Appropriate Assessment (AA) Screening & Natura Impact Statement (NIS) Report

Proposed Derryarkin Sand and Gravel Pit

BD Flood Unlimited Company

Derryarkin townland, Rhode, Co. Offaly

Prepared by:

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Basis of Report

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Acronyms and Abbreviations

AA	Appropriate Assessment
NIS	Natura Impact Statement
SAC	Special Area of Conservation
SPA	Special Protection Area
LSE	Likely Significant Effect(s)
EcIA	Ecological Impact Assessment

1.0 Introduction

1.1 Background

SLR Consulting Ireland (SLR) was commissioned by BD Flood Unlimited Company (hereafter referred to as the Client), to prepare an Appropriate Assessment (AA) Screening report and Natura Impact Statement (NIS) to accompany a planning application for the extraction of sand and gravel at Derryarkin townland, Rhode, Co. Offaly (hereafter referred to as "the Site").

1.2 Relevant Legislation and Policy

The requirement for AA screening and AA is set out in the Habitats Directive (Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora, which is transposed into Irish law primarily through the European Communities (Birds and Natural Habitats) Regulations 2011–21, (S.I. 477 of 2011, as amended) ("Birds and Natural Habitats Regulations")) and the Planning and Development Acts 2000-22. Further details are provided in **Appendix A**.

Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora (Habitats Directive) provides legal protection for habitats and species of European importance. The Directive requires that where a plan or project is likely to have a significant effect on a European Site, while not directly connected with or necessary to the nature conservation management of the site, it will be subject to 'Appropriate Assessment' to identify any implications for the European site in view of the site's Conservation Objectives. Specifically, Article 6(3) of the Habitats Directive states:

> *'6(3) Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives. In the light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public'.*

The competent authority must carry out a screening for appropriate assessment to assess, in view of best scientific knowledge, if the proposed project, individually or in combination with another plan or project is likely to have a significant effect on a European site. If it cannot be excluded, based on objective information, that the proposed project, individually or in combination with other plans or projects, will have a significant effect on a European site, an appropriate assessment of its implications for the European Site(s) in view of the Site's conservation objectives is required to be carried out.

The provisions of Article 6(3) do not apply where the proposed plan or project is 'connected with or necessary to the management of the site'. In this case, the proposed project is not directly connected with or necessary to the management of any European site(s).

1.3 Report Purpose

This report presents an examination of whether the proposed project is likely to have a significant effect on a European site (either alone or in combination with other plans or projects) and is based on best available scientific knowledge. This report has been prepared to inform the competent authority in completing their statutory obligations in relation to Appropriate Assessment, as required by Article 6(3) under Council Directive 92/43/EEC (Habitats Directive).

The information presented will allow the Competent Authority, in this case Offaly County Council, to make a determination regarding likely significant effects on European sites resulting from the proposed development, in accordance with and fulfillment of the requirements of Article 6 of the Habitats Directive and derived Regulations.

1.4 Statement of Authority

SLR Project Ecologist Victoria Molloy prepared this report and SLR Associate Ecologist Michael Bailey carried out the technical review.

Victoria Molloy holds a BSc. in Zoology from the University of Galway. She has over four years' experience as a consultant ecologist and is a Qualifying Member of the Chartered Institute of Ecology and Environmental Management (CIEEM). Victoria has prepared a range of survey reports and impact assessment reports for a variety of project types including quarries, renewable energy, forestry licence applications, housing, road, and industrial developments. She is also responsible for carrying out a range of surveys to inform these assessments including preliminary ecological assessment (PEA), habitat, ornithological, and marsh fritillary surveys.

Michael Bailey BSc (Hons) MSc MCIEEM is an Associate Ecologist with SLR and has worked in ecological consultancy in Ireland and the UK and also internationally since 2003. Michael Bailey holds a BSc. in Biology and Ecology from the University of Ulster and an MSc. in Quantitative Conservation Biology from the University of the Witwatersrand in Johannesburg, South Africa. Michael has prepared ecological reports including Appropriate Assessment (AA) screening reports and Natura Impact Statements (NIS) for a wide range of projects in Ireland and the UK and is a full member of CIEEM.

2.0 Project Description and the Receiving Environment

2.1 Project Description

The proposed extraction of the sand and gravel will be wet working, (i.e., extraction below the natural groundwater level of the site). Processing of the extracted materials will be carried out on-site to produce a range of aggregates for use by the applicant in the manufacture of concrete. The application also includes for the ancillary facilities required to serve the development, as outlined below:

- An overall application area of c. 19.5 hectares;
- Phased extraction of sand and gravel (wet working) over an area of c. 11.7 hectares with processing that includes crushing and screening and all ancillary works and structures;
- Provision of new site facilities to include wheelwash (c. 35m²), weighbridge (c. 69m²); mobile welfare pod facility (c. 16m²) consisting of office, canteen, toilet and drying room; dedicated parking area, perimeter vegetation planting and fencing.
- Access to the site will be via an existing entrance onto the local access road to the north of the site;
- Progressive restoration of the site to naturally regenerated wildlife habitat and a permanent water body;
- The proposed development life is for 15 years to complete extraction and restoration operations.

2.2 Existing Environment

A desk study was carried out to collate available information on the existing natural environment at the proposed project location.

2.2.1 Site Description

The application area covers a total area of approximately 19.5 hectares (48.2 acres) and comprises reclaimed agricultural land, currently under pasture. The site is a reclaimed former cutaway bog, with a thin layer of residual organic rich clay material remaining, below which there are reserves of sand and gravel both above and below the underlying water table.

The Site is flat with elevations only varying between c. 78m –79m AOD over the proposed extraction area. The access road and existing site entrance are slightly elevated from the main site area being at an elevation of c. 80m AOD. There are no hedgerows within the application area; and the proposed extraction area consists of one large agricultural field sub-divided by stockproof fencing.

The northern boundary consists of a stockproof fence and field drain. Beyond this is an area of slightly elevated higher ground within which turbine T7 of the Yellow River Windfarm is located.

The entire eastern landholding boundary is denoted by the Yellow River. The application boundary runs along the western bank of the river and consists of a post and wire stockproof fence and intermittent trees and vegetation.

The southern application boundary consists of a stockproof fence. Beyond this is an agricultural access track that runs along the southern boundary before taking a ninety degree turn north along a small section of the eastern boundary to a bridge access over the Yellow River to access the lands on the eastern side of the river.

The western application boundary is set back slightly and runs parallel to the western edge of the existing agricultural access track which provides access within the overall landholding from the landowner's farm to the northern application area.

The surrounding landscape is comprised of a mix of agricultural land, cutover bog with recolonising vegetation and commercial forestry stands.

2.2.2 Habitats (Annex I) Summary

There are no Annex I habitats known to be present on the Site or within 2km of the Site.

2.2.3 Species (Annex I birds and Annex II others) Summary

The following Annex I and Annex II species have been recorded in the NBDC 2km grid squares N43X and N43Y and/or within 2km of the Site according to the Article 17 data from the NPWS:

- Otter (*Lutra lutra*);
- White-clawed crayfish (*Austropotamobius pallipes*); and
- Whooper swan (*Cygnus cygnus*).

3.0 Methodology

3.1 Guidance

The assessment was conducted in accordance with the following guidance:

- European Commission. (2002). Assessment of Plans and Projects Significantly Affecting Natura 2000 Sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC. Luxembourg: Office for Official Publications of the European Communities.
- European Commission. (2021). Assessment of plans and projects in relation to Natura 2000 sites - Methodological guidance on Article 6(3) and (4) of the Habitats Directive 92/43/EEC. Commission Notice (2021) Brussels, 28.9.2021 C(2021) 6913 final.
- Environment Heritage and Local Government. (2009, updated 2010). Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities. Dublin: National Parks and Wildlife Service, Department of the Environment, Heritage and Local Government.
- European Commission. (2019). Managing Natura 2000 sites. The provisions of Article 6 of the Habitats Directive 92/43/EEC. Brussels, (2019/C 33/01). OJ C 33, 25.1.2019.
- European Commission. (2013). Interpretation Manual of European Union Habitats. Version EUR 28.
- Office of the Planning Regulator. (2021). OPR Practice Note PN01 Appropriate Assessment Screening for Development Management.

3.2 Sources of Information

Sources of information for the assessment of the Project 'alone' and in combination with other plans and projects include the following:

- Environmental Protection Agency (EPA) (on-line map-viewer including the Appropriate Assessment Tool)[1];
- Department of Housing, Planning, and Local Government- EIA Portal;
- Offaly County Development Plan 2021-2027[2]; and
- Offaly County Council planning portal[3] and myplan.ie[4] were accessed for information on other projects and plans.
- National Parks and Wildlife Service – online European site network information, including site conservation objectives[5];
- National Parks and Wildlife Service – Information on the status of EU protected habitats and species in Ireland (including Article 17 and Article 12 Reports); and
- National Biodiversity Data Centre[6].

[1] https://gis.epa.ie/EPAMaps, accessed July 2025
[2] https://www.offaly.ie/c/county-development-plan/, accessed July 2025
[3] https://www.offaly.ie/planning-search/, accessed July 2025
[4] https://www.myplan.ie/, accessed July 2025
[5] www.npws.ie, accessed July 2025
[6] www.biodiversityireland.ie accessed July 2025

3.3 Process

The process of determining the likelihood of significant effects from a proposed project on European sites is an iterative process centred around a Source-Pathway-Receptor model. For an effect to be established, all three elements of this mechanism must be in place. The absence of one of the elements of the mechanism is sufficient to conclude that a potential effect cannot occur:

- **Source(s)** – e.g., pollutant run-off, noise, removal of vegetation, etc.;
- **Pathway(s)** – functional link, or ecological pathway e.g., groundwater connecting to nearby qualifying wetland habitats; and
- **Receptor(s)** – the qualifying habitats and species of European sites and ecological resources supporting those habitats/species.

In the context of this report, a source is any identifiable element of the proposed project that is known to interact with the receiving environment. A receptor is the Qualifying Interests (QI)[7] for an SAC or Special Conservation Interests (SCI)[8] for an SPA or an ecological feature that is known to be utilised by the QI/SCI. In practice, the term Qualifying Interests also applies to SCIs (and is used in this document for simplicity). A pathway is any connection or link between the source and the receptor

3.3.1 Stage One: AA Screening

The assessment commences with a description of the proposed project, along with a description of the receiving environment and the associated sources for impacts to the receiving environment. All elements of the proposed project are presented including the proposed project location and existing baseline environment. The type of impacts that are likely due to the proposed project (Source) are identified having regard to the spatial and temporal scale of the proposed project, resource requirements and likely emissions. These sources are then used to define the zone of influence (ZoI) of the proposed project as detailed in Section 2.0.

The European Commission Notice (2021) on the 'Assessment of plans and projects in relation to Natura 2000 sites – Methodological guidance on Article 6(3) and (4) of the Habitats Directive 92/43/EEC, states that in identifying European sites (Natural 2000 sites), which may be affected by the project, the following should be identified:

- Any European sites geographically overlapping with any of the actions or aspects of the plan or project in any of its phases, or adjacent to them;
- Any European sites within the likely zone of influence of the plan or project. European sites located in the surroundings of the plan or project (or at some distance) that could still be indirectly affected by aspects of the project, including as regards the use of natural resources (e.g., water) and various types of waste, discharge or emissions of substances or energy; and
- European sites whose connectivity or ecological continuity can be affected by the plan or project.

[7] SACs are areas designated under the Habitats Directive to conserve habitats listed in Annex I of the Directive and plant and animal species listed in Annex II. Collectively these are referred to as the 'Qualifying Interests' or 'QIs' of the SAC.
[8] SPAs are sites classified under the Birds Directive to protect rare or vulnerable bird species listed in Annex I to the Directive as well as regularly occurring migratory species and wetlands. Wetland habitats that support internationally important populations of migratory birds may be coastal or inland. Collectively, these species and habitats are referred to as the 'Special Conservation Interests' of the SPA.

The zone of influence of a proposed project is the geographical area over which it could affect the receiving environment in a way that could have potential effects on the Qualifying Interests of a European site. The OPR (2021) practice note states that the Zone of Influence must be established on a case-by-case basis using the Source-Pathway-Receptor (S-P-R) framework and not by arbitrary distances (such as 15 km). Section 3.2 sets out the detailed rationale for the identification of relevant European sites within the ZoI based on the sources of impacts arising from the proposed project. Subsequently, an assessment is undertaken with respect to potential connectivity (Pathways) to European Sites and their qualifying interests/special conservation interests are identified.

The potential for in-combination effects with other plans and projects is examined in Section 3.3, having regard to the identified impacts of the proposed project along the ecological pathways identified to European sites.

In section 3.4 the likelihood of significant effects of the European Sites within the ZoI is examined having regard to the sensitivity of the site with pathways for impacts associated with the project on its own and in combination with other plans and projects.

Having regard to the European Commission Communication on the Precautionary Principle (European Commission, 2021) the:

> *"Absence of scientific evidence on the significant negative effect of an action cannot be used as justification for approval of this action. When applied to Article 6(3) procedure, the precautionary principle implies that the absence of a negative effect on Natura 2000 sites has to be demonstrated before a plan or project can be authorised. In other words, if there is a lack of certainty as to whether there will be any negative effects, then the plan or project cannot be approved."*

Where significant effects are determined to be likely, or where there is uncertainty regarding the likelihood of significant effects, the project will be required under law to be subjected to Appropriate Assessment.

This AA screening is based on best scientific knowledge and has utilised ecological expertise. In addition, a detailed online review of published scientific literature was conducted. This included a detailed review of the National Parks and Wildlife Website including mapping and available reports for relevant sites and in particular sensitive qualifying interests/special conservation interests described and their conservation objectives.

3.3.2 Stage Two: Appropriate Assessment

A Stage 2 AA (Natura Impact Statement) is a focused and detailed examination, analysis and evaluation carried out by the competent authority of the implications of the plan or project, alone and in-combination with other plans and projects, on the integrity of a European site in view of that site's conservation objectives. Case law has established that such an Appropriate Assessment, to be lawfully conducted, in summary:

(i) must identify, in the light of the best scientific knowledge in the field, all aspects of the project which can, by itself or in-combination with other plans or projects, affect the conservation objectives of the European site;

(ii) must contain complete, precise and definitive findings and conclusions and may not have lacunae or gaps; and

(iii) may only include a determination that the project will not adversely affect the integrity of any relevant European site where the competent authority decides (on the basis of complete, precise and definitive findings and conclusions) that no reasonable scientific doubt remains as to the absence of the identified potential effects.

If adverse impacts can be satisfactorily avoided or successfully mitigated at this stage, so that no reasonable doubt remains as to the absence of the identified potential effects, then the process is complete. If the assessment is negative, i.e. adverse effects on the integrity of a site cannot be excluded, then the process must proceed to stage three and, if necessary, stage four.

4.0 AA Screening

4.1 Management of any European Site

The proposed project consists of the extraction of sand and gravel on the Site. Therefore, it is not connected with, or necessary for, the management of a European site.

4.2 Sources of Potential Impacts

Based on the project description in Section 2.0 and a review of the planning documents the following sources for impacts have been identified. The proposed development has the potential to result in the following effects:

- Habitat loss within the project footprint;
- Changes to surface water quality due to the introduction of suspended solids or other pollutants into waterways;
- Changes to groundwater quality which may impact groundwater dependant water features near the project site;
- Changes to groundwater levels;
- Noise and vibration associated with quarrying activity (quarry machinery and plant activity) which may disturb fauna near the project site; and
- Emissions to air (dust) resulting from quarrying activity which could lead to ecological impacts such as smothering of vegetation restricting growth and reducing potential foraging sources for fauna near the project site.

The habitats and species listed as features of interest of any European sites in proximity to the project must therefore be assessed for affects from potential impact factors listed above, and these effects are considered further below.

4.3 Pathways - Ecological Connections

4.3.1.1 General overview of connection rationale

A population of a mobile species that is a qualifying interest of a European site could also use habitat within or in the vicinity of a project site. If such a population is sometimes present within a project site, it is ecologically connected to the relevant European site. For example, ecological connections may include populations of birds, mammals, migratory fish and other species form the QIs of a European site.

Other examples of potential ecological connections include habitat connections either directly or as ‘stepping stones’. Also, a project site may support a population of the same species as within a connected European site which occasionally exchange individuals. Furthermore, a project site may support populations of species which are prey/food or hosts to the QIs of a European site.

4.3.1.2 Ecological Connections – zone of influence

NPWS guidelines (NPWS, 2010) and the Office of the Planning Regulator’s Practice Note PN01 (OPR, 2021) suggest that a 15 km study area is adopted, but a case-by-case basis is undertaken when assessing the potential for source-receptor connectivity between a project and European sites.

While an initial 15 km study area was adopted for SACs, a different approach was undertaken for SPAs.

In the absence of any specific European or Irish guidance in relation to establishing ecological connectivity to SPAs, NatureScot guidance (formerly Scottish Natural Heritage or 'SNH') (SNH, 2016) was consulted. This document provides guidance in relation to the identification of ecological connectivity between development sites and SPAs. The guidance takes into consideration the distances species may travel beyond the boundary of relevant SPAs and provides information on dispersal and foraging ranges of bird species which are frequently encountered when considering plans and projects. It goes on to state that *"in most cases the core range should be used when determining whether there is connectivity between the proposal and the QIs"*. Where SPAs and developments are separated by a greater distance than the core foraging ranges for the SPAs listed QI species, there is no likely ecological connectivity to the development.

According to NatureScot guidance (SNH, 2016), the core foraging distances of wintering grey geese (greylag goose *Anser anser* and pink-footed goose *Anser brachyrhunchus*) from SPAs is 15-20 km. This represents the largest foraging range of all the species listed in this guidance document recorded in Ireland. It is acknowledged that information on core foraging ranges is not available for all Irish SCI species. In such cases, the 15-20 km core foraging range for grey geese has been adopted as a precautionary approach.

Thus, all SPAs within 20 km from the Project were considered for ecological source-receptor connectivity.

Airborne emissions were considered using the approaches outlined in IAQM guidance (IAQM, 2016), which suggests that air pollution and dust from mineral extraction are only likely to be important for sensitive European sites within 500 m.

4.3.1.3 Hydrological and Hydrogeological Connections

Hydrological connectivity beyond 20 km was also searched for using GIS to identify any European sites downstream of the project connected via watercourses.

The Yellow [Castlejordan] stream flows along the eastern Site boundary. This is a tributary of the River Boyne and connects the Site to the River Boyne and River Blackwater SAC and SPA c. 27km downstream of the Site, the Boyne Coast and Estuary SAC and the Boyne Estuary SPA c. 105km downstream of the Site, and the North-West Irish Sea SPA c. 110km downstream of the Site.

The Site is located on the Athboy groundwater body. The River Boyne and River Blackwater SAC and SPA are located on the same groundwater body.

4.4 Identification of European Sites - Sensitive Receptors

European sites identified to have sources and pathways for effects from steps 1 and 2 above. These sites are detailed in **Table 4-1** to interrogate the sensitive receptors present (if any). The locations of these sites, along with hydrological and hydrogeological details, are shown in **Figure 1.**

Table 4-1: Description of European sites with Potential Source-Pathway-Receptor Links

Site Name & Site Code	Distance	Qualifying Features	Connections (Source-Pathway-Receptor)	Considered further in screening [Y/N]
Raheenmore Bog SAC [000582]	5.22km	• Degraded raised bogs still capable of natural regeneration [7120], • Depressions on peat substrates of the Rhynchosporion [7150], • Active raised bogs [7110]	**Habitat loss –** The Site does not overlap with this European site. None of the Annex I habitats for which the European site is designated are found on-site. Therefore, there is no potential for LSEs as a result of habitat loss. **Surface Water Quality –** There is no surface water hydrological connection between the Site and this European site. Therefore, there is no potential for LSEs as a result of reduced surface water quality. **Groundwater Quality –** The Site is located in a different groundwater body to this European site. In addition, the peat habitats for which the European site is designated are primarily rain-fed and are not reliant on groundwater. Therefore, there is no potential for LSEs as a result of reduced groundwater quality. **Dust Emissions –** The Site is located over 500m from this European site. Therefore, it is sufficiently distant to exclude any LSE from dust emissions (IAQM, 2016). **Noise and Vibration –** The Site is considered to be sufficiently distant from this European site to exclude the possibility of LSEs from noise and vibration. **Conclusion:** Therefore, there are no pathways identified – relative to the sources for impacts outlined in **Section 4.2** – that are likely to affect the sensitive receptors of this European site.	**N**
Split Hills and Long Hill Esker SAC [001831]	10.24km	• Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) * important orchid sites [6210]	**Habitat loss –** The Site does not overlap with this European site. None of the Annex I habitats for which the European site is designated are found on-site. Therefore, there is no potential for LSEs as a result of habitat loss. **Surface Water Quality –** There is no surface water hydrological connection between the Site and this European site. Therefore,	**N**

Site Name & Site Code	Distance	Qualifying Features	Connections (Source-Pathway-Receptor)	Considered further in screening [Y/N]
			there is no potential for LSEs as a result of reduced surface water quality. **Groundwater Quality –** The Site is located in a different groundwater body to this European site. Therefore, there is no potential for LSEs as a result of reduced groundwater quality. **Dust Emissions –** The Site is located over 500m from this European site. Therefore, it is sufficiently distant to exclude any LSE from dust emissions (IAQM, 2016). **Noise and Vibration –** The Site is considered to be sufficiently distant from this European site to exclude the possibility of LSEs from noise and vibration. **Conclusion:** Therefore, there are no pathways identified – relative to the sources for impacts outlined in **Section 4.2** – that are likely to affect the sensitive receptors of this European site.	
Lough Ennell SAC [000685]	11.16km	• Alkaline fens [7230]	**Habitat loss –** The Site does not overlap with this European site. None of the Annex I habitats for which the European site is designated are found on-site. Therefore, there is no potential for LSEs as a result of habitat loss. **Surface Water Quality –** There is no surface water hydrological connection between the Site and this European site. Therefore, there is no potential for LSEs as a result of reduced surface water quality. **Groundwater Quality –** The Site is located in a different groundwater body to this European site. Therefore, there is no potential for LSEs as a result of reduced groundwater quality. **Dust Emissions –** The Site is located over 500m from this European site. Therefore, it is sufficiently distant to exclude any LSE from dust emissions (IAQM, 2016).	**N**

Site Name & Site Code	Distance	Qualifying Features	Connections (Source-Pathway-Receptor)	Considered further in screening [Y/N]
			Noise and Vibration – The Site is considered to be sufficiently distant from this European site to exclude the possibility of LSEs from noise and vibration. **Conclusion:** Therefore, there are no pathways identified – relative to the sources for impacts outlined in **Section 4.2** – that are likely to affect the sensitive receptors of this European site.	
Lough Ennell SPA [004044]	11.84km	• Great Crested Grebe (Podiceps cristatus) [A005], • Mallard (*Anas platyrhynchos*) [A053], • Pochard (*Aythya ferina*) [A059], • Tufted Duck (*Aythya* fuligula) [A061], • Goldeneye (*Bucephala clangula*) [A067], • Coot (*Fulica atra*) [A125], • Golden Plover (Pluvialis apricaria) [A140], • Lapwing (*Vanellus vanellus*) [A142], • Greenland White-fronted Goose (*Anser albifrons flavirostris*) [A395], • Wetland and Waterbirds [A999]	**Habitat loss –** The Site does not overlap with this European site. The Site is located over 11km from the European site which is outside the maximum foraging range of the golden plover (SNH, 2016). The Site is considered to be sufficiently distant from the European site to be outside of the core foraging range of the other species for which the site is designated. Therefore, there is no potential for LSEs as a result of habitat loss. **Surface Water Quality –** There is no surface water hydrological connection between the Site and this European site. Therefore, there is no potential for LSEs as a result of reduced surface water quality. **Groundwater Quality –** The Site is located in a different groundwater body to this European site. Therefore, there is no potential for LSEs as a result of reduced groundwater quality. **Dust Emissions –** The Site is located over 500m from this European site. Therefore, it is sufficiently distant to exclude any LSE from dust emissions (IAQM, 2016). **Noise and Vibration –** The Site is considered to be sufficiently distant from this European site to exclude the possibility of LSEs from noise and vibration. **Conclusion:** Therefore, there are no pathways identified – relative to the sources for impacts outlined in **Section 4.2** – that are likely to affect the sensitive receptors of this European site.	**N**

Site Name & Site Code	Distance	Qualifying Features	Connections (Source-Pathway-Receptor)	Considered further in screening [Y/N]
Mount Hevey Bog SAC [002342]	15.8km	• Active raised bogs [7110], • Degraded raised bogs still capable of natural regeneration [7120], • Depressions on peat substrates of the Rhynchosporion [7150]	**Habitat loss –** The Site does not overlap with this European site. The Site is located over 15km from the European site which is outside the maximum foraging range of the golden plover (SNH, 2016). The Site is considered to be sufficiently distant from the European site to be outside of the core foraging range of the other species for which the site is designated. Therefore, there is no potential for LSEs as a result of habitat loss. **Surface Water Quality –** There is no surface water hydrological connection between the Site and this European site. Therefore, there is no potential for LSEs as a result of reduced surface water quality. **Groundwater Quality –** The Site is located in the same groundwater body to this European site. Therefore, there is potential for LSEs as a result of reduced groundwater quality. **Dust Emissions –** The Site is located over 500m from this European site. Therefore, it is sufficiently distant to exclude any LSE from dust emissions (IAQM, 2016). **Noise and Vibration –** The Site is considered to be sufficiently distant from this European site to exclude the possibility of LSEs from noise and vibration. **Conclusion:** Therefore, there are pathways identified – relative to the sources for impacts outlined in **Section 4.2** – that are likely to affect the sensitive receptors of this European site, and this likely effect is assessed further in this report.	**Y**
River Boyne and River Blackwater SAC [002299]	c. 27km downstream	• Alkaline fens [7230], Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) [91E0], • *Lampetra fluviatilis* (River Lamprey) [1099],	**Habitat loss –** The Site does not overlap with this European site. None of the Annex I habitats for which the European site is designated are found on-site. Therefore, there is no potential for LSEs as a result of habitat loss. **Surface Water Quality –** There is a surface water hydrological connection between the Site and this European site. Therefore,	**Y**

Site Name & Site Code	Distance	Qualifying Features	Connections (Source-Pathway-Receptor)	Considered further in screening [Y/N]
		• *Salmo salar* (Salmon) [1106], *Lutra lutra* (Otter) [1355]	there is a potential pathway for LSEs as a result of reduced surface water quality. **Groundwater Quality –** The Site is located in a different groundwater body to this European site. Therefore, there is no potential for LSEs as a result of reduced groundwater quality. **Dust Emissions –** The Site is located over 500m from this European site. Therefore, it is sufficiently distant to exclude any LSE from dust emissions (IAQM, 2016). **Noise and Vibration –** The Site is considered to be sufficiently distant from this European site to exclude the possibility of LSEs from noise and vibration. **Conclusion:** Therefore, there are pathways identified – relative to the sources for impacts outlined in **Section 4.2** – that are likely to affect the sensitive receptors of this European site, and this likely effect is assessed further in this report.	
River Boyne and River Blackwater SPA [004232]	c. 27km downstream	• Cormorant (*Phalacrocorax carbo*) [A017], • Grey Heron (*Ardea cinerea*) [A028], • Teal (*Anas c*recca) [A052], • Mallard (*Anas platyrhynchos*) [A053], • Kingfisher (*Alcedo atthis*) [A229]	**Habitat loss –** The Site does not overlap with this European site. None of the Annex I habitats for which the European site is designated are found on-site. Therefore, there is no potential for LSEs as a result of habitat loss. **Surface Water Quality –** There is a surface water hydrological connection between the Site and this European site. Therefore, there is a potential pathway for LSEs as a result of reduced surface water quality. **Groundwater Quality –** The Site is located in a different groundwater body to this European site. Therefore, there is no potential for LSEs as a result of reduced groundwater quality. **Dust Emissions –** The Site is located over 500m from this European site. Therefore, it is sufficiently distant to exclude any LSE from dust emissions (IAQM, 2016).	**Y**

Site Name & Site Code	Distance	Qualifying Features	Connections (Source-Pathway-Receptor)	Considered further in screening [Y/N]
			Noise and Vibration – The Site is considered to be sufficiently distant from this European site to exclude the possibility of LSEs from noise and vibration. **Conclusion:** Therefore, there are pathways identified – relative to the sources for impacts outlined in **Section 4.2** – that are likely to affect the sensitive receptors of this European site, and this likely effect is assessed further in this report.	
Boyne Coast and Estuary SAC **[001957]**	c. 105km downstream	• 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 [1310], • Atlantic salt meadows (*Glauco-Puccinellietalia 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]	**Habitat loss –** The Site does not overlap with this European site. None of the Annex I habitats for which the European site is designated are found on-site. Therefore, there is no potential for LSEs as a result of habitat loss. **Surface Water Quality –** There is a surface water hydrological connection between the Site and this European site. Therefore, there is a potential pathway for LSEs as a result of reduced surface water quality. **Groundwater Quality –** The Site is located in a different groundwater body to this European site. Therefore, there is no potential for LSEs as a result of reduced groundwater quality. **Dust Emissions –** The Site is located over 500m from this European site. Therefore, it is sufficiently distant to exclude any LSE from dust emissions (IAQM, 2016). **Noise and Vibration –** The Site is considered to be sufficiently distant from this European site to exclude the possibility of LSEs from noise and vibration. **Conclusion:** Therefore, there are pathways identified – relative to the sources for impacts outlined in **Section 4.2** – that are likely to affect the sensitive receptors of this European site, and this likely effect is assessed further in this report..	**Y**
Boyne Estuary SPA	c. 105km downstream	• Cormorant (*Phalacrocorax carbo*) [A017],	**Habitat loss –** The Site does not overlap with this European site. None of the Annex I habitats for which the European site is	**Y**

Site Name & Site Code	Distance	Qualifying Features	Connections (Source-Pathway-Receptor)	Considered further in screening [Y/N]
[004080]		• Brent Goose (*Branta bernicla*) [A046], • Shelduck (*Tadorna tadorna*) [A048], • Wigeon (*Anas penelope*) [A050], • Teal (Anas crecca) [A052], • Mallard (*Anas platyrhynchos*) [A053], • Red-breasted Merganser (*Mergus serrator*) [A069], • Oystercatcher (*Haematopus ostralegus*) [A130], • Ringed Plover (*Charadrius hiaticula*) [A137], • Golden Plover (*Pluvialis apricaria*) [A140], • Grey Plover (*Pluvialis squatarola*) [A141], • Lapwing (*Vanellus vanellus*) [A142], Knot (*Calidris canutus*) [A143], • Sanderling (*Calidris alba*) [A144], • Dunlin (*Calidris alpina*) [A149], • Black-tailed Godwit (Limosa limosa) [A156], • Bar-tailed Godwit (*Limosa lapponica*) [A157], • Curlew (*Numenius arquata*) [A160], • Redshank (*Tringa totanus*) [A162], • Greenshank (*Tringa nebularia*) [A164], • Turnstone (*Arenaria interpres*) [A169],	designated are found on-site. Therefore, there is no potential for LSEs as a result of habitat loss. **Surface Water Quality –** There is a surface water hydrological connection between the Site and this European site. Therefore, there is a potential pathway for LSEs as a result of reduced surface water quality. **Groundwater Quality –** The Site is located in a different groundwater body to this European site. Therefore, there is no potential for LSEs as a result of reduced groundwater quality. **Dust Emissions –** The Site is located over 500m from this European site. Therefore, it is sufficiently distant to exclude any LSE from dust emissions (IAQM, 2016). **Noise and Vibration –** The Site is considered to be sufficiently distant from this European site to exclude the possibility of LSEs from noise and vibration. **Conclusion:** Therefore, there are pathways identified – relative to the sources for impacts outlined in **Section 4.2** – that are likely to affect the sensitive receptors of this European site, and this likely effect is assessed further in this report.	

Site Name & Site Code	Distance	Qualifying Features	Connections (Source-Pathway-Receptor)	Considered further in screening [Y/N]
		• Black-headed Gull (*Larus ridibundus*) [A179], • Common Gull (*Larus canus*) [A182], • Little Tern *(Sterna albifrons)* [A195], Wetland and Waterbirds [A999]		
North-West Irish Sea SPA [004236]	c. 110km downstream	• Red-throated Diver (*Gavia stellata*) [A001], • Great Northern Diver (*Gavia immer*) [A003], • Fulmar (*Fulmarus glacialis*) [A009], • Manx Shearwater (*Puffinus puffinus*) [A013], • Cormorant (*Phalacrocorax carbo*) [A017], • Shag (*Phalacrocorax aristotelis*) [A018], • Common Scoter (*Melanitta nigra*) [A065], • Black-headed Gull (*Chroicocephalus ridibundus*) [A179], • Common Gull (*Larus canus*) [A182], • Lesser Black-backed Gull (*Larus fuscus*) [A183], • Herring Gull (*Larus argentatus*) [A184], • Great Black-backed Gull (*Larus marinus*) [A187], • Kittiwake (*Rissa tridactyla*) [A188], • Roseate Tern (*Sterna dougallii*) [A192], • Common Tern (*Sterna hirundo*) [A193],	**Habitat loss –** The Site does not overlap with this European site. None of the Annex I habitats for which the European site is designated are found on-site. Therefore, there is no potential for LSEs as a result of habitat loss. **Surface Water Quality –** There is a surface water hydrological connection between the Site and this European site. Therefore, there is a potential pathway for LSEs as a result of reduced surface water quality. **Groundwater Quality –** The Site is located in a different groundwater body to this European site. Therefore, there is no potential for LSEs as a result of reduced groundwater quality. **Dust Emissions –** The Site is located over 500m from this European site. Therefore, it is sufficiently distant to exclude any LSE from dust emissions (IAQM, 2016). **Noise and Vibration –** The Site is considered to be sufficiently distant from this European site to exclude the possibility of LSEs from noise and vibration. **Conclusion:** Therefore, there are pathways identified – relative to the sources for impacts outlined in **Section 4.2** – that are likely to affect the sensitive receptors of this European site, and this likely effect is assessed further in this report.	**Y**

Site Name & Site Code	Distance	Qualifying Features	Connections (Source-Pathway-Receptor)	Considered further in screening [Y/N]
		• Arctic Tern (*Sterna paradisaea*) [A194], • Guillemot (*Uria aalge*) [A199], Razorbill (*Alca torda*) [A200], • Puffin (*Fratercula arctica*) [A204], • Little Gull (*Hydrocoloeus minutus*) [A862], • Little Tern (*Sternula albifrons*) [A885]		

4.5 Assessment of Likely Significant Effects

4.5.1 Effects of the Proposed Project Alone

As detailed in **Table 4-1** it has been demonstrated that the sources for impacts are:

- Changes to surface water quality due to the introduction of suspended solids or other pollutants into waterways;
- Changes to groundwater quality which may impact groundwater dependant water features near the project site; and
- Changes to groundwater levels.

Therefore, further considerations are required regarding these potential effects relative to each of the sensitive receptors in the following European sites:

- Mount Hevey Bog SAC [002342];
- River Boyne and River Blackwater SAC [002299];
- River Boyne and River Blackwater SPA [004232];
- Boyne Coast and Estuary SAC [001957];
- Boyne Estuary SPA [004080]; and
- North-West Irish Sea SPA [004236].

4.5.2 Changes in Surface Water Quality

The Yellow [Castlejordan] stream flows along the eastern Site boundary. This is a tributary of the River Boyne and connects the Site to the River Boyne and River Blackwater SAC [002299] and the River Boyne and River Blackwater SPA [004232] c. 27km downstream of the Site, the Boyne Coast and Estuary SAC and the Boyne Estuary SPA c. 105km downstream of the Site, and the North-West Irish Sea SPA c. 110km downstream of the Site.

The extraction area will be located approximately 35 m from the Yellow stream, and a berm will be constructed along the edges of the extraction area at a distance of 20 m from the stream.

The proposed development has the potential to result in the introduction of suspended solids and/or other pollutants into the Yellow stream which may, ultimately, enter the European sites listed above.

Dilution in the marine environment would significantly reduce any potential impacts from changes in water quality for the North-West Irish Sea SPA. Therefore, this site can be reasonably excluded from further consideration in this report.

4.5.3 Groundwater

The Site is located in the Athboy groundwater body; only Mount Hevey Bog SAC is located in the same groundwater body.

4.5.3.1 Changes in Groundwater Quality

Direct impacts on groundwater quality as a result of accidental leaking or spillage of fuel and/or other petroleum-based products, have the potential to impact the groundwater body on which the Site is located. However, any effect to groundwater will be limited due to the short-term nature of works, and any leakage / spillage would be accidental only and of limited volume. Any impacts on groundwater are considered to be slight and not significant.

As such, the possibility of impacts on groundwater quality as a result of the proposed development are negligible and any spillage that may occur would be low in volume. Therefore, it is unlikely that any impacts on groundwater quality would extend to the Mount Hevey Bog SAC due to the distance between the Site and this European site.

4.5.3.2 Changes in Groundwater Levels

The proposed sand and gravel pit will be worked below the groundwater in the sand and gravel deposits; however, no dewatering of shallow groundwater will take place. Therefore, there will be very localised, temporary and limited impacts on the Athboy groundwater body. These impacts are unlikely to extend to the Mount Hevey Bog SAC, due to the distance between the Site and this European site.

4.5.4 In-Combination Effects

In-combination effects can occur where a proposed development results in individually non-significant impacts that, when considered in-combination with impacts of other proposed or permitted plans and projects, can result in significant effects.

Other plans and projects that should be considered when establishing cumulative effects are:

- proposals for which consent has been applied but which are awaiting determination;
- projects which have been granted consent, but which have not yet been started, or which have been started but are not yet completed (i.e., under construction);
- proposals which have been refused permission, but which are subject to appeal, and the appeal is undetermined;
- constructed developments whose full environmental effects are not yet felt and therefore cannot be accounted for in the baseline; or
- developments specifically referenced in a National Policy Statement, a National Plan or a Local Plan.

There are no plans or policies in the Offaly County Development Plan 2021-2027 or the Westmeath County Development Plan 2021-2027 which would result in LSE in-combination with the proposed development.

A search of recent (within the last five years) planning applications was carried out for applications that may give rise to in-combination effects with the project. As such the search focused on projects along the hydrological connection between the Site and any European designated site both upstream and downstream of the Site to where the potential for likely cumulative impacts could be reasonably scoped out due to factors such as dilution.

There are a number of applications along the Yellow river which have the potential to share a hydrological link to European sites downstream which could potentially act in–combination with the proposed project. These projects include a 23-year permission to the extension of a sand and gravel pit adjacent to the Site and a 10-year permission for a solar farm development approximately 6.1 km downstream of the Site. Other projects within this zone of influence are limited to small-scale agricultural developments such as a farm shed etc. **Appendix C** lists the recent planning applications considered for in combination effects with the proposed development.

The planning applications listed in **Appendix C** are not anticipated to result in cumulative effects with the proposed development. Therefore, the risk of significant effects on European sites because of the proposed development can be excluded for the project when considered in-combination with other proposed or permitted plans and projects.

5.0 AA Screening Conclusion

Through an assessment of the Pathways for potential effects and an evaluation of the Sources for impacts, taking account of the processes involved and the distance of separation from European sites, it has been evaluated that, in the absence of the implementation of suitable mitigation, there is potential for likely significant adverse effects on the qualifying interests, special conservation interest or the conservation objectives. Therefore, further consideration is required for the following European sites:

- River Boyne and River Blackwater SAC;
- River Boyne and River Blackwater SPA;
- Boyne Coast and Estuary SAC; and
- Boyne Estuary SPA.

This information is presented in this report will allow the Competent Authority to make their determination regarding the need for a Stage 2 Appropriate Assessment with regard to likely significant effects on European sites resulting from the proposed project, in accordance with and fulfilment of the requirements of Article 6 of the Habitats Directive and derived Regulations.

6.0 Stage Two: Appropriate Assessment

6.1 Information on the Project

6.1.1 The Project

The proposed extraction of the sand and gravel will be wet working, (i.e., extraction below the natural groundwater level of the site). Processing of the extracted materials will be carried out on-site to produce a range of aggregates for use by the applicant in the manufacture of concrete. The application also includes for the ancillary facilities required to serve the development, as outlined below.

- An overall application area of c. 19.5 hectares;
- Phased extraction of sand and gravel (wet working) over an area of c. 11.7 hectares with processing that includes crushing and screening and all ancillary works and structures;
- Provision of new site facilities to include wheelwash (c. 35m²), weighbridge (c. 69m²); mobile welfare pod facility (c. 16m²) consisting of office, canteen, toilet and drying room; dedicated parking area, perimeter vegetation planting and fencing.
- Access to the site will be via an existing entrance onto the local access road to the north of the site;
- Progressive restoration of the site to naturally regenerated wildlife habitat and a permanent water body;
- The proposed development life is for 15 years to complete extraction and restoration operations.

6.1.2 Construction Phase (Ancillary Facilities, Hardcore Access Track & Fencing)

As this is a greenfield site, there is a requirement for new welfare and ancillary facilities and infrastructure to be installed to service the site for the duration of the proposed development and following cessation of extraction and operations.

It is anticipated that the construction stage works as outlined below will be carried out within a 6-month period. It should be noted that extraction and production operations may be commenced within this 6-month period and carried out in tandem with the below-mentioned development works.

A new internal access road will run from the existing site entrance (which provides access to turbine T7) in a south-westerly direction to the new site facilities compound area. There is already a section (c. 120m) of the internally access inside the site entrance where hardcore is already in place serving the turbine compound location. An additional section (c. 210m) of hardcore road will be constructed between the existing hardcore road and the new site facilities area.

The site facilities area will also consist of a hardcore surface where the weighbridge and wheelwash will be installed on the outbound carriageway. Adjacent to this will be the mobile welfare pod (office, canteen, toilet) and a dedicated parking area. The perimeter will be fenced and an automated barrier will be installed to control access to the site.

Beyond the compound area, a hardcore surface track will run south to the proposed extraction and stripped soil stockpile storage areas.

6.1.3 Operational Phase (Phased Soil Stripping / Berm Construction and Sand & Gravel Extraction / Processing)

The extraction of the sand and gravel will be carried out in line with best international practice.

The volume, lateral extent and depth of overburden / sands and gravels for the site have been determined from site investigations. The proposed extraction and processing tasks and activities to be implemented at the site consist of:

- removal of the in-situ residual clay overlying the sand and gravel;
- wet working extraction, i.e., extraction of the sand and gravel materials from beneath the natural water table of the site to a depth of typically from 6m up to 10m;
- long-reach excavator will dig out the sand and gravel and stockpile it in a row beside excavation;
- stockpiling of the sand and gravel adjacent to the working extraction area to allow drying of the materials, i.e., to allow water within the extracted materials to percolate back to the ground;
- stockpiled material is allowed to dry out for typically 2-3 days;
- mobile tracked screener is moved along with the advancing extraction face and the stockpiles and the materials are screened and put into 4 different stockpiles
- sand, 10mm, 20mm and oversize;
- the oversize stockpiles will be crushed as required to produce aggregates of a suitable size in the concrete production process;
- trucks will be loaded directly from the screener or from adjacent stockpiles;
- trucks weigh out on weighbridge and receive a delivery docket and exit the site via the wheelwash.

The overall extraction footprint is c. 11.7 hectares, and it is proposed to extract the materials on a gradual and phased basis as follows:

• Phase 1	c. 3.2 hectares	c. Years 1-4
• Phase 2	c. 3.4 hectares	c. Years 5-8
• Phase 3	c. 3.5 hectares	c. Years 9-12
• Phase 4	c. 1.6 hectares	c. Years 13-14
• Total	c. 11.7 hectares	

The phased approach to extraction will be carried out within the individual phase areas consisting of soil stripping, followed by sand and gravel extraction followed by restoration using onsite materials. Extraction operations within a particular phase (*e.g., Phase 2*) will only be carried out when extraction in the previous phase (*e.g., Phase 1*) has been completed. All lands will remain in agricultural use until required for extraction.

There is no requirement for hedgerow or tree removal during any of the development phases. The following is an overview of the proposed works to be carried out on a phased basis over the life of the proposed development.

6.1.3.1 Phase 1 – Extraction

- Initial soil stripped from both the Phase 1 extraction area (c. 3.2 ha.) and the soil/overburden storage area (c. 1.9 ha.) will be stored on ground level in permitter screening berms;
- The external perimeter of the berm will be secured with stockproof fencing;
- Sand and gravel extraction within Phase 1, with the wet working face advancing in a westerly direction, leaving a permanent waterbody feature behind.

6.1.3.2 Phase 2 – Extraction / Restoration

- Soil stripped from the Phase 2 extraction area (c. 3.4 ha.) will be used to extend the screening berm along the eastern and western boundaries and construct a new berm along the southern boundary;
- Any excess stripped soils will be stored in the soil/overburden storage area to the north of Phase 1;
- The external perimeter of the newly constructed sections of berm will be secured with stockproof fencing;
- The soil material in the existing berm between Phases 1 & 2 will be used to regrade the lake edges in parts and to construct peninsula type features from the edge of the extraction area into the lake. Backfilled areas that reach above the water level will be left for natural regeneration to provide greater biodiversity within the site;
- Sand and gravel extraction within Phase 2, with the wet working face advancing in a westerly direction, leaving a permanent waterbody feature behind.

6.1.3.3 Phase 3 – Extraction / Restoration

- Soil stripped from the Phase 3 extraction area (c. 3.5 ha.) will be used to extend the screening berm along the eastern and western boundaries and construct a new berm along the southern boundary;
- The external perimeter of the newly constructed sections of berm will be secured with stockproof fencing;
- Any excess stripped soils along with the soil material in the existing berm between Phases 2 & 3 will be used to regrade the lake edges in parts and to construct peninsula type features from the edge of the extraction area into the lake. Backfilled areas that reach above the water level will be left for natural regeneration to provide greater biodiversity within the site;
- Sand and gravel extraction within Phase 3, with the wet working face advancing in a westerly direction, leaving a permanent waterbody feature behind.

6.1.3.4 Phase 4 – Extraction / Restoration

- Soil stripped from the Phase 4 extraction area (c. 1.6 ha.) will either be stored in the soil/overburden storage area to the north of Phase 1 or used to regrade the lake edges in parts and to construct peninsula type features from the edge of the extraction area into the lake. Backfilled areas that reach above the water level will be left for natural regeneration to provide greater biodiversity within the site;
- Sand and gravel extraction within Phase 4, with the wet working face advancing in a northerly direction, leaving a permanent waterbody feature behind.

The phased extraction and restoration scheme has the benefit of:

- retaining existing land for agricultural use for as long as possible thereby minimising the stripped areas being exposed at any one time;
- progressive restoration will expedite the return of the lands to a beneficial biodiversity and water feature after use and minimise the overall duration required to carry out the extraction and restoration works;
- where possible, minimising soil handling by stripping from one area and placing directly onto the area previously extracted and ready for restoration;
- replanting of new vegetation at the earliest opportunity.

6.1.4 Restoration Phase (Reinstatement to Ecological Habitat)

The extraction and restoration activities proposed for the site will be on a phased basis. Working in this manner will facilitate the progressive restoration of each area which will generally comprise reinstatement of excavated deposits to the extracted areas, the establishment of a permanent water body and allowing the lake edges and external perimeter berms to naturally regenerate / revegetate over time. There is no requirement to import any materials to site for restoration purposes.

Evidence from similar existing operations is that following extraction works, areas will become colonised with locally occurring grass, wildflower and scrub species, as well as aquatic species along the lakes edge. It is most likely that the lake will be regularly visited by bird species, such as Whooper Swan and Mute Swan which are observed at other wet working extraction operations within the vicinity of the site.

During the post-operational stage, the progressive landscape restoration measures would already be in place across much of the site and, as such, the area will be left undisturbed and allowed to naturally regenerate with secondary woodland and scrub becoming established over a number of years.

Any soil that was previously stripped and stored within the soil/overburden storage area to the north of Phase 1 will be along the northern boundary of Phase 1 to regrade the lake edges in parts and to construct peninsula type features from the edge of the extraction area into the lake. Backfilled areas that reach above the water level will be left for natural regeneration to provide greater biodiversity within the site. The soil/overburden area will be left to naturally regenerate and provide a valuable ecological habitat area adjacent to the permanent water body feature.

The perimeter berm around the final extraction profile will be retained as it will have been colonised for some time with native species. The stockproof fence will also be retained and along with the berm will provide an adequate security barrier to the water body.

The 20m riparian corridor along the length of the easter extraction boundary between the retained screening berm and the Big River will be planted with blocks of native tree species and allow to develop naturally and will provide a habitat refuge linking the new water body created by the extraction works and the river and into the areas of forestry and scrubland beyond.

Redundant structures, plant equipment and stockpiles will be removed from the site on permanent cessation of extraction activity. Machinery and structures will either be utilised by BD Flood on other sites or be sold as working machinery or scrap.

The restoration works will be carried out in accordance with the EPA Guidelines (2006). Ecological advice will also be incorporated into the restoration process to facilitate future habitat value in the area for flora and fauna.

All existing boundary fences and hedgerows will be retained to ensure that the site is secure.

It is anticipated that the restored site will contain a variety of habitats and plant species, making it considerably more diverse than the existing monoculture type grassland currently present.

6.1.5 The Project Site

6.1.5.1 Habitats (Annex I) Summary

There are no Annex I habitats known to be present on the Site or within 2km of the Site.

6.1.5.2 Species (Annex I birds and Annex II others) Summary

The following Annex I and Annex II species have been recorded in the NBDC 10km grid squares N43X and N43Y and/or within 2km of the Site according to the Article 17 data from the NPWS:

- Otter (*Lutra lutra*);
- White-clawed crayfish (*Austropotamobius pallipes*);
- Whooper swan (*Cygnus cygnus*).

6.2 Information on European Sites

6.2.1 River Boyne and River Blackwater SAC [002299]

6.2.1.1 Brief Description

"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 underlying geology is Carboniferous Limestone for the most part, with areas of Upper, Lower and Middle well represented. In the vicinity of Kells Silurian Quartzite is present while close to Trim are Carboniferous Shales and Sandstones. There are many large towns adjacent to but not within the site, including Slane, Navan, Kells, Trim, Athboy and Ballivor.

The site supports populations of several species listed on Annex II of the E.U. 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 riverbanks, 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."

6.2.1.2 Qualifying/Special Conservation Interest

The qualifying interests relevant to this NIS are listed below. All other qualifying interests listed for this European site have been scoped out of further consideration in this report as changes in water quality are not considered to have a direct or indirect impact on their conservation objectives.

Alkaline Fens [7230]

- Conservation objective: To maintain the favourable conservation condition of Alkaline fens in River Boyne and River Blackwater SAC.
    - Attributes and targets relevant to this NIS: Ecosystem function: water quality.

- The target is to maintain appropriate water quality, particularly pH and nutrient levels, to support the natural structure and functioning of the habitat.

River Lamprey *Lampetra fluviatilis* [1099]

- Conservation objective: To restore the favourable conservation condition of River Lamprey (*Lampetra fluviatilis*) in River Boyne and River Blackwater SAC.
  - Attributes and targets relevant to this NIS: Extent and distribution of spawning nursery habitat.
  - The target is no decline in extent and distribution of spawning and nursery beds.
  - A reduction in water quality may result in a reduction in the extent of suitable spawning and nursery habitat for river lamprey.

Salmon *Salmo salar* [1106]

- Conservation objective: To restore the favourable conservation condition of Salmon (*Salmo salar*) in River Boyne and River Blackwater SAC.
  - Attributes and targets relevant to this NIS: Water quality.
  - The target is at least Q4 at all sites sampled by EPA.

Otter *Lutra lutra* [1355]

- Conservation objective: To maintain the favourable conservation condition of Otter (*Lutra lutra)* in River Boyne and River Blackwater SAC.
  - Attributes and targets relevant to this NIS: Fish biomass available.
  - The target is no significant decline.
  - A reduction in water quality may result in a reduction in the availability of prey for otter.

6.2.2 River Boyne and River Blackwater SPA [004232]

6.2.2.1 Brief Description

"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.

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 E.U. Birds Directive."

6.2.2.2 Qualifying/Special Conservation Interest

Kingfisher *Alcedo atthis* [A229]

- Conservation objective: To maintain the favourable conservation condition of Kingfisher (*Alcedo atthis)* in River Boyne and River Blackwater SPA.
  - Attributes and targets relevant to this NIS: Water quality.
  - The target is both biotic (i.e. Q-value) and abiotic indices reflect overall good-high quality status.

The other species listed in **Table 4-1** are regularly occurring migratory species that are associated with the River Boyne and River Blackwater SPA. These species may also be indirectly impacted by changes to water quality as there may be a reduction in foraging availability.

6.2.3 Boyne Coast and Estuary SAC [001957]

6.2.3.1 Brief Description

"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 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 one which is listed with priority status, and for the important bird populations that it supports."

6.2.3.2 Qualifying/Special Conservation Interest

The qualifying interests relevant to this NIS are listed below. All other qualifying interests listed for this European site have been scoped out of further consideration in this report as changes in water quality are not considered to have a direct or indirect impact on their conservation objectives.

Estuaries [1130]

- Conservation objective: To maintain the favourable conservation condition of Estuaries in Boyne Coast and Estuary SAC.
  - Attributes and targets relevant to this NIS: Community distribution.
  - The target is to conserve the following community types in a natural condition: Intertidal estuarine mud and fine sand with Hediste diversicolor and Corophium volutator community; and Subtidal fine sand dominated by polychaetes community.
  - Changes in water quality may result in changes to the community distribution through impacts on the fauna associated with this habitat.

6.2.4 Boyne Estuary SPA [004080]

6.2.4.1 Brief Description

"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.

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."

6.2.4.2 Qualifying/Special Conservation Interest

Shelduck *Tadorna tadorna* [A048]

- Conservation objective: To maintain the favourable conservation condition of Shelduck in Boyne Estuary SPA.
  - Attributes and targets relevant to this NIS: Distribution.
  - The target is no significant decrease in the range, timing or intensity of use of areas other than that occurring from natural patterns of variation.
  - Changes in water quality may result in changes to the distribution through impacts on foraging availability.

Oystercatcher *Haematopus ostralegus* [A130]

- Conservation objective: To maintain the favourable conservation condition of Oystercatcher in Boyne Estuary SPA.
  - Attributes and targets relevant to this NIS: Distribution.
  - The target is no significant decrease in the range, timing or intensity of use of areas other than that occurring from natural patterns of variation.
  - Changes in water quality may result in changes to the distribution through impacts on foraging availability.

Golden Plover *Pluvialis apricaria* [A140]

- Conservation objective: To maintain the favourable conservation condition of Golden Plover in Boyne Estuary SPA.
  - Attributes and targets relevant to this NIS: Distribution.
  - The target is no significant decrease in the range, timing or intensity of use of areas other than that occurring from natural patterns of variation.
  - Changes in water quality may result in changes to the distribution through impacts on foraging availability.

Grey Plover *Pluvialis squatarola* [A141]

- Conservation objective: To maintain the favourable conservation condition of Grey Plover in Boyne Estuary SPA.
  - Attributes and targets relevant to this NIS: Distribution.
  - The target is no significant decrease in the range, timing or intensity of use of areas other than that occurring from natural patterns of variation.
  - Changes in water quality may result in changes to the distribution through impacts on foraging availability.

Lapwing *Vanellus vanellus* [A142]

- Conservation objective: To maintain the favourable conservation condition of Lapwing in Boyne Estuary SPA.
  - Attributes and targets relevant to this NIS: Distribution.
  - The target is no significant decrease in the range, timing or intensity of use of areas other than that occurring from natural patterns of variation.
  - Changes in water quality may result in changes to the distribution through impacts on foraging availability.

Knot *Calidris canutus* [A143]

- Conservation objective: To maintain the favourable conservation condition of Knot in Boyne Estuary SPA.
  - Attributes and targets relevant to this NIS: Distribution.
  - The target is no significant decrease in the range, timing or intensity of use of areas other than that occurring from natural patterns of variation.
  - Changes in water quality may result in changes to the distribution through impacts on foraging availability.

Sanderling *Calidris alba* [A144]

- Conservation objective: To maintain the favourable conservation condition of Sanderling in Boyne Estuary SPA.
  - Attributes and targets relevant to this NIS: Distribution.
  - The target is no significant decrease in the range, timing or intensity of use of areas other than that occurring from natural patterns of variation.
  - Changes in water quality may result in changes to the distribution through impacts on foraging availability.

Black-tailed Godwit *Limosa limosa* [A156]

- Conservation objective: To maintain the favourable conservation condition of Black-tailed Godwit in Boyne Estuary SPA.
  - Attributes and targets relevant to this NIS: Distribution.
  - The target is no significant decrease in the range, timing or intensity of use of areas other than that occurring from natural patterns of variation.
  - Changes in water quality may result in changes to the distribution through impacts on foraging availability.

Redshank *Tringa totanus* [A162]

- Conservation objective: To maintain the favourable conservation condition of Redshank in Boyne Estuary SPA.
  - Attributes and targets relevant to this NIS: Distribution.
  - The target is no significant decrease in the range, timing or intensity of use of areas other than that occurring from natural patterns of variation.
  - Changes in water quality may result in changes to the distribution through impacts on foraging availability.

Turnstone *Arenaria interpres* [A169]

- Conservation objective: To maintain the favourable conservation condition of Turnstone in Boyne Estuary SPA.
  - Attributes and targets relevant to this NIS: Distribution.
  - The target is no significant decrease in the range, timing or intensity of use of areas other than that occurring from natural patterns of variation.
  - Changes in water quality may result in changes to the distribution through impacts on foraging availability.

Little Tern *Sterna albifrons* [A195]

- Conservation objective: To maintain the favourable conservation condition of Little Tern in Boyne Estuary SPA.
  - Attributes and targets relevant to this NIS: Prey biomass available.
  - The target is no significant decline.
  - A reduction in water quality may result in a reduction in the availability of prey for little tern.

The other species listed in **Table 4-1** are regularly occurring migratory species that are associated with the Boyne Estuary SPA. These species may also be indirectly impacted by changes to water quality as there may be a reduction in foraging availability.

6.3 Effects of the Project Alone

There is the potential for indirect impacts on the River Boyne and River Blackwater SAC, River Boyne and River Blackwater SPA, Boyne Coast and Estuary SAC, and Boyne Estuary SPA from the discharge of pollution into surface waters that ultimately enter these European sites.

There is the potential for surface water to be polluted with silt and/or hydrocarbons from the proposed project and without mitigation these pollutants have the potential to affect the qualifying interests of the European sites listed above.

6.4 Cumulative Effects

The risk for significant in combination, or cumulative, effects as a result of the proposed development can be excluded, as considered in **Section 3.5.2**.

6.5 Mitigation Measures

The following mitigation measures will be implemented to avoid adverse impacts on the conservation objectives of the QIs/SCIs identified in **Section 4.2**:

6.5.1 Construction & Operational Stages

BD Flood is part of the Flood Group who has implemented an environmental management system (EMS) at their existing sites. If planning permission is granted for the proposed development, then the Group EMS will be extended to include the application site.

Environmental water monitoring will be carried out on a regular basis to demonstrate that the development is not having any significant adverse effects on the surrounding environment.

In order to mitigate against the risk of pollution to surface water occurring, the following mitigation measures will be implemented:

- Rainfall across the site will percolate downwards and recharge to the underlying sand and gravel. There will be no surface water run-off or overground flow across the site;
- There will be no off-site discharge from the proposed development to any surface watercourse;
- During any fuelling or servicing of plant and equipment at the site a spill kit and drip trays will be available in the event of any accidental spills or leakages;
- No fuel and oils will be stored at the site. Any fuels, oils and lubricants will be brought to the site in a double skinned bowser, in the case of fuel, and / or a drip tray, in the case of oils and lubricants;
- A number of spill kits will be available on-site in the event of any accidental leakages or spillages, should they arise;
- In order to control dust emissions, water will be sprayed from a tractor drawn bowser on dry exposed surfaces and stockpiles as required;
- Areas of bare or exposed soils will, insofar as practicable, be kept to a minimum during the extraction operations;
- All HGVs exiting the site will be routed through a bath type wheel wash;
- A road sweeper will be used to maintain entrances and any emergency spillages on public roads;
- The BD Flood environmental team undertake quarterly environmental audits at the site to ensure that compliance with all planning consents, licences and site environmental management system, which is accredited to ISO14001 standard, is both maintained and enhanced.

With the implementation of these mitigation measures at the site any potential adverse impacts on the surface water quality identified above will be reduced and will be considered to be neutral and not significant.

6.5.2 Post - Operational Stage

The principal activity which will be undertaken at the application site is the extraction and processing of the in-situ sand and gravel with ultimate restoration of lands returned to a beneficial ecological habitat.

It is proposed to restore the application area on a phased basis to a natural habitat land use. The water body within the restoration scheme includes shallow sand & gravel slopes in some locations along the edge of the water body. This will help increase the potential for biodiversity-rich habitats along the edges of the final water body. The proposed restoration to a natural habitat land use, is in line with the beneficial after uses recommended in the EPA Guidelines: 'Environmental Management in the Extractive Industry' (2006).

It is anticipated that the restored site will contain a variety of habitats and plant species, making it considerably more diverse than the existing monoculture type grassland currently present.

Following extraction all plant, machinery and ancillary infrastructure will be removed from the site, so there will be no further potential for adverse impacts on surface water quality.

7.0 Conclusion

The NIS concludes that, based on the best available scientific information, and provided that the proposed development is undertaken in accordance with the proposed operation and the mitigation measures that are outlined in this report are implemented, the proposed development, individually or in combination with other proposed or permitted plans or projects, will not have an adverse effect on the integrity or pose a risk of likely significant effects on the River Boyne and River Blackwater SAC, River Boyne and River Blackwater SPA, Boyne Coast and Estuary SAC, and Boyne Estuary SPA, or any other European site.

8.0 References

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European Commission (2018) Managing Natura 2000 Sites: The Provisions of Article 6 of the 'Habitats Directive' 92/43/EEC.

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Kettunen, M, Terry, A., Tucker, G. & Jones A. (2007) Guidance on the maintenance of landscape features of major importance for wild flora and fauna - Guidance on the implementation of Article 3 of the Birds Directive (79/409/EEC) and Article 10 of the Habitats Directive (92/43/EEC). Institute for European Environmental Policy (IEEP), Brussels, 114 pp. & Annexes.

NPWS (2012) Conservation Objectives for Boyne Coast and Estuary SAC [IE0001957] Version 1.

NPWS (2013) Conservation Objectives for Boyne Estuary SPA [IE0004080] Version 1.

NPWS (2015) Conservation Objectives for Raheenmore Bog SAC [IE0000582] Version 1.

NPWS (2018) Conservation Objectives for Lough Ennell SAC [IE0000685] Version 1.

NPWS (2018) Conservation Objectives for Split Hills and Long Hill Esker SAC [IE0001831] Version 1.

NPWS (2021) Conservation Objectives for River Boyne and River Blackwater SAC [IE0002299] Version 1.

NPWS (2022) Generic Conservation Objectives for Lough Ennell SPA [IE0004044] Version 9.

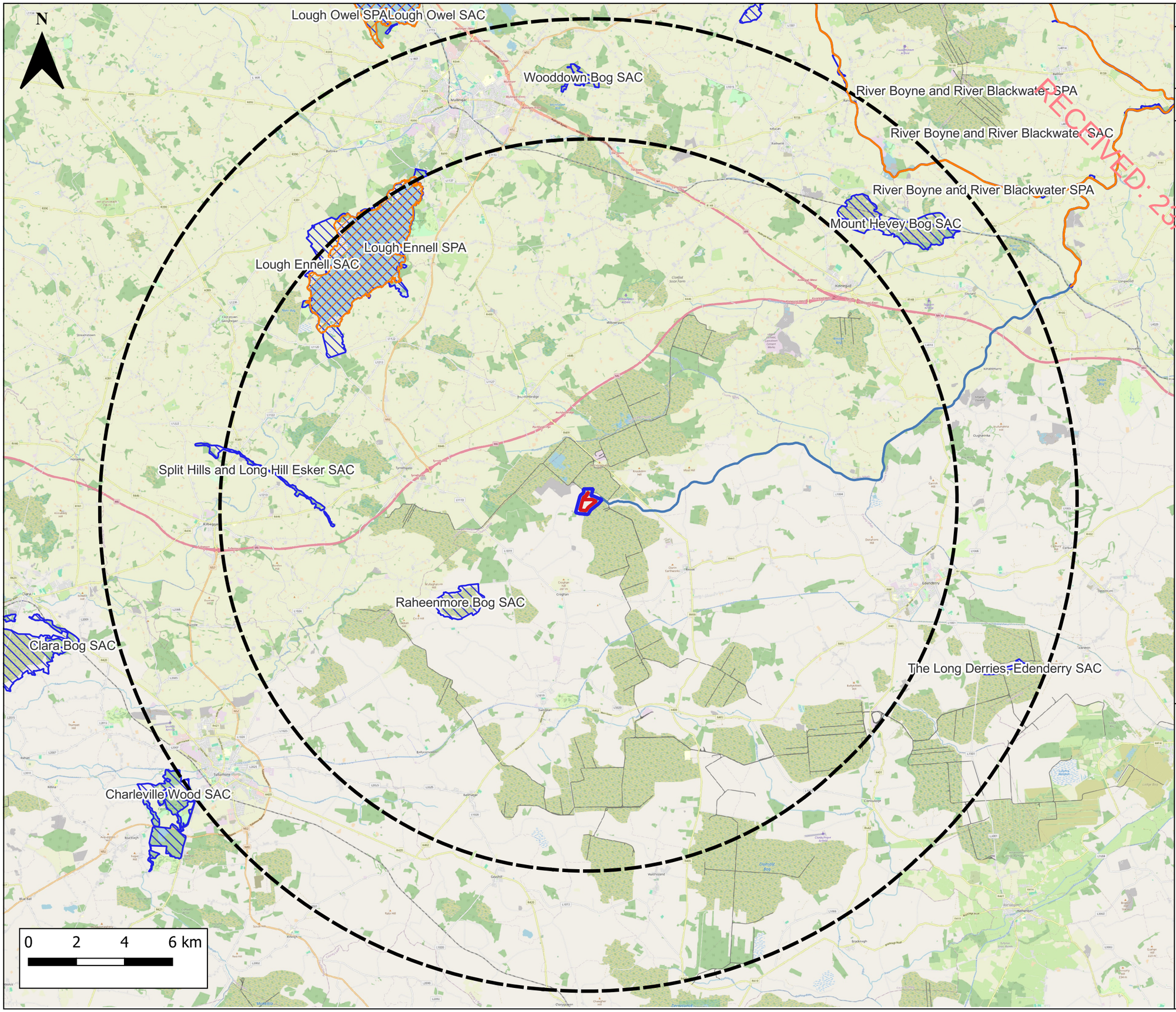
NPWS (2023) Conservation Objectives for North-West Irish Sea SPA [IE0004236] Version 1.

NPWS (2024) Conservation Objectives for River Boyne and River Blackwater SPA [IE0004232] Version 1.

OPR (2021). Appropriate Assessment Screening for Development Management.

FIGURES

Figure 1: Location of The Site Relative to European Sites

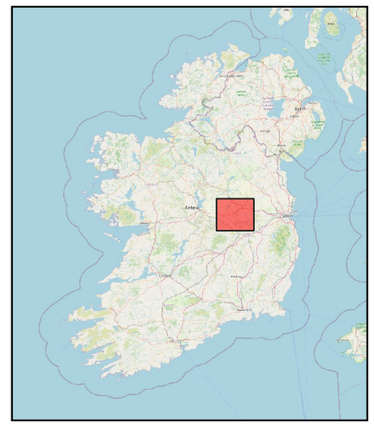


NOTES

1. Base Mapping: OpenStreetMap © (www.openstreetmap.org/copyright)

LEGEND

- Proposed Planning Application Area
- Applicant Land Interest Boundary
- 20 km and 15 km Buffers
- Special Protection Areas (SPA)
- Special Areas of Conservation (SAC)
- Surface Water Connectivity from the Site



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BD Flood Unlimited Company

AA Screening / Natura Impact Statement (NIS) Report

Proposed Sand & Gravel Pit Development
Derryarkin Townland, Rhode, Co. Offaly

European Sites Map

FIGURE 1

Scale	Date
1:150000 @ A3	SEP 2025

Appendix A Relevant Legislation and Policy

Appropriate Assessment (AA) Screening & Natura Impact Statement (NIS) Report

Proposed Derryarkin Sand and Gravel Pit

BD Flood Unlimited Company

SLR Project No.: 501.065657.00001

9 October 2025

A.1 Relevant Legislation and Policy

A.1.1 Habitats and Birds Directives

The Habitats Directive (Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora) forms the basis for the designation of Special Areas of Conservation (SACs) and a precursor designation Sites of Community Interest (SCI). Similarly, Special Protection Areas (SPAs) are classified under the Birds Directive (Council Directive 2009/147/EEC on the Conservation of Wild Birds). Collectively, SACs, SCIs and SPAs are referred to as the Natura 2000 network. The Natura 2000 Network is the minimum required to conserve certain habitats and species which are listed in the Directives.

Under Article 6(3) of the Habitats Directive, an Appropriate Assessment (AA) must be undertaken for any plan or project that is not directly connected with or necessary to the management of a Natura 2000 site but is likely to have a significant effect thereon, either alone or in combination with other plans or projects. An AA is an evaluation of the adverse effects of a plan or project, alone or in combination with other plans or projects, on the integrity of a Natura 2000 site, and the identification, where necessary, of avoidance or mitigation measures to preclude adverse effects on the integrity of the site.

Article 6, paragraph 3 the Habitats Directive states that:-

"*Any plan or project not directly connected with or necessary to the management of the [Natura 2000] 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 [Natura 2000] site in view of the site's conservation objectives. In the light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public*".

Article 6, paragraph 4 goes on to deal with the special circumstances for the granting of consent for plans and projects which would have an adverse effect the integrity of the site(s) concerned.

A.1.2 European Communities (Birds and Natural Habitats) Regulations 2011

Pursuant to the Habitats Directive, Part 5 of the European Communities (Birds and Natural Habitats) Regulations 2011, as amended, similarly sets out the requirements for screening assessments, the circumstances under which an AA is required and the further implementation of Article 6(3) and 6(4) of the Habitats Directive.

It defines a "European Site" as (a) a candidate site of Community importance, (b) a site of Community importance, (c) a candidate special area of conservation, (d) a special area of conservation, (e) a candidate special protection area, or (f) a special protection area. European sites may therefore include sites which may intended to become part of the Natura 2000 network as well as those already within that network.

Regulation 42 has 22 paragraphs, with selected text provided below.

Regulation 42(1) requires that '*a screening for Appropriate Assessment of a plan or project for which an application for consent is received, or which a public authority wishes to undertake or adopt, and which is not directly connected with or necessary to the management of the site as a European Site, shall be carried out by the public authority to assess, in view of best scientific knowledge and in view of the conservation objectives of the site, if that plan or project, individually or in combination with other plans or projects is likely to have a significant effect on the European site*.'

Regulation 42(2) expands on this, stipulating that a public authority must carry out a screening for AA before consent for a plan or project is given, or a decision to undertake or adopt a plan or project is taken.

Regulation 42(6) requires that '*the public authority shall determine that an Appropriate Assessment of a plan or project is required where the plan or project is not directly connected with or necessary to the management of the site as a European Site and if it cannot be excluded, on the basis of objective scientific information following screening under this Regulation, that the plan or project, individually or in combination with other plans or projects, will have a significant effect on a European site*'.

Regulation 42(3)(a) gives the public authority the power to direct a third party to provide a Natura Impact Statement (NIS) and Regulation 42(3)(b) allows it to request any additional information that it needs to complete the screening assessment or AA. Regulation 42(5) goes on to make clear that the NIS should include such information as the public authority considers necessary to enable it to undertake the AA and to ascertain if a project or plan will affect the integrity of a Natura 2000 site. In addition to the information, Regulation 2(1) provides a definition of a Natura Impact Statement as "*a report comprising the scientific examination of a plan or project and the relevant European Site or European Sites, to identify and characterise any possible implications of the plan or project individually or in combination with other plans or projects in view of the conservation objectives of the site or sites, and any further information including, but not limited to, any plans, maps or drawings, scientific information or data required to enable the carrying out of an Appropriate Assessment*".

Regulation 42(11) makes clear that the AA must be carried out by the public authority and that it must include its conclusion as to whether the project or plan would adversely affect the integrity of a Natura 2000 site, and that this must be done prior to consenting the project. Regulation 42 (12) makes clear that the competent authority should, *inter alia*, consider the Natura Impact Statement when undertaking the AA.

Regulations 43 and45 then go on to deal with Article 6(4) of the Habitats Directive.

A.1.3 Planning and Development Act 2000 (as amended)

These processes have been further enshrined in the Planning and Development Act 2000 (as amended), in sections 177T, 177U and 177V.

177T states that:

(1) (a) A Natura impact report means a statement for the purposes of Article 6 of the Habitats Directive, of the implications of a Land use plan, on its own or in combination with other plans or projects, for one or more than one European site, in view of the conservation objectives of the site or sites.

(b) A Natura impact statement means a statement, for the purposes of Article 6 of the Habitats Directive, of the implications of a proposed development, on its own or in combination with other plans or projects, for one or more than one European site, in view of the conservation objectives of the site or sites.

(2) Without prejudice to the generality of subsection (1), a Natura impact report or a Natura impact statement, as the case may be, shall include a report of a scientific examination of evidence and data, carried out by competent persons to identify and classify any implications for one or more than one European site in view of the conservation objectives of the site or sites.

(3) …..

(4) The applicant for consent for proposed development may, or if directed in accordance with subsection (5) by a competent authority, shall furnish a Natura impact statement to the competent authority in relation to the proposed development.

(5) At any time following an application for consent for proposed development a competent authority may give a notice in writing to the applicant concerned, directing him or her to furnish a Natura impact statement.

(6) ….

(7) a) …… a Natura impact report or a Natura impact statement shall include all information prescribed by regulations under section 177AD.

(b) Where appropriate, a Natura impact report or a Natura impact statement shall include such other information or data as the competent authority considers necessary to enable it to ascertain if the draft Land use plan or proposed development will not affect the integrity of the site.

177U states that:

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

(2)….

(3) in carrying out screening for appropriate assessment of a proposed development a competent authority may request such information from the applicant as it may consider necessary to enable it to carry out that screening….

(4) The competent authority shall determine that an appropriate assessment of a draft Land use plan or a proposed development, as the case may be, is required if it cannot be excluded, on the basis of objective information, that the draft Land use plan or proposed development, individually or in combination with other plans or projects, will have a significant effect on a European site.

(5) [the vice versa of (4)]

(6) ….

(7) ….

(8) ….

(9) ….

(10) ….

177V. states that:

(1) An appropriate assessment carried out under this Part shall include a determination by the competent authority under Article 6.3 of the Habitats Directive as to whether or not a draft Land use plan or proposed development would adversely affect the integrity of a European site and an appropriate assessment shall be carried out by the competent authority, in each case where it has made a determination under section 177U(4) that an appropriate assessment is required, before — ...

(a) the draft Land use plan is made including, where appropriate, before a decision on appeal in relation to a draft strategic development zone is made, or

(b) consent is given for the proposed development

(2) In carrying out an appropriate assessment under subsection (1) the competent authority shall take into account each of the following matters:

(a) the Natura impact report or Natura impact statement, as appropriate

(b)….

(3) ……a competent authority shall make a Land use plan or give consent for proposed development only after having determined that the Land use plan or proposed development shall not adversely affect the integrity of a European site

(4)

(5)

(6)

The Act then goes on to deal with Article 6(4) of the Habitats Directive.

A.1.4 National Planning Framework

National Policy Objective 59 Enhance the conservation status and improve the management of protected areas and protected species by

- Implementing relevant EU Directives to protect Ireland's environment and wildlife;
- Integrating policies and objectives for the protection and restoration of biodiversity in statutory development plans;
- Developing and utilising licensing and consent systems to facilitate sustainable activities within Natura 2000 sites;
- Continued research, survey programmes and monitoring of habitats and species.

Appendix B Appropriate Assessment Process

Appropriate Assessment (AA) Screening & Natura Impact Statement (NIS) Report

Proposed Derryarkin Sand and Gravel Pit

BD Flood Unlimited Company

SLR Project No.: 501.065657.00001

9 October 2025

B.1 Appropriate Assessment Process

B.1.1 Stage One: AA Screening

Stage One is a preliminary assessment, the purpose of which is to determine whether a plan or project requires more detailed assessment including the identification of mitigation measures.

There are two principal tests. The first considers whether the plan or project is needed for the management of a European site for the purpose of maintaining or restoring its conservation interest. Any such plans or projects can usually be screened out of further assessment.

The second test considers whether the plan or project, without specific mitigation measures, would be likely to have a significant effect on any European Site. This requires consideration of the project on its own and in combination with other plans or projects. A project can only be screened out of further assessment if it is certain (beyond reasonable scientific doubt and on the basis of the best scientific knowledge) that there would be no significant effects on any European site without detailed scientific investigation or mitigation designed specifically to address potential impacts on the qualifying interest of such sites. Significant effects in this assessment are those which could undermine the conservation objective(s) of a qualifying interest feature of a European site and therefore of the site itself. The process is used to determine which European Sites should be included in the later stages of the assessment. It can also be used to determine which qualifying interest features require further assessment.

The objective of the screening stage is to determine, on the basis of a preliminary assessment and objective criteria, whether a plan or project, alone and in-combination with other plans or projects, could have significant effects on a European site in view of the site's conservation objectives.

There is no necessity to establish such an effect; it is merely necessary for the competent authority to determine that there may be such an effect. The need to apply the precautionary principle in making any key decisions in relation to the tests of Appropriate Assessment (AA) has been confirmed by the case law of the Court of Justice of the European Union (CJEU). Plans or projects that have no appreciable effect on a European site may be excluded. The threshold at this first stage is a very low one and operates as a trigger in order to determine whether a Stage Two AA must be undertaken by the competent authority on the implications of the proposed development for the conservation objectives of a European site. Therefore, where significant effects are likely, uncertain or unknown at screening stage, a second stage AA will be required.

Since the screening assessment must be completed by the competent authority, this report is intended to provide the competent authority the information it requires following the same steps.

Measures intended to avoid or reduce the harmful effects of the proposed development on European sites (i.e. "mitigation measures") or best practice measures have not been taken into account in the screening stage appraisal.

B.1.2 Stage Two: Appropriate Assessment

Stage Two is a more detailed assessment, known as an "Appropriate Assessment" due to the terminology in the legislation. This essentially repeats the second test of the screening assessment but in more detail and considering mitigation measures before reaching a conclusion.

At this stage, the test is whether the project or plan will have an adverse effect on the integrity of any European site. This must be done in the light of the conservation objectives for each of

the sites and qualifying interest features that have been 'screened in' by the earlier stage of assessment. Any effect which could undermine the conservation objectives is considered an adverse effect on the integrity of the site, and vice versa. If the project, with mitigation included, is predicted to lead to adverse effects upon the integrity of the site, further stages of assessment are required before the project can be authorise.

A Stage Two AA is a focused and detailed examination, analysis and evaluation carried out by the competent authority of the implications of the plan or project, alone and in-combination with other plans and projects, on the integrity of a European site in view of that site's conservation objectives. Case law has established that such an Appropriate Assessment, to be lawfully conducted, in summary:

(i) must identify, in the light of the best scientific knowledge in the field, all aspects of the proposed development which can, by itself or in-combination with other plans or projects, affect the conservation objectives of the European site;

(ii) must contain complete, precise and definitive findings and conclusions and may not have lacunae or gaps; and

(iii) may only include a determination that the proposed development will not adversely affect the integrity of any relevant European site where the competent authority decides (on the basis of complete, precise and definitive findings and conclusions) that no reasonable scientific doubt remains as to the absence of the identified potential effects. If adverse impacts can be satisfactorily avoided or successfully mitigated at this stage, so that no reasonable doubt remains as to the absence of the identified potential effects, then the process is complete. If the assessment is negative, i.e. adverse effects on the integrity of a site cannot be excluded, then the process must proceed to stage three and, if necessary, stage four.

Appendix C Planning Applications Considered for In-Combination Effects

Appropriate Assessment (AA) Screening & Natura Impact Statement (NIS) Report

Proposed Derryarkin Sand and Gravel Pit

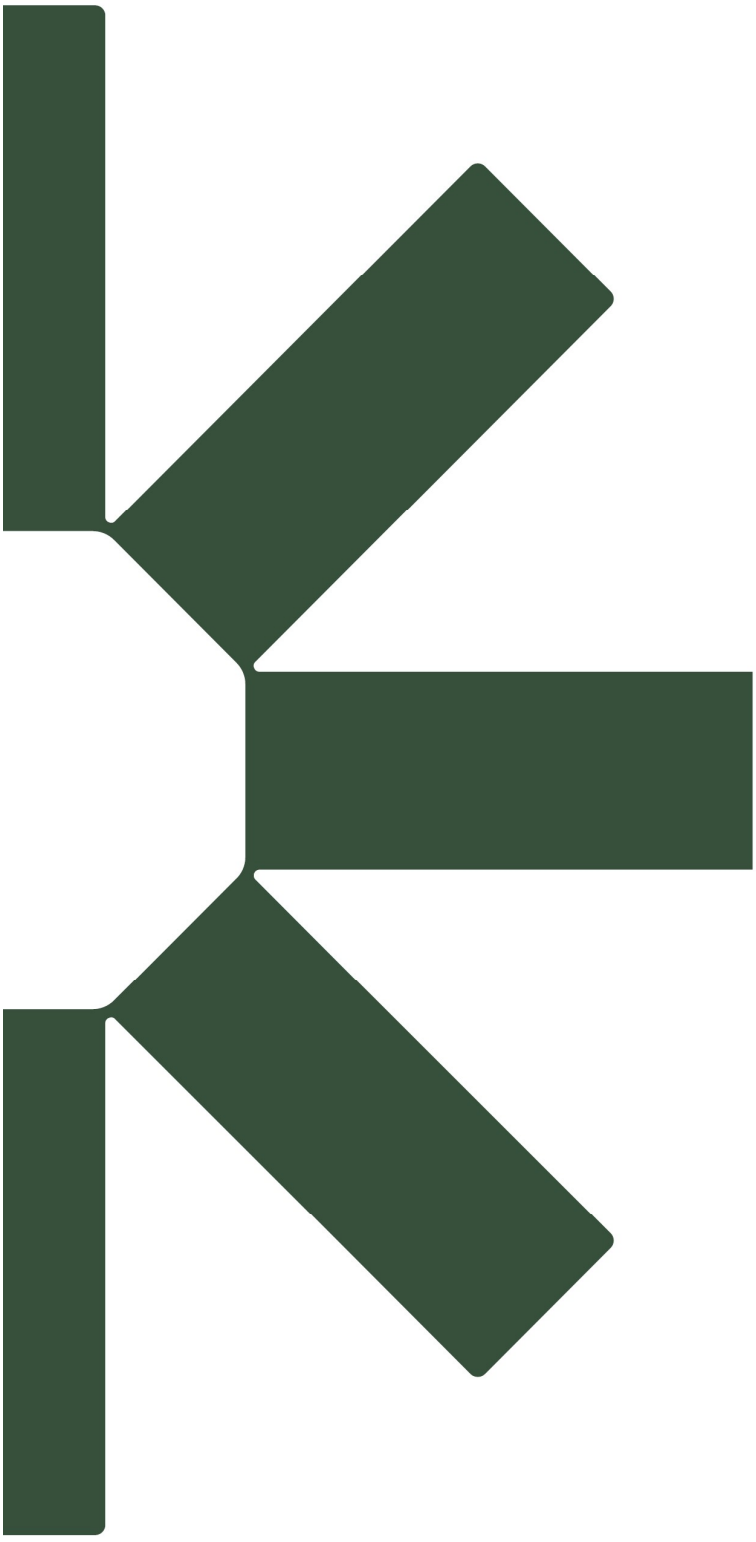
BD Flood Unlimited Company

SLR Project No.: 501.065657.00001

26 September 2025

Application Number	Development Description	Cumulative Effects	Approx. Distance
21247	A 23 Year Permission For A 44.0 Hectare Extension To An Existing Authorised Sand And Gravel Pit Comprising Of The Following: An Extraction Area Of 43.8 Ha.; Removal Of 10.2 Ha. Of Commercial Forestry And Removal Of Overburden Material From The Remaining 33.6 Hectares Of The Proposed Extraction Area; Extraction Of Sand And Gravel By Mechanical Means; Upgrading Of The Existing Internal Haul Road Measuring 0.2 Ha.; Transportation Of Extracted Material To The Existing Authorised Manufacturing Area For Processing Via The Internal Haul Road; Landscaping And Restoration Of The Site Including Screening Berms; All Associated Ancillary Facilities/Works. The Application Is Accompanied By An Environmental Impact Assessment Report (EIAR)	The AA Screening supplied with this application determined that a Stage 2 Appropriate Assessment (NIS) is not required. As such, there is no potential for impacts on any European Site as a result of this project and no pathway to act in combination with any other projects. https://offalycoco.eplanning.ie/idocsweb/ViewFiles.aspx?docid=166124&format=djvu	0.84 km
22278	(1) Construct a new farm building for the housing of livestock over and including an underground slatted slurry storage tank, completed with associated siteworks; (2) Permission to construct a new farm building for the housing of livestock including livestock handling unit, completed with associated siteworks; (3) Permission to construct a new farmyard dungstead manure pit, completed with associated siteworks; and (4) Permission to construct a new entrance into farmyard, completed with associated siteworks	No AA screening supplied with this application. There will be no discharge to the watercourse as a result of this project and as such no potential for in – combination effects.	3.3 km
25/60344	The development of a Data Centre Facility and Decentralised Energy Resource within an overall development boundary area of 243 hectares comprising: • 1 No. Security control building (floor area 23.5m2). • 6 No. new data buildings including administration blocks (each 228m x 62m x 18m high), 6 No. MV switch room buildings, within a secure campus having an area of 39 hectares, 1 No. fire water tank (Volume: 2000m3), pump house and proprietary modular water treatment plant. • 6 No. fuel cell towers (each 89m x 29m x 20m high), 2 No. chilled water tanks (Volume: 1000m3 each), pump house, ancillary water tank (Volume: 2000m3), carbon dioxide process building (30.7m x 15.7m x 11.3m high) and 16 No. carbon dioxide storage tanks (100 tonnes each). • Ancillary equipment compound including a storage building (30.7m x 10.7m x 9.7m high), 2 No. diesel generators, fire water tank (Volume: 2000m3) and pump house and proprietary modular water treatment plant. • Above ground gas installation (AGI) compound including a boiler/instrument kiosk, regulator/metal skid kiosk and connection to the existing gas network within the site. • 33kV IPP building (60.9m x 18.4m x 16.8m high), 1 No. telecoms tower 36m high and compound. • Fuel cell IPP building (40m x 9.8m x 7.1m high) and compound. • Solar farm IPP building (30m x 9.8m x 7.1m high) and compound. • Battery compound including 138 No. battery enclosures & 138 No. medium voltage power stations (MVPS), IPP building (40m x 9.8m x 7.1m high) and fire water tank (Volume: 500m3). • Proprietary modular water treatment plant serving the solar farm IPP building and battery compound IPP building. • Solar farm (168 hectares) to the east of the data campus facility including solar arrays measuring (10.2m x 6.9m), (20.4m x 6.9m) & (30.6 x 6.9m), 45 No. medium voltage power stations (MVPS), 5 No. weather stations, river crossings, internal gravel access roads, security fencing and gates, 3 No. temporary construction compounds, cable crossings in the R446, L11272 & L51251 public roads, and cable crossing under the M6 using horizontal directional drilling. • Connection to public sewer under the R446 public road. • New emergency only access/egress from the R446 public road. • Access/egress to the data centre campus facility through the existing Castlelost Flexgen and GIS substation access to the R446. • Demolition of the existing derelict dwelling and agricultural sheds. • All associated site works including	The AA Screening supplied with this application determined that a Stage 2 Appropriate Assessment (NIS) is not required. As such, there is no potential for impacts on any European Site as a result of this project and no pathway to act in combination with any other projects. https://westmeathcoco.eplanning.ie/idocswebdpss/ViewFiles.aspx?docid=283424&format=djvu	4.1 km
20494	A 10-year permission. the development will consist of the construction of: 1. a solar pv development on a c.132 ha site consisting of solar panels on ground-mounted frames, 27 no. single storey electrical inverter/ transformer units, security fencing, cctv system with pole mounted cameras, upgrading of existing access, landscaping and all associated ancillary development works; 2. an enclosed battery energy storage system compound on a c.0.385 ha located within the solar pv development site consisting of 18 no. battery storage units (each with associated containerised step up transformer), 1 no. containerised control room and 1 no. containerised switch room and all associated ancillary development works; and 3. a temporary construction compound adjacent to the existing access. the operational lifespan of the solar pv development and battery energy storage system will be 35 years. a natura impact statement (nis) will accompany the planning application	The NIS supplied with this application details mitigation measures to ensure no adverse effects on water quality will occur as a result of the proposed project. As such, there is no potential for in – combination effects to occur as there is no pathway. https://offalycoco.eplanning.ie/idocsweb/ViewFiles.aspx?docid=157808&format=djvu	6.1 km
2560082	Amendments to the development permitted under Offaly County Council Planning Register Reference 20/494 to: (i) revise the layout of the permitted development including solar array and inverter/transformer units; (ii) increase the height of the permitted solar array from 2.914 metres to up to 3.3 metres; (iii) provide for variable spacings between the solar array rows; (iv) provide for varying solar	The project was for the amendment to an already granted application. The addendum to the NIS supplied with this application details mitigation measures to ensure no adverse effects on water quality will occur as a result of the proposed project. As such, there is no potential for in – combination effects to occur as there is no pathway	6.1 km

Application Number	Development Description	Cumulative Effects	Approx. Distance
	array tilt-angles; (v) alter the design of the electrical inverter/transformer units and reduce the number of electrical inverter/transformer units from 27 no. to 14 no.; (vi) revise the alignment of approximately 250 metres of existing on-site access tracks and construct approximately 7,500 metres of access track; (vii) relocate and redesign the permitted battery energy storage system compound including an increase in the compound footprint from approximately 3,850 square metres to approximately 10,100 square metres; (viii) alter the design of the battery energy storage system and increase the number of battery energy storage system and ancillary containers from 38 no. to 83 no.; (ix) alter Condition No. 6(b) to provide for the planting of screening vegetation at the end of the construction phase; (x) alter Condition No. 5(a) to provide for the decommissioning of the development no later than 40-years from the date of commissioning; and, (xi) all associated site development, drainage, access and reinstatement works. This planning application is accompanied by a Natura Impact Statement (NIS)	https://offalycoco.eplanning.ie/idocsweb/ViewFiles.aspx?docid=249102&format=djvu	
21247	A 23 Year Permission For A 44.0 Hectare Extension To An Existing Authorised Sand And Gravel Pit Comprising Of The Following: An Extraction Area Of 43.8 Ha.; Removal Of 10.2 Ha. Of Commercial Forestry And Removal Of Overburden Material From The Remaining 33.6 Hectares Of The Proposed Extraction Area; Extraction Of Sand And Gravel By Mechanical Means; Upgrading Of The Existing Internal Haul Road Measuring 0.2 Ha.; Transportation Of Extracted Material To The Existing Authorised Manufacturing Area For Processing Via The Internal Haul Road; Landscaping And Restoration Of The Site Including Screening Berms; All Associated Ancillary Facilities/Works. The Application Is Accompanied By An Environmental Impact Assessment Report (EIAR)	The AA Screening supplied with this application determined that a Stage 2 Appropriate Assessment (NIS) is not required.	0.84 km
2171	And Continuation Of Use Of An Internal Haul Road Which Measures 1,116 Meters In Length And Connects Two Areas Of An Existing Authorised Sand And Gravel Pit. Permission For Development Of An Area Of 1.4 Hectares	The AA Screening supplied with this application determined that a Stage 2 Appropriate Assessment (NIS) is not required.	0.84 km



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