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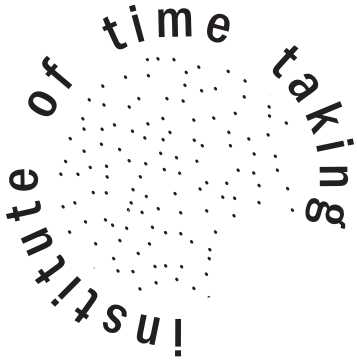
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(www.iott.nl)

Result of the elective course AR0048 - ‘Landscape Architecture ON site, being part of Oerol 2014’ Msc2/Q4
offered by the Chair of Landscape Architecture, Faculty of Architecture
TU Delft

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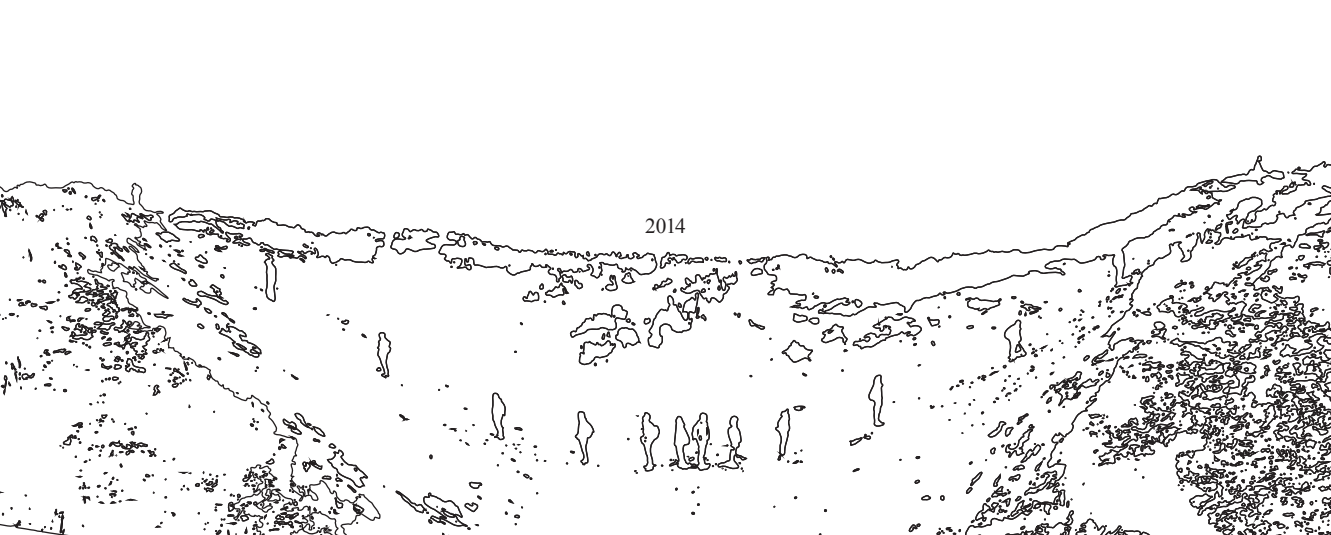


2014

INTRODUCTION

This booklet is published to show the results of a project developed during the fourth edition of the Master elective course AR0048, offered by the chair of Landscape Architecture - 'Landscape Architecture ON site, being part of Oerol Festival 2014', where fifteen students of the Faculty of Architecture and two tutors of the Chair of landscape ArchitectURE were involved.

The aim of this elective is to give the opportunity to students of the faculty of architecture to develop and build a temporarily landscape artwork as an unique experiential learning opportunity, turning abstracts concepts into a concrete artefact. During the course Ideas have to be checked and adjusted to turn them into a 1:1 object, the interaction with the public have to be thought and incorporateD in the design process.

Landscape, art and science come together in this experimental project. This design process is based on experiencing the place, results of theoretical and landscape studies, workshops, brainstorm discussions. The contribution of this year to the expedition program of Oerol Festival – Sense of Place is called, the 'Institute of Time Taking – IOTT'. IOTT attempts to unveil the sensorial characteristics, knowledge and discussions nvolved in the dune landscape of Terschelling.

The location

This year, we were located on the eastern part of Terschelling, at Kaapsduin. Kaapsduin is part

of a dune complex which has been stabilized to protect the villages and the polder behind it from being covered with sand brought mostly by strong winds and waves coming from the northwest / north-northwest. From the primary dunes that first form along the North Sea coast, the sand has been moving towards Kaapsduin, where it encounters obstacles formed by human interventions, such as rows of trees and sand dikes. Due to this process, Kaapsduin has being growing to a height of thirty one meters, offering a splendid view of both the North Sea and the Wadden Sea. However, since the 90's, parts of the stabilized primary dune formations along the North Sea coast across from the Kaapsduin are being opened and lowered in some parts, allowing changes to occur in the landscape.

On this part opened up part of the island, sand is blown into the island rather than stopped by the primary dunes. This creates a dynamic formation called 'stuifduinen' (sand dunes), where special and varied flora and fauna appear in contrast to the more stabilized parts of the dunes, where rarer flora has slowly disappeared following succession in a stable system. This experiment of opening and lowering the primary dune formation is monitored by the Forestry Comission and seeks to understand what are the possibilities of letting the island level up again by allowing new sand in order to form a natural defence against the sea level rise. On this point of the dunes where we are located it is possible to see both: the stabilized primary dunes and the dynamic ' stuifduinen'. The project itself is located on the old dunes covered by species like grasses, mosses, buckthorns and uses two dune pans formed on the northwest side of Kaapsduin.

The design process

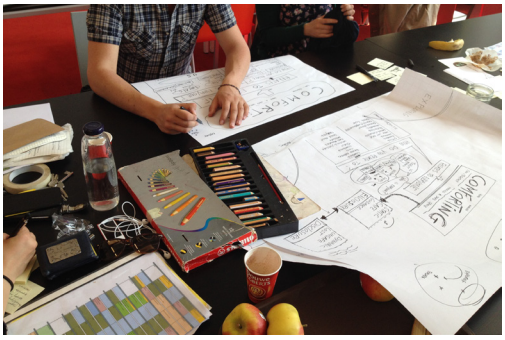
Through a three-day introductory field trip to Terschelling, we have made several excursions on the island and visited the site location for the project. Additionally, we executed short brain storm sessions in the depot of Oerol and attended a lecture by Freek Zwart from Staatsbosbeheer. The main idea was to experience the dunes at Kaapsduin through the senses and by searching for the natural patterns, materials, and history related to it. Back in the atelier, we studied texts on the formation of the island and concepts of Land Art, Genius Loci, walkscapes, place and narratives.

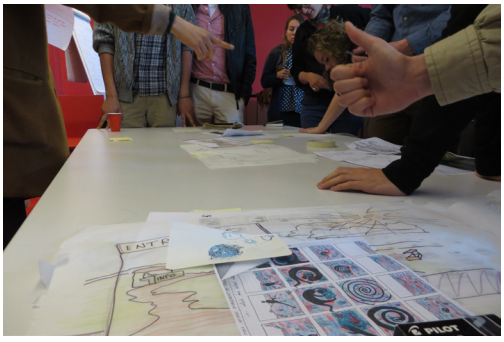
Experiences and ideas generated during the field trip and studies in the atelier have led to several concepts for an intervention in the location that creates or enhances a 'sense of place'. During the design weeks several workshops were held with guest artist – Erick de Lyon and Irene Fortuyn – and experts on Terschellings' landscape and materials such as sand – Albert Oost and Mark Voorendt – to provide new inputs and possibilities.

This was the time to generate as many ideas as possible and check them in order to step over our own limitations, reaching the unexpected. Some questions we tackled were: - How can we create narratives for this specific site? How can we include real and fictional stories in a design? How can the narratives involve the visitors? Does the project have a self-evident aesthetic quality? Is it clear, mysterious, ephemeral, attractive, repulsive? What is the relation among landscape/place/ location, the intervention/object, the designer and the visitor? In which way does the visitor interact with or participate in the project?

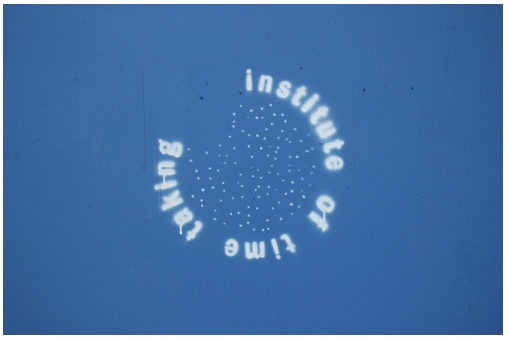
The project

The final project encourages different points of view along a predetermined route addressing the site in multiple ways. Among them are two ways which stand out: the scientific and the sensorial approach. Together they can create a narrative based on the topographical features of the dune landscape, on its history and processes, on its hidden beauty and environmental qualities, on challenges it has to face to cope with






HERE AND NOW HOW ARE YOU


institute of time taking

environmental changes.

The briefing was: ‘The task is to create narratives that resonate with the stories and history of a specific place – stories that includes both the built and the natural world, the real and the fictional past and enables visitors to project their lives into the future.’

The scientific part of the project is embedded in the predetermined routing. This path is guided by six speakers broadcasting information and facilitated via a toolkit.

The theme on the speakers are sequenced as

1. The Chaucis by Plinius
2. Fauna
3. Tide
4. Sediments
5. Flora and
6. Dunes

The toolkit contained a folded A3 pamphlet with a map of the dunes around Kaapsduin, cross sections showing the evolution of the dunes since 3000 B.C. till now, drawings showing the landscapes dynamics of the sand dunes, a succession cross section and related fauna and flora. Along that, several tools are included: a wind sock, a magnifying-glass, a cyanometer, a green meter, a sand racer. With these instruments it is possible to playfully measure some of the conditions of the site, such as for instance, how blue the sky is (cyanometer) or the speed and direction of the wind (wind sock).

The path itself, as well as the toolkit, act as tools allowing the visitor the possibility to discover the dune landscape. Although the project provides information, prescribes a route and sequence of events, it seeks to be less didactic and more enabling. However, the ultimate experience each visitor has is unique and lies in the visitors themselves.

The main issues addressed during the route are the origin, dynamics and formation of the dunes, the dune landscape succession and the most common fauna and flora to be found on the site. Here ,the time is expanded in order to explain the formation of the landscape through the last millennia. The route offers an intentional frame, an overlaying of fragments (the landscape itself, instruments, speakers, experiences) lined up however in a loosely/random way giving the visitor the possibility to combine them constructing a personal and meaningful story which not necessarily follows a sequential chain of events.

The sensorial approach explores the texture, colours, temperature, wind, sounds of the dunes and its vegetation and materials. The specific characteristics of each experience can be defined as:

1. (dashes pattern) lying in a sun bed in the reeds field or under plum trees

2. (worm pattern) sitting on the ground leaning in a very small dune pan enclosed by moss, honeysuckle and marram grass

3. (wave pattern) sitting on a big rocking chair looking direction sand dunes by the North sea side of the island

4. (dot pattern) sitting in a rotary chair placed in a sand womb

5. (hill pattern) sitting in a twin chair up the dune of Kaapsduin, having a panoramic view

The immersion into the landscape, the enclosure

of the body with the surroundings, the lack of time pressure are intended to bring the visitors closer to the place they are in, giving them the possibility of having an intimate and solitary experience. Here, the landscape itself is the plot. Unintentional events related to natural conditions like wind, sun, birds, and proximity of other users determine the coincidences and possibilities of chance encounters, giving each visitor the conditions to create their own experiences and narrative of place.

'The task is to create narratives that resonate with the stories and history of a specific place - stories that includes both the built and the natural world, the real and the fictional past and enables visitors to project their lives into the future.'

The alternation of approaches unveil the characteristics of the dune landscape which are already there, triggering the visitor to look closer and to discover the aesthetical character of the surroundings, giving them the possibility to identify themselves with the uniqueness of the landscape by perceiving it with all their senses. This allows this previously unknown and anonymous landscape to become part of the visitor's memory and knowledge related to their individual experience. Through the approaches facilitated by the project, the dune landscape became, at least for a while, a place with a specific story and meaning.

This is a story of walking through the dunes, discovering them, sitting in a blue chair, alone, with the memories and the emotions it brings. The participation and engagement of the public is mostly achieved by the fact the project is not imposing, but leaves to the visitor to interpret and to construct their own stories.

In this project, walking is a primary act. The territory will transform symbolically through walking, not leaving permanent traces. While the project acts superficially on the site, its impact on the visitor is lasting.

The visitor and us

Besides expressing the landscape of Terschelling in a landscape artwork and relating it to theories of place and narrative, the project had the experience of the visitor as an important component. The issue of how to approach and involve the visitor in the project was developed in such a way that the visitor is actively involved by following preestablished activities.

The visitors mostly come in pairs, some of them alone or in larger groups, and always by bicycle, the best way to move around Terschelling. The majority are middle-aged, open for new experiences, talk actively, gentle and cooperative.

As soon as they have parked their bicycles and crossed the path along the entrance of our project one of us - distinguished from the rest of the crowd by a uniform of a blue shirt with a small red dune sewed on the left side and scheduled to be 'in front' - will greet the visitor:

"Hallo we are from the TU Delft,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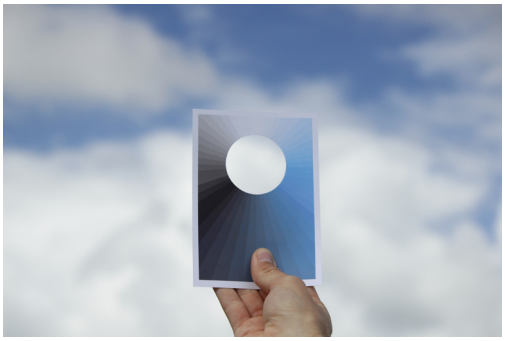

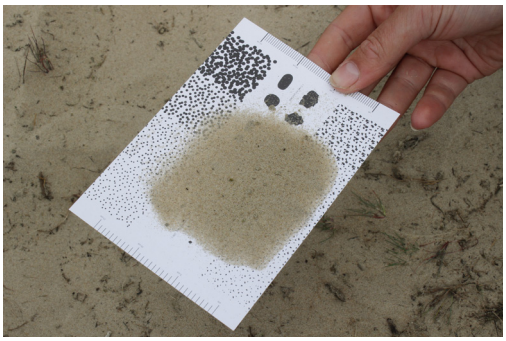

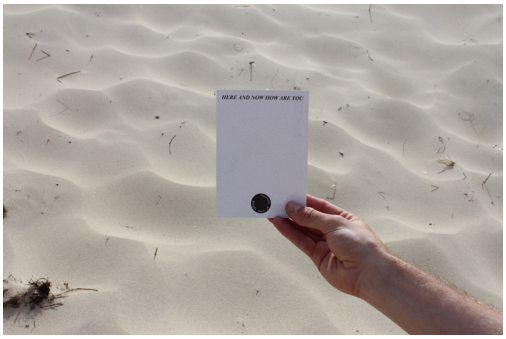
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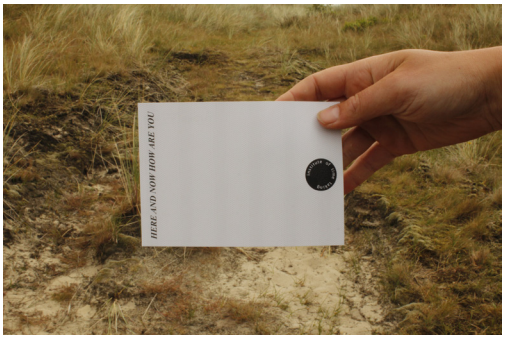
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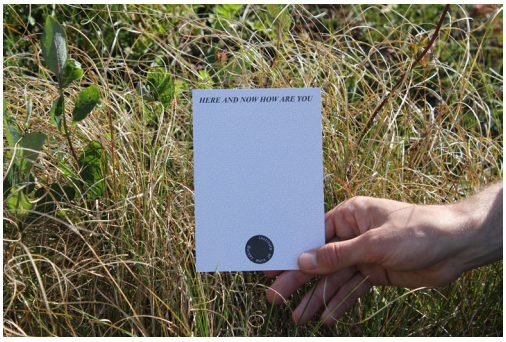

HERE AND NOW HOW ARE YOU

students of architecture, some of us studying landscape architecture. Our project is about the dunes of Terschelling, we have punctuated a routing along the dunes you can follow indicated by the small blue poles. Take a toolkit with you, in there you have a collection of instruments you can use along the route, there is also a pamphlet with some information about the dunes and how to use the instruments"

"No, you don't necessarily have to read it before going - take your time and use it during your stroll."

At that moment someone scheduled to be 'inside'- sitting inside the wagon and assembling the booklets - will hand the visitor a toolkit in exchange of bags, jackets. The visitor is suggested to leave their belongings behind to concentrate on the experience, on the moment itself, on the landscape they are in.

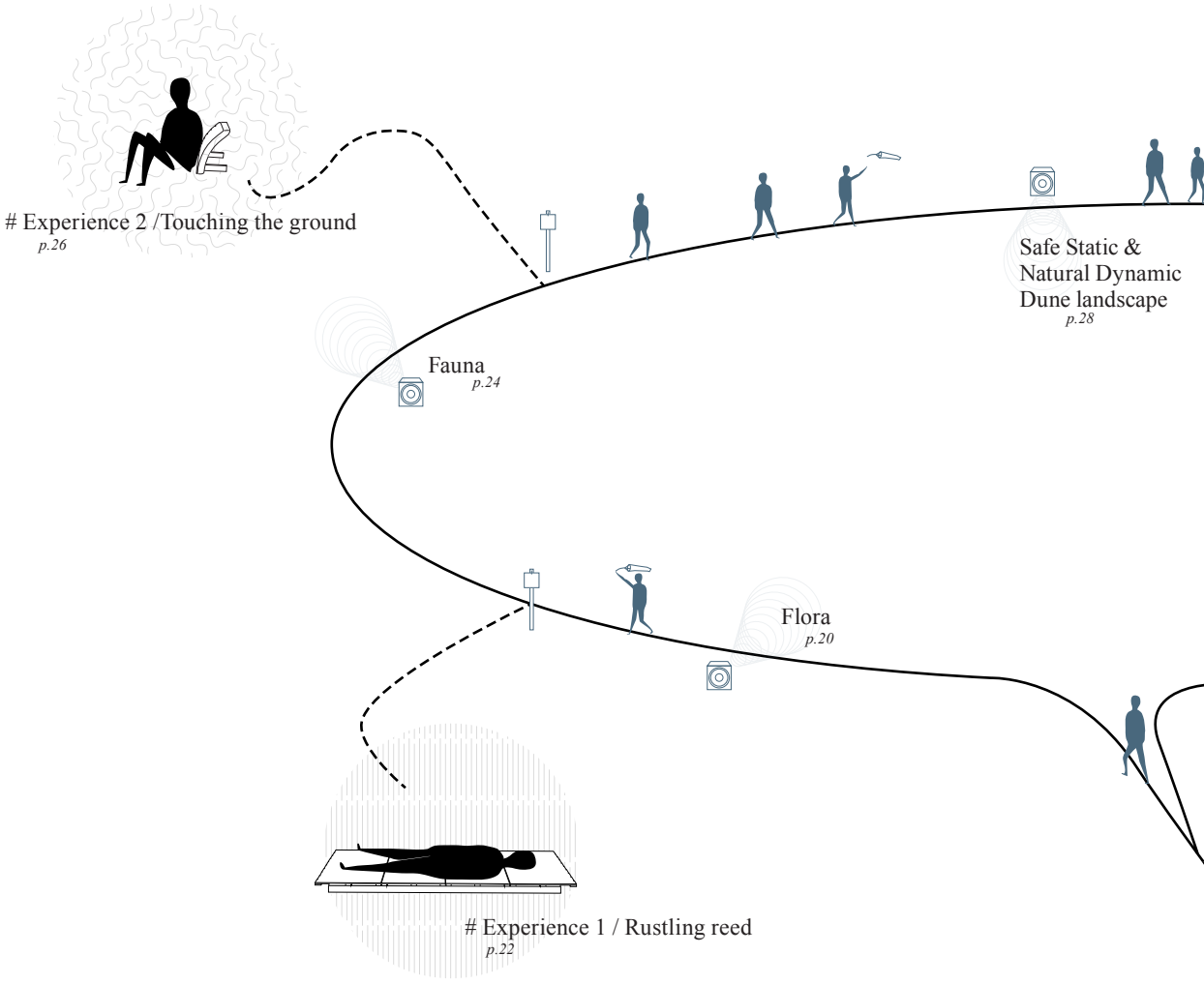
Inside the toolkit – designed with the main routing as part of the scientific aspect of the project, there also is a post card with a pattern printed on it. In fact there are five different patterns acting as the keys to five different experiences spread along the routing. Each visitor gets one by chance. Through this post card, the visitor is allowed one of the 'experiences'. They find the matching pattern by looking for patterns placed on large poles along the route. The patterns are printed in a wooden tile and nailed on one of the five poles along the routing. The post card is also the item where they can leave comments on after they've experienced the project. The place to write this postcard is a 'sitting room' next to wagon, where they can find pens and a mailbox.

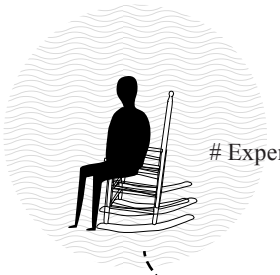
Now, the visitors are ready to go. They have to climb a few meters of old dunes to get inside our project. The specificity of the topography, vegetation and views determine the form of the routing. It is a play of being inside a dune pan, getting a glimpse of the other visitors and poles spread along the route and being out of sight, or walking along a dune crest along a very small path with a splendid view. It is a path of about 800 meters, punctuated by marks spread in equal intervals; the six speakers spreading information and deliberated placed in between de five experiences entrances poles.

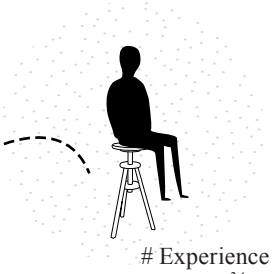
The experiences allow for a more sensorial way of knowing the landscape. At each of the experience entrance poles stands one of us. When the visitor's postcard matched the pattern on the pole, the visitor is asked to leave their booklet behind and come with us. They are then accompanied individually to an isolated spot with specific landscape characteristics and marked by a special chair related to this landscape they are in. The visitor is left there for a while.

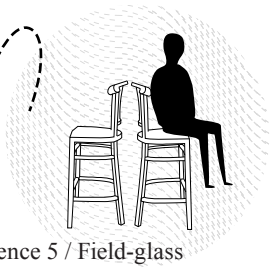
"Take a seat in the blue chair, enjoy your time, I'll come to take you back"

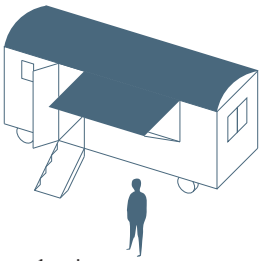
The visitor is collected, and brought back to the path to continue their exploration of the path. At the end of the route, the visitors returns to the entrace. Here they can sit at our 'living room', reflect upon their expereinces, write the postcard and put it in the mailbox. to be sent to whoever they addressed it to. After exchanging their toolkit for their belongings, the visitor can continue their exploring of the entire island and the Oerol festival, hopefully with a new sensibility to the details of the dune landscape.


Experience 2 /Touching the ground
p.26
Safe Static &
Natural Dynamic
Dune landscape
p.28
Fauna
p.24
Flora
p.20
Experience 1 / Rustling reed
p.22
People
p.44







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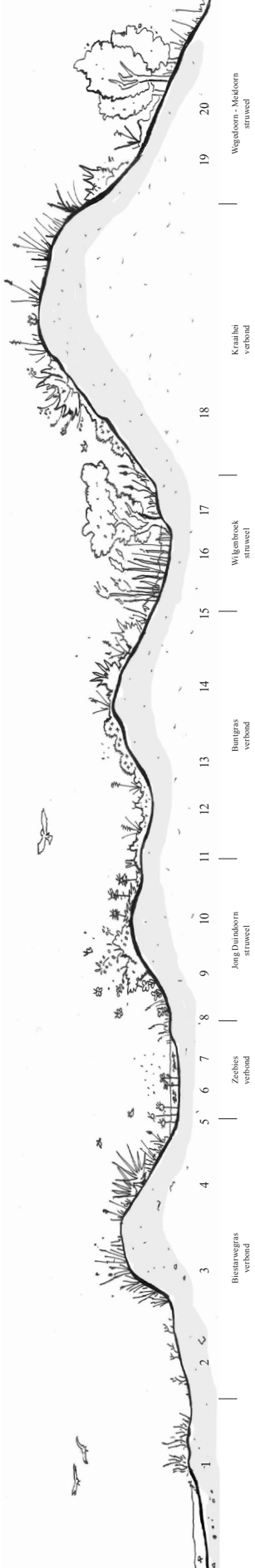
KAART



17

Lisdotter
Typha latifolia

18

Struikhei
Calluna vulgaris

19

Ruwe berk
Betula pendula

20

Ratelpopulier
Populus trumula

13

Reindiermos
Cladina rangiferina

14

Schapenngras
Festuca glauca

15

Duinriet
Calamagrostis epigejos

16

Wilgenstruik
Salix rebens

9

Duindoorn
Hippophae rhamnoides

10

Blauwe Zeedistel
Eryngium maritimum

11

Duinsterretje
Syntrichia ruralis calcicola

12

Buntgras
Corynephorus canescens

5

Zeebies
Bolboschoenus maritimus

6

Zilwaterranonkel
Ranunculus baudoti

7

Rupia
Ruppia maritima

8

Duinviooltje
Ruppia maritima

1

Loogkruid
Salsola kali var. tenuifolia

2

Biestarwegras
Elymus farctus

3

Helmgras
Ammophilia arenaria

4

Zandhaver
Agropyron pubiflorum

FLORA

Looking through the lashes of the eyes, the dunes seem to have overgrown with just a few types of vegetation. The main colours are green-grey-white around the time that the Oerol festival takes plays on the island. But who opens their eyes, and looks at the landscape in detail, will find differences.

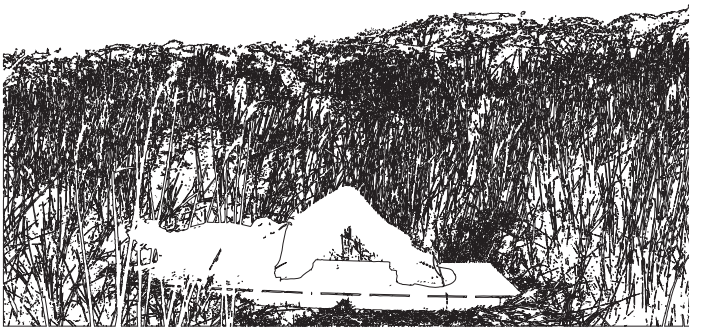
De verschillende stadia van een bepaald type vegetatie worden wel aangeduid met 'serie'. Onder droge omstandigheden, zoals in de duinen van een duinboog of de zeereep, zullen zich 'droge' pioniersoorten vestigen, die worden opgevolgd door andere 'droge' soorten van de 'xeroserie'. Onder natte omstandigheden, in duinvalleien en aan de rand van de duinboog waar zoet grondwater aan de oppervlakte treedt, zijn planten te vinden uit de 'hygroserie'. Onder zoute omstandigheden, zoals op strandvlaktes, kwelders en wash-overs, groeien zoutminnende of zouttolerante soorten uit de 'haloserie'.

These differences are shown along the route. The visitors are told about the different vegetation complexes, from star moss in the dry series (xeroserie), to bulrush and reeds in the wet series (hydroserie). Who is looking at the landscape in even more detail will find differences between for example the north and south side of a dune. Where the southern slope is dry and warm, the northern slopes are mostly wet and cold.

The factors that decide where something is growing are in a constant change when there is a so-called dynamic situation in the landscape. Processes that are happening are for instance sand drifts, decalcification, humus layer forming, depletion, seepage, acidification, periodic flooding, and erosion and deposition of sand.

In a stabilized landscape the dominant process is succession. The more stable the landscape, the further will the succession go. This stability is connected to the dynamics in the landscape. On Terschelling, there are a few different stages to be found in the succession of the vegetation. At the coast, there is a very dynamic situation where only a few species like prickly saltwort and beach grass can get grip on the landscape. By getting this grip, there is a more stable situation formed that gives a chance for species like common sea-buckthorn and grey hair-grass. In a climax stadium, hawthorn and birches are the most dominant species.

The human interventions on the landscape transformed the landscape into a more static situation. Beach grass and forests were planted to hold the young dunes, and dune-dikes were built. However, through interventions by Staatsbosbeheer (Forestry Comission) in a program called Life, parts of the island were rejuvenated and made dynamic again, creating the conditions for nature to increase diversity. Examples of interventions are the removal of a part of the dune-dike, removal of parts of the topsoil and the introduction of small and large grazers. These interventions destablilize the process of succession and allow for different stadia of vegetation to be found in the dunes again.



 # EXPERIENCE 1 / RUSTLING REEDS





The striped pattern on the postcard gave entrance to the first experience, the ‘rustling reeds’, where a winding path through the marram grass leaded away from the main route into a former agriculture area, now overgrown. At a junction, one path leaded into the reed and the other path went into an area with haggard plum trees. The visitors were told to follow one of the paths. At the end of both routes, they found a blue sun bed on which they were supposed to lay down. The beds were surrounded by either the reed or the branches of the plum trees. The only thing the visitors could see was the sky above.

After leaving the visitors for a couple of minutes on one of the sun beds, I would return back. Many of the visitors said that I had come back too early when I picked them up, others said they almost fell asleep. There were also visitors who were not sure what to expect or what to do since “the unknown was frightening”.

Many of the reactions contained a surprise about the beauty of nature; “Gorgeous experience; sun, sea, wind and silence!; Waving grasses, rustling plants, wind through your hair, the sun on your face” and “The colours change if you look closer” were things that surprised visitors told. Other visitors used the moment to reflect on their lives, “take your time, before time takes you” somebody wrote down on a postcard. And “If you can listen to yourself only then you can listen to your surroundings”. But most reactions contained a sense of rest and peacefulness or in short, “an exercise in here and now” as mentioned by a visitor..

> “Everything around me moved while I was finding my peace”.

These reactions can be explained by the restorative effect nature has on people. This effect results in reduced stress levels (Bell, Greene, Fisher, & Baum, 2001, p. 48), which was also experienced by a visitor who explained; “My head was busy with things I have to do at work but then I realised I’m here now and I have to enjoy this moment”.

Although people where left in the sun beds for only a short time, it still could have had a positive effect on peoples well-being. In a research by Tyrväinen et al. (2013) it was discovered that even short visits to nature reduced perceived stress levels. So “10 minutes of this every day” was not a weird suggestion made by one of the visitors.

The chairs at the first experience did not only give people a special experience of nature but the experience also lowered stress levels. This stress reduction was something we did not think about while designing the project but it adds an interesting extra layer to the project. And hopefully, some visitors will find the time to do this more often.





Geelpootmeeuw
Larus michahellis

Grauwe klauwier
Lanius collurio

Rose woelmuis
Clethrionomys glareolous

Blauwe kiekendief
Circus cyaneus

Zandhagedis
Lacerta agilis

Ruwe berk
Betula pendula

Velduil
Asio flammeus

Rugstree
Typha latifolia

Konijn
Oryctolagus cuniculus

Bontbekplevier
Charadrius hiaticula

FAUNA

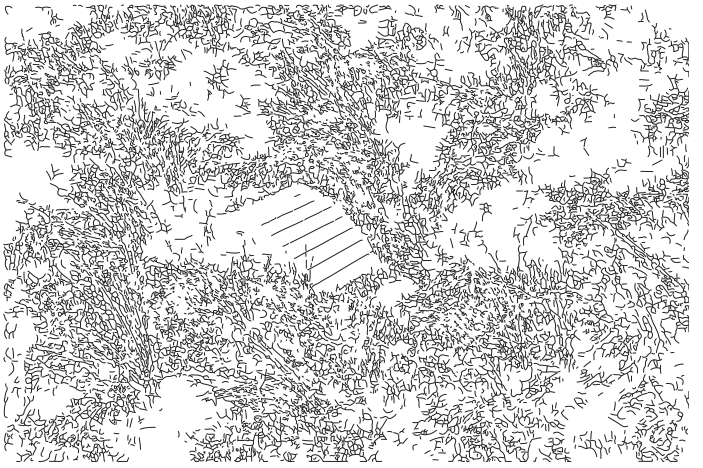
The nature of Terschelling consists of very different types of landscape with a diversity in fauna. The following will describe the fauna living in the dunes of Terschelling zooming in on our expedition project in the dunes around Kaapsduin. There is quite a difference in soil and its nutrients within the dunes which cause a differentiation in fauna found in these different dune areas.

Let's start of with some of the species that are spread over the dune area. According to Boomstra and Lautenbach (1998), there are only a few mammal species living on Terschelling because not all species can reach the Wadden islands. First of all , there are thousands of rabbits living in the dunes. whose large number can cause harm to the sea strip. There are also deer living here, which were imported in the nineties and in 1998 the island already had a population of a hundred! To conclude the mammels, the three mouse species found here are: the field mouse, the vole and the shrew. The Terschellinger dunes are also known as the breeding ground for numerous bird species like the harriers and colonies of gull which are mostly only staying for a period of time on the island. The curlew is a bird species that can be found in the dunes of Terschelling during the whole year. A characteristic amphibian you can find in this area is the natter jack toad living alongside other amphibians like the brown frog, the common frog, the small newt and the sand lizard. Terschelling also habits 45 species of butterflies, next to other insects of course, which is special while having only 110 species in the whole Netherlands. The conditions for these butterflies to flourish are still found in the dunes but when the dynamic dunes disappear, these butterfly species will also start to disappear.

Some animal species are characteristic for a certain area in the dunes: In the dry dunes the shelduck, the stock dove, the wheatear, the skylark, the oyster catcher and the red-backed shrike are found. In the wet dunes smaller birds appear like the meadow pipit, the sedge war-bler, the reed warbler and the whinchat. In these dune valleys the appearance of ducks and water rails depends on the water level. In the thicket dune area the fitis, the whitethroat, the winter wren and the linnet have their breeding ground (Boomstra and Lautenbach).

Because of fixation of the dune landscape and the rigidity of the salt marshes a lot of charac-teristic animal species of Terschelling, like the red-backed shrike, are gradually being op-pressed. Research on the red-backed shrike shows the decrease in population of the species since the eighties on the Wadden islands (Löffler).

By restarting the process of sand drifts, the fluctuation of the sand dune ecosystem can continue and the island can maintain this dynamic under influence of the sea and wind. This could give the red-backed shrike a chance to survive and procreate and also let other characteristic flora and fauna evolve freely.



 # EXPERIENCE 2 / TOUCHING THE GROUND





Honeysuckle love

For us it is repetition. Walking this path, up and down. Returning to the pole, more people waiting. Greeting, explaining. Trying to be calm, aware, polite, to get them into the mood of awareness.

The discomfort at the beginning of the walk, trying to walk next to you, starting a conversation, what do you study?

Calmness, being left alone. Rushing back to the next visitor, or secretly taking a break in the dunes.

Don't forget to enjoy this moment, look more closely at the surroundings yourself.

The rest when they return, no words are needed anymore, just the thankful smile on their faces. A silent nod as they continue their path. A deep breath when they see their companions again, ready to face the day.

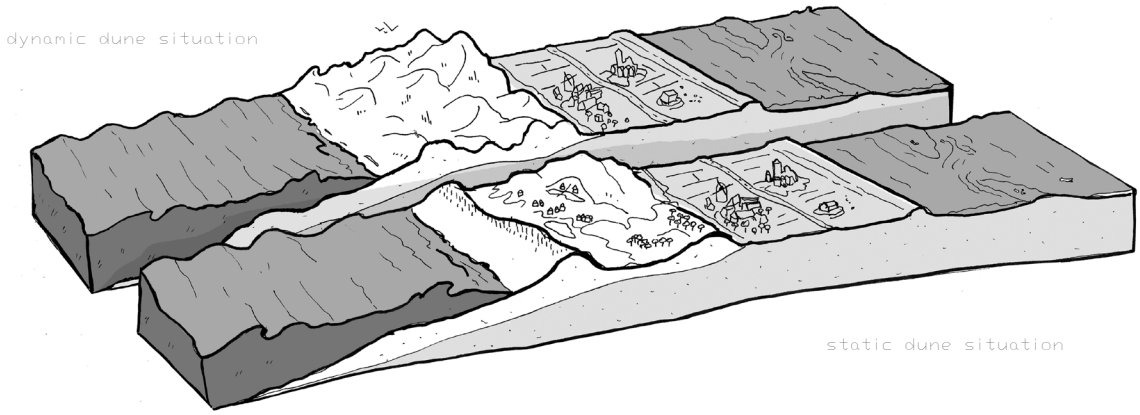
An intimate shared moment between the bringer and the guest, the smile. Those who are still waiting, or waiting for their beloved are not yet in the know.

This we share between us, now you can be in your world again.





SAFE STATIC & NATURAL DYNAMIC DUNE LANDSCAPE



Since the middle ages people have made dikes on Terschelling. At first there were low and short dikes that sometimes only resisted for a short time. Since approximately 1900, men have built the dikes in a much more professional way. The dikes were longer, higher and stronger. Along the North Sea side of the island drift dikes were constructed. Drift dikes are closed rows of artificial dunes that are formed by a combination of human and wind-driven sand transport. The coastal strip is the first line of dunes right next to the North Sea beach, and consists on Terschelling mainly of drift dikes. For years this fixed coastal strip protected the agriculture and the settlements that lay behind the dikes.

Traditionally the wind has a big influence on the formation of the landscape along the coast. This strong dune landscape, the nutrient-poor soil and the open landscape are the foundation for a very characteristic and particular biodiversity.
Behind the fixed coastal strip the influence of the water and wind changed, the dunes are no longer moving, the sand barely shifts and the seawater cannot flow into the hinterland when there is a fierce storm. This results in the stifling of the growth of many animal and plant populations. The particular abundance of species of the dune landscape will decrease and even disappear over time.

Another side effect of this artificial elevation of the coastal strip is that the land behind is getting increasingly lower in relation to the sea level. This will occur even more when there arises a drift ditch behind the coastal strip. The flounce of the dunes happens when there emerges an empty space in the landscape, the sand will spray away until the groundwater level is reached. The effect might be a sodification of the freshwater bubble beneath the island because of the pressure of the seawater causing a saline seepage on those empty spaces.

If, however, the fixed coastal strip is punctured, the dynamics of the landscape and the biodiversity will be fostered again. In 1995, the Department of Waterways and Public Works started a spraying project on Terschelling. They made eight notches in the coastal strip between the beach pole 15 and 20. The aim was to get the straight coastal stipe more adapt in the dune landscape and at the same time increasing the natural values of the hinterland. Besides that, the vegetation has been removed over five years to bring the sand of the dunes in motion. The area became spraying and it turned out that after five years the notches have become wider and deeper and the calcareous sand has been stewing into the land behind the coastal strip. The vegetation in this area is therefore rejuvenated and the straight sand dike has become incorporated into the dunes.

Broadening of the coastal strip and the other measures also influence the fresh water management since it counteracts the negative effects of the sea level rising on the island's fresh water supplies. Without coastal protection measures such as coastal accretion, offshore islands, the sand engine and the re-installation of the dynamic behaviour of the dunes, the fresh water resources will be reduced. This will eventually have major implications for the local abstraction of fresh drinking water.

Especially coastal accretion is known for its positive effect on the thickness of the fresh water bubble. This is illustrated by the area between beach pole 15 and 20 on the north side of the island. At this location the groundwater level is rising since the early 90s as a consequence of the development of the Terschelling's coast. The increased volume of sand above sea level provides a larger storage capacity for fresh water, causing the ground water level to rise. In many places, this increase in ground level resulted in fully saturated soil.

In the basin (valley) between the old coastal strip and the new dunes, the high level of ground water prevents the in flowing (or overtopping) seawater from penetrating in the already saturated soil. For lower levels of ground water, the overtopping seawater would immediately wash away due to the highly permeable sandy soil.

 # EXPERIENCE 3 / SUBLIME

The overwhelming experience of being alone in nature is one that has also been described as ‘the sublime’. It recurs to the aesthetic value of greatness that goes beyond all possibility of measurement. In the romantic period, the word was often used to refer to the greatness of nature.





The philosopher Immanuel Kant (1790) states, that we can look at nature as the sublime. Therefore, the landscape has to be experienced as a source of fear. We can feel fear, without experiencing anxiety, as the landscape turns into a depiction of ourselves. At this point it is our desire to offer small resistance and recognise to ourselves that this resistance is very low. It is impossible to get satisfaction from fear, when it is maintained forever. The pleasant feeling of joy finds its source in the acknowledgement of the cessation of an uneasiness.

This joy is dependent on the release from the danger, and is accompanied by the decision not to endure the risk ever again: in fact, it is even more unpleasurable to memorise how we felt on that occasion, not to mention about the opportunity to experience it again.

Enormous, overhanging rocks, thunderclouds piled along the vault of heaven, lightning and thunderclaps, the endless ocean, the moving mass of the sea, the strength of the wind, the depth of the sky, hurricanes and floods that leave a trail of devastation, make our resistance in the environment of minor importance compared to these great powers.

When we are in a position of relative safety, the experience of a powerful nature and the unfulfilled danger it suggets is very attractive. From this moment we are ready to call them sublime: they rise our souls above the vulgar commonplace, and discover a resistance within our inner selves that exists of a completely different nature. This gives mankind the courage to compete with the seeming omnipotence of nature.

It gives the feeling of existence, the feeling having a place of significant importance.

A woman passed my stand, with the booklet in one, and the postcard in her other hand. She watched the pattern sign. Doubtfully, she looked around.

I asked her if the patterns matched. They did, so I invited her to come with me.'I'm sorry, but I have to go to my friend, he's further on the route already. I don't need to do this.' She looked a bit nervous. Politely, I told her it was an experience just for her alone, and that she will really like it.

But it didn't matter: she said goodbye. Naturally, I wouldn't want to put pressure on her, so she passed my stand to look for her friend. Another visitor was already standing next to me, ready to be brought into the dunes.

However, a little later, the same woman came back to my stand. She said she misunderstood and that her friend also got an individual experience. I asked the lady to follow me trough the dunes. 'I'm never alone, so this is a bit scary for me' the lady told me.

'It will be alright' I said, and pointed her the way. 'If you follow this path a little more, you will find a special blue rocking chair. It's there, only for you. I will be back in a bit, so don't worry.'

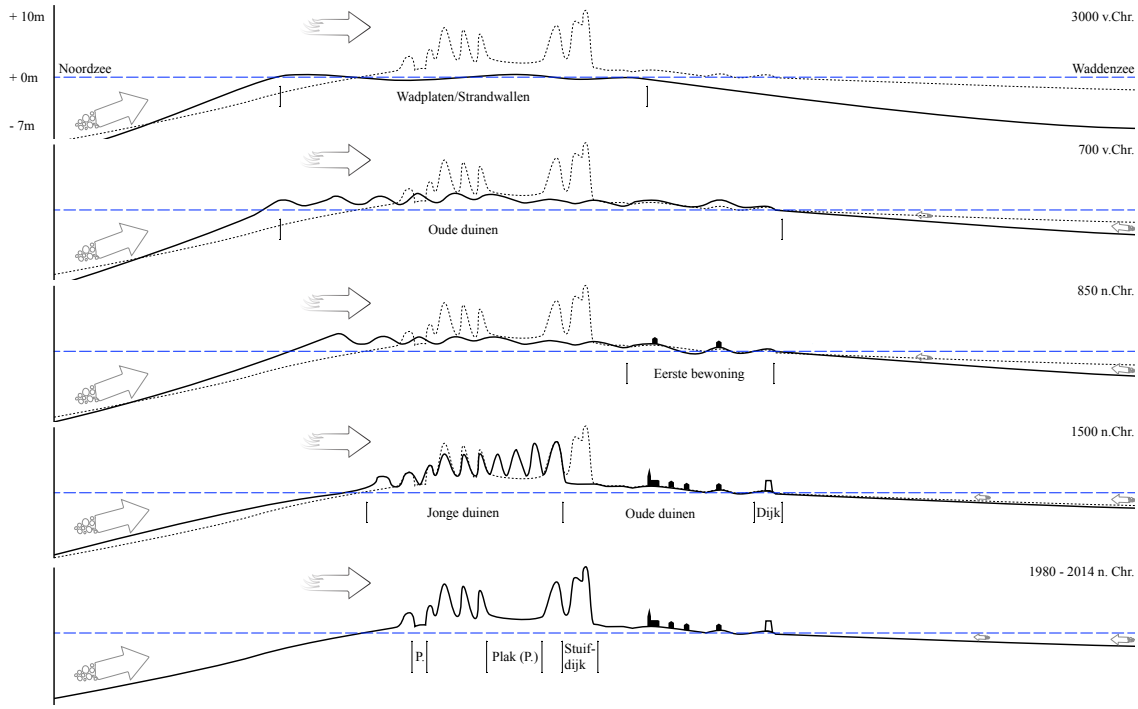
The lady nodded and followed my directions. I walked back in the opposite direction, to help another visitor.

After the two, three minutes of her time were 'taken', I came back to get the lady. Softly, not to scare her, I called her. After walking closer to the lady, I noticed that she was crying.'I'm sorry, I'm just never alone, and so influenced by my surroundings. I'm always worried about and by the people around me.'

She opened up so much, it was touching and made my eyes water. Gently, I brought her back. With a relieved sigh she thanked me, and said goodbye.






+ 10m
+ 0m
- 7m
Noordzee
3000 v.Chr.
Waddenzee
Wadplaten/Strandwallen
700 v.Chr.
Oude duinen
850 n.Chr.
Eerste bewoning
1500 n.Chr.
Jonge duinen
Oude duinen
Dijk
1980 - 2014 n. Chr.
P.
Plak (P.)
Stuif-
dijk

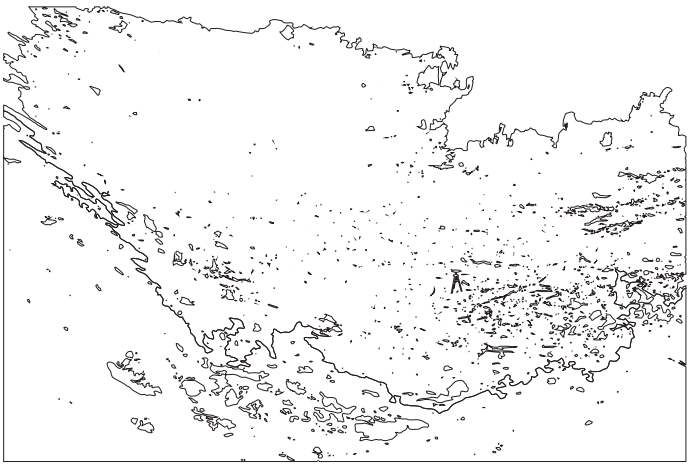
FORMATION OF TERSCHELLING

At the end of the Pleistocene, around 8000 BC, the Netherlands was under the influence of the last glaciation, the Weichsel. During this glaciation the glaciers did not reach the Netherlands. Due to the water storage in the Scandinavian glaciers the North Sea was a dry desert. Westerlies stew the sand from the North Sea to and over the Netherlands. The end of this glacial, and thus the transition from Pleistocene to Holocene, began with the melting of the glaciers. As a consequence of the melting, the water flowed into the North sea again rising the sea level once again.

Behind the first sandbanks along the Dutch coast peat began to form as a result of dying plants in a tranquil wetland situation. Around 6000 BC, the sand banks began to become mature due to sand supplies from the North Sea and further sea level rise. Further distribution by the wind of the by sea supplied sand formed the first dunes, the so-called old dunes. This process continued until 700 BC until the sea supplied more sand again. Since then young dunes form on top of the old ones to this day. These young dunes are characterized by their high spurting's of 10 meters and above. A process that is facilitated by fast growing vegetation, which retains the sand. Due to the differences in sand transport, the grain size also differs in the dunes. In general, wind-blown sand has a smaller grain size and a more uniform shape as sand that has only been under the influence of the sea or has had less wind influence.

Terschelling is one of the sand barriers in this genesis of the Dutch coast. However Terschelling was under the influence of a predominantly northwesterly and is a relatively young sand barrier (3000 BC). The sand that was supplied on the northern sand barriers, sank south of these barriers. Thereby, the first contiguous tidal flats developed and the land behind the sand barriers grew. The peat emerged at the south of the island just as it did behind the western sand barriers of Holland, but at the northern barriers the peat was later washed away during the many storm surges, leaving only the sand barriers with the present Wadden Sea.

Terschelling owes its name to the latest rift, which was called "Der Schilling". The Schelling was a tidal channel between by humans and sea raised remains of the old dunes. The settlement on these mounds, in the lee of the sand barrier, gave many advantages. Due to the Schelling, there was a route for fishermen to go to sea. The ground around the mounds was fertile as a consequence of the tidal movement over it, and finally the settlements were not overblown by the southward moving dunes. As a result the mounds from about 850 BC are the oldest inhabited places on Terschelling. The Schelling and the surrounding mounds are reclaimed from 1280 on and are located mainly along the Midslanderhoofdweg. At this time, the Wadden Sea is silting up, because at high tide more sand flows in than goes out at low tide. There are also plans to reclaim the silting up land along the current polder of Terschelling, as the Dutchmen have done since the eleventh century BC.



 # EXPERIENCE 4 /
SANDY STORY





"How nicely you were sitting there! – I heard the silence, no people or human buildings in sight, and I became silent, and happy, just by myself!"

"Silence in a pit. I visualized that all things heavy in life flew away. Also a rabbit lives here. But we didn't bother each other. I saw myself, turning old, in Terschelling."

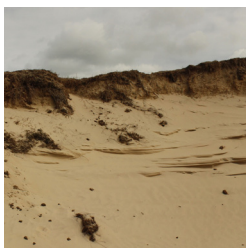
In two different valleys, both enclosed and covered by innocent sky, a blue bar chair is placed. One is a sand valley, whose surface presents different forms of wind traces throughout time. Along the white-gray edge of the top, the roots of plants are exposed, feeding a lot of birds. Here the sound of waves from the north of Terschelling is looming. The other valley, which has a deep dark rabbit hole, is covered by herbs. With the wind, you can hear the songs from the grasses, and sometimes the birds.

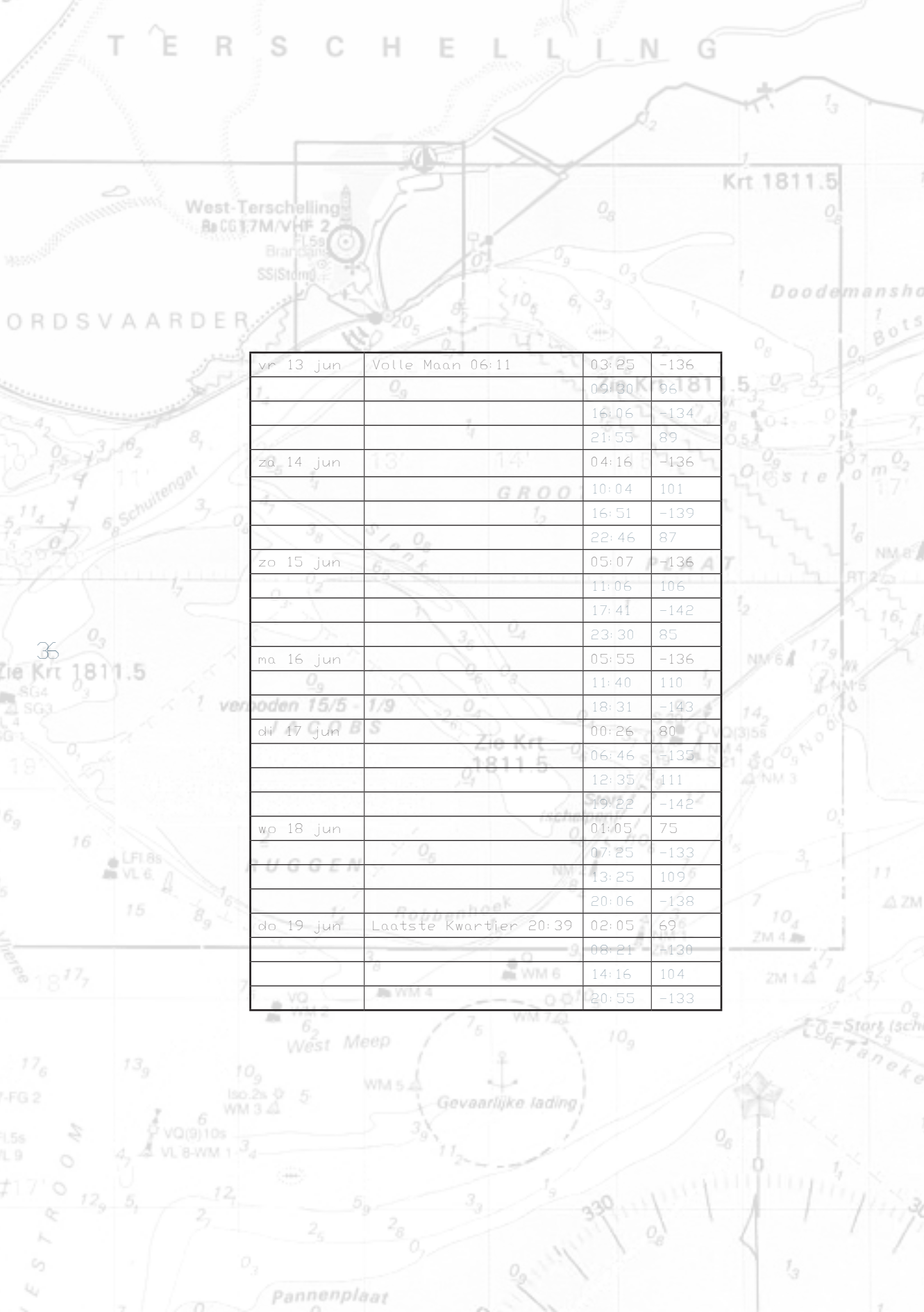
Everyday around 70 visitors came to the fourth experience, 'sandy story', all with subtle smile on their faces when they heard that the blue chair was especially for them. At that moment, these two simple blue chairs seemed to be full of magic. These two valleys, which are not that unique at first glance, can be surprisingly impressive in their own way. They give the visitors initially the same feelings, like silence, peacefulness and relaxation. In the sand valley, the wind is shivery but the sun is reflected by soft sand with warm marvellous colours - orange and yellow. Being showered by this beautiful cascade, I am alone but not lonely. In the dune valley, the deep dark rabbit hole makes this place even more enclosed, because it easily catches all the attention.

For me, seemingly endless as it is, it draws an illusion in our minds, that an unknown world might be hidden behind the darkness. Fear comes with ignorance, followed by admiration. Tightly embraced by nature, everything becomes tiny, as tiny as dust. Visitors wrote 272 postcards about their experiences at these two valleys. Some are inspiring, and some others are negative, but they are all different. Just like the story told by one of the visitors, many years ago: "two writers were sent to an island for an experiment of living alone for six months. Such painful and lonely times influenced one writer so deeply, even after he came back to the real world, which ultimately led to his death. While the other learnt how to confront silence and nature alone, and he wrote a book after the experiment and eventually spent rest of his life on the island."

This story just floated in that visitor's mind from the moment he sat on the blue chair. This shows, that by just reading the postcards you will not know how you would experience it. Rain, wind and sun will wash away the traces of the chairs in the dunes, as if they have never existed.

"We are only passers by, so live like it."

vr 13 jun	Volle Maan 06:11	03:25	-136
		09:30	96
		16:06	-134
		21:55	89
za 14 jun		04:16	-136
		10:04	101
		16:51	-139
		22:46	87
zo 15 jun		05:07	-136
		11:06	106
		17:41	-142
		23:30	85
ma 16 jun		05:55	-136
		11:40	110
		18:31	-143
di 17 jun		00:26	80
		06:46	-135
		12:35	111
		19:22	-142
wo 18 jun		01:05	75
		07:25	-133
		13:25	109
		20:06	-138
do 19 jun	Laatste Kwartier 20:39	02:05	69
		08:21	-130
		14:16	104
		20:55	-133

TIDES

Tides are the rise and fall of sea levels caused by the combined effects of the gravitational forces exerted by the Moon and the Sun and the rotation of the Earth. Some shorelines experience two almost equal high tides and two low tides each day, other locations experience only one high and one low tide each day. Some locations experience two uneven tides a day, or sometimes one high and one low each day. The times and amplitude of the tides at a locale are influenced by the alignment of the Sun and Moon, by the pattern of tides in the deep ocean, by the amphidromic systems of the oceans, and by the shape of the coastline and near-shore bathymetry.

In Terschelling, tides occur twice a day, with two even high points and two not even low points. The bigger floods are repeating here every two weeks and storms come once or twice a year.

To protect from flooding, wash-over areas in Terschelling are common. In these places during the high tide water can easily go into inland and flood it, instead of flooding residential or agricultural areas. In these kinds of places, not only the sea water is washed in, but also sand and silt. These incoming things ensure that the succession of vegetation is disturbed. In this way, the case for the islands characteristic pioneer species of plants and animals maintain and prevent the bushes and trees to spread out.

The most obvious places of dynamics created by tides are in “tales” of island. The eastern part of the island tail is a bare, dynamic bank, where periods of growth and decrease alternate. At the same time the bank moves from north to south and back again. The behaviour of the tail wagging is closely related to the (cyclic) movements of the channels in the adjacent tidal inlet. The wind blows sand to low beach dunes, embryonic dunes. When there is enough sand island tail grows, the beach dunes are becoming wider. Eventually they grow together to form a notched strip of sea. During floods the sea water flushes through these lows around. The lows are small wash-overs.

By capturing the coast, the islands became a static entity in an environment that it is still very dynamic. Growing with the sea has thus become almost impossible. Therefore the Staatsbosbeheer (Forestry Comission) has decided to maintain the coastline by means of replenishment. This layer of sand replenishment is a buffer for stormy times. Since 1995 the Staatsbosbeheer is involved in another experience, that of lowering some parts of the primary coast and let as much as possible natural processes take place, while ensuring that safety is kept. In this case one does not make replenishment if there is no risk of public importance.

The experience of ten years ‘dynamic preservation’ shows that coastal degradation is broadly under control and that perhaps human intervention is no longer needed to the same degree, as the tides are creating dynamic landscape by themselves.

 # EXPERIENCE 5 / FIELD-GLASS



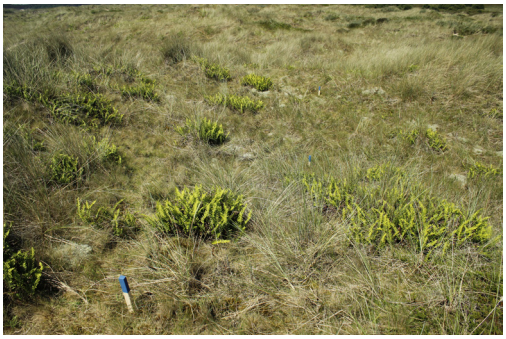


broadens | i saw
and yet it is seeing you i prefer
i saw sea | one showed under me the dunes
with little people, and in the distance the
north sea
| the other showed a meadow with sheep,
and the wadden sea with ships
shows
i was left behind on top of a dune to feel
| i felt big and strong, while the
wind yanked my chair | i was vastly
thrilled and wished i could fly
tailwinds heading
leave your thoughts to the wind | fresh
breeze | clouds
wondering wind, how appropriate
encouraging people | i hoped and waited |
suddenly it was pointed out
suddenly the wind changed
slowing down people | division of contrast,
tangle and chaos | differently to different
and vice versa
take your time
perhaps it was a waste of time | being
independent of time | and back home
also nice
at low tide the area increases | hold that
thought for the future | have you heard
the tide prediction for 2074?
our children will be 78 and 81
a moment of silence | a moment of
reflection | a beautiful moment
a way to say i love you
it's ok, it's already there | nature itself
will decide its course | the best came
naturally
a card provided access
alone on your island | noted | about
letting go and losing grip
i'll explain upon arrival...
go on | lighthouses | and round we go
on the highest point in the dunes
the other had arrived | at the summit
| literally a highlight

ik keek uit
en toch zie ik jou het liefst
ik zie de zee | de één keek uit op onder mij de duinen met kleine mensjes, en in de verte de noordzee
| de ander keek uit op weiland met schapen, en de waddenzee met schepen
voorstellingen
ik werd achtergelaten bovenop een duin om te voelen | ik voelde mij groot en sterk, terwijl de wind aan m´n stoel rukte | ik was enorm ontroerd en wou dat ik kon vliegen
meewind tegen
geef je gedachten aan de wind | frisse wind | wolken
verwonderwind, hoe toepasselijk
mensen (aan) wakkeren | ik hoopte en wachtte | plotseling werd je er op gewezen
plotseling veranderde de wind
mensen vertragen | scheidslijn van contrast, wirwar en chaos | anders om anders en andersom
neem de tijd
maar misschien was dat wel zonde van de tijd | het los zijn van de tijd | en dan weer naar huis ook fijn
bij eb is je eiland groter | houd dat vast de komende tijd | ken je de voorspelling tij 2074
onze kinderen zijn dan 78 en 81
een moment van stilte | een moment van bezinning | een mooi moment
een manier om te zeggen dat ik van je hou
het is goed, het is er toch al | de natuur bepaalt uiteindelijk zelf hoe het loopt | het mooiste kwam vanzelf
een kaart die mij toegang gaf
alleen op je eigen eilandje zitten | gewezen | over loslaten en minder vasthouden
bij thuiskomst leg ik het uit...
verder | vuurtorens | en rond gaan we
op het hoogste punt in de duinen
was de ander gearriveerd | op het allerhoogste punt | letterlijk een hoogtepunt












IMAGES

cover — IOTT (Institute of Time Taking) 2014 logo

cover lining — map of the dune landscape, various voices on the dunes and sof the dunes

page 5 — (bottom) we used our bodies to make a line across a sandy valley near Kaapsduin in order to grasp the space

page 8-9 — (top across)
1. brainstorming sessions in the atelier, coming up with ideas
2. brainstorming session in Terschelling, including plants
3. prototype of an alternate proposal involving goggles
4. picking th project colour schemes

(middle across)
5. brainstorming session in the atelier, choosing the project
6. on-site spatial experiments in a dune valley
7. prototyping an early version of the chairs
8. fabrication of windsocks

(bottom across)
9. folding of pamphlets and assembly of visitor package
10. construction of canopy
11. toolkit components
12. IOTT logo painted on the wagon

page 12-13 — (top across)
1. toolkit contents
2. visitor using windsock
3. 'dot' pattern postcard against sand
4. 'wave' pattern postcard against distant hills

(middle across)
5. cyanometer, used to measure the blueness of the sky
6. vegetationmeter, used to measure the colour of the vegetation
7. 'dashes' pattern postcard against reeds
8. 'hill' pattern postcard against hill slope

(bottom across)
9. using magnifying glass
10. using sand tool
11. 'worm' pattern postcard against valley grasses
12. assembled toolkit, with some plant clippings

page 16-17 — diagram of route and experiences / table of contents

page 18-19 — (top across)
1. handing out booklets with the visitors
2. walking up the first dune row, into the routing
3. looking at the scenery, looking at the toolkit
4. running around with a wind sock, wind against your face

(middle across)
5. measuring the blue of the sky with the cyanometer
6. together measuring the wind speed
7. a dune attendant at their post
8. someone stuck a grass in a signpost

(bottom across)
9. inside the wagon, watching the project being introduced to new visitors
10. in the 'living room', the visitors writing their impressions on their postcards....
11. .... and then putting it in the mailbox to be sent away into the world, ...
12. ... or pinned onto the wagon to be shared with other visitors

page 20 — (left) section from the Noordzee across the dunes, showing the different kinds of vegetation that emerge as the dune progress inland. The numbers below the section correspond to the drawings of the plants to the right

(right) drawings of dune plants, mostly grasses

page 22-23 — (top left) experience one, sitting on the sunbed looking up at the sky and hearing the wind in the reeds sing

(across bottom) 360 degree panorama of the top of the reeds

page 24 — some of the dune inhabitants

page 26-27 — (top left) experience two, sitting in the dune grasses with your back against the furniture at the bottom of a dip
(across bottom) 360 degree panorama of the top of the hill around

page 28 — the furthest cross section shows a dynamic dune situation, when the water is allowed to come into the dunes and constantly change their configuration, both bringing new sand in and disrupting succession to allow for new plant species and greather biodiversity; the nearer cross section shows a static dune situation, where tall primary dunes keep the dunes behind in a fixed situation, allowing only erosion to change them and allowing succession to occur, resulting in less biodiversity

page 30-31 — (top left) experience three, sitting in a rocking chair looking at the sea across the dune landscape

(across bottom) 360 degree panorama of the horizon

page 32 — a series of sections showing the formation of the dunes for the last 5000 years

page 34-35 — (top left) experience four, sitting on a stool at the bottom of a sand pit

(across bottom) 360 degree panorama of the edge of the sand pit

page 36 — tide chart for the duration of the Oerol festival, overlaid onto nautical map of Terschelling

page 38-39 — (top left) experience five, sitting on a high chair on top of Kaapsduin, highest point in the landscape
(across bottom) 360 degree panorama of the island, showing both shores of the island, dune landscape one one side and polder on the other

page 40-41 — (top across)
1. dunes from afar
2. dune from up close

3. the route is indicated by the blue tipped markers
4. the visitors make their way through the route

(middle across)
5. experience sign post, with bag to hold the toolkit while the visitor is in the experience
6. visitors taking a break near an experience
7. view of the routing from across the dip whose perimeter it follows
8. dune attendants walking back at the end of the day along the route

(bottom across)
9. view of the route from the Kaapsduin
10. visitors on top of a dune, using the tools to deepen their experience of the place
11. walking the route you can see the path ahead, but further on the path is suggested by the visitors walking in certain lines
12. seeing the dune vegetation up close, what seems homogenous is in face richly varied

page 44-45 IOTT team portrait

cover lining map of the dune landscape, various voices on the dunes and of the dunes

* all images produced by IOTT unless otherwise specified

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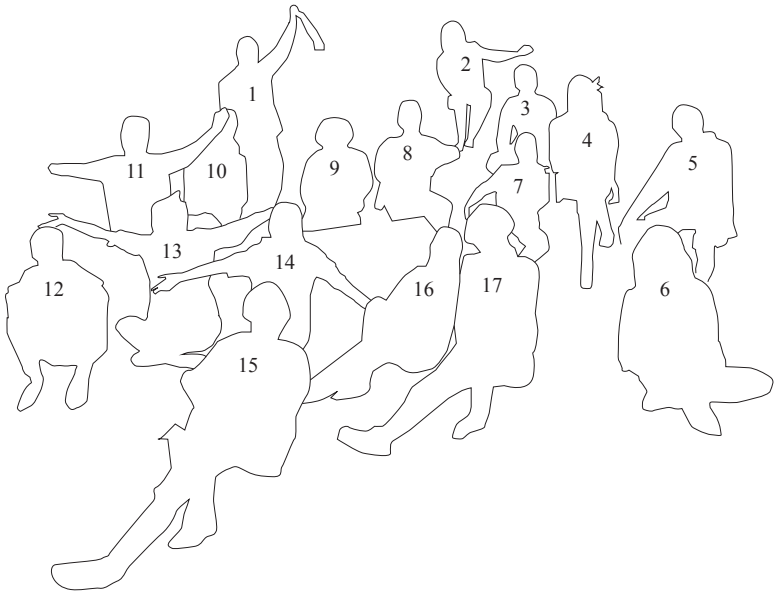

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