

Green Circles Bee Landscape Verified Conservation Area (VCA).

Audit report by Dr. A.P.M. van der Zon, February 2019

Introduction. The Green Circles Bee Landscape is a diverse landscape in the low-lying western part of the Netherlands, one of the most densely populated areas of the world, with a broad variety of public/private and urban/rural elements. In this landscape biodiversity restoration activities are initiated with as binding element the wild bees species and their pollination of natural flora. Initially the bee-initiatives were focussed on the biodiversity of bees and hoverflies but in the framework of the VCA, emphasis is put on the underlying landscape with the bees and hoverflies as indicators for success. The intention of the Bee Landscape VCA is to become the model for future developments elsewhere in the province. The audit of the Green Circles Bee Landscape VCA is effectuated over the last months of 2018 and was executed against the landscape standard of VCA.

VCA landscape standard

The VCA intends to stimulate public and private partners to take initiatives to protect biodiversity jointly in a landscape approach. The landscape comprises public areas under the responsibility of local authorities, private lands, areas privately owned by involved partners and lands under the influence of the conservation measures. Apart from individual landowners/ managers also a coalition of willing may seek the inclusion of a defined landscape in the VCA register.

For this to be successful, it needs to be clear what the boundaries of the landscape (the area) are. It needs to be clear that the coalition has ownership or a management title on substantial parts of the area and is in a position to work with other landowners in the area to achieve the formulated ambitions. This collaboration with other stakeholders needs to be described, and translated to measures (communication, information/ public awareness, incentives) to illustrate their potential contributions in the Conservation Management Plan. This plan also describes the conservation actions with the responsibilities of each of the partners for the actions in the timeframe covered by the management plan.

Public awareness of the conservation goals of the concerned landscape is an important component of the conservation actions.

Overview of the Verified Conservation Area (VCA). The proposed Bee Landscape VCA is situated in 5 municipalities in the province Zuid-Holland in the western part of the Netherlands in the so called “Groene Hart” (green heart). Of the total area of 22,705 ha almost 6000 ha are urban and industrial area, a 1000 ha is infrastructure and about 15,550 ha is natural area of which almost 12,500 ha is managed by farmers, and the remaining area by public parties. It includes the Natura 2000 reserve De Wilck of 120 ha and the major part of the Bentwoud-forest.

The Bee Landscape VCA covers the whole area of the 5 municipalities Leiden, Leiderdorp, Zoeterwoude, Alphen en Zoetermee. Currently 2,830 ha or about 12 % is specifically managed as bee landscape.

In the past centuries the area, part of the “Groene Hart”, has evolved from the original peat landscape with low lying flower-rich meadows dissected by ditches into a high productive cattle raising area with a limited number of high productive grass species. The biodiversity

has been decimated by the intensification of the mechanised land management, drainage and the extensive use of fertilizer, manure, insecticides and herbicides.

The ownership varies from public and semi-public authorities managing the road margins and watercourses, Prorail managing the railway margins, to farmers and enterprises (agricultural and industrial) managing smaller and larger areas, and many small private urban and rural garden owners.

The Management Plan presents a map and geographical coordinates. The management authorities are provided and the contact persons identified. The program management is clearly identified. The VCA core team with the participating municipalities and organisations represented instructs the programme management.

Table 1: Current land use

Municipality	Ha	Urban and industrial	Agricultural (grassland)	Water	Nature and recreation	Infrastructure	# inhabitants
Leiden	2.327	1.344	252	130	344	189	123.900
Leiderdorp	1.228	391	534	72	93	69	27.200
Zoeterwoude	2.196	238	1.759	70	46	59	8.400
Alphen	12.249	2.225	9.223	604	781	416	109.100
Zoetermeer	3.705	1.652	707	254	683	253	124.800
Total	22.705	5.850	12.475	1.130	1.947	986	393.400

The objective of the Bee-Landscape is to create an ecological network that functions as a bee-landscape where pollinators like wild bees find sufficient food, nesting places and shelter. Key farmers, industry and other landscape elements managers initiate biodiversity-restoration projects to develop and expand biodiversity-rich landscape elements. Success can be realised by large scale and long-term cooperation of the partners.

The biodiversity baseline conditions are well elaborated with support of the Wageningen Environmental Research and the Naturalis Biodiversity Center of the Netherlands.

The ecosystem services of the area are many but currently they are not sustainably used. Traditionally the agriculture and cattle-raising was based on the ecosystem services but through the intensification many of the services have been strongly degraded. Some services (production of crops, decomposition of manure) cause that many other services important to the municipal population as well as the farmers come more and more under stress (recreation, clean water, pollination, etc.).

The key players participate of the bee landscape. The Bee Landscape has been evolved from the Green Circles, an initiative of the Province of South Holland, Heineken Brewery and the Wageningen Environmental Research. The major players of the Bee Landscape are the local authorities, companies, and farmers. The small private owners are not yet closely involved. The core team is chaired by the mayor of Leiderdorp and the members are representatives of the municipalities, the farmers and the enterprises.

A SWOT is presented. The strength is the strong participation in the coalition by farmers (Land van Wijk en Wouden) , the industry and the municipalities. Weak part is the consistency of financing by the municipalities. Opportunities form the initiatives for finances from the National Lottery, the man-made Bentwood forest of 1000 ha with 800 ha inside the Bee-Landscape with rich biodiversity and the science (Wageningen, Naturalis) that supports the initiative. Threat forms the urbanisation and expansion of the industry and further intensification of the agriculture promoted by EU through the Common Agricultural Policy with little attention for biodiversity. There is no need for an EIA because key in the VCA area are the conservation actions focussed on influencing inhabitants and users of the Bee Landscape.

Program of Conservation Actions. The CMP gives a description of actions each with the responsible actor. The contributions and the timeframe over which the activities are to be completed are still open. The challenge is to concretize the actions for the coming year(s) and develop a scheme to progressively expand the number of participating members (farmers etc.) and the conservation sites (farms, roads, ditches, railway sides).

Three invasive species are identified and form a problem; one is even poisonous for the cattle. No concrete actions are mentioned to deal with them.

Monitoring and evaluation have been elaborated. The progress on the development of natural flower rich meadows and flower-rich traditional landscape elements should be the central part of the monitoring and evaluation. The base line assessment based on key species of pollinators is developed; the elaboration of the area-based components (flower rich landscape elements) still need to be developed. The monitoring actions should be more robust and focus on the actions with the pollinating species as indicators for success.

Overall assessment. The Bee Landscape used to be a very biodiversity rich area but has been degraded by the agricultural intensification and urban and industrial expansion. The key actors of the Bee-Landscape with representatives of the main parties are very dedicated to restore some of the biodiversity and to further develop the VCA. The VCA-landscape standard fits well for the Bee-Landscape VCA. The area was visited several times and a number of the key actors was interviewed and activities visited. The baseline conditions and actions are adequate to develop the VCA. The VCA should be the central process for the conservation and restoration of the biodiversity with the pollinators as indicators of success. The CMP provides a good basis, however need to be concretized further in the coming years. The CMP is compliant with the VCA landscape standard but still lacks an elaboration of the focal landscape elements and a presentation of actions with actors in annual programs.

Recommendations

- Develop the governing structure into a board that is focussed on the development of the VCA Bee Landscape.
- Focus on strengthening of the process within the existing VCA-borders. Currently the management unit is quite small and should not be stretched out more.
- Put the focus more area-based with the wild flora and fauna (pollinators) as indicator species; put more focus on the wild bees since honey bees are hardly indigenous.
- Set conservation priorities within VCA and focus on the development of major biodiversity-rich corridors.
- Involve the owners of urban gardens in the Bee Landscape and develop with the municipalities a strategy for stone-poor and flower-rich gardens.

- Link the Deltaplan Biodiversity Restoration launched by the Netherlands Ecological Research Network in 2018 with the Bee Landscape VCA that could become the area-based 'experimental garden' for the plan where the science can meet the practise.

Final Conclusion The VCA Green Circles Bee-Landscape conservation management plan is compliant with the VCA landscape standard and the area should be registered as a VCA.

Warmond, The Netherlands, 17 March 2019.