
Screening for Appropriate Assessment

The Wonderful Barn, Leixlip, Co. Kildare

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Executive Summary

This *Screening for Appropriate Assessment* report has been prepared by NM Ecology Ltd on behalf of the Kildare County Council in relation to a proposed development at the Wonderful Barn, Leixlip, Co. Kildare. The development would involve the conservation and conversion of existing buildings and the development of parklands in the remainder of the site.

In accordance with their obligations under the *European Communities (Birds and Natural Habitats) Regulations 2011* (SI 477/2011), the competent authority must assess whether the proposed development could have 'likely significant effects' on any European sites. This document provides information to support an Appropriate Assessment screening exercise, including: a description of the proposed development, a map and list of European sites in the surrounding area, a review of potential source-pathway-receptor links, an appraisal of the suitability of the habitats for birds associated with nearby SPAs, and a screening conclusion.

There is no risk of direct impacts on European sites. Potential pathways for indirect impacts were considered, but none were found to be feasible. Habitats within the site are unsuitable for any of the species associated with nearby SPAs. Therefore, with regard to Article 42 (7) of the *European Communities (Birds and Natural Habitats) Regulations 2011*, it can be concluded that the proposed development will not be likely to have a significant effect on any European sites. The assessment can conclude at Stage 1 of the Appropriate Assessment process, and it is not necessary to proceed to Stage 2.

1 Introduction

1.1 Background to Appropriate Assessment

Approximately 14% of the land area of Ireland is included in the European Network of Natura 2000 sites (hereafter referred to as European sites), which includes Special Protection Areas (SPAs) to protect important areas for birds, and Special Areas of Conservation (SACs) to protect a range of habitats and species. Legislative protection for these sites is provided by the *European Council Birds Directive (79/409/EEC)* and *E.C. Habitats Directive (92/43/EEC, as amended)*, which are jointly transposed into Irish law by the *European Communities (Birds and Natural Habitats) Regulations 2011 (SI 477/2011, as amended)*.

Regulation 42 (1) states that: “*Screening for Appropriate Assessment of a plan or project for which an application for consent is received [...] shall be carried out by the public authority to assess, in view of best scientific knowledge and in view of the conservation objectives of the site, if that plan or project, individually or in combination with other plans or projects is likely to have a significant effect on [any European sites].*” To ensure compliance with this regulation, planning authorities must screen all planning applications for potential impacts on European sites. Supporting information may be requested from the applicant to assist with this process.

This document provides information to support the competent authority’s *Screening for Appropriate Assessment* exercise for the proposed development. It includes a description of the proposed development, a map and list of European sites in the surrounding area, a review of potential source-pathway-receptor links, and an appraisal of the suitability of the habitats for birds associated with nearby SPAs.

1.2 Statement of authority

This report was written by Nick Marchant, the principal ecologist of NM Ecology Ltd. He has sixteen years of professional experience, including thirteen years as an ecological consultant, one year as a local authority biodiversity officer, and two years managing an NGO in Indonesia. He provides ecological assessments for developments throughout Ireland and Northern Ireland, including wind farms, infrastructural projects (roads, water pipelines, greenways, etc.), and a range of residential and commercial developments.

He has an MSc in Ecosystem Conservation and Landscape Management from NUI Galway and a BSc in Environmental Science from Queens University Belfast. He is a member of the Chartered Institute of Ecology and Environmental Management, and operates in accordance with their code of professional conduct.

1.3 Methods

This report has been prepared with reference to the following guidelines:

- OPR Practice Note PN01: *Appropriate Assessment Screening for Development Management* (Office of the Planning Regulator 2021)
- *Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and (4)*, (E.C., 2021)
- *Appropriate Assessment of Plans and Projects in Ireland* (Department of the Environment, Heritage and Local Government, 2009)
- *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal* (Chartered Institute of Ecology and Environmental Management, 2018)

A desk-based study was carried out using data from the following sources:

- Plans and specifications for the proposed development
- Qualifying interests / conservation objectives of European sites from www.npws.ie
- Bedrock, soil, subsoil, surface water and ground water maps from the Geological Survey of Ireland webmapping service (dcenr.maps.arcgis.com), the National Biodiversity Data Centre (<http://maps.biodiversityireland.ie/>), and the Environmental Protection Agency web viewer (gis.epa.ie/EPAMaps/)
- The *Kildare County Development Plan 2023 – 2029*, and details of permitted or proposed developments from the local authority's online planning records

Desktop data from internet resources was accessed in May 2024, and a series of site inspections were carried out in February, July, August and September 2023.

2 Description of the Project

2.1 Environmental setting

Site location and surroundings

The proposed development site (hereafter referred to as 'the Site') is located in the south of Leixlip Town, and is associated with the Castletown Estate. It includes the 'Wonderful Barn' (a spiral-shaped tower likely used for grain storage), two smaller dovecotes of similar design, a two-storey dwelling (Barnhall House) and stable buildings. The buildings are set in extensive parklands, which include woodlands, grasslands and community allotments.

The southern boundary of the Site is formed by the M4 motorway, and the northern, eastern and western boundaries by the Barnhall Meadows housing estate.

Geology and soils

The underlying bedrock is 'dark limestone & shale', which is a locally-important aquifer. Subsoils are limestone gravels, and soils are fine loamy drifts.

Hydrology

The closest major watercourse is the River Liffey, which is located approx. 650 m to the south-east of the Site. A minor tributary of the River Liffey (referred to as the 'Upper Kilmacredock' stream) arises within the Site and flows south-east to meet the River Liffey approx. 1 km downstream. A major tributary of the River Liffey (the 'Rye Water') is located approx. 1.1 km north of the Site. It flows east and meets the River Liffey approx. 1 km to the east of the site.

The River Liffey is currently of Poor status (Water Framework Directive Status Assessments 2016-2021), and the Rye Water is of Moderate status.

2.2 Description of the proposed development

The proposed redevelopment of the Wonderful Barn aims to restore the existing structures on the site, including one house, one barn (two dovecotes, a walled garden and two adjacent courtyards containing two stable buildings (all protected structures – RPS no. B11-15). The proposed works will protect and enhance the architectural heritage and amenity of the site and provide an integrated public amenity park and tourism destination at the Wonderful Barn and associated lands, informed by a detailed conservation plan. The project is aimed at fostering community engagement, provision of diverse recreational and cultural amenities and to attract tourism to the site.

The proposed redevelopment includes:

A) Conservation-led restoration and reuse of the existing building complex including:

- The barn (corkscrew-shaped conical tower), reuse of ground floor as community/cultural space, reuse of upper floors within confines of limited access for other use. Conversion of existing 'potato house' to toilets / first floor add-on general storage area.
- The house, including demolition of small quantum of existing fabric to reinstate integrity of protected structures, provision of improved access at rear of the house for community reuse,
- Reuse of existing stable buildings to facilitate re-use as cafe and multipurpose community/meeting rooms, other community activities, including events, classes, and gatherings. Provision of a 115sqm extension to former stable buildings to provide a commercial kitchen and café with a southern outlook into the historic walled working vegetable garden amenity including external vents.
- Dedicated space within Barnhall House to highlight the context of the structure's past, key historic events, architectural features.
- Restoration of both dovecotes (conical towers) and adjacent courtyards.

- Walled garden restoration, including small scale intervention to facilitate proposed cafe, relocation of existing temporary roadway to be outside of the garden,
- provision of security, including CCTV.
- exterior lighting to the Barn to highlight the structure.

B) Upgrade works at existing site entrance from R404 including.

- Provision of new carpark with 65 no. of carparking spaces and 28 no. of bike parking spaces and 4 bus parking spaces.
- Accommodation works to provide access to existing Uisce Eireann water services pumphouse, to include landscape screening works.

C) Redevelopment of existing parkland to include

- Redevelopment of the current 55 no. allotments to realign the plots within the restored historical landscape axes and provide new and improved facilities for the local allotment users.
- Provision of a new 174sqm building to the East of the existing building complex which will provide a storage facility to replace an existing container on site, new toilets, kitchenette, and workshop facilities for the local allotment user group as well as short term workplace facilities for the KCC Parks Department. Provision of water and power outlet market facilities adjacent to the new building to accommodate weekly / monthly local markets.
- Installation of children's play-area, fitness stations, sport areas and other ancillary open space facilities. Upgrade of existing/ addition of new combined footpath/cycle-paths throughout the site with associated new street furniture, seating, and public lighting throughout the parkland., new wayfinding and signage throughout the parkland, facilities for existing park user groups, eg dog walking facilities.
- The proposed internal route will link to the Celbridge/Backweston to Leixlip cycle route proposed (by others) to the south via the Kildare Innovation Campus (formerly the Hewlett Packard site) and via the M4 pedestrian/cycle overpass. The proposed internal route within the Wonderful Barn site allows for future connections to planned cycle infrastructure improvements along the R404 Celbridge Road towards Leixlip Town Centre, to be delivered by Kildare County Council.
- Protection and reinstatement of the axial views within the site boundary between Castletown House and the Wonderful Barn and undergrounding of overhead cables.
- Protection and reinstatement of the integrity of the historic landscape including the Southern and South-Western formal tree lined avenues and forecourt to Barnhall House, formal planting of the walled garden, formal planting of the historic orchard to the Northwest of the building complex and an historic tree line and hedgerow to the Northern boundary of the courtyards.
- Improve overall park accessibility for residents of all ages and abilities throughout the park.
- soft and hard landscaping, including sustainable landscaping practices to enhance biodiversity and environmental sustainability. New conservation-led woodland planting and motorway screening planting.

- Sensitive design and mitigation measures to minimize environmental impact on native habitat preservation.

D) other works

- Realignment and improvements to pedestrian, cycle and vehicular access to site including all necessary infrastructure works required to integrate the site with a proposed M4 Cycle/Walkway bridge.
- Proposed noise barrier to protect the site from adjacent motorway noise nuisance.
- Provision of all utilities, necessary services, drainage works and associated site works.

3 Review of relevant European sites

In this section we identify European sites that could potentially be affected by the proposed development. The primary consideration is whether the proposed development is within the boundaries of any European sites, because this could lead to direct effects. This is discussed in Section 3.1.

It is also possible that the proposed development could cause indirect effects on European sites located outside the boundary. This is considered using the *source-pathway-receptor* model, which identifies potential *pathways* (e.g. surface water) between the *source* (the Site) and the *receptor* (a European site). This is discussed in Section 3.2.

Some of the bird species associated with SPAs can use secondary habitats outside the SPA boundaries, e.g. brent geese feeding on urban grasslands. The suitability of habitats within the Site for SPA bird species is discussed in Section 3.3.

To support the above assessments, a map of European sites in the surrounding area is shown in Figure 1, and details of relevant European sites are provided in Table 1. For the avoidance of doubt, an arbitrary zone of influence (e.g. 15 km) has not been used for this assessment, as it is no longer considered to be best practice (OPR 2021).

Table 1: European site shown in Figure 1

Site Name	Distance	Qualifying Interests
Rye Water Valley / Carton SAC (1398)	1 km north-east	Annex I habitats: Petrifying springs with tufa formation Annex II species: Narrow-mouthed whorl snail <i>Vertigo angustior</i> , Desmoulin's whorl snail <i>Vertigo moulinsiana</i>

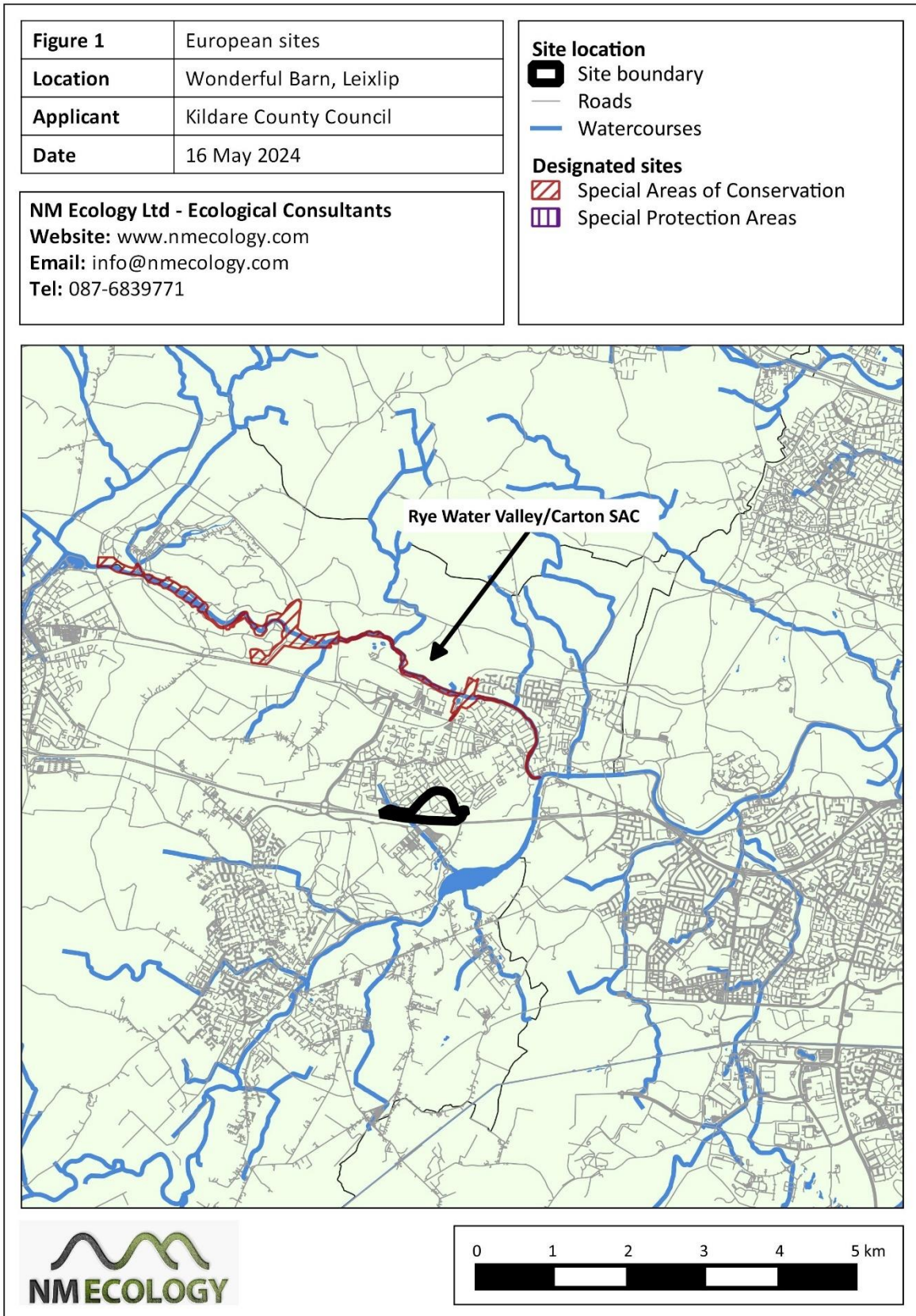
The Conservation Objectives of all European sites discussed in this report are available at <https://www.npws.ie/protected-sites>. They are lengthy and repetitive documents, so in the interests of brevity they are not reproduced here.

3.1 European sites within the Site boundary (potential direct effects)

The Site is not within or adjacent to any European sites (Figure 1). Therefore, the proposed development poses no risk of direct impacts on any European sites.

3.2 European sites outside the Site boundary (potential indirect effects)

In this section we identify potential *pathways* (e.g. surface water) between the *source* (the Site) and the *receptor* (a European site). The most common pathway is surface water, which typically occurs when a pollutant is washed into a river and carried downstream into a European site. Other potential pathways are groundwater, air (e.g. airborne dust or sound waves), or land (e.g. flow of liquids, vibration). The zone of effect for hydrological effects can be several kilometres, but for air and land it is rarely more than one hundred metres.



Surface water

The qualifying interests of the *Rye Water Valley / Carton SAC* are terrestrial wetland habitats (calcareous springs with tufa formations) and species (whorl snails, which favour wet grassland / marsh habitats). These wetlands are supplied by groundwater upwelling in springs, not by surface water. Therefore, a surface water pathway can be ruled out.

The River Liffey provides a very distant hydrological connection to some European sites in Dublin Bay. However, there is more than 25 km of intervening watercourse between the Site and Dublin Bay, so any pollutants would be reduced to negligible concentrations before they could reach the European sites. Therefore, a surface water pathway to these sites can be ruled out.

Groundwater

As noted above, the qualifying interests of the SAC are groundwater-fed terrestrial wetland habitats and whorl snails. They are located in a single location at Louisa Bridge, near the crossing of the Rye Water and Royal Canal.

The Royal Canal is located between the Site and the SAC's qualifying interests, and at a lower elevation. Therefore, any groundwater seepage in that direction would reach the surface at the canal rather than the SAC, and groundwater can be ruled out as a feasible pathway.

Land

As noted above, the Royal Canal would intercept any over-land flow towards the SAC.

Air

The only potential airborne pollutant generated at the Site would be dust. There is no risk that any perceptible quantity of dust could be carried 1 km to the SAC.

Summary

In summary, no feasible pathways were identified between the Site and any European sites.

3.3 Habitat suitability for SPA birds

There are no SPAs in the vicinity of the Site. The closest is the *Wicklow Mountains SPA*, which is located approx. 18 km south-east of the Site, and was designated to protect peregrine and merlin. Habitats within the Site are unsuitable for either of these species. Therefore, the Site is of no importance for any SPA bird species.

4 Screening Statement

In Section 3 of the OPR guidance (OPR 2021), it is stated that the first stage of the AA process can have two possible conclusions:

1. No likelihood of significant effects

Appropriate assessment is not required and the planning application can proceed as normal. Documentation of the screening process including conclusions reached and the basis on which decisions were made must be kept on the planning file.

2. Significant effects cannot be excluded

Appropriate assessment is required before permission can be granted. A Natura Impact Statement (NIS) will be required in order for the project to proceed.

Having considered the particulars of the proposed development, we conclude that this application meets the first conclusion, because there is no likelihood of significant impacts on any European sites. This is based on three key conclusions:

- The Site is not within or adjacent to any European sites, so there is no risk of direct effects
- There are no surface water (or other) pathways linking the Site to any European sites, so there is no risk of indirect effects
- There are no SPAs in the vicinity of the Site

Appropriate Assessment Screening must consider the potential implications of a project both in isolation and in combination with other plans and projects in the surrounding area. An ‘in-combination effect’ can occur when a project will have a perceptible but non-significant residual effect on a European site (when considered in isolation), that subsequently becomes significant when the additive effects of other plans and projects are considered. However, as the proposed development poses no risk of impacts on European sites in isolation, the risk of in-combination effects can also be ruled out.

Therefore, with regard to Article 42 (7) of the *European Communities (Birds and Natural Habitats) Regulations 2011*, it can be concluded that the proposed development will not be likely to have a significant effect on any European sites. On this basis, the assessment can conclude at Stage 1 of the Appropriate Assessment process, and it is not necessary to proceed to Stage 2.

In accordance with the OPR 2021 guidance, we note that no mitigation measures have been considered when reaching this conclusion.

References

Chartered Institute of Ecology and Environmental Management, 2018. *Guidelines for Ecological Impact Assessment in the U.K and Ireland: Terrestrial, Freshwater, Coastal and Marine* (2nd Edition). C.I.E.E.M., Hampshire, England.

Department of the Environment, Heritage and Local Government, 2009. *Appropriate Assessment of Plans and Projects in Ireland*. National Parks and Wildlife Service, DAHG, Dublin, Ireland.

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Office of the Planning Regulator 2021. *Practice Note PN01: Appropriate Assessment Screening for Development Management*. Available online at opr.ie