

Wageningen Campus Flora and Fauna Policy

1. Introduction
2. Policy
3. Guidelines for implementing policy
4. Appendices:
 - I. Overview of Wageningen Campus area
 - II. Overview of flora and fauna present on Wageningen Campus
 - III. Sketch of Wageningen Campus zoning plan
 - IV. Wageningen Campus Green Space and Nature Plan

1. Introduction

Wageningen Campus is a centre where expertise and talent come together. It is the location of Wageningen UR as well as a large number of applied research institutes. These research institutes are responsible for the 'R' in the name of the organisation Wageningen UR. As well as in Wageningen, the applied research is carried out in various locations in the Netherlands and abroad.

Wageningen Campus measures 67.5 hectares (see Appendix I) and abuts against the city of Wageningen. To the south, the Campus grounds border the university sports centre, creating a connection to the university building De Leeuwenborch on the other side of Nijenoordallee. The municipal park Blauwe Bergen is located along a large stretch of the southern boundary of Wageningen Campus. To the east, the Campus grounds are bordered by the new neighbourhood in development 'Born Oost'. The Grintbeek stream runs here and forms part of the ecological water system of Wageningen and the surrounding area. To the north of Wageningen Campus is the area of the Gelder Valley called the Binnenveld, a cultural landscape and animal sanctuary surrounding the Grift nature reserve.

Wageningen UR is a knowledge institute which not only develops high-quality knowledge within the domain of healthy food and living environment but also helps to apply this knowledge. Biodiversity is an important theme within Wageningen UR (go to www.wageningenur.nl for more information). The knowledge available within Wageningen UR is applied at Wageningen Campus. For instance, Wageningen Campus has an ecological garden, wooden walls, wild flower meadows and forests. This helps maintain biodiversity (see Appendix II).

This document explains how Wageningen Campus deals with its plant life (flora) and animal life (fauna). With this document, Wageningen UR aims to provide transparency in this area to interested parties and stakeholders.

2. Policy

Wageningen UR has an attractive, lively, safe and functional Campus. The presence of flora and fauna is an important part of this.

Although Wageningen Campus welcomes wildlife, it does have guidelines for how much and what types it welcomes. Flora and fauna on Wageningen Campus should not lead to unsafe situations for users or damage buildings or grounds. Nor should flora and fauna form an obstruction to the professional image of Wageningen Campus and its fulfilment of its primary function of offering space to research and education at Wageningen UR.

Within this framework, Wageningen UR actively contributes to how it fits in with and connects with the surrounding area; and it treats the flora and fauna present with care and respect. In this regard, Wageningen UR meets or exceeds current legislation and regulations.

Requirements of the legislation and regulations

The following legislation and regulations are applicable to Wageningen Campus in relation to flora and fauna:

- Dutch Flora and Fauna Act (*Flora- en Faunawet*)
- Dutch Nature Conservation Act (*Natuurbeschermingswet*)
- Dutch Forestry Act (*Boswet*)
- Dutch Environmental Management Act (*Wet Milieubeheer*) - Wageningen Campus complex permit
- Zoning plan, taking into account the wildlife corridor as indicated by the Municipality of Wageningen (see Appendix III)

Wageningen UR requirements and wishes

Education and research are the priorities at Wageningen UR; the operational management facilitates and is secondary to these functions. For this reason, biodiversity in operational management must not be detrimental to, but rather should strengthen, education and research.

Wageningen Campus is characterised by the following (see also Appendices I and IV):

- A functional area with an open character and linear structures which is connected to the cultural landscape of the Binnenveld.
- Linked zones of trees, small forests and meadow grass as a connection between Wageningen Campus, which serves as a foraging area for various animal species, and these animals' habitats, located to the north and east of Wageningen Campus.
- Large stretches of water which serve the important purpose of storing and circulating clean water, including spring water, within the ecological water system of the Municipality of Wageningen.
- A freely accessible area with added value, in terms of experiences and the ecology, for the surrounding area.

Wageningen UR takes responsibility for ensuring that pest nuisance is prevented as much as possible while at the same time ensuring that pests are dealt with in an environmentally friendly and animal-friendly way. Integrated Pest Management serves as a guideline in this regard.

3. Guidelines for implementing policy

The following guidelines apply to the implementation of the flora and fauna policy at Wageningen Campus:

- Update distribution information for protected species every three years as part of the compliance with the Dutch Flora and Fauna Act.
- Have independent research carried out into the presence of protected species and, where necessary, ensure that mitigating measures are taken in connection with renovation, demolition and construction work.
- Carry out grounds maintenance and management on the basis of a 'flora and fauna plan of approach' based on the Dutch Flora and Fauna Act and any additional wishes of Wageningen UR.
- Perform extensive maintenance where necessary to increase biodiversity.

- Request advice from internal or external experts when selecting new landscaping plants. The criteria for new landscaping plants are the location, the decorative value, the health and the attractiveness for species such as bees, butterflies and birds, keeping in mind the biodiversity of Wageningen Campus.
- Look for and follow through on opportunities to increase the biodiversity and attractiveness of Wageningen Campus within the financial possibilities.
- Once per year, record the measures taken in relation to biodiversity in the Annual Environmental Report.

In summary, the Wageningen Campus flora and fauna policy focuses on:

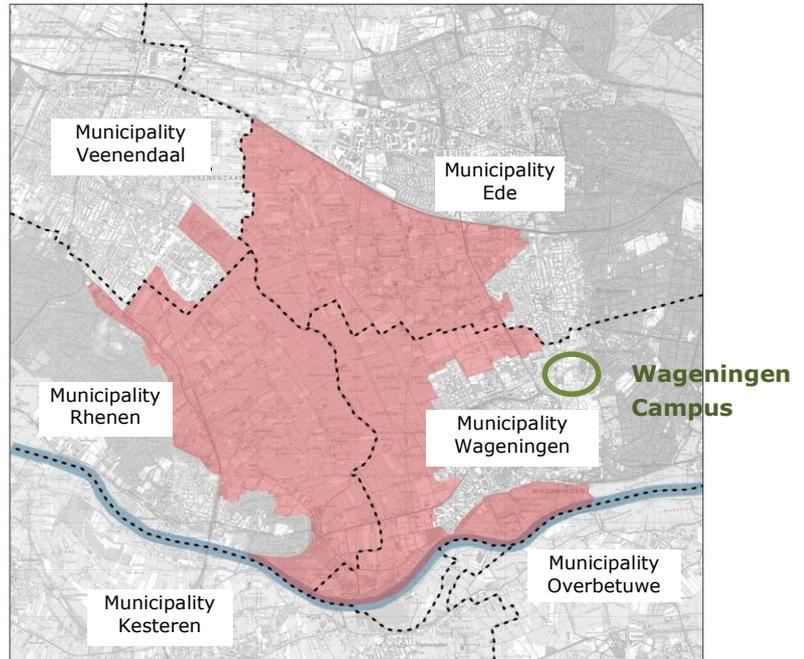
- Complying with or exceeding current relevant legislation and regulations.
- Fulfilling the requirements and wishes of Wageningen UR.
 - Ensuring that education and research are the priority activities and that operational management facilitates and is secondary to these functions.
 - Where possible, applying the results of Wageningen UR's biodiversity research within Wageningen Campus.
 - Maintaining biodiversity by means of a well-considered maintenance approach.

Appendix I: Overview of Wageningen Campus area

Overview of the area

Source: *Beeldkwaliteitsplan Binnenveld* ('Binnenveld visual quality plan'), March 2010

The Binnenveld area is located at the intersection of the green north-south corridor project De Lunterse beek-Uiterwaarden Nederrijn (in particular the Blauwe Kamer nature reserve) and the Wageningen Noord wildlife corridor established by the Municipality; as such, the Binnenveld is an important link in the Dutch Ecological Superstructure.



A map of Wageningen Campus, 2013

Wageningen Campus is characterised by (see also Appendix and IV):

- A functional area with an open character and linear structures which is connected to the cultural landscape of the Binnenveld.
- Linked zones of trees, small forests and meadow grass as a connection between Wageningen Campus, which serves as a foraging area for various animal species, and these animals' habitats, located to the north and east of Wageningen Campus.
- Large stretches of water which serve the important purpose of storing and circulating clean water, including spring water, within the ecological water system of the Municipality of Wageningen.



Appendix II: Presence and maintenance of flora and fauna on Wageningen Campus

The flora and fauna on Wageningen Campus has been studied. In 2009 a so-called year-round study was carried out in connection with the planned changes to the zoning plan.

In 2013 the current situation was evaluated using an ecological test. This test consisted of a source study and an exploratory field study.

The following conclusions were drawn:

- No significant changes have occurred as a result of which other, more heavily protected species could be present than those found during the 2009 study. However, the possibility cannot be eliminated that animals living in buildings, like bats or birds (house sparrows, swifts), may be living in different buildings than those they were found in during the earlier study. Therefore, prior to the demolition of buildings, it is always necessary to check whether any bats, stone martens or breeding birds are present in the building concerned.
- The ecologically verified facts from 2009 are sufficiently up-to-date and reliable to use as a basis for the Wageningen Campus flora and fauna policy.

Results of the year-round study

Flora and fauna on Wageningen Campus

The study shows that there are no protected or rare species of plants or animals on the grounds which could suffer as a result of Wageningen UR's plans for Wageningen Campus. The study did observe a number of bats, some of which have established roosts in buildings for which there are in principle no plans.

Great Spotted Woodpecker nesting holes were observed in the Dassenbos forest. These holes are no longer protected year-round. As long as this forested area is maintained, the protection of the nesting holes does not require any additional attention.

The rarest invertebrate observed is the Large Skipper, a generalist state butterfly. This butterfly species was observed in the vicinity of building 119 (Triton), where a moist grassland meadow meets the Dassenbos forest. As long as this situation is maintained, the species does not require any additional attention.

The creeping bellflower, rampion bellflower (near building 119, Triton) and the broad-leaved helleborine (in the Lumen garden) have been found on Wageningen Campus. These plants are all on the Dutch Flora and Fauna Act's list of protected species. However, these plants have been planted or sown and as such are not protected. This also applies to the descendants of these plants.

Relationship with the surrounding area

The study showed that Wageningen Campus is not part of a Natura 2000 area, not a designated nature reserve and not part of a provincial ecological superstructure or a nature reserve for meadow birds or geese.

The Binnenveld area is located to the north of Wageningen Campus. The Binnenveld is an animal sanctuary, the central part of which is designated as a nature reserve. This part borders the Grift nature reserve. The part of the Binnenveld which borders Wageningen Campus has a primarily cultural value. Long, linear structures of green area are characteristic for this cultural landscape. The green structures on Wageningen Campus link up with the regional wildlife corridors of the Binnenveld.

The entire area between the Utrecht Hill Ridge and the Veluwe is a seep zone. Seep water is also present on Wageningen Campus. The Waterschap Vallei & Veluwe, the local water authority, has classified Wageningen Campus as an 'urban area'.

Water storage to compensate drainage for construction activities is one of the points requiring attention on Wageningen Campus. Large ponds have been built to address the issue of water storage. These ponds are part of the ecological water system of the Municipality of Wageningen. The ponds have gently sloping banks so they are more suited as habitats for amphibians.

There is a wildlife corridor running from the city of Wageningen across Wageningen Campus towards the east. A tunnel under Mansholtlaan forms part of this corridor. Green structures which support this southern branch of the regional wildlife corridor have been included in the design for Wageningen Campus (see Appendix IV).

Activities carried out to 2013:

On the basis of the previously mentioned policy, the following decisions have been made regarding the measures taken up to and including 2013 in relation to flora and fauna and the connection of Wageningen Campus with the surrounding area:

Fauna

Before demolishing or renovating buildings, independent external agencies have investigated whether bats or other protected species were present in the buildings. On the basis of the reports from these agencies, Wageningen UR took mitigating measures where needed. For instance, during demolition or renovation activities, nesting or hibernation boxes were hung at other locations, and the work activities were carried out outside the nesting or hibernation season. Steps were also taken to ensure that after the completion of renovation work, pipistrelle bats could return to the cavity walls work to hibernate.

A habitat for bats was put up in the Lumen garden.

Wageningen Campus is an open area. Burrowing rabbits sometimes create a nuisance on the sport fields. In the periods in which this occurs, the holes in the grass fields are regularly filled in so as to prevent dangerous situations for sportsmen and sportswomen. This policy of discouragement has been chosen instead of fences or the use of natural enemies such as birds of prey.

Many animal species have habitats and mating grounds located outside of Wageningen Campus. They primarily use Wageningen Campus for migration and foraging purposes. Measures have been taken to create corridors between

the foraging areas and habitats by creating linked zones of trees, scrub and meadow grass (wildlife corridors, see Appendix IV).

The gardener works with a plan of approach for flora and fauna in carrying out landscaping maintenance work. One of the points in the plan of approach is that the banks of ponds and watercourses are only mowed outside the hibernation period of fish and amphibians. Moreover, the mowed grasses are left on the banks for 48 hours in order to give amphibians the chance to return to the water.

Before trees are felled, a quick scan or survey of the flora and fauna is carried out to make sure that the trees do not house nesting birds and/or nests which are protected year-round. If any nests are found which are protected year-round, an external ecological agency is brought in to oversee the mitigating measures taken. In general, trees are only felled outside the breeding season unless a dangerous situation has arisen which justifies emergency felling.

Wageningen UR has obtained advice from the Dutch Institute of Pest Expertise on how to deal with pests. In conformity with this advice, Wageningen UR utilises a pest prevention system based on the Integrated Pest Management guidelines. The philosophy behind Integrated Pest Management is that pest infestations can be prevented by good building maintenance, hygiene, instructions and education. Integrated Pest Management assumes that buildings and their surroundings will be thoroughly inspected by experts, that an optimum package of measures will be implemented to repel pests and that alternative control methods will be implemented if necessary. An example of this is regularly filling holes on the grass fields to deal with rabbit nuisance. Chemical pesticides (biocides) for insects and animals which eat food stores, for instance, are used only as a last resort and used as little as possible. They should only be applied by people with a certificate of professional competence.

Flora

The plant growth on the grounds is in accordance with the design of Wageningen Campus: an open landscape inspired by the Binnenveld. This is reflected in long avenues lined primarily with oak trees. Some of these oak trees were already present and some were planted. The hedges of field maple along the roads and around the car parks also emphasise Wageningen Campus's linear structure.

The central area primarily consists of zones with closely mown grass alternating with zones of extensively mown grass and wild flower meadows. There are occasional groups of trees of varying ages and bushes. The lawns and the events field (which is located higher up, strengthened and drained) are intended for relaxation and event purposes.

The wild flower meadows, the trees and the brushwood create wildlife corridors in the form of 'stepping stone' corridors. The wild flower meadows are sown with species from fodder-rich grasslands, in particular sweet clover. The wetter areas are dominated by great willowherb and loosestrife.

The brushwood primarily consists of native species such as guelder rose, blackthorn, cornelian cherry and common hazel. The large trees on the grounds, standing in copses or on their own, were present at those locations before the construction of Wageningen Campus and formed part of the

landscaping around former buildings. These trees have been kept where possible.

Trees which needed to be felled because of construction or renovation work or disease were replaced by new trees as close to the original location as possible, but in any case somewhere on the Wageningen UR grounds.

An ecological garden has been planted near the Lumen building for the purpose of creating a grassland rich in flowers. The garden was planted on what was formerly relatively wet agricultural land; and as a result the area is gradually transforming into a marsh-marigold grassland. The species typically encountered here are the western marsh orchid, soft-grass, ragged robin and rattle. The garden is mown twice a year. The mown material is left on the land for a while so that the seeds can fall. Then the mown material is removed. The Lumen garden is maintained by a garden committee which directs the gardener, indicating when to mow and how the wooden walls of the ponds should be maintained.

There is also a patch of moist grassland near the Triton building which is extensively maintained.

No maintenance work is carried out in the Dassenbos forest. This allows the flora and fauna to develop freely, fulfilling the 'nature' function indicated in the zoning plan for this area.

Connection with the surrounding area (see Appendix IV)

In order to achieve a good connection with the surrounding landscape elements and the wildlife corridor to the north of Wageningen Campus, the following green structures have been created:

- The wooden wall along Bornsesteeg, which forms an important connection to the Binnenveld and the northern wildlife corridor.
- The new wooden wall built along the north side of Wageningen Campus, level with Carus. This wooden wall is to be extended to Bornsesteeg.
- The wooden wall on the north-west side of Wageningen Campus, which forms a connection between the wooden wall along Bornsesteeg and the Dassenbos forest.
- The additional green corridor connecting to the Blauwe Bergen municipal park between Actio and Vitae.
- The connection with Born Oost by way of the local wildlife corridor along Droevendaalsesteeg and the Grintbeek stream, including a tunnel under Mansholtlaan.
- The larch trees planted along the slow traffic route between Leeuwenborch and Wageningen Campus by way of De Bongerd. These trees have been planted as compensation for, and, in the long term, as a replacement for, the wood used to clad the façade of the new fitness room at the De Bongerd Sports Centre.

Appendix III: Sketch of Wageningen Campus zoning plan

Zoning plan dated 5 July 2010.

- orange S-E: Social-Educative
- light orange M (southern construction area): Mixed
- green G: Green
- grey-green N (Dassenbos forest): Nature
- thick green lines (within the orange area, and in some places within the green area): wildlife corridor



More than half the grounds has a social function (zoning plan, see Appendix II). Approximately three quarters of that is focused on education and one quarter serves a 'mixed' purpose. This last portion is the so-called *Zuidelijke bouwstrook* ('southern construction area'). Wageningen UR offers organisations the opportunity to establish a location here or at 'Born Oost'. Slightly less than half the land of the grounds is designated as a 'usable area' with a great deal of green space, places to sit and walking and cycling paths. In the zoning plan, this area is indicated as 'green'.

The zoning and layout of Wageningen Campus were arrived at in consultation with the province, the Municipality of Wageningen and the region's municipal joint venture ('Food Valley' region). In addition, that part of the business community with a connection to Wageningen UR and the various interest groups were also consulted.

Appendix IV: Wageningen Campus Green Space and Nature Plan

Source: *Wageningen Campus duurzaam en groen* ('Wageningen Campus sustainable and green'), 4 March 2010. The plan is up-to-date as of February 2013.

