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Studio information
Studio  Architectural Engineering
Tutors  Roel van der Pas, Carolin Bellstedt, Mauro Parravicini

Motivation  I chose for this studio because of its liberal set-up; I like the fact that I can research my own technical fascination, and use the results for my design. Also the innovative and optimistic attitude of the studio and teachers fits me.

Graduation Project

Title
Autarky Centre Texel

Problem statement
On the Dutch island of Texel a progressive spirit has landed. The island's government has declared it wants to rely exclusively on renewable energy resources as soon as 2020. To reach this goal a variety of technical measures are currently being implemented (like solar panels, bigger wind turbines, public LED-lighting, etc.). Since Texel is a popular holiday destination, combined with its modest scale and the fact that it is an island, gives this particular movement the potential to become a strong symbolic guide in the global field of green transitions. However, this idea can only thrive with a meaningful vision about sustainability that would go beyond the acquisition of high-tech equipment. To be able to share, discuss and develop this vision a public debate centre would be the ideal stage for locals and visitors to come together. A powerful natural context is given by the dune landscape on the west coast of Texel. Its sense of remoteness combined with a fragile eco system create suitable yet challenging conditions.

Overall design question
How can Texel's vision of autarky be strengthened by creating a physical place for discussion and development, making use of a vernacular approach with passive climate strategies.

Thematic research question
Which passive climate strategies can be used for a public building in the dunes of Texel?

sub questions:
- How can relevant program be added to the project to increase user groups (impact) and link to Texels ambitions?
- Can the program provide extra social relevance?
- Which user groups could relate to the project, and how do they interrelate?
- What is the right location on Texel for this program? Sources of inspiration for building in the dunes available?
- Which strategies of sprawl / volume could be introduced on the location?
- What kind of strategies for logistics for public buildings can be used to structure the project?
- How can a landmark be created, to improve the image value/identity of the project?
- How can the visitor of the building experience a profound relation to the surrounding nature?
- Which (natural) local materials can be used to build the main structures, setting an example for use and reuse? What=relation between materials?
- How can artisanal woodworking and wooden (roof) constructions, a personal fascination, contribute to the project and its identity?
- Which building techniques/materials do I want to explore and test within the project?

Objective
My intention is to develop a building within Texel's dune landscape where sustainable progress can be discussed, and where autarky (in building, farming, energy harvesting, transport, ..) can be educated and experienced. The focus will be on passive climate strategies, with a strong relation to local climate- and resources. Inspiration for these strategies mainly comes from low-tech vernacular principles that were developed by our ancestors who lived in pre-industrial times.
**Methodologies**

**Research by design**
I want to use this research method on several ways in my design process. First, to define the scope of the project. Later to test and evaluate different interventions in the context. Various physical experiments can be conceived to get a grip on space, form, material, program, (passive) climate strategies and (constructive) details.

**Context**
- analyzing and mapping of Texel and in particular the west coast dune landscape
- mapping quantitative elements (landmarks, land morphology, accessibility, ...) as well as qualitative elements (sensoric experience, protection vs. exposure, ...)
- research and identify the different values and functions of the dune landscape
- study history of the wadden area

**Literature study**
To explore passive climate strategies, to support and validate choices within the design, to find links between different key figures and fields connected to the topic, and to strengthen the whole project with valid sources.

**Case study**
Doing one or more case studies of architectural works that relate to my project in context, ambition, scale, material, use, or preferably a combination of these.

**Interview**
Possibly interview eco-builders, other experts, locals or other people with relevant experience or insight.

**Relevance**
The projects relevance lies in facilitating and sparking the local and global discourse on sustainability in general. And in demonstrating and advocating ecological, passive and sustainable architecture in particular.

**Literature**
Kees Kaan, Rediscovering climate as a design factor, TUDelft,
David Martinez Escobar, Rammed earth in a cold climate, Chalmers University Gothenburg, 2013.
Helena Coch, Bioclimatism in Vernacular Architecture.