

# Noordzeekanaal+

BSc thesis 2<sup>nd</sup> and 3<sup>rd</sup> period 2014-2015

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## The Why

The natural gas supply of the Netherlands is depleting, the sea water level is rising and weather patterns have begun to change (figure 1). Renewable energy can mitigate climate change and holds potentials for the local economy, inhabitants and landscapes. How can landscape architects contribute to the transition to renewable energy while considering landscape quality and existing functions such as housing, industry, transport, nature and recreation? Earlier this year, the NRGLab (LAR) was asked to further advance energy transition in the greater Amsterdam metropolitan region. We will do so in close collaboration with the newly founded Amsterdam Institute of Advanced Metropolitan Solutions (AMS) and students at the Landscape Architecture program of Wageningen UR.



Figure 1: Flooding caused a lot of trouble in the summer of 2014 in Amsterdam (source: Twitter).

## The Where

The Noordzeekanaal+ studio will explore energy transition in the Amsterdam metropolitan area because the city has high ambitions and expressed the wish to reduce greenhouse gas emissions by 40% in 2025, compared with 1990 (De circulaire stad Amsterdam, 2014). The provision of renewable energy is one of the key strategies to achieve this goal and a relevant assignment for landscape architects (see e.g. Stremke, 2010). Your study area – the Noordzeekanaalzone – is well known for its energy-related functions such as power plants, heavy industry, energy infrastructure and the Amsterdam harbour (figure 2). The area has outstanding potentials with regard to renewable energy and, due to its manmade structure and appearance, invites 'out of the box proposals' for renewable energy generation.

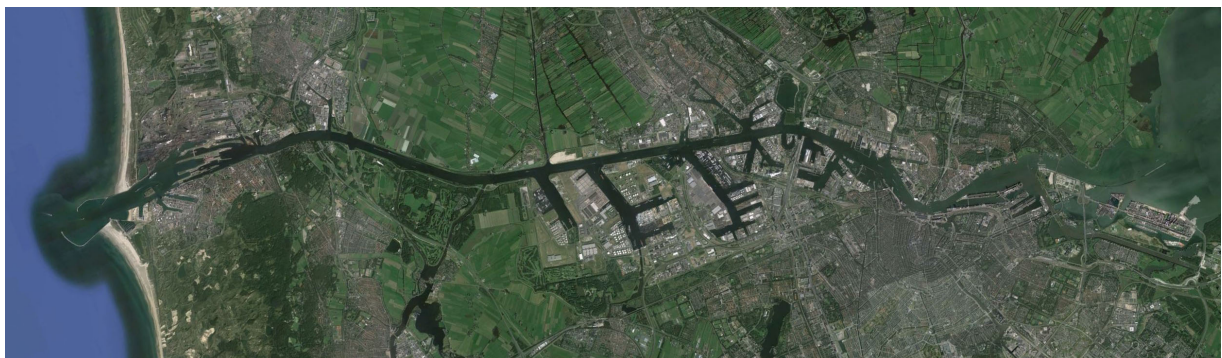


Figure 2: Map of the study area: The Noordzeekanaal stretching from the IJsselmeer to the North Sea (scale approx. 1:250.000, source Google Maps).

## The What

For this thesis topic, you are asked to take a hybrid perspective onto renewable energy provision as a new function in the landscape that is not only technical but a (new) means to create highly attractive landscapes in the Noordzeekanaalzone. The website of the so-called 'Land Art Generator Initiative' (LAGI) might be a valuable source of inspiration. Similar to LAGI, you are required to combine renewable energy generation with at least one other challenge or missed opportunity in the landscape (e.g. need to improve quality of recreational area or create new housing). In order to provide meaningful designs, you will have to analyse the larger study area and individually identify an intriguing 'hot spot' (i.e. site) that has great potentials and/or faces serious challenges. In order to clear the path for implementation you will conduct a stakeholder analysis for your selected site and learn to estimate the amount of renewable energy and reduction of greenhouse gas emissions that can be realized by your design. Finally and in line with the assignment to think 'out of the box', our contact person from the Physical Planning Department in Amsterdam agreed to employ technologies that may be not yet economically feasible as long as it has been proven that the technology works.

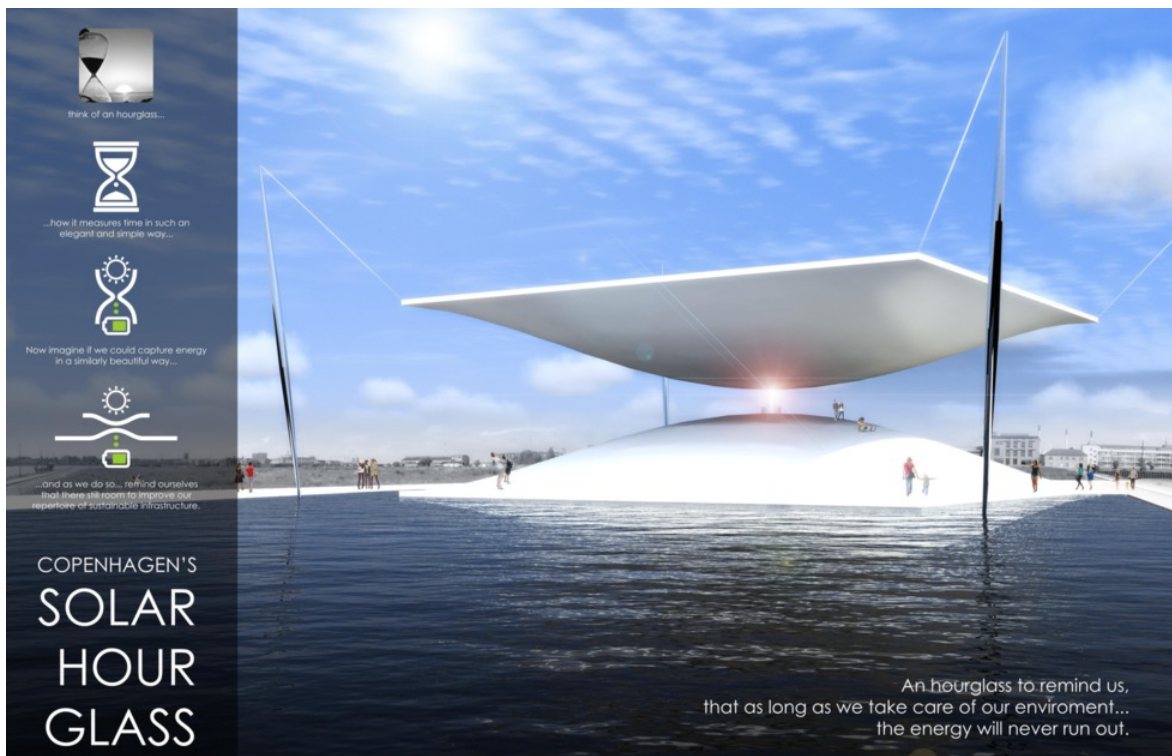


Figure 3: Solar hour glass by Santiago Muros Cortés. The concentrated solar power installation acts as a place of relaxation and contemplation ([www.Landartgenerator.org](http://www.Landartgenerator.org)).

## References

De circulaire stad Amsterdam 2014/2018, DRO Amsterdam, 2014

Stremke, S. 2010. *Designing Sustainable Energy Landscapes: Concepts, Principles and Procedures*. PhD thesis ISBN: 978-90-8585-768-6, Wageningen UR.



Gemeente Amsterdam  
Dienst Ruimtelijke Ordening

