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Laboratory Oerol

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LABORATORY OEROL: DESIGNERLY WAYS OF KNOWING IN THE TU DELFT LANDSCAPE ARCHITECTURE ELECTIVE PROJECT ON SITE, 2018

Reflection: Design

Dr. René van der Velde – Course co-ordinator Oerol_On Site 2018

INTRODUCTION

Discussion on the synergies between scientific and artistic endeavour is a recurring topic in academia, but has gathered a new momentum since the turn of the millennium in response to among other things the urgency of global challenges such as climate change. The incapacity of nations and their various political systems to adequately address problems such as global warming has revived a discussion on the development of new synergies between science and art that might breach this inertia. A first and rudimentary line of thinking has been the communication of scientific findings to the general public by way of artistic 'pieces' such as installations, (theatrical) performances and visual art

works. Art praxis has also engaged with scientific findings to deepen its societal relevance and as inspiration for new creative work. In turn, certain areas of science acknowledge that modes of art praxis generate results which are not achievable by their own, accepted research methodologies. These reflections suggest that an engagement with art praxis may prove fruitful for academic enquiry. Aside from some incidental experiments however, a more fundamental and structural synergy between the realms of science and art has to date not emerged. Synergies have been hampered by reservations about the compromising of scientific integrity on the one hand, and artistic creativity and autonomy on the other, but have also been hampered by

the fundamental differences between both realms. By extension, viable methodologies to bring both realms together, which might uphold disciplinary independence and integrity, have to date been lacking.

DESIGN, ENGINEERING, LANDSCAPE ARCHITECTURE AND THE OEROL FESTIVAL
Design and design thinking has been mooted as an area which might offer a way forward in this debate. The role of spatial design disciplines forms a small but critical chapter in this discussion. Within the discourse, reflections on the particularity of (architectural/planning) design methodology as compared to engineering methodology have emerged. A potential complement to this discussion are approaches from the discipline of landscape architecture. Landscape architecture distinguishes itself from other spatial design disciplines by the critical role of site and context in the design process (Braae & Diedrich, 2015). Other distinctions

include a working through various scales of design, the development of narratives, and the attention to phenomenology and experience (Van der Velde, 2018). The differing perspectives of (landscape) architecture and planning as compared to engineering forms part of a discussion at a University level about design methodology for problematique at the confluence of spatial design and (civil) engineering, such as infrastructure design. To this end, the chair of landscape architecture has received structural funding from the Delta Infrastructures and Mobility Initiative (DIMI) in 2012, 2016 and 2018 to participate in the Oerol Festival on the island of Terschelling in the Netherlands. Oerol has a long tradition of landscape and location art and

is one of the major international centres of development in this field. With the island as a source of inspiration and stage for the broad programming the Oerol festival has a leading artistic profile, focussing on culture, nature and experimentation. Each year, Oerol selects some twenty innovative projects that fit within this focus for the 'expedition' programme. The expedition programme includes projects from all disciplines and mixed forms, such as short presentations, performances, objects, theatrical films and/or visual installations which the public can visit. These projects are freely accessible to visitors of the festival.

TU DELFT ON-SITE ELECTIVE 2018
This frame sets the scene for a discussion of one of the projects realised for the Oerol festival in June 2018, by a group of lecturers and researchers from the section landscape architecture at the TU Delft, together with master students from the faculties of architecture and industrial design. The elective course 'Landscape Architecture On Site' involves the realization of a design-and-build project in a landscape setting, exploring the role of the designer in situated, interactive projects. What makes this project fertile for a discussion on the synergy of science and art and the more development of design methodologies for problematique at the confluence of spatial design and (civil)

engineering, is that it engages with an NWO funded research project entitled 'Shorescape' run by researchers from the Delft University of Technology and the University of Twente. This project addresses the problematique of sea-level rise caused by climate change by calling for the study, conceptualization and trialling of ways to foster wind-blown sand transport on the one hand and sand accretion/harvesting in lieu of strengthening the dune system as flood-barrier infrastructure. Specific to this project is the focus on the role of built environment features on landward sand dynamics (with an associated attention to the cultural-historical, recreational and ecological futures of dune landscapes). These built environment features range from large seaside towns and resorts

to beach pavilions and subsidiary recreational infrastructures such as roads, paths and hardscapes, furniture, walls and fences. All these elements influence the aeolian (wind-driven) sediment transport towards the dunes, but at the moment little is known about the interaction between wind-driven sediment transport, built environment features and long-term dune development. To this end, Delft (group landscape architecture) and Twente (group coastal morphology) have joined forces to investigate and contribute to knowledge in this area. As such, the project was envisaged to incorporate a number of field trialling components for Shorescape, which might inform later fieldwork trials. It was also envisaged to represent and communicate aspects of the

research problematique to the general public. Of interest for discussing the approaches and outcomes of design (for and in relation to science) is the splitting of the project into two parts: a 'scientific' installation examining the effect of built form on sand transport run by the University of Twente, and a 'design' installation engaging with sand accretion/harvesting run by the Delft University of Technology (PhD researchers, teachers and elective course students). The UT project can thus be seen as a 'control' installation. Research questions include:

- How did the TUD outcome differ from the control experiment as an spatial installation?
- what alternative insights did it generate for the scientific goals of the Shorescapes

project?

- what processes were used to develop the scheme?
- how does this process input to the discussion on design vs. engineering?
- What conclusions can be drawn from this work in regard to the synergy of science and art?

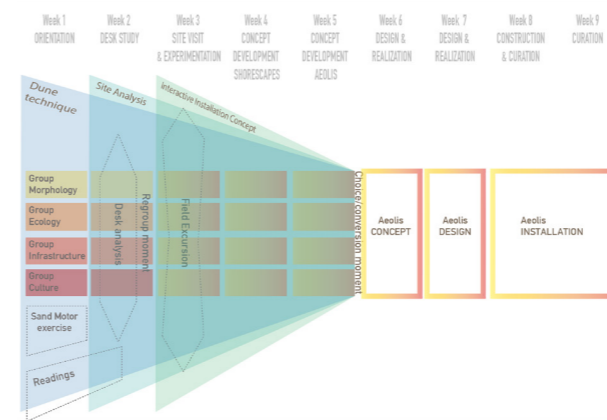


Figure 1. Didactic structure Oerol On-Site elective 2018

PROCESS & RESULTS

DELFT UNIVERSITY OF TECHNOLOGY INSTALLATION
The Delft project 'was structured into an initial 5 week period including orientation, desk study, literature study, site visitation and concept development, followed by a second 5-week period including design elaboration construction and project management (Fig. 1).

The orientation phase included a workshop to introduce students to dune formation in which students made built rudimentary prototypes to play with accretion or erosion/transport of sand. Hessian screens were used successfully in accretion and were taken into the design process. A second part of the orientation phase was literature

study on the topics of Garden, Place, Land Art, and Curation. In the desk study phase student teams analysed the development of the island landscape(s) as a series of four interacting layers: abiotic aspects such as geology, wind and water and their effects on the geomorphology and topography of the island; biotic-ecological aspects; cultural aspects such as agricultural and forestry practices and measures; and urban-tourism aspects such as infrastructure, settlements, holiday houses, beach shacks and recreation infrastructures. Input was also generated in this stage on the problematique of climate change and coastal dune systems in relation to the natural and cultural history of the island. The outcomes of these four chapters were collated in a 4-part 'framing document' that

formed the basis for fieldwork analysis to be carried out in the next phase. At this stage the groups were re-shuffled into four new groups (design teams), each with an expert on one of the four chapters. These groups then brainstormed first ideas and prepared a prototype installation to be installed on site during the field trip.

During a field excursion, students explored a transect of the island including the site location, followed by an individual interpretation of the site using cartography, collages, photographs, drawings, paintings, animation, film and text. First concepts were then tested in trial installations, in which each of the installations is 'enacted' using the rest of the student group.

Results from these various steps were then synthesized into a project brief. Four concepts were developed presented at the end of this stage, and a winner chosen for further development.

GAP THE BORDER

The chosen concept entitled 'Gap the Border' starts as a symbolic representation of the stitching together of the two former islands De Schelling and Wexalia into Terschelling at the end of the middle ages; the waterway between the islands being located on the same place as the project. The stitch is 'woven' as a route from the foredunes to the ocean, and includes at the same time a gap down the centre which forms a route for festival visitors to move through the installation and symbolically walk the historic divide between the two

islands. The height and extent of the installation forms an architectonic space in which the visitor can 'enter' and exit, and creating a particular kinaesthetic spatial experience. In terms of materials, the installation is constructed of hessian panels strung at different heights between wooden poles, conjuring up images of sails of bygone ships in the passage. As a sand accretion installation, the hessian panels were laid out in different angles to funnel or capture sand. The installation also connects the foredunes to the seaward sediment transport zone, setting up a movement of sand from this zone to the dunes which usually wouldn't happen as the dominant winds on Terschelling results in a parallel sediment transport along the beach.

D I S C U S S I O N / CONCLUSIONS

In terms of discussion of design vs engineering (from the perspective of landscape architecture), there has been a critical impact of site and island context on the design concept. Site readings - particularly the morphological development of the island over a long period - has inputted to the development of an historically-informed scheme. The scale of the installation is also derivative of its context, and the intention to create a form which has the scale of the island and its dune system. The stitching concept moreover, also offered the opportunity to test the effect of different angles of hessian panelling on sand movement and accretion.

In relation to the broader discussion of the synergy of science and art, the project can be seen as an example of 'designerly ways of knowing' which breach both realms. These include the incorporation of characteristics of the site and its (island) context, and the spatial and experiential aspects of a landscape installation.

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