

Self Reflection

*Luctor et Emergo*¹

'An island without an island'

The Delta Interventions theme for this year is landscapes of coexistence, which focuses on transitional spaces, infrastructure and power in the North Sea. Within the context of the North Sea, I depicted the Netherlands as a battleground, with the Dutch in a constant struggle against it. Thus, the project is an interpretation of the long-standing tradition of the Dutch battle against water. As Adriaan Geuze said: "You were born a sinner and had to earn heaven by doing battle with the sea."² According to Geuze being born a sinner can also be a gift; as this struggle challenged and strengthened the Netherlands' capacity for technical work, design, imagination and art. This led me to choosing my site, the Wadden Sea, where this battle between the land and the sea is at its most extreme. The Wadden Sea is a transitional border between the northern coast of the Netherlands and the North Sea and its ever-changing borders, moving and even sometimes vanishing islands drove me to study the dynamics behind this malleable habitat.

Ravenous Water Wolf

The long-standing battle between the Dutch and against water became the central tenet of my research. The heraldic motto of Zeeland, 'Luctor et Emergo' means 'I struggle and Emerge' in Latin, and is the name given to the project. During my research, I scanned numerous maps from archives and books to investigate this battle and how it is represented. The representative image on the cover is a symbolic depiction of this battle as an animalization of the Netherlands, an orange lion, battling with a grey sea wolf. This depiction is originally comes from a map of Harlemmermeer planned by Jacob Bartelsz in which you recognize the lion and the wolf above the poem of Joost van den Vondel who calls it the 'Ravenous Water Wolf'.

Moving Islands

Wadden Sea is an ebb tidal delta, where the sediment sharing system causes the Wadden islands to demonstrate a highly dynamic morphological pattern. According to Hellwig and Stock "Large scale examples of continuous geological processes and morphological interactions are on public view in the Wadden



Civil Guards of the Wadden Sea

Jan Cyganski, Julia Holtland, Deniz Üstem, November 2017



Detail from the Map of the Harlemmermeer with its surrounding Waters and Places, 1641

An orange lion battling with a grey sea wolf

¹ Heraldic motto of Zeeland which means 'I fight to emerge'

² Adriaan Geuze, Flatness, Mosaics West 8, January 2008

Sea. Among the most spectacular are the creation, continual shifting and changing, and ultimate disappearance of many of the region's uninhabited natural islands, along with all the biota they support.”³ They also remark that the highest mean shifting rates are reported from *The Netherlands*⁴. This lead me to map the morphological transformations of the territory in three different scales, with each scale posing different problems. The first scale is the Wadden Sea Area (from *The Netherlands* as the westernmost extremity to *Denmark* as the northernmost). The second scale is the West Frisian Islands and Northern Netherlands, with the third scale being the island Schiermonnikoog.

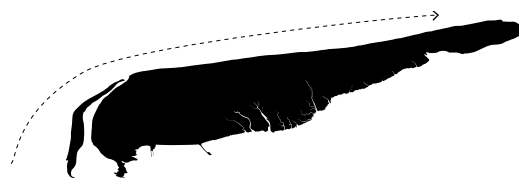
After this interscalar research, I found that the Wadden Sea loses its habitat and requires sustainable tourism while the West Frisian Islands and the Northern Netherlands are threatened by coastal squeeze, droughts, salinization and the dynamic morphology of the island. And finally, after I scaled down to island Schiermonnikoog, I recognized it as being the most dynamic West Frisian island which is highly affected by tidal changes. I also demonstrated the mobilization of the island with maps in the last 175 years which demonstrates the island moved approximately 1,2 kilometres in the last 5 years.

During this interscalar research, the disappearance of some of these Wadden islands surprised me. The island Jordstand is the most extreme case. The island, which used to be an island on the Danish border of the Wadden Sea was destroyed in a series of storm tides. However, in 1971, it was as big as the island Schiermonnikoog. Since it was not protected by dikes and wasn't nourished by sand, it has disappeared in the currents of the North Sea. Today it is just a shallow sandbank and no more than a google landmark on the map. Studying the case of Jordstand carried my morphological research into reconsidering the island Schiermonnikoog which is also threatened by disappearance because of tidal changes and its dynamic morphology. By taking the Jordstand case into account, I aimed to consider the question “What if the island Schiermonnikoog slowly disappeared into the currents of the North Sea?”

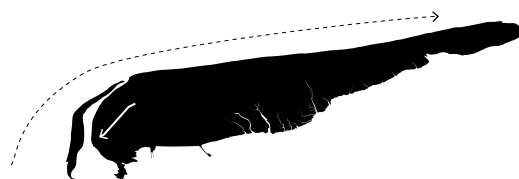
At first, this project scenario should aim to protect the habitat of the Wadden Sea in a sustainable way. The second, it should mitigate the droughts, coastal squeeze and salinization. Lastly, it should protect at least part of the island from the highly dynamic landscape. This lead me to design an infrastructure which produces water, but also protects the island and its habitat. Water production is already an industry on the island, serving as a natural source of drinking and bathing water. It also should give back and protect the land that it draws from however. As a typological approach, it should be a fort which protects its own fresh water source.

The Myth of “Making New Land”

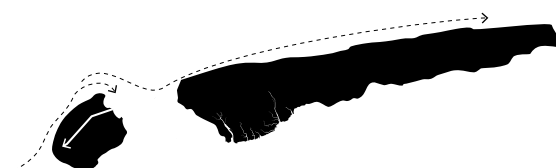
The project traces the myth of “making new land” by investigating four major themes adopted from a recent publication ‘*Sweet and Salt: The Water and The Dutch*’. These four themes are perceived as a thematic backbone of the Dutch waterscapes. Therefore, the intention was to analyze the Wadden Sea and the island of Schiermonnikoog by using the themes: conflict, concord, profit and pleasure. After the investigation of these four themes, the motive here is to project them into the future by using the scenario method mentioned above. This scenario envisions a future when the West Frisian island of Schiermonnikoog is left to nature and risks slowly disappears into the currents of the North Sea. The design intervention narrates a new myth: “guarding the water” by using the typology of a fort. The scenario has four chapters and each of them narrates a different time period of the island's future.



Chapter 1 - The Pontoon



Chapter 2 - The Hydraulic Machine



Chapter 3 - The Sand Machine



Chapter 4 - Inhabited Infrastructure

Decay of the Island Schiermonnikoog Chapter 1,2,3 and 4

³ Ulrich Hellwig, Martin Stock, *Dynamic Islands in the Wadden Sea*, Wadden Sea Ecosystem no.33, 2014

⁴ Ulrich Hellwig, Martin Stock, *Dynamic Islands in the Wadden Sea*, Wadden Sea Ecosystem no.33, 2014

The Pontoon (Building the Hydraulic Machine)

Chapter 1

The island has no concrete industry to build solid and durable constructions with concrete and the logistics are quite problematic due to a lack of proper roads for vehicles and the limited weight capacity of only 30 tons per day that can be carried to the island. Because of these problems, the construction was decided to be made by pontoons and the dredging of a canal on the island. After constructing the canal, pre-cast pieces of concrete are carried onto the site. After the construction of the hydraulic machine is completed, part of the dredged canal is again closed by natural forces and the sand. And the rest of the canal is used for transportation of people and goods.

The Hydraulic Machine

Chapter 2

The Hydraulic Machine consists of eight major components to produce fresh water by using freshwater lenses that are formed under the dunes of Schiermonnikoog. At first, the water is collected by water wells and sent to the water towers. After being collected in the tower, the water is pumped to be filtered. After the water is purified, it is sent to the cistern with the aqueduct. The Cistern is placed at the end of the Hydraulic Machine which remains on the south-west of the fort. The Cistern has a massive body and an underground space where the final processed water is collected below the ground surface. As the island changes within the forces of the Wadden Sea, the dunes get lower and the water lenses below them get smaller. At that moment, the fort starts to pump the salt water inside and begins the desalination process.



The Theme of the Conflict:
De doorbraak van de Sint Anthonisdijk bij Amsterdam
Willem Schellinks, 1651, Amsterdam Museum

Sand Machine

Chapter 3

As the island becomes extremely dynamic, the Hydraulic Machine has a secondary function to resist the forces of the sea. The machine starts carrying sand from the East to the West to keep the ground safe and rigid. In other words, from where the sediments are deposited by sedimentary systems to where the sediments are eroded. Some more people are charged with filling the river barges with sand, crossing the canal and leaving it in the places exactly where the erosion is hazardous.

The Dead Souls (The Inhabited Infrastructure)

Chapter 4

One day, during the dredging processes of the sand from the Eastern peninsula they discovered the archaeological remains of an old monastery which was built and disappeared hundreds of years ago. This creates huge enthusiasm among the public and the archaeologists. Initially, only a group of archaeologists arrive at the fort to preserve and reconstruct the remains of the old monastery. They inhabit the abandoned parts of the hydraulic machine as a workspace and a shelter. After the reconstruction of the monastery, they find some other remains around the territory of the fort. Other artefacts were also found in the remains of the buildings which were created on parts of the island that had become submerged. Then the archaeologists completely colonize the submerged territory, to find and reconstruct the remains of lost artefacts from the disappeared island. Eventually, the fort becomes an infrastructure for the dead souls of the island Schiermonnikoog.

In a wider architectural context, the biggest challenge of the project was to seek for an architectural design solution to an engineering design problem. For that purpose, the project may be considered as an experimental and imaginative design study of a water production facility mostly designed by engineers. On the other hand, the extreme morphology of the territory and the unpredictability of the landscape gave other challenges. The project deals with this unpredictability by giving a second function, carrying the sand, to the water facility. This architectural intervention, described by the above four events, marks itself on the ever-changing landscape of the Wadden Sea. From that point of view, it may seem an untraditional solution to a traditional problem. But initially, it follows the long standing tradition of the battle between the Dutch and the Water by taking it standpoints from the themes: conflict, concord, profit and pleasure. It conflict with its territory, and became a body of conflicting.