

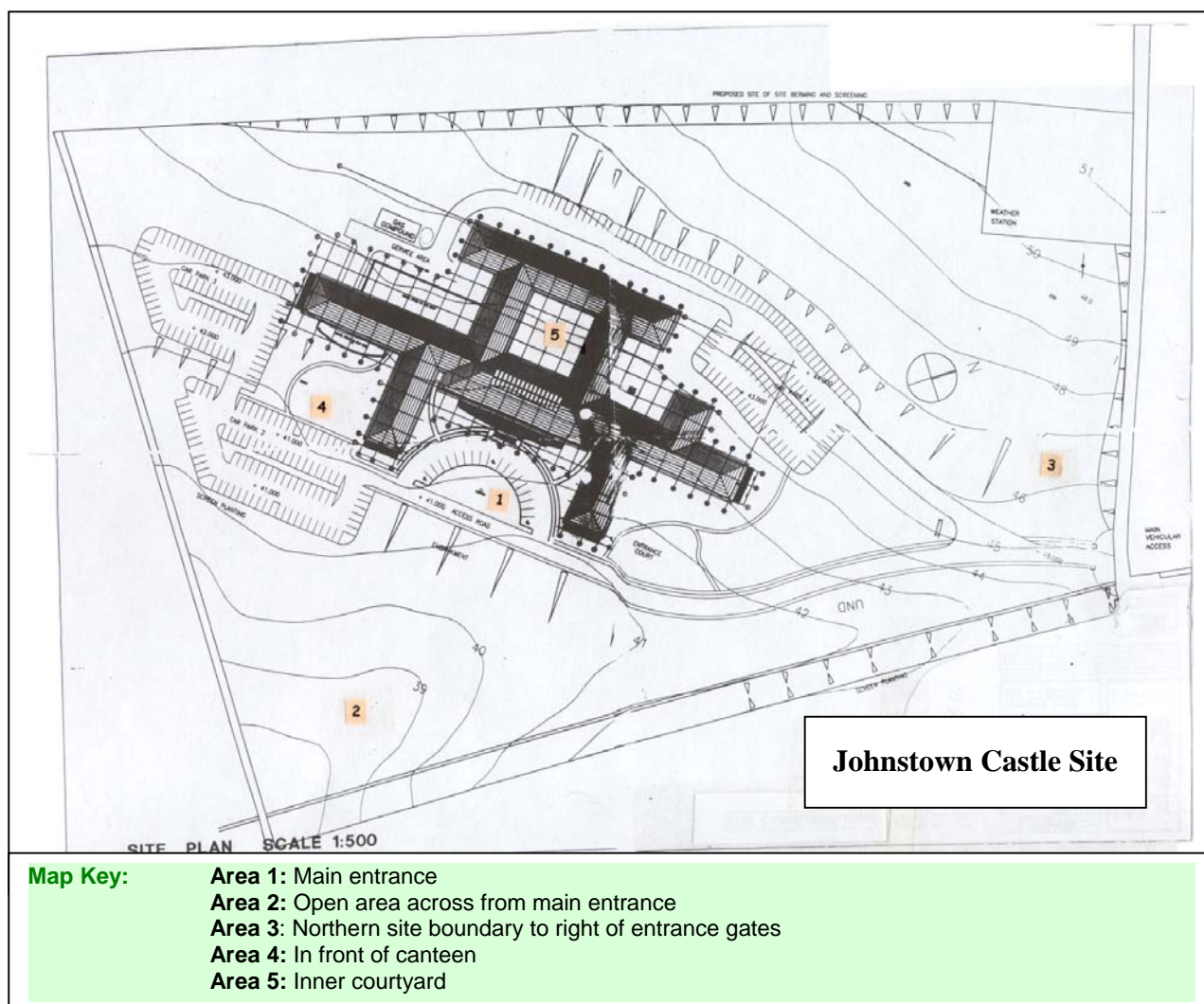
Joint Initiative on Biodiversity Enhancement of DAFF offices, Johnstown Castle

DAFF Biodiversity Unit / Accommodation Section and EENGO

Summary

In Autumn 2005, the EENGO Secretariat's Network for Action on Biodiversity¹ invited DAFF's recently established Biodiversity Unit to make a short presentation to one of its meetings covering the work of the Unit and the Department's contribution to biodiversity issues in general. At the meeting, the EENGO representatives suggested a joint project with DAFF to examine ways of enhancing the biodiversity value on the site of the Department's offices at Johnstown Castle, Co. Wexford.

The DAFF facility at Johnstown Castle was built in 1998. It comprises a two storey office building on an 18 acre site. While the site is extensively landscaped and is larger than many office sites, it presented an opportunity to examine the existing biodiversity value of the site and to look at possible means of enhancing that biodiversity value. It was decided that there was value in a pilot or demonstration project on this basis.



In January 2006, three representatives from the NGOs (Env Secretariat, Coastwatch Irl and An Taisce) visited the site. Site maps and other information had been prepared and after an introductory meeting with the DAFF Biodiversity Unit and the Accommodation Section in Johnstown Castle, the group walked the site.

¹ EENGO represents a group of around 24 environmental NGOs, including An Taisce, Coastwatch Ireland, Bat Conservation Irl, Birdwatch Irl, Irish Peatland Conservancy and others. It is funded by Dept of Environment, Heritage and Local Government and acts as a co-ordinating body for all the NGOs in that Department's consultation processes.

The NGOs had different expertise and came up with a number of different ideas in a report to DAFF. The report identified considerable potential to demonstrate how (without incurring significant extra costs), the overall biodiversity value of the site could be greatly enhanced, including making it more attractive to a number of bird, animal and plant species.

The report suggested that the overall biodiversity value of the site could be enhanced within two years if a number of general proposals were adopted:

- The number of **habitats** could be increased in such a way that it adds to the biodiversity, educational and awareness raising value of the site, while at the same time reducing management effort.
- The native animal and plant **species** diversity could increase significantly, as existing habitats are improved and new habitats are created. This includes a range of wetland plants, fungi and mosses, insects including butterflies and moths feeding off nectar-producing plants, bats feeding off insects, newts and frogs finding feeding, hibernating and spawning grounds, birds feeding off invertebrates and berries, and so on.
- The **genetic pool** is not compromised, by careful use of native species and if possible, by use of local seeds, soil and plants when creating habitats and planting.

The report divided the site into a number of specific areas and made recommendations in respect of each one. The recommendations were examined by DAFF (Biodiversity Unit and Accommodation Section) and it was decided to proceed with most of the recommendations. This involved some additional planting, creation of habitats and changes to management practices designed to enhance the overall biodiversity value of the site. The work or changes implemented are set out in the following section.

It proved impractical to implement all of the recommendations - planting close to services areas for example, or where other work on the building was planned. These recommendations are listed at the end of the section for information.

Project Progress Update – 2008

Below is a brief summary of the work undertaken based on the recommendations of the NGOs detailed report. References to Area 1, 2, etc. are retained in line with the original report and are marked on the site map for clarity.



Above: Area 1: Wexford apple and crab apple trees and native rose planted around the main entrance to the building.

Area 1: Main Entrance to building

The original recommendation was to replace most of the planting around the main entrance to the building. The original planting was predominantly a type of box hedging which is not native, does not fruit and was considered to have little biodiversity value. Holly was suggested as a suitable replacement, while native wild roses could be added to the existing layer of sparsely distributed non-native roses to enhance wildlife value. Planting some small old Wexford apple and crab apple varieties would highlight genetic stock value and night-scented species (e.g. honeysuckle) would encourage insects for bats to feed on at dusk.

The Department decided that only weak plants and the overgrown interior areas should be removed and replaced with a mix of native species as suggested. Planting of holly, briar rose, apple / crab apple and honeysuckle was carried out in 2006.



Above: The well-established pond, February 2008.

Area 2: Large open area opposite the main entrance

This large wet meadow area is retained but with changes to its management practices as recommended in the report. Parts of the area were seeded with native perennial flowers on a trial basis and the meadow grass is cut twice a year, in early Spring and late Autumn for maximum biodiversity value. These cuts leave the meadow undisturbed as cover for hare and for ground-nesting birds such as snipe, which are present on the site. For aesthetic purposes, the strip of grass alongside the avenue is cut as lawn regularly.

The main recommendation here was to create a small pond habitat in the south-eastern corner. The area is poorly drained so a pond would fill naturally and retain water without artificial liners, etc. It would provide a suitable habitat for amphibians such as newts, whose numbers are under serious threat in Ireland. The soil excavated would form a low bank adjacent to the pond, whose habitat value could be further enhanced by bringing in some fallen tree trunks and some additional planting.

The pond was created in 2006. Staff from the Department's Johnstown Castle offices contributed native plants to add habitat value in and around the pond and also volunteered for planting duties in February 2007.

Across: Frog spawn. By Feb 08, the pond was found to be in use as a breeding site. Based on the different stages of development observed, there were a number of separate spawning events.





Left:

Group of volunteers from DAFF, Johnstown Castle with Karin Dubsky, Coastwatch Ireland, planting around the pond for World Wetlands Day, Feb 07.

A return visit by CoastWatch Irl in late February 2008 allowed development of this habitat to be checked. A quick check of water quality indicated that nitrate and nitrite levels were below detection (less than 10mg/l with the testing sticks used) and pH of around 6.5, indicating a very healthy habitat. A considerable amount of frog spawn was present in the shallow end of pond, further indicating that the habitat is healthy and is being colonised by wildlife. Dragonfly larvae may be present also (observed in 2007 and present on the lakes in the nearby Johnstown Castle Estate). The pond edge has developed good varied vegetation, including the bulrushes planted by volunteers, although some of the plants may not have been as successful. A willow may be added in a suitable location on the edge of the pond to provide shade.

Area 3: Wooded embankments around the site

There is already extensive planting around the site and the main recommendation was to replace failed trees with native species that might be more suited to the local soil and climate. In places, the edges of the wooded areas were undersown with wild flowers on a trial basis.



Area 4: Northern site boundary to the right of the entrance gates

This is a large sloping area under grass and trees. Despite the slope, this area is quite wet and a number of the original tree plantings had failed. Any failed trees were removed and 100 additional trees were planted along the site boundary. Native species more suited to the nature of the soil in this area were chosen (alder, birch and willow) and placed in groups or clusters to provide maximum habitat value. As of Spring 2008, these new plantings are thriving and have already developed into a valuable habitat area.



Area 6: In front of the canteen

A number of recommendations were made for this area but due to some planned work around the canteen entrance, only some of these were practical to implement. The main change was the addition of some crab apple trees and native briar roses (five of each). Again, these species were chosen for biodiversity value.

Left: Crab apple trees added to area 6.

Area 7: Internal Courtyard

The decorative courtyard is completely enclosed and therefore very sheltered. It is gravelled and there is some decorative planting (non-native species). To provide some additional biodiversity value, it was suggested that 3 to 4 timber pole frames and native climbers such as honeysuckle be added and some nesting boxes provided. These additions were made in 2006.

Other general recommendations:

There were also a number of general recommendations in the report, applicable to more than one part of the site. Where it was considered practical, these were implemented, either as once-off actions or as on-going management practices.



Above: Some of the extensive beech hedging around site. Holly or other native species is used to replace any failed plants.

- There is extensive beech hedging around the site and car parks. Gaps caused by failed plants are replaced with native species, usually holly, to gradually provide a more biodiversity-friendly mix.
- Hedges are trimmed in a triangular shape (an “A” shape) rather than topped. This encourages better and more even growth and the taller hedges are more attractive to birds. This is similar to the method of trimming that the Department recommends for farm hedgerows in REPS.
- Where trees fail for whatever reason, they are replaced with native species suitable for that part of the site.
- A number of bird boxes were provided around the building.

Future developments

The project will be kept under review during 2008 and it is hoped to arrange a further visit by the NGO representatives during the year to examine the development of habitat areas in more detail and hopefully record the presence of any new species.

In the wider context of biodiversity awareness and action, it is hoped that this joint project will demonstrate some possibilities for enhancing the biodiversity value that could be applied, on smaller scales if necessary, to any office site.

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