

12 ECOLOGY

12.1 INTRODUCTION

This chapter evaluates the impacts, if any, which the development will have on Ecology i.e. Flora and Fauna as defined in the Environmental Protection Agency (EPA) 'Advice Notes on Current Practice (in the preparation of Environmental Impact Statements)', 2003.

This chapter has been prepared based on a review of previous ecological assessments of the site, the most recent of which was completed as part of an EIS and planning application submitted in 2009. This chapter will assess the impact of proposed amendments to the existing planning permission as described in Chapter 1, on the flora and fauna of the site and environs.

As the primary facility has now been constructed, a number of ecological mitigation measures recommended in previous EIS's have now been implemented. The primary ecological assessment for the development was undertaken in 2005 and addressed the potential impacts of the proposed development on the flora and fauna of the site and its environs. This chapter provides an update of the 2009 assessment including the results of mitigation measures as implemented and any further mitigation measures now required due to the proposed amendments.

12.2 NATURE CONSERVATION DESIGNATIONS

A review of the National Parks and Wildlife Service datasets (www.npws.ie) indicates that there are no parts of the site or the immediate surroundings covered by a scientific or conservation designation or proposed designation as recognised by the NPWS. Four designated pNHAs and one SAC occur within approximately 5km of the site and are detailed below (see Figure 12.1).

Table.12.1. Designated sites within approximately 5 km of the study area.

Site	Designation	Site Code	Description	Approx. distance to study area
01578	Duleek Commons	pNHA	Calcareous marsh and fen system	2 km
01593	Thomastown Bog	pNHA	Raised bog surrounded by wet woodland and wet grassland	5 km
01862	Boyne River Islands	pNHA	Alluvial wet woodland	5 km
01861	Dowth Wetland	pNHA	floodplain marsh with an associated area of deciduous woodland	4 km
002299	River Boyne & River Blackwater	SAC	Fresh water river with alkaline fen and alluvial woodlands	3km

12.3 CONSULTATION

In advance of the preparation of this ecological assessment, consultation was undertaken with the National Parks and Wildlife Service (NPWS). On 18th November 2011, WYG discussed the proposed amendments to the development with Maurice Eakin (Regional Officer for the NPWS). He indicated that given the nature of the proposed amendments it would be unlikely to require an Appropriate Assessment in accordance with Article 6(3) and Article 6(4) of the requirements of the Habitats Directive. Subsequently WYG have completed a screening assessment of the proposed development which concludes that an AA is not required.

Previous consultation with the DOEHLG in 2006, considered the area to be largely intensive agricultural land use and that the existing Indaver facility would have no ecological issues. The ERFB highlighted the populations of brown trout in the Nanny. The Environmental Officer stated that it was imperative that preventative measures were taken to ensure non negative impact to water courses. These measures are discussed elsewhere in the EIS including Chapter 11 Surface Water.

12.4 FIELD INSPECTIONS

Comprehensive flora, mammal and bird assessments were conducted at the site as part of the EIS submitted with the planning application in 2006. No designated habitats of international or national value were recorded on or adjacent to the site. All the habitats recorded on site are widespread within the landscape and of moderate to low species-richness. A summary of the habitats present on site at the time of the original study in 2005 is provided in Figure 12.2. As part of the recently completed construction works there has been some loss of the hedgerow and other generally low importance habitat as was anticipated in previous assessments.

12.4.1 Flora

All the habitats recorded on site are widespread within the landscape and of moderate to low species-richness. The dominant habitats on site are arable crops and improved agricultural grassland, which are highly modified habitats. They are of low scientific interest and represent a low contribution to local biodiversity.

12.4.1.1 Flora Mitigation Measures

There are no habitats on site of high ecological importance that warrant conservation. As part of the recently completed construction process, hedgerows and treelines have been incorporated where possible. The development provides good potential to increase the biodiversity value of the site with appropriate landscaping. The amendments proposed in this application will not detract from this. Best practices methods should ensure that there is no impact on surrounding watercourses and subsequently the River Nanny. By undertaking, these measures it is envisaged that there will be no negative impact on the ecology of the area and there will be a net gain in biodiversity value of the site.

A review of the Heritage Division datasets indicates that no part of the site or the immediate surroundings is covered by a scientific or conservation designation or proposed designation as recognized by the National Parks and Wildlife Service (NPWS). Four designated sites occur within the vicinity of the site; the nearest Duleek Commons proposed Natural Heritage Area c. 2km to the south west of the development. The surrounding habitats consist largely of arable land and improved agricultural grassland bounded by hedgerow of similar composition and structure as those described on the site. In addition no rare, threatened or legally protected plant species, as listed in the Irish Red Data Book (Curtis & McGough, 1988), were found throughout the site nor have been known to occur in the general area in the past. The species are widespread within the landscape and are typical of the habitats in which they were found.

The air quality assessment shows that the nearest conservation designation is outside the range of the air emission plume. The other designated sites; the Boyne River Islands, Dowth Wetlands and Thomastown Bog are c.4-5km from the site and also outside the range of the air emission plume. Please refer to Chapter 7 for details.

A comprehensive assessment of the air emissions from the facility has been prepared by AWN as detailed in Chapter 7. The cumulative emissions of the waste to energy plant and the other developments in the vicinity did not cause the maximum predicted ground level of emissions to reach air quality standard limit values and guidelines. As the projected emissions will be within European Limits, it is considered that there would be no significant impacts by air emissions on the flora and fauna within the surrounding area or on designated sites for conservation in the region.

12.4.1.2 Flora Conclusion

Mitigation measures identified in the previous assessments have now been implemented as part of the construction of the facility. Existing treelines and hedgerows have been retained where possible, it is therefore envisaged that there will be no negative impact on the ecology of the area..

12.4.2 Fauna

The site has a very low representation of Irish fauna, due to the intensive agricultural practice (most of the site was composed of arable land) and therefore a limited range of habitats on site. The vegetated boundaries are of low species diversity and poor structure. There is an almost total lack of ponds, and there are no rivers or streams. There are very limited areas of scrub or other habitat types.

12.4.2.1 Fauna Mitigation Measures

The construction of the facility has resulted in the loss of some arable lands, improved pasture and boundaries of low ecological interest. No species of ecological importance were noted on the site. No signs of current active use of the site by badgers were found. Bats were considered likely to utilise the

area for feeding, summer and winter roosts may be present in mature trees or within ivy covered trees on site. Bat foraging and roosting areas may be affected. No significant impacts are expected on other species known or expected on site.

Since the completion of the previous EIS for the site and recent construction works a number of mitigation measures have been implemented, namely;

- Bat and Vertebrate Faunal Survey
- Erection of Bat Boxes
- Supervised felling of Potential Bat Roosts

Bat and Vertebrate Faunal Study

A bat survey was completed at the site on the 28th of April 2008 and 1st May 2008. A vertebrate faunal survey, with a focus on badgers was undertaken on the 10th April 2008. Both surveys were undertaken at suitable times of the year for the species assessed though it is noted that there are no seasonal constraints in relation to badgers. In summary it was identified that Bats utilise the area for feeding, commuting and roosting. Mitigation measures in the form of bat boxes and supervised felling of trees were recommended to ensure minimum impact to bat species as a result of the proposed development. Impacts on the other vertebrate fauna that were the main focus of the assessment were found to be insignificant/neutral or minor negative.

Erection of Bat Boxes

In order to mitigate against the potential loss of bat foraging/roosting sites identified for bat species, six bat boxes were erected at the site in 2008. The main function of bat boxes is to provide alternative safe roosting sites for groups of bats where natural sites become unavailable. Details of the Bat Box scheme have been forwarded to Bat Conservation Ireland to be included in their database for monitoring purposes. The scheme will be monitored for a period of over 2 years in order to ensure best placement and effectiveness of the boxes. Recent results (2011) indicate two of the bat boxes are now in use by bats. Monitoring is ongoing.

Supervised Felling of Trees marked as Potential Bat Roosts (PBR)

In order to ensure felling of trees with potential to be bat roosts is undertaken sensitively, felling of trees was undertaken in accordance with NRA Guidelines: Guidelines for the treatment of Bats during the construction of National Road Schemes (Tree felling and Hedgerow Removal). This requires large mature trees to be felled carefully by gradually dismantling the tree by a qualified tree surgeon under supervision of a bat specialist. One PBR tree was felled on September 22nd 2008 under the supervision of the bat specialist. No bat droppings or other evidence of bat usage was recorded in the tree felled. Three other trees identified as PBR trees were located at the site boundary and have been retained.

12.4.2.2 Fauna Conclusion

No species of ecological importance were noted on the site. No signs of current active use of the site by badgers were found. As bats have been recorded as using the site, a number of mitigation measures for bats have now been implemented at the site. This will ensure that impacts on fauna in the locality are negligible.

12.4.3 Birds

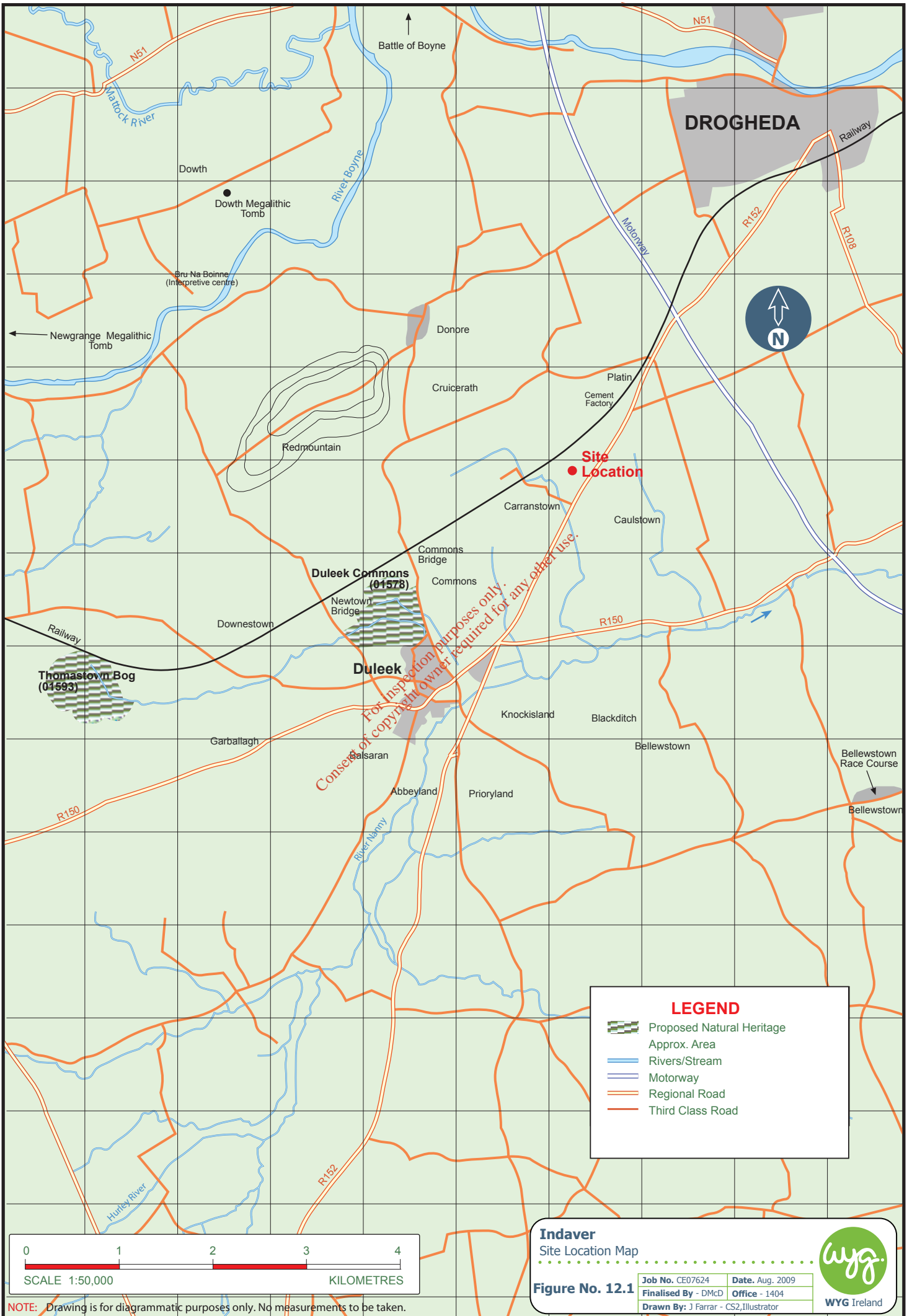
The bird species recorded breeding in the survey area are typical of agricultural habitats in eastern Ireland. The presence of a nesting pair of peregrines in the locality is of note as this species is listed in Annex I of the EU Birds Directive. However, the peregrine is not a species of high conservation concern in Ireland, and a national survey in 2002 indicated a stable population with significant increases in the use of artificial sites, such as quarries and buildings.

The maturing trees and shrubs within the site will support all of those species which already occur and it is likely that a higher diversity of species will occur once the trees and shrubs that have been planted as part of the landscaping plan for the site become established.

12.5 CONCLUSIONS

The amendments to the proposed development will have no significant impact on the ecology of the site. A number of mitigation measures have now been completed and should ensure that any potential impacts to flora, fauna and birds are minimised.

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LEGEND

- Proposed Natural Heritage Approx. Area
- Rivers/Stream
- Motorway
- Regional Road
- Third Class Road



NOTE: Drawing is for diagrammatic purposes only. No measurements to be taken.

Indaver
Site Location Map

Figure No. 12.1

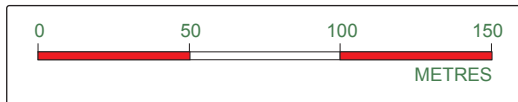
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LEGEND

- Site Boundary
- Improved agricultural grassland
- Arable crops
- Spoil & bare ground
- Hedgerow (intact)
- Hedgerow (gappy)
- Treeline
- Drainage ditch




NOTE: Drawing is for diagrammatic purposes only. No measurements to be taken.

Indaver
Habitat Map

Figure No. 12.2

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