

Upper Dyle Project

The Sigma Plan protects Flanders from flooding while enhancing estuarine nature.

The Scheldt and its tributaries are tidal rivers. Spring tide occurs twice a month and is accompanied by very high water levels. If this coincides with a northwesterly storm at sea, the water swells even more and it becomes a storm tide. The Gale of January 1976 is a well-known example of a storm tide. Causing severe damage in the Belgian provinces of Antwerp and East Flanders, the storm convinced the government that better protection was needed. This resulted in a large-scale water safety project called the Sigma Plan.

The Sigma Plan was updated in 2005. The objective remains protection against flooding but at the same time the Flemish government will restore and further develop the tidal nature along the river. Upper Dyle is part of the updated Sigma Plan.

A safe and natural Dyle Valley

The Sigma Plan project Upper Dyle aims to make the Dyle Valley between Werchter and Mechelen safer and more natural. The entire project area encompasses almost 170 hectares, spread across 3 sub-areas (Rijmenam, Pikhaken and Hollaken-Hoogdonk) in the municipalities of Bonheiden and Haacht. In Rijmenam and Hollaken-Hoogdonk two flood control areas will be created. As a result, Bonheiden, Haacht and the surrounding area will be much better protected against flooding. Some sections will continue to be used as farmland. Here we are also restoring the water-rich river landscape and converting the old meanders into reed marshes and swamp forests, whereas Pikhaken will be transformed into wetlands with wet grasslands.

Location

Provinces of Antwerp and Flemish Brabant, Rijmenam (borough of Bonheiden) and Haacht.

Surface area: 169 hectares

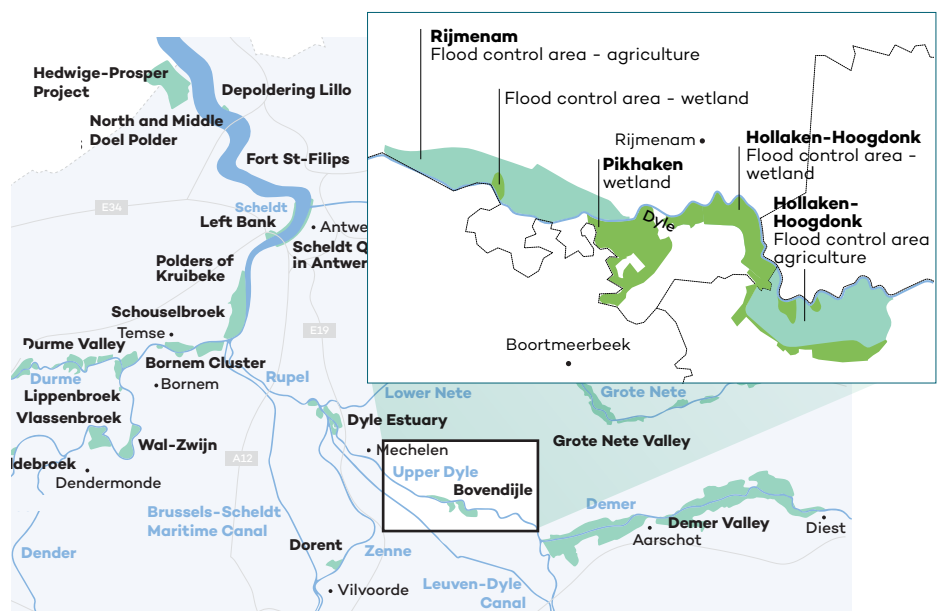
River: Dyle

Interventions

- Flood control area
- Wetland

Why?

- Flood protection
- Restoration of estuarine nature



What measures are being taken?

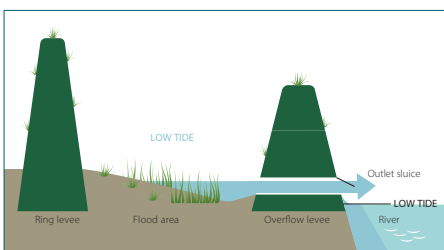
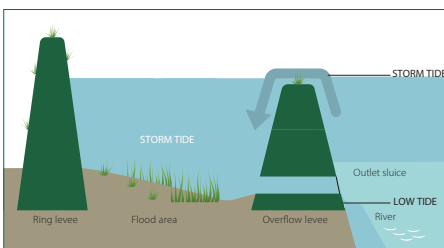
Enhancing water safety in the region.

On the right bank of the river Dyle in Rijmenam a flood control area is being created. This area will only retain water in exceptional meteorological situations, similar to the flood area on the left bank at Hollaken-Hoogdonk. As these areas will only act as water buffers under extreme weather conditions, they can still be used as farmland. Part of Hollaken-Hoogdonk and also Pikhaken will be converted into wetlands, a meadow landscape where

species- and flower-rich grasslands can develop. Contrary to Hollaken-Hoogdonk and Rijmenam, Pikhaken will never buffer Dyle water. This area of nearly 30 hectares will be transformed into a marsh, with an old arm of the Dyle and a series of ponds where the great crested newt will feel right at home.

Flood control area

A flood control area is an area of flat land alongside a river that buffers water under extreme weather conditions. The water flows over an overflow levee and onto the plain. A ring levee always protects the hinterland to prevent any residential areas from being flooded as well.



Operation of a flood control area at storm tide.



Wetlands

Wetlands within the Sigma Plan are marshy areas that are unaffected by the tide. Moreover, this wet nature fulfils a crucial safety function by retaining water like a sponge in case of heavy rainfall in the area. In dry periods it also releases the water more slowly, keeping the surrounding vegetation from drying out too quickly. As a result, this river nature is a useful ally in the struggle against climate change. What's more, this wet nature also stores CO₂.





© H. Willcox

Great burnet



© K. De Blick

Kingfisher



© J. Poortmans

Vagrant darter



© Vilda

Great crested newt

Restoration of the meadow landscape.

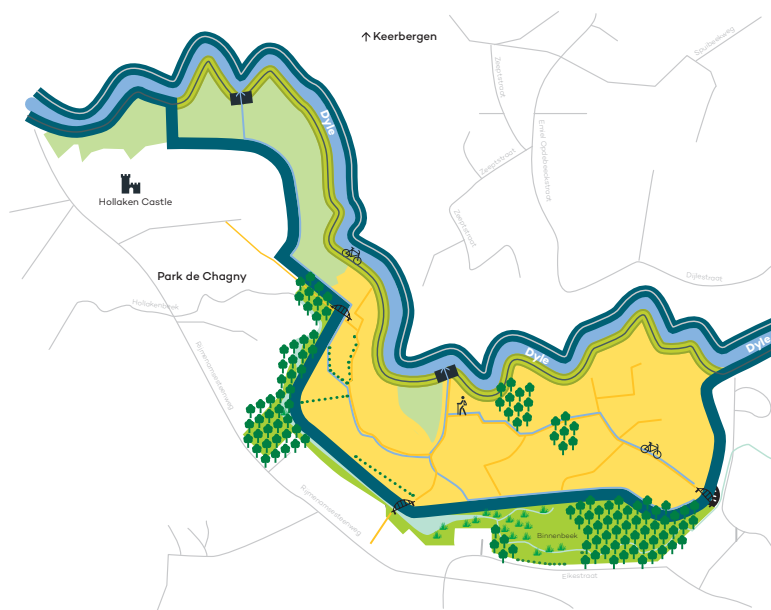
A small section of the Rijmenam area in the old Dyle meander will undergo a genuine metamorphosis. Here we cultivate wetland, with reed beds, marsh forests, wet grasslands, shelterbelts and water features, and with a diversity of remarkable plants and animals.

With a bit of luck you should be able to spot a kingfisher, a sedge warbler or a bluethroat amid the greenery. In the southern part of Pikhaken we are creating a mosaic

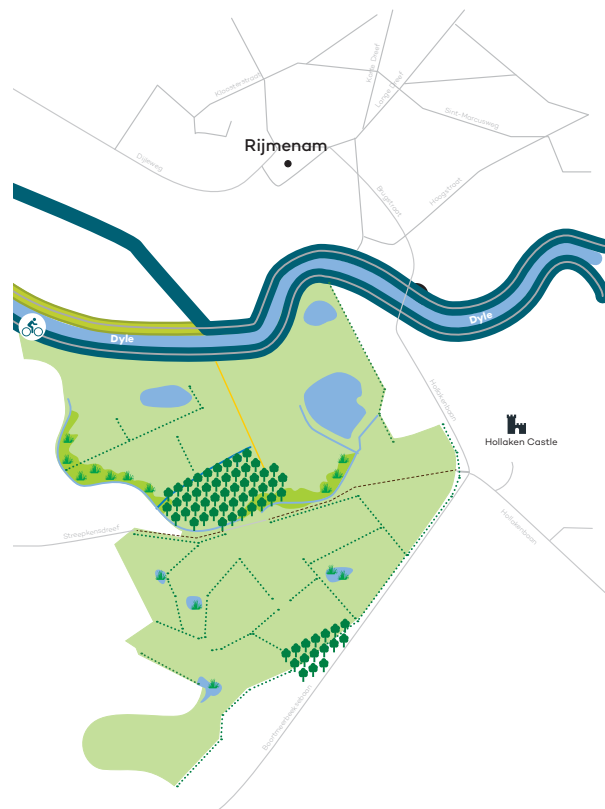
landscape of burnet grasslands. The section of Pikhaken against the Dyle and Hollaken will be open meadow landscape with several ponds for the great crested newt.

Flood areas and wetlands are not just an asset to nature. Inhabitants of Bonheiden, Haacht and the surrounding area will be able to fully enjoy the breathtaking green areas. From cycling and hiking to birdwatching and experiencing nature: in the near future nature lovers will be able to do so in an even more unique setting.

Hollaken-Hoogdonk



Pikhaken



-  wetland
-  overflow levee
-  ring levee
-  fields / pastures
-  outlet sluice
-  bridge
-  towpath
-  farm road
-  shelterbelt
-  ditch

Rijmenam



Project name	Surface area	Municipality	Duration	Intervention
Hollaken-Hoogdonk	69 hectares	Rijmenam (Bonheiden) and Haacht	2010-2030	Flood control area and wetland
Pikhaken	33 hectares	Rijmenam (Bonheiden)	2015-2030	Wetland
Rijmenam	67 hectares	Rijmenam (Bonheiden)	2010-2030	Flood control area and wetland