

PILOT SITE DESIGN

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**SWINKELS**

HELMOND, THE NETHERLANDS



This site is situated next to the Schevelingse Loop and is currently a wet grassland.

Here a small ditch will be closed and small dikes will be made around the pilot site to better retain water in the site and the water table will be maintained by pumping surface water from the Schevelings

Loop into the pilot site by means of a pump on solar energy. Thereafter cattail (*Typha*) will be planted. This indigenous plant species is selected as cattail is a promising crop to be used for insulation or building material, but it can also be used as substrate or to feed cattle.

Cattail will be mown in summer to feed animals, or in the end of the winter when the biomass is dry, to be applied as substrate or construction material.

**Size of pilot site:** 10 000 M<sup>2</sup>

**Peatland type:** Deep sand layer with fen peat

**Land use:** grassland for cattle and paludiculture crops

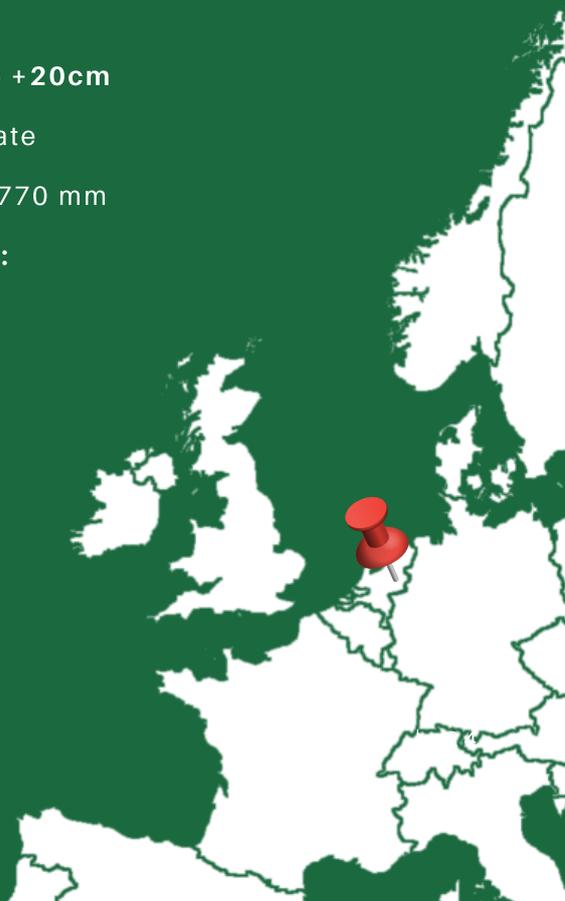
**Crop type:** Cattail

**Water level:** -10 cm to +20cm

**Climate type:** Temperate

**Total annual rainfall:** 770 mm

**Target CO2 reduction:**



## CHALLENGES

In general, drought is severe problem during establishment of crops. Water management for raising the water table to a level that is sufficiently high is challenge in the drained landscape, especially in dry summers. Therefore, the local farmers, the brewery company and the water board collaborate to optimise the use of surface water, ground water, as well as the process water from the brewery.

## GOALS

- Specific goals : learning from paludiculture experiment. Keeping ground water table high to avoid as much as possible too low ground water in summer.
- GHG emission reduction goal : Blocking of drainage ditches, preferably infilling of ditches with peat to reduce loss of water by downward seepage. Raising the surface water table in the main ditch would further improve the hydrological situation (=more stable and high ground water table) in the pilot site, but this cannot be realized because of the need for drainage of the upstream areas.

## POTENTIAL BUSINESS MODELS

The farmer is taking care of the whole management and harvesting. She may get incomes by selling the biomass, but currently the aim is to get more experience with paludiculture and more sustainable use of water and soil.

## PILOT SITE TIMELINE

*To be completed*

