
Screening for Appropriate Assessment

Proposed residential infill development
at Newtown, 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 Kildare County Council (the applicant) as part of a planning application for a residential infill development at Newtown, Leixlip, Co. Kildare. The proposed development will involve the construction of 4 no. residential units, and associated works.

In accordance with their obligations under the *European Communities (Birds and Natural Habitats) Regulations 2011* (SI 477/2011), Kildare County Council must assess whether the proposed development could have 'likely significant effects' on any Natura 2000 sites. This document provides supporting information to assist the local authority with an Appropriate Assessment screening exercise, including: a description of the proposed development, details of its environmental setting, a map and list of Natura 2000 sites within the potential zone of impact, and an assessment of potential impacts. It is concluded that the proposed development will not cause direct or indirect impacts on any Natura 2000 sites, and that Appropriate Assessment is not required.

1 Introduction

1.1 Background to Appropriate Assessment

Approximately 10% of the land area of Ireland is included in the European Network of Natura 2000 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 Natura 2000 sites].”* To ensure compliance with this regulation, planning authorities must screen all planning applications for potential impacts on Natura 2000 sites. Supporting information may be requested from the applicant to assist with this process.

This document provides background information to assist the local authority with a *Screening for Appropriate Assessment* exercise for the proposed development. It includes an outline of the proposed works, details of the environmental setting of the site, an appraisal of future development proposals in the area (potential for ‘in-combination effects’), a map and list of Natura 2000 sites within the potential zone of impact, and an assessment of potential impacts.

1.2 Statement of authority

This report has been prepared by Nick Marchant, the principal ecologist of NM Ecology Ltd. He has thirteen years of professional experience, including ten 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, infrastructure projects (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:

- *Appropriate Assessment of Plans and Projects in Ireland* (Department of the Environment, Heritage and Local Government, 2009)
- *Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and (4), E.C., 2002.*
- *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine* (Chartered Institute of Ecology and Environmental Management, 2019)

In accordance with Section 3.2 of *Appropriate Assessment of Plans and Projects in Ireland*, the screening exercise was conducted using the following steps:

1. Description of the project and local site characteristics
2. Identification of relevant Natura 2000 sites, and compilation of information on their qualifying interests and conservation objectives
3. Assessment of potential impacts upon Natura 2000 sites, including:
 - Direct impacts (e.g. loss of habitat area, fragmentation)
 - Indirect impacts (e.g. disturbance of fauna, pollution of surface water)
 - Cumulative / 'in-combination' effects associated with other concurrent projects
4. Screening Statement with conclusions

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 Natura 2000 sites from www.npws.ie
- Bedrock, soil, subsoil, surface water and ground water maps from the Geological Survey of Ireland webmapping service (www.gsi.ie/mapping.htm), the National Biodiversity Data Centre (<http://maps.biodiversityireland.ie/>), and the Environmental Protection Agency web viewer (<http://gis.epa.ie/EPAMaps/>)
- The *Kildare County Development Plan 2017-2023*, the *Leixlip Local Area Plan 2019-2023*, and details of permitted or proposed developments from the local authority's online planning records

All web-based resources were accessed in November 2020.

2 Description of the Project

2.1 Environmental setting

The site is in a suburban setting in the north of Leixlip. It currently consists of a small patch of scrub, which has not been managed for a number of years. The 'River Forest' housing estate is located to the north and west of the site, and there is a commercial development (a tyre centre) and community facility to the south and east. The broader surroundings consist mainly of housing estates, public green space, and shopping centres.

Geology and soils

The underlying bedrock is dark limestone & shale, which is a locally-important aquifer (Geological Survey of Ireland). Sub-soils are limestone till, and soils are a combination of made ground and fine loamy drift. The soils and subsoil appear to be moderately well-drained, so it is expected that most rainfall on the site would percolate to ground rather than flowing into surface water features.

Hydrology

The closest watercourse is the 'Rye Water', a major tributary of the River Liffey. At the nearest point, it is located approx. 450 m south-west of the proposed development site. The Rathleek stream (a tributary of the Rye Water) is also located approx. 500 m west of the proposed development site, and the Oranstown River (a minor tributary of the River Liffey) is located approx. 500 m to the east.

The Rye Water merges with the River Liffey to the south of Leixlip, approx. 1 km downstream of the proposed development site. The Liffey then flows east through Dublin City, and reaches the coast at Dublin Bay approx. 25 km downstream.

Under the Water Framework Directive status assessments 2013-2018, the Rye Water was found to be of Poor quality, as was the Rathleek Stream. The Oranmore River was not assessed, nor was the majority of the River Liffey. However, some sections of the River Liffey upstream of Dublin City were of Good status, while sections within Dublin City were of Moderate status. The transitional waters of the River Liffey and the coastal waters of Dublin Bay were both of Good status.

2.2 Description of the proposed development

The proposed development will involve the construction of 4 no. semi-detached dwellings, of which two will be one-bedroom units, and two will be two-bedroom units. Road access will be from 'River Forest' road to the south of the site, and parking will be provided on a paved area to the east of the new dwellings. The dwellings will have private gardens, and some shared green space will be provided to the east of the dwellings.

Foul water will be discharged to an existing foul sewer on River Forest road, and will subsequently be treated in the Leixlip Wastewater Treatment Plant. Surface water will be discharged to an existing storm drain on River Forest road.

2.3 Other nearby developments (potential in-combination effects)

The proposed development site is included in Zone C: New Residential of the *Leixlip Local Area Plan 2019-2023*. All other land to the north and west of the site is in Zone B: Existing / Infill Residential, while the community facilities to the south and east are in Zone N: Neighbourhood Centre. The surrounding area is relatively settled, and it is unlikely to be under significant development pressure in the short to medium term. Live and recently-approved planning applications in the vicinity of the site were reviewed on the online planning records of Kildare County Council, but all were for small-scale works such as residential modifications / extensions.

In conclusion, the area surrounding the proposed development site is not subject to significant development pressure. No planning applications were identified that could act in-combination with the proposed development to increase the scale of potential ecological impacts.

3 Description of Natura 2000 sites

3.1 Identification of Natura 2000 sites within the zone of influence

The proposed development site is not within or adjacent to any Natura 2000 sites. Potential indirect impacts were considered within a potential zone of influence of 2 km of the site¹. This radius is considered to be proportionate to the small size of the proposed development site, and its urban setting. A map of Natura 2000 sites within the radius is provided in Figure 1, and details of relevant sites are provided in Table 1.

¹ In *Appropriate Assessment of Plans and Projects in Ireland*, it is noted that the potential 'zone of impact' of a development "must be evaluated on a case-by-case basis with reference to the nature, size and location of the project, the sensitivities of the ecological receptors, and the potential for in-combination effects." A radius of 15km may be used for regional development plans, but for small projects it may be as little as 100m.

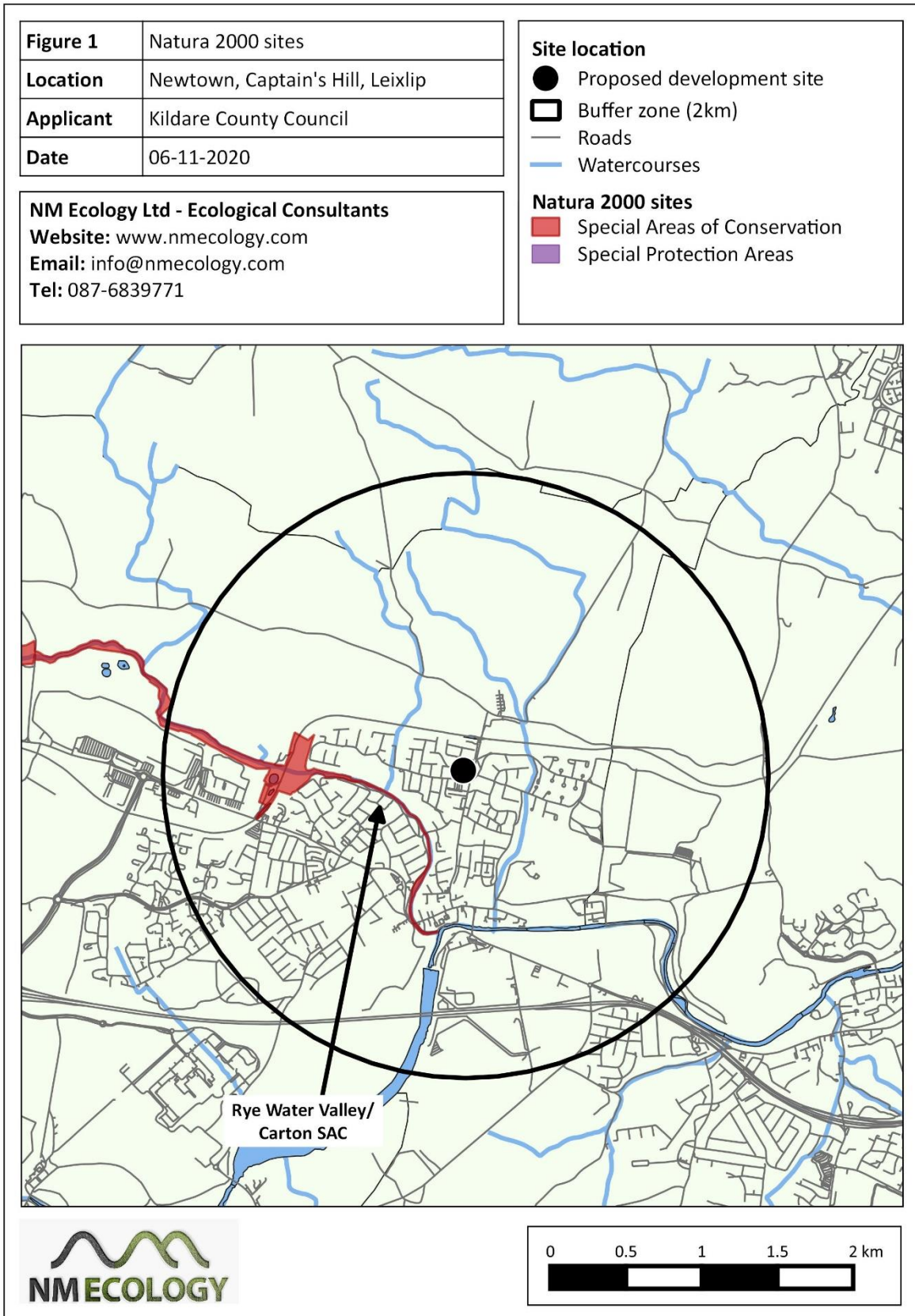


Table 1: Natura 2000 sites of relevance to the proposed development site

Site name	Qualifying Interests
Rye Water Valley / Carton SAC (site code 1398)	<p>Annex I habitats:</p> <ul style="list-style-type: none"> • Petrifying springs with tufa formation (<i>Cratoneurion</i>) <p>Annex II species:</p> <ul style="list-style-type: none"> • Narrow-mouthed whorl snail <i>Vertigo angustior</i> • Desmoulin's whorl snail <i>Vertigo moulinsiana</i>

3.2 Identification of potential pathways for indirect impacts

Indirect impacts on Natura 2000 sites can only occur if there is a viable pathway between the source (the proposed development site) and the receptor (the habitats and species for which a site has been designated). The most common pathway for impacts is surface water, for example if a pollutant is washed into a river, carried downstream, and subsequently reaches aquatic habitats or species. 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 impacts can be several kilometres, but for air and land it is rarely more than one hundred metres. An appraisal of potential pathways for impacts on the Natura 2000 sites referenced in Table 1 is provided below.

The *Rye Water Valley / Carton SAC* has been designated for the protection of petrifying springs (wetland habitats fed by upwelling groundwater), and two species of whorl snail (which live in freshwater marshes). In the site synopsis of the SAC it is noted that the springs and whorl-snails occur at a wetland complex near Louisa Bridge; this area is approx. 1 km to the west of the proposed development site, and upstream of the closest part of the Rye Water to the proposed development site.

As the SAC's qualifying interests are upstream of the proposed development site, hydrological pathways can be ruled out. Similarly, as the proposed development site is approx. 1 km from the wetland complex at Louisa Bridge, and the underlying bedrock is only a locally-important aquifer (and thus unlikely to have substantial groundwater connections), pathways via groundwater can also be ruled out. The distances involved are too great for pathways via land or air. Therefore, all potential pathways to this SAC can be ruled out.

There are no other Natura 2000 sites downstream in the freshwater or estuarine sections of the Liffey catchment. There are four Natura 2000 sites in Dublin Bay: the *North Dublin Bay SAC*, the *South Dublin Bay SAC*, the *South Dublin Bay and River Tolka Estuary SPA* and the *North Bull Island SPA*. However, all of these sites are over 25 km downstream of the proposed development site. Considering the small scale of the proposed development, and the dilution capacity provided by intervening watercourses and coastal waters, all potential pathways to these Natura 2000 sites can be ruled out.

3.3 Conservation objectives

The standard conservation objective for all SACs and SPAs in Ireland is “*to maintain or restore the favourable conservation condition of the qualifying interests for which the SAC / SPA has been selected*”. In addition, the Department of Culture, Heritage and the Gaeltacht has produced detailed conservation objectives for individual Natura 2000 sites. They can be viewed on the website of the National Parks and Wildlife Service (<http://www.npws.ie/protected-sites>), but are not reproduced here in the interests of brevity.

4 Assessment of potential impacts

4.1 Direct impacts

The proposed development site is not located within any Natura 2000 sites, so there is no risk of habitat loss, fragmentation or any other direct impacts.

4.2 Indirect impacts

Potential changes in water quality (construction phase)

Construction works typically generate fine sediments, and may occasionally cause accidental spills of oil or other toxic chemicals, which can be harmful to aquatic / marine habitats and species. However, no hydrological (or other) pathways were identified between the proposed development site and any Natura 2000 sites, so there is no pathway for indirect impacts.

Potential changes in water quality (operational phase)

During the operation of the development, foul water will be discharged to an existing foul water sewer and treated in the Leixlip Waste Water Treatment Plant (WWTP). The Annual Environmental Report of the WWTP was reviewed on the EPA website, and it was concluded that the WWTP is currently operating within its ELVs, but that it is nearing capacity, and upgrades have been proposed. The proposed development will represent only a negligible increase in load to the WWTP, and will be agreed with Irish Water in advance. Therefore, there is no risk that foul water generated by the development could have any impact on Natura 2000 sites.

Surface water from roofs and hard surfaces will be channelled to a storm drain on River Forest road, and is likely to be discharged to a watercourse in the surrounding area. Rainwater is considered to be unpolluted, and the underlying soils are well drained, so there is no risk of any impacts to local watercourses or Natura 2000 sites.

4.3 Potential in-combination effects

No developments were identified in the surrounding area that could potentially lead to in-combination effects.

5 Conclusion of Stage 1: Screening Statement

Article 42 (7) of the *European Communities (Birds and Natural Habitats) Regulations 2011* states that: “*The public authority shall determine that an Appropriate Assessment of a plan or project is not required [...] if it can be excluded on the basis of objective scientific information following screening under this Regulation, that the plan or project, individually or in combination with other plans or projects, will have a significant effect on a European site.*”

To assist the planning authorities with the screening exercise, we have provided supporting information including: a description of the proposed development; an outline of its environmental setting; details of Natura 2000 sites within the potential zone of impact; and an assessment of potential impacts. Based on this information, we have demonstrated that there will be no risk of direct or indirect impacts on any Natura 2000 sites, so we conclude that Appropriate Assessment is not required.

References

Chartered Institute of Ecology and Environmental Management, 2018. *Guidelines for Ecological Impact Assessment in the U.K. and Ireland*. 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, DCHG, Dublin, Ireland.

European Commission. 2002. *Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC*. Office for Official Publications of the European Communities, Luxembourg.