

Ghent, East-Flanders, Belgium

Coupling-areas that reconcile industrial and residential functions and that contribute to Climate Adaptation through the implementation of Nature Based Solutions

Wet nature development in the Ghent Canal Zone



www.vlm.be
(Gentse Kanaalzone)



Wet nature development creates an attractive habitat for some of these species.



Introduction to the case
In the Ghent Canal Zone, there are about 8 villages or urban neighborhoods, whose livability is endangered by the ever-developing port activities. Between these neighborhoods and the port areas (North Sea Port), there are residual grounds with limited use, remnants of the former landscape with a limited function. Open space and port industry mostly face away from each other forming a "messy" buffer area in the shape of ribbons. Through this land development project, the VLM aims to transform 16 of these neglected residual areas into so-called "coupling-areas". Areas that reconcile industrial and residential functions and that contribute to Climate Adaptation through the implementation of NBS. In this case, we focus on two of these finished projects where specifically natural wetlands were installed: Langerbrugge & Desteldonk.

Definition of coupling-areas
Coupling-areas are areas that enhance the open space of the neighborhoods, improve biodiversity and provide a pleasant and healthy environment for the port industry workers as well. As an extra benefit, the coupling-areas also provide a positive impact on mobility by creating a network of soft connections for local residents and workers.



Recognition of the case
In 2023, the European Seaports Association awarded North Sea Port for the development of these coupling areas through the land development project of the VLM.

Land development plan: how it works

Based on the expectations of the various stakeholders, within the possibilities of the legal zoning, a development plan was drawn up. This development plan took into account the main objective of the coupling-areas: buffering and connecting through the construction of forest buffers and paths for walkers and cyclists. In addition, the individuality of the area was considered and, where possible, extra investment for climate adaptation by using NBS like wet nature were integrated. This was the case for the zones of Langerbrugge and Desteldonk. The financing of this development plan was established in close consultation with the authorities involved. Thanks to the land development instrument, subsidies from the Flemish government were available.

Nbs in depth

The natural wetland consists of an area, situated around a watercourse, that was excavated and rewetted and the reshaping and rewilding of a watercourse itself. In the watercourse (Hospice) that forms a natural ribbon through the wetland, the northern bank was leveled with a long sloping bank for the development of reeds and marsh vegetation. To make it accessible, a decking path was created in the wetland zone.



Social benefits

Benefits for vulnerable residents
The coupling-area of Langerbrugge was constructed in a way that this is accessible for wheelchairs and other less mobile citizens. The people from ObraJBaken vzw, an institute with experience-oriented daytime activities in the neighborhood, have informed us they make regular use of the coupling-zones to go for a walk in more quiet natural areas nearby the home. Here, they feel free to take the time to talk and walk together with others. The coupling-area has a differentiated look combining more natural zones like the wet nature part and decking paths with picnic- and rest zones. This makes it possible for people who cannot always access bigger and often less accessible nature reserves to enjoy a part of nature closely.

Benefits for the younger generation
In the coupling-area of Langerbrugge there is also place for young people and children to come together and play. There are some smaller infrastructural elements in the area to provide place to play and meet. However, in the natural wetlands the children experience a natural playful environment and have the opportunity to go on a small adventure in their own neighborhood.



Environmental benefits



A home for a variety of fauna and flora
The coupling-area of Desteldonk has been crowded with nature spotters after its construction. Waxwings Vagrant, Emperor Dragonfly, Eurasian penduline tit and Narrow-leaf Bird's-foot Trefoil are some of the many species spotted in the area. The members of 'waarnemingen.be' have created a specific page on their website and have registered close to 600 different species since the development of the area in 2012. Also 'Natuurpunt' is voluntarily counting the species in the reserve and searching for new rare species that could still explore these new wet natural zones. In 2017 they spotted a colony of storks that came to take a rest in the wet nature reserve of Desteldonk. Recently Natuurpunt also organised an open guided walking tour through the area of Desteldonk and Langerbrugge.

Economic benefits



Multiplying spatial and financial effect

To construct the 16 coupling-areas in a period of more than 20 years, VLM worked together with many different stakeholders, each active on another scale and another interest. In first instance the financing came from the harbour that invested money in order to compensate for the impact of the port on its direct environment. VLM looked for other stakeholders in the area, also looking for new opportunities to improve the natural and general value of these areas for the community and combined all these interests and financing together. By doing so, a multi benefit for the local community was created in a multi-used space. By combining the financing, VLM got more access to space and financial resources to create NBS than initially was expected. This resulted in bigger areas, that can provide space for more species and also include buffers for more municipalities. Thus having a general financial multiplying effect for NBS.



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