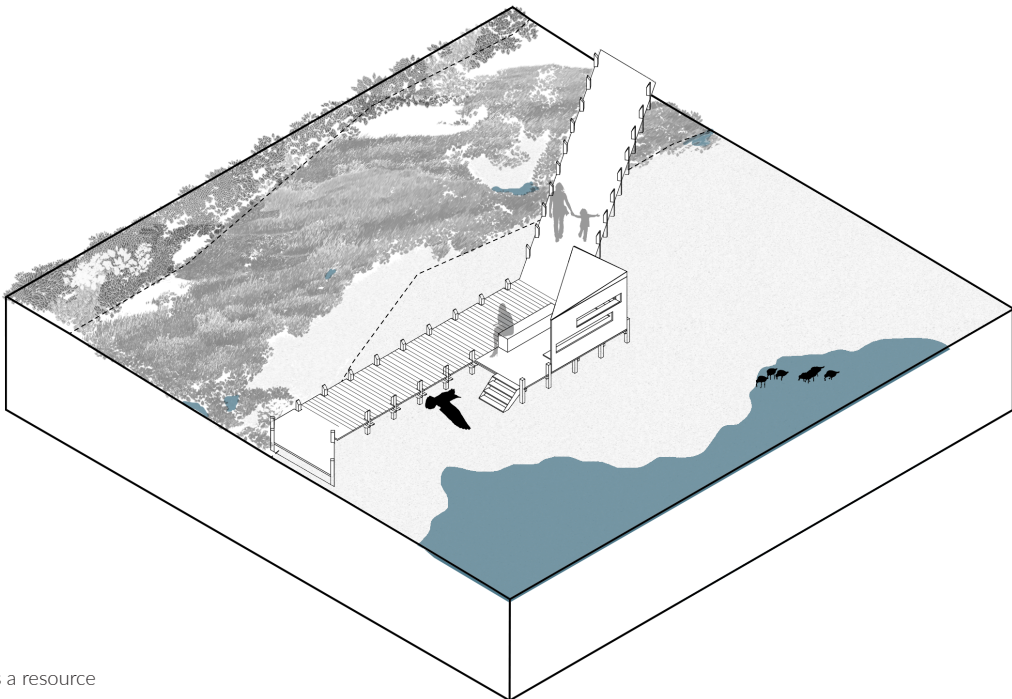
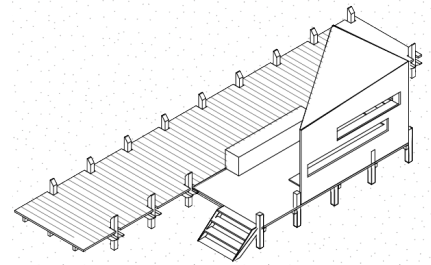
2.

Collaboration process of construction



3.

Constructed space enabling use of the landscape



4.

Landscape as a resource

Community Pavilion

In order to sustain the commoning processes of joint decision making and collaboration on the programming of and care for the landscape, one of the spaces attached to the path will be treated differently, here a community pavilion will be constructed. The pavilion provides a basic but flexible space, with facilities such as a small kitchen, bathroom and space for tools and materials, which support different possible activities such as meetings, workshops, and physical construction and care in the landscape.

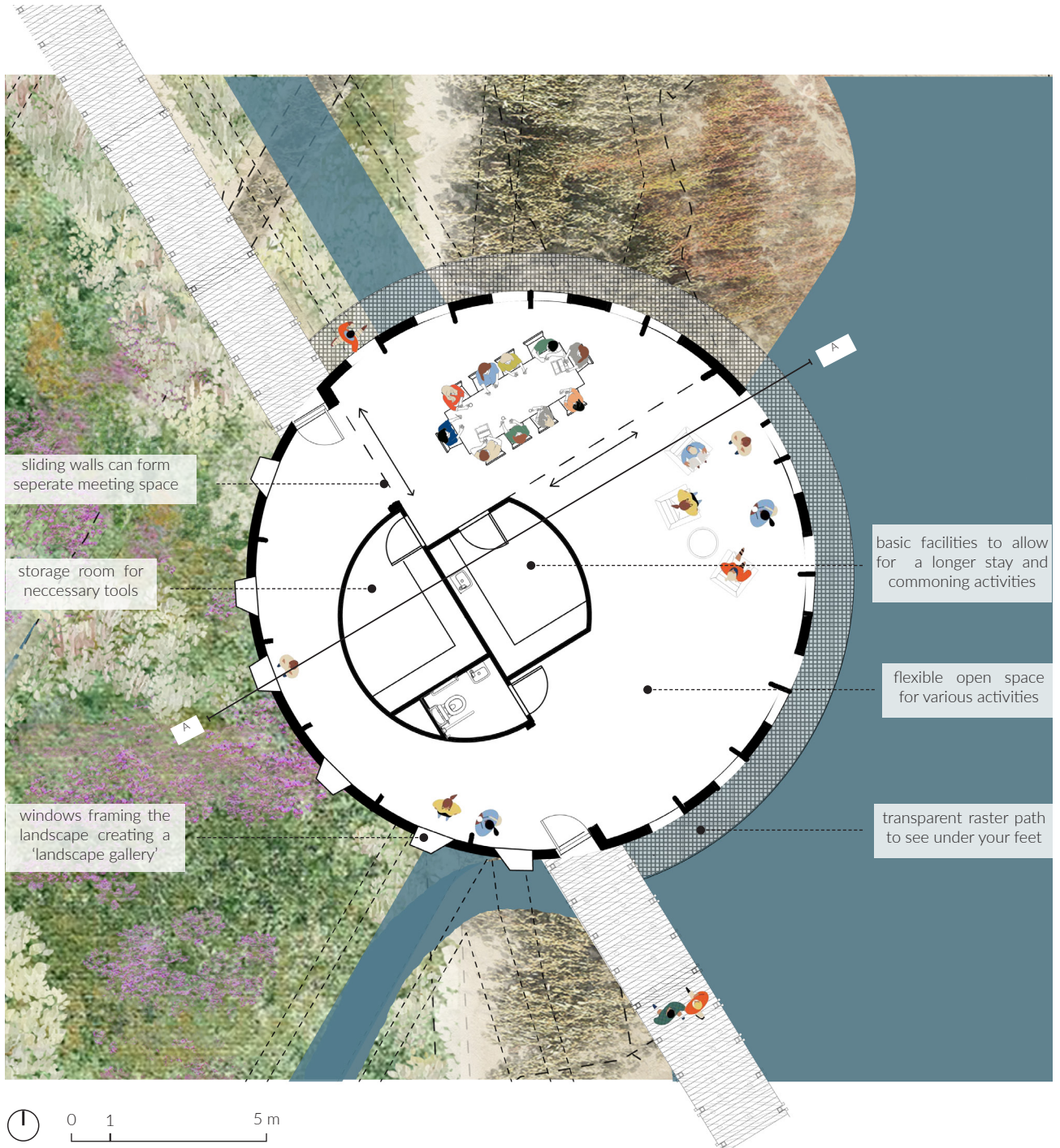
The pavilion does not only fulfil a practical function, but also responds to the landscape. It is situated right on the edge between the middle and lower marsh, making the pavilion an observatory to experience these different landscape types. It allows a wide view towards the sea, experiencing its openness, and creates framed views towards the higher marsh, functioning as a gallery of the landscape.

Framed view in landscape gallery



Figure 48: Reference for wooden structure; Hans Christian Andersen Museum (Abdel, 2022): the wooden structure consists of an inner and outer circle of wooden columns and beams with the beams showing in the ceiling and connecting to the window frames creating a warm but light atmosphere.



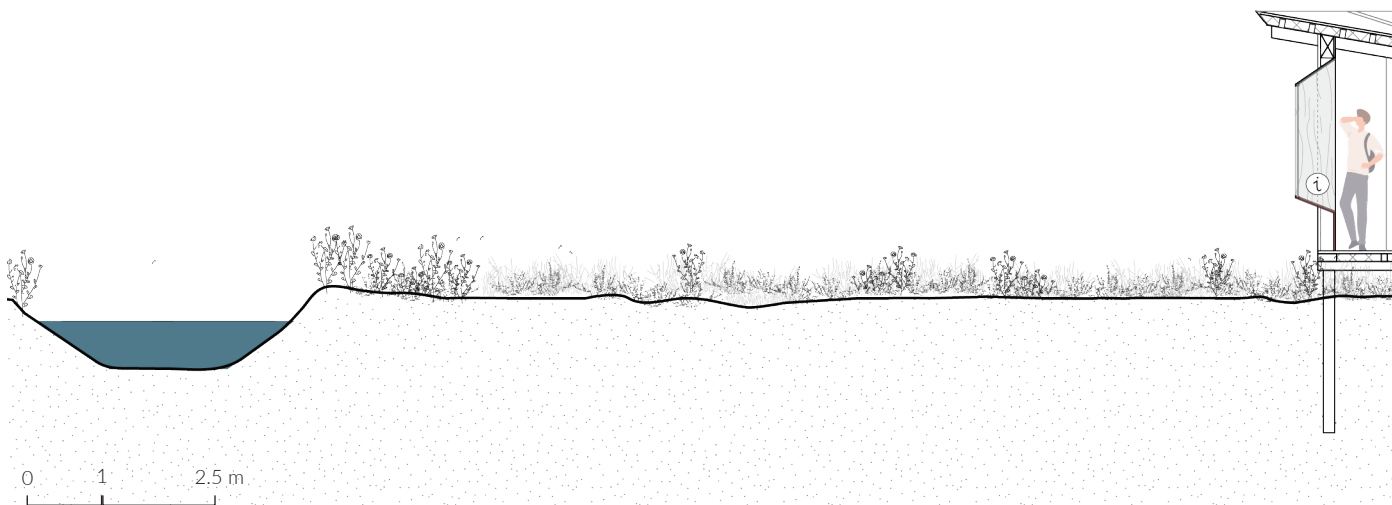
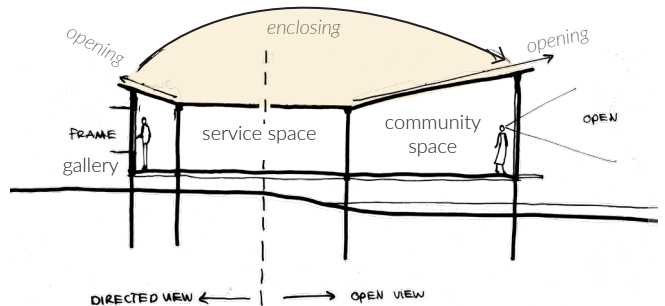


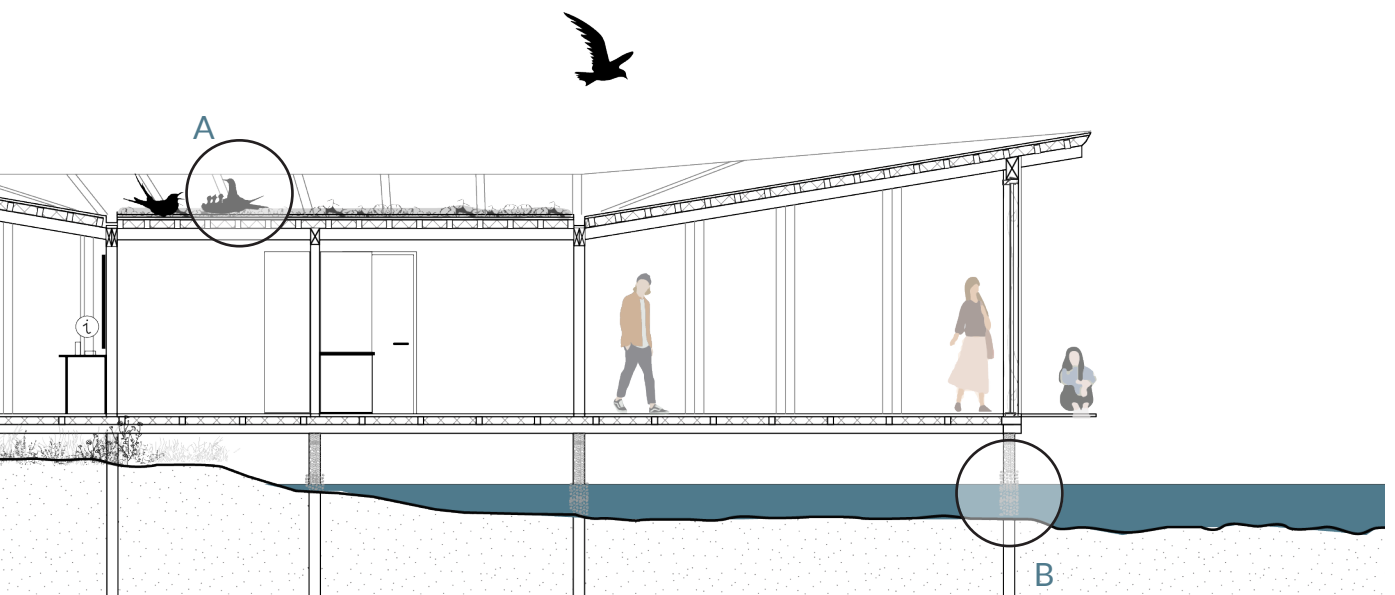
Structure for Humans and Non-Humans

The pavilion has a particular appearance caused by the shape of the roof. The roof angles upwards, opening up the inside space towards the outside. This directs the visitor's attention towards the landscape, and provides larger views to the outside.

At the same time, the upward angle of the roof creates an enclosed space on top of it. This space, almost shaped like a birds nest, provides a safe breeding and nesting place for specific types of birds (A). Here they are sheltered from the wind, and their nests are protected from land predators and flooding. The foundation of the pavilion can be used and appropriated by shellfish and aquatic plants, from where a small reef structure can develop (B).

In this way the design of the pavilion supports the forming of both human and non-human communities.





Appropriation by Other-Than-Humans

A Safe breeding space

The roof space is dedicated for bird communities that breed in the Wadden sea region, and is especially focussed on creating the right breeding conditions for the Common Tern (*Sterna hirundo*), which is currently on the Dutch Red list of vulnerable species.

The common tern breeds on undisturbed, barren areas. Therefore the roof, with its surrounding heightened edges, provides a hidden and sheltered breeding place. The flat area on the roof is covered with a layer of pebbles and shells, allowing the terns to dig shallow holes to create their nests.

In the Balgzandpolder close to the proposed commons area, there is already a successful breeding area dedicated to the common tern. This 'Broedponton' is a floating raft covered in shells, pebbles and tubes, creating a suitable nesting place protected from predators such as foxes.

A

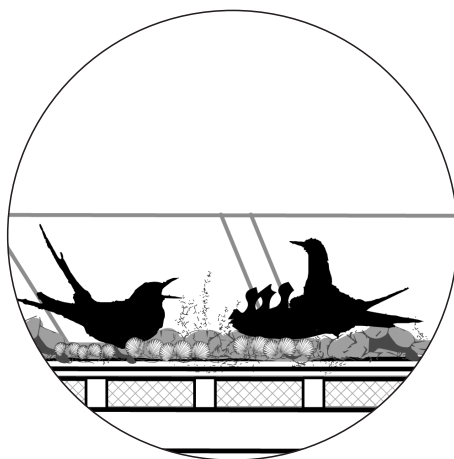


Figure 49: Broedponton Balgzandpolder
(Broedponton Voor Anker in Balgzandpolder:
Landschap Noord-Holland, n.d.)

B (Mussel) Reef

While the roof can be appropriated by breeding pairs of birds, the foundation structure can be appropriated by shellfish and aquatic plants. On parts where the foundation interacts with the tidal water of the Wadden sea, the wooden columns will have a concrete component. This concrete component will have a coarse structure which plants and animals can attach themselves to.

Rough and stone like surfaces appear to be suitable for shellfish communities to attach themselves to, and in their turn attract other plants and small animals, forming a reef like structure.

With these communities forming around the foundation of the pavilion, a small shallow reef can develop proving valuable as well for populations of smaller fish.

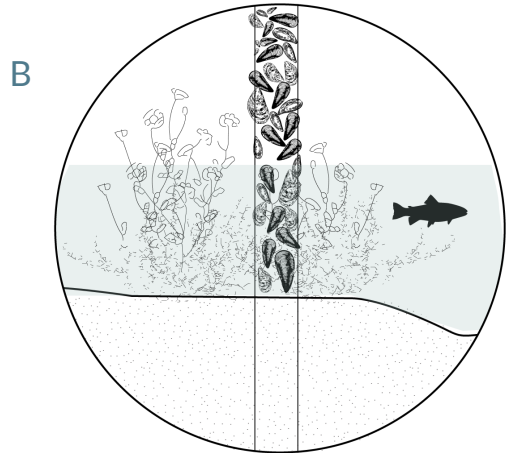


Figure 50: Mussels and other shellfish attaching to rough stone structures, forming a community and reef conditions.
(Trælvikosen, n.d.)

Designing Commons & Commoning after Design

5

5.1 No Commons Without a Connected Community

In the previous chapter a design proposal is set out to transform the land-water edge of Den Helder into a commons for humans and non-humans. However, there is no commons without an active community that participates in the use, management and further development of the commons. So what happens after the construction is finished, and the designer leaves? How will the space be transformed into a common space? And by what community?

Networks and Cooperation

A key difference between a classical commons, and the proposed commons in the landscape is that there are no user communities tied to this landscape yet. The project unlocks the eastern land-water edge of Den Helder as a resource, and therefore needs to draw in and connect people to it, who can form a community that engages in commoning processes and thereby develops the land-water edge as a common space.

An important factor in engaging people in Den Helder, is tapping into the existing network of social organisations and commons-like projects. These are often places with strong community outreach and social networks that can draw in interested people and create awareness about the new commons project. However, the connection to social networks and like-minded projects and organisations can be beneficial and necessary in more ways, as advocated by Sheila Foster and Christian Iaione (2018):

Similar to urban commons, the constructed commons in the land-water edge of Den Helder exists within the social and political system of Den Helder, and therefore has to deal with local politics, property systems and other actors within the area. Even though mainly the user community should manage, and control the process of use and governance, it can not be an isolated project existing on its own, and therefore needs to collaborate with actors such as the municipality and nature organisations. By collaborating with organisations certain resources and knowledge can be shared which will benefit the community of the commons in the landscape. Foster and Iaione (2018) propose cooperation between five different actors: social innovators, public authorities, businesses, civil society organisations, and knowledge institutions.

Within the visits to Den Helder, I encountered several organisations and places that are engaged with the communities in the city, or fulfil general social and civic functions supporting existing communities in

Den Helder. Figure 51 shows several of these places which might be valuable to connect to. These places include:

General facilities such as multifunctional centres and libraries that have strong outreach to local communities.



Social organisations who work together with vulnerable groups, who provide information and activities to engage people.

Nature organisations who, with their expertise can contribute with knowledge and advise on the landscape and ecology within the landscape commons.

Allotment gardens where people with affinity for hands-on work in green environments can be engaged in the commons and asked for their expertise.

Figure 51 (p. 176)

Several social places, organisations and commons-like projects which are embedded in Den Helder and therefore show potential for collaboration.

-  Community centered places
-  Allotment gardens

Connecting to the Social Network of Den Helder

Social places, organisations and commons-minded projects



Library Nieuw Den Helder

Libraries fulfil an important societal function as a meeting place and place for education and activities



Het Fundament

Guidance for sustainable and healthy living and financial stability



't Wijkhuis Nieuw Den Helder

Multifunctional center with various activities, possibilities to volunteer



School 7

'Living room of the c
Public library



city'



De Groene Stek

A city farm/nursery providing daytime activities for people with disabilities, or in other ways disadvantaged people



Schooten Plaza

The neighborhood centre of de Schooten is situated in the central plaza. They organise montly 'coffee moments' as an easy way for people to meet eachother and ask questions



Natuurcentrum Balgzand 't Kuitje

A nature centre about the waddensea landscape and ecology. They organise bird watching excursions and walks onto the mudflats. Run by volunteers from the Waddenvereniging and Landschap Noord Holland

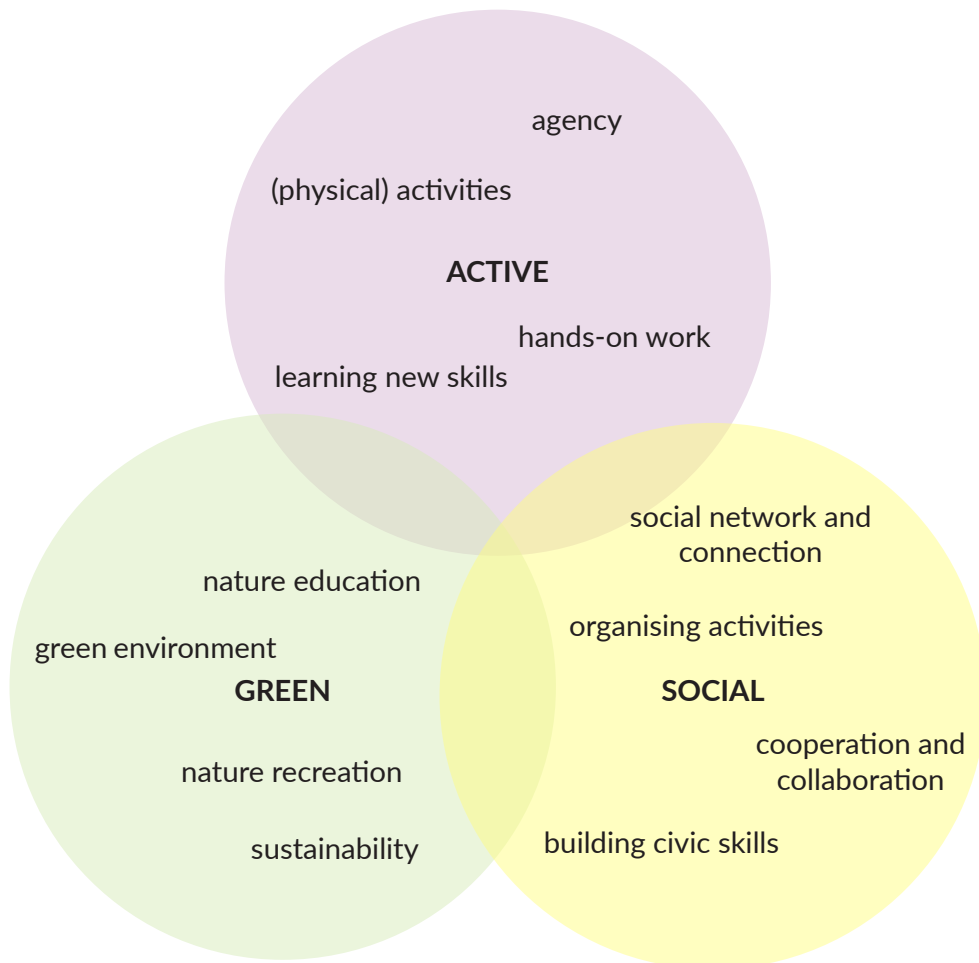
Boerderij De Schooten

Multifunctional center with various activities, possibilities to volunteer



People of the Commons

Looking at these existing groups of people and communities within Den Helder, certain wants, needs and interests can be recognised. These can be linked to the possible resources and activities of the commons in the land-water edge of Den Helder. They can be categorised in three groups; Green, Active, and Social. From here a general idea can be generated on the kinds of people that will make up the community of the commons in the edge.



Commoning structure

The people interested in the use and interaction with the landscape as a resource, can engage in commoning processes of rule and decision making, and cooperation processes that allow them to use and manage the commons. Together they will make up a community of commoners. This process of creating a community can be led by a small group of representatives from the municipality and several social organisations which are mentioned before, which can reach out and organise events to kickstart the processes. Thereafter, the community can create their own structures and processes of commoning.

Possibly starting as a smaller group, the decision making processes can be done by easy face-to-face meetings without the necessity for elaborate collaboration structures. However, as the group of commoners grows, there might be need for more formalised structures or even the appointing of custodians to make the decision making processes run more smoothly and organised, and especially keep them fair and democratic (Dellenbaugh-Losse et al., 2020). In any case, independent of group size, making sure all members of the community feel heard and are able to put their ideas and opinions forward in the decision making process, is an essential social

component of the commons. From this basis of trust and mutual understanding and respect, social capital can emerge and friendships can be made, contributing to the social value of the commons.

Besides people actively engaged in commoning processes of decision making, maintaining and caring for the commons, the group of people who use the commons in the landscape as a resource can include non-commoners as well. This is because this landscape is, and should be an inclusive area for different users with different levels of engagement. Similar to the projects mentioned in chapter two, such as maximapark, there are people who can enjoy the park as a resource, and there are people who are engaged in the caring and maintenance processes which gives them other benefits and resources. However, there should be transparency on the rights and limits of use for everyone and the commoners group should be open for anyone who wants to join and is willing to participate.

Activities and Commoning Processes in the Land-Water Edge

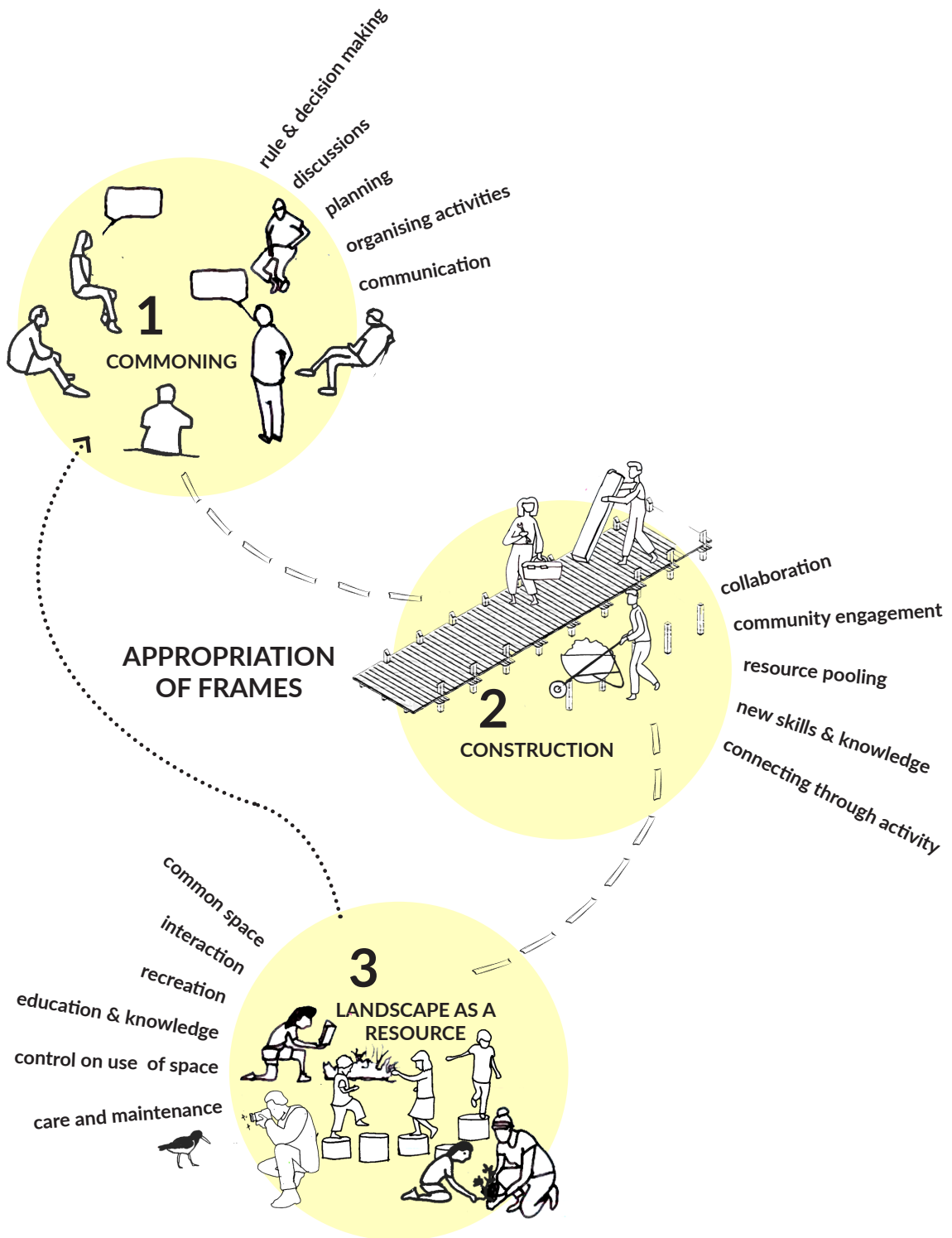
Looking specifically at the commons in the land-water edge of Den Helder, there are a number of activities and social practices that can take place in order to use, sustain and take care of the commons.

The social engagement in rule and decision making forms the basis for the use, care and creation of the landscape as a resource. In the first place, it will be centred around the use of the landscape: The frames in the landscape invite the community to react to the landscape qualities in the land-water edge and construct ways in which they can use the landscape. The process of group appropriation of these spaces, shown in figure 52, will establish a new relation of care, responsibility and importance between the community and the landscape.

The agency created by the use of these frames, and the sense of care and responsibility that it evokes, will be extended towards the surrounding landscape beyond the frames. From the want and need to take care of the landscape, the community will develop practices by which they can tend to the landscape. In this way the intrinsic value of the landscape and the commons for non-humans can be safeguarded.

In the next pages several activities and processes occurring in the commons are explained.

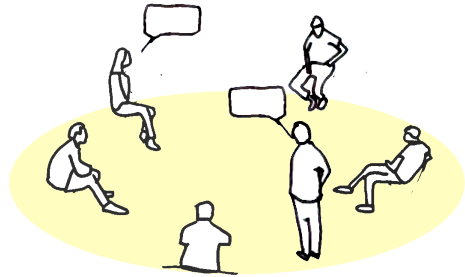
Figure 52: The process of group appropriation of the frames in the landscape: after democratically deciding on the program of a space, the members of the community can construct the space themselves, whereafter a new landscape resource is unlocked.



COMMONING PROCESSES

*social practices as basis for all activities
in, and uses of the landscape*

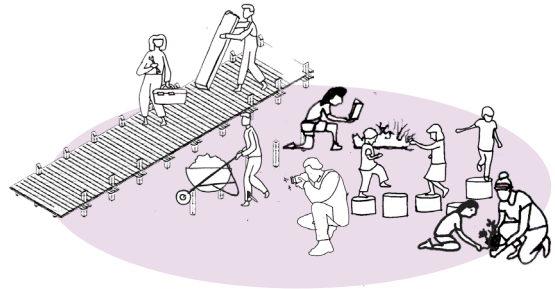
- democratic processes of rule and decision making
- collaborating with and reaching out to experts and organisations
- engaging and inviting other people
- organising (commoning) activities



APPROPRIATION AND USE OF THE LANDSCAPE

*connecting to the landscape through
activity and appropriation - use value-
evoking a sense of care and responsibility*

- construction of program within frames
- different unlocked resources



CARE FOR THE LANDSCAPE

*protecting intrinsic value of the
landscape*

- monitoring flora and fauna
- protecting nests and breeding places
- protecting marsh from erosion
- removing invasive species in case of harm to the non-human commons
- keeping entrance creeks at depth
- educating about the landscape
- removing harmful washed up materials



LANDSCAPE EXPERIENCE

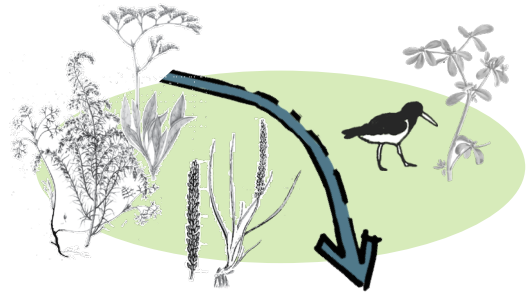
personal sensorial experience of the landscape - existence value -

- aesthetic appreciation
- symbolic relations
- identification with the landscape



NON-HUMAN APPROPRIATION

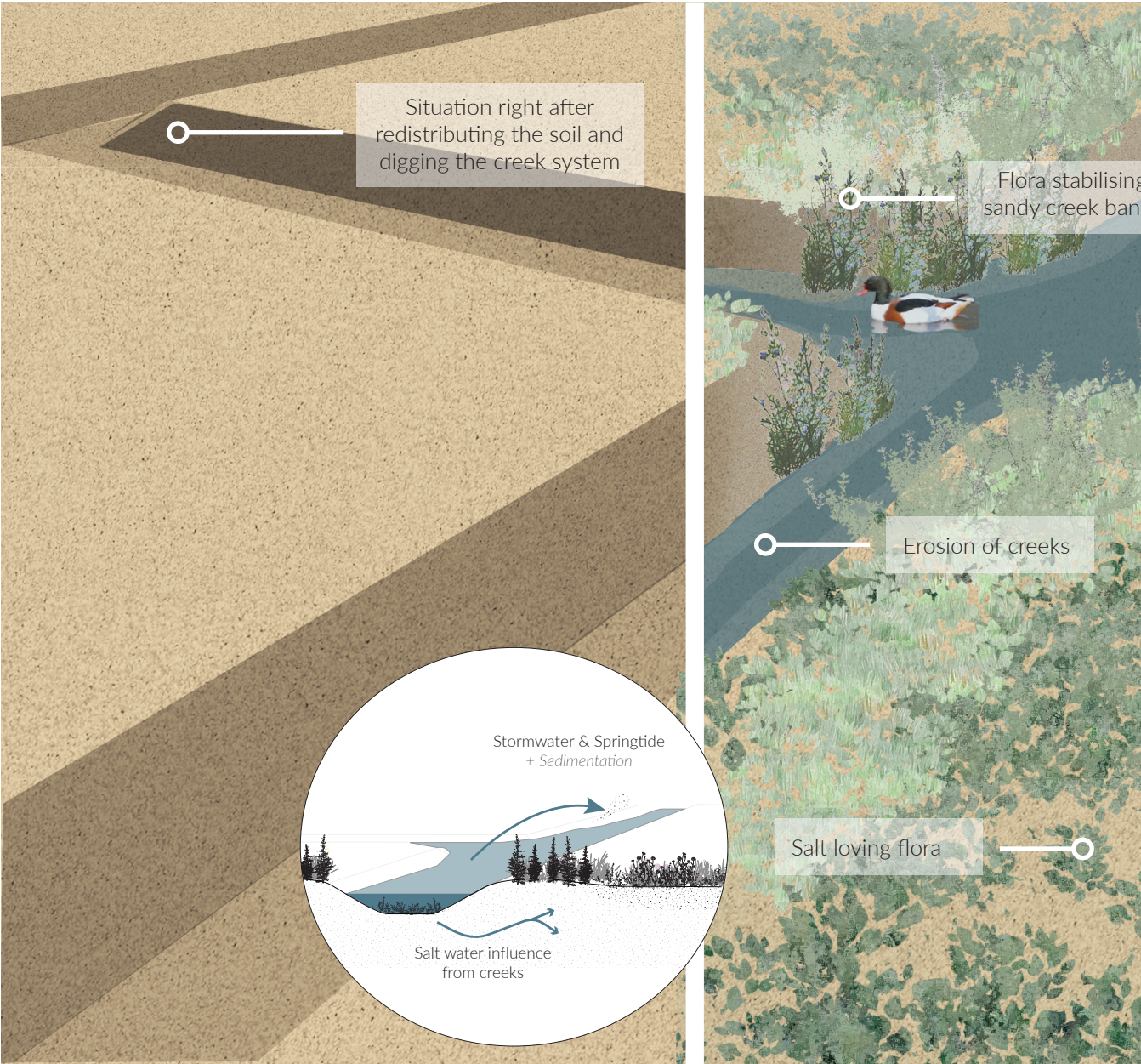
processes of use and appropriation by plant and animal communities, and the natural elements influencing the landscape

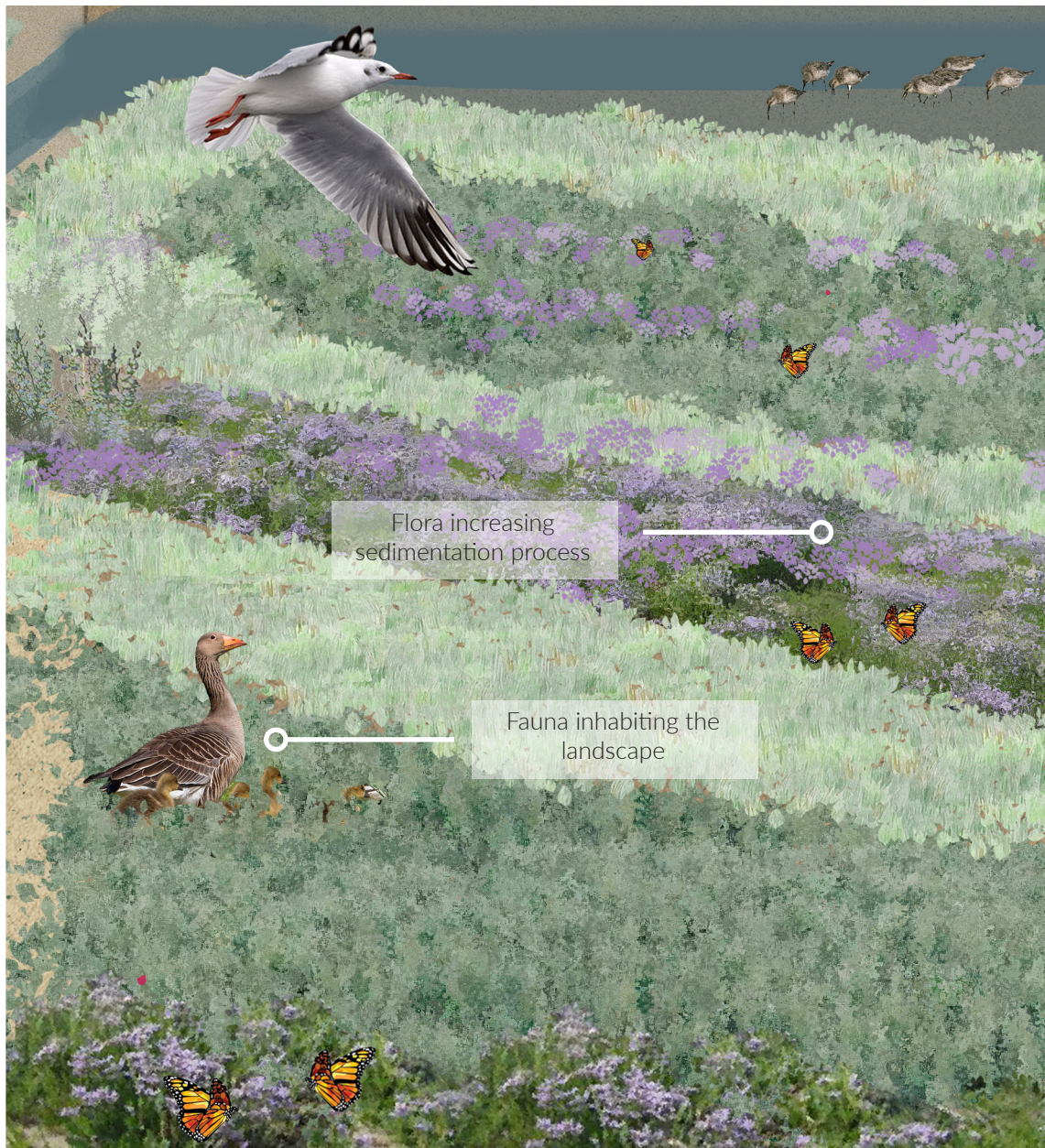


All these different uses and processes by non-human and human communities, create the commons in the landscape. They unlock different resources of the landscape, such as recreation, physical and mental health, as well creating new resources of knowledge, a sense of identity and purpose, and social capital. For non-humans being active actors in the commons in the landscape provides them with food, safety and reproduction opportunities. In figure xx, this living landscape resulting from these processes is shown.

Figure 53 (p194-195)
The commons in the land=water edge as a living landscape full of human and non-human processes.

Non-humans as active actors in the commons





Humans as active participants in the landscape



Collaborative action of
constructing the spaces





Tribune for nature talks and
enjoying the landscape

Frame as entrance to the
landscape to educate
about flora and fauna

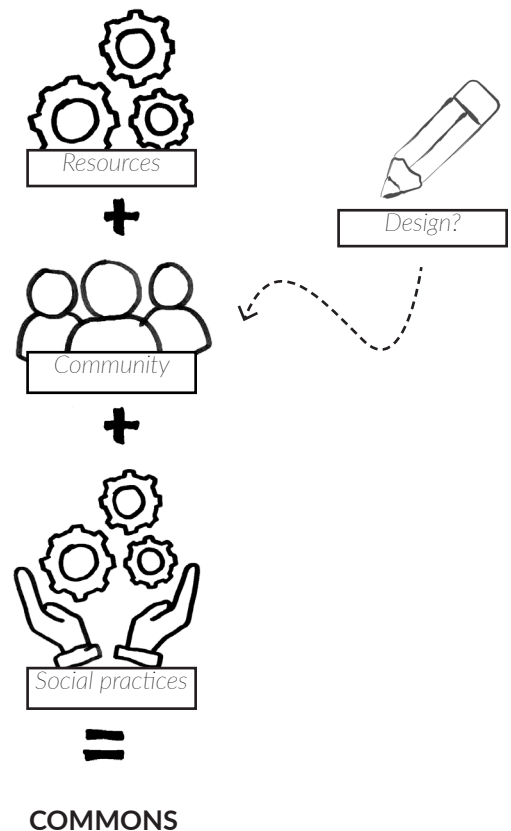
5.2 Designing Commons?

As mentioned before, commons consist of a resource, a community, and the social structures created by this community to manage and use the resource. In practice, the social component, regarding governance, sharing and maintenance, is what largely separates 'just resources' from commons, and therefore plays an essential role in how the commons function and how they are constructed. Design however, often does not: Even in commons with a strong physical component, such as community gardens, the physical design does not fulfil a substantial role in their functioning or creation. The physical space is important because it is part of the resource for the garden, but the design of the actual garden does not usually matter. It is the governance structures and social practices that construct the space that matter. Therefore most of the time when design principles are mentioned they are principles regarding the organisational structure and governance of the commons, such as the principles of Elinor Ostrom (1990). However, within this thesis a design proposal is made for the transformation of the land-water edge of Den Helder into a commons for human and non-human communities. This raises the question of what the role is of landscape architectural design in this transformation, and to what extent it influences the functioning and success of the commons, and whether designing the commons in this landscape architectural context is relevant (or possible) at all.

Therefore, in the following section, the role of landscape architectural design in the transformation of the land-water edge into a commons will be discussed.

Firstly, the project's relation to the commons will be formulated. Secondly, from a reflection on the design in Den Helder, design principles for transforming

landscape-edges into commons will be derived. Then lastly, with these design principles the role of the landscape architectural design in the constructing of the commons will be discussed.



Relation to commons

Before the role of design in the commons will be considered, the actual relation of this project to the commons needs to be clarified. This will be done through the connection to the three pillars of the commons: Resources, Community and Community practices.

Resource

The project treats the landscape as a common resource, which can be made into a commons serving human and non-human communities by allowing appropriation, care and agency in the landscape. It seems similar to a traditional commons where the resources are also derived from the landscape. However, within the contemporary framework of landscape commons used in landscape architecture, the landscape is framed rather as a spatial resource which can be drawn upon for its different uses and experiences, opposed to using the landscape as a material resource to extract from. It includes non-human users as commoners in the landscape which draw upon it as a place to inhabit.

Community

In this specific situation, there are currently no active communities in the land-water edge. The design unlocks the land-water edge as a valuable resource for both human and non-human communities, which will be drawn to the commons in the landscape.

Non-human communities are present in the surrounding area, such as het Balgzand, and will easily make their way to this suitable place to use as their commons. By embedding the project into the social network of Den Helder, and engaging and interesting them in early processes of construction, human communities will be drawn to the commons as well.

Community practices

In order for the project to function as a commons the communities in the landscape need to be able to use and govern the landscape as their common resource.

As discussed in section 5.1, for other-than-humans this means that they, as plant and animal communities, 'manage' natural processes in the landscape that shape the landscape, hereby producing the commons that provide resources such as food and safety. For humans this means that they have agency on how to use the framed spaces, and responsibility for safeguarding other landscape values, including its value for other-than-humans. In order to do this, individuals need to form a community around shared goals and interests, and engage in collaborative action and decision making to govern the landscape.

Design Principles for Transforming Landscape Edges into Commons

In chapter 4, a design is proposed to transform a location in the Eastern land-water edge of Den Helder into a commons. Reflecting on this design, and treating it as a case study, some general design principles for transforming landscape edges into commons can be derived.

Commons for non-humans

Firstly, from literature research in chapter 3 is concluded that landscape edges prove to be a valuable resource for non-human communities due to the presence of gradients between the bordering landscape types. In the case in Den Helder, the gradient between land and water had been disrupted. To restore the ecotone between land and water, new interaction between them had to be created. This has been done by intertwining land and water through a creek structure, which allows interaction of land and water and enlarges the general interaction surface leading to more gradient areas.

This design intervention protects and (re)creates landscape edges as valuable resources for non-humans. Hence the first design principle:

1. Intertwine bordering landscape types/habitats to stimulate interaction

However, in order for non-human communities to treat and use the landscape as a commons, they need to be able to inhabit, adapt and support the landscape with their own practices. Therefore, in the case in the commons in the land-water edge a structure is created which enables different plant and animal communities to settle and appropriate the landscape, and enhances these processes. This transforms not only the landscape but also the initial structure.

Therefore, the second design principle, supporting the first one, becomes:

2. Create structures that allow for growth and change, and enhance appropriation by other-than human users

Commons for humans

Secondly, to create a commons for humans the same factors of value and appropriation are relevant, but are expressed in different design interventions.

Essential for humans is the physical accessibility to the commons, in order to make use and take care of it. When dealing with landscape edges, often one landscape type has to be crossed before arriving at the edge. In the case of Den Helder, the land-water edge is hard to reach because of the occupation of the land that has to be crossed to reach the edge. The design responds to this by bridging the barriers and creating a passage through non-accessible areas, making the land-water edge accessible for communities in Den Helder. Without access to the resource, there can be no commons, therefore the third design principle becomes:

3. Create accessibility to the edge

Within the chosen area in the land-water edge, different values of the landscape are considered for it to operate as a commons for humans. In the

theoretical framework of chapter two, three values are discussed: the existence value, the use value and the intrinsic value. The proposed design answers to these three values by both *limiting and allowing*:

A) The path

In line with the third principle of accessibility, a path is constructed floating over the landscape. The path creates access to the area, including people with mobility aids, and not only allows, but complements the experience of the intertwining landscape types by moving back and forth over the edge and changing the path's layout accordingly. This personal sensorial experience of the landscape enables a personal (aesthetic, symbolic, identity) evaluation of the landscape, making up the existence value of the landscape. Moreover, the slightly elevated path, with its implied and restricted use, responds to the intrinsic value of the landscape by respecting the underlying landscape and limiting disturbance.

B) Frames for appropriation

To allow use of the landscape (and create use value) the path forms a structure from which several 'frames' in the landscape can be accessed. These frames are there to be appropriated by the community of Den Helder, to create different ways in which the landscape can function as a resource and in order to establish a relation of importance, care and responsibility for the landscape.

C) Visual expression of the commons versus non-commons

Lastly an important part of the design is the visual expression of limiting and allowing, and giving expression to the commons and non-commons areas. The design language of the closed path versus the open space, reveals the possibilities for the

use of the space. The contrast in design language between the closed path, where the rigid linear route only allows passive and static experience of the surrounding landscape, and the open space, where the path opens up to the landscape, and has an unfinished and adaptable character with the landscape frames, signals to the people that the commons is a distinct area with different possibilities.

These design measures can be broken down into the following general principles:

4. Create a clear guiding structure or path in the edge landscape that allows and enhances the landscape experience of both sides of the edge, while respecting the intrinsic value of the landscape by imposing limits on its use.

5. Enable and allow appropriation of the landscape in order to use the landscape as a resource and generate relations of importance, responsibility and care, but limit this appropriation to distinct recognisable areas, in order to balance the different landscape values and avoid overexploitation of the landscape.

6. Use design language to express the difference between commons and non-commons areas, and to indicate different uses and ability for appropriation and change.

Lastly, to create the possibility for commoning processes in the landscape edge, a central meeting

place is constructed. This pavilion has the necessary facilities and spaces for people to stay for a longer period of time and engage in social activities, and increases accessibility and comfortability of visiting the landscape edge. Furthermore, this central place increases the visibility of the commons and the community for visitors, and becomes a place to invite and get in touch with newcomers.

Therefore the last principle becomes:

7. Create a central inside space that supports commoning processes

The Role of Design

With the clear desired use of the commons in the landscape, and the proposed design principles in mind, the discussion can be started on the role of landscape architectural design in the transformation of landscape edges into commons.

To begin with, the question can be asked; **'Why is it necessary to use landscape architectural design in the transformation of landscape edges into commons?'**

Most of the time the conceptualisation and realisation of a commons is initiated by an existing community who recognises a valuable and often scarce or threatened resource. However, in the case of Den Helder the current social and ecological value of the eastern land-water edge had been rather damaged, and was therefore not functioning as a resource for human and non-human communities. Additionally, the land-water edge was not accessible for many humans and other-than-humans, meaning that there were no communities present that could create and manage the landscape edge as a commons. For this reason, larger interventions were needed to unlock the land-water edge as an important resource, requiring landscape architectural design. The design creates a starting point for communities to adopt the landscape as a valuable resource that needs managing and protection. This can be applicable to various landscape edges that are neglected and/or inaccessible.

Additionally, landscape architectural design is relevant for balancing the specified values of the landscape. Especially regarding the existence- and ecological-value, knowledge from the landscape architectural field can contribute to the improvement and safeguarding of ecological, spatial and experiential quality of the landscape. This is translated in the design principles for the non-

human commons and of the creation of a path that guides and allows experience, but also puts limits on the use of the landscape.

Lastly, landscape architectural design is necessary to respond appropriately to sensitive surrounding areas. In the case in Den Helder, the commons area is enclosed by private terrain, with the especially sensitive area of the navy. This calls for design measures that respect the navy terrain, while providing a valuable experience towards the commons.

The second question that is essential to ask is: **'How does the design contribute to the commoning processes and the establishing of a community that is connected to the commons?'**

The landscape architectural design of the path and the spaces invites people to react to, and interact with the landscape, creating common spaces which allow the use of the landscape as a resource. It provides a framework for people to start appropriating the landscape as a group, which allows them to establish stronger relations with the landscape as well as with the created community by connecting through activities and shared goals. Even Though the framework of the path and 'frames' imposes limits, it creates clear and defined boundaries to operate within, which makes the initial process of appropriation more straight-forward and more accessible. Therefore the designed framework, with the implied goal of creating common spaces

within the landscape, creates a starting point from where collaboration can start and a community can be formed. Thereafter the commoning processes can evolve and be adapted by the community, and can be expanded with a sense of care and responsibility for the larger landscape.

The commoning processes are supported by providing a community space that is suitable for meetings, workshops, showcasing information etc., and provides space as well for manual tools that can be used in the landscape.

The last question that I would like to ask is: **‘To what extent can landscape architectural design create a commons, when the commons only really take form with community involvement?’**

Different from for example natural common pool resources, in the commons in the land-water edge of Den Helder the community has to create structures and spaces in order to use and govern the landscape as a resource. This ‘constructed’ commons is the result of social commoning processes which involves bringing together a wide range of actors that collaborate in order to co-create the shared resources (Foster & Iaione, 2018). Therefore, simply said, purely landscape architectural design cannot create a commons. During and after the realisation of the design, social engagement and collaboration will have to be initiated by bringing together several groups and actors in Den Helder in order to kickstart and give shape to the commons.

However, the design still plays an important role in the transformation of the landscape edge into

a commons: It creates suitable conditions for the landscape to serve as a resource for both human and non-human communities, and creates incentive and ability for these communities to appropriate and be active actors in the landscape in order to adopt it as their commons. The design interventions that create accessibility and allow landscape experience for humans, create a starting point for the human community to acknowledge the land-water edge as an important resource. The frames in the landscape facilitate a sense of belonging, responsibility and care through enabling appropriation, interaction and change in the landscape. Furthermore, by using design language to create a contrast between the non-commons (the closed path) and the commons (the open space), the commons can be perceived as a place in the landscape that is not static but changeable and enlarges the appreciation for this different way of relating to the landscape.

For non-human communities, the design interventions that enable interaction between land and water, create a starting point as well for plant and animal communities to inhabit and influence the landscape, making it their commons.

To conclude, a commons consists of the key elements of resources, community and social practices. The landscape architectural design works mostly on the level of the resources; it unlocks the landscape edge as a resource for humans and non-humans by making it accessible (routing, boardwalk, interaction between land-water), and by creating space for group adaptation and appropriation of the landscape by which the communities can use and create resources (frames, creek structure). However, the other essential parts of the commons are the community and social practices that develop after the design, which the design interventions have minimal influence on. Even though the design creates an important starting point for the commons to develop, with the framework allowing communities to connect to the landscape and develop a new relation of importance, responsibility and care, forming the basis of the commons, the (social) processes that shape the commons go far beyond the designed framework of the path and spaces for appropriation. Therefore the role of the landscape architectural design in transforming landscape edges into commons lies mostly in the creation of suitable conditions for commons to develop, and in the balancing of landscape values in order for the landscape edge to operate as a commons for both humans and non-humans.

Conclusion & Reflection

6

6.1 Conclusion

For many reasons the use and experience of landscapes are important to the human and other-than human communities surrounding them. However, certain social and ecological values are often neglected or overruled by the focus on specific quantifiable function and performance, leading to commodification and enclosure of valuable landscapes.

In Den Helder this is happening to its surrounding coastal landscape, with the city turning its back on the sea. This is reflected in the response of the land-water edge to the landscape values and qualities for its related human and non-human communities. The current design and occupation of the land-water edge result in lost interaction between humans and non humans with the landscape, creating a diminished relation of meaning.

In this thesis I hypothesise that commons theory can provide a framework that can be used within landscape architecture to create contemporary landscape commons which improve the social and ecological value of landscapes.

Therefore, by means of literature studies and research by design, this thesis aims to answer the following research question:

'What can be the role of landscape architectural design in transforming landscape edges into commons?'

The main research question is answered through the supporting sub-questions:

SQ1: What are the commons?

SQ2: How can commons theory be used in the field of landscape architecture?

SQ2.1 How do landscape commons answer to the social and ecological values of the landscape?

SQ3: What is the social and ecological relevance of the edge?

SQ4: What design interventions can be done to transform landscape edges into commons?

This has resulted in the following findings:

1. Commons are material or immaterial (conceptualised) resources which are linked to a community that manages, (re)produces and shares them, with the goal of sustainable and socially just use and management and the sharing of certain resources. With the emergence of 'new commons' there is a widespread use of commons theory and commons-like thinking in various conditions. Still, general concepts of commons can be defined, including; a sense of sharing, collaborative social practices, and working for the common good and additional community value.

2. Originating in landscapes, regarding their natural common-pool resources, there is a strong link between commons and landscapes. From commons theory a theoretical framework is constructed to approach the relation between landscape and commons in a contemporary way; Landscape as Commons provides a framework on acknowledging and balancing different values of landscapes beyond its material and functional use-value for humans, including other-than-humans as active contributors and users of the landscape. Commons in the

Landscape operates within this larger conceptual framework and focuses on general values and principles related to the physical manifestation of the commons as a place within the landscape that allows for accessing different resources within it. This lead to the following general guidelines:

- Design that allows people to connect to the landscape through programming (use value)
- Design that works with and strengthens experiential landscape qualities (existence value)
- Design that enables appropriation and change of the landscape by other-than human communities in order to respond to their wants and needs to make it function as a valuable resource.
- Design that enables appropriation and change of the landscape by human communities in order to use and adapt the landscape as an important resource and create agency which allows relationships of care and responsibility to manage the commons.

3. Edges are socially and ecologically valuable places: Ecological edges, also called ecotones, form ecological 'hotspots' with high biodiversity, including specialised species for the particular edge conditions. Socially, edges provide safe, semi sheltered and comfortable spaces, making them favourable places for staying, meeting and observing. For its social and ecological value, edges are especially suitable and in need for establishing commons for both humans and other-than humans.

4. By using the general guidelines from the theoretical framework in a landscape architectural design in the Wadden sea coast of Den Helder, and hereby engaging in research by design, several principles for transforming landscape edges into commons have been developed:

1. Intertwine bordering landscape types/habitats to stimulate interaction
2. Create structures that allow for growth and change, and enhance appropriation by other-than human users
3. Create accessibility to the edge
4. Create a clear guiding structure or path in the edge landscape that allows and enhances the landscape experience of both sides of the edge, while respecting the intrinsic value of the landscape by imposing limits on its use.
5. Enable and allow appropriation of the landscape in order to use the landscape as a resource and generate relations of importance, responsibility and care, but limit this appropriation to distinct recognisable areas, in order to balance the different landscape values and avoid overexploitation of the landscape.
6. Use design language to express the difference between commons and non-commons areas, and to indicate different uses and ability for appropriation and change.
7. Create a central inside space that supports commoning processes

With these findings the role of landscape architectural design in transforming landscape edges into commons can be determined:

In order to transform landscape edges into commons, three key elements of the commons need to be considered: resources, community and social practices. With the formulated design principles, the landscape architectural design predominantly works on the level of resources, and has limited influence on the two other elements. Through landscape architectural design, suitable conditions can be created for human and non-human communities to make use of, appropriate and manage landscape edges as commons. This provides an important starting point for the transformation of landscape edges into commons, and provides a framework that balances different landscape values that need to be considered for landscapes to operate as commons. However, beyond providing a starting point by inviting communities to engage with the landscape and each other, design has less influence on the community and social practices that are necessary as well to transform landscape edges into commons.

With these conclusions this thesis contributes to the body of knowledge on the commons, and adds insights on its contemporary application in landscape designs. The design principles can prove to be useful in the development of commons in the landscape. However, further research should be conducted on how design can improve and support commoning practices and the forming of communities in edge landscapes. Furthermore, research should be done on its practical application regarding ownership, financial and economical feasibility and relation to governments and other institutions.

6.2 Reflection

Back and forth processes

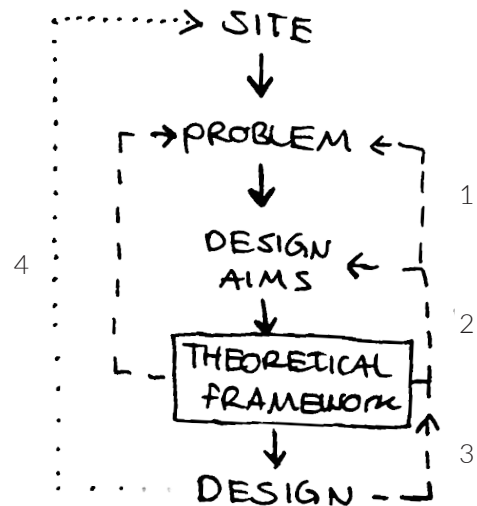
The landscape problematique presented in this thesis is directly derived from the initial site analysis of Den Helder. From the problem statement I formulated my first design aims: 1) to create a place or places in the land-water edge of Den Helder, that would allow people to stay and consciously enjoy and interact with the landscape, and 2) to soften the land-water edge to allow interaction with the flora and fauna of the coastal ecosystems.

The commons, being essentially a way to connect resources and users in a sustainable and participatory way, seemed like an interesting and possible way to connect people to landscape and make them feel the landscape qualities through active engagement. When conducting literature research on the commons and constructing the theoretical framework, I gained more insight in the larger problematique that I was confronted with. By learning more about the values of the landscape and how they can be approached and interrelated, the problem evolved from the relatively vague problem of 'disconnection' towards the problem of neglect of different landscape values.

The theoretical framework that was formed, provides a larger overarching framework on how to view and react to Landscape as Commons. Operating within this framework is Commons in the Landscape, which focuses on the spatial application of literature and principles.

By defining the theoretical framework, the design aims could be refined as well; focussing not only on the accessibility, placemaking and softening the edge, but shifting towards appropriation and change over time.

The design intervention consequently works with the principles and ideas derived from the theoretical framework, while at the same time influencing the theoretical framework from the findings from the research by design.



1. Position site specific problem in larger problematique
2. Refining design aims
3. Deeper understanding of theory through practical application
4. Insights about the site through design research

Methodology & Process

This research can be divided into three parts with each their distinctive research methods;

We started out with the immersive site analysis, which was conducted with studio specific methods such as imaginary interviews and scoring walks, in order to experience the site from many different perspectives and gain a layered understanding of Den Helder. The performance of these methods resulted in the finding of many intriguing aspects of Den Helder. Combining our groups' research results on the vogt wall, allowed us to categorise our findings in certain themes while including many aspects of analysis. However, in having this amount of varied material, I encountered some difficulties in finding my research subject. Choosing the land-water edge as my first focus topic helped me to keep many interesting layers from the analysis, while at the same time letting go of other themes.

After the initial site analysis phase, I tried to approach the detected problematique from a commons' perspective. Being new to the topic, I got lost in its wide range of information and theories and had difficulties to move to spatial examples of commons and adapt the literature to my own project. Throughout my research process I tried to find examples and theories that would fit exactly with my general design and research aims, to be able to fit in the box of commons. This caused me to get stuck in literature research on the commons, and stopped me from progressing in my design aims and ideas.

To counteract the focus on theories and political ideas, and mostly to get unstuck, I tried to find inspirational projects that could be to some extent related to my ideas of landscape commons. Visiting these projects, and especially talking with their

founders/organisers, provided me with insights about the (spatial) qualities that I was looking for, and helped me direct my research and adopt the commons' theory and principles in a more suitable way.

The final part, consisting of research by design, formed a large part of my research. For a while, I had trouble aligning the findings of the literature research with my design aims, which made me hesitant to design. Finally, through the act of sketching, trying options and discarding ideas, the research was moving forward. Firstly it resulted in more questions than answers; Questions were raised about the ins and outs of the design site, and as well about my design goals and their relation to the commons. The research by design helped me to ask additional questions such as 'how to respond to the 'non-commons' area?', 'how to design for human and non-human appropriation?' and 'how to express the difference between commons and non-commons in the design?' I started to gain a better understanding of my design goals and was able to make the findings from the literature research my own.

Looking back at this process, I can see why I encountered some difficulties: I was hoping to construct design principles from the literature research, while ultimately I could only derive the design principles from the design research in the last phase. This required me to zoom out and look for the relevance of the project beyond the design site in Den Helder, adapting my research question, which helped me put the focus back on the spatial and landscape architectural aspects of the research.

Finding References

At the start of this research I tried to find specific projects or examples that would fit in exactly with the ideas of landscape commons that I had in mind. Throughout the research process however, I managed to find elements in other projects that I could apply in my research and design. Especially within literature about, and examples from 'urban commons', I found usable information. Many things were applicable within landscape commons since they share the important spatial component which allows for physical interaction with different resources and direct social contact within the community.

I had difficulty however, distilling design components from example projects; most projects served more as inspiration regarding their organisation and way of collaborating and accessing resources, because they lacked (conscious) physical design.

Later on in the design phase I drew upon references such as the 'luchtsingel', and the 'Renaturation of the River Aire'. They are projects with relatively straightforward principles and designs, which at first I had trouble making my own. However, as the design progressed, I found that the specific site conditions asked for slightly different applications of the same principles, which as well made me understand better the conditions of the reference projects.

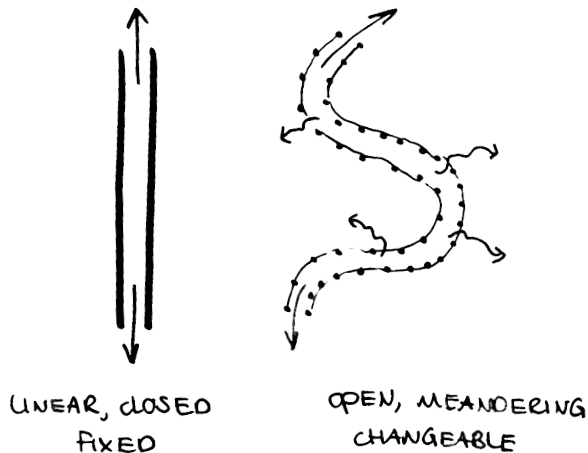
Design translations

My reading of the site can be summarised as the lack of interaction and the need to design for more interaction. I translated this to the topic of the commons, where a community is bound to a resource, and different kinds of interactions can

take place. However, the step to writing did not come very easy. Taking theory from urban commons also increased the difficulty of applying principles to landscape commons. Therefore I started by breaking up the design in parts; Firstly, in order for people to interact with the Wadden sea coast as a resource, the edge needs to be accessible. Secondly, in order to create conditions for non-humans to access this landscape as a resource, the land needs to interact more with the water. Thirdly, after improving the ecological value of the landscape, humans need to be able to interact with the landscape, therefore a path was needed, which was later enhanced with adaptable spaces to react to the dynamic landscape. These elements together create a place full of interaction.

Architectural Expression of Interaction

Within the design I worked with the larger theme of interaction. The design aim was to create a place for human interaction with the landscape, as well as for the interaction and natural appropriation of the landscape by other-than-humans. As the design developed I started to play with open vs. closed, dynamic vs. static, changeable vs. fixed, linear vs. meandering, in order to give expression to this idea of interaction. These principles are applied throughout the design, from the course of the routing to the use of the space, and the detailing of the paths.



Societal & Scientific Relevance

The ideas and principles of commoning as a spatial practice can be very valuable to the field of architecture in order to obtain socially just and sustainable environments. Currently, practices of placemaking that involve user communities are becoming more widespread. The idea of commoning takes this further by not only involving communities in the making of places, but by establishing ongoing social practices that help sustain them and let them evolve, generating continuous value for their surrounding community. Although introduced in architecture and urbanism, commons' theory is rarely applied in landscape architecture. Yet it could provide a valuable way to approach designs regarding landscape and connect people to nature in different ways, contributing to both human wellbeing and sustainability and protection of landscapes.

This thesis provides an overarching theoretical framework, and design principles that can be used in landscape architectural practice to create starting points for transforming landscape edges into commons. Without the desire to create commons, these principles can be valuable in guiding landscape transformations that balance the existence, intrinsic and use value of the landscape.

Personally, I have learned to design for dynamic social and ecological processes and to look at plant and animal communities, together with natural forces, as active actors in the landscape that together with human activity create living landscapes. The design research of this thesis can be an example for others to do the same.

Lastly, landscape commons show other ways of designing and using landscapes that engage local communities with each other and their environments. Governments could support these kinds of spaces

and cooperations to improve social cohesion and community resilience, as well as create sustainable human-landscape relationships. Further research should be done on the practical implementations, and institutional aspects of such landscape commons.

Social & Moral Aspects

I started the design process with the intention of creating small interventions that would 'allow' people, flora and fauna to reclaim the landscape. However, during the process I found out I had to make heavier interventions than I initially thought. This clashed with the idea of the 'low- key' commons that could be self produced and would have a low impact on the environment. Yet, since the intervention of for example moving large amounts of soil, still contributes to the increase of ecological quality, they still fit into the larger ideas of sustainability that are part of the commons. Together with mostly using the relatively sustainable material of wood, the environmental impact of the project is reduced.

The fact that the degree of intervention is larger, also influences the costs of the project, which might make it less socially sustainable. To combat this, there can be drawn upon skills and involvement of the community to physically make the space from earlier stages. This contributes as well to their connection to the place.

Something else that I encountered was the inclusivity and accessibility of the designed place. Initially I

proposed to let the path disappear in the landscape to let people wander through the area. This however made the space and central pavilion inaccessible for wheelchair users and possibly elderly, therefore I decided to design a continuous path, as well as propose ramps in the southern connection to the city. Additionally, there might be social barriers to reach the commons. With larger involvement of collectives, municipalities and other organisations (such as 'Het Fundament' in Den Helder or community centres), more vulnerable parts of society can be reached and brought together in order for them to participate and enjoy the benefits of the commons as well.

Literature References

- Angus, I. (2021, August 1). Commons and classes before capitalism. *Climate & Capitalism*. Retrieved January 22, 2023, from <https://climateandcapitalism.com/2021/08/01/robbing-the-soil-1-commons-and-classes-before-capitalism/>
- Artworks, Z. C. B. S. &. (2014, October). Meent - Leestekens van het Landschap. *Leestekens Van Het Landschap*. Retrieved April 29, 2023, from <https://www.leestekensvanhetlandschap.nl/meent>
- Avermaete, T., Teerds, H., Aterlier Bow-Wow, Wilms-Floet, W., & Havik, K. (n.d.). Constructing the Commons. *Constructing the Commons*. Retrieved April 29, 2023, from <http://constructingthecommons.com/>
- Banyan, M. E. (2014, March 24). Tragedy of the commons. *Encyclopedia Britannica*. <https://www.britannica.com/science/tragedy-of-the-commons>
- Bodegom, B. (2016, November 8). Ontginningen en de Markenwet. *Leven in De Liemers*. Retrieved April 29, 2023, from <https://levenindeliemers.nl/verhalen/48-ontginningen-markewet>
- Bollier, D. (2011, July 15). The Commons, Short and Sweet. *David Bollier News and Perspectives on the Commons*. Retrieved May 9, 2023, from <https://www.bollier.org/commons-short-and-sweet>
- Brain, D. (2019). Reconstituting the Urban Commons: Public Space, Social Capital and the Project of Urbanism. *Urban Planning*, 4(2), 169–182. <https://doi.org/10.17645/up.v4i2.2018>
- Campbell, L. (2009). Restorative Commons: Creating Health and Well-Being Through Urban Landscapes. <https://www.nrs.fs.usda.gov/pubs/8810>
- Castiglioni, B., Parascandolo, F., & Tanca, M. (2015). Landscape as mediator, landscape as commons: *International Perspectives on Landscape Research* (1st ed.) [PDF]. Coop. Libreria Editrice Università di Padova. https://www.researchgate.net/publication/288823492_Landscape_as_mediator_landscape_as_commons_International_perspectives_on_landscape_research#fullTextFileContent
- Commons and classes before capitalism. (2022, March 10). *Climate & Capitalism*. <https://climateandcapitalism.com/>

com/2021/08/01/robbing-the-soil-1-commons-and-classes-before-capitalism/

Council of Europe Landscape Convention. (2000). [PDF]. In Council of Europe (Ed.), European Treaty Series - No. 176. <https://rm.coe.int/16807b6bc7>

De Groot, T., & Bloemen, S. (2019). Our Commons: Political Ideas for a New Europe.

De Lacerda Arpini, E. (2022). URBAN COMMONS AS A DRIVER OF INCLUSION: A socio-spatial analysis of the accessibility to Urban Commons in Amsterdam [MA thesis]. TU Delft.

De Raad, H., Montsma, P., Vonk-Uitgeest, I., Roeper, M., Dijkhuis, W., Bremer, J. T., Diederik, F., Noot, M., Van Nes, G., Joustra, M., Roeper, V., Alders, G., & Aerts, A. (n.d.). Canon van de Noordkop (By C. Misset). Canon Van Nederland. <https://www.canonvannederland.nl/nl/noord-holland/noordkop>

Dee, C. (2004). Form and Fabric in Landscape Architecture: A Visual Introduction. Taylor & Francis.

Dellenbaugh-Losse, M., Zimmermann, N. E., & De Vries, N. (2020). The Urban Commons Cookbook: Strategies and Insights for Creating and Maintaining Urban Commons. Dellenbaugh-Losse, Mary.

Feinberg, A. (2022). Community Resilience through the Urban Commons | TU Delft Repositories. <https://repository.tudelft.nl/islandora/object/uuid:7566ecef-fa11-4843-907b-fb264617e17b?collection=research>

Foster, S. R., & Iaione, C. (2018). Ostrom in the City: Design Principles and Practices for the Urban Commons. Forthcoming, Routledge Handbook of the Study of the Commons (Dan Cole, Blake Hudson, Jonathan Rosenbloom Eds.). https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3130087

Gehl, J., & Rogers, L. R. (2010). Cities for People (Illustrated). Island Press.

Gemeente Den Helder, MOOI Noord Holland, & SCHOUT rv&b. (2021). Gebiedsbiografie Den Helder zeestad op het wad: Het verleden verankeren in de toekomst [PDF]. Gemeente Den Helder.

Genossenschaft Kalkbreite. (2022, November 21). About us | Genossenschaft Kalkbreite. <https://www.>

kalkbreite.net/en/about-us/

- Gerber, J. D., & Hess, G. (2017). From landscape resources to landscape commons: focussing on the non-utility values of landscape. *International Journal of the Commons*, 11(2), 708–732. <https://doi.org/10.18352/ijc.745>
- Hardin, G. (1968). The Tragedy of the Commons. *Science*, 162(3859), 1243–1248. <https://doi.org/10.1126/science.162.3859.1243>
- Helderse Historische Vereniging. (2022, September 16). Helderse Historische Vereniging • De geschiedenis van Den Helder in beeld & geluid. <https://heldersehistorischevereniging.nl/>
- Hess, C. (2008). Mapping the New Commons. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.1356835>
- Hopf, T. (2006). The right of public access to the landscape as a commons situation. *Gaia* (Heidelberg). <https://doi.org/10.14512/gaia.15.1.7>
- Institut für Kunst und Architektur [IKA], & Avermaete, T. (2016, November 21). Tom Avermaete | Praxis Communis: The Rituals, Pleasures and Politics of Cooperation | 21.11.2016 [Video]. Vimeo. Retrieved May 9, 2023, from <https://vimeo.com/262036902>
- LIVING LAB: CONSTRUCTING THE COMMONS. (2019, April 9). Issuu. https://issuu.com/ika-vienna/docs/livinglab_constructing_the_commons
- Menatti, L. (2017). Landscape: from common good to human right. *The International Journal of the Commons*, 11(2), 641–683. <https://doi.org/10.18352/ijc.738>
- Monderkamp, H., Monderkamp, H., & Monderkamp, H. (2022, December 20). duesselgruen – Offener Gemeinschaftsgarten. <https://www.duesselgruen.de/>
- Nassauer, J. I. (1995). Messy ecosystems, orderly frames. *Landscape Journal*, 14(2), 161–170. <https://doi.org/10.3368/lj.14.2.161>

- Rowe, J. (2013, March 16). The Hidden Commons. Jonathan Rowe. <https://jonathanrowe.org/the-hidden-commons>
- Rugel, E. J. (2019). Connecting natural space exposure to mental health outcomes across Vancouver, Canada [PhD-thesis, University of British Columbia]. <https://doi.org/10.14288/1.0377727>
- Stavrides, A. P. S. (2016). Common space: The City as Commons. Bloomsbury Publishing.
- Turner, N. J., Davidson-Hunt, I. J., & O'Flaherty, M. (2003). Living on the Edge: Ecological and Cultural Edges as Sources of Diversity for Social–Ecological Resilience. *Human Ecology*, 31(3), 439–461. <https://doi.org/10.1023/a:1025023906459>
- What is Placemaking? (2007). Project for Public Spaces. Retrieved September 26, 2023, from <https://www.pps.org/article/what-is-placemaking>

Images

- Figure 1: Hansnijders. (2023, January 1). Gemene grond - Han Snijders - documentaire teksten. Han Snijders - Documentaire Teksten. <https://han-snijders.nl/gemene-grond/>
- Figure 5: Genossenschaft Kalkbreite. (2022, November 21). About us | Genossenschaft Kalkbreite. <https://www.kalkbreite.net/en/about-us/>
- Figure 6: Monderkamp, H., Monderkamp, H., & Monderkamp, H. (2022, December 20). duesselgruen – Offener Gemeinschaftsgarten. <https://www.duesselgruen.de/>
- Figure 11: Gerber, J. D., & Hess, G. (2017). From landscape resources to landscape commons: focussing on the non-utility values of landscape. *International Journal of the Commons*, 11(2), 708–732. <https://doi.org/10.18352/ijc.745>

Figure 20, 24 & 27: Gemeente Den Helder, MOOI Noord Holland, & SCHOUT rv&b. (2021). Gebiedsbiografie Den Helder zeestad op het wad: Het verleden verankeren in de toekomst [PDF]. Gemeente Den Helder.

Figure 34: Luchtfoto 2022 ortho 8cm RGB. (n.d.). [Dataset; QGIS]. In Pdok service (V1_0). https://service.pdok.nl/hwh/luchtfotorgb/wms/v1_0

Figure 41: Architectenweb. (n.d.). Luchtsingel beleeft officiële opening. Architectenweb. <https://architectenweb.nl/nieuws/artikel.aspx?id=37036>

Figure 42: Jett, M. (2022, December 23). Moses Bridge / RO&AD Architecten. ArchDaily. https://www.archdaily.com/184921/moses-bridge-road-architecten?ad_source=search&ad_medium=projects_tab

Figure 43: Luchtfoto 2022 ortho 8cm RGB. (n.d.). [Dataset; QGIS]. In Pdok service (V1_0). https://service.pdok.nl/hwh/luchtfotorgb/wms/v1_0

Figure 46: Renaturation of the River Aire, Geneva. (n.d.). Landezine. <https://landezine.com/renaturation-of-the-river-aire-geneva/>

Figure 48: Abdel, H. (2022, March 28). H.C.Andersen Hus Museum / Kengo Kuma & Associates. ArchDaily. <https://www.archdaily.com/979082/hcandersen-hus-museum-kengo-kuma-and-associates>

Figure 49: Broedponton voor anker in Balgzandpolder : | Landschap Noord-Holland. (n.d.). <https://www.landschapnoordholland.nl/nieuws/broedponton-voor-anker-balgzandpolder>

Figure 50: Trælvikosen. (n.d.). <https://www.snohetta.com/projects/traelvikosen>

Glossary

accessibility. (2023). <https://dictionary.cambridge.org/dictionary/english/accessibility>

Basurto, X. (2013, March 12). Common-pool resource | Natural Resources, Sustainability & Conservation.

Encyclopedia Britannica. <https://www.britannica.com/science/common-pool-resource>

commodification. (2023). <https://dictionary.cambridge.org/dictionary/english/commodification>

Definition of common. (2023). In Merriam-Webster Dictionary. <https://www.merriam-webster.com/dictionary/common>

Definition of interaction. (2023). In Merriam-Webster Dictionary. <https://www.merriam-webster.com/dictionary/interaction>

Definition of occupation. (2023). In Merriam-Webster Dictionary. <https://www.merriam-webster.com/dictionary/occupation>

interaction. (2023). <https://dictionary.cambridge.org/dictionary/english/interaction>

Kdkasi. (2023, July 8). What is Social interaction? - Sociology Learners. Sociology Learners. <https://www.sociologylearners.com/what-is-social-interaction/>

Resource Definition & Meaning | Dictionary.com. (2020). In Dictionary.com. <https://www.dictionary.com/browse/resource>

