

Restoring fen wetlands & heathlands for climate adaptation

Results of changes implemented to the 'Grobbendonk' site by Pidpa



The fen before restoration – Works are now being prepared

UNDERSTANDING THE CATCHMENT

In Grobbendonk, the public water company Pidpa developed the Interreg 2 Seas PROWATER site 'Grobbendonk' to demonstrate how the region can adapt to the consequences of climate change through Ecosystem-based Adaptation measures. The demonstration site is located in the Central Campine region, which is characterised by the presence of sandy soils, naturally allowing easy infiltration of rainwater to groundwater bodies (in areas with healthy and non-compacted soils).

IDENTIFYING & ENGAGING STAKEHOLDERS

Within Grobbendonk, drinking water users of Pidpa (through consumption charges) and European citizens (through public funding provided by the Interreg 2 Seas programme) can be perceived as buyers of the targeted ecosystem services in Grobbendonk on land owned by Pidpa. The targeted ecosystem services that these buyers receive in return is a more secure water provisioning, increased biodiversity, and more healthy nature in which recreation can take place (cf. § 4). From this perspective, Pidpa (landowner) is acting as seller. The Agency for Nature and Forest (nature management and evaluating environmental permit applications) and the regional landscape organisation "Kleine and Grote Nete" (RLKGN) of the province of Antwerp acted as brokers. RLKGN aims to realise futureproof local projects to increase the beauty, the biodiversity and accessibility of the region.

PRIORITISING LOCATIONS FOR CLIMATE ADAPTATION MEASURES

For the project PROWATER, the University of Antwerp applied the water system map to the Interreg 2 Seas area (including catchments in Flanders, the Netherlands and South England). The water system map shows that the sub-sites selected in 'Grobbendonk' are suitable for the development of temporary wetlands such as fens that would naturally be present in the area (indicated in green on figure 5) and infiltration zones (indicated in brown on figure 5). Extensive preliminary soil and topography studies confirmed the possibility to enlarge and restore the presently degraded historical fen to its original 18th century contour in the fen restoration sub-site. The sub-site for heathland restoration in an area formerly covered by a pine tree plantation is an evident measure to increase infiltration capacity for drinking water production and restore this historically and ecologically valuable habitat. Pine tree plantations previously served the now shut down mining industry.

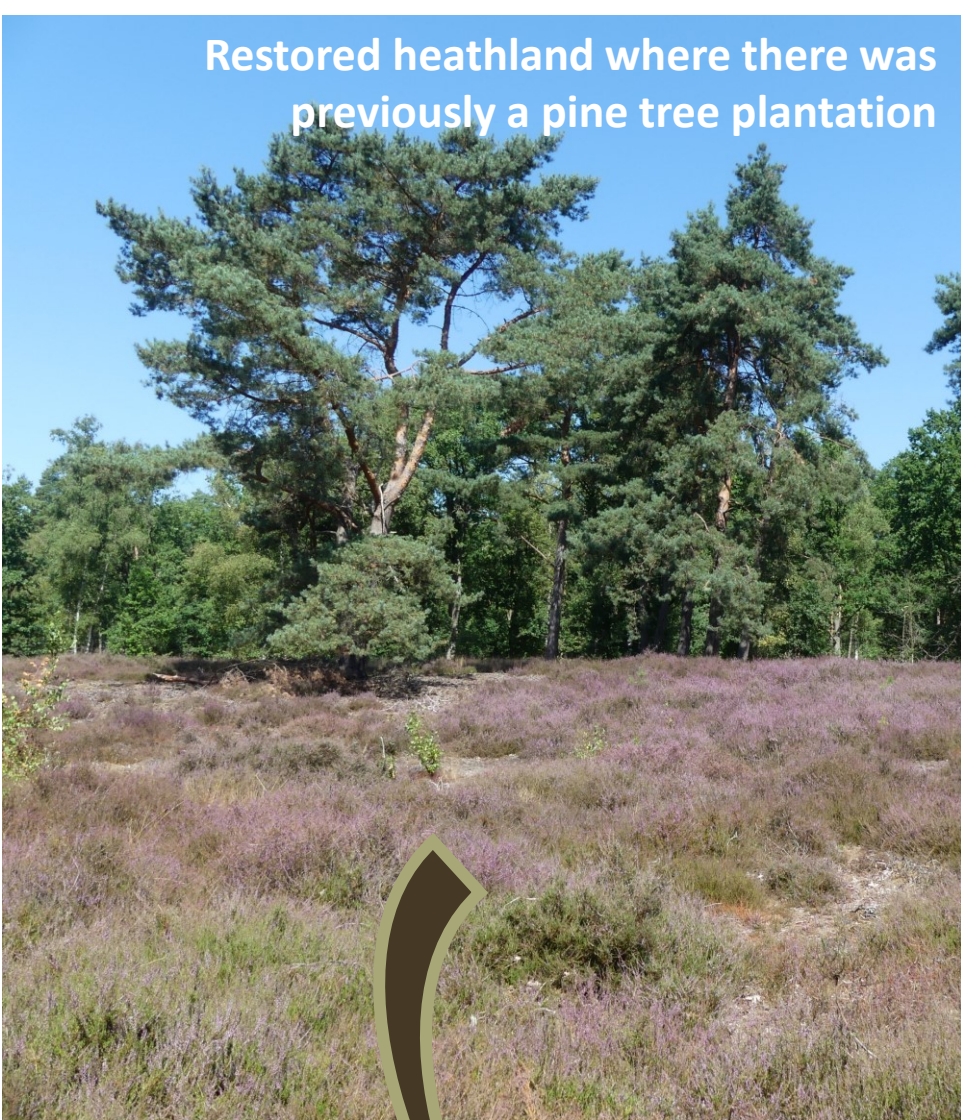
The targeted ecosystem services resulting from implemented EbA measures in Grobbendonk include increased water infiltration and retention. It is clear that the restoration of the fen and reduction of drainage by ditches in the area will increase the retention and delayed infiltration towards the groundwater. The restoration of heathland, where there was a conifer tree plantation, will further increase the infiltration towards the groundwater in the abstraction cone of the drinking water production.

MONITORING & EVALUATION

With the PROWATER experiences, Pidpa gained more theoretical knowledge and practical knowledge needed to implement EbA measures efficiently into the landscape. This helps to further streamline the engagements of Pidpa in Grobbendonk as well as other areas in the province of Antwerp, resulting also in an increased quantity and quality of the groundwater and a climate proof 'water loving' environment. First examinations have already been done to explore the potential for future realisations of similar EbA measures within the zone of the Grobbendonk groundwater abstraction site.

Using the yearly groundwater abstraction taxes to fund and realise EbA measures, as demonstrated by PROWATER is currently not possible. This requires legislation to be adjusted, to generate more available funding for targeted right EbA measures and help maximise the climate change adaptation capacity of our regions.

FOR MORE INFORMATION: www.pro-water.eu/output-library
<https://www.pro-water.eu/grobbendonk-be>



Restored heathland where there was previously a pine tree plantation



The fen before restoration – Works are now being prepared



The red circles indicate the location of the heathland (left) and fen (right) sub-sites on the water system map. The map confirms the suitability to restore the previously degraded fen (with the potential for temporarily wet zones indicated in green) and to restore heathland (with the potential for infiltration zones indicated in brown).

A cross-border cooperation

From November 2017 to March 2023, 10 partners from Flanders, the Netherlands and the United Kingdom work together on PROWATER. The project has a budget of more than 5.5 million euros. In each country, water production companies, governments and research institutes as well as land managers are involved in order to achieve a supported vision for Ecosystem-based Adaptation (EbA).

The project PROWATER receives 3.315.974 € through the Interreg 2 Seas fund, co-funded by the European Regional Development Fund (ERDF), to work on climate change adaptation and to increase resilience against droughts and extreme precipitation based on ecosystem services.

