

Max van den Berg
4020332

aE Intecture

Roel van de Pas
Mauro Parravicini
Carolin Bellstedt
Roberto Cavallo

The relation between research and design

I chose the Intecture studio because of its liberal set-up in which the student can research his or her own fascination and determine the purpose and program of the project.

For my graduation I chose the topic: the Vernacular Approach and the use of Passive Design Strategies in a small conference center (*De Kastelein*) in the dune landscape of Texel. The building is a space where islanders and visitors can discuss, develop and learn about the sustainable ideas and plans for Texel. In the project I combined my fascination for the simple natural beauty of the *Wadden* islands with the workings of vernacular architecture; especially how it creates pleasant and comfortable spaces through simple and passive systems, which I think is an example for sustainable architecture today.

In the first semester I focussed on determining how I could use the architectural approach of our ancestors, often found in vernacular designs, for my project. Despite the divergence of vernacular designs found on all continents and in different climate types, I found that this approach has four consistent factors; 1. Buildings are designed in relation to local climatic conditions to create indoor and outdoor comfort for the users, 2. Buildings are made almost entirely using local and natural materials, 3. Constructions and systems are low tech and easily repairable if broken, 4. Building techniques are related to local culture and are passed down through the generations.

To relate these four factors to my project, I looked at the context; Texel. It appeared that the most affecting local climatic factor are the often strong winds that blow predominantly from a South-Western direction. Vernacular building types on the island react to this condition by for example directing a closed facade with a slanting roof towards the South-West. My program, that has a peak use in summer, when visitor numbers on Texel are very high, needed a square like outside area. It also needed a rather large parking space for visitors to reach the location. A simple L-shaped heavy sandstone wall proved to both create a wind-sheltered outside space, and hide the parked cars behind it.

Furthermore, the interior climate looks to benefit from local climatic conditions. As the sun can be very hot in summer, and the rain quite tedious in the late season, the buildings of *De Kastelein* provide multiple covered outside areas. Inside the heavy sandstone walls, a very stable climate is created by the large thermal mass of the material. This climate is used to house the storage spaces of the restaurant facility, so demand for artificial cooling is reduced.

The relation between the theme of the graduation lab and the subject chosen by the student

The vernacular approach to architecture and its application in a contemporary context fits very well within the studio themes of 'make' and 'flow'. I found five local materials (sand, shells, timber, wool and marine plastics) that the island offered, and used them to make the main building components of the project. For example the materials sand and shells are combined to build lime sandstone within the project (make). The whole project is intended to be used as long as the program is needed. When the building becomes redundant in the future, the plastic roof tiling should be removed, and all other natural materials will be gradually taken back by the elements (flow).

The relation between the methodical line of approach of the graduation lab and the method chosen by the student

The Architectural Engineering studio is a studio in which the doing of (physical) experiments to get to architectural solutions is paramount. Earlier in the Master program I experienced this approach within the Bucky Lab, and I feel this 'practical' approach suits me well personally. In the first steps of the graduation design process I struggled with getting a hold of the openness and vastness of the location in the dune landscape. By making a scale model of the location and testing various physical forms, I found that a long solid wall, double functioning as a lifted pathway gave me the appropriate structure to establish a building that works with and within its environment. The feedback from the physical model was indispensable to get to this solution. Sketching remains my most used and also a very powerful tool while designing. Mostly in section and plan, I try to find out what works best in a given situation. I consider it very helpful that the teachers of the aE studio encourage the students to do many experiments, and to possibly leave their computers off the table, and start using their hands to build concepts and ideas, and get feedback from these models.

The relation between the project and the wider social context

To make changes in our behaviour and our way of life it is always helpful to have a clear example. Texel, with its ambitions to become self-sufficient island and to become a place for testing sustainable approaches, could become a lighting example for other communities of how to live, move, build and eat more sustainable. *De Kastelein* offers a space where ideas and plans for a sustainable island (and world) can be discussed and developed. This discussion is vital to the success of the plans made, as they will be supported by a significant part of the community that will understand the ideas and regard them as their own, because they were made part of the process of creating new visions and plans for the island. This lesson of inclusion of the community was learned by studying the succes of sustainable change on the Danish island of Samsø. The building, with its vernacular approach, passive design strategies and use of local materials, silently inspires the conversations at *De Kastelein*. The second part of the projects relevance is educating visitors about sustainability and how local resources and culture can foster sustainability. Therefore the project entails a visitor's center where the island's story of becoming more sustainable is told, and various local crafts are carried out with their connection to the building made obvious, as the project is made by these local craftsmen and their materials.

In a bright future where self-sufficiency and sustainability of communities has become ubiquitous, *De Kastelein* and its program to cultivate these themes could become superfluous. Once a community center, *De Kastelein* could become a ruin of long, slowly disappearing, sandstone walls, reminding the islanders of a destination they reached by working together.