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Appropriate Assessment Screening Report,

For Project West, Knockharley Landfill, Co. Meath

prepared for AWN Consulting Ltd

on behalf of Beauparc Utilities Limited

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1 Introduction

1 This report, which contains information required for the competent authority to undertake a screening for Appropriate Assessment (AA), has been prepared by Scott Cawley Ltd., on behalf of the applicant, Knockharley Landfill Limited. It provides information on, and assesses in view of best scientific knowledge, the potential for the Proposed Development to have significant effects on the Natura 2000 network (hereafter referred to as European sites)[1]. The Proposed Development comprises the construction of an additional active void space of 4.12 million m^3 for landfilling, the relocation of an existing 220kV overhead ESB powerline which traverses the site, and diversion of the existing Knockharley Stream to the outer extent of the expanded landfill void.

An AA is required if significant effects on European sites arising from a proposed development cannot be ruled out at the screening stage, either alone or in combination with other plans or projects. It is the responsibility of the competent authority to make a decision as to whether or not the proposed development site is likely to have significant effects on European sites, either individually or in combination with other plans or projects.

2 For the reasons set out in detail in this AA Screening Report, a Stage Two Appropriate Assessment of the Proposed Development is required as it cannot be concluded, in view of best scientific knowledge and on the basis of objective information, that the Proposed Development, either individually or in combination with other plans or projects, will not have a significant effect on the following European site(s): River Nanny Estuary and Shore SPA and North-west Irish Sea SPA.

2 Methodology

2.1 Guidance

3 This Appropriate Assessment Screening Report has been prepared with regard to the following guidance documents, as relevant:

- OPR *Practice Note PN01. Appropriate Assessment Screening for Development Management* (Office of the Planning Regulator, 2021)
- *Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities*. (Department of Environment, Heritage and Local Government, 2010 revision)
- *Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities*. Circular NPW 1/10 & PSSP 2/10
- *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* (European Commission, 2021)
- *Communication from the Commission on the precautionary principle* (European Commission, 2000), and

[1] The Natura 2000 network is a European network of important ecological sites, as defined under Article 3 of the Habitats Directive 92/43/EEC, which comprises both Special Areas of Conservation and Special Protection Areas. Special Areas of Conservation are sites hosting the Natural Habitat Types listed in Annex I, and habitats of the species listed in Annex II, of the Habitats Directive, and are established under the Habitats Directive itself. Special Protection Areas are established under Article 4 of the Birds Directive 2009/147/EC for the protection of endangered species of wild birds. The aim of the network is to aid the long-term survival of Europe's most valuable and threatened species and habitats.

In Ireland these sites are designed as European sites - defined under the Planning Acts and/or the Birds and Habitats Regulations as (a) a candidate site of Community importance, (b) a site of Community importance, (c) a candidate special area of conservation, (d) a special area of conservation, (e) a candidate special protection area, or (f) a special protection area. They are commonly referred to in Ireland as Special Areas of Conservation (SACs) and Special Protection Areas (SPAs).

- *Managing Natura 2000 Sites: The Provisions of Article 6 of the Habitat's Directive 92/43/EEC* (European Commission, 2019); and
- EC (2013) *Interpretation Manual of European Union Habitats*. Version EUR 28. European Commission.

2.2 Assessment Methodology

4 The above referenced guidance sets out a staged process for carrying out Appropriate Assessment. To determine if an Appropriate Assessment is required, documented screening is required. Screening identifies the potential for effects on the conservation objectives of European sites, if any, which would arise from a proposed plan or project, either alone or in combination with other plans and projects (i.e. likely significant effects).

5 Significant effects on a European site are those that would undermine the conservation objectives supporting the favourable conservation condition of the Qualifying Interest (QI) habitats and/or the QI/Special Conservation Interest (SCI) species of a European site(s).

6 Screening for Appropriate Assessment involves the following steps:

7 If the conclusions at the end of screening are that there is no likelihood of significant effects occurring on any European sites as a result of the proposed plan or project, either alone or in combination with other plans and projects, then there is no requirement to undertake a Stage Two Appropriate Assessment.

8 In establishing which European sites are potentially at risk (in the absence of mitigation) from the proposed development, a source-pathway-receptor approach was applied. In order for an impact to occur, there must be a risk enabled by having a source (e.g. water abstraction or construction works), a receptor (e.g. a European site or its QI(s) or SCI(s)[2]), and a pathway between the source and the receptor (e.g. pathway by air for airborne pollution, or a pathway by a watercourse for mobilisation of pollution). For an impact to occur, all three elements must exist; the absence or removal of one of the elements means there is no possibility for the impact to occur.

9 The identification of source-pathway-receptor connection(s) between the Proposed Development and European sites essentially is the process of identifying which European sites are within the Zone of Influence (ZoI) of the Proposed Development, and therefore potentially at risk of significant effects. The ZoI is the area over which the Proposed Development could affect the receiving environment such that it could potentially have significant effects on the QI habitats or QI/SCI species of a European site, or on the achievement of their conservation objectives[3].

10 The identification of a source-pathway-receptor link does not automatically mean that significant effects will arise. The likelihood for significant effects will depend upon the characteristics of the source (e.g. extent and duration of construction works), the characteristics of the pathway (e.g. direction and strength of prevailing winds for airborne pollution) and the characteristics of the receptor (e.g. the sensitivities of the European site and its QIs/SCIs).

11 The 'likely significant effects' test is based on the precautionary principle[4]. The precautionary principle means that, based on the most reliable available information, where there is uncertainty or doubt as to the absence of significant effects, the project cannot be screened out and an appropriate assessment must be carried out.

2.3 Desktop Data Review

12 The desktop data sources used to inform the assessment presented in this report are as follows (accessed in August 2025):

- Online data available on European sites and protected habitats/species within 10km of the Proposed Development as held by the National Parks and Wildlife Service (NPWS) from www.npws.ie[5], including conservation objectives documents. The use of a 10km radius for desk studies is frequently applied to evaluate potential impacts on protected species, habitats, and the surrounding landscape. A 10km radius allows for the capture of relevant data on species that may

[2] The term Qualifying Interest is used when referring to the habitats or species for which an SAC is designated; the term Special Conservation Interest is used when referring to the bird species (or wetland habitats) for which an SPA is designated.

[3] As defined in the *Guidelines for Ecological Impact Assessment in the UK and Ireland* V1.3 (CIEEM, 2024)

[4] The precautionary principle is a guiding principle that derives from Article 191 of the Treaty on the Functioning of the European Union and has been developed in the case law of the European Court of Justice (e.g. ECJ case C-127/02 – Waddenzee, Netherlands).

The guidance document *Communication from the Commission on the Precautionary Principle* (European Commission, 2000) notes that the precautionary principle "*covers those specific circumstances where scientific evidence is insufficient, inconclusive or uncertain and there are indications through preliminary objective scientific evaluation that there are reasonable grounds for concern that the potentially dangerous effects on the environment, human, animal or plant health may be inconsistent with the chosen level of protection*"..

[5] The following SAC and SPA GIS boundary datasets are the most recently available at the time of writing: SAC_ITM_2024_12, SPA_ITM_2024_01

use habitats in the area surrounding a Proposed Development site. This distance is useful for species with broader ranges, like certain bird or mammal species, and also helps identify potential corridors or linkages between habitats. It allows for the consideration of species that may be present in the broader landscape while focusing on those that are most likely to be impacted by activities within the development area.

- Online data available on protected species as held by the National Biodiversity Data Centre (NBDC) from www.biodiversityireland.ie
- Information on the surface water network and surface water quality in the area available from www.epa.ie
- Information on soils, geology and hydrogeology in the area available from the Geological Survey Ireland (GSI) online Spatial Resources service. Available from https://www.gsi.ie/en-ie/data-and-maps/Pages/Groundwater.aspx
- Ordnance Survey of Ireland mapping and aerial photography available from https://www.geohive.ie/
- Information on the location, nature and design of the Proposed Development site supplied by the applicant's design team
- Information on the conservation status of birds in Ireland from Birds of Conservation Concern in Ireland 4 (Gilbert *et al*., 2021)

2.4 Baseline Surveys

13 Baseline ecological surveys were undertaken as necessary to inform environmental assessments of the Proposed Development. This section describes all ecological surveys performed by Scott Cawley Ltd. which are relevant to and have informed the assessment of likely significant effects on European sites, presented in this NIS. Surveys were carried out between September 2024 and May 2025. It is noted that some surveys listed in Table 1 are not relevant to the AA process, but are captured under the assessment in Chapter 7 - Biodiversity of the EIAR.

14 Table 1 lists the survey details. It is noted that some surveys listed in Table 1 are not relevant to the AA process, but are captured under the assessment in Chapter 7 - Biodiversity of the EIAR.

Table 1 : Ecological Surveys, Survey Dates and Surveyors

Survey	Survey Date(s)
Habitat Surveys	24 September 2024, 14 May 2025
Invasive Plant Species Surveys	24 September 2024, 14 May 2025
Terrestrial Fauna (excluding bats)	24 September 2024, 14 May 2025
Small Stream Risk Score (SSRS)	3, 4, and 11 December 2024
Bat Activity Surveys	18 September 2024, 24 September 2024, 4 October 2024, 9 October 2024, 22 April 2025, 13 May 2025
Ground-level Tree Assessment	25 March 2025
Breeding Bird Surveys	20 March 2025, 2 May 2025, 28 May 2025
Wintering Bird Surveys	24 September 2024, 23 October 2024, 20 November 2024, 20 December 2024, 20 January 2025, 20 February 2025, 19 March 2025
Kingfisher Surveys	19 March 2025, 16 April 2025, 13 May 2025

2.4.1 Habitats and Flora Survey

15 A habitat survey of the Proposed Development site was undertaken on 24 September 2024, following the methodology described in *Best Practice Guidance for Habitat Survey and Mapping*[6]. An additional survey was undertaken on 14 May 2025 to verify results, as the initial survey was performed late in September which was suboptimal for verifying habitats and flora species. All habitat types were classified using the *Guide to Habitats in Ireland*[7], and recording any species of conservation interest. Vascular and bryophyte plant nomenclature generally follow that of *The National Vegetation Database*[8], having regard to more recent taxonomic changes to species names after *the New Flora of the British Isles*[9] and the British Bryological Society's *Mosses and Liverworts of Britain and Ireland: A Field Guide*[10].

2.4.2 Small Stream Risk Score Survey

16 A Small Stream Risk Score (SSRS) survey was undertaken on 3, 4 and 11 December 2024, following the methodology described *SSRS Training Manual – a Pollution Investigation Tool for Use in the Field*[11]. Samples were collected from the four stream and river sites by means of a two-minute kick sample, collecting all macroinvertebrates in a 1mm pond net attached to a metal frame.

2.4.3 Terrestrial Mammals (excluding bats)

17 A terrestrial fauna survey was undertaken by Scott Cawley Ecologists on 24 September 2024 and 14 May 2025. The presence/absence of terrestrial fauna species were surveyed through the detection of field signs such as tracks, markings, feeding signs, and droppings, as well as by direct observation. The habitats on site were assessed for signs of usage by protected/red-listed fauna species, and their potential to support these species. Surveys included checks for the presence of badger setts and otter holts within the subject lands, and to record any evidence of use. Evidence of terrestrial mammals observed during other surveys was also recorded.

2.4.4 Bats

18 A ground-level tree assessment was conducted to evaluate the suitability of buildings and vegetation within the Proposed Development site for supporting roosting bats and their potential importance for commuting and foraging bats. This assessment was based on guidelines from *Bat Surveys for Professional Ecologists: Good Practice Guidance*[12], as detailed in Table 2: Guidelines for assessing the potential suitability of subject lands for bats, based on the presence of habitat features within the landscape, applied according to professional judgement. (Taken from Collins (2023))Table 2. The evaluation included inspections of buildings and trees for potential roost features (PRFs), looking for signs of bats such as staining at roost entrances, droppings, carcasses, and insect remains.

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[6] Smith, G.F., O'Donoghue, P., O'Hora, K. & Delaney, E. (2011) *Best Practice Guidance for Habitat Survey and Mapping*. The Heritage Council Church Lane, Kilkenny, Ireland.

[7] Fossitt, J.A. (2000) A Guide to Habitats in Ireland. Heritage Council, Kilkenny.

[8] Weekes, L.C. & FitzPatrick, Ú. (2010) *The National Vegetation Database: Guidelines and Standards for the Collection and Storage of Vegetation Data in Ireland.* Version 1.0. Irish Wildlife Manuals, No. 49. National Parks and Wildlife Service, Department of Environment, Heritage and Local Government, Dublin, Ireland.

[9] Stace, C. (2019) *New Flora of the British Isles*. *4th Edition*. C&M Floristics.

[10] Atherton, I., Bosanquet, S. & Lawley, M. (2010) *Mosses and Liverworts of Britain and Ireland: A Field Guide*. Latimer Trend & Co., Plymouth.

[11] Small Streams Risk Score (SSRS) Training Manual – A Pollution Investigation Tool for Use in the Field – White Young Green, February 2009

[12] Collins, J. (2023) *Bat Surveys for Professional Ecologists: Good Practice Guidelines 4th Edition.*

19 Four activity surveys were performed in on the September 2024 and May 2025 which covered the Proposed Development site, as well as the placement of automated detectors on the September 2024, October 2024, April 2025, and May 2025.

Table 2: Guidelines for assessing the potential suitability of subject lands for bats, based on the presence of habitat features within the landscape, applied according to professional judgement. (Taken from Collins (2023))

Suitability	Description of Roosting Habitats	Commuting and Foraging Habitats
None	No habitat features on site likely to be used by any roosting bats at any time of the year (i.e. a complete absence of crevices/suitable shelter at all ground/underground levels	No habitat features on site likely to be used by any commuting or foraging bats at any time of the year (i.e. no habitats that provide continuous lines of shade/protection for flight-lines, or generate/shelter insect populations available to foraging bats).
Negligible[a]	No obvious habitat features on site likely to be used by roosting bats; however, a small element of uncertainty remains as bats can use small and apparently unsuitable features on occasion.	No obvious habitat features on site likely to be used as flight-paths or by foraging bats; however, a small element of uncertainty remains in order to account for non-standard bat behaviour.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically at any time of the year. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions[b] and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity and not a classic cool/stable hibernation site, but could be used by individual hibernating bats[c]).	Habitat that could be used by small numbers of bats as flight-paths such as a gappy hedgerow or unvegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
Moderate	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions[b] and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only, such as maternity and hibernation – the categorisation described in this table is made irrespective of species conservation status, which is established after presence is confirmed).	Continuous habitat connected to the wider landscape that could be used by bats for flight-paths such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High	A structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions[b] and surrounding habitat. These structures have the potential to support high conservation status roosts, e.g. maternity or classic cool/stable hibernation site.	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by bats for flight-paths such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland. Proposed Development is close to and connected to known roosts.

a) Negligible is defined as 'so small or unimportant as to be not worth considering, insignificant'. This category may be used where there are places that a bat could roost or forage (due to one attribute) but it is unlikely that they actually would (due to another attribute).

b) For example, in terms of temperature, humidity, height above ground level, light levels or levels of disturbance.

c) Evidence from the Netherlands shows mass swarming events of common pipistrelle bats in the autumn followed by mass hibernation in a diverse range of building types in urban environments (Korsten *et al*., 2016 and Jansen *et al*., 2022). Common pipistrelle swarming has been observed in the UK (Bell, 2022 and Tomlinson, 2020) and winter hibernation of numbers of this species has been detected at Seaton Delaval Hall in Northumberland (National Trust, 2018). This phenomenon requires some research in the UK, but ecologists should be aware of the potential for larger numbers of this species to be present during the autumn and winter in prominent buildings in the landscape, urban or otherwise.

2.4.5 Breeding Birds

20 Breeding bird surveys were undertaken on the 20 March 2025, 2 May 2025, and 21 May 2025, using a methodology adapted from the *Bird Monitoring Methods - A Manual of Techniques for Key UK Species* (Gilbert *et al*., 2011). The study area covered the Proposed Development site. Surveys commenced at dawn and lands within the study area were slowly walked in a manner allowing the surveyor to come within 50m of all habitat features. Birds were identified by sight and song, and general location and activity were recorded using the British Trust for Ornithology (BTO) species and activity codes.

2.4.1 Wintering Birds

21 A full season of wintering bird surveys were undertaken on 24 September 2024, 23 October 2024, 20 November 2024, 20 December 2024, 20 January 2025, 20 February 2025, and 19 March 2025, using a methodology adapted from the *Bird Monitoring Methods - A Manual of Techniques for Key UK Species* (Gilbert *et al*., 2011). The study area covered the lands within the Proposed Development site. Lands were surveyed visually using binoculars from a vantage point(s) at the edge of the study area followed by a walkover of the area to identify birds which may not be visible from a distance (e.g. waders) and evidence of usage by wildfowl such as swans or geese (e.g. droppings). Birds were identified by sight and general location and activity were recorded using the British Trust for Ornithology (BTO) species and activity codes.

2.4.2 Kingfisher Surveys

22 Dedicated kingfisher surveys were undertaken with the approach adopted from recommendations contained in the NRA publication *Ecological Surveying Techniques for Protected Flora and Fauna during the Planning of National Road Schemes*[13]. Surveys comprised of walked transects along the accessible sections of the Knockharley Stream (EPA Name: Flemingstown 08) bank(s) and vantage point watches of potentially suitable kingfisher nesting habitat shortly after dawn. If observed, the presence of nest holes, perches, resting places and individual birds was recorded and mapped. If nest holes were identified, they were categorised as active when kingfisher activity was reported near the hole and/or fresh droppings were present at the entrance(s).

3 Provision of Information for Screening for Appropriate Assessment

23 The following sections provide information to facilitate the Appropriate Assessment screening of the Proposed Development to be undertaken by the competent authority.

24 A description of the Proposed Development and the receiving environment is provided to identify the potential ecological impacts. The environmental baseline conditions are discussed, as relevant to the

[13] National Roads Authority (NRA) (2009). Ecological Surveying Techniques for Protected Flora and Fauna during the Planning of National Road Schemes.

assessment of ecological impacts where they may highlight potential pathways for impacts associated with the Proposed Development to affect the receiving ecological environment (e.g. hydrogeological and hydrological data).

25 The potential impacts are examined in order to define the potential zone of influence of the Proposed Development on the receiving environment. This then informs the assessment of whether the Proposed Development will result in significant effects on any European sites; i.e. affect the conservation objectives supporting the favourable conservation condition of the European site's QIs or SCIs.

3.1 Description of the Proposed Development

3.1.1 Construction Phase

26 The Proposed Development consists of the expansion of the existing landfill site, with the construction of an additional void space of 4.12 million m^3 for landfilling.

The construction phase is divided into seven phases over 21 years.

- Phase 1 will develop the site for the future construction programme within the first two years of construction, and involves site clearance, berm construction, diversion of Knockharley Stream, installation of surface water infrastructure, and the development of landfill cells 31-32.
- Phase 2 will involve the development of landfill cells 33-34 over 2 years.
- Phase 3 will involve the development of landfill cells 35-36 over 2 years, and capping of cells 31-32.
- Phase 4 will involve the development of landfill cells 37-38 over 2 years, and capping of cells 33-34.
- Phase 5 will involve the development of landfill cell 39 over 2 years, and capping of cells 35-36.
- Phase 6 will involve the development of landfill cell 40 over 2 years, and capping of cells 37-38.
- Phase 7 will involve the capping of cells 39-40.

27 As part of the creation of the void space, the works include;

- Relocation of an existing 220kV overhead ESB powerline which traverses the site to the western boundary of the site, to accommodate development of the expanded landfill void.
- Diversion of the existing Knockharley Stream to the outer extent of the expanded landfill void. The diverted section of the stream will be unculverted, with the exception of where it crosses under existing access road crossings.
- Amendment and extension of 10m high permitted screening berms (ABP Ref: 303211) along the western planning boundary to revise the berm profile and extend the extent of the berm. The proposed amended berm will have a total berm footprint of approximately 16.4ha.
- Felling of approximately 12.6 ha of the existing commercial broadleaf/conifer mix plantations to facilitate the Proposed Development.
- Replanting and new planting totalling approximately 8.86ha to off-set loss of commercial forestry on the proposed development site, along with an additional 4.04 ha planted off site.
- Replanting over screening berms.
- The old void cells will be capped and planted in what is currently the permitted development.

28 The Proposed Development will also provide for all associated site development works, infrastructure, excavation and clearance works including decommissioning of the existing void.

3.1.2 Operational Phase

29 As the Construction Phase is divided into seven phases over 21 years, the Operational Phase of the Proposed Development will continue with waste being disposed in the existing landfill cell during the construction of new landfill cells. After the landfill is remediated, the site will remain operational for the IBA facility and Biological treatment facility. The main characteristics of the Operational Phase of the Proposed Development that have potential for ecological impact are:

- The presence of traffic delivering waste to the landfill cells.
- Water degradation.
- Routine maintenance and landscaping.

30

Figure 1 Red line boundary for phase 1 of the Proposed Development.

3.2 Overview of the Receiving Environment

3.2.1 European sites

The Proposed Development lands are not located within any European sites, it is however hydrologically connected downstream to two European sites, namely the River Nanny Estuary and Shore SPA and the North-West Irish Sea SPA. The Knockharley Stream which intersects the Proposed Development joins with the River Nanny *c*. 2.8km downstream and therefore provides a hydrological connection to downstream European sites. All other marine SPAs within the North-west Irish Sea (e.g. Lambay island SPA and Rockabill SPA) are not included in this assessment as according to the Hydrology Chapter of the EIAR[14] the

[14] EIAR Chapter 6 Hydrology and Hydrogeology, Project West.

perceptible impacts from construction are negative at a local geographic scale, and therefore given dilution and mixing in the marine environment, the Proposed Development would not give rise to a pollution event of a magnitude that would have any perceptible effect on water quality in the Irish Sea.

The European sites present in the vicinity of the Proposed Development are shown on **Error! Reference source not found.**. The QIs/SCIs of the European sites in the vicinity of the Proposed Development are provided in Appendix I.

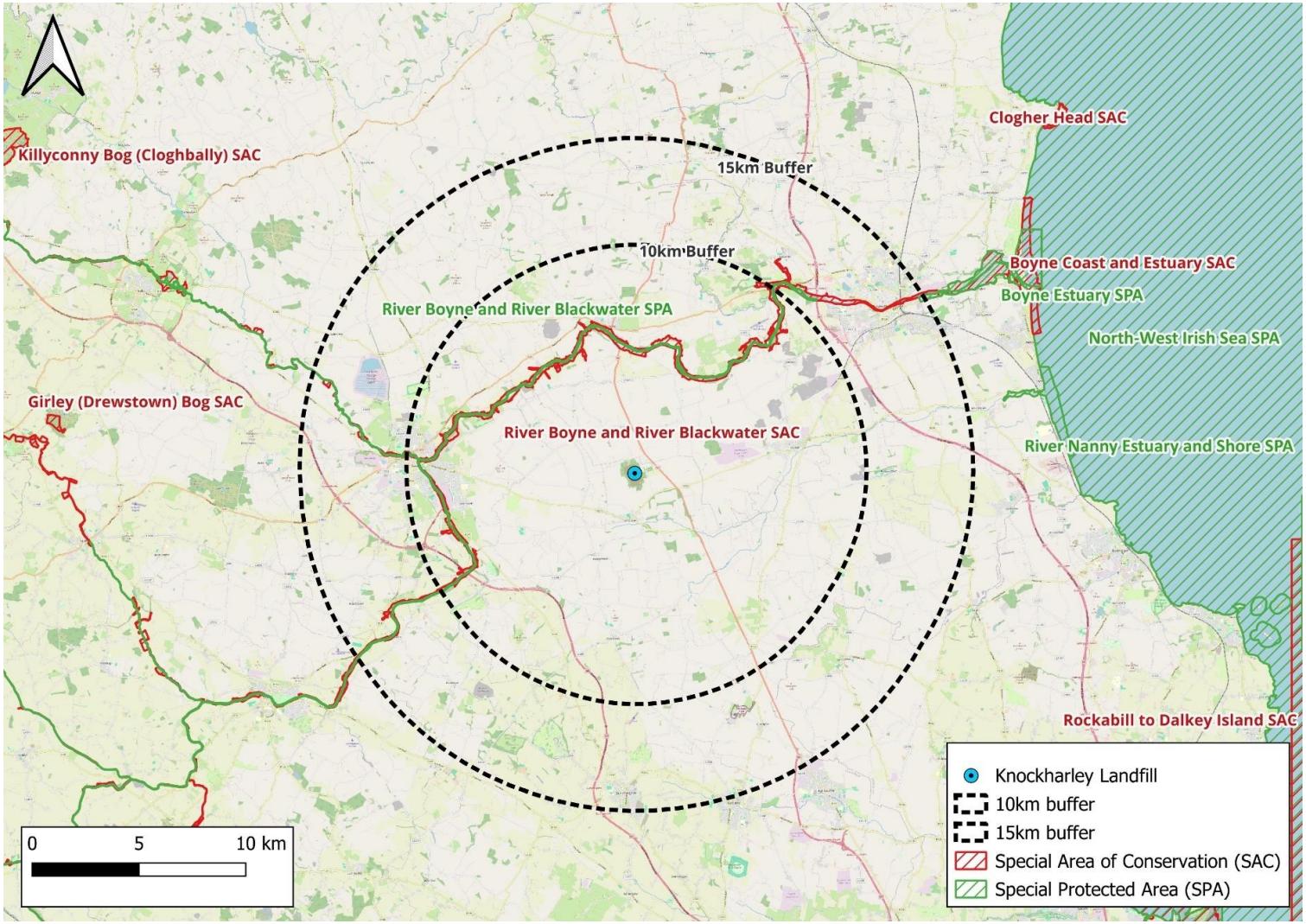

Figure 2 European sites in the vicinity of the Proposed Development

3.2.2 Habitats

31 The results of the habitat surveys within the Proposed Development site are described below by habitat type after Fossitt (2000). The habitats described below relate to habitat areas within or adjacent to the Proposed Development site.

32 Each habitat identified within the Proposed Development site was classified according to Fossitt (2000) and their corresponding level of ecological importance was determined in accordance with CIEEM (2024) and NRA (2009) guidelines.

33 The habitat types recorded along the footprint of the Proposed Development, are as follows:

- Buildings and artificial surfaces (BL3);
- Exposed sand, gravel or till (ED1);
- Spoil and bare ground (ED2);
- Recolonising bare ground (ED3);
- Other artificial lakes and ponds (FL8);
- Reed and large sedge swamps (FS1);
- Depositing/Lowland Rivers (FW2);
- Drainage ditches (FW4);
- Improved Agricultural grassland (GA1);
- Amenity grassland (Improved) (GA2);
- Dry meadows and grassy verges (GS2);
- Wet grassland (GS4);
- (Mixed) broadleaved woodland (WD1);
- Mixed broadleaved/conifer woodland (WD2);
- (Mixed) conifer woodland (WD3);
- Hedgerows (WL1);
- Treelines (WL2);
- Scrub (WS1);
- Immature woodland (WS2); and
- Ornamental/non-native shrub (WS3).

34 None of the recorded habitats on the Proposed Development site correspond with Annex I habitats as per the Interpretation Manual of European Union Habitats (European Commission, 2013) and most are of low ecological value by virtue of vegetation assembly and management regime. The habitats are described in Chapter 7 of the EIAR.

3.2.1 Rare and Protected Flora

35 Records were returned for four non-native invasive plant species, listed on the Third Schedule of the European Communities (Birds and Natural Habitats) Regulations 2011 (as amended) and Habitats Regulations and the European Union (Invasive alien species) Regulations 2024 (S.I. 374/2024); Himalayan balsam *Impatiens glandulifera*, Japanese knotweed *Reynoutria japonica*, Spanish bluebell *Hyacinthoides hispanica,* and three-cornered garlic *Allium triquetrum*. These species were not recorded within the vicinity of the Proposed Development.

3.2.2 Invasive Flora

36 A search of the NBDC database returned two records of a red-list species as occurring within 10km of the Proposed Development site; Common Wintergreen *Pyrola minor*[15] and Slender Pocket-moss *Fissidens exilis*[16]. The habitat survey undertaken on 24 September 2024 and additional habitat verification survey on the 14 May 2025 did not find any protected or rare species within the Proposed Development.

3.2.3 Fauna Species

37 A search of the NBDC database of species returned records for several fauna species within approximately 10km (refer to Section 2.3) of the Proposed Development lands.

3.2.3.1 Otter

38 Otter and their breeding and resting places, are protected under the Wildlife Act 1976 (as amended). Otter are also listed on Annex II and Annex IV of the EU Habitats Directive and are afforded strict protection under the Habitats Directive and the European Communities (Birds and Natural Habitats) Regulations, 2011 (as amended). Otter have a widespread distribution in Ireland and typically otter territories are within the range of 7.5km for females and up to 21km for males[17].

39 The NBDC database holds records for the Annex II listed otter *Lutra lutra* within *c.* 10km of the Proposed Development, with the nearest record being from 1980, approximately 2.1km northwest of the Proposed Development site along the Seneschalstown stream.

40 The Knockharley Stream bounding the Proposed Development site is a poor-quality stream with little fisheries resource, and much of the stream is covered by riparian vegetation and is adjacent to planation forests, hedgerows, and agricultural land. These habitats could provide safe passage between the riverbank and the open areas for any potentially wide-foraging otters. However, sections of the stream have previously been modified by removing bank vegetation and channelisation as part of an earlier stream diversion, and any suitable habitat has since been removed. No evidence of otter was recorded during surveys.

41 As such, the Proposed Development itself does not contain habitat (neither habitation nor feeding grounds) suitable to otter and is therefore considered unsuitable for otter activity. Otters are therefore not considered further in this assessment.

3.2.3.2 Bats

42 Bats, and their breeding and resting places, are protected under the Wildlife Acts and, as Annex IV species, are also afforded strict protection under Article 12 of the Habitats Directive. The Lesser horseshoe bat *Rhinolophus hipposideros*, is also listed on Annex II of the Habitats Directive, necessitating the establishment of SACs for their protection. This species is not, however, known to be present in the Proposed Development area. Its Irish distribution is confined to six western counties, occurring in clusters, with large areas that contain few or no colonies, which does not include Meath[18]. It was not recorded

[15] Wyse Jackson, M., FitzPatrick, Ú., Cole, E., Jebb, M., McFerran, D., Sheehy Skeffington, M. & Wright, M. (2016) Ireland Red List No. 10: Vascular Plants. National Parks and Wildlife Service, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs, Dublin, Ireland.

[16] N.G. & Lockhart, N. (2025) Bryophytes (Mosses, Liverworts & Hornworts). Ireland Red List No. 14. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage, Dublin, Ireland..

[17] Ó'Neill, L., Veldhuizen, T., de Jongh, A. & Rochford, J. (2009). Ranging behaviour and socio-biology of Eurasian otters (*Lutra lutra*) on lowland mesotrophic river systems. European Journal of Wildlife Research. 55:363-370.

[18] NPWS & VWT (2022) Lesser Horseshoe Bat Species Action Plan 20222026. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage, Ireland.

during surveys. The Lesser horseshoe bat (Annex II) species is not considered further in this assessment, however all other protected Annex IV species are considered in this assessment.

3.2.3.3 Birds

Kingfisher

43 Kingfisher *Alcedo atthis* reside within the River Boyne corridor (Cummins *et al*., 2010), with several records of this species returned from the NBDC database within *c*. 10km of the Proposed Development. This Birds Directive Annex I species is associated with watercourses throughout Ireland, and nests in sandy banks over and in the vicinity of its river habitat. The closest European site for which Kingfisher is an SCI species is the River Boyne and River Blackwater SPA, located *c*. 4.2km north of the Proposed Development. Kingfisher are a sedentary species whose home range is limited to 2.5ha (0.25km^2)[19]. As such, any local populations of kingfisher, which may be present within the vicinity of the Proposed Development, are not considered to form part of any SPA populations and there is no hydrological connectivity between the Proposed Development and the SPA. While there was potentially suitable foraging habitat for kingfisher within Knockharley Stream, no kingfisher or their nests were identified during surveys between March and May 2025. The kingfisher is not considered further in this assessment.

Breeding Birds

44 The NBDC desk study returned records of a total of 38 breeding bird species within approximately 10km of the Proposed Development site. Records included 6 species listed under Annex I of the Birds Directive, 19 Amber-listed and 12 Red-listed species. This includes 31 species with breeding and wintering populations. Bird species are grouped into habitat preferences and are discussed below in relation to their presence within the Proposed Development.

45 Several bird species for which desk study records were returned, are those typically found in coastal, estuarine and intertidal habitats, such as Nanny Estuary. Gulls favour nesting along coasts on shingle and cliffs but may utilise inland public areas for scavenging and buildings for roof nesting as per habitat preferences associated with the species as listed on BirdWatch Ireland (BirdWatch Ireland, 2021). As such, some gull species may utilise the buildings adjacent to or within the Proposed Development for nesting. However, other species associated with estuarine and coastal habitats are not deemed likely to breed within the Proposed Development.

46 Three SCI species were observed at the Proposed Development during breeding bird surveys, including; grey heron *Ardea cinerea*, herring gull *Larus argentatus*, and mallard *Anas platyrhynchos.*

47 The nearest site designated for grey heron is Wexford Harbour and Slobs SPA, approximately 127.6km south-east of the Proposed Development. The nearest site designated for herring gull is River Nanny Estuary and Shore SPA, approximately 16.7km east of the Proposed Development. The nearest site designated for mallard is Dundalk Bay SPA, approximately 27.8km east of the Proposed Development.

48 Appendix V provides a list of all breeding birds recorded during the surveys.

Wintering Birds

49 The NDBC desk study identified records of fifteen SCI bird species within *c*. 10km of the Proposed Development. Records for six species that are listed under Annex I of the Birds Directive were recorded within 10km of the Proposed Development.

[19] Musseau *et al*., 2023. Sensitivity of the European Kingfisher (*Alcedo atthis*) to global change: evidence from home range features and contaminations by trace elements and organic pollutants, a case study in the marshes of Western Europe. 4th international Kingfisher conferencen, Biology, ecology & conservation, Wdecki Landscape Parc, Sep 2023, Tleń, Poland.

50 The majority of wintering bird species identified in the desk study are typically found in coastal, estuarine, wetlands, and agricultural lands. There is suitable habitat for these species within the Proposed Development, as it contains areas of woodland and scrub.

51 Six wintering bird species were observed foraging within the Proposed Development site during wintering bird surveys; Herring gull *Larus argentatus*, Lesser Black-backed Gull *Larus fuscus*, Great Black-backed Gull *Larus marinus*, Mallard *Anas platyrhynchos*, Mute Swan *Cygnus olor*, and Skylark *Alauda arvensis*.

52 Two SCI species were observed flying over the site: herring gull *Larus argentatus* and mallard *Anas platyrhynchos.* Herring gull was disturbed from the waste deposition area into the current operational landfill cells. Mallard *Anas platyrhynchos* were observed flying south from the swamp site at the southern border of the Proposed Development. Herring gull, Lesser Black-backed gull and Great Black-backed gull were all observed foraging within the operational landfill site. Herring gull was observed in high frequency, while Lesser Black-backed gull and Great Black-backed gull were rarely observed. Mallard *Anas platyrhynchos* were observed flying south from the swamp site at the southern border of the Proposed Development, but was rarely observed.

53 The nearest site designated for herring gull is River Nanny Estuary and Shore SPA, approximately 16.7km east of the Proposed Development site. The nearest site designated for lesser black-backed gull, and great black-backed gull is North-west Irish Sea SPA, approximately 18.7km east of the Proposed Development site. The nearest site designated for mallard is Lough Ree SPA, located approximately 74km east of the Proposed Development site. Mallard is not considered further in this assessment as it is not designated for any SPAs within vicinity of the Proposed Development.

54 Appendix IV provides a list of all wintering birds recorded during the surveys.

3.2.3.4 Aquatic Species

55 The desk study revealed no records of QI aquatic species within *c.* 10km of the Proposed Development.

56 Electro-fishing surveys and aquatic surveys were not undertaken as the Knockharley Stream which intersects the Proposed Development, and which has previously been locally modified does not have a sufficient volume of water. However, due to the hydrological connection between Knockharley Stream and the River Nanny *c.* 2.8km downstream, there is a possibility that surface runoff water during construction and operation could impact downstream fish species including non-SAC population QI species.

3.2.3.5 Marine Mammals

57 There were no dedicated marine mammal surveys carried out as part of the assessment. They were scoped out due to the Proposed Development being located on land, and that there are no proposed works within the Irish Sea. While there is a hydrological connection to the North-west Irish Sea SPA located 27.8km downstream, a significant level of dilution and mixing of surface and sea water would occur in any event. Upon reaching the sea, any pollutants would be even further diluted and dissipated by the receiving waters. Marine mammals are therefore not considered further in this assessment.

3.2.4 Hydrology

58 The Proposed Development is located within the Nanny-Delvin Catchment. According to EPA data[20], the Knockharley Stream (IE_EA_08F050930) intersects the Proposed Development and eventually joins the River Nanny *c.* 2.8km downstream and ultimately discharges into the Irish Sea via the Nanny Estuary.

59 The EPA undertakes monitoring and reporting in accordance with the Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy (Water Framework Directive or WFD) status of Irish waterbodies. Good

[20] Environmental Protection Agency (2020) Data available for download at http://gis.epa.ie/GetData/Download

ecological status (good status) is defined in Annex V of the WFD, in terms of quality of the biological community, the hydrological characteristics and the chemical characteristics of a waterbody[21]. The WFD classification scheme in Ireland includes five status classes: high, good, moderate, poor, and bad[22]. The WFD status of a waterbody reflects the biological, chemical and morphological conditions associated with it, and these elements together make up the ecological status of a waterbody.

60 The WFD status (2016-2021) of the Knockharley Stream within the Proposed Development site is "*Poor*".

61 In addition to monitoring WFD status, the EPA characterises whether waterbodies are at risk of failing to meet their environmental objectives. Knockharley Stream is currently listed as being "*under review*".

3.2.5 Hydrogeology

62 The Proposed Development site lies within the Realtage Groundwater Body (GWB) (IE_EA_G_020). There are no European sites within this GWB which are designated for groundwater dependant habitats and/or species. The nearest SAC that is designated for groundwater dependant habitats is the River Boyne and River Blackwater SAC, which is located *c.* 4.8km to the north of the Proposed Development and is in a different GWB (the Donroe Groundwater Body, IE_EA_G_021).

63 The Realtage GWB has good WFD groundwater status (2016-2021) the groundwater risk is currently "*Not at Risk*".

64 The GSI (2017) Interim Vulnerability Map presently classifies the Groundwater vulnerability of the under the Proposed Development as Low (Category L), and Subsoil Permeability is "Low".

3.2.6 Air Quality

65 The EPA produces an annual report on air quality[23], which includes results from air quality monitoring stations across various Air Quality Zones within Ireland. The EPA has divided the country into zones for the assessment and management of air quality. The zones adopted in Ireland are Zone A, the Dublin conurbation; Zone B, the Cork conurbation; Zone C, comprising 21 large towns in Ireland with a population >15,000; and Zone D, the remaining area of Ireland. The background air quality in the area of the Development is of good quality and the site is located in 'Zone D' as denoted by the EPA.

66 In terms of potential air quality impact assessment, the Proposed Development has the potential to give rise to construction dust impact during the construction stage and during the operation of the development, there is the potential for air quality impact due to associated road traffic movements.

67 The effects of air pollution derived from anthropogenic activities is known to have negative impacts on the environment, either directly by causing vegetation die-back, or indirectly by affecting the acidity and nutrient status of soils and waters[24]. Governments have set limit values for a range of air pollutants in ambient air, known as Air Quality Standards (AQS). The Air Quality Standards Regulations 2011 (S.I. No. 180 of 2011) transpose EU Directive 2008/50/EC into Irish law.

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[21] Introduction to the EU Water Framework Directive - Environment - European Commission (europa.eu) [Accessed 12/08/2025].

[22] Information on WFD classification categories and characterisation from the EPA website www.epa.ie/water/watmg/wfd/ [Accessed 12/08/2025].

[23] Air Quality in Ireland 2021 (2022) https://www.epa.ie/publications/monitoring--assessment/air/air-quality-in-ireland-2023.php= 2023 report on EPA website

[24] Aherne, J. (2021) *Nitrogen–sulfur critical loads: Assessment of the impacts of air pollution on habitats.* Available at: https://www.epa.ie/publications/research/air/Research_Report_390.pdf (Accessed: May, 2025).

68 There are no European sites within 250m of construction works (IAQM, 2024)[25], therefore there is no air quality impact on European sites.

3.3 Assessment of Potential Effects on European Sites

69 This section identifies all the potential impacts associated with the Proposed Development, examines whether there are any European sites within the ZoI of effects from the Proposed Development, and assesses whether there is any potential of the Proposed Development resulting in a significant effect on any European site, either alone or in combination with other plans or projects.

70 In assessing the potential for the Proposed Development to result in a significant effect on any European sites, any measures intended to avoid or reduce the harmful effects of the project on European sites are not taken into account.

71 Considering the baseline ecological environment and the extent and characteristics of the Proposed Development the following potential impacts are discussed in Section 3.3.1 to 3.3.7.

3.3.1 Zone of Influence of the Proposed Development

72 The Zone of Influence (ZoI) is the area within which the Proposed Development could affect the receiving environment such that it could potentially have significant effects on the QI habitats or QI/SCI species of a European site.

73 The mechanism to define the ZoI is summarised as follows:

- Consider the nature, size and location of the Proposed Development (see Section 3.1) for a description of the Project);
- Consider the sensitivities of the relevant ecological receptors (see Section 3.2 for a description of the receiving environment);
- Identify potential impact sources and pathways (see Section 3.3 for the potential impacts associated with the Project); and
- Determine the ZoI based on the potential extent of the impact.

74 In consideration of the European sites considered in this AA (Section 3.2.1), identified impact sources and pathways (Section), the ZoI of each impact pathway is explained and summarised in Table 3 (Section 3.3.9).

3.3.2 Habitat loss and fragmentation

75 The Proposed Development does not lie within or overlap with the boundary of any European site. Therefore, there are no European sites at risk of direct habitat loss impacts. As the Proposed Development does not traverse any European sites there is no potential for habitat fragmentation to occur.

76 The potential for the loss of *ex-situ*[26] inland feeding sites utilised by SCI bird species[27] as a consequence of the Proposed Development to impact on the conservation objectives of any SPA has been assessed.

[25] IAQM (2024). *Guidance on the Assessment of Dust from Demolition and Construction*

[26] These areas termed '*ex-situ*' sites are defined as areas of habitat situated within the immediate hinterland of the SPA, or in areas ecologically connected to it, which support SCI bird species. There is no information or evidence to confirm whether any of the bird species recorded in habitats outside of European sites, which are within the ZoI of the Project, are birds from either River Nanny Estuary and Shore SPA or the North-west Irish Sea SPA, or are not part of the population from either European site. Therefore, a precautionary approach is being taken in assuming that any habitat areas supporting SCI bird species are potentially '*ex-situ*' sites under that definition, and are assessed accordingly.

[27] The listed gull species may at times use habitats situated within the immediate hinterland of the SPA or in areas ecologically connected to it [i.e., *ex-situ* sites]. The reliance on these habitats will vary from species to species and from site to site.

Potential impacts may arise due to the direct loss of *ex-situ* inland sites that individual SCI bird species of local SPA populations rely upon as feeding and/or roosting habitat where these sites fall within the Proposed Development boundary.

77 The wintering bird surveys undertaken between September 2024 to March 2025 noted that the void areas were being utilised by large flocks of Herring gull, and to a lesser extent Lesser Black-backed gull and Great black backed gull. The Proposed Development is within the core foraging range of Herring Gull, which is an SCI of the River Nanny Shore and Estuary SPA and North-west Irish Sea SPA, as well as Lesser black-backed gull and Great black-backed gull[28], which are SCIs of North-west Irish Sea SPA. While it cannot be ruled out that the recorded SCI species may belong to an SPA population, none of the SCI species potentially utilising *ex-situ* foraging grounds within the Proposed Development were recorded in numbers which would align with international significance [29](Appendix VI), therefore there is no possibility of the Proposed Development resulting in population level effects on SCI species.

78 All other European sites are not considered to be within the ZoI of the Proposed Development, and therefore are not at risk of any habitat loss and fragmentation as a result of the Proposed Development.

3.3.3 Habitat degradation as a result of hydrological impacts

79 The release of contaminated surface water runoff and/or an accidental spillage or pollution event into any surface water features during the construction or operation stage of the Proposed Development, has the potential to affect water quality in the receiving aquatic environment. Due to the close proximity of surface water features to the Proposed Development, in the absence of mitigation, the associated effects of a reduction of surface water quality could potentially extend for a considerable distance downstream of the discharge point or location of the accidental pollution event. Such an occurrence, of a sufficient magnitude, either alone or in combination with other pressures on water quality, and in the absence of mitigation could undermine the conservation objectives of Nanny Estuary and Shore SPA and North-West Irish Sea SPA.

80 This reduction in water quality (either alone or in combination with other pressures on water quality) could result in the degradation of sensitive habitats present within these European sites, which in turn would negatively affect the SCI bird species that rely upon these habitats as foraging and/or roosting habitat. It could also negatively affect the quantity and quality of prey available to SCI bird species. In addition, impacts on water quality, if of a sufficient magnitude and duration, could negatively affect the SCI populations for which SPAs are designated by affecting their foraging resources.

81 As the Proposed Development has the potential to result in habitat degradation and effects on of the QIs/SCIs of European sites (i.e., River Nanny Estuary and Shore SPA and North-west Irish Sea SPA) as the result of hydrological impacts, there is the potential for in combination effects to occur. All other European sites are not considered to be within the ZoI of the Proposed Development as they are not hydrologically connected to the Proposed Development, therefore are not at risk of any hydrological impacts as a result of the Proposed Development.

3.3.4 Habitat degradation as a result of hydrogeological impacts

82 The Proposed Development lies within the Realtage GWB (IE_EA_G_020). The area lies on the topographic boundary between the Boyne and Nanny River catchments. The flow is generally in localised systems with

Significant habitat change or increased levels of disturbance within these areas could result in the displacement of one or more of the listed waterbird species from areas within the SPA, and/or a reduction in their numbers"

[28] Woodward, I., Thaxter, C.B., Owen, E. & Cook, A.S.C.P. (2019) Desk-based revision of seabird foraging ranges used for HRA screening. *BTO Research Report No. 724*.

[29] Significance based on all Ireland and international thresholds as per the Irish wetland bird survey: waterbird status and distribution 2009/10 – 2015/16

little continuity between them. Local groundwater flow directions will be dictated by local topographic, and hence hydraulic, gradients, which will converge at rivers[30].

83 During groundworks and excavations, the groundwater vulnerability will be increased and there will be a more direct pathway for surface contaminants to enter the underlying bedrock aquifer and migrate towards downgradient receiving Knockharley Stream and River Nanny surface watercourses.

84 In an unmitigated scenario, there is a potential risk associated with the discharge of contaminants to the ground affecting both the underlying aquifer and downstream waterbodies including the Knockharley Stream and associated downstream European sites. There are no groundwater-dependent habitats within the vicinity of the Proposed Development.

85 The Realtage GWB beneath the Proposed Development site is considered to have low levels of interconnection between groundwater and surface water[30] with limited potential for dissolved phase contaminants to migrate towards receiving watercourses and European sites. As the GWB underlying the Proposed Development site is considered to have low levels of interconnection between groundwater and surface water, there is no potential for water quality impacts to affect SCI species of any European site. The potential for groundwater contamination by surface water is limited due to the pollution control measures, with the implementation of SuDS and an attenuation system. Additionally, the landfill and there will be an engineered landfill liner and leachate collection system, an under cell drainage system and leachate recording and monitoring programme to protect groundwater. The only European site in the same GWB is River Boyne and River Blackwater SPA, and as this is upstream of the Proposed Development it cannot influence groundwater conditions in this European site.

86 Therefore, there is no possibility of the Proposed Development undermining the conservation objectives of the QIs or SCIs of any European site, either alone or in combination with any other plans or projects, as a result of hydrogeological effects.

3.3.5 Habitat degradation as a result of introducing/spreading non-native invasive species

87 No species currently listed on the Third Schedule of the European Communities (Birds and Natural Habitats) Regulations, 2011 and Habitats Regulations and the European Union (Invasive alien species) Regulations 2024 (S.I. 374/2024) were recorded within the Proposed Development site during the 2024 and 2025 surveys. There is the possibility that invasive species may be bought to the site during construction or brought in landfill waste during operation.

88 In an unmitigated scenario, there is a potential that invasive species could colonise downstream terrestrial areas of European sites via Knockharley Stream which could be a potential vector for the spread of these species. Any impacts to habitats by these invasive species could affect QI/SCI species that may utilise the River Nanny, including those from River Nanny Estuary and Shore SPA.

89 As the Proposed Development has the potential to result in habitat degradation and effects on the SCIs, namely supporting wetlands of River Nanny Estuary and Shore SPA, as the result of the spread of invasive species. All other European sites are not considered to be within the ZoI of the Proposed Development, and therefore are not at risk of the spread of invasive species as a result of the Proposed Development.

3.3.6 Disturbance and displacement impacts

90 A temporary increase in noise, vibration, lighting and/or human activity levels during the construction or operation of the Proposed Development could result in the disturbance to and/or displacement of fauna species present within the vicinity of the Proposed Development.

91 Construction-related disturbance and displacement of fauna species could potentially occur within the vicinity of the Proposed Development. For mammal species such as badger and otter, disturbance effects

[30] https://gsi.geodata.gov.ie/downloads/Groundwater/Reports/GWB/RealtageGWB.pdf

would not be expected to extend beyond 150m[31]. For birds, disturbance effects would not be expected to extend beyond a distance of *c*. 300m, as noise levels associated with general construction activities would attenuate to close to background levels at that distance[32]. There are no European sites within the ZoI of the Proposed Development in relation to disturbance to fauna species.

92 There are two SPAs located distally to the Proposed Development which are designated for SCI species, a number of which are known to forage at inland *ex-situ* sites, namely River Nanny Estuary and Shore SPA and North-west Irish Sea SPA. These species include Herring gull, Lesser black-backed gull, and Great black-backed gull. Suitable inland foraging sites, which these bird species utilise, are located within the potential ZoI of the Proposed Development. In terms of construction noise, levels below 50dB would not be expected to result in any response from foraging or roosting birds. Noise levels between 50dB and 70dB would provoke a moderate effect/level of response from birds, i.e., birds becoming alert and some behavioural changes (e.g., reduced feeding activity), but birds would be expected to habituate to noise levels within this range. Noise levels above 70dB would likely result in birds moving out of the affected zone or leaving the site altogether. At *c.* 300m, typical noise levels associated with construction activity (BS 5228) are generally below 60dB or, in most cases, are approaching the 50dB threshold. There is potential for temporary displacement in the vicinity of the Proposed Development due to noise and vibration associated with construction works during the construction phase of the development.

93 While it cannot be ruled out that the SCI species recorded from the surveys of the Proposed Development may belong to an SPA population, none of the SCI species potentially utilising *ex-situ* foraging grounds within the Proposed Development site were recorded in numbers which would align with international significance (Appendix VI), therefore there is no possibility of the Proposed Development resulting in population level effects on SCI species. Additionally, while there will be some habitat loss, in terms of potential *ex-situ* foraging areas, for wintering bird species within the Proposed Development, new areas will be created as a new void is created for dumping waste and any disturbance impact is considered to be a temporary effect. Therefore, there is no possibility of the Proposed Development undermining the conservation objectives of the QIs or SCIs of any European site, either alone or in combination with any other plans or projects, as a result of noise impacts.

3.3.7 Habitat degradation as a result of air quality impacts

94 A reduction in air quality within the immediate vicinity of the construction and operation works may occur as a consequence of dust deposition associated with construction/operational activities. This includes reduction in photosynthesis due to smothering from dust on the plants and chemical changes such as acidity to soils. Whilst potential impacts on vegetation and habitats arising from dust associated with a project of this nature is generally greatest within *c.* 50-100m; impacts may also occur beyond this to a maximum distance of *c*. 200m from the Proposed Development (NRA, 2011; Natural England, 2016; Bignal *et al*., 2004).

[31] This is consistent with Transport Infrastructure Ireland (TII) guidance (*Guidelines for the Treatment of Otters prior to the Construction of National Road Schemes* and *Guidelines for the Treatment of Badgers prior to the Construction of National Road Schemes*) documents. This is a precautionary distance, and likely to be moderated by the screening effect provided by surrounding vegetation and buildings, with the actual ZoI of construction related disturbance likely to be much less in reality.

[32] The disturbance zone of influence for waterbirds is based on the relationship between the noise levels generated by general construction traffic/works (BS 5228:2009 Code of Practice for Noise and Vibration Control on Construction and Open Sites – Part 1 Noise) and the proximity of those noise levels to birds – as assessed in Cutts, N. Phelps, A. & Burdon, D. (2009) *Construction and Waterfowl: Defining Sensitivity, Response, Impacts and Guidance*, and Wright, M., Goodman, P & Cameron, T. (2010) *Exploring Behavioural Responses of Shorebirds to Impulsive Noise*. Wildfowl (2010) 60: 150–167. At 300m, noise levels are below 60dB or, in most cases, are approaching the 50dB threshold below which no disturbance or displacement effects would arise.

95 There are no European sites within 250m of the Proposed Development. As such, there is no possibility of the Proposed Development undermining the conservation objectives of the QIs or SCIs of any European site as a result of air quality impacts.

3.3.8 Collision Risk

96 The presence of new pylons and the IBA facility within the Proposed Development could potentially result in direct mortality of breeding bird species that utilise the site for foraging and/or commuting, due to collisions.

97 From a review of available literature on the subject, bird collisions with man-made structures are common and well documented (Banks, R.C., 1979, Jenkins, *et al*., 2010, Klem, D., 1990, Erickson, *et al*., 2005, Erickson, *et al*., 2001) with migratory passerine species the most prevalent collision victims (Bing *et al*., 2012, Longcore *et al*., 2013). Bird collision with buildings is generally associated with reflective material such as windows or large surfaces of glass which create a mirror and appear to show the continuation of the sky or surrounding landscape, an effect that can be exacerbated by lighting (Sheppard, C. & Phillips, G., 2015). Whilst the design of the facades of the buildings do include windows, no large surfaces of glass are proposed.

98 Bird collisions and electrocution with power pylons is documented (Demerdzhiev, 2014) and (Janss, 2000) with 'poor fliers' and raptor species being the most prevalent victims. Line marking of power lines has been demonstrated to reduce bird mortality .

99 In the absence of mitigation there could be a low level of mortality attributable to bird collision with glazing on the proposed buildings and power pylons, however this impact will not cause any significant effect at a local scale or any other geographic scale.

100

3.3.9 Summary

101 The potential impacts associated with the Proposed Development have the potential to affect the receiving environment and, as a result, the conservation objectives supporting the qualifying interest/special conservation interests of River Nanny Estuary and Shore SPA and the North-west Irish Sea SPA.

102 The potential impacts of the Proposed Development on the receiving environment, their zone of influence, and the European sites at risk of likely significant effects are summarised in Table 3 below.

Table 3 Summary of Analysis of Likely Significant Effects on European sites

Potential Direct, Indirect In Combination Effects and the ZoI of the Potential Effects	**Are there any European sites within the ZoI of the Proposed Development?**
Habitat loss and fragmentation Habitat loss will be confined to the lands within the Proposed Development boundary. There is no potential for loss of *ex-situ* inland feeding sites used by SCI wintering bird species (for the duration of the construction works).	No There are no European sites at risk of habitat loss or fragmentation.
Habitat degradation as a result of hydrological impacts Habitats and species downstream of the Proposed Development site and the associated surface water drainage discharge points.	Yes River Nanny Estuary and Shore SPA and the North-west Irish Sea SPA is potentially at risk of hydrological effects arising from surface water run-off and pollution associated with the construction and/or operational phases of the Proposed Development.
Habitat degradation as a result of hydrogeological impacts	No

Potential Direct, Indirect In Combination Effects and the ZoI of the Potential Effects	Are there any European sites within the ZoI of the Proposed Development?
Groundwater-dependant habitats, and the species those habitats support, in the local area that lie downgradient of the Proposed Development site.	There are no European sites at risk of hydrogeological effects associated with the Proposed Development.
Habitat degradation as a result of introducing/spreading non-native invasive species Habitat areas within, adjacent to, and potentially downstream of the Proposed Development site.	Yes River Nanny Estuary and Shore SPA is potentially at risk from the spread of non-native invasive species bought into to the Proposed Development during the construction and/or operational phases of the Proposed Development.
Disturbance and displacement impacts Potentially up to several hundred metres from the Proposed Development boundary, dependent upon the predicted levels of noise, vibration and visual disturbance associated with the Proposed Development, taking into account the sensitivity of the mobile Qualifying Interests/ Special Conservation Interests to disturbance effects	No There are no European sites within the potential zone of influence of disturbance effects associated with the construction or operation of the proposed Project.
Habitat degradation as a result of air quality impacts Potentially up to 50m from the proposed Project boundary and 250m from the Construction Compound at Construction Phase, and up to 200m at Operational Phase.	No There are no European sites at risk of air quality impacts associated with the Proposed Development due to the distance of the nearest European sites to the project.

4 Conclusions of Screening Assessment Process

103 Following an examination, analysis and evaluation of all the relevant information and in view of best scientific knowledge, and applying the precautionary principle, it can be concluded that there is the possibility for significant effects on European sites, in the absence of mitigation, either arising from the project alone or in combination with other plans and projects due to habitat degradation as a result of hydrological impacts and habitat degradation as a result of the introduction of non-native invasive species, on River Nanny Estuary and Shore SPA and North-west Irish Sea SPA.

104 In reaching this conclusion, the nature of the project and its potential relationship with all European sites within the zone of influence, and their conservation objectives, have been fully considered.

105 Therefore, it is the professional opinion of the authors of this report that the application for approval for the Proposed Development requires a Stage Two Appropriate Assessment and consequently the preparation of a Natura Impact Statement (NIS).

Appendix I The Qualifying Interests (QIs) and Special Conservation Interests (SCIs) of the European sites in the vicinity of the Proposed Development

European Site Name [Code]	Qualifying interest(s) / Special Conservation Interest(s) (*Priority Annex I Habitats)	Location Relative to the Proposed Development Site
Special Area of Conservation (SAC)		
River Boyne and River Blackwater SAC [002299)	099 River Lamprey *Lampetra fluviatilis* 1106 Salmon *Salmo salar* 1355 Otter *Lutra lutra* 7230 Alkaline fens 91E0 Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion, Alnion incanae, Salicion albae*)* NPWS (2021) Conservation Objectives: River Boyne and River Blackwater SAC 002299. Version 1. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage. S.I. No. 451/2024 - European Union Habitats (River Boyne and River Blackwater Special Area of Conservation 002299) Regulations 2024	Approximately 4.2km north of the Proposed Development site.
Boyne Coast and Estuary SAC [001957]	1130 Estuaries 1140 Mudflats and sandflats not covered by seawater at low tide 1310 *Salicornia* and other annuals colonizing mud and sand 1330 Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) 1410 Mediterranean salt meadows (*Juncetalia maritimi*)[33] 2110 Embryonic shifting dunes 2120 Shifting dunes along the shoreline with *Ammophila arenaria* ('white dunes') 2130 Fixed coastal dunes with herbaceous vegetation ('grey dunes')* NPWS (2012) Conservation Objectives: Boyne Coast and Estuary SAC 001957. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. S.I. No. 433/2021 - European Union Habitats (Boyne Coast and Estuary Special Area of Conservation 001957) Regulations 2021	Approximately 15.9km east of the Proposed Development site.
Special Protection Area (SPA)		
River Boyne and River Blackwater SPA [004232]	A229 Kingfisher *Alcedo atthis* NPWS (2024) Conservation Objectives: River Boyne and River Blackwater SPA 004232. Version 1. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage. S.I. No. 462/2012 - European Communities (Conservation of Wild Birds (River Boyne and River Blackwater Special Protection Area 004232)) Regulations 2012	Approximately 4.4km north of the Proposed Development site.
Boyne Estuary SPA [004080]	A048 Shelduck *Tadorna tadorna* A130 Oystercatcher *Haematopus ostralegus* A140 Golden Plover *Pluvialis apricaria* A141 Grey Plover *Pluvialis squatarola*	Approximately 14.7km east of the Proposed Development site.

[33] The status of Mediterranean salt meadows (*Juncetalia maritimi*) as a qualifying Annex I habitat for Boyne Coast and Estuary SAC is currently under review. The outcome of this review will determine whether a site- specific conservation objective is set for this habitat".

European Site Name [Code]	Qualifying interest(s) / Special Conservation Interest(s) (*Priority Annex I Habitats)	Location Relative to the Proposed Development Site
	A142 Lapwing *Vanellus vanellus* A143 Knot *Calidris canutus* A144 Sanderling *Calidris alba* A156 Black-tailed Godwit *Limosa limosa* A162 Redshank *Tringa totanus* A169 Turnstone *Arenaria interpres* A195 Little Tern *Sterna albifrons* A999 Wetlands NPWS (2013) Conservation Objectives: Boyne Estuary SPA 004080. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. S.I. No. 626/2011 - European Communities (Conservation of Wild Birds (Boyne Estuary Special Protection Area 004080)) Regulations 2011.	
River Nanny Estuary and Shore SPA [004158]	A130 Oystercatcher *Haematopus ostralegus* A137 Ringed Plover *Charadrius hiaticula* A140 Golden Plover *Pluvialis apricaria* A143 Knot *Calidris canutus* A144 Sanderling *Calidris alba* A184 Herring Gull *Larus argentatus* A999 Wetlands NPWS (2012) Conservation Objectives: River Nanny Estuary and Shore SPA 004158. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. S.I. No. 140/2012 - European Communities (Conservation of Wild Birds (River Nanny Estuary and Shore SPA 004158)) Regulations 2012.	Approximately 16.7km east and 21.5km downstream of the Proposed Development site.
North-west Irish Sea SPA [004236]	A001 Red-throated Diver *Gavia stellata* A003 Great Northern Diver *Gavia immer* A009 Fulmar *Fulmarus glacialis* A013 Manx Shearwater *Knockharley NIS* A017 Cormorant *Phalacrocorax carbo* A018 Shag *Phalacrocorax aristotelis* A065 Common Scoter *Melanitta nigra* A179 Black-headed Gull *Chroicocephalus ridibundus* A182 Common Gull *Larus canus* A183 Lesser Black-backed Gull *Larus fuscus* A184 Herring Gull *Larus argentatus* A187 Great Black-backed Gull *Larus marinus* A188 Kittiwake *Rissa tridactyla* A192 Roseate Tern *Sterna dougallii* A193 Common Tern *Sterna hirundo* A194 Arctic Tern *Sterna paradisaea* A195 Little Tern *Sterna albifrons* A199 Guillemot *Uria aalge* A200 Razorbill *Alca torda* A204 Puffin *Fratercula arctica* A862 Little Gull *Hydrocoloeus minutus*	Approximately 18.7km east and 27.8km downstream of the Proposed Development site.

European Site Name [Code]	Qualifying interest(s) / Special Conservation Interest(s) (*Priority Annex I Habitats)	Location Relative to the Proposed Development Site
	NPWS (2023b) Conservation Objectives: North-west Irish Sea SPA 004236. Version 1. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage. *No S.I Documents*	

Appendix II Planning polices/objectives relating to the protection of European sites and water quality

Eastern and Midland Regional Assembly (EMRA) Regional Spatial and Economic Strategy (RSES) 2019-2031

Overarching Environmental Regional Policy Objectives

1. The Assembly supports the process whereby applications for development consents for projects emanating from any policies that may give rise to likely significant effects on the environment will need to be accompanied by one or more of the following, as relevant:
    i. An Ecological Impact Assessment Report (EcIA);
    ii. Environmental Report (ER);
    iii. An Environmental Impact Assessment Report (EIAR) if deemed necessary under the relevant legislation (statutory document);
    iv. Natura Impact Statement (NIS) if deemed necessary under the relevant legislation (statutory document).
2. The Assembly supports the implementation of the All-Ireland Pollinator Plan 2015-2020 and support measures to control and manage the spread of invasive and alien species within the region.
3. The Assembly will coordinate the core objectives of the EU Flood Directive and statutory plans across the planning hierarchy, including national guidance on the relationship between the planning system and flood risk management.
4. The Assembly supports the use of Environmental Sensitivity Mapping (e.g. EPA ESM Webtool) to investigate optimum and integrated land use management with particular emphasis on cumulative impacts.
5. The Assembly supports the integration of biodiversity considerations in a positive, proactive and precautionary way and promotes the protections of the environment and biodiversity conservation as key principles of this strategy.

Regional Policy Objective 3.4

Ensure that all plans, projects and activities requiring consent arising from the Regional Spatial and Economic Strategy are subject to the relevant environmental assessment requirements including SEA, EIA and AA as appropriate. In addition, the future strategic development of settlements throughout the Region will have full cognisance of the legal requirements pertaining to sites of International Nature Conservation Interest.

Regional Policy Objective 4.6

Support enhancement and expansion of Wicklow port and harbour, to expand commercial berthing and pleasure craft capacity subject to a feasibility study with particular focus on avoiding adverse impacts on the integrity of adjacent European Sites.

Regional Policy Objective 4.76

Support the sustainable development of environmentally sensitive, low intensity amenity development associated with the Barrow Blueway subject to compliance with the Habitats and Birds Directive and Floods Directive.

Regional Policy Objective 7.2

To achieve and maintain 'Good Environmental Status' for marine waters and to ensure the sustainable use of shared marine resources in the Region, and to promote the development of a cross-boundary and cross-border strategic management and stakeholder engagement framework to protect the marine environment.

Regional Policy Objective 7.3

EMRA will support the use of Integrated Coastal Zone Management (ICZM) to enable collaborative and stakeholder engagement approaches to the management and protection of coastal resources against coastal erosion, flooding and other threats.

Regional Policy Objective 7.11

For water bodies with 'high ecological status' objectives in the Region, Local authorities shall incorporate measures for both their continued protection and to restore those water bodies that have fallen below high ecological status and are 'At Risk' into the development of local planning policy and decision making any measures for the continued protection of areas with high ecological status in the Region and for mitigation of threats to water bodies identified as 'At Risk' as part of a catchment-based approach in consultation with the relevant agencies. This shall include recognition of the need to deliver efficient wastewater facilities with sufficient capacity and thus contribute to improved water quality in the Region.

Regional Policy Objective 7.12

Future statutory land use plans shall include Strategic Flood Risk Assessment (SFRA) and seek to avoid inappropriate land use zonings and development in areas at risk of flooding and to integrate sustainable water management solutions (such as SUDS, non-porous surfacing and green roofs) to create safe places in accordance with the Planning System and Flood Risk Assessment Guidelines for Local authorities.

Regional Policy Objective 7.13

Support the implementation of the Water Framework Directive in achieving and maintaining at least good environmental status for all water bodies in the Region and to ensure alignment between the core objectives of the Water Framework Directive and other relevant Directives, River Basin Management plans and local authority land use Plans.

Regional Policy Objective 7.15

Local authorities shall take opportunities to enhance biodiversity and amenities and to ensure the protection of environmentally sensitive sites and habitats, including where flood risk management measures are planned.

Regional Policy Objective 7.16

Support the implementation of the Habitats Directives in achieving an improvement in the conservation status of protected species and habitats in the Region and to ensure alignment between the core objectives of the EU Birds and Habitats Directives and local authority development plans.

Regional Policy Objective 7.17

Facilitate cross boundary co-ordination between local authorities and the relevant agencies in the Region to provide clear governance arrangements and coordination mechanisms to support the development of ecological networks and enhanced connectivity between protected sites whilst also addressing the need for management of alien invasive species and the conservation of native species.

Regional Policy Objective 7.18

Work with local authorities and state agencies to promote the development of all aspects of park management in the Wicklow National Park and the Slieve Bloom Mountains.

Regional Policy Objective 7.19

Support the consideration of designating a National Park for the peatlands area in the Midlands.

Regional Policy Objective 7.20

Promote the development of improved visitor experiences, nature conservation and sustainable development activities within the Dublin Bay Biosphere in cooperation with the Dublin Bay UNESCO Biosphere Partnership.

Regional Policy Objective 7.21

Local authorities shall promote an Ecosystem Services Approach in the preparation of statutory land use plans.

Regional Policy Objective 7.22

Local authority development plan and local area plans, shall identify, protect, enhance, provide and manage Green Infrastructure in an integrated and coherent manner and should also have regard to the required

targets in relation to the conservation of European sites, other nature conservation sites, ecological networks, and protected species.

Regional Policy Objective 7.26

Support the development of guidance for assessment of proposed land zonings in order to achieve appropriate riparian setback distances that support the attainment of high ecological status for water bodies, the conservation of biodiversity and good ecosystem health, and buffer zones from flood plains.

Regional Policy Objective 8.24

EMRA supports the undertaking of feasibility studies to determine the carrying capacity of ports in relation to potential for likely significant effects on associated European sites including SPAs and SACs.

Regional Policy Objective 10.1

Local authorities shall include proposals in development plans to ensure the efficient and sustainable use and development of water resources and water services infrastructure in order to manage and conserve water resources in a manner that supports a healthy society, economic development requirements and a cleaner environment.

Regional Policy Objective 10.6

Delivery and phasing of services shall be subject to the required appraisal, planning and environmental assessment processes and shall avoid adverse impacts on the integrity of the Natura 2000 network.

Regional Policy Objective 10.18

Local authorities shall ensure adequate surface water drainage systems are in place which meet the requirements of the Water Framework Directive and the associated River Basin Management Plans.

Meath County Development Plan 2022-2028

Policy Objectives for Water Supply and Quality

INF POL 32

To ensure, through the implementation of the River Basin Management Plan(s) and the associated Programmes of Measures and any other associated legislation or revised plans with all relevant stakeholders, the protection and improvement of all drinking water, surface water and ground waters throughout the County

HER POL 47

To protect the ecological, recreational, educational, amenity and flood alleviation potential of navigational and non-navigational waterways within the County, towpaths and adjacent wetlands.

INF OBJ 29

To strive to achieve 'good status' in all water bodies in compliance with the Water Framework Directive and to cooperate with the implementation of the National River Basin Management Plan 2018-2021.

Policy Objectives Wastewater

RD POL 52

To ensure wastewater treatment plants discharging into the Boyne catchment or to coastal Natura 2000 sites are suitably maintained and upgraded in advance of any additional loadings beyond their capacity in order to protect water quality, as required.

RD POL 53

To promote good practice with regard to the siting and design of septic tanks and the maintenance of existing tanks. A high level of scrutiny will be placed on applications within 2km of watercourses in the Boyne catchment. Proposals in this area shall not have an adverse impact on local water quality that could affect the qualifying interests of the SAC and SPA.

Policy Objectives Air Quality

INF OBJ 72

To support the collation or air quality and greenhouse gas monitoring data in support of a regional air quality and greenhouse gas emission inventory.

Policy Objectives Noise Pollution

INF OBJ 73

To support and facilitate the preparation of strategic noise maps and action plans, in conjunction with EMRA, that support proactive measures to avoid, mitigate and minimise noise, in all instances where it is likely to have adverse impacts.

Policy Objectives Light Pollution

INF OBJ 74

To require that outdoor lighting proposals minimise the harmful effects of light pollution and to ensure that new street lighting is appropriate to a particular location and that environmentally sensitive areas are protected from inappropriate forms of illumination.

Policy Objectives Natural Heritage and Biodiversity

HER POL 27

To protect, conserve and enhance the County's biodiversity where appropriate.

HER POL 28

To integrate in the development management process the protection and enhancement of biodiversity and landscape features wherever possible, by minimising adverse impacts on existing habitats (whether designated or not) and by including mitigation and/or compensation measures, as appropriate.

HER POL 31

To ensure that the ecological impact of all development proposals on habitats and species are appropriately assessed by suitably qualified professional(s) in accordance with best practice guidelines –e.g. the preparation of an Ecological Impact Assessment (EcIA), Screening Statement for Appropriate Assessment, Environmental Impact Assessment, Natura Impact Statement (NIS), species surveys etc. (as appropriate).

HER OBJ 32

To actively support the implementation of the All Ireland Pollinator Plan 2021-2025 and any revisions thereof.

HER POL 35

To ensure, where appropriate, the protection and conservation of areas, sites, species and ecological/networks of biodiversity value outside designated sites and to require an appropriate level of ecological assessment by suitably qualified professional(s) to accompany development proposals likely to impact on such areas or species

HER POL 37

To encourage the retention of hedgerows and other distinctive boundary treatments in rural areas and prevent loss and fragmentation, where practically possible. Where removal of a hedgerow, stone wall or other distinctive boundary treatment is unavoidable, mitigation by provision of the same type of boundary will be required.

HER POL 38

To promote and encourage planting of native hedgerow species in new developments and as part of the Council's own landscaping works.

HER POL 39

To recognise the archaeological importance of townland boundaries including hedgerows and promote their protection and retention.

HER POL 40

To protect and encourage the effective management of native and semi-natural woodlands, groups of trees and individual trees and to encourage the retention of mature trees and the use of tree surgery rather than felling, where possible, when undertaking, approving or authorising development

Policy Objectives Invasive Species

HER POL 43

To promote best practice in the control of invasive species in the carrying out its functions in association with relevant authorities including TII and the Department of Transport, Tourism and Sport.

HER POL 44

To require all development proposals to address the presence or absence of invasive alien species on proposed development sites and (if necessary) require applicants to prepare and submit an Invasive Species

Management Plan where such a species exists to comply with the provisions of the European Communities (Birds and Natural Habitats) Regulations 2011-2015.

Policy Objectives Flood Risk Management

INF POL 19

To implement the findings and recommendations of the Strategic Flood Risk Assessment prepared in conjunction with the County Development Plan review, ensuring climate change is taken into account.

INF POL 20

To require that a Flood Risk Assessment is carried out for any development proposal, where flood risk may be an issue in accordance with the "Planning System and Flood Risk Management –Guidelines for Planning Authorities" (DoECLG/OPW, 2009). This assessment shall be appropriate to the scale and nature of risk to and from the potential development and shall consider the impact of climate change.

INF POL 24

To ensure that flood risk management is incorporated into the preparation of Local Area Plans in accordance with 'The Planning System and Flood Risk Management -Guidelines for Planning Authorities (2009)'.

INF POL 26

To undertake a review of the 'Strategic Flood Risk Assessment for County Meath' in light of the completed flood mapping which has been developed as part of the Eastern Catchment Flood Risk Assessment and Management (CFRAM) Study.

INF OBJ 25

To require the use of sustainable drainage systems (SuDS) to minimise and limit the extent of hard surfacing and paving and require the use of sustainable drainage techniques where appropriate, for new development or for extensions to existing developments, in order to reduce the potential impact of existing and predicted flooding risks.

INF OBJ 27

To encourage the use of Green Roof technology particularly on apartment, commercial, leisure and educational buildings.

INF POL 29

To facilitate the provision of new, or the reinforcement of existing flood defences and protection measures where necessary and in particular to support the implementation of flood schemes being progressed through the planning process during the lifetime of the Plan. T

INF OBJ 30

To ensure the County's natural coastal defences, such as beaches, sand dunes, salt marshes and estuary lands, are protected and are not compromised by inappropriate works or forms of development.

Meath County Biodiversity Action Plan 2015-2020

Meath County Biodiversity Action Plan – Actions

2: Develop and provide guidance on hedge planting and management (including choice of appropriate species lists for landscape character areas) for planning conditions. Run workshops on hedgerow management on demonstration farms and an annual hedgerow management competition for landowners**.**

3: As part of planning applications, encourage all developers and contractors commissioned to do EIAs and flora and fauna surveys to submit all biodiversity records collected as part of such surveys to the National Biodiversity Data Centre online record submission system in accordance with proper data collection and submission protocols.

6: Formulate and promote guidance on biodiversity features on Meath's farms, including hedgerows, wetlands and grasslands, with a target audience of agro-environment scheme planners and the farming community. Guidance to include biodiversity importance, ecological services and appropriate management options.

8: Undertake collation of existing biodiversity data and promote acquisition of additional information on the flora and fauna of Meath's significant aquatic habitats (rivers, lakes, ponds, canals and wetlands) in order to promote understanding and guardianship and to facilitate implementation of protection policies.

9: Undertake an assessment of the biodiversity value of all abandoned railway lines and other selected habitats (e.g. graveyards, parks and quarries) in the County and their potential to enhance biodiversity in line with Article 10 of the Habitats Directive) by for example acting as wildlife corridors or stepping stones linking habitat fragments.

14: Commission a process of data collection on the current state of all significant peatland sites within the County as detailed on the IPCC peatland database to ensure that a full up to date site synopses of sites of conservation concern within the County is maintained.

15: Continue to monitor the ecological and geological interest of remaining esker sites in the County (e.g. proposed NHA Rathmoylan esker and Trim Esker).

21: Commission an inventory of all sites of local nature conservation importance by utilising existing survey data (e.g. hedgerow, wetland and trees surveys) and further fieldwork in under surveyed areas. List the sites in any future County Development Plans to guide planning decisions.

Appendix III NBDC records of SCI Bird Species within a 10km radius of the Proposed Development

Species	BoCCI	Annex I	EU site (if appropriate) to which the SCI species occurs within the ZoI of the Proposed Development
Black-headed gull *Chroicocephalus ridibundus*	Amber	No	N/A
Common coot *Fulica atra*	Amber	No	N/A
Common kingfisher *Alcedo atthis*	Amber	Yes	N/A
Corn crake *Crex crex*	Red	Yes	N/A
Eurasian curlew *Numenius arquata*	Red	No	N/A
European golden plover *Pluvialis apricaria*	Red	Yes	N/A
Great cormorant *Phalacrocorax carbo*	Amber	No	N/A
Herring gull *Larus argentatus*	Amber	No	N/A
Little grebe *Tachybaptus ruficollis*	Green	No	N/A
Mallard *Anas platyrhynchos*	Amber	No	N/A
Mew gull *Larus canus*	Amber	No	N/A
Northern lapwing *Vanellus vanellus*	Red	No	N/A
Peregrine falcon *Falco peregrinus*	Green	Yes	N/A
Ringed plover *Charadrius hiaticula*	Amber	No	N/A
Whooper swan *Cygnus cygnus*	Amber	Yes	N/A

Appendix IV Bird Species Recorded during the Wintering Bird Surveys (2024-2025)

Common Name	Scientific Name	Number of Records	Max. Count Observed[34]	BoCCI[35]	SCI[36]	Annex I	EU site (if appropriate) to which the SCI species occurs within the ZoI of the Proposed Development
Buzzard	*Buteo buteo*	1	1	Green	No	No	N/A
Chaffinch	*Fringilla coelebs*	3	1	Green	No	No	N/A
Goldcrest	*Regulus regulus*	3	1	Amber	No	No	N/A
Goldfinch	*Carduelis carduelis*	2	1	Green	No	No	N/A
Great black-backed gull	*Larus marinus*	24	13	Green	Yes	No	North-west Irish Sea SPA, approximately 16.7km east of the Proposed Development
Greenfinch	*Chloris chloris*	2	1	Amber	No	No	N/A
Grey heron	*Ardea cinerea*	3	1	Green	Yes	No	N/A
Herring gull	*Larus argentatus*	1666	270	Amber	Yes	No	Nanny Estuary and Shore SPA, approximately 18.7km east of the Proposed Development
Hooded crow	*Corvus corone*	2	2	Green	No	No	N/A
Jackdaw	*Corvus monedula*	25	20	Green	No	No	N/A
Lesser black-backed gull	*Larus fuscus*	44	30	Amber	Yes	No	North-west Irish Sea SPA, approximately 18.7km east of the Proposed Development

[34] 'Max. Count Observed' represents the maximum number of individuals recorded within any survey site during any single survey session.

[35] Birds of Conservation Concern in Ireland (BoCCI) status after Gilbert, G., Stanbury, A. & Lewis, L. (2021) Birds of Conservation Concern in Ireland 2020-2026. *Irish Birds* **43:**1-22.

[36] Special Conservation Interests (SCI) species are Bird Directive Annex I birds, and/or migratory birds and their habitats for which sites are selected for SPA designation.

Common Name	Scientific Name	Number of Records	Max. Count Observed	BoCCI	SCI	Annex I	EU site (if appropriate) to which the SCI species occurs within the ZoI of the Proposed Development
Magpie	*Pica pica*	1	1	Green	No	No	N/A
Mallard	*Anas platyrhynchos*	22	12	Amber	Yes	No	N/A
Meadow pipit	*Anthus pratensis*	1	1	Red	No	No	N/A
Mute swan	*Cygnus olor*	1	1	Amber	No	No	N/A
Pied wagtail	*Motacilla alba yarrellii*	7	1	Green	No	No	N/A
Raven	*Corvus corax*	3	2	Green	No	No	N/A
Robin	*Erithacus rubecula*	2	1	Green	No	No	N/A
Rook	*Corvus frugilegus*	107	50	Green	No	No	N/A
Skylark	*Alauda arvensis*	4	1	Amber	No	No	N/A
Song thrush	*Turdus philomelos*	1	1	Green	No	No	N/A
Woodpigeon	*Columba palumbus*	1	1	Green	No	No	N/A

Appendix V Bird Species Recorded during the Breeding Birds Surveys (2025)

Common Name	Scientific Name	Number of Records	Max. Count Observed[37]	BoCCI[38]	SCI[39]	Annex I	EU site (if appropriate) to which the SCI species occurs within the ZoI of the Proposed Development
Blackbird	*Turdus merula*	35	2	Green	No	No	N/A
Blackcap	*Sylvia atricapilla*	13	1	Green	No	No	N/A
Blue Tit	*Cyanistes caeruleus*	3	1	Green	No	No	N/A
Bullfinch	*Pyrrhula pyrrhula*	2	2	Green	No	No	N/A
Chaffinch	*Fringilla coelebs*	25	2	Green	No	No	N/A
Chiffchaff	*Phylloscopus collybita*	10	1	Green	No	No	N/A
Coal Tit	*Periparus ater*	1	1	Green	No	No	N/A
Dunnock	*Prunella modularis*	6	1	Green	No	No	N/A
Goldcrest	*Regulus regulus*	5	1	Amber	No	No	N/A
Goldfinch	*Carduelis carduelis*	5	1	Green	No	No	N/A
Great Tit	*Parus major*	5	1	Green	No	No	N/A
Grey Heron	*Ardea cinerea*	2	1	Green	Yes	No	N/A
Herring Gull	*Larus argentatus*	20	10	Amber	Yes	No	N/A
Hooded Crow	*Corvus corone*	20	10	Green	No	No	N/A
House Martin	*Delichon urbicum*	7	7	Amber	No	No	N/A
House Sparrow	*Passer domesticus*	3	1	Amber	No	No	N/A
Jackdaw	*Corvus monedula*	5	3	Green	No	No	N/A
Jay	*Garrulus glandarius*	2	1	Green	No	No	N/A

[37] 'Max. Count Observed' represents the maximum number of individuals recorded within any survey site during any single survey session.

[38] Birds of Conservation Concern in Ireland (BoCCI) status after Gilbert, G., Stanbury, A. & Lewis, L. (2021) Birds of Conservation Concern in Ireland 2020-2026. *Irish Birds* **43:**1-22.

[39] Special Conservation Interests (SCI) species are Birds Directive Annex I birds, and/or migratory birds and their habitats for which sites are selected for SPA designation. Breeding birds aren't always migratory.

Common Name	Scientific Name	Number of Records	Max. Count Observed[40]	BoCCI[34]	SCI[35]	Annex I	EU site (if appropriate) to which the SCI species occurs within the ZoI of the Proposed Development
Linnet	*Linaria cannabina*	2	1	Amber	No	No	N/A
Long-Tailed Tit	*Aegithalos caudatus*	3	1	Green	No	No	N/A
Magpie	*Pica pica*	1	1	Green	No	No	N/A
Mallard	*Anas platyrhynchos*	22	9	Amber	Yes	No	N/A
Meadow Pipit	*Anthus pratensis*	27	4	Red	No	No	N/A
Mistle Thrush	*Turdus viscivorus*	1	1	Green	No	No	N/A
Mute Swan	*Cygnus olor*	2	1	Amber	No	No	N/A
Pheasant	*Phasianus colchicus*	5	3	Green	No	No	N/A
Pied Wagtail	*Motacilla alba yarrellii*	6	2	Green	No	No	N/A
Raven	*Corvus corax*	13	5	Green	No	No	N/A
Reed Bunting	*Emberiza schoeniclus*	3	1	Green	No	No	N/A
Robin	*Erithacus rubecula*	14	1	Green	No	No	N/A
Rook	*Corvus frugilegus*	9	3	Green	No	No	N/A
Skylark	*Alauda arvensis*	9	3	Amber	No	No	N/A
Song Thrush	*Turdus philomelos*	12	1	Green	No	No	N/A
Spotted Flycatcher	*Muscicapa striata*	1	1	Amber	No	No	N/A
Starling	*Sturnus vulgaris*	12	11	Amber	No	No	N/A
Stonechat	*Saxicola torquatus*	5	2	Green	No	No	N/A
Swallow	*Hirundo rustica*	6	4	Amber	No	No	N/A
Tree Pipit	*Anthus trivialis*	1	1	Amber	No	No	N/A
Treecreeper	*Certhia familiaris*	1	1	Green	No	No	N/A
Whitethroat	*Sylvia communis*	3	1	Green	No	No	N/A

Common Name	Scientific Name	Number of Records	Max. Count Observed[41]	BoCCI[34]	SCI[35]	Annex I	EU site (if appropriate) to which the SCI species occurs within the ZoI of the Proposed Development
Willow Warbler	*Phylloscopus trochilus*	15	2	Amber	No	No	N/A
Woodpigeon	*Columba palumbus*	53	26	Green	No	No	N/A
Wren	*Troglodytes troglodytes*	53	4	Green	No	No	N/A

Appendix VI All Ireland and International population thresholds for SCI species

Species	Designated Site	All Ireland Threshold	International Threshold[42]
Oystercatcher *Haematopus ostralegus*	**River Nanny Estuary and Shore SPA**	610	8,200
Ringed Plover *Charadrius hiaticula*	**River Nanny Estuary and Shore SPA**	120	540
Golden Plover *Pluvialis apricaria*	**River Nanny Estuary and Shore SPA**	920	9,300
Knot *Calidris canutus*	**River Nanny Estuary and Shore SPA**	160	5,300
Sanderling *Calidris alba*	**River Nanny Estuary and Shore SPA**	85	2,000
Herring Gull *Larus argentatus*	**River Nanny Estuary and Shore SPA**	N/A	14,400

[42] Thresholds taken from NPWS https://www.npws.ie/sites/default/files/publications/pdf/IWM_106_Irelands_Wintering_Waterbirds.pdf

Species	Designated Site	All Ireland Threshold	International Threshold[42]
Red-throated Diver *Gavia stellata*	**North-west Irish Sea SPA**	20	3,000
Great Northern Diver *Gavia immer*	**North-west Irish Sea SPA**	20	50
Fulmar *Fulmarus glacialis*	**North-west Irish Sea SPA**	N/A	N/A
Manx Shearwater	**North-west Irish Sea SPA**	N/A	N/A
Cormorant *Phalacrocorax carbo*	**North-west Irish Sea SPA**	110	1,200
Shag *Phalacrocorax aristotelis*	**North-west Irish Sea SPA**	N/A	2,000
Common Scoter *Melanitta nigra*	**North-west Irish Sea SPA**	110	7,500
Black-headed Gull *Chroicocephalus ridibundus*	**North-west Irish Sea SPA**	N/A	31,000
Common Gull *Larus canus*	**North-west Irish Sea SPA**	N/A	16,400
Lesser Black-backed Gull *Larus fuscus*	**North-west Irish Sea SPA**	N/A	5,500
Great Black-backed Gull *Larus marinus*	**North-west Irish Sea SPA**	N/A	3,600
Kittiwake *Rissa tridactyla*	**North-west Irish Sea SPA**	N/A	N/A
Roseate Tern *Sterna dougallii*	**North-west Irish Sea SPA**	N/A	N/A
Common Tern *Sterna hirundo*	**North-west Irish Sea SPA**	N/A	N/A
Arctic Tern *Sterna paradisaea*	**North-west Irish Sea SPA**	N/A	N/A

Species	Designated Site	All Ireland Threshold	International Threshold[42]
Little Tern *Sterna albifrons*	**North-west Irish Sea SPA**	N/A	N/A
Guillemot *Uria aalge*	**North-west Irish Sea SPA**	N/A	N/A
Razorbill *Alca torda*	**North-west Irish Sea SPA**	N/A	N/A
Puffin *Fratercula arctica*	**North-west Irish Sea SPA**	N/A	N/A
Little Gull *Hydrocoloeus minutus*	**North-west Irish Sea SPA**	N/A	1,000

N/A represents where there has been no assigned threshold for the species at either the All Ireland or international threshold or both