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Tullybrook Phase 3, Drogheda, Co. Louth

Natura Impact Statement

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Tullybrook Phase 3
Natura Impact Statement

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Tullybrook Phase 3

Natura Impact Statement

TABLE OF CONTENTS

1. INTRODUCTION

1.1 Introduction

Roughan & O'Donovan (ROD) was commissioned by Tullybrook Developments Ltd. to prepare a Natura Impact Statement (NIS) to accompany the planning application for Tullybrook Phase 3 ("the proposed development") in the Boyne valley on the outskirts of Drogheda, Co. Louth.

The requirements arising out of Article 6(3) of Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora ("the Habitats Directive") in relation to Appropriate Assessment are transposed into Irish law by Part XAB of the Planning and Development Act, 2000 (as amended) ("the Planning and Development Act"), the European Communities (Birds and Natural Habitats) Regulations 2011 as amended (S.I. No.477 of 2011)[1] ("the Habitats Regulations"), including Part 5 thereof), Regulation 250 of the Planning and Development Regulations 2001 (as amended) ("the Planning and Development Regulations") and the European Union (Planning and Development) (Habitats and Environmental Impact Assessment) Regulations 2022 (S.I. No. 708/2022).

An AA Screening exercise, which was undertaken by ROD on behalf Tullybrook Developments Ltd., in view of best scientific knowledge and the Conservation Objectives of the sites concerned, that, in the absence of appropriate mitigation, the proposed development had the potential to significantly affect two European Sites, namely the River Boyne and River Blackwater SAC and River Boyne and River Blackwater SPA. Therefore, a Natura Impact Statement (NIS) has been prepared in respect of the proposed development.

In accordance with Article 6(3) of the Habitats Directive and section 177V of the Planning and Development Act 2000 (as amended), it is the Competent Authority – in this case Louth County Council – which carries out the appropriate assessment (AA) which includes inter alia (i) an examination (ii) an analysis (iii) an evaluation (iv) the making of findings (v) the making of conclusions and (vi) the making of a final determination.[2]

This document comprises the NIS in respect of the proposed development and has been prepared by ROD on behalf of Tullybrook Developments Ltd. It contains an examination, analysis and evaluation of the likely impacts from the proposed development, both individually and in combination with other plans and projects, in view of best scientific knowledge and the Conservation Objectives of the European sites concerned. It also prescribes appropriate mitigation to ensure that the proposed development will not adversely affect the integrity of those sites. Finally, it provides complete, precise and definitive findings which are capable of removing all reasonable scientific doubt as to the absence of adverse effects on the integrity of the European sites concerned and sets out detailed reasons which explain the basis for such findings.

[1] Including inter alia S.I. 290 of 2013; SI 499 of 2013; SI 355 of 2015; the Planning, Heritage and Broadcasting (Amendment) Act 2021, Chapter 4; SI 293 of 2021.
[2] *Waddenzee* (CaseC-127/02) [2004] ECR I-7405; *Commission v Spain* (Case C-404/09) [2011] E.C.R. I-11853; *Sweetman* (Case C-258/11).

1.2 Competent Experts

This NIS was prepared by Patrick O'Shea. Patrick is a Principal Ecologist with 13 years' experience in ecological assessment including Appropriate Assessment. He holds a degree in Botany from Trinity College Dublin and an MSc in Ecological Management and Conservation Biology from Queen's University Belfast. Patrick is a Full member of the Chartered Institute of Ecological and Environmental Management (CIEEM).

1.3 Legislative Context

Council Directive 92/43/EEC of the 21st May 1992 on the conservation of natural habitats of wild fauna and flora ("the Habitats Directive") and Directive 2009/147/EC of the European Parliament and of the Council of the 30th November 2009 on the conservation of wild birds ("the Birds Directive") list habitats and species which are, in a European context, important for conservation and in need of protection. This protection is afforded in part through the designation of sites which support significant examples of habitats or populations of species ("European sites"). Sites designated for wild birds are termed "Special Protection Areas" (SPAs) and sites designated for natural habitat types or other species are termed "Special Areas of Conservation" (SACs). The complete network of European sites is referred to as "Natura 2000".

In order to ensure the protection of European sites in the context of land use planning and development, Article 6(3) of the Habitats Directive provides for the assessment of the implications of plans and projects for European sites, as follows:

> *"Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives. In the light of the conclusions of the assessment of the implications for the site*[3] *and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public."*

In *Case C-323/17* [§34*], People Over Wind*, the Court of Justice of the European Union ('the CJEU') referred to the nature of the test to be applied in making a screening determination as follows:

> *"[...] it is settled case-law that Article 6(3) of the Habitats Directive makes the requirement for an appropriate assessment of the implications of a plan or project conditional on there being a probability or a risk that the plan or project in question will have a significant effect on the site concerned. In the light, in particular, of the precautionary principle, such a risk exists if it cannot be excluded on the basis of objective information that the plan or project will have a significant effect on the site concerned (judgment of 26 May 2011, Commission v Belgium, C538/09, EU:C:2011:349, paragraph 39 and the case-law cited). The assessment of that risk must be made in the light inter alia of the characteristics and specific environmental conditions of the site concerned by such a plan or project (see, to that effect, judgment of 21 July 2016, Orleans and Others, C387/15 and C388/15, EU:C:2016:583, paragraph 45 and the case-law cited)."*

[3] Including, where applicable, 'sites'.

Further clarification on the use of mitigation measures was provided in *Eco Advocacy*[4], where the CJEU ruled that where constituent elements are incorporated into the design of a project as standard features required for all projects of that nature and not with the aim of reducing negative effects of a project on European sites, those features cannot be regarded as indicative of likely significant effects on European sites concerned and should not be interpreted as mitigation measures intended to avoid or reduce harmful effects of a plan or project on those European sites. The judgment stated that:

> "*In the light of the foregoing considerations, the answer to the fourth question is that Article 6(3) of the Directive 92/43 must be interpreted as meaning that, in order to determine whether it is necessary to carry out an appropriate assessment of the implications of a plan or project for a site, account may be taken of the features of that plan or project which involve the removal of contaminants and which therefore may have the effect of reducing harmful effects of the plan or project on that site, where those features have been incorporated into that plan or project as standard features, inherent in such a plan or project, irrespective of any effect on the site*."

Article 7 of the Habitats Directive provides that the provisions of, *inter alia*, Article 6(3) are to apply to SPAs under Directive 2009/147/EC (the "Birds Directive"). As stated, the requirements arising out of Article 6(3) of the Habitats Directive are transposed into Irish law by Part XAB of the Planning and Development Act and by the European Communities (Birds and Natural Habitats) Regulations 2011 as amended[5] (S.I. No.477 of 2011) (the Habitats Regulations), including Part 5 thereof.

The determination of whether or not a plan or project requires AA is referred to as "Stage 1" or "AA Screening". A "Stage 1" or "AA Screening" is completed to determine whether or not the proposed development, either individually or in combination with other plans or projects, in view of best scientific knowledge, is likely to have a significant effect on areas designated as being of European importance for nature conservation ("European sites"), thereby enabling the Applicant, to fulfil its obligations under Article 6(3) of the Habitats Directive.

The determination of whether or not a plan or project meets the two thresholds for requiring AA is referred to as "Stage 1" or "AA Screening". The first threshold is reached if the plan or project is not directly connected with or necessary to the management of one or more European sites. In its ruling in *Waddenzee*[6], the Court of Justice of the European Union (CJEU) interpreted the second threshold as being reached where "*it cannot be excluded, on the basis of objective information, that* [the plan or project] *will have a significant effect on that site*". Thus, in applying the Precautionary Principle, the CJEU interpreted the word "likely" to mean that, as long as it cannot be demonstrated that an effect will not occur, that effect is considered "likely". A likely effect is considered to be "significant" only if it interrupts or causes a delay in achieving the Conservation Objectives of the site concerned.[7]

4 Eco Advocacy v. An Bord Pleanála [2023] C-721/21

5 Including inter alia S.I. 290 of 2013; SI 499 of 2013; SI 355 of 2015; the Planning, Heritage and Broadcasting (Amendment) Act 2021, Chapter 4; SI 293 of 2021.

6 Landelijke Vereniging tot Behoud van de Waddenzee, Nederlandse vereniging tot Bescherming van Vogels *v.* Staatssecretaris van Landbouw, Naturbeheer en Visserij (Waddenzee) [2004] C-127/02 ECR I-7405.

7 Conservation Objectives are referred to, but not defined, in the Habitats Directive. In Ireland, Conservation Objectives are set for Qualifying Interests (the birds, habitats or other species for which a given European site is selected) and represent the overall target that must be met for that Qualifying Interest to reach or maintain favourable conservation condition in that site and contribute to its favourable conservation status nationally.

Prior to approval of a plan or project which is the subject of AA (also referred to as "Stage 2"), it is necessary to "*ascertain*" that the plan or project will not "*adversely affect the integrity of the site*". In its guidance document (EC, 2018), the European Commission stated that "*the integrity of a site involves its constitutive characteristics and ecological functions*" and that "*the decision as to whether it is adversely affected should focus on and be limited to the habitats and species for which the site has been designated and the site's conservation objectives*". Regarding the word "ascertain", the CJEU, also in *Waddenzee*, interpreted this as meaning "*where no reasonable scientific doubt remains as to the absence of such effects*".

Therefore, the legal test at Stage 2 is satisfied (and the plan or project may be authorised) when it can be demonstrated beyond reasonable scientific doubt that the plan or project will not interrupt or cause delays in the achievement of the Conservation Objectives of the site or sites concerned. AA is informed by a "Natura Impact Report" (NIR) in the case of plans or a "Natura Impact Statement" (NIS) in the case of projects.

The CJEU has made a relevant judgment on what information should be contained within documents supporting AA[8] (in the NIR or NIS):

"[The AA] *cannot have lacunae and must contain complete, precise and definitive findings and conclusions capable of removing all reasonable scientific doubt as to the effects of the works proposed on the protected site concerned.*"

The High Court and Supreme Court[9] have also provided clarity on how Competent Authorities should undertake AA[10] and has stated that the following four matters require to be addressed:

- First, an appropriate assessment must identify, in the light of the best scientific knowledge in the field, all aspects of the development project which can, by itself or in combination with other plans or projects, affect (a) European site(s) in the light of its conservation objectives.
- Second, there must be complete, precise and definitive findings and conclusions regarding the previously identified potential effects on any relevant European site(s) and may not have lacunae or gaps. The requirement for precise and definitive findings and conclusions requires analysis, evaluation and decisions. Further, the reference to findings and conclusions in a scientific context requires both findings following analysis and conclusions following an evaluation each in the light of the best scientific knowledge in the field.
- Third, on the basis of those findings and conclusions, the Competent Authority (here Louth County Council) must be able to determine that no scientific doubt remains as to the absence of the identified potential effects.
- Fourth, where the aforesaid three requirements are satisfied, Louth County Council, may determine that the proposed development will not adversely affect the integrity of any relevant European site. Accordingly, an appropriate assessment may only include a determination that the proposed development will not adversely affect the integrity of any relevant European site where upon the basis of complete, precise and definitive findings and conclusions made the Board decides that no reasonable scientific doubt remains as to the absence of the identified potential effects.

[8] *Sweetman v. An Bord Pleanála* [2013] Case C-258/11.
[9] See *Kelly (Eoin) v An Bord Pleanála* [2014] I.E.H.C. 400 where the High Court (Finlay Geoghegan J.) held that section 177V(1) of the Planning and Development Act 2000 (as amended) must be construed so as to give effect to Article 6(3) of the Habitats Directive, and hence, an appropriate assessment carried out under section 177V(1) of the 2000 Act must meet the requirements of Article 6(3) of the Habitats Directive as interpreted by jurisprudence of the CJEU case law; *Connelly v An Bord Pleanála* [2018] 2 I.L.R.M 453; [2018] I.E.S.C. 31.
[10] *Kelly v. An Bord Pleanála* [2014] IEHC 422.

In accordance with Regulation 250 of the Planning and Development Regulations and Regulation 42 of the Habitats Regulations, AA must be undertaken by the Competent Authorities. In Ireland, the Competent Authority is the relevant planning authority for each plan or project (as defined in Part 1 of the Habitats Regulations), e.g. the local authority, in this case Louth County Council. Consequently, the responsibility for carrying out AA lies solely with the Competent Authority. In that respect, the NIS is not in itself an Appropriate Assessment but provides the Competent Authority with the information it needs in order to carry out its AA.

1.4 Methodology

In accordance with the requirements for AA, this NIS assesses the likely effects of the proposed development on the integrity of the European site(s) "screened in" at Stage This assessment is undertaken in six steps, as follows:

1. Step 1 involves gathering all of the information and data that will be necessary for a full and proper assessment. These include, but are not limited to, the details of all phases of the plan or project, environmental data pertaining to the area in which the plan or project is located, e.g. rare or protected habitats and species or invasive species present or likely to be present, and the details of the European sites within the Zone of Influence.
2. Step 2 involves examination of the information gathered in the first step and detailed scientific analysis of the effects of the plan or project on the ecological structure and function of the receiving environment, focussing on European sites.
3. Step 3 evaluates the effects analysed in Step 2 against the Conservation Objectives of the relevant European site or sites, thereby determining whether or not they constitute adverse effects on site integrity.
4. Having established that the plan or project will adversely affect the integrity of one or more European sites, Step 4 involves the development of appropriate mitigation, including, where appropriate, monitoring and enforcement measures, to eliminate or minimise those effects such that they no longer constitute adverse effects on the integrity of the site(s) concerned, as well as consideration of the significance of any residual (post-mitigation) effects.
5. Step 5 involved the assessment of the significance of any residual effects arising from the proposed development in combination with other plans or projects.
6. Step 6 involves the final determination of whether or not the plan or project will adversely affect the integrity of one or more European sites. Notwithstanding the final recommendation made in the NIS, the responsibility for completing this step lies solely with the competent authority.

The following guidance documents informed the assessment methodology:

- EC (2021) *Assessment of plans and projects in relation to Natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC*. Environment Directorate-General of the European Commission.
- EC (2018) *Managing Natura 2000 sites: The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC*. European Commission, Brussels.
- DEHLG (2010) *Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities*. Department of the Environment, Heritage and Local Government, Dublin.

- NPWS (2010a) *Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities*. Circular Letter NPWS 1/10 & PSSP 2/10. National Parks & Wildlife Service, Department of the Environment, Heritage and Local Government, Dublin.
- OPR (2021) Appropriate Assessment Screening for Development Management. Office of the Planning Regulator, Dublin.

1.5 Ecological Assessment

In order to fully inform this NIS, it was necessary to establish the baseline ecological conditions in the receiving environment, particularly with regard to European sites. This was achieved by undertaking a number of desktop studies and field surveys and engaging in consultations with the relevant stakeholders, including the National Parks & Wildlife Service (NPWS) and Inland Fisheries Ireland (IFI).

1.5.1 Desk Study

During the desk study, the statutory consultee, the NPWS, provided data on designations of sites, habitats and species of conservation interest. This included reporting pursuant to Article 17 of the Habitats Directive[11] (NPWS, 2019a, b, c) and Article 12 of the Birds Directive[12] (Eionet, 2018), as well as the Site Synopses and Conservation Objectives for the relevant European sites.

The desk study involved a thorough review of existing information relating to ecology in the vicinity of the proposed development and in the surrounding area. A number of web-based geographic information systems (GISs) were used to obtain information relating to the natural environment surrounding the proposed development. These included the NPWS *Map Viewer* (NPWS, 2023), which provided information on the locations of protected sites, the National Biodiversity Data Centre's *Biodiversity Maps* (NBDC, 2023), which provided recent and historic records of rare and protected species in the area.

As with all desk studies, the data considered were only as good as the data supplied by the recorders and recording schemes. The recording schemes provide disclaimers in relation to the quality and quantity of the data they provide, and these were considered when examining outputs of the desk study.

Water Quality

Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for the Community action in the field of water policy (the Water Framework Directive or 'WFD') requires that each Member State protect and improve water quality in all waters so that good ecological status is achieved. Additionally, proposed actions (within discrete River Basin Management Plans) are also required, to secure national natural water resources for the future. The EPA is the competent authority responsible for monitoring, protecting, and improving the water environment in the Republic of Ireland.

[11] Under Article 17, to report to the European Commission every six years on their status and on the implementation of the measures taken under the Directive.
[12] Every three years, Member States of the European Union are required by Article 12 of the Birds Directive to report on implementation of the Directive. The most recent reporting available is for the period 2008-2012.

In accordance with WFD guidelines, water quality 'Status' is assigned using a variety of available data on aquatic flora and fauna (including fish), the availability of nutrients, and aspects like salinity, temperature and pollution by chemical pollutants. Morphological features, such as quantity, water flow, water depths and structures of the riverbeds, are also taken into account.

The original EPA water quality classification system (the 'Quality Rating System' or 'Q-values') is also used to assess water quality in Irish rivers, taking into account aquatic macrophytes, phytobenthos and hydromorphology. The Quality Rating System has been shown to be a robust and sensitive measure of riverine water quality and has been linked with both chemical status and land-use pressures in catchments. Individual macroinvertebrate species are ranked for their sensitivity to organic pollution and the Q-value is assessed based, primarily, on their relative abundance within a biological sample. A review of both the internal EPA Q-value status and WFD surface water status for the relevant watercourses was undertaken.

The EPA's online map viewer provides access to information at individual waterbody level in Ireland. Waterbodies can relate to surface waters (these include rivers, lakes, estuaries [transitional waters], and coastal waters) or to groundwater. Table 1-1 shows the information recorded in watercourses crossed by the proposed development, at the closest point.

Table 1-1 Water Quality Results

Rivers			
Waterbody Name	**EPA Q-Value**	**WFD Status 2016-2021**	**WFD Risk Assessment**
Boyne	4	n/a	n/a
Tullyeskar_010	n/a	Moderate	Review
Groundwater			
Waterbody name	**WFD Status 2016-2021**	**WFD Risk Assessment**	
Drogheda	Good	At risk	
Transitional Waterbodies			
Waterbody name	**WFD Status 2016-2021**	**WFD Risk Assessment**	
Boyne Estuary	Moderate	At risk	
Coastal Waterbodies			
Waterbody name	**WFD Status 2016-2021**	**WFD Risk Assessment**	
Boyne Estuary Plume Zone	Moderate	At risk	

1.5.2 Consultations

A consultation request was sent on the 25th of September 2023 to the Development Applications Unit (DAU) and Inland Fisheries Ireland (IFI). An email was received from the DAU on the 28th of September 2023 confirming that they had received the consultation request and that the expected turnaround time was 6 weeks. No response had been received on the date of lodging the application.

A summary of these consultations, relevant to this NIS, is presented in Table 1-2 below. All issues raised by the consultees have been addressed as far as possible in this NIS.

Table 1-2 Details of consultations

Consultee	Date	Summary of Response
Department of Housing, Local Government and Heritage (National Parks & Wildlife Service)	28th September 2023	An email was received confirming that the DAU had received the consultation request and that the expected turnaround time was 6 weeks.
	27th September 2023	The following observations were made: • There is sufficient capacity in Drogheda Wastewater Treatment plant. • All in-stream works should be carried out as per IFI's 'Guidelines on Protection of Fisheries During Construction Works in and Adjacent to Waters' (2016). • Works should be carried out in the months July and September. • Destocking may need to be carried out. • Appropriate environmental protection measures are the responsibility of the landowner and contractor (developer, named company, public authority etc) involved, and all works are subject to the provision of the Local Government (Water Pollution) Act 1977 (as amended) and the Fisheries (Consolidation) Act (as amended).

1.5.3 Field Surveys

Ecological walkover surveys were undertaken at various dates between June 2021 - December 2025. The surveys adhered to the following guidelines:

- *Ecological Survey Techniques for Protected Flora and Fauna during the Planning of National Road Schemes* (NRA, 2008b).
- *Guidelines for Assessment of Ecological Impacts of National Road Schemes* (NRA, 2009).
- *Best Practice Guidance for Habitat Survey and Mapping* (Smith et al., 2011).
- Water Quality in Ireland: 2001 – 2003 (Toner et al., 2005).

The surveys with relevance to this NIS are described below.

Habitats

The habitats in the vicinity of the proposed development were surveyed following the Heritage Council's *Best Practice Guidance for Habitat Survey and Mapping* (Smith et al., 2011). Habitats were classified in accordance with *A Guide to Habitats in Ireland* (Fossitt, 2000) and conformity to Annex I-type habitats was evaluated using the *Interpretation Manual of European Union Habitats – EUR28* (EC, 2013). Smith et al. (2011) states that the optimal time of year for habitat surveys is April to September, inclusive, as this is the growing season for most plants. The first habitat survey was undertaken in June and July 2021 i.e. within the optimal season for habitats. Further surveys were undertaken in April 2023, November 2024 and December 2025.

Invasive Alien Plant Species

As part of the habitat survey, the presence of invasive alien species was considered. The Ecologists had particular regard for invasive species subject to restrictions under Regulation 49 of the Habitats Regulations, including Himalayan Balsam (*Impatiens glandulifera*), Giant-rhubarb (*Gunnera* sp.), Japanese Knotweed (*Reynoutria japonica*), Bohemian Knotweed (*Reynoutria* × *bohemica*) and Rhododendron (*Rhododendron ponticum*). The most recent invasive species survey was undertaken in December 2025. This is outside the optimum survey season, however many invasive species are visible late in the season, including Himalayan balsam which is present along the Boyne, and Traveller's Joy which was recorded in the trees along the western side of the Mell Stream and on the terramesh retaining wall.

Otter

An otter survey was conducted along the Mell Stream, from the reed beds at confluence with the Boyne to 50m upstream of the proposed development. The survey involved a search for signs of otter activity (prints, spraints, trails, holts, couches, slides, feeding remains etc.). The most recent otter survey to inform this NIS was undertaken in December 2025.

Birds

The banks of the Mell Stream were assessed for their suitability for Kingfisher (*Alcedo atthis*) to burrow. Kingfisher nest in burrows in soft clay banks along rivers, usually over water and out of reach of predators.

Water Quality

The macroinvertebrate and water sampling were undertaken on the 18th August 2025. The macroinvertebrate sampling followed the standard methodology used by the Environmental Protection Agency (EPA) as described in Toner et al., 2005. The survey was carried out during the optimum survey period (June-October) when flows are likely to be relatively low and temperatures highest.

The results of the macroinvertebrate surveys and water chemistry sampling were used to assign an EPA Q-Value and a Water Framework Directive (WFD) Ecological Status for each sampling point (Table 1-3). Chemical analysis of water samples was carried out by Fitz Scientific in Drogheda. The lab is INAB accredited, which is the international standard that specifies the general requirements for the competence of laboratories to carry out tests. The results from both sampling points indicate that the water quality is poor, which is illustrated by the chemical analysis and freshwater macroinvertebrate species assemblage.

Samples of the water for testing in the lab and macroinvertebrate surveys were undertaken at one downstream and one upstream sampling point.

The Mell steam is a small, shallow stream that flows in a southerly direction along a narrow woodland along the western border of the proposed development. At the time of the survey, the stream was approximately 1-8cm deep and 60-140cm wide. Dense filamentous algae *Cladophora* growth was recorded in the stream between the upstream and downstream sampling locations.

Upstream Sampling Point

The upstream sampling site was located 120m north of the site boundary (ITM 706209 775891). The stream is within a linear woodland with the canopy dominated by Sycamore and Ash. This section of the watercourse was in moderate flow, 7cm deep and 135cm wide, with bankside vegetation consisting of ivy, nettle, herb robert, creeping buttercup, rowan, enchanters' nightshade. The vegetation provided moderate shading to the watercourse. The bed comprised of the following substrate types in order of dominance: cobbles, sand, silt, gravels and boulders (Plate 1.1). A single elver (juvenile) European Eel (*Anguilla anguilla*) was caught while kick sampling at this location. This species is listed as critically endangered by the International Union for Conservation of Nature (IUCN), however they are commonly found in the lower reaches of rivers in Ireland.

A total of five macroinvertebrate taxa were recorded. No Group A pollutant 'sensitive' macroinvertebrates were found. The only Group B macroinvertebrates to be recorded at the site were cased caddisflies of the Limnephilidae and Glossosomatidae (genus *Agapetus*) families, present in fair and numerous numbers, respectively. Numerous numbers of freshwater snail *Potamopyrgus antipodarum*, a Group C macroinvertebrate, were present at the site. There were common numbers of the freshwater shrimp *Gammarus duebeni* recorded, another Group C macroinvertebrate. three other Group C macroinvertebrates were recorded in fair/small numbers: the freshwater snail *Ancylus fluviatilis*, fly larvae of the family *Simuliidae* and the beetle of the genus *Elmis*. One Group D pollutant tolerant species of water hoglouse, *Asellus aquaticus*, was recorded in fair numbers. The upstream sampling point was allocated a Q-value of 3, indicating moderately polluted and a 'Poor' water quality status.

The water chemistry results were compared with the surface water quality ranges and limits set out in the S.I. No. 77/2019 - European Union Environmental Objectives (Surface Waters) (Amendment) Regulations 2019, with the sample parameters either being graded as 'High', 'Good' or 'Unsatisfactory'.

The Alkalinity at the upstream sampling point was 126 mg/l which indicates moderately hard water. The Biochemical Oxygen Demand (BOD) was 0.9 mg/l which is low, and meets 'High' water quality status. The Ammonia was 0.02mg/l, indicating 'High Status'. The Nitrate level was 1.92 mg/l N which is a normal level. The only exceedance in the sample was Orthophosphate levels which were 0.06 mg/l P, and meet the criteria for 'Unsatisfactory' status. The most likely cause of this exceedance is from poorly constructed septic or slurry tanks in the catchment.

Plate 1.1 Upstream sampling point.

Downstream Sampling Point

The downstream survey point was as far downstream as the surveyors could access (ITM 706287 775742) but was not entirely downstream of the site. The watercourse was in moderate flow and very shallow, between 1.8cm and 7cm deep and 61cm wide. The area was dominated by bramble and there were no macrophytes present in the watercourse. The sample was taken in a small open area of the stream which is used as a crossing point. The vegetation on the stream banks at this location was dominated by bramble, with Yorkshire fog, cleavers, red clover, creeping buttercup, water speedwell, narrow dock, common dock, willowherbs, ribwort plantain, hawthorn, bindweed and nettles. The bed comprised of the following substrate types in order of dominance: gravels, cobbles, sand, silt, and boulders (Plate 1.2).

A total of five macroinvertebrate taxa were recorded. Similar to Site 1 no Group A macroinvertebrates were found. The only Group B 'less sensitive' macroinvertebrate to be recorded were cased caddisflies of the Limnephilidae family, which occurred in small numbers. The most common Group C 'tolerant' macroinvertebrates were freshwater shrimp *Gammarus duebeni* which was dominant, and the freshwater snail *Potamopyrgus antipodarum*, which was numerous in the sample. Three other Group C macroinvertebrates were recorded in fair/ small numbers: the cased caddisfly *Baetis rhodani* and the beetle of the genus *Elmis*. The upstream sampling point was allocated a Q-value of 3, indicating moderately polluted and a 'Poor' water quality status. The Group D 'very tolerant' water hoglouse, *Asellus aquaticus* was recorded in fair numbers.

The water chemistry results were compared with the surface water quality ranges and limits set out in the S.I. No. 77/2019 - European Union Environmental Objectives (Surface Waters) (Amendment) Regulations 2019, with the sample parameters either being graded as 'High', 'Good' or 'Unsatisfactory'.

The Alkalinity at the upstream sampling point was 118 mg/l and indicates moderately hard water. The Biochemical Oxygen Demand (BOD) was 0.8 mg/l which is low and meets 'High' status. The Ammonia was 0.02 mg/l indicating 'High Status'. The Nitrate level was 1.83 mg/l N which is a normal level. The only exceedance in the sample was Orthophosphate levels which were 0.09 mg/l P, and meet the criteria for 'Unsatisfactory' status. The most likely cause of this exceedance is from poorly constructed septic or slurry tanks in the catchment.

Plate 1.2 Downstream sampling point

A site engineer and a member of the public reported on separate occasions that the watercourse has dried completely during Summer 2025. The poor ecological status at both sampling points is likely to be as a result of excessive levels of orthophosphate, the fact that the stream dries up periodically, and shading leading to low macroinvertebrate diversity.

Table 1-3 Water Quality Results

Watercourse	Q-Value	WFD Ecological Status
Mell Stream (Upstream)	Q3 (poor)	0.6 (poor)
Mell Stream (Downstream)	Q3 (poor)	0.6 (poor)

1.5.4 Assessment

The ecological baseline which was established by the desk study and field surveys described above was used to inform the assessment of the potential ecological effects arising from the proposed development, particularly with regard to European sites. Any assumptions that were made in view of gaps in the ecological data were made in accordance with the Precautionary Principle.

2. DESCRIPTION OF THE PROPOSED DEVELOPMENT

2.1 Overview

The subject site (c. 1.46ha) consists of an infill development site within the existing Tullybrook Estate development at Tullybrook, Slane Road, Tullyallen, Drogheda, Co. Louth (known as Tullybrook Phase 3).

The subject site is enclosed by Slane Road to the north, existing dwellings to the east, Tullybrook Place to the west (subject to planning permission Reg. Ref: 2360345) and the Tullybrook Phase 4 development site to the south (subject to separate planning application Reg. Ref: 25/60350).

The proposed development will principally consist of the construction of 16no. residential dwellings including 10no. three-bedroom duplex units (Block 3) each with a private terrace or balcony and access to a communal open space and 2no. housing blocks (Block 1 and Block 2) comprising 3no. two-bedroom houses and 3no. three-bedroom houses overall each with a private garden. A total of 32no. residential car parking spaces and 42no. residential bicycle parking spaces are proposed. The proposed development will also include the provision of new landscaped public open spaces.

The proposed development will also consist of the construction of a crèche with associated outdoor play area and informal open space together with associated car parking and bicycle parking spaces.

The primary pedestrian / vehicular / cycle access to serve the proposed development is provided via the existing entrance from Slane Road on a newly constructed internal road delivered under planning permission Reg. Ref: 06510077 (as extended under Reg. Ref: 12510022, Reg. Ref: 1858 and Reg. Ref: 211431). The proposed creche will be served by a proposed dedicated internal shared surface access. The proposed development will also include all associated internal roads and footpaths.

Planning permission is also sought for all ancillary site and development works to facilitate the development, including external bin stores; external sheltered bicycle store; public lighting; mechanical and electrical installations; retaining walls; boundary treatments; hard and soft landscaping; SuDS; water, surface water drainage and foul drainage works; and all associated site strip and excavation works above and below ground.

The stockpiled soil will be removed from the site and reused in another area of the wider site (Phase 4) subject to planning permission or it will be removed from the site and disposed of or reused in an appropriate manner.

Drawings for the proposed development are provided in Appendix A to this NIS.

No lime or cement soil stabilisation is proposed for the proposed development.

2.2 Location

The proposed development is located in the Boyne Valley, 2.5km west of Drogheda, Co. Louth. The location of the proposed works is rural in nature with agricultural land being the primary land use. There is also existing residential development either side of the proposed development along the Slane Road. The M1 industrial estate/3retail park is located 300m to the north. The M1 motorway is located 430m west.

2.3 Receiving Natural Environment

The River Boyne is located 210m south of the proposed development. It is tidal in this area and flows in the easterly direction towards Drogheda. The River Boyne is fringed by reed beds and islands, some of which contain alluvial woodland. The presence of features of deposition in the river, such as islands and bars, illustrate a high sediment load in the river in this area.

The proposed development traverses the wider Tullybrook site. It includes a narrow narrow lane that runs along the western side of the main development from the Slane Road, the site itself which consists of a spoil heap that has been in place for several years and is now covered in a layer of vegetation, the Mell Stream and associated linear woodlands, roads within the wider Tullybrook site, the site compound and a narrow areas of rank grassland with encroaching scrub on the eastern side of the site. The spoil heap makes up the main area of the phase 3 site. The area is covered with a mix of mainly ruderal species including Ragort (*Senacio jacobea*), Thistle (*Cirsium sp.*), Willowherbs (*Epilobium sp.*), Coltsfoot (*Tussilago farfara)*, Knapwed (*Centaurea nigra)*, Butterfly Bush (*Buddleja davidii)* and Creeping Buttercup (*Ranunculus repens)*.

The site slopes down to the west to the Mell Stream. A silt fence is in place between the pumping station and the northern extent of the Mell Stream within the site (Plate 2.1). Beyond the Mell Stream is a strip of scrub and woodland. Hawthorn (*Crataegus monogyna*) is the main component of this woodland, with some mature ash trees. The invasive species, Traveller's Joy (*Clematis vitalba*) is widespread in the woodland to the west of the stream and along the southern end of the terramesh retaining wall. This species is not listed on the Thirds Schedule of the Habitats Regulations which would require management. The area to the west of the stream will be unaffected by the proposed development.

Plate 2.1 Phase 3 site looking north along the Mell Stream. Stockpiled soil is on the right hand side of the photo, and the silt fence on the left indicates the location of the Mell Stream. (Photo taken August 2025).

Plate 2.2 The Phase 3 site looking north. The invasive species *Clematis vitalba* is visible in the trees along the Mell Stream on the left hand side of the photograph. (Photo taken December 2025).

2.4 Potential Effects on the Natural Environment

A number of elements of the proposed development are considered likely to give rise to environmental and ecological impacts. Potential risks to the natural environment arising from the proposed development are as follows:

- Water quality impacts arising from both the construction and the operation of the proposed development have the potential to affect habitats and species directly and indirectly. There is potential for surface water runoff during construction, including the movement of soil, machinery movements and the use of construction materials. Accidental pollution events could result in sediment and pollutants entering the Mell Stream, the River Boyne and in turn, the Boyne Estuary. During the operational phase of the proposed development, surface water from the site will be directed to the Mell Stream. There is a risk of water quality impacts during the construction of the headwall in the Mell Stream. There is a risk of surface water from the site to contain sediment, hydrocarbons or other pollutants. Foul water from the site during construction will be directed to the existing foul water system or collected on site and disposed of appropriately. During the operation of the proposed development, the foul water will ultimately end up at the Drogheda Wastewater Treatment Plant, which has capacity for the proposed development.
- The proposed development will give rise to noise, vibration, artificial lighting, and visual disturbance on the receiving environment during construction. During the operational phase of the proposed development there will be additional housing and therefore additional traffic, noise, human movements etc., and a general increase in the level of activity. Therefore, visual, noise and light disturbance will occur during operation phase of the proposed development.
- The habitats within the footprint of the proposed development are generally built ground or recolonising bare ground. These habitats are of limited biodiversity value. A new precast headwall will be constructed on the bank of the Mell Stream to convey treated and attenuated surface water from the site to the Mell Stream during the operation phase.

3. IDENTIFICATION OF ADVERSE EFFECTS

3.1 Establishing the Zone of Influence

Section 3.2.3 of DEHLG (2010) outlines the procedure for selecting the European sites to be considered in AA. It states that European sites potentially affected should be identified and listed, bearing in mind the potential for direct, indirect and in-combination effects. It also states that the specific approach in each case is likely to differ depending on the scale and likely effects of the plan or project. However, it advises that the following sites should generally be included:

- All European sites within or immediately adjacent to the plan or project area;
- All European sites within the Zone of Influence of the plan or project; and
- In accordance with the Precautionary Principle, all European sites for which there is doubt as to whether or not they might be significantly affected.

The Zone of Influence (hereafter referred to as the "ZoI") of a project is the geographic extent over which significant ecological effects are likely to occur. In the case of projects, the guidance recognises that the zone of influence must be established on a case-by-case basis using the Source-Pathway-Receptor Model (OPR, 2021). A project may only lead to significant effects on the integrity of the European site where all three elements of Source-Pathway-Receptor are linked. In the absence of one element of this model, likely significant effects can be screened out with confidence. The assessment should make reference to the following key variables:

- The nature, size and location of the project;
- The nature of the impacts which may arise from the project;
- The sensitivities of the ecological receptors; and,
- The potential for in-combination effects.

For example, in the case of a project that could affect a watercourse, it may be necessary to include the entire upstream and/or downstream catchment in order to capture all European sites with water-dependent features of interest.

Having regard to the above key variables, the ZoI extends to a distance of 1km in all directions from the proposed development, 1km upstream of the proposed development, and the downstream extent of the River Boyne as far as the transitional waterbody. This distance was chosen as it takes account of the following:

- The potential for noise and visual disturbance from the proposed development; and,
- The potential for water quality impacts in transitional waterbodies and in the tidal limit of the River Boyne.

A geographical representation of the Zone of Influence was produced in QGIS using the proposed development location in combination with NPWS shapefiles to identify the boundaries of European sites in relation to the Zone of Influence. This is presented in Figure 3.1 below. It was determined that five European sites occur within the ZoI, namely the River Boyne and River Blackwater SPA, River Boyne and River Blackwater SAC, the Boyne Estuary SPA, the Boyne Coast and Estuary SAC, and the North-West Irish Sea SPA.

Table 3-1 describes how these sites are connected to the proposed development. Detailed descriptions of these sites are given in Section 3.2.

Table 3-1 European sites located within the zone of influence of the proposed development.

European site [site code]	Are there potential pathways for impacts from the proposed development to this site? Explain.
River Boyne and River Blackwater SPA [004232]	**Yes**. This site is located 500m southwest of the proposed development. This SPA is designated for one species, Kingfisher (*Alcedo atthis*) [A229]. Whilst this site is located upstream of the proposed development, there is potential for the proposed development to result in the release of pollutants which may lead to ex situ impacts on habitat for Kingfisher and a reduction in prey availability through water quality degradation. Therefore, there are potential pathways for impacts from the proposed development.
River Boyne and River Blackwater SAC [0022999]	**Yes**. This site is located outside but immediately adjacent to the proposed development. This site is designated for Alkaline Fens [7230], Alluvial Forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion, Alnion incanae, Salicion albae*) [91E0], River Lamprey (*Lampetra fluviatilis*) [1099], Atlantic Salmon (*Salmo salar*) [1106], and Otter (*Lutra lutra*) [1355]. The nearest examples of Alluvial Forests are located 200m upstream of the proposed development. There is no information on the locations of the other habitats. The aquatic species may be present in the Mell Stream and the River Boyne, and Otter may utilise the terrestrial habitats in the area. Therefore, there are pathways for effects arising from the proposed development.
Boyne Coast and Estuary SAC [001957]	**Yes.** This site is located directly 5km east and 5.5km hydrologically east towards the coast via the Boyne Estuary. This site is designated for Estuaries [1130], Mudflats and Sandflats not Covered by Seawater at Low Tide [1140], Annual Vegetation of Drift Lines [1210], *Salicornia* and other Annuals Colonising Mud and Sand [1301], Atlantic Salt Meadows (*Glauco-Puccinelliietalia maritimae*) [1330], Embryonic Shifting Dunes [2110], Shifting Dunes along the Shoreline with *Ammophila arenaria* (white dunes) [2120], Fixed Coastal Dunes with Herbaceous Vegetation (grey dunes) [2130]. Any potential release of pollutants or sediments from the proposed development may reach the SAC via the Boyne Estuary. Therefore, there are pathways effects arising from the proposed development.
Boyne Estuary SPA [004080]	**Yes.** This site is located directly 5km east and 5.5km hydrologically east towards the coast via the Boyne Estuary. This site is designated for eleven bird species and wetlands and waterbirds [A999]. Any potential release of pollutants or sediments from the proposed development may reach the SPA via the Boyne Estuary. This may lead to a reduction in prey availability due to water quality degradation. As such, there are pathways for effects arising from the proposed development.
North-West Irish Sea SPA [004236]	**Yes.** This site is located directly 9.5km east and 11.2km hydrologically east towards the coast. This site is designated for eleven bird species. Any potential release of pollutants or sediments from the proposed development may reach the SPA via the Boyne Estuary. This may lead to a reduction in prey availability due to water quality degradation. As such, there are pathways for effects arising from the proposed development.

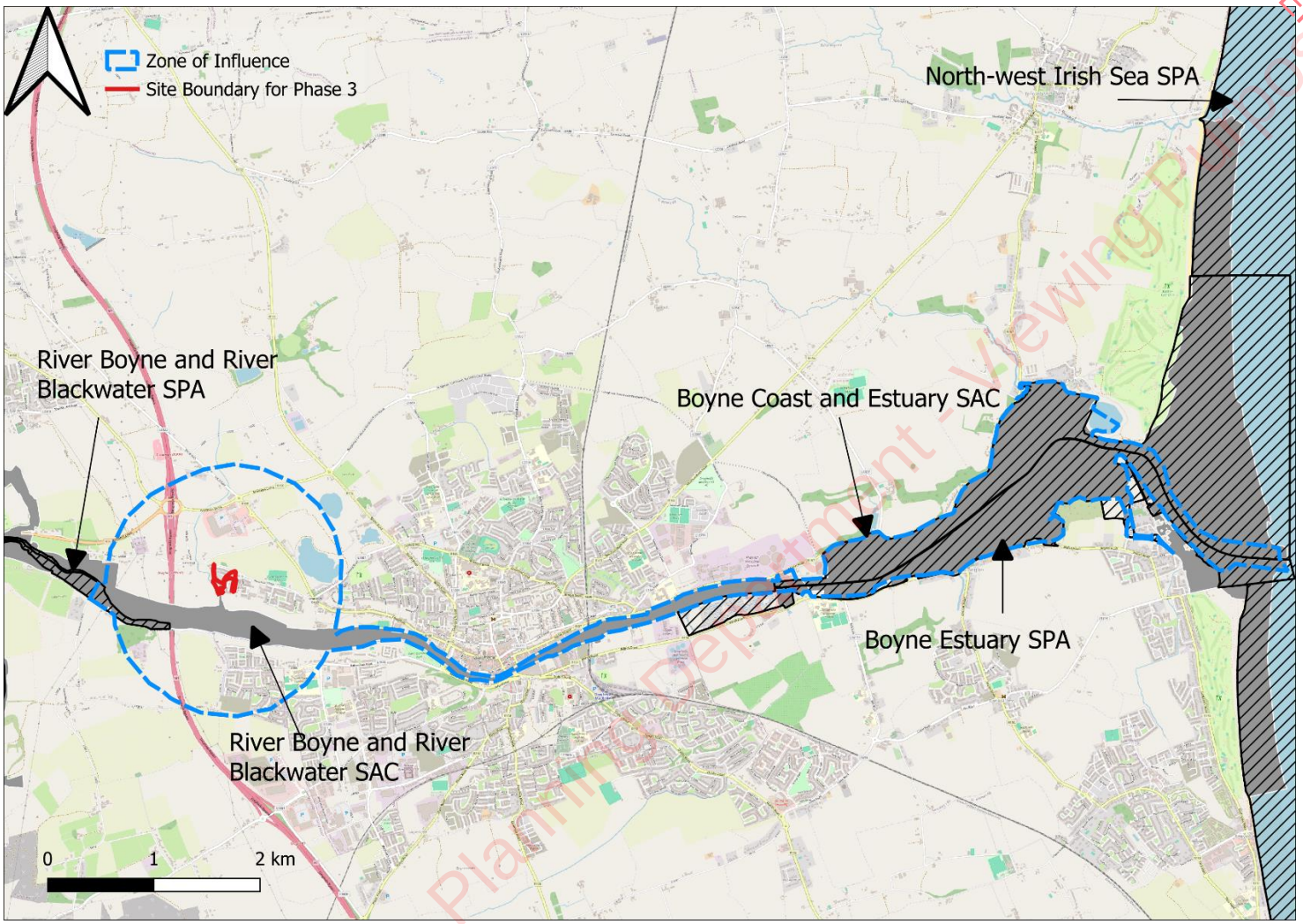

Figure 3-1 Zone of Influence for the proposed development.

3.2 Site Descriptions

River Boyne and River Blackwater SPA

The description of the River Boyne and River Blackwater SPA provided here is based on the Site Synopsis (NPWS, 2010b), Conservation Objectives (NPWS, 2024) and Natura 2000 Standard Data Form (NPWS, 2020) for the site.

Qualifying Interests of the Site

[A229] Kingfisher (*Alcedo atthis*)

Site Overview

The River Boyne and River Blackwater SPA is a long, linear site that comprises stretches of the River Boyne and several of its tributaries; most of the site is in Co. Meath, but it extends also into Cos Cavan, Louth and Westmeath. It includes the following river sections: the River Boyne from the M1 motorway bridge, west of Drogheda, to the junction with the Royal Canal, west of Longwood, Co Meath; the River Blackwater from its junction with the River Boyne in Navan to the junction with Lough Ramor in Co. Cavan; the Tremblestown River/Athboy River from the junction with the River Boyne at Kilnagross Bridge west of Trim to the bridge in Athboy, Co. Meath; the Stoneyford River from its junction with the River Boyne to Stonestown Bridge in Co. Westmeath; the River Deel from its junction with the River Boyne to Cummer Bridge, Co. Westmeath. The site includes the river channel and marginal vegetation.

Most of the site is underlain by Carboniferous limestone but Silurian quartzite also occurs in the vicinity of Kells and Carboniferous shales and sandstones close to Trim.

The site is a Special Protection Area (SPA) under the E.U. Birds Directive of special conservation interest for the following species: Kingfisher. A survey in 2010 recorded 19 pairs of Kingfisher (based on 15 probable and 4 possible territories) in the River Boyne and River Blackwater SPA. A survey conducted in 2008 recorded 20-22 Kingfisher territories within the SPA. Other species which occur within the site include Mute Swan (90), Teal (166), Mallard (219), Cormorant (36), Grey Heron (44), Moorhen (84), Snipe (32) and Sand Martin (553) – all figures are peak counts recorded during the 2010 survey.

The River Boyne and River Blackwater Special Protection Area is of high ornithological importance as it supports a nationally important population of Kingfisher, a species that is listed on Annex I of the Birds Directive.

Sensitivities of the Site and its Qualifying Interests

The main threats and pressures on this site are urbanisation and residential development as well as the development of road and car parks.

River Boyne and River Blackwater SAC

The description of the River and River Blackwater SAC provided here is based on the Site Synopsis (NPWS, 2014), Conservation Objectives (NPWS, 2021b) and Natura 2000 Standard Data Form (NPWS, 2019d) for the site.

Site Overview

This site comprises the freshwater element of the River Boyne as far as the Boyne Aqueduct, the Blackwater as far as Lough Ramor, and the Boyne tributaries including the Deel, Stoneyford and Tremblestown Rivers. These riverine stretches drain a considerable area of Meath and Westmeath, and smaller areas of Cavan and Louth.

The Boyne and its tributaries form one of Ireland's premier game fisheries and the area offers a wide range of angling, from fishing for spring salmon and grilse to sea trout fishing and extensive brown trout fishing. Atlantic Salmon (Salmo salar) use the tributaries and headwaters as spawning grounds.

This site is also important for the populations of two other species listed on Annex II of the E.U. Habitats Directive which it supports, namely River Lamprey (Lampetra fluviatilis), which is present in the lower reaches of the Boyne River, and Otter (Lutra lutra), which can be found throughout the site. In addition, the site also supports many more of the mammal species occurring in Ireland. Those which are listed in the Irish Red Data Book include Pine Marten (Martes martes), Badger (Meles meles) and Irish Hare (Lepus timidus). Common Frog (Rana temporaria), another Red Data Book species, also occurs within the site. All of these animals, with the addition of the Stoat and Red Squirrel, which also occur within the site, are protected under the Wildlife Act, 1976.

The site supports populations of several species listed on Annex II of the Habitats Directive, and habitats listed on Annex I of this Directive, as well as examples of other important habitat types. Although the wet woodland areas appear small there are few similar examples of this type of alluvial wet woodland remaining in the country, particularly in the north-east. The semi-natural habitats, particularly the strips of woodland which extend along the river banks, and the marsh and wet grasslands, increase the overall habitat diversity and add to the ecological value of the site, as does the presence of a range of Red Data Book plant and animal species and the presence of nationally rare plant species.

Qualifying Interests of the Site

[7320] Alkaline Fens

[91E0] Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*)

[1099] River Lamprey (*Lampetra fluviatilis*)

[1106] Salmon (*Salmo salar*)

[1355] Otter (*Lutra lutra*)

Sensitivities of the Site and its Qualifying Interests

The main threats and pressures on this site are pollution to surface waters, industrial or commercial areas and discharges from them, invasive non-native species, and human induced changes in hydraulic conditions.

Boyne Estuary SPA

The description of the Boyne Estuary SPA provided here is based on the Site Synopsis (NPWS, 2015a), Conservation Objectives (NPWS, 2013) and Natura 2000 Standard Data Form (NPWS, 2020b) for the site.

Qualifying Interests of the Site

[A048] Shelduck (*Tadorna tadorna*)
[A130] Oystercatcher (*Haematopus ostralegus*)
[A140] Golden Plover (*Pluvialis apricaria*)
[A141] Grey Plover (*Pluvialis squatarola*)
[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] Wetland and Waterbirds

Site Overview

This moderately-sized coastal site is situated west of Drogheda on the border of Counties Louth and Meath. The site comprises most of the estuary of the Boyne River, a substantial river which drains a large catchment. Apart from one section which is over 1 km wide, its width is mostly less than 500 m. The river channel, which is navigable and dredged, is defined by training walls, these being breached in places. Intertidal flats occur along the sides of the channelled river. The sediments vary from fine muds in the sheltered areas to sandy muds or sands towards the river mouth. The linear stretches of intertidal flats to the north and south of the river mouth are mainly composed of sand. One or more species of Eelgrass (*Zostera spp*.) occur in the estuary. Parts of the intertidal areas are fringed by salt marshes, most of which are of the Atlantic type.

The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Shelduck, Oystercatcher, Golden Plover, Grey Plover, Lapwing, Knot, Sanderling, Black-tailed Godwit, Redshank, Turnstone and Little Tern. The E.U. Birds Directive pays particular attention to wetlands and, as these form part of this SPA, the site and its associated waterbirds are of special conservation interest for Wetland & Waterbirds.

The Boyne Estuary is the second most important estuary for wintering birds on the Louth-Meath coastline. Black-tailed Godwit occurs here in internationally important numbers (471). A further nine species of wintering waterbirds have populations of national importance, i.e. Shelduck (218), Oystercatcher (1,179), Golden Plover (6,070), Grey Plover (146), Lapwing (4,771), Knot (1,944), Sanderling (81), Redshank (583) and Turnstone (221) - all figures are mean peaks for the 5 year period 1995/96-1999/2000. Of particular note is that the site supports 6.8% of the all-Ireland population of Knot and almost 3% of the total for Golden Plover. Other species which occur include Bar-tailed Godwit (86), Cormorant (97), Brent Goose (172), Wigeon (454), Teal (230), Dunlin (498), Curlew (395), Mallard (197), Red-breasted Merganser (14), Greenshank (6), Ringed Plover (80) and Mute Swan (13).

The site provides both feeding and high-tide roost areas for the birds. The estuary also attracts large numbers of gulls in winter, including Black-headed Gull (593), Common Gull (145), Herring Gull (403) and Great Black-backed Gull (160).

Little Tern have bred here since at least 1984 and a nationally important population was recorded in 1995 (14 pairs). In the intervening years breeding numbers and fledgling success has varied significantly. In 1996 approximately 20 pairs fledged 15 - 20 chicks but in 1998 and 1999 part of the shingle bank where the birds nested was washed away by storms. In 2008 35 pairs of Little Tern were recorded.

The site is of considerable ornithological importance for wintering waterfowl, with Black-tailed Godwit occurring in internationally important numbers and nine other species having populations of national importance. Of particular significance is that three species that regularly occur, Golden Plover, Bar-tailed Godwit and Little Tern are listed on Annex I of the E.U. Birds Directive. Part of the Boyne Estuary SPA is a Wildfowl Sanctuary.

Sensitivities of the Site and its Qualifying Interests

The main threats and pressures on this site relate to dredging, altering of hydrodynamic and siltation as a result of dumped dredge material. These threats are directly related to channel maintenance in Drogheda Port. Invasive species, horse riding, walking and non-motorised vehicles are also listed as threats.

The Boyne Coast and Estuary SAC

The description of the Boyne Coast and Estuary SAC provided here is based on the Site Synopsis (NPWS, 2016), Conservation Objectives (NPWS, 2012a) and Natura 2000 Standard Data Form (NPWS, 2018) for the site.

Site Overview

Boyne Coast and Estuary SAC is a coastal site which includes most of the tidal sections of the River Boyne, intertidal sand- and mudflats, saltmarshes, marginal grassland, and the stretch of coast from Bettystown to Termonfeckin that includes the Mornington and Baltray sand dune systems.

The Boyne River channel, which is navigable and dredged, is defined by training walls, these being breached in places. Intertidal flats occur on the sides of the channelled river. The sediments vary from fine muds in the sheltered areas to sandy muds or sands towards the river mouth. The linear stretches of intertidal flats to the north and south of the river mouth are mainly composed of sand. One or more species of eelgrass (*Zostera spp.*) occur in the estuary.

The two sand dune systems in the site, at Baltray and Mornington, are of conservation value, despite the restricted distribution of the intact areas and the high recreational pressure to which they are subjected. A gradient from embryonic dunes to Marram (*Ammophila arenaria*) dunes and then fixed dunes is shown at both systems.

The largest area of annual vegetation of drift lines within this SAC is located at Baltray, north of the estuary. The vegetation is highly representative of the habitat type, which is limited to a small number of highly specialised species that are capable of coping with harsh environmental conditions including high salinity, wind exposure, and unstable substrate and lack of soil moisture.

This site has been somewhat modified by human activities. The river is regularly dredged to accommodate cargo ships, which causes disturbance to the bird, fish and invertebrate communities in the estuary. Several factories operate upstream from the estuary and pollution and disturbance associated with them has had an impact on the ecology of the area. There is a proposal to create a deep-water facility at the north end of Mornington Dunes on the mouth of the Boyne estuary.

The site is of considerable conservation interest as a coastal complex that supports good examples of eight habitats that are listed on Annex I of the E.U. Habitats Directive, including Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130] which is listed with priority status.

Qualifying Interests of the Site

[1130] Estuaries

[1140] Mudflats and sandflats not covered by seawater at low tide

[1210] Annual vegetation of drift lines

[1310] Salicornia and other annuals colonising mud and sand

[1330] Atlantic salt meadows (Glauco-Puccinellietalia maritimae)

[2110] Embryonic shifting dunes

[2120] Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes)

[2130] Fixed coastal dunes with herbaceous vegetation (grey dunes)

Sensitivities of the Site and its Qualifying Interests

The main threats and pressures on this site are storms/ cyclones, pollution of surface waters, vegetation succession, illegal dumping and invasive species.

North-West Irish Sea SPA

The description of the North-west Irish Sea SPA provided here is based on Conservation Objectives (NPWS, 2023a) and Site Synopsis (NPWS, 2023b).

Site Overview

The North-west Irish Sea SPA constitutes an important resource for marine birds. The estuaries and bays that open into it along with connecting coastal stretches of intertidal and shallow subtidal habitats, provide safe feeding and roosting habitats for waterbirds throughout the winter and migration periods. These areas, along with more pelagic marine waters further offshore, provide additional supporting habitats (for foraging and other maintenance behaviours) for those seabirds that breed at colonies on the north-west Irish Sea's islands and coastal headlands. These marine areas are also important for seabirds outside the breeding period.

This SPA extends offshore along the coasts of counties Louth, Meath and Dublin, and is approximately 2,333km2 in area. This SPA is ecologically connected to several existing SPAs in this area.

The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Common Scoter, Red-throated Diver, Great Northern Diver, Fulmar, Manx Shearwater, Shag, Cormorant, Little Gull, Kittiwake, Black-headed Gull, Common Gull, Lesser Black-backed Gull, Herring Gull, Great Black-backed Gull, Little Tern, Roseate Tern, Common Tern, Arctic Tern, Puffin, Razorbill and Guillemot.

The breeding seabird species listed for those SPAs, which abut the North-West Irish Sea SPA are: Fulmar (Lambay Island SPA); Cormorant (Skerries Island SPA; Ireland's Eye SPA; Lambay Island SPA); Shag (Skerries Island SPA; Lambay Island SPA); Lesser Black-backed Gull (Lambay Island SPA); Herring Gull (Skerries Island SPA; Ireland's Eye SPA; Lambay Island SPA); Kittiwake (Lambay Island SPA; Ireland's Eye SPA; Howth Head SPA); Roseate Tern (Rockabill SPA); Common Tern (Rockabill SPA;); Arctic Tern (Rockabill SPA); Little Tern (Boyne Estuary SPA); Guillemot (Lambay Island SPA, Ireland's Eye SPA); Razorbill (Lambay Island SPA, Ireland's Eye SPA); and Puffin (Lambay Island SPA). The Common Tern population that is listed for the nearby South Dublin Bay and River Tolka Estuary SPA is also likely to use this SPA as a foraging resource.
Informed by two surveys of the western Irish Sea region in 2016 an estimated 120,232 and 34,626 individual marine birds occurred in this SPA during autumn and winter respectively. Those marine bird species whose estimated abundances equalled or exceeded 1% of the total estimated size of the winter assemblage are: Red-throated Diver (538), Fulmar (506), Little Gull (391), Kittiwake (944), Black-headed Gull (508), Common Gull (2,866), Herring Gull (6,893), Great Black-backed Gull (2,096), Razorbill (4,638) and Guillemot (13,914).

The estimated 2016 summer abundance of Manx Shearwater in the North West Irish Sea SPA is 13,010 and is of international importance. The estimated 2016 autumn and winter abundances of Great Northern Diver in the North West Irish Sea SPA is 248 and 230 respectively and are of international importance. The estimated abundances of Common Scoter over parts of this SPA can reach significant numbers (e.g. 14,567 in December 2018) which is also of international importance.

Qualifying Interests of the Site

[A065] Common Scoter (*Melanitta nigra*)
[A001] Red-throated Diver (*Gavia stellata*)
[A003] Great Northern Diver (*Gavia immer*)
[A009] Fulmar (*Fulmarus glacialis*)
[A013] Manx Shearwater (*Puffinus puffinus*)
[A018] Shag (*Phalacrocorax aristotelis*)
[A017] Cormorant (*Phalacrocorax carbo*)
[A177] Little Gull (*Larus minutus*)
[A188] Kittiwake (*Rissa tridactyla*)
[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*)
[A195] Little Tern (*Sterna albifrons*)
[A192] Roseate Tern (*Sterna dougallii*)
[A193] Common Tern (*Sterna hirundo*)
[A194] Arctic Tern (*Sterna paradisaea*)
[A204] Puffin (*Fratercula arctica*)
[A200] Razorbill (*Alca torda*)
[A199] Guillemot (*Uria aalge*)

Sensitivities of the Site and its Qualifying Interests

As this site has recently been announced, it lacks conservation objectives or a Natura 2000 standard data form. However, the Ministerial Direction document for this site lists land reclamation (including infilling), blasting, drilling, dredging or otherwise removing or disturbing fossils, rock, minerals, mud, sand, gravel or other sediment, introduction, or re-introduction, of plants or animals not found in the area undertaking scientific research involving the collection and removal of biological material, any activity intended to disturb birds, including by mechanical, air, gas, wind powered or audible means, developing or consenting to the development or operation of commercial recreational/visitor facilities or organised recreational activities and undertaking active acoustic surveys in the marine environment as activities which require consent for the SPA.

3.3 Evaluation against Conservation Objectives

Guidance from the European Commission (EC, 2021) explains that "*The description of the site's integrity and the impact assessment should be based on the parameters that determine the conservation objectives and that are specific to the habitats and species of the site and their ecological requirements*".

Following this guidance, the identification of adverse effects potentially arising from the proposed development on the integrity of the European sites identified in Section 3.1 and described in Section 3.2 focusses on and is limited to the Conservation Objectives of those sites.

Table 3-2 to Table 3-6 below detail the evaluation of the likely effects of the proposed development in view of the Conservation Objectives of the sites identified in Section 3.1 and described in Section 3.2. As explained in Sections 1.2 and 1.3, the assessment of adverse effects is carried out in view of the Conservation Objectives of the relevant European sites, which are in turn defined by the respective Attributes and Targets. Therefore, the evaluation of whether or not the proposed development will adversely affect each European site (in view of the Conservation Objective in question) is made with regard to these Attributes and Targets.

Table 3-2 Evaluation of the likely effects of the proposed development in view of the Conservation Objectives of the River Boyne and River Blackwater SPA.

Qualifying Interest	Conservation Objective (NPWS, 2024)	Do the proposed development provide for any potential delay or interruption in the achievement of this Conservation Objective, as defined by its Attributes and Targets?	Adverse Effect
[A229] Kingfisher	"*To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.*" No Attributes or Targets are defined at present for the River Boyne and River Blackwater SPA or any SPA in the Member State where Kingfisher is listed as a qualifying interest. The Attributes and Targets used below are taken from other SPAs in the Member State. According to the Generic Conservation Objectives for the SPA, favourable conservation status of a species is achieved when *"population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats", "the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future"* and *"there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis"* (NPWS, 2022).	The Attributes of this Conservation Objective focus on "*Population size", "Productivity rate", "Spatial distribution of territories", "Extent and quality of nesting banks and other suitable nesting features", "Forage spatial distribution, extent, abundance and availability", "Water quality" and "Barriers to connectivity".* This site is located 500m southwest and upstream of the confluence of the Mell Stream and the River Boyne, with the Mary McAleese Bridge being its most downstream point. Kingfisher nest in burrows in soft clay banks along rivers. There is no suitable burrowing habitat along the Mell Stream, therefore impacts on Kingfisher burrows or suitable habitat can be ruled out. Whilst the SPA is located upstream of the proposed development, there is potential for the proposed development to result in the release of pollutants such as hydrocarbons or sediment which may lead to ex situ impacts on habitat for Kingfisher and a reduction in prey availability through water quality degradation.	Yes

Table 3-3 Evaluation of the likely effects of the proposed development in view of the Conservation Objectives of the River Boyne and River Blackwater SAC

Qualifying Interest	Conservation Objective (NPWS, 2021b)	Do the proposed development provide for any potential delay or interruption in the achievement of this Conservation Objective, as defined by its Attributes and Targets?	Adverse Effect
[7320] Alkaline Fens	*"To maintain the favourable conservation condition of the QI habitat in the SAC"*	The Attributes of this Conservation Objective focus on "*Habitat area", Habitat distribution", "Ecosystem function" in terms of peat formation and hydrology, "Vegetation composition" in terms of diversity, negative indicator species, and non-native species, "Vegetation structure", "Physical structure", "Indicators of local distinctiveness", and "Transitional areas between fen and adjacent habitats".* Alkaline Fens are not present in the vicinity of the proposed development or downstream. Therefore, there is no potential for adverse effects.	No
[91E0] Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion, Alnion incanae, Salicion albae*)	*"To restore the favourable conservation condition of the QI habitat in the SAC"*	The Attributes of this Conservation Objective focus on "*Habitat area", Habitat distribution", "Woodland size", "Woodland structure" in terms of community, cover and height, diversity, dead wood, veteran trees, indicators of local distinctiveness, and natural regeneration, "Hydrological regime", "Vegetation composition" in terms of typical species, native species, and negative indicator species.* The nearest examples of Alluvial Forests are located 200m upstream of the confluence of the Mell Stream and the River Boyne. At the point that the Mell Stream meets the River Boyne, the River Boyne is tidal, therefore pollutants could be carried upstream. However, given the nature and scale of the project, the size of the Mell Stream and the assimilative capacity of the River Boyne when in flood, adverse effects resulting from pollutants entering the River Boyne will not occur.	No
[1099] River Lamprey	*"To restore the favourable conservation condition of River Lamprey in the SAC"*	The Attributes of this Conservation Objective focus on "*Distribution*", "*Distribution of larvae", "Population structure of larvae", "Larval lamprey density in fine sediment",* and *"Extent and distribution of spawning nursery habitat".* River Lamprey are present in the River Boyne and have been recorded in the main channel of the River Boyne south of Obelisk Bridge in Oldbridge. River Lamprey spawn in clean gravels with flowing water which is required to keep the eggs oxygenated. After River Lamprey hatch, the ammocoetes (young) are washed downstream where they settle in areas with low flows, and bury themselves in the	Yes

Qualifying Interest	Conservation Objective (NPWS, 2021b)	Do the proposed development provide for any potential delay or interruption in the achievement of this Conservation Objective, as defined by its Attributes and Targets?	Adverse Effect
		sediment. The Mell Stream is shallow (generally <5cm between pools) and the stream bed consists of cobbles with lots of organic material which is unsuitable spawning habitat for River Lamprey. Furthermore, the Mell Stream dries out which makes it unsuitable. It is likely that juvenile lamprey are present in the lower reaches of the Boyne closer to the confluence with the Mell Stream. There is potential for the proposed development to result in the release of pollutants such as hydrocarbons, cementitious materials and sediment which may lead to a reduction in water quality.	
[1106] Salmon	*"To restore the favourable conservation condition of Atlantic Salmon in the SAC"*	The Attributes of this Conservation Objective focus on "*Distribution: extent of anadromy*", "*adult spawning fish", "Salmon fry abundance", "Out-migrating smolt abundance", "Number and distribution of redds",* and *"Water quality".* Salmon are present in the River Boyne near the proposed development and potentially in the Mell Stream. There is potential for the proposed development to result in the release of pollutants such as hydrocarbons, cementitious materials and sediment which may lead to a reduction in water quality.	Yes
[1355] Otter	*"To maintain the favourable conservation condition of Otter in the SAC"*	The Attributes of this Conservation Objective focus on "*Distribution*", "*Extent of terrestrial habitat", "Extent of freshwater habitat (river and lake)", "Couching sites and holts", "Fish biomass available",* and *"Barriers to connectivity".* Otter are found throughout the SAC including the River Boyne and the Mell Stream, and the adjacent terrestrial habitat. The proposed development may lead to disturbance due to noise and visual disturbance. There is potential for the proposed development to result in the release of pollutants such as hydrocarbons, cementitious materials and sediment which may lead to indirect impacts to Otter through a reduction in water quality and reduction in fish biomass available.	Yes

Table 3-4 Evaluation of the likely effects of the proposed development in view of the Conservation Objectives of the Boyne Estuary SPA

Qualifying Interest	Conservation Objective (NPWS, 2013)	Do the proposed development provide for any potential delay or interruption in the achievement of this Conservation Objective, as defined by its Attributes and Targets?	Adverse Effect
[A048] Shelduck [A130] Oystercatcher [A140] Golden Plover [A141] Grey Plover [A142] Lapwing [A143] Knot [A144] Sanderling [A156] Black-tailed Godwit [A162] Redshank [A169] Turnstone [A999] Wetland and Waterbirds	*"To maintain the favourable conservation condition of the QI in the SPA"*	The Attributes of the Conservation Objectives for these QIs focus on "*Population trend*", and "Distribution". This site is located 5km east, and hydrologically 5.5km downstream towards the coast via the Boyne Estuary. The site of the proposed development is not suitable for these species, as is it currently being used for the temporary storage of materials and is surrounds to the north and east by an active construction site. There is potential for the proposed development to result in the release of pollutants such as hydrocarbons or sediment which may enter the Boyne Estuary. However, given the significant hydrological distance, 5.5km, the assimilative capacity of the Boyne Estuary, and due to the fact that it is a tidal waterbody and flows through an urban centre and industrial port, there are no anticipated impacts as a result of pollution.	No
[A195] Little Tern	*"To maintain the favourable conservation condition of the QI species in the SPA"*	The Attributes of this Conservation Objective focus on "*Breeding population abundance: apparently occupied nests (AONs)*", "*Productivity rate: fledged young per breeding pair*", "*Distribution: breeding colonies*", "*Prey biomass available*", "*Barriers to connectivity*", and "*Disturbance at breeding site*". This site is located directly 5km east, and hydrologically 5.5km downstream towards the coast via the Boyne Estuary. Little Tern have successfully bred at this site since at least 1984. In 2024, 112 nesting attempts fledged 167 chicks. Given the distance between the proposed development and this site, and the intervening land uses including Drogheda town centre and industrial areas, the proposed development does not have the potential to affect Little Tern through disturbance.	No

Qualifying Interest	Conservation Objective (NPWS, 2013)	Do the proposed development provide for any potential delay or interruption in the achievement of this Conservation Objective, as defined by its Attributes and Targets?	Adverse Effect
		As above, there is potential for the proposed development to result in the release of pollutants such as hydrocarbons or sediment which may enter the Boyne Estuary. However, given the significant hydrological distance, 5.5km, the assimilative capacity of the Boyne Estuary, and due to the fact that it is a tidal waterbody and flows through an urban centre and industrial port, there are no anticipated impacts as a result of pollution events during construction. Little Tern generally feed along the coast and in estuaries, within 5km of their nesting sites (Woodward, 2019), and therefore any disturbance generated by the proposed development would not significantly affect this species.	

Table 3-5 Evaluation of the likely effects of the proposed development in view of the Conservation Objectives of Boyne Coast and Estuary SAC

Qualifying Interest	Conservation Objective (NPWS, 2012a)	Do the proposed development provide for any potential delay or interruption in the achievement of this Conservation Objective, as defined by its Attributes and Targets?	Adverse Effect
[1130] Estuaries	*"To maintain the favourable conservation condition of the QI habitat in the SAC"*	The Attributes of this Conservation Objective focus on "*Habitat area*" and "*Community distribution*". This habitat is located 5.5km downstream from the proposed development. There is potential for the proposed development to result in the release of pollutants such as hydrocarbons or sediment which may enter the Boyne Estuary and consequently the SAC. However, given the significant hydrological distance, 5.5km, the assimilative capacity of the Boyne Estuary, and due to the fact that it is a tidal waterbody and flows through an urban centre and industrial port, there are no anticipated impacts as a result of pollution events during construction.	No
[1140] Mudflats and sandflats not covered by seawater at low tide	*"To maintain the favourable conservation condition of the QI habitat in the SAC"*	The Attributes of this Conservation Objective focus on "Habitat area" and "Community distribution". This habitat is located hydrologically approximately 5.5km downstream from the proposed development at the coast. There is potential for the proposed development to result in the release of pollutants such as hydrocarbons or sediment which may enter the Boyne Estuary and consequently the SAC. However, given the significant hydrological distance, 5.5km, the assimilative capacity of the Boyne Estuary, and due to the fact that it is a tidal waterbody and flows through an urban centre and industrial port, there are no anticipated impacts as a result of pollution events during construction.	No

Qualifying Interest	Conservation Objective (NPWS, 2012a)	Do the proposed development provide for any potential delay or interruption in the achievement of this Conservation Objective, as defined by its Attributes and Targets?	Adverse Effect
[1210] Annual vegetation of drift lines	There is no Conservation Objective for this QI habitat.	As there is no Conservations Objective for this habitat, there are no Attributes or Targets. This closest known location of this habitat is at Baltray, c. 10km downstream. There is potential for the proposed development to result in the release of pollutants such as hydrocarbons or sediment which may enter the Boyne Estuary and consequently the SAC. However, given the significant hydrological distance to this European site, 5.5km, the assimilative capacity of the Boyne Estuary, and due to the fact that it is a tidal waterbody and flows through an urban centre and industrial port, there are no anticipated impacts as a result of pollution events during construction.	No
[1310] Salicornia and other annuals colonising mud and sand	*"To restore the favourable conservation condition of the QI habitat in the SAC"*	The Attributes of this Conservation Objective focus on "Habitat area", "Community distribution", "Physical structure" in terms of sediment supply, creek and pans, and flooding regime, "Vegetation structure" in terms of zonation, vegetation height, vegetation cover, and negative indicator species – *Spartina anglica*, and "Vegetation composition: typical species and sub-communities". This closest known location of this habitat is in the Boyne Estuary, c. 7.5km downstream. There is potential for the proposed development to result in the release of pollutants such as hydrocarbons or sediment which may enter the Boyne Estuary and consequently the SAC. However, given the significant hydrological distance to this European site, 5.5km, the assimilative capacity of the Boyne Estuary, and due to the fact that it is a tidal waterbody and flows through an urban centre and industrial port, there are no anticipated impacts as a result of pollution events during construction.	No
[1330] Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)	*"To maintain the favourable conservation condition of the QI habitat in the SAC"*	The Attributes of this Conservation Objective focus on "Habitat area", "Habitat distribution", "Physical structure" in terms of sediment supply, creek and pans, and flooding regime, "Vegetation structure" in terms of zonation, vegetation height, vegetation cover, and negative indicator species – *Spartina anglica*, and "Vegetation composition: typical species and sub-communities".	No

Qualifying Interest	Conservation Objective (NPWS, 2012a)	Do the proposed development provide for any potential delay or interruption in the achievement of this Conservation Objective, as defined by its Attributes and Targets?	Adverse Effect
		This closest known location of this habitat is in the Boyne Estuary, c. 6km downstream. There is potential for the proposed development to result in the release of pollutants such as hydrocarbons or sediment which may enter the Boyne Estuary and consequently the SAC. However, given the significant hydrological distance to this European site, 5.5km, the assimilative capacity of the Boyne Estuary, and due to the fact that it is a tidal waterbody and flows through an urban centre and industrial port, there are no anticipated impacts as a result of pollution events during construction.	
[2110] Embryonic shifting dunes	*"To restore the favourable conservation condition of the QI habitat in the SAC"*	The Attributes of this Conservation Objective focus on *"Habitat area", "Community distribution", "Physical structure"* in terms of functionality and sediment supply, creek and pans, and flooding regime*, "Vegetation structure"* in terms of zonation, and *"Vegetation composition"* in terms of typical species and sub-communities, plant health of foredune grasses, and *"negative indicator species".* This is a terrestrial habitat, and it is not located in the vicinity of the proposed development. Therefore, there will be no impacts on this habitat.	No
[2120] Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes)	*"To restore the favourable conservation condition of the QI habitat in the SAC"*	The Attributes of this Conservation Objective focus on "*Habitat area", "Habitat distribution", "Physical structure: functionality and sediment supply", "Vegetation structure: zonation, "Vegetation composition" in terms of typical species and sub-communities, plant health of dune grasses, and "negative indicator species".* This is a terrestrial habitat, and it is not located in the vicinity of the proposed development. Therefore, there will be no impacts on this habitat.	No
[2130] Fixed coastal dunes with herbaceous vegetation (grey dunes)	*"To restore the favourable conservation condition of the QI habitat in the SAC"*	The Attributes of this Conservation Objective focus on *"Habitat area", "Community distribution", "Physical structure"* in terms of functionality and sediment supply, creek and pans, and flooding regime*, "Vegetation structure"* in terms of zonation*, and "Vegetation composition"* in terms of typical species and sub-communities, plant health of foredune grasses, and *"negative indicator species".* This is a terrestrial habitat, and it is not located in the vicinity of the proposed development. Therefore, there will be no impacts on this habitat.	No

Table 3-6 Evaluation of the likely effects of the proposed development in view of the Conservation Objectives of the North-West Irish Sea SPA

Qualifying Interest	Conservation Objective (NPWS, 2023a)	Do the proposed development provide for any potential delay or interruption in the achievement of this Conservation Objective, as defined by its Attributes and Targets?	Adverse Effect
Qualifying Interests for which the wintering populations are designated			
Red-throated Diver [A001] Great Northern Diver [A003] Common Scoter [A065] Black-headed Gull [A179] Common Gull [A182] Great Black-backed Gull [A187] Little Gull [A177]	*To maintain the favourable conservation condition of the Qualifying Interest Species in the North-west Irish Sea SPA.*	The Attributes of this Conservation Objective focus on "*Non-breeding population size*", "*Spatial distribution*", "*Forage spatial distribution, extent and abundance*", "*Disturbance across the site*", and "*Barriers to connectivity and site use*". This site is located directly 9.5km east and 11.2km hydrologically east of the proposed development towards the coast. However, given the significant hydrological distance to this European site, the assimilative capacity of the Boyne Estuary, and due to the fact that it is a tidal waterbody and flows through an urban centre and industrial port, it can be concluded that the proposed development will not lead to adverse effects on this European site.	No
Populations for which the resident (both wintering and breeding) populations are designated			
Guillemot [A199] Razorbill [A200] Fulmar [A009] Herring Gull [A184] Kittiwake [A188]	The Conservation Objective for Guillemot and Razorbill is *to maintain the favourable conservation condition of the Qualifying Interest Species in the North-west Irish Sea SPA.* The Conservation Objective for Fulmar, Herring Gull and Kittiwake is *to Restore the favourable conservation condition of the Qualifying Interest Species in the North-west Irish Sea SPA.*	The Attributes of these Conservation Objectives focus on "*Population size*", "*Spatial distribution*", "*Forage spatial distribution, extent and abundance*", "*Disturbance across the site*", and "*Barriers to connectivity and site use*". This site is located directly 9.5km east and 11.2km hydrologically east of the proposed development towards the coast. However, given the significant hydrological distance to this European site, the assimilative capacity of the Boyne Estuary, and due to the fact that it is a tidal waterbody and flows through an urban centre and industrial port, it can be concluded that the proposed development will not lead to adverse effects on this European site.	No

Qualifying Interest	Conservation Objective (NPWS, 2023a)	Do the proposed development provide for any potential delay or interruption in the achievement of this Conservation Objective, as defined by its Attributes and Targets?	Adverse Effect
Qualifying Interests for which the breeding populations are designated			
Manx Shearwater [A013] Cormorant [A017] Shag [A018] Lesser Black-backed Gull [A183] Roseate Tern [A192] Common Tern [A193] Arctic Tern [A194] Little Tern [A195] Puffin [A204]	The Conservation Objective for Manx Shearwater, Lesser Black-backed Gull, Roseate Tern, Common Tern, Arctic Tern and Little Tern is *to maintain the favourable conservation condition of the Qualifying Interest Species in the North-west Irish Sea SPA.* The Conservation Objective for Cormorant, Shag, Puffin is *to Restore the favourable conservation condition of the Qualifying Interest Species in the North-west Irish Sea SPA.*	The Attributes of this Conservation Objective focus on "*Breeding population size*", "*Spatial distribution*", "*Forage spatial distribution, extent and abundance*", "*Disturbance across the site*", and "*Barriers to connectivity and site use*". This site is located directly 9.5km east and 11.2km hydrologically east of the proposed development towards the coast. However, given the significant hydrological distance to this European site, the assimilative capacity of the Boyne Estuary, and due to the fact that it is a tidal waterbody and flows through an urban centre and industrial port, it can be concluded that the proposed development will not lead to adverse effects on this European site.	No

3.4 Summary of Adverse Effects

In Section 3.1, it was established that five European sites, namely the River Boyne and River Blackwater SPA, River Boyne and River Blackwater SAC, Boyne Estuary SPA, Boyne Coast and Estuary SAC, and the North-West Irish Sea SPA occur within the ZoI of the proposed development, and that pathways exist for effects between the proposed development and any other European sites.

In Section 3.3, it was established that, in the absence of appropriate mitigation, interruptions or delays in achieving certain Conservation Objectives for two of these sites, i.e. adverse effects on the integrity of two of those sites, as a result of the proposed development, cannot be ruled out. A summary of the adverse effects identified is given in Table 3-7 below.

Table 3-7 Summary of the European sites likely to be affected by the proposed development and the Qualifying Interests likely to be affected in each site.

European site	Qualifying Interest
River Boyne and River Blackwater SPA [004232]	Kingfisher (*Alcedo atthis*) [A229]
River Boyne and River Blackwater SAC [002299]	River Lamprey (*Lampetra fluviatilis*) [1099] Salmon (*Salmo salar*) [1106] Otter (*Lutra lutra*) [1355]

4. ASSESSMENT OF ADVERSE EFFECTS

4.1 Approach to Assessment

In Section 3 of this NIS, adverse effects on the integrity of the River Boyne and River Blackwater SPA and River Boyne and River Blackwater SAC were identified. In accordance with European Commission guidance (EC, 2021), the identification of these effects was focussed on and limited to the Conservation Objectives of the sites concerned.

Section 4 provides a detailed analysis and evaluation of the adverse effects identified in Section 3 (as summarised in Section 3.4). In order to fully assess the implications of the proposed development for the European sites concerned, each of the potential adverse effects is evaluated with reference to the Attributes and Targets which define the Conservation Objectives of those sites.

4.2 River Boyne and River Blackwater SPA

The Qualifying Interest for which River Boyne and River Blackwater SPA has been selected and which could be adversely affected, was identified in Section 3.

4.2.1 Kingfisher

The Attributes for 'Kingfisher' are:

- Population size
- Productivity rate
- Spatial distribution of territories
- Extent and quality of nesting banks and other suitable nesting features
- Forage spatial distribution, extent, abundance and availability
- Water quality
- Barriers to connectivity

Population size

The site-specific Target for population size is "*no significant decline in the long term*". No suitable nesting habitat for Kingfisher exists along the Mell Stream. Potential impacts of the construction and operation of the proposed development on water quality include sedimentation, the spillage of hydrocarbons, cementitious materials and other chemicals, and inadequate treatment of wastewater from on-site toilets and washing facilities. The operation phase of the proposed development, if not properly managed, has the potential to impact on water quality via increased impermeable surface areas, which can result in surface water run-off due to pollution from hydrocarbon leaks and residues in urban areas. Drogheda has available capacity for wastewater treatment, therefore negative impacts on water quality as a result of wastewater during the operation phase of the proposed development are not expected to be significant. Given that the potential for significant negative water quality impacts as a result of the proposed development cannot be ruled out, mitigation is required.

Productivity rate

The site-specific Target for productivity rate is "*sufficient productivity to maintain the population trend as stable or increasing*". No suitable nesting habitat for Kingfisher exists along the Mell Stream. Potential impacts of the construction and operation of the proposed development on water quality include sedimentation, the spillage of hydrocarbons, cementitious materials and other chemicals, and inadequate treatment of wastewater from on-site toilets and washing facilities. The operation phase of the proposed development, if not properly managed, has the potential to impact on water quality via increased impermeable surface areas, which can result in surface water run-off due to pollution from hydrocarbon leaks and residues in urban areas. Drogheda has available capacity for wastewater treatment, therefore negative impacts on water quality as a result of wastewater during the operation phase of the proposed development are not expected to be significant. Given that the potential for negative water quality impacts as a result of the proposed development cannot be ruled out, mitigation is required.

Spatial distribution of territories

The site-specific Target for spatial distribution of territories is "*No significant loss of distribution in the long term, other than that occurring due to natural patterns of variation".* No suitable nesting habitat for Kingfisher exists along the Mell Stream. Potential impacts of the construction and operation of the proposed development on water quality include sedimentation, the spillage of hydrocarbons, cementitious materials and other chemicals, and inadequate treatment of wastewater from on-site toilets and washing facilities. The operation phase of the proposed development, if not properly managed, has the potential to impact on water quality via increased impermeable surface areas, which can result in surface water run-off due to pollution from hydrocarbon leaks and residues in urban areas. Drogheda has available capacity for wastewater treatment, therefore negative impacts on water quality as a result of wastewater during the operation phase of the proposed development are not expected to be significant. Given that the potential for negative water quality impacts as a result of the proposed development cannot be ruled out, mitigation is required.

Extent and quality of nesting banks and other suitable nesting features

The site-specific Target for Extent and quality of nesting banks and other suitable nesting features is "*Sufficient area of high-quality nesting habitat to support the population target".* No suitable nesting habitat for Kingfisher exists along the Mell Stream, therefore, no mitigation is required.

Forage spatial distribution, extent, abundance and availability

The site-specific Target for Forage spatial distribution, extent, abundance and availability is "*Sufficient number of locations, area of suitable forage habitat and available forage biomass to support the population target".* No suitable nesting habitat for Kingfisher exists along the Mell Stream. Potential impacts of the construction and operation of the proposed development on water quality include sedimentation, the spillage of hydrocarbons, cementitious materials and other chemicals, and inadequate treatment of wastewater from on-site toilets and washing facilities. The operation phase of the proposed development, if not properly managed, has the potential to impact on water quality via increased impermeable surface areas, which can result in surface water run-off due to pollution from hydrocarbon leaks and residues in urban areas.

Drogheda has available capacity for wastewater treatment, therefore negative impacts on water quality as a result of wastewater during the operation phase of the proposed development are not expected to be significant. Given that the potential for negative water quality impacts as a result of the proposed development cannot be ruled out, mitigation is required.

Water quality

The site-specific Target for Water Quality is "*Both biotic (i.e. Q-value) and abiotic indices reflect overall good-high quality status".* Potential impacts of the construction and operation of the proposed development on water quality include sedimentation, the spillage of hydrocarbons, cementitious materials and other chemicals, and inadequate treatment of wastewater from on-site toilets and washing facilities. The operation phase of the proposed development, if not properly managed, has the potential to impact on water quality via increased impermeable surface areas, which can result in surface water run-off due to pollution from hydrocarbon leaks and residues in urban areas. Drogheda has available capacity for wastewater treatment, therefore negative impacts on water quality as a result of wastewater during the operation phase of the proposed development are not expected to be significant. Given that the potential for negative water quality impacts as a result of the proposed development cannot be ruled out, mitigation is required.

Barriers to connectivity

The site-specific Target for Barriers to connectivity is "*Number, location, shape and hectares No significant increase".* The proposed development will not increase barriers to connectivity within the SPA or between the SPA and ecologically important habitats outside the SPA.

4.3 River Boyne and River Blackwater SAC

The Qualifying Interests for which River Boyne and River Blackwater SAC has been selected and which could be adversely affected, were identified in Section 3. The Conservation Objectives for each Qualifying Interest is stated in Table 3-2 above.

4.3.1 River Lamprey (*Lampetra fluviatilis*) [1099]

The Attributes for 'River lamprey' are:

- Distribution
- Distribution of larvae
- Population structure of larvae
- Larval lamprey density in fine sediment
- Extent and distribution of spawning nursery habitat

Distribution

The site-specific Target for distribution is "*restore access to all water courses down to first order streams*". There is potential for the proposed development to result in the release of pollutants and sediment which may lead to a reduction in water quality. Such effects may result in negative effects on the distribution of river lamprey in this SAC, which in turn could negatively affect the distribution of this species. Therefore, mitigation is required.

Distribution of larvae

The site-specific Target for the distribution of larvae is "*not less than 50% of sample sites with suitable habitat positive for larval brook/river lamprey"*. There is potential for the proposed development to result in the release of pollutants and sediment which

may lead to a reduction in water quality. The habitat of River Lamprey is in fine sediment in freshwater environments. The nearest area of fine sediment are at the confluence of the River Boyne and the Mell Stream, which is tidal and has a saline influence. Therefore, there is no pathways for effects on the distribution of larvae, and no mitigation is required.

Population structure of larvae

The site-specific Target for the population structure of larvae is "*at least three age/size classes of larval brook/river lamprey present*." There is potential for the proposed development to result in the release of pollutants and sediment which may lead to a reduction in water quality. The habitat of River Lamprey is in fine sediment in freshwater environments. The nearest area of fine sediment is at the confluence of the River Boyne and the Mell Stream, which is tidal and has a saline influence. Therefore, there is no pathways for effects on the population structure of larvae, and no mitigation is required.

Larval lamprey density in fine sediment

The site-specific Target for Larval lamprey density in fine sediment is "*mean density of brook/river larval lamprey in sites with suitable habitat more than 5/m².*" There is potential for the proposed development to result in the release of pollutants and sediment which may lead to a reduction in water quality. The habitat of River Lamprey is in fine sediment in freshwater environments. The nearest area of fine sediment is at the confluence of the River Boyne and the Mell Stream, which is tidal and has a saline influence. Therefore, there is no pathways for effects on the density of larvae in fine sediment, and no mitigation is required.

Extent and distribution of spawning nursery habitat

The site-specific Target for Extent and distribution of spawning nursery habitat is "*no decline in extent and distribution of spawning and nursery beds*." The Mell Stream is shallow and the stream bed is made up of cobbles with lots of organic material, which is unsuitable spawning habitat for River Lamprey. The stream also dries out during dry spells. Therefore, no mitigation is required.

4.3.2 Salmon (*Salmo salar*) [1106]

The Attributes for 'Salmon' are:

- Distribution: extent of anadromy
- Adult spawning fish
- Salmon fry abundance
- Out-migrating smolt abundance
- Number and distribution of redds
- Water quality

Distribution: extent of anadromy

The site-specific Target for Distribution: extent of anadromy is "*100% of river channels down to second order accessible from estuary*." This attribute is measured by the percentage of the river which is accessible. The Mell Stream is a small watercourse with small pools and slow-moving shallow riffle sections between the pools. The conditions in the stream are not suitable for salmon to spawn, therefore the proposed development will not result in any decline in the extent of anadromy. Therefore, no mitigation is required.

Adult spawning fish

The site-specific Target for Adult spawning fish is "*Conservation limit (CL) for each system consistently exceeded*." There is potential for the proposed development to result in the release of pollutants and sediment which may lead to a reduction in water quality. This has the potential to negatively impact the health of Salmon via the reduction of water quality. This in turn may negatively impact adult spawning salmon, as salmon may not be of adequate health for reproduction or may fail to reach maturity for spawning. Therefore, mitigation is required.

Salmon fry abundance

The site-specific Target for Salmon fry abundance is "*Maintain or exceed 0+ fry mean catchment-wide abundance threshold value. Currently set at 17 salmon fry/5 minutes sampling*." There is potential for the proposed development to result in the release of pollutants and sediment which may lead to a reduction in water quality. The Mell Stream is not suitable for salmon to spawn, and the River Boyne downstream is tidal and has a saline influence. Salmon fry live in freshwater until they undergo physiological changes to allow them to survive in salt water (smoltification). Therefore, the Mell Stream and the tidal sections of the Rive Boyne are not suitable habitat for salmon fry. There are no pathways for effects between the proposed development and salmon fry habitat. Therefore, no mitigation is required.

Out-migrating smolt abundance

The site-specific Target for Out-migrating smolt abundance is "*no significant decline*." The main threats to out-migrating smolt abundance are estuarine pollution, predation, and sea lice (NPWS 2014). There is potential for the proposed development to result in the release of pollutants and sediment which may lead to a reduction in water quality. This has the potential to negatively impact the health of health of smolt on their seaward migration. Therefore, mitigation is required.

Number and distribution of redds

The site-specific Target for Number and distribution of redds is "*No decline in number and distribution of spawning redds due to anthropogenic causes*." The Mell Stream is a small watercourse with small pools and slow-moving shallow riffle sections between the pools. The conditions in the stream are not suitable for salmon to spawn, therefore the proposed development will not result in any decline in the number or distribution of redds. Therefore, no mitigation is required.

Water quality

The site-specific Target for Water quality is "*At least Q4 at all sites sampled by EPA*." All Q-values in this SAC within the Zone of Influence are rated Q4. The River Mattock, which flows into this SAC approximately 3.2km upstream of the proposed develop has a Q-value of 3. A potential effect of the proposed development on this Qualifying Interest is through water quality impacts. Potential impacts of the construction and operation of the proposed development on water quality include sedimentation, the spillage of hydrocarbons, cementitious materials and other chemicals, and inadequate treatment of wastewater from on-site toilets and washing facilities. The operation phase of the proposed development, if not properly managed, has the potential to impact on water quality via increased impermeable surface areas, which can result in surface water run-off due to pollution from hydrocarbon leaks and residues in urban areas. However, Drogheda has available capacity for wastewater treatment, therefore negative impacts on water quality as a result of wastewater during the operation phase of the proposed development are not expected to be significant (Uisce Éireann, 2023).

Given that the potential for significant negative water quality impacts as a result of the proposed development cannot be ruled out, mitigation is required.

4.3.3 Otter (*Lutra lutra*) [1355]

The Attributes for 'Otter' are:

- Distribution
- Extent of terrestrial habitat
- Extent of freshwater (river) habitat
- Extent of freshwater (lake) habitat
- Couching sites and holts
- Fish biomass available
- Barriers to connectivity

Distribution

The site-specific Target for distribution is "*no significant decline*". This SAC is located within the site of the proposed development. Negative impacts such as reduced water quality and disturbance may occur as a result of the proposed development. This may lead to otter utilizing the area less. During the otter survey, no signs of otter were recorded, and given that the stream does no support significant populations of fish. The Mell Stream is not important for Otter and therefore, the proposed development will not lead to a decline in the distribution of this species in the SAC. Therefore, mitigation is not required.

Extent of terrestrial habitat

The site-specific Target for Extent of terrestrial habitat is "*no significant decline*". NPWS identifies a 10m buffer along rivers and around water bodies as critical for otters (NPWS, 2021). The proposed development will not lead to a reduction of terrestrial habitat in the SAC. The proposed development is entirely outside the SAC. Therefore, mitigation is not required.

Extent of freshwater (river) habitat

The site-specific Target for Extent of freshwater (river) habitat is "*no significant decline*." There will be no alterations to the Mell Stream as part of the proposed development. Therefore, mitigation is not required.

Extent of freshwater (lake) habitat

The site-specific Target for Extent of freshwater (lake) habitat is "*no significant decline*." Lakes do not occur within the Zone of Influence for the proposed development, nor do they occur downstream. Therefore, it can be concluded that negative effects on the extent of lake habitat for otter as a result of the proposed development will not occur, and mitigation will not be required.

Couching sites and holts

The site-specific Target for Couching sites and holts is "*no significant decline*." An Otter survey undertaken in April 2023, November 2024 and December 2025 did not identify any holts or couches along the Mell Stream, however new holts or couches could be excavated between the survey and construction. Therefore, mitigation is required.

Fish biomass available

The site-specific Target for Fish biomass available is "*no significant decline*." There is potential for the proposed development to result in the release of pollutants and sediment which may lead to a reduction in water quality, which could lead to indirect impacts to Otter through a reduction in water quality and reduction in fish biomass available. Therefore, mitigation is required.

Barriers to connectivity

The site-specific Target for Barriers to connectivity is "*no significant increase*". There will be no alterations to the River Boyne or the Mell Stream as part of the proposed development. Therefore, mitigation is not required.

Conclusion

In the absence of appropriate mitigation, the construction of the proposed development has the potential to adversely affect the Conservation Objectives for 'River lamprey,' 'Salmon,' and 'Otter' in the River Boyne and River Blackwater SAC through impacts on water quality. Therefore, mitigation is required to avoid these adverse effects.

5. MITIGATION

5.1 Principles and Approach

Section 4 of this NIS assessed the adverse effects likely to arise from the proposed development on the specific Attributes and Targets which define the Conservation Objectives for a number of Qualifying Interests of the River Boyne and River Blackwater SAC. This section prescribes mitigation measures to ensure their full and proper implementation aimed at mitigating these adverse effects, thereby protecting the integrity of this European site during the construction and operation of the proposed development.

The mitigation measures prescribed in this NIS have been designed according to the principle of a mitigation hierarchy, as outlined in the European Commission's guidance document *Assessment of plans and projects in relation to Natura 2000 Sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC* (EC, 2021). According to this hierarchy, mitigation measures first suggest *avoidance* (i.e. preventing significant impacts from happening in the first place) and then *reduction* of impact (i.e. reducing the magnitude and/or likelihood of an impact).

As mitigation measures are related directly to impacts and only indirectly to receptors and as, in this case, all of the affected receptors have been identified as being affected the same set of impacts, to describe mitigation measures under the headings of the relevant receptors would lead to undue repetition. Therefore, the measures prescribed in this NIS are described under the heading of water quality which has been identified as a source of adverse effects for Kingfisher in the River Boyne and River Blackwater SPA, and River Lamprey, Atlantic Salmon and Otter in the River Boyne and River Blackwater SAC. A separate heading under Otter (Section 5.2.2) is presented which relates to the need for a preconstruction survey if more than 12 months has elapsed between the survey and the construction of the proposed development.

The mitigation measures are prescribed in Section 5.2 and a protocol to ensure their full and proper implementation is prescribed in Section 5.3. The significance of any residual effects following the inclusion of mitigation measures is evaluated in Section 5.4. As per the assessment of adverse effects in Section 4, this evaluation is made in view of the relevant Conservation Objectives.

5.2 Mitigation Measures

5.2.1 Water Quality

All works in proximity to the Mell Steam will follow best practice guidance, as per the following documents:

- *Guidelines on Protection of Fisheries during Construction Works in and adjacent to Waters* (IFI, 2016).
- *C532 Control of water pollution from construction sites: guidance for consultants and contractors* (CIRIA, 2001).
- A suitably qualified and experienced Ecological Clerk of Works (ECoW) will be employed by the Contractor for the duration of the construction phase to ensure that the mitigation measures contained in this NIS are adhered to. The ECoW will sign-off on the method statement for works in proximity to the Mell Stream and the implementation the mitigation for water quality including settlement ponds and silt fences.

- DCE IRL has prepared a Construction Management Plan (CMP) (dated December 2025) for the proposed development (Appendix D). The CMP outlines the construction methodology that will be applied to the site. The purpose of the document is to ensure the contractor maintains an approved construction and demolition management plan for the works. A detailed CMP will be prepared by the Main Contractor. This plan will be managed and updated in advance of commencement on site and throughout the construction phase as required, by the appointed Main Contractor.
- There will be no washdown of cement lorries or other equipment with wet cement permitted on site.
- Fuels, lubricants and hydraulic fluids for equipment used on the construction site shall be carefully handled to avoid spillage, properly secured against unauthorised access and provided with spill containment according to codes of practice.
- Fuelling and lubrication of equipment shall not be carried out within 50m of the Mell Stream.
- Any spillages will be immediately contained;
- Waste oils and hydraulic fluids will be collected in leak-proof containers and transported off site for disposal or recycling.
- Foul sewage drainage from site offices during construction stage will be removed to a suitable treatment facility or discharged to the existing foul system on site.
- When working near surface water and the application of in-situ materials cannot be avoided, the use of alternative materials such as biodegradable shutter oils shall be used.
- Any plant operating close to the water will require special consideration on the transport of concrete from the point of discharge from the mixer to final discharge into the delivery pipe (tremie). Care will be exercised when slewing concrete skips or mobile concrete pumps near the Mell Stream.
- There will be no hosing into surface water drains of spills of concrete, cement, grout or similar materials. Such spills shall be contained immediately, and runoff prevented from entering watercourses.
- Concrete waste and wash-down water will be contained and managed on site to prevent pollution of the watercourses.
- On-site concrete batching and mixing activities will only be allowed at the identified construction compound.
- Washout from concrete lorries, with the exception of the chute, will not be permitted on site and will only take place at the construction compound (or other appropriate facility).
- Chute washout will be carried out at designated locations only. These locations will be signposted. The concrete plant and all delivery drivers will be informed of their location with the order information and on arrival on site.
- Chute washout locations will be provided with appropriate designated, contained impermeable area and treatment facilities including adequately sized settlement tanks. The water in the settlement tanks shall be pH corrected prior to discharge (which shall be by means of one of the construction stage settlement facilities) or alternatively disposed of as waste in accordance with the Contractor's CMP.

- Surface runoff from the site will be minimised by ensuring that the paved/ impervious area is minimised. All surface water runoff will be intercepted and directed to appropriate settlement facilities for the removal of pollutants and/or silt prior to discharge. The site compound will be fenced off as part of the site establishment period.
- Fuel storage tanks shall have secondary containment provided by means of an above ground bund to capture any oil leakage.
- Storage tanks and associated provision, including bunds, will conform to the current best practice for oil storage and will be undertaken in accordance with Best Practice Guide BPGCS005 – Oil Storage Guidelines (Enterprise Ireland).
- Wastewater drainage from all site offices and construction facilities will be contained and disposed of in an appropriate manner to prevent water pollution and in accordance with the relevant statutory requirements.
- All hazardous material will be stored within secondary containment, temporary bunds for oil/diesel storage tanks.
- Bunds must be sufficiently large to fully contain accidental spills provided around all tanks/storage areas containing harmful substances, safe handling of potentially hazardous materials.
- All machinery and harmful substances stored overnight in areas remote from open water courses, so that any potential oil/diesel spillage will reach the Mell Stream.
- Fuels, oils, greases and hydraulic fluids must be stored in bunded compounds. Refuelling of machinery, etc., will be carried out in bunded areas.
- There must be no discharge of suspended solids or any other deleterious matter into the Mell Stream.

Measures to Protect Water the Mell Stream

- The silt fence which is currently along the Mell Stream (Plate 2.1) will be maintained for the duration of the construction phase and until the risk to water quality from uncontrolled run-off has passed. No works are proposed which necessitate it's removal during the construction phase.
- Stockpiling, temporary or otherwise, of construction material or topsoil will be prohibited within 10m of the Mell Stream, in order to minimize sources of sediment runoff.
- If build-up of groundwater occurs, it will be removed from the excavations by pumping through a silt sock, or similar.
- Run-off from the site will be collected in temporary attenuation ponds as required as the construction phase progresses. The ponds will be located so that surface water run-off from the site cannot reach the Mell Stream without attenuation, settlement. The pH of the ponds will be checked at least once per week, during, and with two weeks of works involving the use of wet cement on site. Where a pH value of 8.5 or above is detected, pH correction will be carried out.
- Surface water from the site during the operation phase will pass through an attenuation tank and hydrocarbon interceptor before being discharged out of the existing outfall with concrete headwall next to the pumping station.

Given the full and proper implementation of these water quality protection measures, the construction, operation, and maintenance of the proposed development will not give rise to adverse effects.

5.2.2 Otter

In addition to the mitigation measures related to water quality, the following mitigation measure will apply specifically to Otter:

- If more than 12 months has elapsed since the Otter survey undertaken to inform this NIS (December 2025), a new survey will be carried out within 4 weeks of the commencement of the proposed development. If a holt or couch is identified, direction will be sought from the NPWS.

5.3 Implementation

In order to give effect to the mitigation prescribed in this NIS it should be a condition of any consent granted in respect of the proposed development that all of the mitigation, including monitoring and enforcement, prescribed in this NIS be binding, during the construction phase, on the Contractor and, during operational phase, on the local authority. Accordingly, all of the mitigation prescribed herein shall be transposed into the Contract Documents for the construction of the proposed development.

During construction, all works must comply with relevant legislation and guidelines in order to reduce and minimise environmental impacts and to protect all ecological receptors. In particular, there must be full compliance with the following:

- The mitigation prescribed in this NIS and the accompanying planning application.
- Any conditions which might be attached to the proposed development's planning consent.
- *Guidelines on Protection of Fisheries During Construction Works in and Adjacent to Waters* (IFI, 2016).
- *C532 Control of water pollution from construction sites: guidance for consultants and contractors* (CIRIA, 2001).
- *C648 Control of water pollution from linear construction projects: technical guidance* (CIRIA, 2006).
- *Guidelines for the Crossing of Watercourses during the Construction of National Road Schemes* (TII, 2006).
- *Guidelines for Ecological Survey Techniques for Protected Flora and Fauna during the Planning of National Road Schemes* (TII, 2008).
- All applicable legislative requirements in relation to environmental protection.

This list is non-exhaustive. All environmental commitments/requirements and relevant legislation and guidelines which are current at the time of construction will be followed.

5.4 Monitoring

In order to illustrate the effectiveness of the mitigation measures, and in addition to the oversite of the ECoW and the Contractor's Environmental Manager, water quality in the Mell Stream, above and below the outfall, we be tested by the ECoW. Table 5-1 below presents the protocol for monitoring water quality in the Mell Stream before during and after construction.

Table 5-1 Protocol for Monitoring Water Quality

Parameter	Frequency	Rationale	Corrective Action
Visual Assessment	At least weekly during the construction phase.	Regular checks of the Mell Stream will be undertaken by the ECoW and the Contactor's Environmental Manager. The visual checks will include a check of the silt fence and any outfalls for signs of sedimentation, turbidity, pollution, loss of vegetation, erosion etc.	Notify site manager. Silt fence to be repaired/ replaced as required. Identify the source/ pathway of pollution and apply appropriate control measures to be implemented following investigation/ evaluation of the source by the ECoW.
pH	Before the commencement of construction, and fortnightly during works involving the use of wet cement on site.	Lime/cement are alkaline materials and can significantly raise the pH of water. The pH of the settlement ponds on sites and the Mell Stream upstream and downstream of the proposed development/ outfall will be monitored to ensure any difference in Ph i.e. caused by the proposed development is identified.	Notify site manager. Identify the source/ pathway of pollution and apply appropriate control following investigation/ evaluation of the source by the ECoW.
Conductivity	Before the commencement of construction, and fortnightly during works involving the use of wet cement on site.	Lime/cement are alkaline materials and can significantly raise conductivity. The pH of the settlement ponds on sites and the Mell Stream upstream and downstream of the proposed development/ outfall will be monitored to ensure any difference in Ph i.e. caused by the proposed development is identified.	Notify site manager. Identify the source/ pathway of pollution and apply appropriate control measures following investigation/ evaluation of the source by the ECoW.
Macroinvertebrate and chemical analysis	Following construction.	Macroinvertebrate and chemical analysis in the Mell Stream, upstream and downstream of the proposed development/ outfall will be undertaken to ensure any differences in water quality are identified.	Identify the source/ pathway of pollution and apply appropriate control measures following investigation/ evaluation of the source by the ECoW.

5.5 Residual Effects

5.5.1 Atlantic Salmon, Otter, River Lamprey and Kingfisher

The mitigation prescribed in Section 5.2 and the implementation measures prescribed in Section 5.3 will reduce all negative impacts to imperceptible levels.

The Drogheda Wastewater Treatment Plant is currently treating wastewater for up to 40,956 people and has available capacity for an increase in wastewater (Uisce Éireann, 2023).

Therefore, given the full and proper implementation of the mitigation prescribed in this NIS, it can be concluded beyond all reasonable scientific doubt that construction and operation of the proposed development will not adversely affect the integrity of the River Boyne and River Blackwater SAC and the River Boyne and River Blackwater SPA, with regards to the Conservation Objectives for Atlantic Salmon, Otter, River Lamprey and Kingfisher.

6. IN-COMBINATION EFFECTS

6.1 Introduction

Article 6(3) of the Habitats Directive requires that AA be carried out in respect of plans and projects that are likely to have significant effects on European sites, "*either individually or in combination with other plans or projects*". Therefore, regardless of whether or not the likely effects of a plan or project are significant when considered on their own, the significance of the combined effects of the plan or project under assessment and other plans and projects must also be evaluated.

6.2 Methodology

Plans and projects with potential for interactions with the proposed development were selected for assessment. For the purposes of the assessment, small scale and domestic developments were not considered given the nature of the proposed development and the fact that these developments would be subject to stringent planning controls. Plans and projects with planning permission in the Zone of Influence within the last ten years were considered, which aligned with the following criteria:

- within 200m of the proposed development;
- within 200m of the River Boyne and River Blackwater SAC.

The ePlanning websites for Louth and Meath County Councils and the EIA Portal was used to search for planning applications.

6.3 Outcome

Table 6-1 Table 6-1 below details the assessment of the likelihood of significant effects arising from the proposed development in combination with other plans or projects. This assessment was undertaken in view of the Conservation Objectives of the relevant European sites and found that the proposed development does not have the potential to adversely affect any European site in combination with other plans or projects.

Table 6-1 Assessment of potential adverse effects on the integrity of European sites from the proposed development in combination with other plans and projects.

Plan or Project	Description of Plan or Project	In-Combination Effect(s)
Planning Reg. Ref.: 2560350 **Planning Authority:** Louth County Council **Applicant:** Burmilla Limited. **Address:** Slane Road, Drogheda, Co. Louth	The proposed development comprises a residential scheme on a site of 1.36 ha located at Tullybrook, Slane Road, Tullyallen, Drogheda, Co. Louth (known as Tullybrook Phase 4). The Site is enclosed to the north by Tullybrook Court (subject to planning permission Reg. Ref: 06510077 as extended under Reg. Ref:12510022, Reg. Ref: 1858 and Reg. Ref: 211431) and by agricultural lands to the east, south and west. The proposed development will principally consist of the construction of 43no. residential dwellings (4,675.7sq.m. Residential GFA) including an apartment/duplex block (Block 12) containing 9no. two-bedroom apartment units and 9no. three-bedroom duplex units each with a private balcony or terrace and an associated communal open space (0.030ha) and 11no. housing blocks (Blocks 1 to 11 inclusive) comprising 21no. three-bedroom houses and 4no. four-bedroom houses each with a private garden. A total of 43no. car parking spaces are proposed including 2no.accessible parking spaces and 9no. EV charging spaces. A total of 90no. bicycle parking spaces are proposed comprising of 75no. resident spaces and 15no. visitor spaces. The primary pedestrian / vehicular / cycle access to serve the proposed development is provided via the existing entrance from Slane Road on a newly constructed internal road delivered under planning permission Reg. Ref: 06510077 (as extended under Reg. Ref:12510022, Reg. Ref: 1858 and Reg. Ref: 211431). The proposed development will include internal roads and footpaths which will facilitate future connections to the adjoining lands to the east and the provision of 2no. new landscaped public open spaces (0.149ha total). Planning permission is also sought for all ancillary site and development works to facilitate the development, including public lighting; ESB substation kiosk (5.8sq.m.); external sheltered bicycle stores (12.8sq.m.); mechanical and electrical installations; boundary treatments; hard and soft landscaping; retaining wall structures; water, surface water drainage and foul drainage works; associated ground raising and stabilisation ground improvement works, including the importation of soil on-site, and associated strip and excavation works above and below ground.	This development application will be submitted with an NIS which will address the potential for adverse effects arising from it. Water quality mitigation measures, similar to those prescribed in the NIS for Phase 3 (the subject of this NIS) are similar and will similarly avoid adverse effects. Therefore, it can be concluded that the proposed development and this project will not lead to in-combination adverse effects.

Plan or Project	Description of Plan or Project	In-Combination Effect(s)
Planning: 2560940 **Planning Authority:** Meath County Council **Applicant:** Earlsfort Developments Drogheda Limited **Address:** Lands to the east of the M1 motorway and west of the Rathmullan Road, Oldbridge, Drogheda, Co. Meath	The proposed development will consist of the: • demolition/removal of all existing farm buildings/structures and associated hard standing on site; • construction of a large-scale residential development (LRD) of 249 no. units comprising 170 no. two-storey houses (including 37 no. two-bedroom houses, 111 no. three-bedroom houses and 22 no. four-bedroom houses), 16 no. three-storey duplex buildings (accommodating 16 no. one-bedroom and 16 no. two-bedroom units) and a mix of 8 no. three-storey and 3 no. four-storey apartments blocks accommodating a total of 22 no. one-bedroom and 25 no. two-bedroom apartments); • construction of a new vehicular entrance and access road off Rathmullan Road with associated junction works and associated internal access road network with pedestrian and cyclist infrastructure; • provision of a three-storey creche facility (411sq.m) with external play areas at ground and second floor levels and vehicular/bicycle parking area. all ancillary site and infrastructural works, inclusive of removal of existing vehicular entrances, general landscaping and public open space provision, vehicular parking provision (396 no. spaces in total), bicycle parking, boundary treatments, foul/surface water drainage, attenuation areas, provision of a pumping station and provision of an ESB substation, as necessary to facilitate the proposed development.	**No.** An NIS was prepared for this project, which concluded that there would be no adverse effects on the integrity of any European sites, alone or in-combination with other plans and projects. Provided the mitigation proposed in the NIS for the project is implemented, in-combination effects will not occur between this project and the proposed development.
Planning: 2460674 **Planning Authority:** Louth County Council **Applicant:** Premier Periclase Limited **Address:** Strand Road and Boyne Avenue, Drogheda, Co. Louth	The Proposed Development to which this planning application relates is the first phase of CORE and will consist of extensive works that will transform the entirety of the ca. 35.6 hectare site and set it on a path that will ultimately result in it being a sustainably powered enterprise campus. The Proposed Development is unrelated to the existing Industrial Emissions licensed activity at the site. The Proposed Development consists of the following: • The demolition of existing processing and industrial buildings, ancillary structures, and services associated with the PPL facility, site clearance and remediation work. The Proposed Development will carefully sequester the licensed (inert) landfill onsite in accordance with all ongoing and future requirements of the EPA. • A number of existing buildings and structures will be maintained as part of the Proposed Development, such as an existing Workshop Building (located within the northwest of the site), part of an existing Crane Store structure, 3 no. Lime Silos and existing water tanks and infrastructure. These will be incorporated into the design where beneficial and appropriate.	**No.** An NIS was prepared for this project, which concluded that there would be no adverse effects on the integrity of any European sites, alone or in-combination with other plans and projects. The works will take place within an existing industrial site and will abstract freshwater from the River Boyne and seawater from Baltray under existing abstraction arrangements which form part of the baseline conditions. Mitigation measures are included to avoid and reduce the risks of water quality impacts to the River Boyne and the Irish Sea. Therefore, it can be concluded that the proposed development and this project will not lead to in-combination adverse effects.

Plan or Project	Description of Plan or Project	In-Combination Effect(s)
	• The construction of a three storey Energy Centre (EC) building in the northwestern area of the subject site to accommodate 9 no. gas engines, electrical rooms, mechanical plant rooms, telecommunication rooms, switchrooms, and uninterruptible power supply (UPS) rooms. The building includes 9 no. flues ca. 28.9 metres in height. Solar PV arrays and plant will be provided at roof level. • The construction of a three storey Data Centre (DC) building within the southern portion of the site to accommodate data hall floorspace, mechanical and electrical rooms, support facilities, telecommunication rooms, storage, and ancillary office / administration space. Solar PV arrays and plant will be provided at roof level, with a structure offset from the southern façade of the building providing additional solar PV arrays and a green wall. • The construction of a single storey Facility Operations Centre (FOC) building to the west of the EC building, to accommodate security and network operations centre rooms, staff facilities, plant rooms, and storage. • The construction of a single storey Pump and Filtration Building in the northeastern portion of the site. • The construction of ancillary structures including a single storey Security Gatehouse and Security Kiosk at the main site entrance from Boyne Avenue. • An ESB Substation will be provided in the northwestern corner of the site within a fenced compound, to accommodate transformers, electrical equipment and a single storey ESB Control Building. It is noted that the cable connection from this substation to an offsite ESB substation to the north, which is in partial ownership of PPL, is not included as part of the Proposed Development and will be subject to the necessary consenting process by ESB, separate to the Proposed Development. • A Battery Energy Storage System (BESS) compound will be provided to the north of the proposed EC building, accommodating battery units and associated plant and equipment within a fenced compound. • The construction of a Cooling Compound substation located to the immediate east of the BESS compound. • A Thermal Store Compound to accommodate thermal storage equipment will be located to the east of the EC building. • The provision of a Pump and Filtration System and other ancillary structures including a Firewater Tank, a Fire Fighting Water Pump Building, Control Building, a Maintenance Yard, and Waste Management facilities.	

Plan or Project	Description of Plan or Project	In-Combination Effect(s)
	• The provision of ground-mounted solar PV arrays on the existing licensed landfill and stockpile no. 3 (which will be re-profiled and capped), along with 3 no. compact substations. • Staff car parking (50 no. spaces) and bicycle parking will be provided in the western portion of the site, adjacent to the proposed FOC Building and DC Building. All associated works including access arrangements, internal roadways and footpaths, car and cycle parking, boundary treatments, landscaping and services, and all ancillary works.	
Planning Reg. Ref.: 2360345 **Planning Authority:** Louth County Council **Applicant:** Tullybrook Developments Limited **Address:** Slane Road, Drogheda, Co. Louth	This development was granted permission in January 2024. It will consist of the construction of a part three / part four storey apartment / duplex block (known as Block 3) (2,473.87sq.m GIA) containing 23no. apartment units comprising 11no. 2-bedroom units and 12no. 3-bedroom units with associated private rear gardens and balconies; and shared landscaped communal open space (184sq.m). This development also involves the provision of high quality landscaped public open space (625sq.m), 23no. car parking spaces including 3no. accessible parking spaces, and 4no. EV charging spaces and 88no. bicycle parking spaces, 44no. of which are secured, and covered spaces located at lower ground floor level of the proposed building with the remaining 44no. cycle spaces located at surface level. The primary pedestrian / vehicular / cycle access to serve the development is provided via the existing entrance from Slane Road and a newly constructed internal road delivered under planning permission Reg. Ref: 06510077 (as extended under Reg. Ref:12510022, Reg. Ref: 1858 and Reg. Ref: 211431). Planning permission is also sought for all associated site development and landscape works including the provision of external bin store (17.3sq.m GIA), internal meter room, internal cold water storage tank, stair and lift cores and associated lobbies and circulation space, boundary treatment, hard and soft landscaping, pathways, access steps and associated railings to the open space, provision of foul, service water and water services on site with connections and modifications to existing network. The development will integrate with the permitted scheme that is currently under construction on the wider Tullybrook lands and the subject units will utilise existing	This development application was submitted with an AA Screening Report which concluded that there are no pathways for impacts between the proposed development and any European sites. Therefore, it can be concluded that the proposed development and this project will not lead to in-combination adverse effects.

Plan or Project	Description of Plan or Project	In-Combination Effect(s)
	and permitted access and infrastructure as detailed and will ultimately consolidate and rationalise the complete Tullybrook scheme.	
Planning Reg. Ref.: n/a **Planning Authority:** n/a **Applicant:** Meath County Council **Address:** Oldbridge, Co. Meath	This project is south of the proposed development on the south bank of the River Boyne, upstream of the Mary McAllese Bridge. The project is being developed by Meath County Council and is exempt from planning permission, although it is subject to AA. The proposed development consists of three elements, 1) the repair of the plastic boardwalk, the removal of the embankment and rebuilding of the section of plastic boardwalk, 2) the repointing of Engineer's Bridge and 3) the construction of a new overflow between the Boyne Canal and the Boyne.	An NIS was prepared for this project, which concluded that there would be no adverse effects on the integrity of any European sites, alone or in-combination with other plans and projects. The works are temporary in nature and in the footprint of the existing greenway, and mitigation has been included in the design to ensure that water quality is protected and invasive species will not be spread. Therefore, it can be concluded that the proposed development and this project will not lead to in-combination adverse effects.
Planning Reg. Ref.: 21414 **Planning Authority:** Louth County Council **Applicant:** Louth & Meath Education & Training Board **Address:** Marley's Lane / Rathmullen Road, Drogheda, County Louth	An extension of planning permission was granted until the 26th April 2026. EXTENSION OF DURATION 15/675****Permission for proposed development will consist of a new two-storey administrative headquarters building. The building will be exclusively occupied by the applicant (LMETB) for the purposes of administering educational & training services in the Louth & Meath areas. The proposed development also provides for 57 no surface car parking spaces, cycle parking, landscaping and boundary treatment, signage and all associated site development works. Vehicular access to the proposed development is provided via a new access off Marley's Lane.	**No.** This development is located within the grounds of the existing Saint Oliver's Community College, in close proximity of the River Boyne (approximately 140m south), and is approximately 740m downstream of the proposed development. Given the assessment of the Planner's Report that an NIS, the fact that this project will occur on existing college grounds, the capacity for wastewater treatment in Drogheda and the assimilative capacity of the River Boyne and Boyne Estuary, it can be concluded that the proposed development and this

Plan or Project	Description of Plan or Project	In-Combination Effect(s)
		project will not lead to in-combination adverse effects (Uisce Éireann 2023).
Planning Reg. Ref.: 20275 **Planning Authority:** Louth County Council **Applicant:** Maybeck Limited **Address:** Lagavooren, Donore Road, Drogheda, Co Louth	Planning permission for amendments for granted on the 28th August 2020. Permission for amendments to previously permitted development granted under PL18176 for development at site previously used as the Roadstone Batching Plant that incorporates the lower section of the previous batching plant, bounded by Donore Road to the north, the Watery Steps to the east, the upper section of the batching plant to the south and the Bloomsbury Centre to the west. The amendments to the development will consist of A. Removal of the basement car park and proposed 28 no. surface car parking spaces located to the rear of Block A. B. Modification of the 66 apartment layouts to accommodate elderly residents, comprising of 4 no. 1 bedroom apartments, 54 no. 2 bedroom apartments and 8 no. 3 bedroom apartments. The total number and mix of units and gross floor areas have not changed. C. Modification to the elevations and sections to reflect the amended apartment layouts. D. Minor modification of the positioning of the 3 blocks on the site and their composition. E. Modification of the communal facility, bin stores and general landscaping. F. Adjustment of the existing vehicular site access off Donore Road and introduction of two new pedestrian site access points; one at the foot of the Water Steps with a proposed ESB substation and a second access point off Donore Road, all as granted under PL 18176. G. All associated amendments to roof plant, site lighting, signage, services, landscaping, external furniture, related infrastructure and site development works in conjunction with the amendments noted in points A-F.	**No.** This project is approximately 200m south of the River Boyne, and approximately 2.6km downstream of the proposed development. Roadways, treelines and hedgerows, fields, car parks and residential and commercial developments lie between this project and the River Boyne. This project did not progress to stage 2 of Appropriate Assessment, due to its scale and the nature of the project. Given this, and given the capacity for wastewater treatment in Drogheda and the assimilative capacity of the River Boyne and Boyne Estuary, it can be concluded that the proposed development and this project will not lead to in-combination adverse effects (Uisce Éireann 2023).
Planning Reg. Ref.: 2560671 **Planning Authority:** Louth County Council	Planning Application Lodged: 22nd October 2025 A Large Residential Development (LRD 020), "South Bank", of five No, six storey blocks, comprising 172 apartments, commercial (non-residential) units, and all associated roads/parking/paths, landscaped areas (including a public square to the	**No.** This project is located on the southern bank of the River Boyne, within 10m of the river. It is approximately 3.1km downstream of the proposed development. The area in which this project is situated is densely urban.

Plan or Project	Description of Plan or Project	In-Combination Effect(s)
Applicant: Hallscotch Venture Ltd. **Address:** Marsh Road, Drogheda, Co Louth	river) and ancillary buildings, all at Marsh Road (to the East of Scotch Hall Shopping Centre), Drogheda, Co. Louth. A permission of 10 year duration is sought, at the discretion of Louth County Council. The upper five stories comprise apartments all with balconies, and the 5th floor penthouse will be recessed with terraces. At ground floor level there is, variously, further apartments, parking and ancillary storage for the apartments and other non-residential uses. There are 172 apartments in total comprising 73 no. 1- bed apartments, 71 no. 2-bed apartments and 28 no. 3-bed apartments. There are 132 no. car parking spaces, 304 long stay and 121 short stay bicycle parking spaces being provided within the site. The non-residential uses comprise three retail units/café(s) of a total area 253 sq. m. and a crèche of 247 sq. m.. The ancillary buildings comprise provision for an E.S.B. substation (if required) of 25.5 sq. m. and a bicycle store of 33.2 sq. m. The existing, partially built, concrete building which occupies part of the site will be demolished, along with the remains of a building and a shed abutting No. 4 Marsh Road, and two old storage buildings on a lane North of Marsh Road. Vehicular and pedestrian access to the development is via, "New Road" to the East of Scotch Hall Shopping Centre, off Marsh Road. An existing lane off Marsh Road will be used to provide continued access to the Industrial/warehouse units to the South of Marsh Road, for pedestrian and bicycle access and egress for the proposed development, and as an exit for bin lorries and larger delivery vehicles only.	Provided the mitigation measures outlined in the Natura Impact Statement for the proposed development is adhered to, and given the capacity for wastewater treatment in Drogheda and the assimilative capacity of the River Boyne and Boyne Estuary, it can be concluded that the proposed development and this project will not lead to in-combination adverse effects (Uisce Éireann 2023).
Planning Reg. Ref.: 236005 **Planning Authority:** Louth County Council **Applicant:** Sionna Homes Ltd. **Address:** Boyne Road, Drogheda, Co. Louth.	Planning permission was granted for a Large-Scale Residential Development (LRD) on a site which extends to c.3.8 ha, on lands at Boyne Road, Drogheda, Co. Louth. The application is being made under the provisions of the Planning and Development (Amendment)(Large Scale Residential Development) Act 2021. The proposed development will consist of: i) The Construction 192 no. residential units comprising of: a. 42 no. dwellings (22 no. 3-beds, and 20 no. 4-beds) b. 150 no. apartments (41 no. 1-beds, 95 no. 2-beds, and 14 no. 3-bed) ii) New vehicular, cycle and pedestrian access to the site from the Newtown Road (L2307) including new crossing points; iii) Replacing and upgrading of existing pedestrian steps to the site from Strand Road (R167) iv) The provision of non-residential uses on the site: a. Childcare facility/Creche (394 sq.m) b. Café (81 sq.m) c. Gymnasium (554 sq.m) d. Community Workspace/Community Space (77 sq.m) v) The provision of 196 no. basement and surface level parking spaces, incluiding EV spaces, Disabled parking spaces, and Go Car spaces; vi) The provision of 344 no. sheltered cycling spaces for residents 122 no. visitor cycle spaces; vii) The provision of public and private open space; viii) The provision of cycle paths throughout the site; ix) The provision of Landscaping including planting, public art and play equipment; x) The provision of Attenuation ponds; xi) The provision of public lighting throughout the subject site; xii) All internal roads, tracks and paths, incluiding signage throughout the site; xiii) All associated development and infrastructure works including traffic calming on	**No.** This project is located approximately 25m north of the River Boyne and is approximately 4.7km downstream of the proposed development. The potential effects arising from this project and the proposed development are similar. However, provided the mitigation measures outlined in the Natura Impact Statement for the proposed development is adhered to, and given the capacity for wastewater treatment in Drogheda and the assimilative capacity of the River Boyne and Boyne Estuary, it can be concluded that the proposed development and this project will not lead to in-combination adverse effects (Uisce Éireann 2023).

Plan or Project	Description of Plan or Project	In-Combination Effect(s)
	Newtown Road and Newtown Link Road; xiv) Demolition of existing buildings on site (2,113.4 sq.m); A Natura Impact Statement (NIS) has been included with this application. All application documentation and information including the NIS is available to view online at the following website set up by the applicant: www.BoyneRoadLRD.com.	
Planning Reg. Ref.: ABP: 311678 **Planning Authority:** Louth County Council **Applicant:** Loughdale Properties Ltd **Address:** Old Slane Road, Mell/Tullyallen, Drogheda, Co. Louth.	Permission was granted for 237 no. residential units (86 no. houses, 151 no. apartments), creche and associated site works on the 9th of February 2022.	**No.** This project is approximately 630m northwest of the proposed development. Provided the mitigation measures outlined in the Natura Impact Statement for the proposed development is adhered to and given the assimilative capacity of the River Boyne and Boyne Estuary, it can be concluded that the proposed development and this project will not lead to in-combination adverse effects.

7. CONCLUSION

This NIS has been prepared in accordance with the relevant provisions of the Habitats Directive, the Habitats Regulations and the Planning and Development Act, as well as the relevant case law and current guidance. It has demonstrated that, in the absence of appropriate mitigation, Tullybrook Phase 3, individually or in combination with other plans or projects, could adversely affect the integrity of two European sites, namely the River Boyne and River Blackwater SPA and the River Boyne and River Blackwater SAC, in view of their Conservation Objectives. In light of this finding, this NIS has prescribed appropriate mitigation to eliminate or minimise such effects. Any residual effects, either individually or in combination with other plans or projects, have been assessed as not constituting adverse effects on the integrity of the European sites concerned. This assessment has been undertaken on the basis of the best scientific knowledge in the field and the Precautionary Principle. No reasonable scientific doubt remains as to the absence of such effects.

It is the considered opinion of ROD, as the author of this NIS, that, in making its AA in respect of the proposed Tullybrook Phase 3, Louth County Council, as the Competent Authority in this case, may determine that, given the full and proper implementation of the mitigation prescribed in this NIS, the proposed development, either individually or in combination with other plans or projects, will not adversely affect the integrity of the River Boyne and River Blackwater SPA and River Boyne and River Blackwater SAC. ROD recommends that it be a binding condition of any consent granted in respect of the proposed development that the mitigation prescribed in this NIS be fully and properly implemented.

8. REFERENCES

CIRIA (2001) *C532 Control of water pollution from linear construction projects: technical guidance*. Construction Industry Research and Information Association, London.

CIRIA (2006) *C532 Control of water pollution from construction sites: guidance for consultants and contractors*. Construction Industry Research and Information Association, London.

Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (the Habitats Directive). Official Journal of the European Communities, L206/7.

Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds (the Birds Directive). Official Journal of the European Union, *L20/7.*

DEHLG (2010) *Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities*. Department of Environment, Heritage and Local Government, Dublin.

Eionet (2018) *Population status and trends at the EU and Member State levels: 2013 - 2018. Article 17 Assessments*. <http://bd.eionet.europa.eu/article17/> [Accessed: January 2022]. European Topic Centre on Biological Diversity.

EC (2021) *Assessment of Plans and Projects in Relation to Natura 2000 sites: Methodological Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC*. European Commission Environment Directorate-General.

EC (2013) *Interpretation Manual of European Union Habitats – EUR28*. European commission, Brussels.

EC (2018) *Managing Natura 2000 sites: The Provisions of Article 6 of the Habitats Directive 92/43/EEC*. European Commission, Brussels.

Enterprise Ireland. Best Practice Guide BPGCS005 – Oil Storage Guidelines.

European Communities (Birds and Natural Habitats) Regulations, 2011. *SI No. 477/2011*.

European Communities (Birds and Natural Habitats) (Amendment) Regulations, 2013. *SI No. 499/2013*.

European Communities (Birds and Natural Habitats) (Amendment) Regulations, 2015. *SI No. 355/2015*.

Fossitt, J. (2000) *A Guide to Habitats in Ireland*. Heritage Council of Ireland.

IFI (2016) *Guidelines for the Protection of Fisheries During Construction Works in and Adjacent to Waters.* Inland Fisheries Ireland, Dublin.

Landelikje Vereniging tot Behoud van de Waddenzee, Nederlandse vereniging tot Vesherming van Vogels *v.* Staatssecretaris van Landbouw, Natuurbeheer en Visserij (Waddenzee) [2004] C-127/02 ECR I-7405.

National Biodiversity Data Centre (NBDC) (2022) *Biodiversity Maps* <https://maps.biodiversityireland.ie> [Accessed January 2022]. National Biodiversity Data Centre, Waterford.

National Parks and Wildlife Service (NPWS) (2010a) *Circular NPW 1/10 & PSSP 2/10 Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities*. National Parks & Wildlife Service, Department of Arts, Heritage and the Gaeltacht, Dublin.

National Parks and Wildlife Service (NPWS) (2010b) *Site Synopsis for the River Boyne and Blackwater SPA [004232].* National Parks & Wildlife Service, Department of Arts, Heritage and the Gaeltacht, Dublin.

National Parks and Wildlife Service (NPWS) (2012a) *Conservation Objectives for Boyne Coast and Estuary SAC [001957]*. National Parks & Wildlife Service, Department of Arts, Heritage and the Gaeltacht, Dublin.

National Parks and Wildlife Service (NPWS) (2013) *Conservation Objectives for the Boyne Estuary SPA [004080]*. National Parks & Wildlife Service, Department of Arts, Heritage and the Gaeltacht, Dublin.

National Parks and Wildlife Service (NPWS) (2014) *Site Synopsis for River Boyne and River Blackwater SAC [002299]*. National Parks & Wildlife Service, Department of Arts, Heritage and the Gaeltacht, Dublin.

National Parks and Wildlife Service (NPWS) (2015a) *Site Synopsis for Boyne Estuary SPA [004080]*. National Parks & Wildlife Service, Department of Arts, Heritage and the Gaeltacht, Dublin.

National Parks and Wildlife Service (NPWS) (2016) *Site Synopsis for Boyne Coast and Estuary SAC [001957]*. National Parks & Wildlife Service, Department of Arts, Heritage and the Gaeltacht, Dublin.

National Parks and Wildlife Service (NPWS) (2018) *Natura 2000 Standard Data Form for Boyne Coast and Estuary SAC. [IE0001957]*. Updated September 2018. National Parks & Wildlife Service, Department of Arts, Heritage and the Gaeltacht, Dublin.

National Parks and Wildlife Service (NPWS) (2019a) *The Status of EU Protected Habitats and Species in Ireland. Volume 1: Summary Overview*. National Parks & Wildlife Service, Department of Arts, Heritage and the Gaeltacht, Dublin.

National Parks and Wildlife Service (NPWS) (2019b) *The Status of EU Protected Habitats and Species in Ireland. Volume 2: Habitat Assessment.* National Parks & Wildlife Service, Department of Arts, Heritage and the Gaeltacht, Dublin.

National Parks and Wildlife Service (NPWS) (2019c) *The Status of EU Protected Habitats and Species in Ireland. Volume 3: Species Assessment*. National Parks & Wildlife Service, Department of Arts, Heritage and the Gaeltacht, Dublin.

National Parks and Wildlife Service (NPWS) (2019d) *Natura 2000 Standard Data Form for the River Boyne and River Blackwater SAC [002299]*. Updated September

2019. National Parks & Wildlife Service, Department of Arts, Heritage and the Gaeltacht, Dublin.

National Parks and Wildlife Service (NPWS) (2020a) *Natura 2000 Standard Data Form for the River Boyne and Blackwater SPA [IE0004232]*. Updated October 2020. National Parks & Wildlife Service, Department of Arts, Heritage and the Gaeltacht, Dublin.

National Parks and Wildlife Service (NPWS) (2020b) *Natura 2000 Standard Data Form for the Boyne Estuary SPA [IE0004232]*. Updated October 2020. National Parks & Wildlife Service, Department of Arts, Heritage and the Gaeltacht, Dublin.

National Parks and Wildlife Service (NPWS) (2021) *Conservation Objectives for River Boyne and River Blackwater SAC [004232]*. Updated March 2021. National Parks & Wildlife Service, Department of Arts, Heritage and the Gaeltacht, Dublin.

National Parks and Wildlife Service (NPWS) (2024) *Conservation Objectives for River Boyne and River Blackwater SPA [004232]*. Version 1. National Parks & Wildlife Service, Department of Arts, Heritage and the Gaeltacht, Dublin.

National Parks and Wildlife Service (NPWS (2023a) *Conservation Objectives for the North-west Irish Sea SPA [004236]*. National Parks & Wildlife Service, Department of Arts, Heritage and the Gaeltacht, Dublin.

National Parks and Wildlife Service (NPWS) (2023b) *Site Synopsis for the North-west Irish Sea SPA [004236].* Published 17/07/2023. National Parks & Wildlife Service, Department of Arts, Heritage and the Gaeltacht, Dublin.

National Roads Authority (NRA) (2004) *Guidelines for the Treatment of Noise and Vibration in National Road Schemes.*

National Roads Authority (NRA) (2008) *Guidelines for The Treatment of Otters Prior to the Construction of National Road Schemes*.

OPR (2021) *Appropriate Assessment Screening for Development Management: OPR Practice Note PN01*. Office of the Planning Regulator, Dublin.

Peay, S. (2000) *Guidance on works affecting white-clawed crayfish*. Report prepared for English Nature, Peterborough and the Environment Agency, Leeds.

Peay, S. (2002) *Guidance on Habitat for White-clawed Crayfish and its Restoration. Environment Agency Technical Report W1-067/TR*. A report prepared for English Nature, Peterborough and the Environment Agency, London as part of the Species Recovery Programme.

People Over Wind and Peter Sweetman *v.* Peter Sweetman *v.* Coillte Teoranta [2018] C-323/17.

Planning and Development Act, 2000. *No. 30 of 2000.*

Planning and Development (Amendment) Act, 2002. *No. 32 of 2002.*

Planning and Development (Strategic Infrastructure) Act, 2006. *No. 27 of 2006.*

Planning and Development (Amendment) Act, 2010. *No. 30 of 2010*.

Smith, G, F., O'Donoghue, P., O'Hora, K. & Delaney, E. (2011) *Best Practice Guidance for Habitat Survey and Mapping*. Heritage Council of Ireland.

TII (2008) *Guidelines for the Crossing of Watercourses during the Construction of National Road Schemes.* Transport Infrastructure Ireland, Dublin.

TII (2009) *Ecological Survey Techniques for Protected Flora and Fauna during the Planning of National Road Schemes.* Transport Infrastructure Ireland, Dublin.

TII (2009) *Guidelines for Assessment of Ecological Impacts of National Road Schemes*. National Roads Authority, Dublin.
TII (2014) *Good Practice Guidance for the Treatment of Noise during the Planning of National Road Schemes.* National Roads Authority, Dublin.

Uisce Éireann (2023) *Settlements with Waste Water Discharge Authorisations.* Wastewater Treatment Capacity Register (Louth). https://www.water.ie/connections/developer-services/capacity-registers/wastewater-treatment-capacity-register/louth/.

APPENDIX A

Project Drawings