

Life Turnhouts Vennengebied

This Life Project is the result of a co-operation between our NGO, Natuurpunt Beheer, and two public institutes, Agentschap voor Natuur en Bos and Vlaamse Landmaatschappij. The objective of this innovative partnership between NGO and public authorities is restoring the high natural values on a large scale of one of the most important Flemish Natura 2000 sites, called 'Turnhouts Vennengebied'.

Turnhouts Vennengebied is situated in the north of the Campine region, close to the Dutch border, on a plateau where thick clay layers break surface and form the watershed between two river systems. Since long, the area is renowned for its vast complex of species rich oligotrophic ponds and heaths, containing a broad range of wet and dry heathland habitats. The clay surfacing the area result in the presence of oligo-mesotrophic pond complexes, in which the very well developed Annex I habitats *Littorelletalia uniflorae* (3110) and *Nanocyperetalia* (3130) can be found.

More-over, the project area is one of the very few sites in Flanders where both *Lobellia dortmanna* and *Sparganium angustifolium*, two typical species of the habitats mentioned, grow together with *Luronium natans*. Here, the latter species (Annex II) reaches in the area one of its largest and densest populations in Belgium. The oligotrophic pond complexes are surrounded by very well developed Atlantic wet heath (4010), alternating with numerous large depressions with *Rhynchosporion* (7150) vegetation, making the site of European importance. Species rich *Nardus* grasslands (6230), a priority habitat, can still be found in the project area, especially on a slightly richer clay soil, although the surface of this important habitat has severely declined over the last years. The best developed *Nardus* grasslands (6230) are famous for their richness in several rare orchid species.

The north-east part of the project area consist of extensive and very valuable inland sand dunes, characterised by an unusual mineral rich sand soil. As a result, the *Corynephorus* and *Agrostis* dune grasslands (2330) and dry sand heaths with *Calluna* and *Genista* species (2310) are unique within the European lowland. These habitats are home for a broad range of Red List species. Finally, dry heath (4030) is found throughout the project area. The wide variety of heaths, oligotrophic species rich ponds and associated habitats is also reflected in the presence of several rare bird species from Annex I of the Bird Directive. *Luscinia svecica*, *Alcedo atthis*, *Pernis apivorus* and *Dryocopus martius* are breeding birds in the area. *Chlidonias niger*, *Philomachus pugnax* are formerly breeders and can return after habitat restoration. As a consequence, the project area is designated as a Natura 2000 site, designated under the Habitats Directive (pSCI) and the Birds Directive (SPA).

Unfortunately, the presence of the unique habitats and species has decreased severely in the pSCI during the last decades. The most important threats for this project area are the fragmentation of the Annex I habitats and the consequent isolation of target species populations, eutrophication and acidification of the Annex I habitats due to intensive farming surrounding the habitats, the disappearance of valuable habitats by large-scale afforestation and intensively worked agricultural fields, the lack of adequate management, an unnatural hydrology and the lack of social support. The decrease of the high natural values was the start for the creation of the first nature reserves in the region.

Thanks to the actions of a large number of volunteers, organised by NGO Natuurpunt, and the support of the city of Turnhout, Agentschap voor Natuur en Bos and VLM, a large nature reserve was created with a total surface of 285 ha. Our actions were consolidated by the institutes Agentschap voor Natuur en Bos and Vlaamse Landmaatschappij, who took the initiative to start a 'land development for nature'. The aim of this project is to restore the natural values of European importance in the project area to their former extend and quality.

Objectives

- Large scale redevelopment of the very valuable species rich *Nardus* grasslands (6230).
- Optimal restoration of international important habitats *Littorelletalia uniflorae* (3110) and *Nanocyperetalia* (3130), with *Luronium natans* (1831).
- The large-scale restoration of a large heath and land dunes complex, existing of special Annex I habitats, such as *Ericion tetralicis* (4010), *Rhynchosporion* (7150), dry sand heaths with *Calluna* and *Genista* species (2310), *Callunetum* (4030) and especially *Corynephorretalia canescentis* (2330).
- Improvement and enlargement of the habitats for diverse Annex I species of the Birds Directive and Annex II species of the Habitats Directive), especially *Luronium natans*, *Leucorrhinia pectoralis*, *Chlidonias niger*, *Philomachus pugnax*, *Lullula arborea*, *Caprimulgus europaeus*.
- Besides these conservation objectives, we want to increase the socio-economic potential of this Natura 2000 area, using optimally the possibilities for nature-oriented recreation, integrating volunteers into nature management and informing local people and visitors about the project.

Actions and means involved

Preparatory actions

Preparatory actions are essential to become high qualitative results in this project. First of all, we need a better scientific reference framework, on which we can found our decisions.

Furthermore, the following preparatory actions are foreseen:

- Realisation of preparatory researches on ponds restoration.
- Development of integrated conservations plans for the acquired land, based on a detailed vegetation map and field research.
- Realisation of preparatory field researches to determine the occurrence of soil pollution.
- Writing of detailed plans for efficient and effective habitat restoration.
- Development of a new plan for the visitors and the socio-economic potentials of the project area.
- Preparation and guidance of the nature organisation project.

Land purchase

- Acquisition of 50 ha and clearing the leasehold of 20 ha in the project area for habitat restoration. To start a long-term management of the project area directed towards the favorable conservation status of the Annex I habitats. To protect and connect the special habitats and to preserve sustainable populations of the target species.

Concrete conservation actions

- In connection with the land development for nature project of Agentschap voor Natuur en Bos en Vlaamse Landmaatschappij, the following actions will be undertaken:
 - Restoration of 17 ha oligotrophic to mesotrophic pond complexes with *Littorelletalia uniflorae* (3110) and *Nanocyperetalia* (3130). Before restoration a preparatory study will be carried out, keeping in mind the vulnerable status of these ecosystems.

- Restoration of 12 ha heath habitats surrounding the pond complexes by removing the fertilized upper soil of grasslands and arable fields.
- Restoration of 20 ha heath habitats and the wind effect on pond habitats by removing young forest and sod-cutting.
- Natuurpunt Beheer wishes to carry out the following actions:
 - Development of a 20 ha mosaic existing of heath habitats, with transitions to open forest.
 - Restoration of 20 ha heath habitats by removing young forest.
 - Restoration of 5 ha heath habitats by sod-cutting after removing young forest
 - Restoration of 12 ha Nardus grasslands (6230), heath habitats and smaller oligotrophic ponds by removing the fertilized upper soil of grasslands/arable fields.
 - Placing a raster in order to start the recurring grazing management, carried out in co-operation with local farmers.
- The realization of well-adapted equipment to manage the vulnerable grasslands (hayfield management), so that the volunteer groups can continue the long-term management on the most vulnerable sites in a durable way.
- The construction, or reconstruction of walking paths to prevent disturbance to birds, with information boards and an information folder to guide visitors.

Public awareness and dissemination of results

- Development and realization of a wide range of measures to create a larger support for Natura 2000, to promote the tourist and socio-economical potential of the area and to this LIFE +project by the publication of leaflets, information for the general public, new information panels, the development of new tracks, the writing of a layman's report, the publication of several articles in membership magazines and the organization of public activities.
- Organization of several activities to exchange knowledge and experience with the local people and several authorities, networking with other Life projects. Moreover, we wish to exchange not only technical experience about habitat restoration, but to promote our approach with involvement of local people and volunteers as well.
- It is evident that we will monitor the results of our actions with a well-structured monitoring scheme. At the end of the project, an 'after Life conservation plan' shall focus on the long term perspectives for the pSCI area, to prevent the loss of all our efforts during this Life-project

Expected results

- Large-scale restoration and sustainable management of heaths, inland sand dunes, oligotrophic ponds and grasslands, with emphasis on the above mentioned habitats and species for over a 100 ha.
- Better visitor facilities and more information (brochures, leaflets, flyers) about the area and a better socio-economic support of the Natura 2000 area and the Life project.
- The continuation of the good co-operation between the governmental organization 'Agentschap voor Natuur en Bos' and 'Vlaamse landmaatschappij' and the NGO Natuurpunt is also an important result of the project. Also raising public awareness is an important expected result.