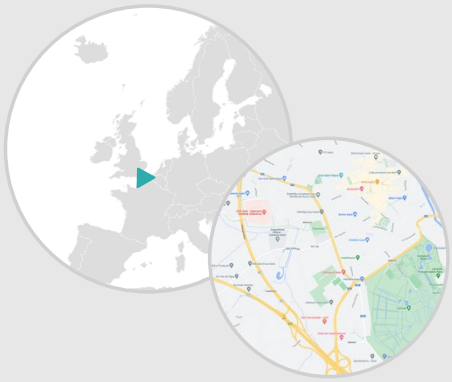
# NATURAL CLIMATE BUFFER

Belgium



# Hoezekouter

## Introduction

The Hoezebeek project lies in the valley of the Hoezekouterbeek, located southwest of Aalst. The brook valley is located in slightly flood-prone areas and is zoned 'green and nature' on the regional plan. Downstream of the area is the Regelsbrugge castle estate, a historic castle built by a wealthy, entrepreneurial family that was active in the historic industrial town of Aalst. Further on, the stream continues underground until it flows into the Dender. The brook valley often suffers from abundant rainfall when there is excess runoff, which increasingly threatens to cause flooding in the lower-lying inner city where the brook is underground. The castle grounds located adjacent to the area also recently suffered from flooding after the heavy peak rainfall of 4 July.

As part of Wetlands4Cities, we want to buffer extra water in the valley of the Hoezekouterbeek to prevent flooding in the lower-lying areas. An existing dyke and associated weir have already been repaired for this purpose. In addition, historically raised soil will be excavated so that the original level can be restored. The sponge effect of the soil will be strengthened, and biodiversity restored. This will create an extra green area to the north of the city and enable local residents to discover the importance of wet nature.

In cooperation with the Province of East Flanders, the watercourse manager in the area, two weirs will be installed. These weirs can buffer a total volume of 15 000m$^3$ of water in the valley, making the private properties and the city centre located downstream more resistant to overflows caused by extreme precipitation.

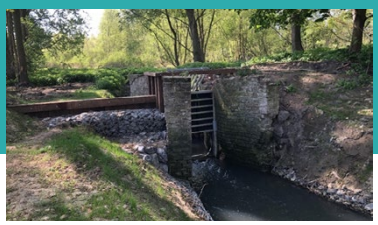
It also allows for nature restoration. For instance, historically raised soil will be will be excavated along the stream valley and used for the construction of the second dyke at the edge of the existing path. Due to the excavation, no new soil needs to be brought in the banks of the Hoezebeek. Nature recovery and water safety go hand in hand and result in the development of an urban wetland where footpaths and information boards will also be provided in collaboration with the city.

## Issues & key challenges

- Countering habitat loss, fragmentation and degradation
- Restoring the water level, so extra water can be stored and the historical peat remains stay wet
- By using citizen science, creating citizen involvement, and involving residents in softening and watering projects
- Using wet nature to keep the city liveable during hot summer days and also provide space for residents who do not have their own garden or green spaces available

## Outcomes & benefits

- Prevention of floods through water storage and buffering peak flow events
- Prevention of droughts and optimisation of nature values through water retention
- Restoration of ecohydrological conditions
- Restoration of habitats for threatened European species
- Decrease of the heat island effect
- Citizen engagement and natural space in densely populated areas



## Lessons learnt & future

- Restoration of a second dyke to buffer more water upstream
- Restore the original wetland level
- Make the area accessible for inhabitants and guided walks
- Further nature restoration upstream and extend the conservation area

We will further publicise the concept of nature as a solution to climate-resilient cities and, by engaging policymakers and citizens, increase support for wetland restoration and expansion.

## Legal Status

Nature reserve

## Habitats and Protected Species

The Hoezebeek is a valley area located in the southwest of Aalst 1km from the city centre.

The valley consists of small woods, interesting (wet) spring flora and hay meadows that are heavily overgrown and gradually becoming wooded

An important habitat for numerous breeding birds: StorksRobin, Kingfisher, marsh marigold

## Management

Natuurpunt (NGO)

City of Aalst

**Private landowner**

**Province of East-Flanders**

## Information sources

https://www.natuurpunt.be/pagina/wetlands4cities

https://curieuzeneuzen.be/waar-we-meten/tuin/

BLUE-GREEN SPACE


CARBON SINK

GREEN AIRCO

More info

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