Brakel, Belgium

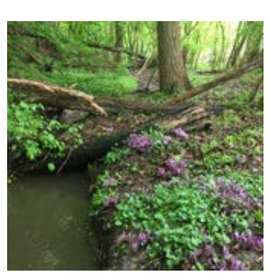
## River restoration and grass-flower buffer strips increase biodiversity

# Restoration Dorenbosbeek

https://oost-vlaanderen.be/herinrichting-dorenbosbeek

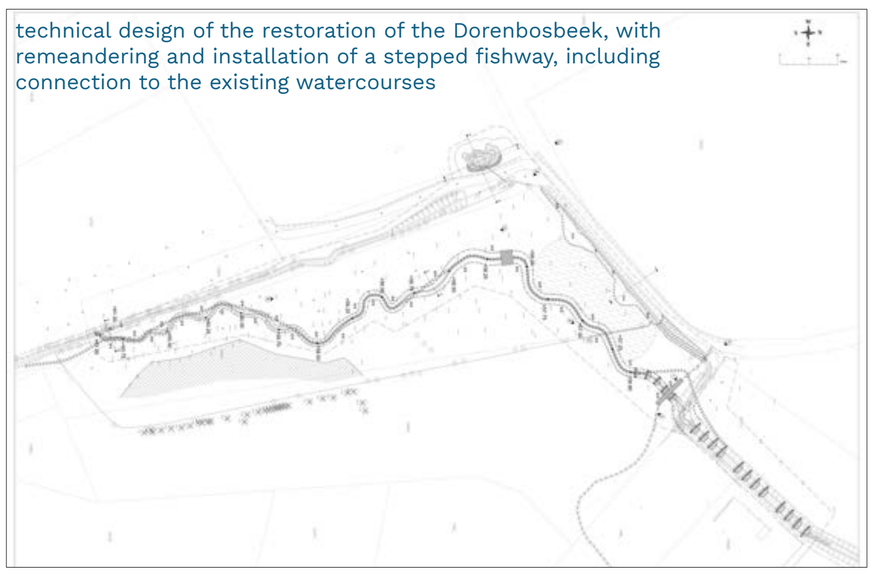

Due to land management in the 1950ties the river was relocated within the landscape, straightened and the river banks were modified. In the MERLIN project the original riverbed of the Dorenbosbeek was restored, bank reinforcements (see picture below) were removed and a stepped fishway was installed to allow free fish migration (see picture on the left).

The old concrete banks were removed and natural riverbanks were promoted to create habitat similar to the upstream natural riverbanks present in the forested area (see picture below).



## NbS in depth

technical design of the restoration of the Dorenbosbeek, with remeandering and installation of a stepped fishway, including connection to the existing watercourses



## Environmental benefits

Fish migration was restored allowing locally protected species such as bullhead and brook lamprey to colonize new habitat leading to self-sustaining populations.

The natural e-flow was restored within the river creating extra microhabitat and promoting macroinvertebrate life.
The flower buffer strips promoted insect diversity.

## Social benefits

A bridge was constructed over the newly restored river to increase accessibility and allow recreationists to enjoy the typical landscape and spring streams.

To have the buffer strips installed the project also included farmers on a volontary basis to create support and connect with farming activities. Different stakeholders were informed on the planned activities and could provide support.

## Economic benefits

Erosion and flooding are reduced due to the construction of an erosion pool and thanks to extra water buffer canals, remeandering and the construction of winter beds.

This reduces the cost for drediging, reduces the possibility of economic damage by floodings and supports earlier ecological investments made. Insects foraging on the flow-buffer strips can act as natural enemies against pest species protecting the crops and increasing the yield leading to higher economic benefits.

provincie Oost-Vlaanderen

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**Selected** case studies

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