
Screening for Appropriate Assessment

Proposed residential development at
Newtownstalaban, Drogheda

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Executive Summary

This *Screening for Appropriate Assessment* report has been prepared by NM Ecology Ltd on behalf of Lagan Homes Drogheda Ltd (the applicant), as part of a planning application for a residential development at Newfoundwell Road, Drogheda, Co. Louth. The proposed development will consist of 217 no. residential units, a creche, and associated internal roads, services and landscaped areas.

The proposed development site is located 50 – 60 m from the Beaulieu Stream, which could provide a tenuous hydrological connection to two Natura 2000 sites: the Boyne Estuary SPA and the Boyne Coast and Estuary SAC. In accordance with their obligations under the *European Communities (Birds and Natural Habitats) Regulations 2011* (SI 477/2011), the planning authorities must assess whether the proposed development could have ‘likely significant effects’ on these or any other Natura sites.

This document provides supporting information to assist the planning 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 15 km, and an assessment of potential impacts. Having reviewed this information, we conclude that the proposed development will not cause direct or indirect impacts on any Natura 2000 sites, and that a Stage 2 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 planning 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

All surveying and reporting was carried out by Nick Marchant, the principal ecologist of NM Ecology Ltd. 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.

He has twelve years of professional experience, including nine 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 (water pipelines, greenways, etc.), and a range of residential and commercial development.

1.3 Methods

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

- *Appropriate Assessment of Plans and Projects in Ireland*, DEHLG (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 U.K.*, CIEEM (2006)

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 conducted 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 Louth County Development Plan 2015-2021 and the Drogheda Development Plan 2011 - 2017, and details of permitted or proposed developments from the local authority's online planning records

All web-based resources were accessed between June and October 2019.

2 Description of the Project

2.1 Environmental setting

The proposed development site is located in a suburban / rural setting in the north-east of Drogheda. It currently consists of abandoned agricultural fields (which have reverted to rank grassland and/or scrub), and some derelict farm buildings. All fields are lined by hedgerows and/or treelines.

The surrounding area is similar in character: much of the land to the north and east is also in arable use, and there is a sports field and business park to the south-west. The Newfoundwell / Termonfeckin Road runs along the north-western boundary, and the L2307 Newtownstalaban Road along the south-eastern boundary.

Geology and soils

The underlying bedrock is limestone (pale micritised grainstone-wackestone), which is a regionally-important, karstified aquifer (Geological Survey of Ireland). Sub-soils are 'Irish Sea Till' (sandstones and shales till) and soils are fine clay.

Hydrology

The Beaulieu stream is located approx. 50 – 60 m north of the site, flowing from west to east. It is a highly modified watercourse, as it has been extensively re-aligned along the boundaries of agricultural fields. Therefore, although it is a semi-natural watercourse, its function is similar to an agricultural drain. It flows to the east of the site and joins the River Boyne estuary approximately 2.1 km downstream. The River Boyne also flows to the east, and meets the coastal waters of the Irish Sea a further 4 km downstream.

Water quality in the Beaulieu stream is not currently monitored as part of the Water Framework Directive status assessments 2010 - 2015, but the transitional waters of the Boyne Estuary are of moderate status, and the coastal waters are of good status.

2.2 Description of the proposed development

The proposed development will consist of 217 no. residential units, comprising a mix of duplex apartments and houses. Most of the properties will have private gardens, but public green space will also be provided in the centre of the site. A creche will be constructed near the Newfoundwell Road.

During the operation of the development, runoff from roofs and external hard surfaces will pass through oil and silt interceptors and will be channelled to an on-site attenuation tank, and then

discharged to a local authority storm sewer on the Newfoundwell Road. Foul water will be discharged to a local authority foul sewer that passes through the site, and will be treated in the Drogheda Waste Water Treatment Works.

2.3 Other nearby developments (potential in-combination effects)

The proposed development site was included in zone RN of the Drogheda County Council Development Plan 2011 - 2017, for which the planning objective was *“To provide for new residential communities and community facilities and to protect existing residential development”*. The playing fields to the south-west of the site are zoned for open space / recreation, and most other lands surrounding the site are zoned for ‘employment generation’ / commercial uses. Most of the surrounding has not yet been developed, so it is possible that it will be subject to development pressure in the future.

Details of live and recently-approved planning applications in the vicinity of the site were obtained from the Louth County Council online planning portal. A large residential development – Beaulieu Village – has been constructed in multiple phases over a period of approx. ten years at a location approx. 500 m to the north-west of the proposed development site. The original application was approved in 2008 (planning reference 08/1), and the most recent application was approved in March 2019 (reference 18939). Screening for Appropriate Assessment was undertaken in 2018 for a variation of the development (reference 181), the conclusions of which are considered in Section 4.3 of this assessment.

All other planning applications in the surrounding area were for small-scale developments such as residential extensions. Therefore, the Beaulieu Village development is the only project that could potentially pose a risk of cumulative / in-combination effects with the proposed development.

3 Description of Natura 2000 sites

3.1 Identification of Natura 2000 sites within the zone of impact

The proposed development site is not located within or adjacent to any Natura 2000 sites (Figure 1). Six sites were identified within 15 km; their locations are shown in Figure 1, and details of the sites are provided in Table 1.

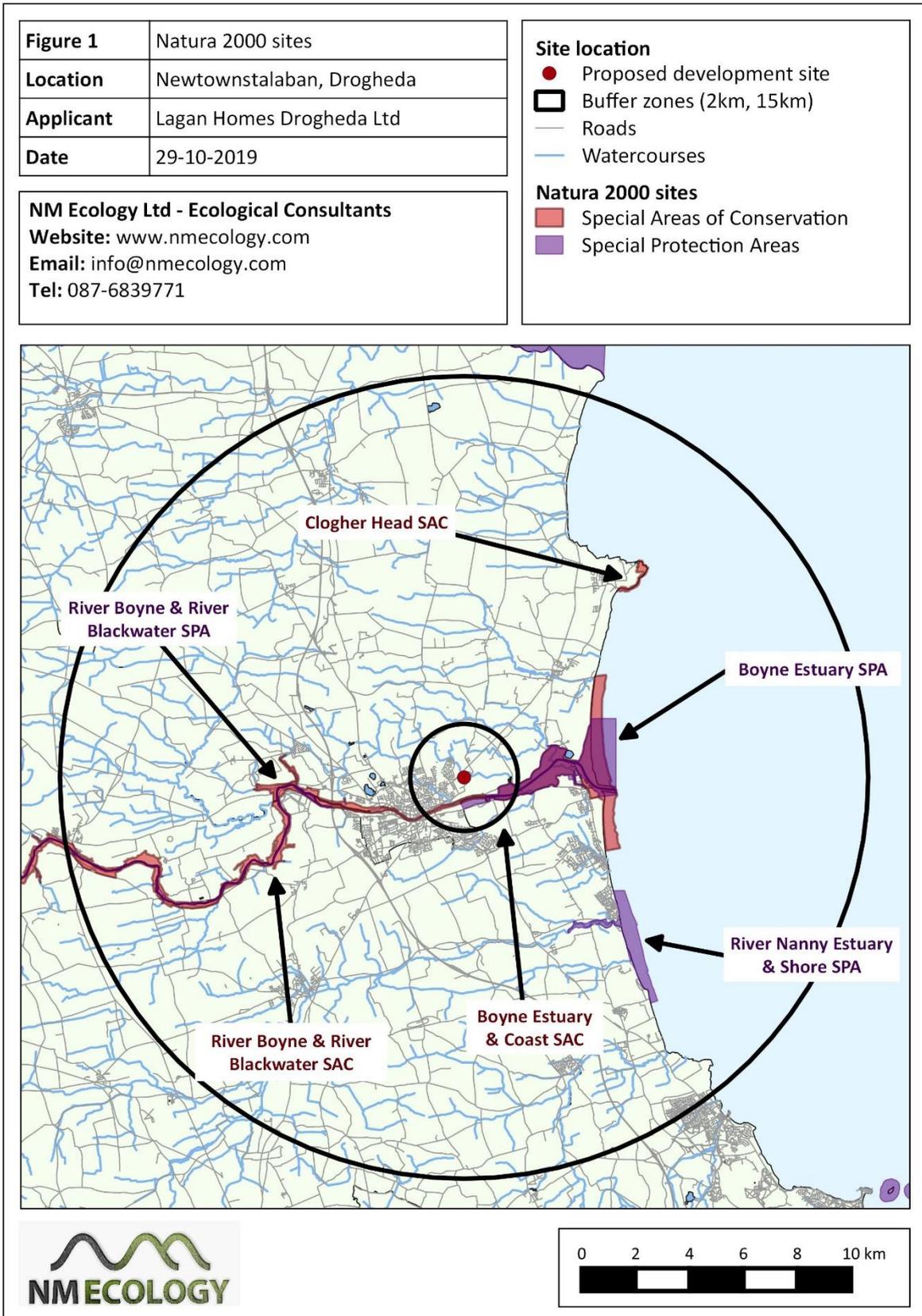


Table 1: Natura 2000 sites within 15 km of the proposed development site

Site Name	Distance	Qualifying Interests
River Boyne and River Blackwater SAC (site code 2299)	0.6 km south	Annex I habitats: alkaline fens, alluvial forests Annex II species: river lamprey, salmon, otter
Boyne Estuary SPA (4080)	0.8 km south	Key habitats: coastal wetlands Special Conservation Interests: shelduck, oystercatcher, golden plover, grey plover, lapwing, knot, sanderling, black-tailed godwit, redshank, turnstone, little tern
Boyne Coast and Estuary SAC (1957)	1.2 km south-east	Annex I habitats: estuaries, mudflats / sandflats, <i>Salicornia</i> and other annuals colonising mud and sand, Atlantic salt meadows, embryonic shifting dunes, shifting dunes, fixed coastal dunes with herbaceous vegetation Annex II species: none
River Boyne and River Blackwater SPA (4232)	5.0 km west	Special Conservation Interests: kingfisher
River Nanny Estuary & Shore SPA (4158)	7.1 km south-east	Key habitats: coastal wetlands Special Conservation Interests: oystercatcher, golden plover, ringed plover, knot, sanderling, herring gull
Clogher Head SAC (1459)	9.0 km north-east	Annex I habitats: vegetated sea cliffs, dry heaths Annex II species: none

3.2 Potential pathways for indirect impacts

Indirect impacts on a Natura 2000 site can 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.

There are no Natura 2000 sites within 500 m of the proposed development site, so there is no risk of short-range pathways by land, air or groundwater. There could potentially be a hydrological pathway via the Beaulieu Stream, which is located approx. 50 – 60 m north of the

proposed development site, and flows into the River Boyne estuary approx. 2 km downstream. However, this pathway is very tenuous, because any waterborne pollutants (e.g. suspended sediments, oil or cement residues) from the proposed development site would be filtered during the 50 m of overland flow and diluted by the 2 km of intervening watercourse. Nonetheless, in accordance with the precautionary principle, this potential hydrological pathway will be considered further in the screening assessment.

In Table 2, the potential extent of the hydrological pathway is considered for each of the Natura 2000 sites listed in Table 1.

Table 2: Appraisal of potential hydrological pathways to each Natura 2000 site

Site Name	Consideration of potential pathways	Appraisal
River Boyne and River Blackwater SAC (site code 2299)	Although this SAC is associated with the River Boyne, it is upstream of the point of confluence between the River Boyne and the Beaulieu Stream, and covers only the freshwater section of the river. Therefore, waterborne pollutants in the estuary could not flow upstream into this SAC	No viable pathways for indirect impacts
Boyne Estuary SPA (4080)	The discharge point of the Beaulieu stream is onto a polder (an area of reclaimed land), which is within the Boyne Estuary SPA	Potential surface water pathway
Boyne Coast and Estuary SAC (1957)	The discharge point of the Beaulieu stream is onto a polder (an area of reclaimed land), which is within the Boyne Coast and Estuary SAC	Potential surface water pathway
River Boyne and River Blackwater SPA (4232)	Although this SPA is associated with the River Boyne, it is upstream of the point of confluence between the River Boyne and the Beaulieu Stream, and covers only the freshwater section of the river. Therefore, waterborne pollutants in the estuary could not flow upstream into the SPA	No viable pathways for indirect impacts
River Nanny Estuary & Shore SPA (4158)	The SPA is located several kilometres from the mouth of the River Boyne. Any pollutants would be diluted to negligible concentrations by coastal waters	No viable pathways for indirect impacts
Clogher Head SAC (1459)	The SAC is located several kilometres from the mouth of the River Boyne. Any pollutants would be diluted to negligible concentrations by coastal waters	No viable pathways for indirect impacts

In summary, a potential surface water pathway was identified between the proposed development site and two Natura 2000 sites: the Boyne Estuary SPA and Boyne Coast and Estuary SAC. There are no viable pathways to any of the other sites listed in Table 1.

3.3 Sensitivities of qualifying interests to indirect impacts

In this section, we consider the qualifying interests of the two Natura 2000 sites, and their sensitivity to indirect impacts via the Beaulieu Stream. It is important to note that any pollutants arising from the proposed development site (e.g. suspended sediments, or residues of oil or cement) would be filtered by 50 m of overland flow and diluted by the 2 km of intervening watercourse prior to reaching the Natura 2000 sites in the River Boyne. Therefore, even in a worst case scenario, the concentrations of any pollutants reaching the SAC and SPA would be very low.

Table 3 provides a list of the qualifying interests of the Boyne Estuary SPA and Boyne Coast and Estuary SAC, and discussion of their vulnerability to low concentrations of pollutants. This is undertaken with reference to the conservation objectives of each site, which were obtained from the website of the National Parks and Wildlife Service (<http://www.npws.ie/protected-sites>).

It should be noted that estuaries and associated intertidal habitats (e.g. sandflats, mudflats and saltmarshes) are naturally high in silt and other fine sediments. In particular, intertidal habitats rely on a supply of fresh silt and sand from their associated river, as well as periodic inundation by tidal movements. The sediment provides habitat for a range of invertebrates, which, in turn, provide feeding resources for wading birds. Therefore, these ecosystems are not considered to be vulnerable to inflows of suspended sediments. In addition, the continuous flows of river water and tides prevent the accumulation of pollutants.

Table 3: Sensitivity of qualifying interests to indirect effects

Qualifying interest	Sensitivity to indirect effects
Estuaries	Estuaries are naturally high in suspended sediments, and would not be negatively affected by small quantities of suspended sediment or other pollutants. Therefore, there will be no change to the area of this habitat within the SAC, nor to the distribution of faunal communities
Mudflats / sandflats	Mudflats and sandflats are naturally composed of fine sediment, and would not be negatively affected by small quantities of suspended sediment. Tidal movements would prevent accumulation of other pollutants. Therefore, there will be no change to the area of this habitat within the SAC, nor to the distribution of faunal communities
Salicornia and other annuals colonising mud and sand	This habitat is naturally composed of fine sediment, and would not be negatively affected by small quantities of suspended sediment. Tidal movements would prevent accumulation of other pollutants. Therefore, there will be no change to the area or distribution of this habitat within the SAC, its physical structure (sediment supply, creeks and pans or flooding regime) nor vegetation structure (zonation,

Qualifying interest	Sensitivity to indirect effects
	vegetation height, cover, typical species and sub-communities, absence of negative indicators)
Atlantic salt meadows	This habitat is naturally composed of fine sediment, and would not be negatively affected by small quantities of suspended sediment. Tidal movements would prevent accumulation of other pollutants. Therefore, there will be no change to the area or distribution of this habitat within the SAC, its physical structure (sediment supply, creeks and pans or flooding regime) nor vegetation structure (zonation, vegetation height, cover, typical species and sub-communities, absence of negative indicators)
Embryonic shifting dunes	Dune habitats are located above the tidal zone, and thus have minimal hydrological association with the estuary. There will be no change to the area or distribution of this habitat within the SAC, its physical structure (functionality or sediment supply) nor vegetation structure (zonation, plant health of foredune grasses, typical species and sub-communities absence of negative indicators)
Shifting dunes	Dune habitats are located above the tidal zone, and thus have minimal hydrological association with the estuary. There will be no change to the area or distribution of this habitat within the SAC, its physical structure (functionality or sediment supply) nor vegetation structure (zonation, plant health of dune grasses, typical species and sub-communities absence of negative indicators)
Fixed coastal dunes with herbaceous vegetation	Dune habitats are located above the tidal zone, and thus have minimal hydrological association with the estuary. There will be no change to the area or distribution of this habitat within the SAC, its physical structure (functionality or sediment supply) nor vegetation structure (zonation, absence of bare ground, sward height, typical species and sub-communities absence of negative indicators)
Overwintering birds: shelduck, oystercatcher, golden plover, grey plover, lapwing, knot, sanderling, black-tailed godwit, redshank and turnstone	During winter months, these species feed on invertebrates in intertidal habitats, particularly mudflats and sandflats. These habitats will not be negatively affected by the development, so there will be no effect on the population trends or distribution of these bird species.
Breeding populations of little tern	This species nests on shingle beaches in the lower section of the estuary (i.e. not in the vicinity of the Beaulieu Stream). There will be no change to the breeding population abundance, productivity rate, distribution of breeding colonies, prey biomass available, barriers to connectivity or disturbance at the breeding site

In summary, the qualifying interests (habitats and species) of the SAC and SPA are considered to have relatively low sensitivity to suspended sediments or other pollutants.

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 involve the use of hydrocarbons, cement products and other harmful substances. Under normal circumstances, all such pollutants will remain within the boundaries of the proposed development site. However, in a worst-case scenario (e.g. a period of very high rainfall) it is possible that surface water runoff from the construction site could carry these pollutants to the Beaulieu stream, which would provide a potential hydrological pathway to the Boyne Estuary SPA and Boyne Coast and Estuary SAC.

However, there are a number of factors that would prevent 'likely significant effects' on the SAC or SPA. Any runoff from the site would have to flow over at least 50 m of agricultural land to reach the Beaulieu stream, which would provide a degree of filtration. Any runoff reaching the stream would then be diluted by approx. 2 km of intervening watercourse prior to reaching the Boyne Estuary, and subsequently by the considerable volume of flowing water in the estuary. The qualifying interests of the SAC and SPA (estuarine / intertidal habitats and birds) are considered to have relatively low sensitivity to suspended sediments or other pollutants, and their conservation objectives would not be compromised.

Therefore, considering the suburban location of the site, the lack of a direct hydrological connection, the filtration / dilution of intervening land and waters, and the low sensitivity of qualifying interests in the relevant Natura 2000 sites, the risk of 'likely significant effects' on the SAC and SPA can be ruled out.

It is noted that the applicant will implement a range of pollution-prevention measures during construction works, as specified in the Construction and Waste Management Plan for the development (prepared by N.J. O'Gorman & Associates). However, in accordance with the Court of Justice of the European Union (CJEU) Case C-323/17 '*People Over Wind and Peter Sweetman v Coillte*', these mitigation measures were not considered during this screening assessment.

Potential changes in water quality (operational phase)

All foul water from the proposed development will be discharged to a local authority sewer and treated in the Drogheda Waste Water Treatment Works. The Annual Environmental Report for the WWTW was reviewed, and it is currently within capacity and providing a high level of treatment before discharge to the Boyne Estuary. It is the responsibility of the local authority to provide adequate treatment of foul water passing through the treatment plant, and to assess any potential impacts that it may have on the Natura 2000 network.

All surface-water runoff from roofs and hard surfaces will pass through oil and silt interceptors, and will be collected in underground attenuation tanks. It will then be discharged to a local authority storm sewer on the Newfoundwell Road, and ultimately to the Beaulieu stream. Subject to the treatment on site, the discharge to the local authority sewer will be unpolluted, and will not cause any significant impacts upon water quality in the stream or any downstream Natura 2000 sites.

4.3 Potential in-combination effects

A *Screening for Appropriate Assessment* report was prepared by Openfield Ecological Services in 2018 for a variation to the 'Beaulieu Village' residential development, which is located approx. 500 m to the north-west of the proposed development site, and is adjacent to the Beaulieu Stream. The assessment concluded as follows:

"This project has been screened for AA under the appropriate methodology. It was found that significant effects are not likely to arise, either alone or in combination with other plans or projects".

As neither the proposed development nor the Beaulieu Village development are expected to have an impact on the Natura 2000 sites in the Boyne Estuary, the risk of in-combination effects can be ruled out.

5 Screening Statement: Conclusion of Stage 1

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 15 km, and an assessment of potential impacts. A sequential approach was incorporated, in which sites were initially screened out due

to distance, then to the absence of potential pathways for indirect impacts, and finally to the sensitivity of qualifying interests.

Based on this information, and beyond reasonable scientific doubt, we have demonstrated that the development, either individually or in combination with other plans or projects, would not be likely to have a significant effect on any Natura 2000 sites. Therefore, a Stage 2 Appropriate Assessment is not required.

References

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