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Introduction

- 5.1 SLR Consulting (Ireland) Ltd. was commissioned by BD Flood Ltd., to prepare a Biodiversity chapter which forms part of the Environmental Impact Assessment Report (EIAR) prepared in support of the proposed extension of the Murrens Sand and Gravel Pit, Annagh, Oldcastle, Co. Meath site, hereafter referred to as “the Site”.

Site Description

- 5.2 The application site is located within a rural area referred to as ‘The Murrens’, located c. 4km west of Dromone and 6km southwest of Oldcastle town. The R195 regional route that runs along the eastern edge of the existing quarry links Oldcastle, Co. Meath (to the north) to Castlepollard to the south.
- 5.3 The proposed pit extension area is located to the southeast of the existing pit and represents c. 4.2 hectares set within an overall landholding of c. 254 hectares. The existing pit site is located within the townlands of Annagh, Baltrasna and the Murrens. The proposed extension lands subject of this planning application are located with the townland of the Murrens.
- 5.4 The application site (c. 5.8 hectares) is an area of previous plantation woodland located immediately adjacent and southeast / east of the existing sand and gravel pit development permitted by planning permission KA/141129 (ABP PL17.245257).
- 5.5 The application site is made up rough ground and scrub terrain as a result of cleared forestry, which consisted of poorly performing Ash trees due to the presence of the widespread Ash dieback disease. Within the extraction area footprint of 4.2 hectares, there are some remaining clusters of trees within the southeastern portion of the site.
- 5.6 To the immediate west of the site, is the existing operational BD Flood sand and gravel pit. The northern application boundary forms the landholding boundary between the BD Flood lands and the third-party quarry site operated by JJ Flood. The southwestern application boundary adjoins third party agricultural lands while the southern / southeastern boundary adjoins lands under the control of BD Flood and currently used for forestry plantation.

Project Description

- 5.7 The proposed development being applied for under this planning application is shown in plan on **Figure 2-2** of the EIAR, and in cross section on **Figure 2-3** of the EIAR, and will consist of:
- Extraction of sand and gravel (dry working) over a lateral extension extraction area of c. 4.2 hectares adjacent to the existing sand and gravel pit development permitted by planning permission KA/141129 (ABP PL17.245257) with access gained from the existing pit.
 - Restoration of the lands will form part of the overall adjacent sand and gravel pit restoration site, returning the lands to a combination of agricultural grazing and beneficial ecological habitat.
 - The development will be commensurate with the life of existing site permission (P. Ref. KA14/1129 & ABP PL.17.245257) which is due to expire in December 2036.
 - All associated site ancillary works within an overall application area of c. 5.8 hectares.

Purpose of this Report

- 5.8 This biodiversity chapter aims to describe the baseline ecological conditions at the Site and to identify potential significant effects associated with the proposed development. Where necessary appropriate mitigation measures will be set out to reduce residual effects to a suitable level.
- 5.9 This chapter forms part of the EIAR that will be submitted with the planning application to assist the competent authority, in this case Meath County Council, to carry out an Environmental Impact Assessment (EIA) of the proposed development.
- 5.10 The purpose of this report is to:
- Describe (any) likely significant effects, any indirect, secondary, cumulative, transboundary, short-term, medium-term, and long-term, permanent, and temporary, positive and negative effects of the project, which result from the proposed works during construction, operation and restoration;
 - Describe mitigation measures envisaged to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects on biodiversity; and
 - Explain the extent, to which significant adverse effects on the environment are avoided, prevented, reduced, or offset.
- 5.11 This chapter will address the terrestrial and freshwater habitats and species, with particular attention to rare and protected species as listed under the Checklist of protected and threatened species in Ireland (Nelson et al., 2019).

Evidence of Technical Competence and Experience

- 5.12 This report was prepared by SLR Project Ecologist Victoria Molloy BSc and SLR Associate Ecologist Michael Bailey carried out the technical review for this report.
- 5.13 **Victoria Molloy** holds a BSc. in Zoology from the University of Galway. She has three 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 wide range of impact assessment reports including biodiversity chapters for Environmental Impact Assessment Report (EIAR), Ecological Impact Assessment Reports (EclA), Appropriate Assessment (AA) screening reports, and Natura Impact Statements (NIS) for a variety of projects including quarries, forestry licence applications, housing, road, and industrial developments.
- 5.14 **Michael Bailey** holds a BSc (Hons) in Biology and Ecology from the University of Ulster, and an MSc in Quantitative Conservation Biology from the University of the Witwatersrand, Johannesburg, South Africa. Michael is a full member of the Chartered Institute of Ecology and Environmental Management (CIEEM). Michael is an experienced consultant ecologist with field and research experience with mammal, bird, bat and invasive species surveys in Ireland, the UK and Africa. He has prepared Appropriate Assessments and Ecological Impact Assessments for a wide range of infrastructure, mining and extractive industry, and renewable energy projects.

Relevant Legislation and Policy

International legislation and policy

- United Nations (UN) Convention on Biological Diversity (CBD); and
- The Ramsar Convention on Wetlands of International Importance.

European legislation and policy

- EU Habitats Directive on the conservation of natural habitats and of wild fauna and flora (92/43/EEC) (as amended) (the Habitats Directive);
- EU Birds Directive on the conservation of wild birds (2009/147/EC) (as amended);
- The Berne Convention on the Conservation of European Wildlife and Natural Habitats;
- The Bonn Convention on the Conservation of Migratory Species of Wild Animals;
- EU Water Framework Directive establishing a framework for Community action in the field of water policy (2000/60/EC) (as amended);
- EU Environmental Liability Directive (2004/35/EC);
- EU EIA Directive on the assessment of the effects of certain public and private projects on the environment (2011/92/EU) (as amended);
- EU Biodiversity Strategy 2020;
- Regulation (EU) No 1143/2014 of the European Parliament and of the Council of 22 October 2014 on the prevention and management of the introduction and spread of invasive alien species, as amended, together with Commission Implementing Regulation (EU) 2016/1141 and Implementing Regulation (EU) 2019/1262; and
- EU Nature Restoration Law 2023 2022/0195(COD).

National legislation and policy

- The Wildlife Acts 1976, as amended;
- S.I. No. 477/2011 - Regulation 49 and 50 of European Communities (Birds and Natural Habitats) Regulations;
- S.I. No. 272/2009 – European Communities Environmental Objectives (Surface Waters) Regulations, as amended;
- S.I. No. 293/1988 - European Communities (Quality of Salmonid Waters) Regulations;
- European Union Environmental Objectives (Freshwater Pearl Mussel *Margaritifera margaritifera*) (Amendment) Regulations 2009 to 2018;
- The Flora (Protection) Order 2022;
- The Heritage Act, 2018 (as amended);
- Planning and Development Act, 2000 (as amended);
- Project Ireland 2040;
- National Heritage Plan 2030;
- Ireland's 4th National Biodiversity Action Plan 2023 - 2030.
- European Communities (Planning and Development) (Environmental Impact Assessment (EIA)) Regulations 2018, as amended;
- European Communities (Water policy) Regulations, 2003, as amended; and

- European Communities Environmental Objectives (Surface Waters) Regulations 2009.

Local policy

- 5.15 The relevant local planning policies have been extracted from the Meath County Development Plan (CDP) 2021-2027 (Meath County Council, 2021). These policies are specific to “Chapter 8: Cultural and Natural Heritage Strategy” of the county development plan and are concerned with the policies and objectives to protect and/or enhance the ecology and biodiversity of the county. In broad terms these objectives and policies aim to ensure correct measures are put in place to identify and protect natural heritage and important environmental features within the county. The full list of relevant policies and objectives are listed in **Appendix 5-A** of this chapter.

Guidance

- 5.16 The relevant guidance has been followed:
- Guidelines for Assessment of Ecological Impacts of National roads Schemes (National Roads Authority (NRA, 2009a.);
 - Ecological Surveying Techniques for Protecting Flora and Fauna during the Planning of National Road Schemes (NRA, n.d.);
 - Guidelines for the Treatment of Badgers Prior to the Construction of National Road Schemes (NRA, 2009b);
 - Surveying Badgers (Harris et al., 1989)
 - Guidelines for Ecological Impact Assessment in the UK and Ireland (Chartered Institute of Ecology and Environmental Management (CIEEM), 2018);
 - Guidance Note 08/23: Bats and Artificial Lighting at Night (Institute of Lighting Professionals (ILP) and Bat Conservation Trust (BCT), 2023);
 - Bat Surveys for Professional Ecologists – Good Practice Guidelines (Collins 2016; and Collins, 2023);
 - A guide to Habitats in Ireland (Fossitt, 2000);
 - The Status of Ireland's Breeding Seabirds: Birds Directive Article 12 Reporting 2013 – 2018 (Cummins et al., 2019);
 - The Status of EU Protected Habitats and Species in Ireland (National Parks and Wildlife Service (NPWS), 2019);
 - Common Standards Monitoring Guidance for Reptiles and Amphibians (Joint Nature Conservation Committee (JNCC), 2004);
 - UK BAP Mammals: Interim Guidance for Survey Methodologies, Impact Assessment and Mitigation (Cresswell et al., 2012); and
 - New Atlas of the British and Irish Flora: An Atlas of the Vascular Plants of Britain, Ireland, The Isle of Man and the Channel Islands (Preston et al., 2022).

Methodology

- 5.18 The methods used to carry out the survey of the Site, to evaluate the ecological value and to prepare the biodiversity chapter is outlined in this section. The assessment methodology for this proposal was developed using the standard professional impact assessment guidance published in 2018 by the Chartered Institute of Ecology and Environmental Management (CIEEM).

Scope of the Assessment

- 5.19 The scope of this Biodiversity Chapter is to identify potential impacts likely to occur from the proposed extraction and restoration operations, and to determine if the effects on biodiversity are significant. The scope of the report includes the provision of mitigation, compensation and enhancement measures as required.

Desk study

- 5.20 All designated sites for biodiversity within 15 km and with ecological and/or hydrological connectivity have also been considered.

Field survey

- 5.21 The study area for field surveys comprised the site boundary, although incidental sighting of species beyond this boundary are represented where relevant in this report.

Baseline Data Collection

Desk Study

- 5.22 A desk study was carried out to collate the available existing ecological information on the Site. The Site and the surrounding area were viewed using existing available satellite imagery¹.
- 5.23 The following data sources were used to compile the desk study:
- The National Parks and Wildlife Service (NPWS)² online resources were accessed for information on sites with a statutory designation for nature conservation, specifically European sites (Special Areas of Conservation (SAC) and Special Protection Areas (SPA)), Ramsar sites and Natural heritage Areas (NHAs), and other sites such as proposed Natural Heritage Areas (pNHA) that are not legally designated but are identified as being of conservation interest, and protected habitats and species as defined under the NPWS *Checklist of Protected and Threatened Species in Ireland* (Nelson et al., 2019) .
 - The National Biodiversity Data Centre (NBDC)³ online resources were accessed for information on rare and protected habitats and species (Nelson et al., 2019). All records were considered within this assessment; however, where a record was sufficiently old and unlikely to comprise relevant data (e.g., where changes

¹ <https://www.google.ie/maps> & <http://www.bing.com/maps/> (Accessed May 2025)

² www.npws.ie (Accessed May 2025)

³ <http://maps.biodiversityireland.ie/#/Map> (Accessed May 2025)

in land management that has occurred in the intervening period), these data have been omitted from the assessment.

- Environmental Protection Agency (EPA) Maps⁴ was accessed for other environmental information, such as surface water features, relevant to preparation of this report.
- Records of Annex I habitats, and Annex II and IV species of the Habitats Directive (92/43/EEC) using Article 12 and Article 17 reports.
- Local policies listed in the Meath County Development Plan.
- Birds of Conservation Concern in Ireland (BoCCI) 2020-2026 (Gilbert et al., 2021), published by BirdWatch Ireland and the RSPB NI, is a list of priority bird species for conservation action on the island of Ireland. The BoCCI lists birds which breed and/or winter in Ireland and classifies them into three separate lists; Red, Amber and Green; based on the conservation status of the bird and hence their conservation priority. Birds on the Red List are those of highest conservation concern, Amber List are of medium conservation concern and Green List are not considered threatened.
- Wildlife Acts 1976 – 2018 (ISB, n.d.), the Red List of Terrestrial Mammals (Marnell et al., 2019)
- Annexes of the EU Habitats Directive 92/43/EEC¹² (European Commission, n.d.).
- Meath County Council website was accessed for information on relevant planning policy while the planning portal⁵ was accessed for information on other planning applications within the Site and immediate surrounding area.
- The drawings and the full project description are contained within other sections of this EIAR which also informed the desk study. Other chapters of the EIAR reviewed included **Chapter 7 - Water**, **Chapter 8 - Air Quality**, **Chapter 10: Noise** and **Chapter 13 - Landscape**.

Field Survey(s)

- 5.24 A habitat and species survey was conducted on 6th February 2025 by SLR Senior Ecologist Jake Matthews to identify the habitats on-site and to determine the baseline ecology of the Site. An additional site drone and walk over survey was carried out by SLR Project Manager Shane McDermott on 13th March 2025.
- 5.25 The approach to the field surveys is based on accepted standard practice and methods. Habitats within the study area were classified after '*A Guide to Habitats in Ireland*'⁶ and were assessed if they comprise Annex I habitats under the Habitats Directive, habitats which have a supporting function for such habitats, habitats which may support Annex II species of the Habitats Directive and/or habitats which may support Annex I species of the Birds Directive.

⁴ <http://gis.epa.ie/> (Accessed May 2025)

⁵ <https://www.myplan.ie/> (Accessed May 2025)

⁶ Fossitt (2000): A Guide to Habitats in Ireland

Limitations

Desk Study

- 5.26 Desk study data is unlikely to be exhaustive, especially in respect of species, and is intended mainly to set a context for the study. It is therefore possible that important habitats or protected species not identified during the data search do in fact occur within the vicinity of the site. Interpretation of maps and aerial photography has been conducted in good faith, using recent imagery, but it has not been possible to verify the accuracy of any statements relating to land use and habitat context outside of the field study area.
- 5.27 The lack of ecological records returned in the data search does not conclude the absence of a species. Such an absence of records may simply indicate an under-recording of the area.
- 5.28 In accordance with CIEEM's Advice Note on the Lifespan of Ecological Reports and Surveys⁷, the details of this report will remain valid for a period of 18-months from the date of the survey (i.e., until 06th August 2026). After which the validity of this assessment should be reviewed to determine whether further updates are necessary.

Field Survey

- 5.29 The field surveys were conducted in February 2025. These are outside the optimal seasonality (considered April – September) and certain flowering species may have been missed as a result. However, only heavily disturbed habitats of limited value are being lost to facilitate the proposed development. As such, it is considered unlikely that any notable flora is present within the impacted habitats and this limitation is not considered to pose a significant constraint to the accuracy of the survey.

⁷ CIEEM (2019) Advice Note on the Lifespan of Ecological Reports and Surveys

Assessment Approach

- 5.30 The ecological evaluation and assessment within this chapter has been undertaken with reference to relevant parts of the 2018 Guidelines for Ecological Impact Assessment in the UK and Ireland developed by the Chartered Institute of Ecology and Environmental Management (CIEEM, September 2018).
- 5.31 Although this is recognised as current good practice for ecological assessment, the guidance itself recognises that it is not a prescription about exactly how to undertake an ecological impact assessment (ECIA); rather, they “*provide guidance to practitioners for refining their own methodologies*”. For the full guidance, refer to <https://www.cieem.net/data/files/ECIA%20Guidelines.pdf>. The approach to impact assessment also has regard to advice set out in the EPA draft guidelines on the information to be contained in Environmental Impact Assessment Reports (EIAR) published in 2022.

Important Ecological Features

- 5.32 Important Ecological Features (IEFs) can be important for a variety of reasons. Importance may relate, for example, to the quality or extent of the site or habitats therein; habitat and/ or species rarity; the extent to which such habitats and/ or species are threatened throughout their range, or to their rate of decline. IEFs comprise the following:
- Designated sites including European, nationally, and locally designated sites;
 - Habitats listed on Annex I of the Habitats Directive;
 - Populations of bird species listed on Annex I of the Birds Directive; on local biodiversity action plan or are provided protection through policies listed under the county development plans;
 - Populations of protected and threatened species in Ireland as defined by Nelson et al. (2019) and/or the local biodiversity action plan; or
 - Habitats that comprise a significant resource for a rare or protected species.

Determining Importance

- 5.33 The importance of an ecological feature should be considered within a defined geographical context. The following frame of reference has been used in this case, relying on known/ published accounts of distribution and rarity where available, and professional experience:
- International (European);
 - National (Ireland);
 - County (Meath);
 - Local (i.e., within circa 5km); and
 - Negligible.
- 5.34 The above frame of reference is applied to the IEFs identified during the desk study and surveys to inform this report.
- 5.35 In assigning a level of value to the population of a species, it is necessary to consider its distribution and status, including a consideration of trends based on available historical records. Examples of relevant lists and criteria include species of European

conservation importance (as listed on Annexes II, IV and V of the Habitats Directive or Annex 1 of the Birds Directive), species protected under the Wildlife Acts 1976 - 2012 and BoCCI.

- 5.36 The level of value is determined by reference to standard criteria. All features of Local value and higher are considered in the assessment if they are likely to be significantly affected. Other features are also considered in the assessment if they are protected by law or policy, or otherwise require consideration in the development process.

Impact Assessment

- 5.37 The impact assessment process involves the following steps:
- identifying and characterising potential impacts;
 - incorporating measures to avoid and mitigate (reduce) these impacts;
 - assessing the significance of any residual effects after mitigation;
 - identifying appropriate compensation measures to offset significant residual effects (if required); and
 - identifying opportunities for ecological enhancement.
- 5.38 When describing impacts, reference has been made to the following characteristics, as appropriate:
- Positive or negative;
 - Extent;
 - Magnitude;
 - Duration;
 - Timing;
 - Frequency; and
 - Reversibility.
- 5.39 The impact assessment process considers both direct and indirect impacts: direct ecological impacts are changes that are directly attributable to a defined action (e.g., the physical loss of habitat occupied by a species during the construction process). Indirect ecological impacts are attributable to an action, but which affect ecological resources through effects on an intermediary ecosystem, process, or feature (e.g., the creation of roads which cause hydrological changes, which, in the absence of mitigation, could lead to the drying out of wet grassland).
- 5.40 Consideration of conservation status is important for evaluating the effects of impacts on individual habitats and species and assessing their significance:
- **Habitats** – conservation status is determined by the sum of the influences acting on the habitat that may affect its extent, structure, and functions as well as its distribution and its typical species within a given geographical area.
 - **Species** – conservation status is determined by the sum of influences acting on the species concerned that may affect its abundance and distribution within a given geographical area.
- 5.41 The threshold of importance is based at 1% of the existing background population / area (CIEEM, 2018).

Significant Effects

- 5.42 The 2018 CIEEM guidance sets out information in paragraphs 5.24 through to 5.28 of the guidance documents which describes the concept of ecological significance. Significant effects are qualified with reference to an appropriate geographic scale, and the scale of significance of an effect may or may not be the same as the geographic context in which the feature is considered important.
- 5.43 A significant effect, for the purposes of EclA, is defined as an effect that either supports or undermines biodiversity conservation objectives for '*important ecological features*' or for biodiversity in general. Conservation objectives may be specific (e.g. for a designated site) or broad (e.g. national/local nature conservation policy) or more wide-ranging (enhancement of biodiversity). Effects can be considered significant at a wide range of scales from international to local.
- 5.44 The nature of the identified effects on each assessed feature is characterised. This is considered, along with available research, professional judgement about the sensitivity of the feature affected, and professional judgement about how the impact is likely to affect the site, habitat, or population's structure and continued function. Where it is concluded that an effect would be likely to reduce the importance of an assessed feature, it is described as significant. The degree of significance of the effect takes into account the geographic context of the feature's importance and the degree to which its interest is judged to be affected.

Cumulative Effects

- 5.45 Cumulative effects can result from individually insignificant but collectively significant actions taking place over a period of time or concentrated in a location. Cumulative effects can occur where a proposed development results in individually insignificant impacts that, when considered in-combination with impacts of other proposed or permitted plans and projects, can result in significant effects.
- 5.46 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.

Avoidance, Mitigation, Compensation and Enhancement

- 5.47 When seeking mitigation or compensation solutions, efforts should be consistent with the geographical scale at which an effect is significant. For example, mitigation and compensation for effects on a species population significant at a county scale should ensure no net loss of the population at a county scale. The relative geographical scale at which the effect is significant will have a bearing on the required outcome which must be achieved.

- 5.48 Where potentially significant effects have been identified, the mitigation hierarchy has been applied, as recommended in the CIEEM Guidelines. The mitigation hierarchy sets out a sequential approach beginning with the avoidance of impacts where possible, the application of mitigation measures to minimise unavoidable impacts and then compensation for any remaining impacts. Once avoidance and mitigation measures have been applied, residual effects are then identified along with any necessary compensation measures, and incorporation of opportunities for enhancement.
- 5.49 It is important to clearly differentiate between avoidance mitigation, compensation and enhancement and these terms are defined here as follows:
- **Avoidance** is used where an impact has been avoided, e.g. through changes in scheme design;
 - **Mitigation** is used to refer to measures to reduce or remedy a specific negative impact in situ;
 - **Compensation** describes measures taken to offset residual effects, i.e. where mitigation in situ is not possible; and
 - **Enhancement** is the provision of new benefits for biodiversity that are additional to those provided as part of mitigation or compensation measures, although they can be complementary.

Baseline Ecological Conditions

- 5.50 This section sets out the current baseline conditions for the ecological features considered within the Site and provides a clear description of the changes that would occur as a result of the proposed development using the findings of the desk study and field survey.

Sites Designated for Nature Conservation

- 5.51 Sites which have been designated for nature conservation are discussed in this section. These designations may include European sites, Natural Heritage Areas, National Parks, Nature Reserves, and Ramsar Sites.

European Designated Sites

- 5.52 An Appropriate Assessment (AA) screening report has been provided alongside this report (SLR, 2025). **Table 5-1** lists the European sites identified within 15 km of the Site. Sites beyond this distance have been scoped out as it is considered that the potential impacts caused by the proposed development are likely to have an imperceptible effect on sites beyond this distance. The designated sites are provided in **Figure 5-2**.
- 5.53 White Lough, Ben Loughs and Lough Doo SAC [001810] is located within the Tynagh Gravels Groundwater Body (GWB), and therefore there is a potential pathway for groundwater contamination between the project site and this European site. The potential for Likely Significant Effects on White Lough, Ben Loughs and Lough Doo SAC is assessed further in this report.
- 5.54 All other European sites have been scoped out from potential impacts in the AA Screening report and have, therefore, not been assessed further in this chapter.

Table 5-1: European Sites Within 15km of the Project Site

European Site [code]	Approximate distance ⁸	Qualifying Interests ⁹
Special Areas of Conservation (SAC) within 15 km		
White Lough, Ben Loughs and Lough Doo SAC [001810]	700 m southwest	Habitats 3140 Hard oligo-mesotrophic waters with benthic vegetation of Chara spp. Species 1092 White-clawed Crayfish (Austropotamobius pallipes)
Lough Bane and Lough Glass SAC [002120]	1.9 km southeast	Habitats • 3140 Hard oligo-mesotrophic waters with benthic vegetation of Chara spp. Species

⁸ When measured in a straight line over the shortest distance between the site and European site.

⁹ For SPAs, the bird species that are the reason for designation are Species of Conservation Interest (SCIs) and for SACs the habitats and species that are the reason for designation are its Qualifying Interests (QIs). For convenience, the term qualifying interest or QI is used here for both SPAs and SACs.

⁹ [Protected Sites in Ireland | National Parks & Wildlife Service \(npws.ie\)](https://www.npws.ie/Protected_Sites_in_Ireland/National_Parks_Wildlife_Service)

European Site [code]	Approximate distance ⁸	Qualifying Interests ⁹
		1092 White-clawed Crayfish (<i>Austropotamobius pallipes</i>)
Lough Lene SAC [002121]	4.95 km south	Habitats 3140 Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp. Species 1092 White-clawed Crayfish (<i>Austropotamobius pallipes</i>)
River Boyne and River Blackwater SAC [002299]	7.0 km southeast	Habitats 7230 Alkaline fens 91E0 Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, Alnion incanae, Salicion albae)* Species 1099 River Lamprey (<i>Lampetra fluviatilis</i>) 1106 Salmon (<i>Salmo salar</i>) 1355 Otter (<i>Lutra lutra</i>)
Moneybeg and Clareisland Bogs SAC [002340]	9.4 km northwest	Habitats 7110 Active raised bogs* 7120 Degraded raised bogs still capable of natural regeneration 7150 Depressions on peat substrates of the Rhynchosporion
Garriskil Bog SAC [000679]	13.9 km southwest	Habitats 7110 Active raised bogs* 7120 Degraded raised bogs still capable of natural regeneration 7150 Depressions on peat substrates of the Rhynchosporion
Derragh Bog SAC [002201]	14.1 km northwest	Habitats 7110 Active raised bogs* 7120 Degraded raised bogs still capable of natural regeneration
Special Protection Areas (SPA) within 15 km		
Lough Sheelin SPA [004065]	10.6 km northwest	Birds - A005 Great Crested Grebe (<i>Podiceps cristatus</i>) - A059 Pochard (<i>Aythya ferina</i>) - A061 Tufted Duck (<i>Aythya fuligula</i>) - A067 Goldeneye (<i>Bucephala clangula</i>) Habitats - Wetlands

European Site [code]	Approximate distance ⁸	Qualifying Interests ⁹
Lough Derravaragh SPA [004043]	11.05 km southwest	Birds - A038 Whooper Swan (<i>Cygnus cygnus</i>) - A059 Pochard (<i>Aythya ferina</i>) - A061 Tufted Duck (<i>Aythya fuligula</i>) - A125 Coot (<i>Fulica atra</i>) Habitats - Wetlands
River Boyne and River Blackwater SPA [004232]	13.4 km northeast	Birds A229 Kingfisher (<i>Alcedo atthis</i>)
Lough Kinale and Derragh Lough SPA [004061]	13.4 km northwest	Birds - A059 Pochard (<i>Aythya ferina</i>) - A061 Tufted Duck (<i>Aythya fuligula</i>) Habitats - Wetlands

Natural Heritage Areas

- 5.55 **Table 5-2** details the Natural Heritage Areas (NHA) and proposed Natural Heritage Areas (pNHA) within 15 km of the proposed development.
- 5.56 Lough Naneagh pNHA (001814) and White Lough, Ben Loughs and Lough Doo pNHA (001810) are located within 2km of the Site. Therefore, they are considered further for potential impacts in this report.
- 5.57 All other NHAs and pNHAs are considered to be sufficiently distant to exclude the possibility of significant impacts as a result of the proposed development.

Table 5-2: Natural Heritage Areas Within 15 km of the Site

Natural Heritage Area [code]	Distance ¹⁰	Details / reason for designation
Natural Heritage Areas (NHAs)		
Lough Derravaragh NHA [000684]	11.05 km southwest	Peatlands [4] and birds [12]. It is anticipated that this NHA is designated for the same QI species as the Lough Derravaragh SPA which it overlaps with.
Lough Kinale and Derragh Lough NHA [000985]	13.4 km northwest	Peatlands [4] and birds [12]. It is anticipated that this NHA is designated for the same QI species as the Lough Kinale and Derragh Lough SPA and Derragh Bog SAC which it overlaps with.

¹⁰ When measured in a straight line over the shortest distance between the site and NHA/pNHA.

Natural Heritage Area [code]	Distance ¹⁰	Details / reason for designation
Proposed Natural Heritage Areas (pNHAs)		
Lough Naneagh pNHA [001814]	425 m northwest	Transitional fen and lake.
White Lough, Ben Loughs and Lough Doo pNHA [001810]	700 m southwest	It is anticipated that this pNHA is designated for the same QIs as the White Lough, Ben Loughs and Lough Doo SAC which it overlaps with.
Lough Glore pNHA [000686]	2.95 km southwest	Limestone lake, birds, and otter.
Aghalasty Fen pNHA [000672]	4.2 km south	Fen.
Hill of Mael and the Rock of Curry pNHA [000681]	6.3 km west	Limestone pavement.
Lough Sheelin pNHA [000987]	9.4 km northwest	It is anticipated that this pNHA is designated for the same QIs as the Lough Sheelin SPA and Moneybeg and Clareisland Bogs SAC which it overlaps with.
Lough Shesk pNHA [000556]	10.85 km southeast	It is anticipated that this pNHA is designated for the same QIs as the River Boyne and River Blackwater SAC which it overlaps with.
Lough Bane pNHA [001721]	10.9 km northwest	Peatlands.
Lough Ramor pNHA [000008]	13.35 km northeast	Birds.

Habitats

5.58 Habitats present within the Site, as recorded during the preliminary ecological assessment survey, are described in this section. Habitat classification follows that of 'A Guide to Habitats in Ireland' (Fossitt, 2000). A habitat map for the site is provided in **Figure 5-3**.

Desk Study

5.59 Consultation with Biodiversity Maps¹¹ returned four parcels of National Survey of Native Woodlands (NSNW) woodland habitats (2010) were identified during the desktop search within 2 km of the site boundary. These included the following:

- Oak-ash-hazel woodland, comprising *Fraxinus excelsior* - *Hedera helix* woodland group, *Geum urbanum* - *Veronica montana* vegetation type. This

¹¹ <https://maps.biodiversityireland.ie/Map>. (Accessed May 2025)

woodland was located c. 645 m east of the site. This was also considered to comprise ancient & long established woodland.

- Oak-ash-hazel woodland, comprising *Fraxinus excelsior* - *Hedera helix* woodland group, *Geum urbanum* - *Veronica montana* vegetation type. This woodland was located c. 425 m north-west of the site. This was also considered to comprise ancient & long established woodland.
- Oak-birch-holly woodland, comprising *Betula pubescens* - *Molinia caerulea* woodland group, *Vaccinium myrtillus* - *Luzula sylvatica* vegetation type. This woodland was located c. 1.55 km south-east of the site.
- Oak-ash-hazel woodland, comprising *Betula pubescens* - *Molinia caerulea* woodland group, *Vaccinium myrtillus* - *Luzula sylvatica* vegetation type. This woodland was located c. 1.62 km south-east of the site.

5.60 The desk study found no records of Annex I habitats within the site boundary. **Table 5-3** details the parcels of Annex I habitat were recorded within a 2 km buffer of the site boundary.

Table 5-3: Annex I habitats located within 2 km of the site boundary.

Code and Habitat Name	Status	ITM Centroid X	ITM Centroid Y	Approximate distance from site
7210 Cladium fens*	INADEQUATE	653,128	773,538	0.74 km
7230 Alkaline fens	BAD	653,128	773,538	0.74 km
7140 Transition mires	BAD	652,787	775,516	1.09 km
7210 Cladium fens*	INADEQUATE	652,787	775,516	1.09 km
7230 Alkaline fens	BAD	652,787	775,516	1.09 km
7140 Transition mires	BAD	651,895	772,578	1.27 km
7210 Cladium fens*	INADEQUATE	651,895	772,578	1.27 km
7230 Alkaline fens	BAD	651,895	772,578	1.27 km
7140 Transition mires	BAD	651,061	773,109	1.37 km
7210 Cladium fens*	INADEQUATE	651,061	773,109	1.37 km
7230 Alkaline fens	BAD	651,061	773,109	1.37 km
7140 Transition mires	BAD	650,845	775,371	1.47 km
7210 Cladium fens*	INADEQUATE	650,845	775,371	1.47 km
7230 Alkaline fens	BAD	650,845	775,371	1.47 km
7140 Transition mires	BAD	652,382	772,051	1.75 km
7210 Cladium fens*	INADEQUATE	652,382	772,051	1.75 km
7230 Alkaline fens	BAD	652,382	772,051	1.75 km
3180 Turloughs*	INADEQUATE	653,139	776,018	1.75 km
7140 Transition mires	BAD	652,060	772,140	1.85 km
7210 Cladium fens*	INADEQUATE	652,060	772,140	1.85 km
7230 Alkaline fens	BAD	652,060	772,140	1.85 km
7140 Transition mires	BAD	652,213	771,765	1.92 km

7210 Cladium fens*	INADEQUATE	652,213	771,765	1.92 km
7230 Alkaline fens	BAD	652,213	771,765	1.92 km
3180 Turloughs*	INADEQUATE	654,359	774,438	1.94 km

Field Survey

Mixed Broadleaved Woodland (WD1)

- 5.61 The area of broadleaved woodland located in the south of the Site is considered to be a plantation plot consisting of ash *Fraxinus excelsior*, sycamore *Acer pseudoplatanus*, pine *Pinus* spp. and spruce *Picea* spp. The trees are of uniform age and are planted in dense rows. There were signs of felling in this plot with lots of deadwood present at the time of survey. The majority of the trees within these plots are ash trees affected by ash dieback.
- 5.62 Ground flora density is varied throughout this plot and consists of Hart's tongue fern *Asplenium scolopendrium*, creeping buttercup *Ranunculus repens*, mosses, lichens, with some instances of young holly *Ilex aquifolium* and young elder *Sambucus nigra*. Where the ground flora is dense it is dominated by brambles *Rubus fruticosus* agg.
- 5.63 This habitat provides limited value to biodiversity due to the poor health of the trees and a lack of significant ground cover. Therefore, it is evaluated to be of **negligible importance**.

Previously-felled Woodland (WD5)

- 5.64 Most of the Site is comprised of previously felled conifer plantation. The felled trees were semi-mature and consisted of ash *Fraxinus excelsior* and Sitka spruce *Picea sitchensis*. There was some ground flora present amongst bare ground including creeping buttercup *Ranunculus repens*, bramble *Rubus fruticosus* agg., cleavers *Galium aparine* and fescue *Festuca* spp.
- 5.65 This habitat provides very limited value to biodiversity. Therefore, it is evaluated to be of **negligible importance**.

Treelines (WL2)

- 5.66 Treelines are located around the Site boundary consisting of mature and semi-mature trees. These include ash *Fraxinus excelsior*, beech *Fagus sylvatica*, hawthorn *Crataegus monogyna*, holly *Ilex aquifolium*, and elder *Sambucus nigra*. Ground flora under these treelines consist of ivy *Hedera helix*, brambles *Rubus fruticosus* agg., cleavers *Galium aparine*, mosses, nettles *Urtica dioica*, bracken *Pteridium aquilinum*, creeping bent grass *Agrostis stolonifera*, speedwell *Veronica* spp., vetch *Vicia* spp., and ragwort *Senecio jacobaea*.
- 5.67 Most of the treelines on-site will be retained during the proposed development. Only a small section of treeline will be removed along the north-western Site boundary which is located between the Site and the existing sand and gravel pit. This treeline is of low biodiversity as it consists of ash and hawthorn trees which are in poor health.
- 5.68 This habitat may provide suitable habitat for local fauna. Therefore, it is evaluated to be of **local-level importance**. However, due to the limited value of the one treeline to be removed to facilitate the development, it can be excluded from further consideration in this report.

Species

Desk Study

- 5.69 The NBDC database was searched for records of rare and/or protected species from the 2 km grid squares N57B, N57C, N57G, and N57H within which the Site is located. The records of rare and/or protected species are presented in **Table 5-4** below.

Table 5-4. Rare and/or Protected Species Recorded Within 2 km Grid Squares N57B, N57C, N57G, and N57H

Species	Date of Last Record	No. of Records	Conservation Status	Dataset
Amphibians				
Common Frog <i>Rana temporaria</i>	2019	2	EU Habitats Directive: Annex V Protected Species: Wildlife Act	Amphibians and reptiles of Ireland
Smooth Newt <i>Lissotriton vulgaris</i>	2018	1	Protected Species: Wildlife Act	Amphibians and reptiles of Ireland
Birds				
Barn Swallow <i>Hirundo rustica</i>	2011	3	Birds of Conservation Concern: Amber	Bird Atlas 2007 - 2011, The Second Atlas of Breeding Birds in Britain and Ireland: 1988-1991
Black-headed Gull <i>Larus ridibundus</i>	2011	2	Birds of Conservation Concern: Amber	Bird Atlas 2007 - 2011
Common Coot <i>Fulica atra</i>	2011	3	Birds of Conservation Concern: Amber	Bird Atlas 2007 - 2011
Common Goldeneye <i>Bucephala clangula</i>	2011	1	Birds of Conservation Concern: Red	Bird Atlas 2007 - 2011
Common Kestrel <i>Falco tinnunculus</i>	2011	1	Birds of Conservation Concern: Red	Bird Atlas 2007 - 2011
Common Linnet <i>Carduelis cannabina</i>	2011	1	Birds of Conservation Concern: Amber	Bird Atlas 2007 - 2011
Common Pochard <i>Aythya ferina</i>	2011	1	Birds of Conservation Concern: Red	Bird Atlas 2007 - 2011
Common Snipe <i>Gallinago gallinago</i>	1991	1	Birds of Conservation Concern: Red	The Second Atlas of Breeding Birds in Britain and Ireland: 1988-1991
Common Starling <i>Sturnus vulgaris</i>	2011	3	Birds of Conservation Concern: Amber	Bird Atlas 2007 - 2011, The Second Atlas of Breeding Birds in Britain and Ireland: 1988-1991

Eurasian Curlew <i>Numenius arquata</i>	2019	2	Birds of Conservation Concern: Red	Birds of Ireland
Eurasian Tree Sparrow <i>Passer montanus</i>	2011	1	Birds of Conservation Concern: Amber	Bird Atlas 2007 - 2011
Eurasian Wigeon <i>Anas penelope</i>	2011	1	Birds of Conservation Concern: Amber	Bird Atlas 2007 - 2011
Great Cormorant <i>Phalacrocorax carbo</i>	2011	1	Birds of Conservation Concern: Amber	Bird Atlas 2007 - 2011
House Martin <i>Delichon urbicum</i>	2011	1	Birds of Conservation Concern: Amber	Bird Atlas 2007 - 2011
House Sparrow <i>Passer domesticus</i>	1991	2	Birds of Conservation Concern: Amber	The Second Atlas of Breeding Birds in Britain and Ireland: 1988-1991
Mallard <i>Anas platyrhynchos</i>	2011	3	Birds of Conservation Concern: Amber	Bird Atlas 2007 - 2011
Mute Swan <i>Cygnus olor</i>	2011	2	Birds of Conservation Concern: Amber	Bird Atlas 2007 - 2011
Northern Lapwing <i>Vanellus vanellus</i>	2011	3	Birds of Conservation Concern: Red	Bird Atlas 2007 - 2011
Sand Martin <i>Riparia riparia</i>	1991	1	Birds of Conservation Concern: Amber	The Second Atlas of Breeding Birds in Britain and Ireland: 1988-1991
Sky Lark <i>Alauda arvensis</i>	1991	1	Birds of Conservation Concern: Amber	The Second Atlas of Breeding Birds in Britain and Ireland: 1988-1991
Tufted Duck <i>Aythya fuligula</i>	2011	2	Birds of Conservation Concern: Amber	Bird Atlas 2007 - 2011
Whooper Swan <i>Cygnus cygnus</i>	2011	1	EU Birds Directive: Annex I Birds of Conservation Concern: Amber	Bird Atlas 2007 - 2011
Crustaceans				
Freshwater White-clawed Crayfish <i>Austropotamobius pallipes</i>	2007	1	EU Habitats Directive: Annex II and Protected Species: Wildlife Acts	Crayfish of Ireland
Invertebrates				
Irish Damselfly <i>Coenagrion lunulatum</i>	2009	2	Red List Status: Vulnerable	Dragonfly Ireland

Marsh Fritillary <i>Euphydryas aurinia</i>	2014	1	EU Habitats Directive: Annex II	Butterflies of Ireland pre-2022
Mammals				
Eurasian Badger <i>Meles meles</i>	2017	28	Protected Species: Wildlife Acts	Mammals of Ireland 2016-2025, Setts of Ireland Database
European Otter <i>Lutra lutra</i>	2013	2	EU Habitats Directive: Annex II and IV Protected Species: Wildlife Acts	Atlas of Mammals in Ireland 2010-2015, Otter Survey of Ireland 1982
Pine Marten <i>Martes martes</i>	2005	1	EU Habitats Directive: Annex V Protected Species: Wildlife Acts	Atlas of Mammals in Ireland 2010-2015
West European Hedgehog <i>Erinaceus europaeus</i>	2019	2	Protected Species: Wildlife Acts	Hedgehogs of Ireland, Road Kill Survey

Rare and Protected Flora

- 5.70 There are no records of rare and protected plant species within the 2 x 2 km grid squares. No notable protected plant species were noted within the Site during the field surveys.
- 5.71 The field survey was outside of the optimal season for botanical surveys. However, the majority of the Site is composed of heavily disturbed, previously felled woodland habitat. The mixed broadleaved woodland plantation on-site is of low value for biodiversity due to the poor health of the ash trees within the habitat. As such, it is considered unlikely that protected flora species would be present
- 5.72 Therefore, they have been scoped out from further assessment.

Rare and Protected Fauna

Amphibians

- 5.73 The data search returned two records of common frog and one record of smooth newt within the 2km squares consulted. No amphibians were recorded on the site during the field surveys.
- 5.74 No suitable breeding waterbodies for amphibians were located within 250m of the Site boundary. TII (2008) *Ecological Surveying Techniques for Protected Flora and Fauna during the Planning of National Road Schemes* states that generally amphibians are likely to experience significant effects from a development when within 250m of suitable breeding waterbodies.
- 5.75 The majority of the Site is composed of heavily disturbed, felled woodland which is unsuitable for amphibians. The broadleaved woodland habitat on-site are of low value to amphibians due to a lack of ground flora cover and are unlikely to be used as refuge during the non-breeding season.
- 5.76 The Site is considered to be of **negligible importance** to amphibians.

Reptiles

- 5.77 The data search returned no records of reptiles within the 2 x 2 km squares. No reptiles were noted on-site during the field surveys.
- 5.78 The majority of the Site is composed of heavily disturbed, felled woodland which is unsuitable for amphibians. The broadleaved woodland habitat on-site are of low value to reptiles due to a lack of ground flora cover and are unlikely to be used as refuge and foraging habitat.
- 5.79 The Site is considered to be of **negligible importance** to reptiles.

Invertebrates

- 5.80 The data search returned records of Irish damselfly and marsh fritillary within the 2 x 2 km squares. Marsh fritillary is protected under Annex II of the EU Habitats Directive and is listed as vulnerable on the Irish Red Lists. Irish damselfly is listed as vulnerable in the Irish Red Lists (NPWS, 2011).
- 5.81 No notable invertebrate species were observed on-site during the field survey.
- 5.82 The habitats on-site are generally of limited value to invertebrates. The treelines containing hawthorn may provide some foraging and refuge habitat for common and widespread invertebrate species.
- 5.83 However, most of the treelines on-site will be retained during the proposed development. Only a small section of treeline will be removed along the north-western Site boundary which is located between the Site and the existing sand and gravel pit. This treeline is of low value to invertebrates as it consists of trees which are in poor health.
- 5.84 Invertebrates are evaluated to be of **local-level importance** due to the presence of potentially suitable foraging and refuge habitat on-site. However, due to the limited value of the one treeline to be removed to facilitate the development, they can be excluded from further consideration.

Birds

- 5.85 The data search returned records of several red and amber listed birds within the 2 x 2 km squares (refer to **Table 5-4**). Whooper swan is included in the bird species recorded within the 2 x 2 km squares. Whooper swans are protected under Annex I of the EU Birds Directive.
- 5.86 The habitats on-site are considered to be unsuitable for waterbirds, including whooper swans, and raptor species.
- 5.87 The woodland habitat to the south of the Site would provide suitable nesting and foraging habitat for a variety of common and widespread passerine species, in addition to some amber and red listed species.
- 5.88 The bird assemblage on-site is evaluated to be of **local-level importance** due to the presence of amber and red listed birds and suitable breeding and foraging habitat within the Site.

Mammals

Bats

- 5.89 The data search returned no records of bat species within the 2 x 2 km squares.

- 5.90 Consultation with Biodiversity Maps¹² was undertaken to assess the bat landscape suitability for the 2x2 km grid square in which the site is located (i.e., N57H), following the methodology set out by Lundy et al. (2011). This methodology applies a 'habitat suitability' index, which ranges from 0 to 100, with 0 being least favourable and 100 most favourable for bats. The bat suitability index score for the Site is provided in **Table 5-5**.
- 5.91 Based on the bat suitability index, the local area is most suitable for common pipistrelle, soprano pipistrelle, and Leisler's bat. The local area is considered by the data to be less suitable for whiskered bat and lesser horseshoe bat.

Table 5-5: Bat landscape suitability for 2x2 km square N57H

Species	Index score
All bats	25.56
Common pipistrelle <i>Pipistrellus pipistrellus</i>	43
Soprano pipistrelle <i>Pipistrellus pygmaeus</i>	37
Leisler's bat <i>Nyctalus leisleri</i>	35
Natterer's bat <i>Myotis nattereri</i>	31
Brown long-eared bat <i>Plecotus auritus</i>	30
Nathusius' pipistrelle <i>Pipistrellus nathusii</i>	27
Daubenton's bat <i>Myotis daubentonii</i>	19
Whiskered bat <i>Myotis mystacinus</i>	5
Lesser horseshoe bat <i>Rhinolophus hipposideros</i>	3

- 5.92 The Site is considered to be of low/moderate value to foraging and commuting bats due to the presence of suitable habitats (i.e. scrub/woodland clearings, and treelines) which have good connectivity with the surrounding hedgerow network. However, the majority of the Site is composed of felled woodland which will not provide suitable foraging and commuting habitat for bats.
- 5.93 There are limited opportunities for bat roosting on-site. The majority of the trees noted on-site during the field survey are not of a sufficient size and maturity to provide roosting opportunities for bats.
- 5.94 Three trees with bat roosting potential were identified on-site. A summary of these is shown in **Table 5-6** below. Trees #2207 and #2213 are located within the treelines surrounding the Site and will not be removed as part of the proposed development.
- 5.95 Tree #2211 is located within the area of mixed broadleaved woodland to the south of the Site and will be removed to facilitate the proposed development.

¹² Available at <https://maps.biodiversityireland.ie/Map> (accessed May 2025).

Table 5-6: Summary of Bat Tree PRFs On-Site

ID	Description	Bat Roosting Potential
2207	Semi mature ash covered in dense ivy. No PRFs noted from ground but may be obscured by ivy.	Low
2211	Mature ash covered in dense ivy. No PRFs can be seen from ground but may be obscured by ivy.	Low
2213	Mature beech with broken branches and split branches approx. 4m high on eastern aspect. Another split branch approx. 6m high on east aspect.	High / Moderate

5.96 Bats are evaluated to be of **local-level importance** due to the presence of suitable roosting, foraging and commuting habitats within the Site.

Other Mammals

5.97 The data search returned records of badger, otter, pine marten, and hedgehogs within the 2 x 2 km squares. No signs of mammal activity (feeding signs, droppings, badger setts, burrows, etc.) were noted during the field surveys.

5.98 The woodland habitats on-site may provide suitable habitat for common mammal species including pine marten and red squirrel. However, these habitats are very small in scale and fragmented when compared to the woodlands in the surrounding landscape. Therefore, they are considered to be of limited value to woodland mammals.

5.99 The Site is evaluated to be of **negligible importance** for other mammal species.

Invasive Species

5.100 The data search returned no records of invasive species within the 2 x 2 km squares. No invasive species were noted on-site during the field surveys.

5.101 Therefore, invasive species are considered to be absent from the Site and can be reasonably excluded from further consideration in this report.

Summary of Important Ecological Features

5.102 **Table 5-7** summarises all important ecological features for which detailed assessment is required. The geographical scale of importance for the ecological features within the Site are summarised along with their legal status and a rationale, where appropriate, for carrying forward any features for detailed assessment.

5.103 All ecological features scoped out from further assessment have been detailed in the previous section.

Table 5-7: Summary of Important Ecological Features Subject to Detailed Assessment

Ecological Feature	Scale at which Feature is Important	Comments on Legal Status and/or Importance
Sites Designated for Nature Conservation		
European Designated Sites	International	Natura 2000 sites are protected under 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

Ecological Feature	Scale at which Feature is Important	Comments on Legal Status and/or Importance
		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.
Natural Heritage Areas	National	Natural Heritage Areas are afforded local protection under the following objective from the County Development Plan: <i>"HER OBJ 34 To protect and conserve the conservation value of candidate Special Areas of Conservation, Special Protection Areas, Natural Heritage Areas and proposed Natural Heritage Areas as identified by the Minister for the Department of Culture, Heritage and the Gaeltacht and any other sites that may be proposed for designation during the lifetime of this Plan in accordance with the provisions of the Habitats and Birds Directives and to permit development in or affecting same only in accordance with the provisions of those Directives as transposed into Irish Law."</i>
Species		
Birds	Local	- All birds are protected under the Wildlife acts 1976 and subsequent amendments during the breeding bird season (i.e., 1st March to 31st August). - There is potentially suitable breeding and foraging habitat for amber and red listed passerine species.
Bats	Local	- One tree with low bat roosting potential will be removed to facilitate the proposed development. - Potentially suitable foraging and commuting habitat on-site.

Detailed Project Description

Construction Phase (Extension of Conveyor System, Screening Berms, Fencing & Topsoil Stripping)

- 5.104 The overall extraction development plan is shown in EIAR **Figure 2-2**. It is anticipated that the construction stage works as outlined below would be carried out within a 3-6 month period.
- Extension of fixed field conveyor system using standard construction techniques;
 - Construction of perimeter fencing;
 - Topsoil and overburden will be stripped to obtain access to the underlying sand and gravel resource and will be either placed in landscaped screening berms or stored for final restoration of the extraction area.

Operational Phase (Sand & Gravel Extraction / Processing – Phased Extraction)

- 5.105 The proposed operational phase will see sand and gravel extraction carried out within an overall extraction area of c. 4.2 hectares. Extraction within the existing pit is carried out as a dry extraction operation above the groundwater table. It is proposed that extraction within the extension area will also be carried out above the groundwater table, with the proposed pit floor over the extension lands of between 123m AOD and 120mAOD. It is proposed to extract the sand and gravel on a gradual basis with the extraction face advancing southeast from the existing pit as shown on **Figure 2-2**.
- 5.106 A mechanical excavator will take material from the working pit face to be placed into a mobile crusher to crush any oversized boulders. The extracted sand & gravel from the working face and mobile crusher will be transported for processing via the efficient and environmentally friendly field conveyor system using the existing crushing, screening, and washing plant located within the existing central processing area / registered pit area.
- 5.107 The lack of requirement to locate any fixed plant within the proposed extension lands will minimise any impact of the development on the local residences from dust, noise and visual intrusion. The conveyor system will also eliminate the requirement for dump trucks to transport the material internally within the site, thereby reducing fuel costs, emissions and potential disturbance from noise and dust.

Restoration Phase (Reinstatement to Agricultural Lands and Ecological Habitat)

- 5.108 Upon the cessation of extraction operations, it is proposed to return the worked lands to agricultural grazing lands on the pit floor with some dedicated peripheral areas for natural habitat after-uses included – refer to **Figure 2-4**.
- 5.109 Restoration activities will be carried out after extraction operations have ceased and all plant and machinery has been removed from the site. Re-grading to a gradient of 1:3 or less of the sand and gravel pit side slopes to achieve a relatively uniform profile. The re-graded areas will be spread with topsoil and seeded.
- 5.110 The only material requirements in respect of the planned restoration scheme are those topsoils and subsoils already present on site, and which will remain on site for restoration purposes.
- 5.111 Please note it is not proposed to import material onto the site for operational or restoration purposes.

- 5.112 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.
- 5.113 All existing boundary fences and hedgerows will be retained to ensure that the site is secure.

Site Drainage

- 5.114 A small stream along the northern boundary of the land ownership connects a complex series of small lakes and wetlands within the Lough Naneagh, a proposed Natural Heritage Area (pNHA), and discharges into Lough Naneagh approximately 1.5 km to the northwest of the site.
- 5.115 There is also a system of drains/ streams/ ponds located to the south and southeast of the site drains into the Ben Loughs, Lough Doo complex and White Lough.
- 5.116 Within the application site itself, there are no water courses or ponds. There is no surface water discharge from the proposed extraction area off site.
- 5.117 The existing extraction operations have been in successful operation for over sixty years. Much of the existing pit has been worked down to a main floor level which is above the groundwater table and in some locations it has been previously worked below the water table in various low level lagoons at the western end of the overall site.
- 5.118 There has been no need for dewatering at the existing pit in the past. There is little surface water runoff over the existing site owing to the relatively high permeability of the sand & gravel materials, therefore there has been no requirement for surface water drainage infrastructure within the site.
- 5.119 The material to be extracted from the proposed extension area will be processed at the existing central processing facility at the site. Therefore, there are no water requirements within the proposed extension area for any processing activities.
- 5.120 The management of water in the proposed extraction area will be relatively straightforward; it is not anticipated that there will be any surface water across the proposed extension area and precipitation will infiltrate naturally to the ground. No oils or fuels will be stored in the proposed extension area.

Water Management System

- 5.121 There is no discharge from the site and there are no surface water courses on the site. The existing water management system at the overall landholding site for processed water to be recycled/used for washing, is relatively simple and consists of:
- rainfall infiltrates to ground across the majority of the overall site. Rainfall from roadways, hard standing and roof areas is allowed to infiltrate to ground.
 - groundwater is present in a clear water sump on the floor of the western pit void at the lowest point, and is kept separate from surface water runoff by berms on the floor of the pit;
 - water used for processing aggregates, readymix and concrete block production plant and dust suppression is sourced from onsite. The wash water is recycled (90%) through the recycling process, and water is topped up as required from the onsite water pond;
 - an existing proprietary treatment system, comprising treatment unit with percolation area, treats foul water from the site;

- there is bunded fuel storage at the site with hardstand refuelling area and a mobile tanker is used for refuelling the mobile crusher and plant on the pit floor. Runoff from the paved hard stand area in front of the workshop is managed and treated through a hydrocarbon separator before percolation to the ground;
- water for welfare use in the office / canteen / toilet facilities is sourced from a deep well (borehole) located beside the workshop;
- bottled water is used in the site canteen for personal use including the preparation of hot drinks etc.

Fuel and Oil Storage

- 5.122 There is an existing refuelling facility located adjacent to the existing wheelwash and site entrance. Only the excavator and jaw crusher at the pit face are re-fuelled using a mobile 'bunded' double-skinned tanker. Servicing of plant and machinery is carried out on site at the existing site workshop.
- 5.123 Runoff from the paved hard stand area in front of the workshop is managed and treated through a hydrocarbon separator before percolation to the ground.
- 5.124 There is a further hydrocarbon interceptor located adjacent to the truck wash area. The interceptors are checked regularly and are emptied once per year.
- 5.125 The only chemicals stored on site are lubricating oils and hydraulic oils. Drums containing chemicals/ lubricants are stored on spill pallets. These are placed in bunded fuel tanks, which will be covered and enclosed to prevent the build-up of potentially contaminated water within the bund arising from rainfall. A build-up of rainwater in the bund could also reduce the holding capacity of the bund. The bund capacity is in excess of 110% of the combined volume of the tank(s).
- 5.126 Spill kits are provided on all mobile machinery and periodic spill kit training is provided to staff.

Dust Generation and Control

- 5.127 In dry, windy weather conditions, site activities may give rise to dust blows across and beyond the existing or planned development site areas.
- 5.128 The incidence of fugitive dust outside of the operation will be reduced by the proposal to locate mobile crushing and screening plant within the pit void. Generation of fugitive dust is generally limited to periods of very low rainfall (refer to Chapter 8 – Air Quality). Dust generation occurs from three main sources:
- point sources – such as operating plant and machinery;
 - line sources – such as roads and conveyors; and
 - dispersed sources – such as pit floors and stockpiles.
- 5.129 In order to control dust emissions, the following measures will be implemented:-
- water will be sprayed from a tractor drawn bowser on dry exposed surfaces and stockpiles (paved roads, unsealed haul roads and hardstand areas) as required;
 - areas of bare or exposed soils will, insofar as practicable, be kept to a minimum through the phased/ gradual topsoil stripping and extraction proposals;
 - all HGV's exiting the site will be routed through the proposed wheelwash. This will minimise the transport of fines by HGVs over the access / egress road and the public road network;

- periodic sweeping of the internal paved site access road and surrounding public roads will be carried out as required by a mechanical road sweeper.

5.130 These dust mitigation and management measures are in accordance with the DoEHLG (2004) and EPA (2006) guidelines for the sector.

Assessment of Effects and Mitigation Measures

- 5.131 This section sets out the potential impacts and their effects on important ecological features. The information available from the desk study and fieldwork has been used to identify impacts and the significant effects including positive, negative, direct, indirect, and cumulative effects. The potential effects resulting from the proposed development works and proposed mitigation measures are discussed in the following sections.

Potential Impacts

European Designated Sites

Potential Impacts

- 5.132 The only potential pathway identified for impacts on European designated sites is the potential for groundwater contamination reaching the White Lough, Ben Loughs and Lough Doo SAC. No other pathways for impacts were identified on any other European sites.
- 5.133 The project Site is underlain by the Tynagh Gravels groundwater body (GWB), the and the Derravarragh GWB is located to the south of the Tynagh Gravels GWB; and the Tynagh GWB is hydraulically connected to the Derravarragh GWB.
- 5.134 The White Lough, Ben Loughs and Lough Doo SAC falls within the Tynagh Gravels GWB and therefore there is a groundwater connection between the Site and this SAC and a potential impact pathway as diffuse recharge will occur to both groundwater bodies through percolation through the soils.
- 5.135 While there is a potential groundwater pathway between the Site and White Lough, Ben Loughs and Lough Doo SAC the existing environmental management system and construction and operational practices listed below and described in the project description, will mean there are no source impacts arising as a result of the proposed development:
- Rain falling 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;
 - No re-fuelling (or servicing) of excavation plant will occur at the extraction area. Refuelling will take place adjacent to the bunded fuel storage area on a concrete pad with associated hydrocarbon interceptor attached in the existing operational site area at the BD Flood Site;
 - Final floor levels in the proposed extraction area will be maintained above the underlying (seasonal maximum) groundwater level and any rain falling across the pit will percolate naturally through unsaturated ground to the underlying groundwater.
- 5.136 Therefore, Likely Significant Effects on White Lough, Ben Loughs and Lough Doo SAC from contamination of groundwater can be excluded.
- 5.137 None of the other European sites listed in **Table 5-1** fall within the Tynagh GWB or Derravarragh GWB and therefore there is no potential for a groundwater connection between the Site and any other European site.

Proposed Mitigation Measures

- 5.138 No mitigation measures are required.

Significance of Residual Effects

- 5.139 Under the current development proposals, it is assessed that the impacts on European designated sites will not be significant.

Proposed Natural Heritage Areas**Potential Impacts**

- 5.140 Lough Naneagh pNHA is located on a different WFD ground water body to the Site. There are no surface water hydrological connections between the Site and this pNHA. Therefore, there is no potential pathway for impacts on this pNHA.
- 5.141 The White Lough, Ben Loughs and Lough Doo pNHA overlaps with the White Lough, Ben Loughs and Lough Doo SAC which has already been assessed in the previous section.
- 5.142 No other potential pathways for impacts were identified for all other NHAs and proposed NHAs listed in **Table 5-2**.

Proposed Mitigation Measures

- 5.143 No mitigation measures are required.

Significance of Residual Effects

- 5.144 Under the current development proposals, it is assessed that the impacts on Natural Heritage Areas and proposed Natural Heritage Areas will not be significant.

Bats**Potential Impacts**

- 5.145 The proposed development will require the removal of one tree with low bat roosting potential (refer to **Table 5-6**, point #2211).
- 5.146 There will be a loss of potential bat foraging and commuting habitat via the removal of 133m of treeline and the area of mixed broadleaved woodland in the south of the Site. However, these are of poor quality and of limited value to foraging bats due to the poor health of the trees in these habitats suffering from ash dieback.

Proposed Mitigation Measures

- 5.147 The removal of the ash tree with PRFs (refer to **Table 5-6**, point #2211) on-site must undergo reasonable avoidance measures, whereby the tree should be soft felled with any sections possessing PRFs being lowered gently to the ground and left for at least 24 hours, leaving the PRF unobstructed.
- 5.148 It is proposed to replace the treeline which will be removed during the extraction phase. This will require the planting of native hedgerows over a length of c. 375m within the restored pit floor area to create enclosed fields. The hedgerow will be planted in two staggered rows, with the rows 50cm apart and plants within each row 50cm apart (i.e. 4 plants per m). Transplants and container grown shrubs will be planted in random groups of 3-5. One feathered tree will be planted every 10-15m. Refer to **Figure 2-4** in Chapter 2 of this EIAR for further details of the restoration plan.

Significance of Residual Effects

- 5.149 Under the current development proposals and recommended mitigation measures in place, it is assessed that the impacts on bats will not be significant.

Birds

Potential Impacts

- 5.150 There will be a loss of potential breeding and foraging habitat for birds via the removal of 133m of treeline and the area of mixed broadleaved woodland in the south of the Site. However, these are of poor quality and of limited value to birds due to the poor health of the trees in these habitats suffering from ash dieback.

Proposed Mitigation Measures

- 5.151 It is proposed to replace the treeline which will be removed during the extraction phase. This will require the planting of native hedgerows over a length of c. 375m within the restored pit floor area to create enclosed fields. The hedgerow will be planted in two staggered rows, with the rows 50cm apart and plants within each row 50cm apart (i.e. 4 plants per m). Transplants and container grown shrubs will be planted in random groups of 3-5. One feathered tree will be planted every 10-15m. Refer to **Figure 2-4** in Chapter 2 of this EIAR for further details of the restoration plan.
- 5.152 No vegetation loss should be undertaken during the breeding bird season to avoid impacting birds during this sensitive time. If vegetation removal is required during this time as a last resort (using an exemption in the Wildlife Act¹³), a nesting bird check conducted by a suitably qualified ecologist should be undertaken no more than 24 hours prior to the planned removal.
- 5.153 If nesting birds are found during this check, they must be left in situ with a suitable buffer around the nest (detailed by the ecologist following the nesting bird check) until the chicks have fledged. A further nesting bird check should be undertaken to confirm this.

Significance of Residual Effects

- 5.154 Under the current development proposals and recommended mitigation and compensation measures in place, it is assessed that the impacts on birds will not be significant.

Cumulative Effects

- 5.155 The following plans were reviewed for strategies and objectives that may act in combination with the project:
- Meath County Development Plan 2021-2027
- 5.156 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. All of the recent planning applications in the vicinity of the Site are for small-scale domestic and agricultural projects that will not result in any cumulative effects with the proposed development.
- 5.157 There are no plans or policies in the Meath County Development Plan 2021-2027 which would result in impacts in combination with the proposed development.
- 5.158 Therefore, the risk of significant effects on biodiversity can be excluded for the project when considered in-combination with other proposed or permitted plans and projects.

¹³ Section 40 of the Wildlife Act 1976 as amended by the Wildlife (Amendment) Act 2000 and the Heritage Act 2018 – Section 40(2) (e)

Proposed Mitigation and Compensation Measures

- 5.159 The removal of the ash tree with PRFs (refer to **Table 5-6**, point #2211) on-site must undergo reasonable avoidance measures, whereby the tree should be soft felled with any sections possessing PRFs being lowered gently to the ground and left for at least 24 hours, leaving the PRF unobstructed.
- 5.160 It is proposed to replace the treeline which will be removed during the extraction phase. This will require the planting of native hedgerows over a length of c. 375m within the restored pit floor area to create enclosed fields. The hedgerow will be planted in two staggered rows, with the rows 50cm apart and plants within each row 50cm apart (i.e. 4 plants per m). Transplants and container grown shrubs will be planted in random groups of 3-5. One feathered tree will be planted every 10-15m. Refer to **Figure 2-4** in Chapter 2 of this EIAR for further details of the restoration plan.
- 5.161 No vegetation loss should be undertaken during the breeding bird season to avoid impacting birds during this sensitive time. If vegetation removal is required during this time as a last resort (using an exemption in the Wildlife Act¹⁴), a nesting bird check conducted by a suitably qualified ecologist should be undertaken no more than 24 hours prior to the planned removal.
- 5.162 If nesting birds are found during this check, they must be left in situ with a suitable buffer around the nest (detailed by the ecologist following the nesting bird check) until the chicks have fledged. A further nesting bird check should be undertaken to confirm this.

¹⁴ Section 40 of the Wildlife Act 1976 as amended by the Wildlife (Amendment) Act 2000 and the Heritage Act 2018 – Section 40(2) (e)

Conclusions

- 5.163 There will be no effect on sites designated for nature conservation as a result of the proposed works. None of the habitats on the Site are considered to comprise Annex I habitats under the Habitats Directive.
- 5.164 Overall, it is assessed that with the recommended mitigation measures outlined, the proposed development will not have a significant impact on the biodiversity, designated sites, and habitats on the Site. Provided that the proposed works are undertaken in accordance with the proposed design and best practice that is described within this report, significant effects on ecology are not anticipated. As such, the proposed works are in line with environmental and biodiversity planning policy.

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Figure

Figure 5-1: Site Location

Figure 5-2: Designated Sites

Figure 5-3: Site Habitat Map



LEGEND

 Planning Application Area

 Permitted Extraction Area



BD Flood

Building with Confidence

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THE MURRENS PIT EXTENSION
ENVIRONMENTAL IMPACT ASSESSMENT

ECOLOGY

SITE LOCATION

FIGURE 5.1

Scale 1:5,000 @ A3

Date JUNE 2025



LEGEND

 Planning Application Area

Fossit Habitat (Linear)

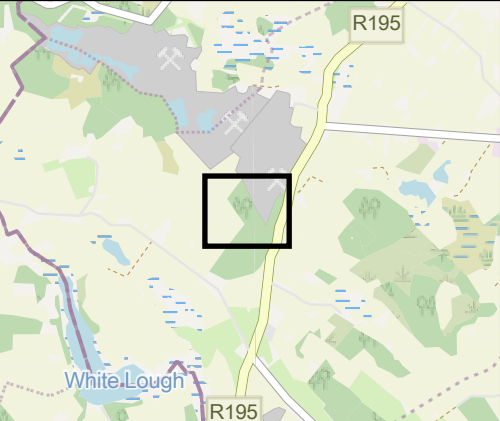
 WL1 - Hedgerow

 WL2 - Treeline

Fossit Habitats (Areas)

 WD1 - Mixed Broadleaved Woodland

 WS5 - Recently Felled Woodland



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**THE MURRENS PIT EXTENSION
ENVIRONMENTAL IMPACT ASSESSMENT**

ECOLOGY

FOSSIT HABITAT SURVEY

FIGURE 5.3

Scale 1:2,000 @ A3 Date JULY 2025

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Appendix 5-A Relevant Legislation

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Relevant Legislation¹⁵

EIA Directive

The EIA Directive, Council Directive 85/337/EEC of 27 June 1985 on the assessment of the effects of certain public and private projects on the environment as amended by Council Directive 97/11/EC of 3 March 1997, Directive 2003/35/EC of 26 May 2003 and Directive 2009/31/EC of 23 April 2009, now codified in Directive 2011/92/EU of 13 December 2011 and amended in Directive 2014/52/EU of 16 April 2014, is designed to ensure that projects likely to have significant effects on the environment are subject to a comprehensive assessment of environmental effects prior to project consent being given.

The EIA Directive was first transposed into Irish law by the European Communities (Environmental Impact Assessment) Regulations, 1989 (S.I. No. 349 of 1989) which amended the Local Government (Planning and Project) Act, 1963 (and other legislation) to provide for environmental impact assessment. The European Union (Planning and Project) (Environmental Impact Assessment) Regulations 2018 (S.I. No. 296 of 2018) transpose the requirements of Directive 2014/52/EU, Amending previous Directive 2011/52/EU, on the assessment of the effects of certain public and private projects on the environment (the EIA Directive) into Irish planning law.

Habitats and Birds Directive

The Habitats Directive ensures the conservation of a wide range of rare, threatened or endemic animal and plant species. Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora was adopted in 1992 and aims to promote the maintenance of biodiversity, taking account of economic, social, cultural and regional requirements. It forms the cornerstone of Europe's nature conservation policy with the Birds Directive and establishes the EU wide Natura 2000 ecological network of protected areas, safeguarded against potentially damaging developments.

The Natura 2000 network of protected areas is known as Special Areas of Conservation (SAC) and Special Protection Areas (SPA). In general terms, they are considered to be of exceptional importance in terms of rare, endangered or vulnerable habitats and species within the European Community. The requirements of the Habitats Directive have been transposed into Irish law through the European Communities (Birds and Natural Habitats) Regulations 2011 [S.I. No. 477/2011]. This legislation affords protection to both Special Protection Areas and Special Areas of Conservation.

Special Areas of Conservation (SAC) are designated under the Conservation of Natural Habitats and of Wild Fauna and Flora Directive 92/43/EEC (Habitats Directive) which is transposed into Irish law by the EC (Birds and Natural Habitats) Regulations 2011 (S.I. 477 of 2011). Special Protection Areas (SPA) are classified under the Birds Directive (2009/147/EC on the Conservation of Wild Birds). Article 6(3) of the Habitats Directive requires an 'appropriate assessment' to be undertaken for any plan or project that is likely to have a significant effect on the conservation objectives of a Natura 2000 site. An 'appropriate assessment' is an evaluation of the potential impacts of a plan or project on the integrity of a Natura 2000 site, and the incorporation, where necessary, of measures to mitigate or avoid negative effects.

¹⁵ Please note that the summary of relevant legislation provided here is intended for general guidance only. The original legislation should be consulted for definitive information.

National Legislation

Flora and fauna in Ireland are protected at a national level by the Wildlife Acts 1976 to 2018 and the Floral (Protection) Order 2015. Natural Heritage Areas (NHA) are areas that are considered to be important for the habitats present or for the species of plants and animals supported by those habitats. Under the Wildlife Amendment Act 2000, NHAs are legally protected from damage from the date they were formally proposed for designation. Section 19(1) of the Act states that 'Where there is a subsisting natural heritage area order in respect of any land, no person shall carry out, or cause or permit to be carried out, on that land any works specified in the order or any works which are liable to destroy or to significantly alter, damage or interfere with the features by reason of which the designation order was made'.

In addition, a list of proposed NHAs (pNHAs) was published in 1995 but to date these have not had their status confirmed. Prior to statutory designation, pNHAs are subject to limited protection under various agri-environment and forestry schemes and under local authority planning strategies such as County Development Plans.

Regional Spatial and Economic Strategy – Northern and Western Regional Assembly

The relevant regional biodiversity policy objectives are set out in the following section:

RPO 5.5: *Ensure efficient and sustainable use of all our natural resources, including inland waterways, peatlands, and forests in a manner which ensures a healthy society a clean environment and there is no net contribution to biodiversity loss arising from development supported in this strategy. Conserve and protect designated areas and natural heritage areas. Conserve and protect European sites and their integrity.*

RPO 5.7: *Ensure that all plans, projects and activities requiring consent arising from the RSES are subject to the relevant environmental assessment requirements including SEA, EIA and AA as appropriate.*

Relevant Planning Policy

The planning policy and legislation that is relevant to the development.

Meath County Development Plan 2021-2027

The relevant local planning policies have been extracted from Volume 1 of the Meath County Development Plan 2021-2027. These policies are specific to “Chapter 8: Cultural and Natural Heritage Strategy” and are concerned with the policies and objectives relating to biodiversity:

HER POL 27 To protect, conserve and enhance the County’s biodiversity where appropriate.

HER POL 28 To integrate in the development management process the protection and enhancement of biodiversity and landscape features wherever possible, by minimising adverse impacts on existing habitats (whether designated or not) and by including mitigation and/or compensation measures, as appropriate.

HER POL 29 To raise public awareness and understanding of the County’s natural heritage and biodiversity.

HER POL 30 To promote increased public participation in biodiversity conservation by supporting and encouraging community-led initiatives.

HER POL 31 To ensure that the ecological impact of all development proposals on habitats and species are appropriately assessed by suitably qualified professional(s) in accordance with best practice guidelines – e.g. the preparation of an Ecological Impact Assessment (EclA), Screening Statement for Appropriate Assessment, Environmental Impact Assessment, Natura Impact Statement (NIS), species surveys etc. (as appropriate).

HER OBJ 30 To implement, in partnership with the Department of Culture, Heritage and the Gaeltacht, relevant stakeholders and the community, the objectives and actions of Ireland’s National Biodiversity Action Plan 2017 - 2021 which relate to the remit and functions of Meath County Council.

HER OBJ 31 To implement, in partnership with the Department of Culture, Heritage and the Gaeltacht, relevant stakeholders and the community, the objectives and actions of the County Meath Biodiversity Plan 2015-2020 and any revisions thereof.

HER OBJ 32 To actively support the implementation of the All-Ireland Pollinator Plan 2021-2025 and any revisions thereof.

HER POL 32 To permit development on or adjacent to designated Special Areas of Conservation, Special Protection Areas, Natural Heritage Areas, Statutory Nature Reserves or those proposed to be designated over the period of the Plan, only where the development has been subject to the outcome of the Appropriate Assessment process and has been carried out to the satisfaction of the Planning Authority, in consultation with National Parks and Wildlife.

HER POL 33 To have regard to the views and guidance of the National Parks and Wildlife Service in respect of proposed development where there is a possibility that such development may have an impact on a designated European or National site or a site proposed for such designation.

HER POL 34 To undertake appropriate surveys and collect data to provide an evidence-base to assist the Council in meeting its obligations under Article 6 of the Habitats Directives (92/43/EEC) as transposed into Irish Law, subject to available resources.

HER OBJ 33 To ensure an Appropriate Assessment in accordance with Article 6(3) and Article 6(4) of the Habitats Directives (92/43/EEC) and in accordance with the Department of Environment, Heritage and Local Government Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities, 2009 and relevant EPA and European Commission guidance documents, is carried out in respect of any plan or project not directly connected with or necessary for the management of the site but likely to have a significant effect on a Natura 2000 site(s), either

individually or in-combination with other plans or projects, in view of the site's conservation objectives.

HER OBJ 34 To protect and conserve the conservation value of candidate Special Areas of Conservation, Special Protection Areas, Natural Heritage Areas and proposed Natural Heritage Areas as identified by the Minister for the Department of Culture, Heritage and the Gaeltacht and any other sites that may be proposed for designation during the lifetime of this Plan in accordance with the provisions of the Habitats and Birds Directives and to permit development in or affecting same only in accordance with the provisions of those Directives as transposed into Irish Law.

HER POL 35 To ensure, where appropriate, the protection and conservation of areas, sites, species and ecological/networks of biodiversity value outside designated sites and to require an appropriate level of ecological assessment by suitably qualified professional(s) to accompany development proposals likely to impact on such areas or species.

HER POL 36 To consult with the National Parks and Wildlife Service and take account of their views and any licensing requirements, when undertaking, approving or authorising development which is likely to affect plant, animal or bird species protected by law.

HER OBJ 35 To ensure that development does not have a significant adverse impact, incapable of satisfactory avoidance or mitigation, on plant, animal or bird species protected by law.

HER POL 37 To encourage the retention of hedgerows and other distinctive boundary treatments in rural areas and prevent loss and fragmentation, where practically possible. Where removal of a hedgerow, stone wall or other distinctive boundary treatment is unavoidable, mitigation by provision of the same type of boundary will be required.

HER POL 38 To promote and encourage planting of native hedgerow species in new developments and as part of the Council's own landscaping works.

HER POL 39 To recognise the archaeological importance of townland boundaries including hedgerows and promote their protection and retention.

HER POL 40 To protect and encourage the effective management of native and semi-natural woodlands, groups of trees and individual trees and to encourage the retention of mature trees and the use of tree surgery rather than felling, where possible, when undertaking, approving or authorising development.

HER POL 41 To protect trees the subject of Tree Preservation Orders (see Map 9.3), Champion and Heritage Trees identified on the Tree Register of Ireland and Heritage Tree Database when undertaking, approving, or authorising development.

HER POL 42 To promote the preservation of individual trees or groups of trees as identified on the Heritage Maps in Volume 2 and to manage these trees in line with arboricultural best practice.

HER OBJ 36 To promote awareness, understanding and best practice in the management of the County's woodland, tree and hedgerow resource.

HER OBJ 37 To continue to work in partnership with relevant stakeholders to develop and enhance Balrath Wood and to explore opportunities to develop additional sites under the Neighbour Wood Scheme.

HER OBJ 38 To review the Meath Tree, Woodland and Hedgerow Survey (2011), over the life of the Development Plan, as appropriate.

HER POL 43 To promote best practice in the control of invasive species in the carrying out its functions in association with relevant authorities including TII and the Department of Transport, Tourism and Sport.

HER POL 44 To require all development proposals to address the presence or absence of invasive alien species on proposed development sites and (if necessary) require applicants to prepare and

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

HER POL 45 To ensure that peatland areas which are designated (or proposed for designation) as NHAs, SACs or SPAs are conserved for their ecological, climate regulation, archaeological, cultural and educational significance.

HER OBJ 39 To work in partnership with relevant stakeholders on a suitable peatland site(s) to demonstrate best practice in sustainable peatland conservation, management and restoration techniques and to promote their heritage and educational value subject to Ecological Impact Assessment and Appropriate Assessment Screening, as appropriate, having regard to local and residential amenities.

HER POL 47 To protect the ecological, recreational, educational, amenity and flood alleviation potential of navigational and non-navigational waterways within the County, towpaths and adjacent wetlands.

HER OBJ 40 To work in partnership with Waterways Ireland and relevant stakeholders to encourage best practice biodiversity management of canal and towpath habitats.

HER POL 48 To manage, enhance and protect the wetlands of the County having regard to the 'County Meath Wetland Survey 2010' and ensure that there is an appropriate level of assessment in relation to proposals which would involve draining, reclaiming or infilling of wetland habitats.

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Appendix 5-B Site Photographs

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Photograph 1: Previously Felled Woodland (WD5)



Photograph 2: Mixed Broadleaved Woodland (WD1)



Photograph 3: Treeline (WL1)

