



measuring the water level

Project Sheet



The Polders of Kruibeke and its flood control area (FCA)

the Polders of Kruibeke

A stone's throw from Antwerp, in Kruibeke along the river Scheldt, you can find the Polders of Kruibeke. These polders house the largest floodplain of Flanders. Flanked by picturesque villages, you enjoy open meadows, ingenious tidal nature and rare alluvial forests.

Colophon

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ir. Wim Dauwe

Anna Bijns-gebouw
Lange Kievitstraat 111-113, bus 44
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www.sigmoidplan.be

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Ruisbroek 1976

The Sigma Plan, from safety plan to intergral project

The FCA is part of the Sigma Plan, which was established after a disastrous flood in 1976. Today, the construction of higher and more solid embankment works have been executed to a large extent and 13 flood control areas are functional. With its 600 ha, the FCA in de Polders of Kruikebe is the largest of them.



ring dike

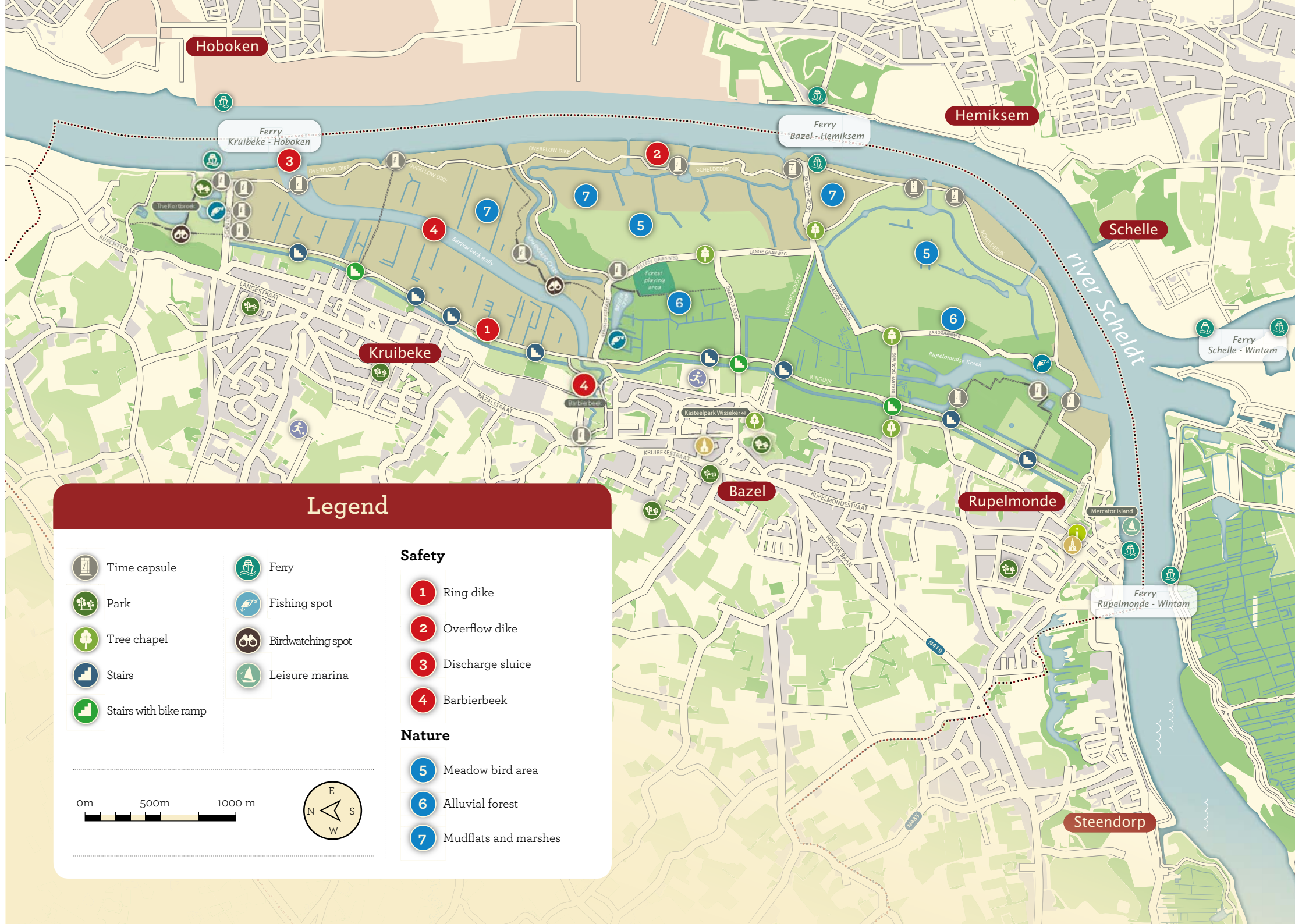


het Kortbroek



inlet sluice

Created as a water management plan, in the meantime the Sigma Plan has expanded into a much more extensive project. The new Sigma Plan aims for a sustainable Scheldt, with all the functions of the river being developed in a balanced way. Protection against floods is its first priority. Restoration and development of the European protected nature of the Scheldt region is another one. The Sigma Plan also improves the possibilities for recreation on and along the Scheldt, and focuses on the economic functions of the Scheldt region such as shipping and the countryside economy.



Safety

The FCA stands for:

- a flood control area of 600 ha
- it makes the Sea Scheldt basin considerably safer all at once.
- excess Scheldt water flows into this area approximately once or twice per year, when storms coincide with spring tide.

1 Ring dike

To prevent residential areas, roads and other infrastructure from flooding, the hinterland of a flood control area is always protected with a ring dike. In the Polders van Kruibeke it consists of:

- approximately 6 km new inland dike
- more than 2,5 million m³ earthmoving
- maximal application of the 'work by work' principle.

2 Overflow dike

When a north-westerly storm coincides with spring tide, the water flows over the overflow dike into the flood control area. The overflow dike is the original dike, which has been lowered and reinforced to withstand the river water flowing over it. The overflow dike encompasses:

- the lowering of a 8 km long Scheldt dike
- a gentle slope to dissipate the force of the water
- approximately 300.000 m² fibrous open stone asphalt.



overflow dike



overflow dike under construction

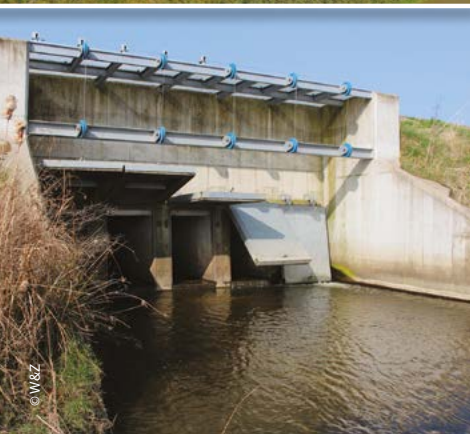


outlet construction at the overflow dike

3 Discharge sluices

When the water level drops in the river, discharge sluices ensure that the water flows back out the FCA. These constructions are situated in the overflow dike. As soon as the water level of the Scheldt is lower than the level in the polders, all the excess water from the FCA will return to the river. Some specifics:

- 7 new outlet sluices over a length of 8 kilometers
- low outlet openings for a swift discharge towards the river for quick regeneration of storage volume



outlet construction in the ring dike

4 Drainage of the hinterland

The FCA also implicated some necessary measures for the local streams:

- 3 new outlet sluices in the ring dike
- additional flood areas
- new stream bed for the Barbierbeek



Kallebeek outflow



oystercatcher



roe deer

Nature

With the construction of the Polders of Kruikebe it was important to also take the ecological priorities in account. Not only realising important nature compensations due to historical losses of habitat but also taking up the enhancement of the present nature in the polders:

1 Meadow bird area (150 ha)

This bird paradise is part of the nature habitat restoration plan for expansion of the Port of Antwerp

- lapwing, black-tailed godwit, oystercatcher, common redshank are the main target species
- open meadow landscapes and higher ground water levels in spring are the most important requirements

2 Forest & forest compensation (150 ha)

The existing forests are a protected priority habitat, as stated by the European habitats directive. Within the framework of a Life+ program, the local government, local nature association and the higher government invest in their restoration.

Woodland that needed to disappear for the realisation of the FCA is compensated through:

- spontaneous forest development
- afforestation (tree planting campaign)
- relocation of forest soil



alluvial forest



common tern



pied avocet

3 Mudflats and marshes (300 ha)

In the past tidal habitats were claimed by man in the Scheldt Valley without proper compensation elsewhere. Within this area these historical losses are compensated while safeguarding a full operational flood control area, and this by means of the ingenious system of “reduced tide”.

A limited (reduced) amount of water flows in through an inlet sluice. When the tide ebbs, the water flows back into the river through the outlet sluice. The natural action of a tidal river is thus mimicked.

Specific characteristics are:

- next to the “reduced tide” principle tidal nature is created by managed realignment
- by introducing a controlled reduced tide through 3 new inlet sluices
- the area effectively becomes part of the Scheldt ecosystem and tidal marshes can develop



spined loach



cycling in the polders

Recreation

Extended hiking and bicycling networks, towpaths, log roads and look-out points, The Polders of Kruibeke offers it all. The visual identity of the polder furniture, designed by Stefan Schöning, finds its inspiration in the wood of the forests and the concrete referring to the safety constructions of the FCA. Intelligent designed 'time capsules' inform visitors at significant locations about the history, culture and nature in the Polders of Kruibeke.

- 16 km of walking trails
- 1 forest playground
- several opportunities for licensed fishermen
- viewpoints showing every nature type
- a landart trail

Participation

The municipality, associations, the hotel and catering industry, farmers, fishermen, local residents ... were given numerous opportunities to share ideas concerning 'their' polder. Their contribution is very valuable.

More info on
www.poldersvankruibeke.be



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