

PILOT SITE DESIGN

BIEST-HOUTAKKER

BIEST-HOUTAKKER, THE NETHERLANDS



The site is situated besides the wastewater treatment plant in the ecological zone. The treatment plant has a capacity of 73.500 inhabitant equivalents and max. 2.850 m³/h (see <https://www.dommel.nl/biesthoutakker/>). The water flows to the small river the Reusel.

Cattail is planted in spring 2019. Re-plant is necessary in 2020 as geese visited the site over summer.

Water level can be regulated but depends on water availability in the area and the operation of the treatment plant. Water quality is monitored in the waste water treatment plant.

Size: 3.800 m²

Peat soil: Sandy soil

Crop type: Cattail

Water level: adjustable

Climate: Temperate

Rainfall: periods of drought and sometimes heavy rain

Target CO₂ reduction: 0,38*20 = 7,6 ton CO₂-eq /year

Note 20 ton/ha cattail (Rulebook Greendeal National CO₂ markt
zie <https://nationaleco2markt.nl/wp-content/uploads/2018/12/GDNK-Groen-Veenweide-001-1.pdf>)



BIEST-HOUTAKKER

CHALLENGES

CLIMATE CHANGE

Summers of 2018 and 2019 were very dry. However after planting cattail in 2019 some heavy rainfall induced a short water overflow in the wastewater treatment plant and as a result water table in the ecological zone was raised sooner than planned. This may have caused some damage to the cattail. However the main reason of decreased cattail plant are most likely the geese.

BIODIVERSITY

The ecological zone is meant to bring life back into the treated water. Biodiversity is one of the goals.

INTERACTION WITH WASTEWATER TREATMENT

The water level and quality in the cattail basin depends and on the operation of the wastewater treatment plant and on water availability in the area. Both are monitored.

GOALS

- Learning how to grow and harvest cattail
- Production of cattail for start-ups in the region

BUSINESS MODELS

- Cattail for furniture, insulation, packaging or bio-composites.
- Cattail for water quality
- Cattail for biodiversity

PILOT SITE TIME LINE

2018	Identifying pilot site Selection of crop
2019	May 15 th Cattail Planted July partly eaten by geese
2020	Re-plant Cattail Contact with regional farmers and start-ups Harvest

