Screening Report for Appropriate Assessment for residential development at Kilnahue, Gorey, Co. Wexford

Compiled by OPENFIELD Ecological Services

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Introduction

Biodiversity is a contraction of the words ‘biological diversity’ and describes the enormous variability in species, habitats and genes that exist on Earth. It provides food, building materials, fuel and clothing while maintaining clean air, water, soil fertility and the pollination of crops. A study by the Department of Environment, Heritage and Local Government placed the economic value of biodiversity to Ireland at €2.6 billion annually (Bullock et al., 2008) for these ‘ecosystem services’.

All life depends on biodiversity and its current global decline is a major challenge facing humanity. In 1992, at the Rio Earth Summit, this challenge was recognised by the United Nations through the Convention on Biological Diversity which has since been ratified by 193 countries, including Ireland. Its goal to significantly slow down the rate of biodiversity loss on Earth has been echoed by the European Union, which set a target date of 2010 for *halting* the decline. This target was not met but in 2010 in Nagoya, Japan, governments from around the world set about redoubling their efforts and issued a strategy for 2020 called ‘Living in Harmony with Nature’. In 2011 the Irish Government incorporated the goals set out in this strategy, along with its commitments to the conservation of biodiversity under national and EU law, in the second and third national biodiversity action plans (Dept. of Arts, Heritage and the Gaeltacht, 2011; Department of Culture, Heritage and the Gaeltacht, 2017). A fourth plan is due for publication in 2022.

The main policy instruments for conserving biodiversity in Ireland have been the Birds Directive of 1979 and the Habitats Directive of 1992. Among other things, these require member states to designate areas of their territory that contain important bird populations in the case of the former; or a representative sample of important or endangered habitats and species in the case of the latter. These areas are known as Special Protection Areas (SPA) and Special Areas of Conservation (SAC) respectively. Collectively they form a network of sites across the European Union known as Natura 2000. A report into the economic benefits of the Natura 2000 network concluded that “there is a new evidence base that conserving and investing in our biodiversity makes sense for climate challenges, for saving money, for jobs, for food, water and physical security, for cultural identity, health, science and learning, and of course for biodiversity itself” (EC, 2013).

Unlike traditional nature reserves or national parks, Natura 2000 sites are not ‘fenced-off’ from human activity and are frequently in private ownership. It is the responsibility of the competent national authority to ensure that ‘good conservation status’ exists for their SPAs and SACs and specifically that Article 6(3) of the Habitats Directive is met.

Screening for Appropriate Assessment

Article 6(3) of the Habitats Directive states:

Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives. In the light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.

The purpose of Stage 1 Screening for Appropriate Assessment is to determine whether it is necessary to carry out a Stage 2 full Appropriate Assessment (AA). In accordance with the provisions of Part XAB of the Planning and Development Act 2000, as amended, An Bord Pleanála ("the Board") is required to carry out a screening for appropriate assessment in respect of a proposed Strategic Housing Development (SHD).

Section 177U(1) provides that a screening for appropriate assessment of a proposed development shall be carried out by the competent authority to assess, in view of best scientific knowledge, if that proposed development, individually or in combination with another plan or project is likely to have a significant effect on the European site.

Section 177U(4) provides that the competent authority shall determine that an appropriate assessment of a proposed development is required if it cannot be excluded, on the basis of objective information, that the proposed development, individually or in combination with other plans or projects, will have a significant effect on a European site.

The Board's determination as to whether an Appropriate Assessment is required must be made on the basis of objective information and must be recorded.

Where an Appropriate Assessment is required, an applicant for planning permission must prepare and submit a Natura Impact Statement.

This Appropriate Assessment Screening Report (AASR) has been prepared in accordance with the provisions of Article 6(3) of the Habitats Directive and Section 177U of the 2000 Act.

The Purpose of this document

This document provides the information necessary to allow the Board, as competent authority, to conduct a Screening for Appropriate Assessment in respect of a proposed strategic housing development (SHD) at a site at

Kilnahue, Gorey, Co. Wexford, and its potential effects in relation to Natura 2000 sites (SACs and SPAs). Under the Planning and Development Act 2000 (as amended), and the Birds and Natural Habitats Regulations 2011, the competent authority cannot grant planning permission where significant effects may arise to a Natura 2000 site. In order to make that decision the development must, in the first instance, be screened for AA.

About OPENFIELD Ecological Services

OPENFIELD Ecological Services is headed by Pádraic Fogarty who has worked for 25 years in the environmental field and in 2007 was awarded an MSc from Sligo Institute of Technology for research into Ecological Impact Assessment (EcIA) in Ireland. Since its inception in 2007 OPENFIELD has carried out numerous EcIAs for Environmental Impact Assessment (EIA), Appropriate Assessment in accordance with the EU Habitats Directive, as well as individual planning applications. Pádraic is a full member of the Institute of Environmental Management and Assessment (IEMA).

Methodology

The methodology for this screening statement is clearly set out in a document prepared for the Environment DG of the European Commission entitled 'Assessment of plans and projects in relation to Natura 2000 sites - Methodological guidance on Article 6(3) and (4) of the Habitats Directive 92/43/EEC' (EC, 2021).

In accordance with this guidance, the following methodology has been used to produce this screening statement:

Step 1: Management of the Natura 2000 site
This determines whether the project is necessary for the conservation management of the site in question.

Step 2: Description of the Project
This step describes the aspects of the project that may have an impact on the Natura 2000 site.

Step 3: Identify which Natura 2000 sites may be affected by the plan or project
This process identifies the conservation aspects of the Natura 2000 sites within the zone of influence of the project. This is done through a literature survey and consultation with relevant stakeholders – particularly the National Parks and Wildlife Service (NPWS).

Step 4: Assess whether likely significant effects can be ruled out in view of the site's conservation objectives
All potential effects are identified including those that may act alone or in combination with other projects or plans. Using the precautionary principle, and

through consultation and a review of published data, it is normally possible to conclude at this point whether potential impacts are likely. Deficiencies in available data are also highlighted at this stage. Assessing whether an effect is significant or not must be measured against the conservation objectives of the Natura site in question.

If this analysis shows that significant effects are likely then a full AA will be required.

The steps are compiled into a screening matrix, a template of which is provided in Appendix II of the EU methodology.

Reference is also made to guidelines for Local Authorities from the Department of the Environment, Heritage and Local Government (DoEHLG, 2009) as well as 'Appropriate Assessment Screening for Development Management' (Office of the Planning Regulator, 2021).

A full list of literature sources that have been consulted for this study is given in the References section to this report while individual references are cited within the text where relevant.

Screening Template as per Annex 2 of EU methodology:

This plan is not necessary for the management of any SAC or SPA and so Step 1 as outlined above is not relevant.

Brief description of the proposed project

The project is described here as per the planning application:

A proposed Strategic Housing Development consisting of the demolition of the dilapidated structures on site and the construction of 421 no. residential units comprising duplex units, apartment units, and houses, all with associated car parking; a creche facility with outdoor play areas, 2 no. retail units and 2 no. community rooms, all with associated car parking; a new vehicular access onto Carnew Road (R725) and associated road upgrade works, new vehicular accesses onto Kilnahue Lane (L10112) and associated road upgrade works; landscaping including neighbourhood park, pocket parks, a playground and multi-purpose sports court; boundary treatments; public lighting; and all associated engineering and site works necessary to facilitate the development including proposed upgrade works to existing engineering infrastructure on Carnew Road, Kilnahue Lane, Main Street and Esmonde Street.

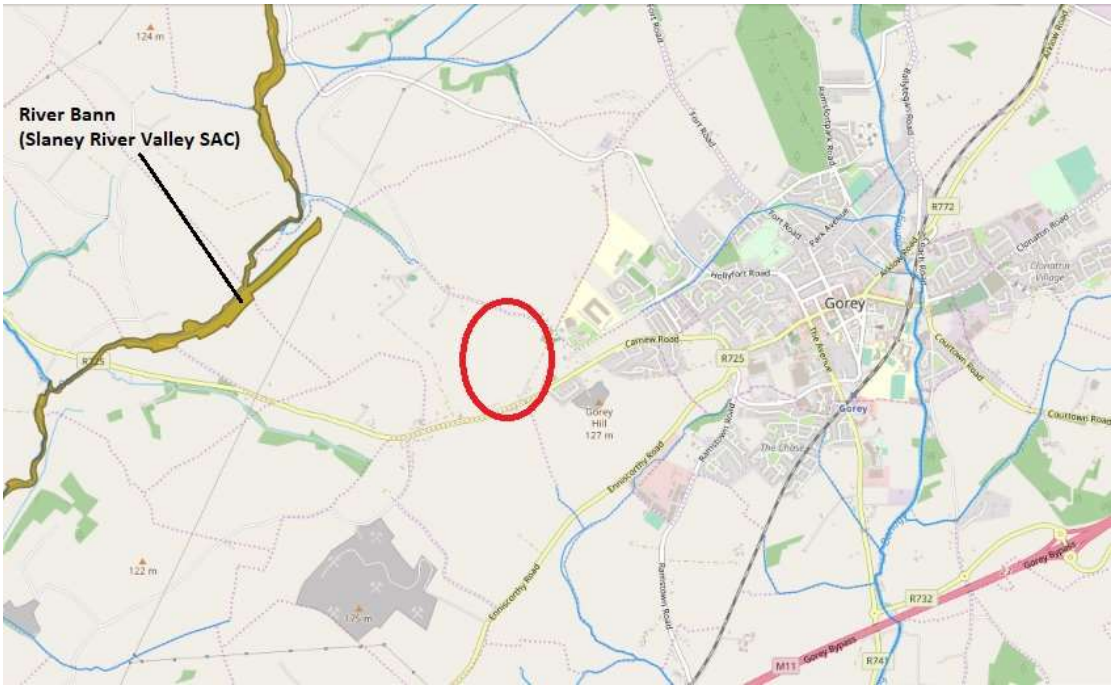

Figure 1 – Site location showing proximity to nearby Natura 2000 sites. The boundary of the SAC is shown in tan (from www.epa.ie).

The development site is located to the south-west of Gorey Town which is located in the northern portion of County Wexford. The site is located directly to the north of the R725 Carnew Road. Open agricultural land lies to the north and west while built/urban development is a feature to the east and south. Historic mapping shows the lands to have been in agricultural use for some time.

The lands were surveyed as part of this study on April 5th 2017, September 23rd 2020, January 1st 2021 and June 28th 2021. April, September and June are within the optimal period for general habitat survey and all habitats were identified to Fossitt level 3 (Fossitt, 2000). It is of key importance that linkages between the site and Natura 2000 areas be identified and in this regard a full assessment was possible. The site was surveyed in accordance with best practice standards and habitats were classified in accordance with standard methodology (Smith et al., 2010).

The subject site is agricultural in nature with fields of **improved agricultural grassland – GA1** and **arable crops – BC2**. These fields are of low biodiversity value. Traditional field boundaries remain in place and include **hedgerows – WL1** and **earth banks – BL2**. Guidance is available from the Heritage Council to differentiate between hedges of 'higher' and 'lower' significance (Foulkes et al., 2013). This is based on a scoring system for a variety of features including native species diversity, age or historical significance, structure and associated features such as ditches or badger setts, habitat connectivity and landscape significance. On these criteria the earth banks and one stretch of hedgerow along the R725 can be considered to be lower significance, largely due to the poor species diversity. There are few trees along these banks and vegetation is mostly composed of Brambles *Rubus fruticosus agg.*, Common Nettle *Urtica dioica* and rough grasses. One hedgerow bordering a home to the south is surrounded by the non-native Leyland Cypress *Cuprocyparis leylandii* and is of

negligible ecological value. Other hedgerows are of higher significance. They are of historical value, appearing on early OSI maps. The boundaries to the north and east are townland boundaries and so may be of great age. One is a double line of hedge marking a former farm path or trail. They are diverse and include tree species such as Birch *Betula sp*., Aspen *Populus tremula*, Holly *Ilex aquifolium*, Blackthorn *Prunus spinosa*, Hawthorn *Crataegus monogyna*, Rowan *Sorbus aucuparia*, Ash *Fraxinus excelsior* and Oak *Quercus sp*. The ground flora consists of Dog Violet *Viola riviniana*, Bluebells *Hyacinthoides non-scripta*, Primrose *Primula vulgaris* as well as ferns and mosses.

Old farm **buildings – BL3** are overgrown and surrounded by dense stands of the non-native Cherry Laurel *Prunus laurocerasus*. The buildings themselves are cloaked with Ivy *Hedera helix*. To the north of the buildings an area has reverted to scrub – WS1 this is mostly Brambles with rough grasses such as Cock's-foot *Dactylis glomerata*. These habitat are of low local biodiversity value.

There are no plant species on the site that are considered rare or endangered. There are no examples of habitats which are listed on Annex I of the EU's Habitats Directive or which are suitable for species listed on its Annex II. There are no alien invasive species on the site (listed on Schedule 3 of SI 477 of 2011). There are no bodies of open or running water. The site is in the catchment of the River Owenavorragh.

There is no suitable habitat on the development site for wetland/wading/wintering bird which may be associated with coastal or wetland Natura 2000 sites. The site survey in January 2021 fell within the optimal season for surveying wintering birds and no wetland species were recorded.

The subject application is for the construction of 421 houses and a creche on the development lands along with internal access roads, essential infrastructure and amenity open space. It will include the demolition of existing structures and clearance of the remaining land.

Foul wastewater from the development will pass to the municipal wastewater treatment plant for Courtown-Gorey. This is operated by Irish Water under licence from the EPA (licence no.: D0046-01) and discharges treated effluent into the Irish Sea. It has a treatment capacity of 36,000 population equivalent (P.E.) and the mean hydraulic and organic loadings are well within this limit. The most recent Annual Environment Report, for 2020, states that the discharge was compliant with emission limit values for this period, that "the discharge from the wastewater treatment plant does not have an observable impact on the water quality" and that "The discharge from the wastewater treatment plant does not have an observable impact on the water quality. The discharge from the wastewater treatment plant does not have an observable negative impact on the Water Framework Directive status." It adds that the capacity of the treatment plant is not likely to be exceeded over the next three years (i.e. from 2020).

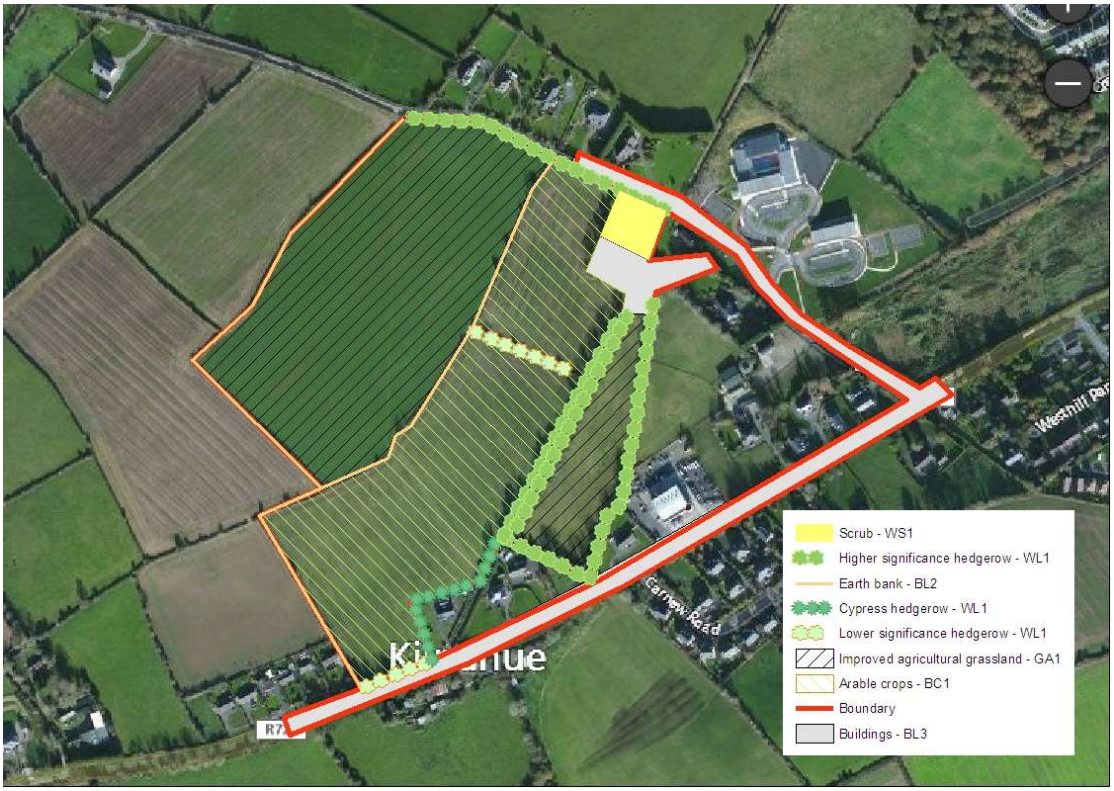

Figure 2 – Habitat map of the Kilnahaue site (aerial photo from www.bing.com).

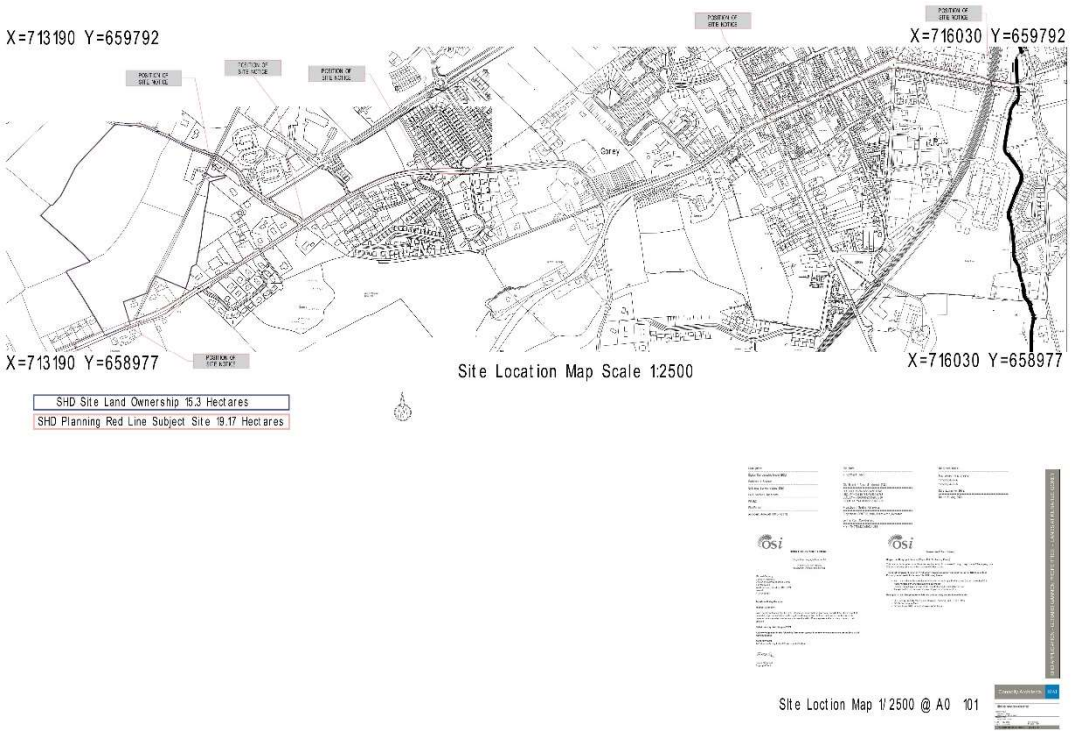

Figure 3 – Full extent of the development site boundary including works on Main St., Gorey.

There are no water courses on the development site and according to the www.wfdireland.net website it is located within the catchment of the River Owenavorragh. The freshwater portion of the Banogue/Owenavorragh is not subject to any Natura 2000 designation. Nor is its estuary, at Courtown, within any Natura 2000 site.

Surface water from the development site currently soaks to ground. According to the Report prepared for this development application by Waterman Moylan:

It is proposed to drain surface water through the site via a series of sewers, ranging in size from 225mm diameter to 825mm diameter. For storm water management purposes, the site has been divided into eight sub-catchments. Seven of these will be attenuated separately but will ultimately combine to outfall to the stream at Kilnahue Lane, north-east of the site. The eighth catchment, at the south of the site, will be attenuated separately and will have a separate outfall to the existing ditch on Carnew Road.

Catchments 1 to 6 will each drain to below ground attenuation with a permeable base to allow for infiltration/soakaway. Each of these attenuation areas will discharge via a Hydrobrake or similar approved flow control device, joining a network which flows to the Catchment 7 attenuation tank. From here, surface water will discharge at a controlled rate to Kilnahue Lane, continuing east down Kilnahue Lane before outfalling to the stream via a new headwall.
Additional SUDS measures which are proposed include permeable paving, green roofs, planted areas and bioretention tree pits. SUDS are standard measures which are included in all development projects and are not included here to reduce or avoid any effect to a Natura 2000 site.

Fresh water supply for the development is sourced from groundwater wells. The development site layout is given in figure 3.

This development site is not located within any Natura 2000 site (SAC or SPA). Figure 1 shows that there is one Natura 2000 site in this vicinity. This is the Slaney River Valley SAC. The run-off of surface water creates a hydrological pathway to the River Owenavorragh however this river system is not associated with any Natura 2000 site. There is no Natura 2000 site within the zone of influence of the discharge point from the wastewater treatment plant. There is no pathway to the Slaney River Valley SAC and so it is considered that no SAC or SPA falls within the zone of influence of this project.

This development occurs in an area that is agricultural in nature albeit with built-up areas composed of artificial or highly modified surfaces to the east and south. Activities in the locality are a combination therefore of agriculture and civic/residential. The site itself is physically separated from the boundary of any Natura 2000 site. The nearest such area, at a distance of 1.2km, is the Slaney River Valley SAC (site code: 0781). However this SAC falls within a separate hydrological catchment to the subject lands and so there is no pathway between the two areas. There are no habitats on the site that are associated with habitats or species for which SACs or SPAs are generally designated. There are no water courses on or near to the site that may be of fisheries value although the

River Owenavorragh is of salmonid status (i.e. with a run of Atlantic Salmon *Salmo salar* and Trout *S. trutta*) according to Inland Fisheries Ireland.

Surface water run-off currently flows to the River Banogue, a tributary of the Owenavorragh. This project will not result in the loss of habitats within any SAC or SPA. It will result in additional artificial lighting, noise and disturbance from human activity. The Courtown-Gorey wastewater treatment plant is a relatively new plant, with ample treatment capacity. The project will result in an increase in the loading to this plant. During the construction phase there will be use of concrete (which is highly toxic to aquatic life) and other potentially polluting substances. There will be extensive earth works which may result in sediment run-off from the site.

Figure 4 – Proposed site layout

Brief description of Natura 2000 sites

In assessing the zone of influence of this project upon Natura 2000 sites the following factors must be considered:

- Potential impacts arising from the development
- The location and nature of Natura 2000 sites
- Pathways between the development and the Natura 2000 network

It has already been stated that the site is not located within or directly adjacent to any Natura 2000 site. For projects of this nature an initial 15km radius is normally examined. This is an arbitrary distance however and impacts can occur at distances greater than this. There are a number of Natura 2000 sites within this radius.

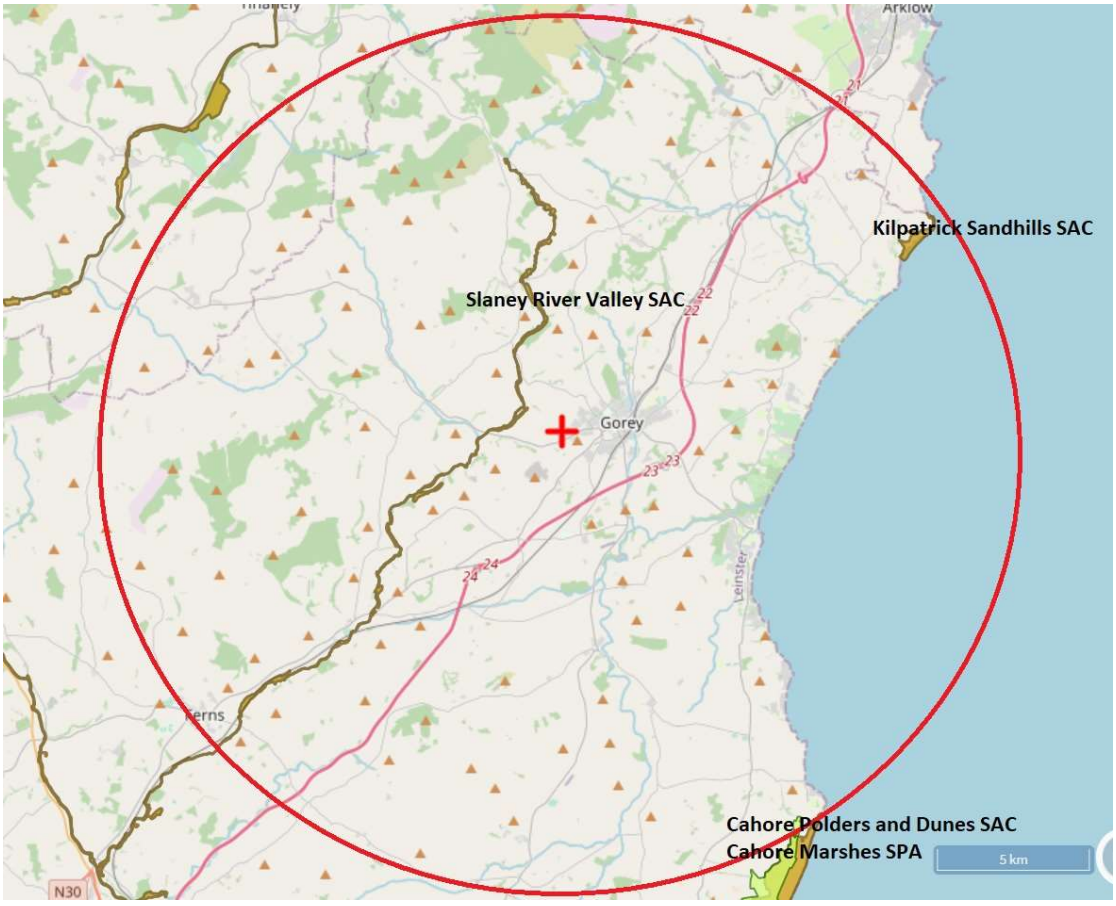

Figure 5 – Approximate 15km radius around the proposed development (red cross) site and Natura 2000 sites.

Slaney River Valley SAC (site code: 0781)
At its closest point the site is approximately 1.2km from the boundary of the Slaney River Valley SAC. However there are no pathways to this area and so impacts cannot occur.

This SAC covers a very large area stretching from the Wicklow mountains in the north to Wexford harbour and includes not only the main channel of the Slaney but also a number of its tributaries. While the Slaney and its tributaries are the principle features of the SAC, there are also important terrestrial habitats including a number of rare woodland types and the intertidal area.

Table 1 – Qualifying interests of the Slaney River Valley SAC

Code	Feature of interest	Status
91E0	Alluvial wet woodlands	Bad
91A0	Old oak woodlands	Bad
1130	Estuaries	Inadequate
1140	Mudflats	Inadequate
3260	Floating river vegetation	Inadequate
1106	Atlantic salmon *Salmo salar*	Inadequate
1095	Sea lamprey *Petromyzon marinus*	Bad
1096	Brook lamprey *Lampetra planeri*	Good
1355	Otter *Lutra lutra*	Good
1029	Freshwater pearl mussel *Margaritifera margaritifera*	Bad
1099	River lamprey *Lampetra fluviatilis*	Not assessed
1103	Twaite shad *Alosa fallax*	Bad

- **Estuary (1130)**: This is the portion of a river that is influenced by the tide but retaining a significant freshwater influence. Substrates can range from rocks and boulders, to expanses of fine mud and sand. They are an important resource for birds and other fauna and many estuaries have twin designations (i.e. both SAC and SPA). It considered that the majority of estuary habitat is in good condition however approximately a quarter is negatively affected by excess nutrient input and damaging fishing practices.
- **Tidal mudflats (1140)**. This is an intertidal habitat characterised by fine silt and sediment. Most of the area in Ireland is of favourable status however water quality and fishing activity, including aquaculture, are negatively affecting some areas.
- **Floating river vegetation (3260)**: There is currently no satisfactory definition of this habitat type in Ireland and it is considered broad, encompassing all rivers. The NPWS says that “the main problems for river habitats in Ireland are damage through eutrophication and other processes linked to water pollution, rather than direct habitat loss and destruction.”
- **Alluvial Wet Woodland (91E0)**: This is a native woodland type that occurs on heavy soils, periodically inundated by river water but which are otherwise

well drained and aerated. The main pressures are identified as alien invasive species, undergrazing and overgrazing. Pollution from agricultural land may also be significant.

- **Old Oak Woodlands (91A0)**: This native woodland type is typified by Sessile Oak *Quercus patrea,* Holly *Ilex aquifolium* and Hard Fern *Blechnum spicant.* Its range is much reduced from historic levels while the principle threats are alien invasive species and overgrazing by deer but also cattle, goats and sheep.
- **Freshwater pearl mussel (1029)** This is one of the most threatened species in Ireland and one of a small number that is listed on the International Union for the Conservation of Nature's (IUCN) red list. Although it is long-lived, its populations have not reproduced in many years. This has been due to over-extraction for their pearls and, more recently, by dramatic deteriorations in water quality. Freshwater pearl mussels need exceptionally high quality water for breeding and depend upon another threatened species, the Atlantic salmon, for part of its life cycle.
- **Sea lamprey (1095)** This is an anadromous species of jawless fish. Their population densities are considered low in many catchments and are negatively affected by barriers to migration, such as weirs, dams etc. Pollution and drainage works are also identified as threats to its conservation status.
- **Brook and river lamprey (1096 & 1099)**: These species are similar to the sea lamprey although they spend their entire life cycle in freshwater and are considerably smaller. As juveniles they are indistinguishable at the species level and are only differentiated by their size at adults. Since surveys are carried out on the juvenile life stage the two species are jointly assessed. Although threatened by pollution, along with all aquatic life, they are assessed as being of 'good' status.
- **Twaite shad (1103)**. This is a localised fish species in Ireland, breeding at the upper tidal reaches of rivers in the south-east. They are threatened by non-native invasive species such as Dace and the Asian clam, which are now established in the tidal reaches of the Nore/Barrow. They spend their adult life at sea and here they are susceptible to capture by industrial fisheries.
- **Atlantic salmon (1106)** This once abundant fish has suffered a dramatic decline in recent decades. On land they are threatened by pollution and barriers to migration while at sea mortality may occur through industrial fisheries, parasites from aquaculture operations and climate change. The Habitats Directive only protects the salmon in its freshwater habitat and here specific conservation objectives have been set for water quality. Salmon will only spawn in clean, sediment-free beds of gravel.
- **Otter (1355)** This aquatic mammal lives its entire life in and close to wet places, including rivers, lakes and coastal areas. They will feed on a wide variety of prey items. Despite local threats from severe pollution incidents and illegal fishing, its population is considered stable and healthy, and so is assessed as being of 'good' status.

Whether the SAC is likely to be significantly affected must be measured against its conservation objectives. Site specific conservation objectives have been set (NPWS, 2011). This document sets specific objectives for each of the qualifying

interests (in the case of the SAC). It is not necessary to reproduce these in their entirety.

Cahore Polders and Dunes SAC (site code: 0700)
According to the site synopsis report for this SAC: “The site comprises a sand dune system that extends along the coast for over 4 km, backed by areas of polder grassland, wetland and drainage channels. It is underlain by rocks of Cambrian age. A sand dune ridge and sandy beach forms the eastern boundary of the site. These dunes are highest in the north (up to 18 m high) and gradually become lower towards the south. The dunes display a well-developed zonation of fixed dunes grading eastwards to Marram (Ammophila arenaria)-dominated dunes, embryo dunes and, at the top of the beach, drift line vegetation” (NPWS, 2018). Table 2 sets out the qualifying interests for this SAC.

Table 2 – Qualifying interests of the Cahore Polders and Dunes SAC

Code	Feature of interest	Status
1210	Annual Vegetation of Drift Lines	Inadequate
2110	Embryonic Shifting Dunes	Inadequate
2120	Marram Dunes (White Dunes)	Inadequate
2130	Fixed Dunes (Grey Dunes) (priority habitat)	Bad
2190	Humid Dune Slacks	Inadequate

- Annual vegetation of drift lines (1210) This habitat of the upper shore is characterised by raised banks of pebbles and stones. They are inhabited by a sparse but unique assemblage of plants, some of which are very rare. The principle pressures are listed as gravel extraction, the building of pipelines and coastal defences.
- Embryonic shifting dunes (2110). As their name suggests these sand structures represent the start of a sand dune’s life. Perhaps only a meter high they are a transient habitat, vulnerable to inundation by the sea, or developing further into white dunes with Marram Grass. They are threatened by recreational uses, coastal defences, trampling and erosion.
- Shifting dunes along the shoreline with Ammophila arenaria (white dunes) (2120). These are the second stage in dune formation and depend upon the stabilising effects of Marram Grass. The presence of the grass traps additional sand, thus growing the dunes. They are threatened by erosion, climate change, coastal flooding and built development.
- Fixed coastal dunes with herbaceous vegetation (grey dunes) (2130 – priority habitat). These are more stable dune systems, typically located on the landward side of the mobile dunes. They have a more or less permanent, and complete covering of vegetation, the quality of which depends on local hydrology and grazing regimes. They are the most endangered of the dune habitat types and are under pressure from built developments such as golf courses and caravan parks, over-grazing, under-grazing and invasive species.

- Humid dune slacks (2190). These are wet, nutrient enriched (relatively) depressions that are found between dune ridges. During winter months or wet weather these can flood and water levels are maintained by a soil layer or saltwater intrusion in the groundwater. There are found around the coast within the larger dune systems.

Site specific conservation objectives have been set for this SAC (NPWS, 2016). These are based upon maintaining the area of the different habitats, their species composition and dynamic processes upon which they depend.

Cahore Marshes SPA (site code: 4143)
This SPA overlaps to a considerable degree with the Cahore Polders and Dunes SPA. According to the site synopsis report "The Cahore Marshes SPA is of ornithological importance as a site for wintering waterfowl." Table 3 gives the qualifying interests.

Table 3 – Qualifying interests of the Cahore Polders and Dunes SAC

Code	Feature of interest	Status[1]
A050	Wigeon *Anas penelope*	Amber
A140	Golden Plover *Pluvialis apricaria*	Red
A142	Lapwing *Vanellus vanellus*	Red
A395	Greenland White-fronted Goose *Anser albifrons flavirostris*	Amber
	Wetland and Waterbirds	n/a

- Wigeon. There is a small unconfirmed breeding population of this duck in Ireland but the bulk of the population arrives to winter in coastal and inland wetlands. Changes in its wintering population have been attributed to climate change.
- Greenland White-fronted Goose. Once found in large numbers across midland and western bogs this goose is now concentrated on the Wexford Slobs. Loss of habitats has driven it from much of its former range although special conservation measures ensure a stable winter gathering at its Wexford site.
- Golden Plover. In winter, these birds are recorded across the midlands and coastal regions. They breed only in suitable upland habitat in the north-west. Wintering abundance in Ireland has changed little in recent years although it is estimated that half of its breeding range has been lost in the last 40 years.
- Lapwing. Although still one of the most widespread of the breeding waders Lapwing populations have declined by over 50% in the past 40 years. This has been driven by changes in agricultural practices and possibly increased predation (Balmer et al., 2011).

Generic conservation objectives only are available for this SPA and are stated as "To maintain or restore the favourable conservation condition of the wetland

[1] Gilbert et al., 2021

habitat at Cahore Marshes SPA as a resource for the regularly-occurring migratory waterbirds that utilise it" (NPWS, 2022).

Kilpatrick Sandhills SAC (site code: 1742)
According to the site synopsis report "The site is comprised of a mosaic of coastal habitats but primarily a mature sand dune system which extends along 2km of coastline". It is designated for a number of coastal qualifying interests and these are given in table 4.

Table 4 – Qualifying interests of the Kilpatrick Sandhills SAC

Code	Feature of interest	Status
1210	Annual Vegetation of Drift Lines	Inadequate
2110	Embryonic Shifting Dunes	Inadequate
2120	Marram Dunes (White Dunes)	Inadequate
2130	Fixed Dunes (Grey Dunes) (priority habitat)	Bad
2150	Decalcified Dune Heath	Inadequate

- Annual vegetation of drift lines (1210) This habitat of the upper shore is characterised by raised banks of pebbles and stones. They are inhabited by a sparse but unique assemblage of plants, some of which are very rare. The principle pressures are listed as gravel extraction, the building of pipelines and coastal defences.
- Embryonic shifting dunes (2110). As their name suggests these sand structures represent the start of a sand dune's life. Perhaps only a meter high they are a transient habitat, vulnerable to inundation by the sea, or developing further into white dunes with Marram Grass. They are threatened by recreational uses, coastal defences, trampling and erosion.
- Shifting dunes along the shoreline with Ammophila arenaria (white dunes) (2120). These are the second stage in dune formation and depend upon the stabilising effects of Marram Grass. The presence of the grass traps additional sand, thus growing the dunes. They are threatened by erosion, climate change, coastal flooding and built development.
- Fixed coastal dunes with herbaceous vegetation (grey dunes) (2130 – priority habitat). These are more stable dune systems, typically located on the landward side of the mobile dunes. They have a more or less permanent, and complete covering of vegetation, the quality of which depends on local hydrology and grazing regimes. They are the most endangered of the dune habitat types and are under pressure from built developments such as golf courses and caravan parks, over-grazing, under-grazing and invasive species.
- Decalcified Dune Heath (2150 – priority habitat). This rare habitat type is found within dune systems where calcium has been leached or where sand is siliceous in nature. It is characterised by Heathers Erica sp. and Gorse Ulex sp. Pressures include under-grazing and agricultural intensification.

Site specific conservation objectives have been set for this SAC (NPWS, 2017). These are based upon maintaining the area of the different habitats, their species composition and dynamic processes upon which they depend.

Pathway Analysis

There are no Natura 2000 sites within the vicinity of the site. There are no water courses on the development site and so there are no direct hydrological links to local water courses. Indirect hydrological pathways lead to the River Owenavorragh and the Irish Sea via surface water and wastewater.

Wastewater will be treated in the municipal wastewater treatment plant for Gorey/Courtown which discharges into the Irish Sea. There are no Natura 2000 sites in the catchment of the River Owenavorragh or at its mouth at the Irish Sea. There are no Natura 2000 sites at the outfall from the wastewater treatment plant.

Beyond the vicinity of the mouth of the Owenavorragh in the Irish Sea dilution occurs to such an extent that no perceivable impact can arise to any Natura 2000 site in the coastal or marine zone. In summary therefore, there is no terrestrial or hydrological pathway between the development site and any Natura 2000 site.

Data collected to carry out the assessment

A series of sites visits found that the habitats on the site are not associated with species or habitats generally associated with Natura 2000 sites. There are no SACs or SPAs within the zone of influence of this project.

Water quality in rivers, estuaries and coastal zones is routinely assessed by the EPA. Recent monitoring of the River Owenavorragh/Banoge shows ‘moderate’ or ‘poor’ status under the Water Framework Directive (WFD) reporting period 2013-18 throughout all but the upper reaches of the catchment (www.epa.ie). These assessments are ‘unsatisfactory’ and so remedial measures will be required to restore ‘good ecological status’, something that was due by 2015.

The Assessment of Significance of Effects

Describe how the project or plan (alone or in combination) is likely to affect the Natura 2000 site.

In order for an effect to occur there must be a pathway between the source (the development site) and the receptor (the SAC or SPA). Where a pathway does not exist an impact cannot occur. The proposed development is not located within, or adjacent to, any SAC or SPA. No Natura 2000 site falls within the zone of influence of this development.

Habitat loss
The site is 1.2km from the boundary of the Slaney River Valley SAC. No significant effects to any Natura 2000 site can arise from this source. Because of this distance there can be no direct interference or loss of habitat in any Natura 2000 site.

No significant effects from this source are likely to arise to Natura 2000 sites.

Pollution from wastewater during operation
Wastewater ultimately discharges to the Irish Sea, away from any Natura 2000 area. No significant effects to any Natura 2000 site can arise from this source.

No significant effects from this source are likely to arise to Natura 2000 sites.

Pollution from surface water during operation
There can be no effects to Natura 2000 sites arising from this aspect of the project.

No significant effects from this source are likely to arise to Natura 2000 sites.

Pollution during construction
Because there are no Natura 2000 sites associated with the River Owenavorragh, no negative effects can arise from this aspect of the project. No significant effects to any Natura 2000 site can arise from this source.

No significant effects from this source are likely to arise to Natura 2000 sites.

Abstraction
There is no evidence that abstraction is resulting in negative effects to any Natura 2000 site.

No significant effects from this source are likely to arise to Natura 2000 sites.

Light and noise
While the projects may result in increases to ambient levels of noise, light and general disturbance, this cannot affect Natura areas due to the significant separation distance.

No significant effects from this source are likely to arise to Natura 2000 sites.

Are there other projects or plans that together with the project or plan being assessed could affect the site?

Eventual implementation of the WFD will attain good status throughout the Owenavorragh/Banogue catchment, including coastal waters, although it may be some years before this is achieved. Environmental water quality can be impacted by the effects of surface water run-off from areas of hard standing. These impacts are particularly pronounced in urban areas and can include pollution from particulate matter and hydrocarbon residues, and downstream erosion from accelerated flows during flood events (Mason, 1996). In this case the proposed development is not likely to negatively affect the standard of runoff from the site.

Forward planning in Gorey is set out in the Gorey Local Area Plan 2017-2023. This has zoned the subject mostly for residential. The plan has been screening for AA and this found that significant effects to Natura 2000 areas are not likely to arise from its implementation.

There are no effects which may arise from the construction or operation phases of the development which could act in combination with other plans or projects to result in significant effects to any SAC or SPA.

List of agencies consulted
As the site falls within the catchment of a river system of salmonid status, Inland Fisheries Ireland was contacted for fisheries conservation observations. A response to this was received on January 18th 2019 noting that “the Banogue and its tributaries are an important salmonid catchment and represent some of the best fisheries habitat of the entire Owenavorragh system. The Owenavorragh River catchment supports several species listed in Annex II of the Directive including Salmon, River Lamprey, Brook Lamprey, Sea Lamprey and Otter.”

Response
Water quality protection measures have been included in the design of this project to ensure negative impacts to aquatic life downstream does not occur.

<u>Conclusion and Finding of No Significant Effects</u>

This report has assessed the potential for the proposed development to result in significant effects on European sites in the absence of any mitigation measures. Mitigation in an AA context is any measure which is introduced in order to avoid or reduce an impact to a Natura 2000 site. In this case no such mitigation measures were relied upon in preparing this Report on Screening for Appropriate Assessment.

No significant effects are likely to arise to any Natura 2000 site either alone or in combination with other plans or projects.

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