

## SUMMARY DESCRIPTION OF THE PROJECT

### Project title: Habitat restoration in the Abeek Valley

#### Description of the project area:

The lowland brook system 'Abeek' in the Flemish Campine region, is a unique natural area for Western Europe. This area and the brook itself are characterised by a high geomorphological and natural diversity. Everywhere in the valley, the seepage pressure is spectacular for the region and the whole of Western-Europa.

The exceptional abiotic conditions in the valley of the Abeek have led to several types of endangered Annex I habitats. Among them, the most important are sand dune and dune-heath vegetations on land dunes (2310, 2330), dry heathland vegetation (4030), transition mires and quacking bogs (7140), *Molinia caerulea* meadows (6410), species rich *Nardus*-grasslands (6230+), oligotrophic to mesotrophic standing waters (3130), old Oak Forests (9190) and last – but not least – forests on extremely wet soils and a high epiphyte flora (91E0+).

Especially for transition mires with small sedge communities (7140), quacking bogs (7140), *Molinia caerulea* meadows (6410), species rich *Nardus*-grasslands (6230+), dry Atlantic heath (4030), diverse subtypes of alluvial forests (91E0+) and oligotrophic to mesotrophic standing waters (3130), the valley of the Abeek is of Flemish and European importance! All these habitats are rare and threatened in the whole of the European Union.

The wide variety of Annex I habitats is also reflected in the presence of several rare and threatened bird species from Annex I of the Bird Directive. Among them, species of open water and marshes with reedbeds are the most important: *Luscinia svecica*, *Alcedo atthis*, *Botaurus stellaris*, *Ixobrychus minutus* and *Porzana porzana* are breeding in the area. *Pandion haliaetus* and *Casmerodius albus* are migrating and/or wintering species.

The project area also supports one of the last breeding populations in Flanders (and Western-Europe) of *Lanius collurio*! *Lullula arborea* is another breeding species in the valley of the Abeek, *Caprimulgus europaeus* a former one, but can return soon after habitat restoration is carried out. The more wooded parts of the valley hold breeding *Pernis apivorus*, *Dryocopus martius* and (recently) *Dendrocops medius*.

Logically, several species of the Annex II and Annex IV of the Habitat Directive are present in the valley of the Abeek. *Pelobates fuscus*, a rare and threatened species, was recently discovered within the boundaries of the pSCI. Historically, the area held populations of *Bufo calamita* en *Coronella austriaca*. Both species are present in the surrounding pSCI. The creation of good stepping stones in the strategically located valley of the Abeek will be of great importance to maintain a favourable conservation status for the populations for both species in this part of the EU. *Triturus cristatus* has still a population within the project area.

The valley of the Abeek is one of the 'hot spots' for dragonflies in Flanders. At least 44 species were recorded. The most special species with permanent populations are *Aeshna isosceles*, *Brachytron pratense*, *Libellula fulva*, *Coenagrion pulchellum* en *Cordulia aenea*. All of them are typical fen and mire species. *Leucorrhinia pectoralis*, Annex II species, is regularly seen, but no reproduction has been observed yet.

The Abeek itself holds an impressive and healthy population of *Lampetra planerii*. An important part of the Flemish population (> 8%) of this fish species lives in the brook.

As for butterflies, the area is most known for its population of *Heteropterus morpheus*, a very threatened species all over Western-Europa. Other rare species include *Apatura iris*, *Limenitis camilla*, *Satyrrium ilicis* and *Carterocephalus palaemon*. *Boloria selene* was extinct in the nineties of last century.

Unfortunately, the presence of the extremely diverse and unique habitats and species is decreasing in the pSCI. Several habitats are under severe pressure, species are on the verge of extinction. The biggest threats for this project area are the fragmentation of the Annex I habitats and the consequent isolation of target species populations, the disappearance of valuable habitats by the lack of adequate management, afforestation, intensive farming, an unnatural hydrology, eutrophication of the Annex I habitats and the lack of socio-economical support for this unique Natura 2000 area.

### **Objectives:**

With this proposal of LIFE+ Nature project, Natuurpunt Beheer vzw wishes to tackle the threats influencing in a negative way the unique habitats and species of both Habitat and Bird Directive who are characteristic for the valley of the Abeek. We wish to realise this objective in such way that it can act as best practice and demonstration for other valley ecosystems with similar habitats and threats within the EU. Moreover, after finishing the LIFE-project, the pSCI will be one of the key areas in lowland Europe for the target habitats and target species.

The concrete objectives of this Life-proposal are as follows:

- Large-scale restoration of a complex of ground- and seepage dependent Annex I habitats for which the Abeek valley is of national and international importance: especially 10 of quacking bogs (7140) and transition mires with small sedge communities (7140), 25 ha alluvial forests (Saliceto-Franguletum and Carici elongatae-Alnetum (91E0+)) and hydrophilous tall herb fringe communities (6430). Locally also *Molinia caerulea* meadows (6410) and lowland hay meadows (6510) will develop. The Life-proposal is in particular extremely important for the quacking bogs and transition mires (7140). This habitats will significantly increase from a mere 2 ha tot at least 12 ha!
- Large-scale restoration of 17 ha Annex I habitats typical for a semi-dry, poor sandy soil typical for the region and as stepping stone between the 'Hoge Kempen' (Flanders) and the 'Peel' area (Netherlands): Corynephorus and Agrostis dune grasslands (2330), psammophilous heathlands with Calluna and Genista species (2310), old oak forests (9190) and dry heathlands (4030). The surface of the last habitat will double in surface, locally with elements of species rich *Nardus*-grasslands (6230+).
- Restoration (5 ha) of the valuable Annex I habitats Nanocypertalia fen vegetations (3130) and on a smaller scale Magnopotamion (3150) as well. As a result of our efforts, the Abeek valley will become internationally known for its Nanocypertalia fen vegetations (3130), and their associated species like *Leucorhynchus pectoralis*, *Pelobates fuscus*, *Triturus cristatus* and *Bufo calamita*.
- To increase the (breeding) population of *Luscinia svecica*, a species of the Annex I of the Birds Directive.

Due to its location in the densely populated Flemish region, the project area has a very important role to play for the people. A significant increase of the socio-economic potential of this Natura 2000 area, through optimally using the possibilities for nature-oriented recreation, integrating volunteers into nature management and informing local people, visitors and authorities about the project and building new partnerships as an example of good practice is therefore another very important objective of this LIFE+ project proposal. We wish to realise a LIFE+ project which demonstrates the participation of local people into large scale habitat restoration.

**Actions and mean involved:**

- Development of two integrated conservation plans, based on a detailed vegetation map and field research and at the end of the project an 'after LIFE conversation plan' which highlights the long term perspectives for the pSCI area.
- Writing of detailed plans for efficient and effective habitat restoration.
- Monitoring of the (first) results.
- Acquisition of 50 ha in the project area in order to realise a large-scale restoration of the target Annex I habitats and their associated species towards the favourable conservation status of the habitats, and populations. Without acquisition, the restoration of the Annex I habitats in the pSCI is not possible, due to the high fragmentation of properties and habitats.
- Large-scale restoration of the Annex I habitats in the project area, in the first place on the newly acquired land, which, in turn form good habitats for several species of the Bird and Habitat Directive as well. The restoration is carried out by removing wood and sod-cutting on cleared up larch and pine plantations, removing spontaneous trees/vegetation on abandoned land, development of new alluvial forests, integrating sites with buildings, removing the nutrient rich top soil and restoration of the original soil profile of former agricultural land, restoration of the natural hydrology and freshwater habitats, restoration of several fen habitats, removing of exotic invasive species in heathland- and woodlandhabitats, and fencing to start grazing management on an area of 30 ha.
- Acquisition of specialised equipment to carry out habitat restoration in extremely difficult situations (e.g. restoration of quacking bogs (7140) and transition mires (7140), *Molinia* meadows (6410), *Corynephorus* and *Agrostis* dune grasslands (2330), psammofillous heathlands with *Calluna* and *Genista* species (2310) and dry heathlands (4030).
- Development and realisation of a wide range of measures to promote the tourist and socio-economical potential of the area, through the publication of several leaflets, new information panels, the development of new tracks and information signs, the publication of articles, the writing of a layman's report and yearly public activities.
- Organisation of several activities to exchange knowledge and experience with the local people, other LIFE projects and several authorities.

**Expected results:**

- Large-scale restoration and sustainable development of the higher mentioned Annex I habitats in the project area. After, the LIFE-project, the valley of the Abeek will be one of the core areas in lowland Europe for several Annex I habitats, especially for quacking bogs (7140), transition mires with small sedge communities (7140), alluvial forests (*Saliceto-Franguletum* and *Carici elongatae-Alnetum* (91E0+)), *Corynephorus* and *Agrostis* dune grasslands (2330), psammofillous heathlands with *Calluna* and *Genista* species (2310), old oak forests (9190), dry heathlands (4030) and *Nanocypertalia* fen vegetations (3130).
- Restoration and increase of population of *Luscinia svecica*.
- 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. More visitors visiting the nature reserve with respect for the natural values.