Lobinstown Quarry

Environmental Impact Assessment Report

Section 5

Biodiversity

2024

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5.1 INTRODUCTION

This section of the EIAR describes the likely significant effects on biodiversity resulting from the proposed continued use and operation and extension of the existing quarry at Lobinstown, Navan, Co. Meath.

The development will consist of the continuance of operation of the existing permitted quarry and associated infrastructure (ABP Ref. 17.QD.0017; P.A. Ref. LB200106 & ABP Ref. 309109-21), deepening of the quarry extraction area by 1 no. 15 metre bench from 50 m OD to 35 m OD, a lateral extension to the quarry over an area of c. 4.8 ha to a depth of 35 m OD, provision for aggregates and overburden storage, and restoration of the site to natural habitat after uses following completion of extraction, within an overall application area of c. 18.5 hectares. An extraction capacity of up to 300,000 tonnes per annum is sought to provide the applicant with the ability to respond to demand for aggregates in the region. Permission is sought for a period of 20 years in order to extract a known resource with a further 2 years to fully restore the site.

The Appropriate Assessment (AA) process was commenced by Moore Group for the proposed development and a Report for AA Screening is presented as a separate document as part of the Planning application (Refer to Appendix 11).

5.1.1 PROPOSED DEVELOPMENT

The development will consist of the continuance of operation of the existing permitted quarry and associated infrastructure (ABP Ref. 17.QD.0017; P.A. Ref. LB200106 & ABP Ref. 309109-21), deepening of the quarry extraction area by 1 no. 15 metre bench from 50 m OD to 35 m OD, a lateral extension to the quarry over an area of c. 4.8 ha to a depth of 35 m OD, provision for aggregates and overburden storage, and restoration of the site to natural habitat after uses following completion of extraction, within an overall application area of c. 18.5 hectares. An extraction capacity of up to 300,000 tonnes per annum is sought to provide the applicant with the ability to respond to demand for aggregates in the region. Permission is sought for a period of 20 years.

There will be no changes to the method of extraction and processing as a result of the proposed development. Blasting will continue to be used as the method of extraction, to fragment the rock prior to crushing, screening and aggregate washing using mobile plant on the quarry floor. The existing site infrastructure includes site entrance with c.350 m long paved internal roadway, internal access roads, weighbridge, wheelwash, portacabin office, car park, mobile crushing, screening and washing plant, settlement lagoon system, and other ancillaries, which will be maintained onsite for the duration of the works. An effluent treatment system also exists on-site (Refer to EIAR Figure 3.1).

To date, extraction has taken place to a depth of c. 65 m OD in the southern and central sections of the active, permitted quarry. The quarry comprises disturbed ground with a level processing area located in the central section of the site and an oval-shaped extraction area developed into the central and southern sections of the site. The northern section of the site accommodates the settlement pond and screening embankment along the northern site boundary with the Killary Stream (KILLARY WATER_010, IE_NB_06K010100). The site holds a current, valid, Section 4 Discharge Licence (Ref. 20/01), which was issued by Meath County Council in 2020, for a discharge from the treatment systems (settlement lagoons) to the Killary Stream.

In June 2022, Breedon were granted planning permission to develop a readymix concrete plant in the northern section of the quarry (P.A. Ref. 22/328). However, this concrete plant has not been developed to date.

In December 2023, Breedon were granted planning permission for construction of a new single storey office building and associated ancillary works (P.A. Ref. 23/917) adjacent to the quarry entrance onto the L1603 local road. The internal access road extends from the site entrance from the L1603 local road on the southern boundary around the western perimeter, connecting to the northern part of the active quarry. The portacabin site office, wheelwash and weighbridge are adjacent to the internal access road on the western side of the active quarry. The application area under consideration will require no new access roads and can be accessed from the internal routes already established within the quarry.

The quarry has been developed on the underlying Salterstown Formation, which comprises dark blue grey siltstones with interbedded sandstones. Due to the strength and durability the bedrock, the quarry produces aggregates with a high Polished Stone Value (PSV), which have a very high value as surface dressing chips used in road construction.

The southern boundary of the proposed extension area is defined by a geological boundary which was determined by Ground Investigation (Refer to EIAR Section 6.5.4) defines the limit of the high PSV sandstone/mudstone metasediment unit, that is the rock of interest. The lands to the south of the proposed extraction area were determined to be underlain by less suitable, highly weathered, banded tuff with slaty metamudstones.

Extension further to the east is principally limited by above ground physical constraints rather than geological features. A 220 kV overhead transmission line traverses the eastern side of the landholding in a NNW-SSE orientation. A 10 and 20 m standoff will be maintained to the application and extraction areas respectively.

Another physical constraint is an ephemeral stream / drainage channel to the east of the application area that is rainfall runoff driven. It is proposed to retain this feature and associated hedgerow, while the extraction area will not encroach within 10 m of the eastern site boundary. The western boundary of the proposed extension area also comprises the current eastern boundary of the existing operational quarry site.

The lands north of the northern boundary of the proposed extension area have recently been planted with forestry and were found to be underlain by 4 to 7 m of overburden (Alluvium), and as such the area was not considered economically viable to develop.

A working scheme has been designed for the quarry that provides for the sequence and direction of working (Refer to EIAR Figures 3.1 to 3.3). The objective of this scheme is to reduce as far as possible the overall visual impact of the workings.

A Restoration & Landscape Plan for the site has been prepared. Full details for the Restoration Plan are presented in Section 3.4 of this EIAR. The final site restoration will contain a landscaped woodland / amenity with water feature. The intention is to create a habitat suitable for aquatic life and birds, such that the disused workings will eventually become of considerable amenity value. Some of the methods to be employed are detailed on the Restoration Plan Figure 3.2.

In summary, the final restoration will consist of the following:

- Landscaping works will be undertaken during the working life of the quarry, where required;
- At the end of quarrying, all plant and machinery will be removed off the site;
- All site boundaries will be secured;
- Additional planting of trees and shrubs may be necessary in some areas; and
- The water abstraction pumps will be switched off and groundwater will be allowed to return to natural equilibrium, at which sump water levels will be maintained by way of an existing overflow to natural existing drainage channels.

5.1.2 STATEMENT OF EXPERTISE

The EIAR Chapter: Biodiversity has been completed by Ger O'Donohoe B.Sc. M.Sc. (Moore Group) and considers the data included in Chapter 7 on Water provided by Dr. Pamela Bartley (Hydro-G) and Dr. Colin O'Reilly (Envirologic).

Ger has 30 years' experience as an environmental consultant with particular experience in the planning and management of Environmental Impact Assessments. He graduated from ATUG in 1993 with a B.Sc. in Applied Freshwater & Marine Biology and subsequently worked in environmental consultancy while completing an M.Sc. in Environmental Sciences, graduating from Trinity College, Dublin in 1999.

His primary role in Moore Group is as Principal Ecologist in the management and compilation of Environmental Impact Assessment Reports and undertaking Ecological Impact Assessments (EcIA/Biodiversity Assessment/Habitat Surveys) of the terrestrial and aquatic environments of a range of particular developments with comprehensive experience in quarry developments.

Ger has excellent knowledge of Environmental Legislation, Planning and Policy. He has extensive experience in freshwater and marine ecology and in terrestrial habitat surveying and mapping.

5.1.3 OBJECTIVES

The objectives of this assessment are to:

- Provide baseline Habitat conditions within the footprint of the site and update previous assessments such as bat surveys. Assess the potential impact of the proposed development on flora and fauna and associated surface water bodies and sensitive aquatic receptor species with respect to the proposed quarry water's arisings that will require discharge licencing; and
- Identify potential risks and impacts and provide appropriate mitigation measures for any identified potential impacts, as deemed necessary.

5.1.4 PLANNING GUIDANCE DOCUMENTS & LEGISLATIVE REQUIREMENTS

This report was prepared with consideration of the following guidance documents and ensuring compliance with Irish Regulations, listed in the following subsections.

5.1.4.1 EU Habitats Directive

The "*Habitats Directive*" (Council Directive 92/43/EEC) on the Conservation of Natural Habitats and of Wild Flora and Fauna) is the main legislative instrument for the protection and conservation of biodiversity within the European Union. The Habitats Directive provides for the designation, conservation and protection of sites comprising Special Areas of Conservation (SACs) and Special Protection Areas (SPAs), collectively forming the Natura 2000 network of 'European sites'. Article 3 of the Habitats Directive obliges Member States to designate as SACs sites hosting the natural habitat types listed in Annex I and habitats of the species listed in Annex II of the Habitats Directive. Article 10 of the Habitats Directive requires that Member States endeavour to improve the ecological coherence of the Natura 2000 network to manage and conserve features of the landscape which are of major importance for wild fauna and flora, for example ecological corridors or stepping-stones which are important for the migration, dispersal and genetic exchange of species.

Article 6(2) obliges Member States to take the necessary measures to avoid the deterioration of an SAC, or disturbance of a species for which the site is designated. Article 6(3) sets out the requirement for an "Appropriate Assessment", to ensure that a proposed plan or project will not have an adverse effect on the integrity of a SAC. Article 7 applies the requirements of Article 6(2) and 6(3) of the Habitats Directive to SPAs designated under the Birds Directive.

In addition and separate to the Appropriate Assessment requirements, Article 12 of the Habitats Directive obliges Member States to establish a regime of strict protection for certain species listed in Annex IV of the Directive, wherever they occur within their natural range. The protection for species under Article 12 of the Habitats Directive is not confined to the boundary of SACs. Species listed in Annex IV include the otter and certain species of bat.

5.1.4.2 EU Birds Directive

The "*Birds Directive*" (European Council (2009) Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds) confers legal protection to all naturally occurring wild birds within the EU territory. Member States are obliged to adopt the necessary measures to maintain the population of bird species, and that includes, in accordance with Article 3, an obligation to create, maintain and manage habitats for birds, and specifically for the species of Bird listed in Annex I of the Directive, Article 4 requires Member States to create SPAs which, by virtue of Article 7 of the Habitats Directive, form part of the Natura 2000 network of European sites and are subject to the Appropriate Assessment requirements under Article 6(3) of the Habitats Directive.

Additionally, Article 5 of the Birds Directive requires that Member States establish a general system of protection for all naturally occurring wild birds within the EU territory, similar to the system of strict protection required for Annex IV species under the Habitats Directive.

5.1.4.3 Wildlife Acts (1976 - 2012)[1]

The primary domestic legislation providing for the protection of wildlife in general, and wild birds in particular, and the control of some activities adversely impacting upon wildlife is the Wildlife Act of 1976, as amended. The aims of the Wildlife Act, according to the National Parks and Wildlife Service (NPWS) are "... to provide for the protection and conservation of wild fauna and flora, to conserve a representative sample of important ecosystems, to provide for the development and protection of game resources and to regulate their exploitation, and to provide the services necessary to accomplish such aims." All wild bird species are protected under the Act. The European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011) made significant amendments to the Wildlife Acts to ensure consistency with the Habitats and Birds Directives.

5.1.4.4 Relevant Guidance

Following desktop assessment and fieldwork, an evaluation of the development area and determination of the potential effects on the flora and fauna of the area is based on the following guidelines and publications:

- Guidelines for Ecological Impact Assessment in the UK and Ireland (CIEEM 2019);
- EPA Guidelines on Information to be contained in an EIAR (EPA 2022);
- Best Practice Guidance for Habitat Survey and Mapping (Heritage Council 2011);
- Guidance document on Article 6(4) of the Habitats Directive 92/43/EEC (EC 2007);
- Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities (DEHLG, December 2009, Rev 2010);

[1] Wildlife Act 1976, as amended. Administrative consolidation of the Wildlife Act 1976, Law Reform Commission (2021)

- Ecological Surveying Techniques for Protected Flora & Fauna (NRA 2008); and
- Guidelines for Assessment of Ecological Impacts of National Road Schemes (NRA 2009).

5.2 IMPACT ASSESSMENT METHODOLOGY

This assessment concentrates on ecological features within the development area of particular significance, primarily designated habitats and species. This includes habitats/species listed in Annex I, II and IV of the EU Habitats Directive, birds listed in Annex 1 of the EU Birds Directive, rare plants listed in the Flora Protection Order and other semi-natural habitats of conservation value.

The European Habitats Directive 92/43/EEC (Article 6) indicates the need for plans and projects to be subject to Habitats Directive Assessment (also known as Appropriate Assessment) if the plan or project is not directly connected with or necessary to the management of a Natura 2000 site, which includes Special Areas of Conservation (SACs) and Special Protection Areas (SPAs), but which has the potential to have implications on a site's conservation objectives. These implications can be significant effects, either individually or in combination with other plans or projects.

A habitat survey was carried out, in three stages, firstly through desktop research to determine existing records in relation to habitats and species present in the study areas. This included research on the National Parks and Wildlife Services (NPWS) metadata website, the National Biodiversity Data Centre (NBDC) database and a literature review of published information on flora and fauna occurring in the development area.

Other environmental information for the area was reviewed, e.g., in relation to soils, geology, hydrogeology and hydrology. Interactions in terms of the chapters on these topics presented in this EIAR were important in the determination of source vector pathways and links with potentially hydrologically connected areas outside the proposed development site. While the main focus of biodiversity was on the proposed development site within the red line boundary, the surrounding environment was taken into account in terms of biological and hydrological connectivity, particularly in relation to European sites.

5.2.1 STUDY METHODOLOGY

The habitat survey was carried out firstly through desktop research to determine existing records in relation to habitats and species present in the study areas. This included research on the NPWS metadata website, and the National Biodiversity Data Centre (NBDC) database.

The following resources assisted in the production of this chapter of the report:

- The following mapping and Geographical Information Systems (GIS) data sources, as required:
    - National Parks & Wildlife (NPWS) protected site boundary data;
    - Ordnance Survey of Ireland (OSI) mapping and aerial photography;
    - OSI/Environmental Protection Agency (EPA) rivers and streams, and catchments;
    - Digital Elevation Model over Europe (EU-DEM);

  - Google Earth and Bing aerial photography 1995-2023;
- Online data available on Natura 2000 sites as held by the National Parks and Wildlife Service (NPWS) from www.npws.ie including:
  - Natura 2000 - Standard Data Form;
  - Conservation Objectives;
  - Site Synopses;
- National Biodiversity Data Centre records:
  - Online database of rare, threatened and protected species;
  - Publicly accessible biodiversity datasets.
- Status of EU Protected Habitats in Ireland. (National Parks & Wildlife Service 2019); and
- Relevant Development Plans;
  - Meath County Development Plan 2021-2027.

The second phase of the survey involved a site visit to establish the existing environment in the footprint of the proposed development area. Areas which were highlighted during desktop assessment were investigated in closer detail according to the Heritage Council Best Practice Guidance for Habitat Survey and Mapping (Smith *et al*. 2011). Habitats in the proposed development area were classified according to the Heritage Council publication *A Guide to Habitats in Ireland* (Fossitt 2000). This publication sets out a standard scheme for identifying, describing and classifying wildlife habitats in Ireland. This form of classification uses codes to classify different habitats based on the plant species present. Species recorded in this report are given in both their Latin and English names. Latin names for plant species follow the nomenclature of An Irish Flora (Parnell & Curtis 2012).

Habitats were surveyed on 3 July 2023 and 10 August 2023 by conducting a study area walkover covering the main ecological areas identified in the desktop assessment. The survey dates are within the optimal botanical survey period. A photographic record was made of features of interest during fieldwork.

Birds were surveyed using standard transect methodology and signs were recorded where encountered during the field walkover survey.

A night-time bat detector survey was undertaken on 10 August 2023 by undertaking roving transects circling the site using a D230 Pettersson Heterodyne Bat Detector and an Echo Meter Touch 2 Pro Bat Detector. The survey commenced at 20:30 with sunset occurring at approximately 21:10. The weather on the night was good with varying cloud cover and a moderate southeasterly breeze and temperatures ranging from 20°C during the evening to 16°C that night.

The survey was undertaken in line with recommendations of the Bat Conservation Trust 'Good Practice Guidelines', 3rd edition, 2016 (Collins, J (ed) (2016) and Irish Wildlife Manual No. 25' (Kelleher, C. & Marnell, F. 2006).

The final part of the site assessment involved an evaluation of the study area and determination of the potential impacts on the habitats of the study area. This part of the assessment formed the basis for the Impact Assessment.

5.2.2 SITE EVALUATION AND IMPACT ASSESSMENT

Transport Infrastructure Ireland (TII) Guidelines for Assessment of Ecological Impacts of National Road Schemes (NRA 2009) outlines the methodology for evaluating ecological impacts of the project in the present report. According to the TII Guidelines, the Ecological Study should address:

- Designated conservation areas and sites proposed for designation within the zone(s) of influence of any of the route options;
- All the main inland surface waters (e.g., rivers, streams, canals, lakes and reservoirs) that are intersected by any of the route corridor options, including their fisheries value and any relevant designations;
- Aquifers and dependent systems and turloughs and their subterranean water systems;
- Any known or potentially important sites for rare or protected flora or fauna that occur along or within the zone(s) of influence of any of the route options;
- Any other sites of ecological value, that are not designated, along or in close proximity to any of the route corridor options;
- Any other relevant conservation designations or programmes (e.g., catchment management schemes, habitat restoration or creation projects, community conservation projects, etc.); and
- Any other features of particular ecological or conservation significance along any of the route options.

5.2.3 CONSULTATION

5.2.3.1 Statutory Stakeholders

J Sheils Planning & Environmental Ltd. circulated a scoping document to relevant statutory consultees and stakeholders in March 2023. Information on the scoping and responses is presented in Section 1.5.2 of the EIAR.

Some of the main matters arising where as follows:

Inland Fisheries Ireland

The site is located in the Killary River catchment, which is a sub-catchment of the River Dee. The Killary River contains valuable fisheries habitat and supports stocks of salmon, trout and lamprey among other species. The River Dee supports stocks of salmon, trout, lamprey, pike and coarse fish among other species and is a valuable angling resource.

Note: Salmon and Lamprey species are Annex II listed species in the Habitats Directive.

The current WFD Ecological status of the waterbody at this location, Killary Water_010, is Moderate and 'at risk' of not achieving Good status.

The potential impacts of developments of this nature on fisheries habitats include:

- discharges to watercourses of contaminated water and fuels/oils
- unregulated abstraction of ground/surface water

Contaminated waters:

- Uncured concrete can kill fish, plant life and macro-invertebrates by altering the pH of the water.
- Discharges of silt laden waters can clog fish spawning beds and juvenile fish species are particularly sensitive. Plant and macroinvertebrate communities can be blanketed over, which can lead to loss or degradation of aquatic habitat.
- Discharges of fuels and oils can be directly toxic to aquatic life. Oil films can interfere with the diffusion of oxygen from the atmosphere into waters and in extreme cases result in oxygen depletion.

Suitable mitigation measures must be put in place to prevent contaminated water from the site entering surface waters.

Abstractions:

It is important to ensure that any abstraction from ground/surface water is carefully managed in a sustainable manner to protect these resources.

Environmental Health Services

Decommissioning/site restoration

The EIAR should include an indication of the proposed operational lifetime of the quarry and should include a Decommissioning Plan.

On decommissioning, the Environmental Health Service recommends that consideration be given to the guidance issued by the Health and Safety Authority's on 'Quarrying – Trespass, Boundary Fencing and Prevention of Drowning'.

5.2.3.2 Third Parties

A third party well survey was carried out by an environmental scientific officer of Breedon, under direction and assistance from one of the project's hydrogeologists. Dr. Pamela Bartley. All properties within 500 m of the extraction area were visited on 14 and 15th November 2023. Where a homeowner was absent on 14th November that house was revisited on the 15th November. During the two visits, hydrogeological data were also collected and is presented in the Water Chapter 7. The locations of the dwellings which were visited for consultation is presented as EIAR Figure 7.9.

5.3 SITE DESCRIPTION

5.3.1 SITE LOCATION & TOPOGRAPHY

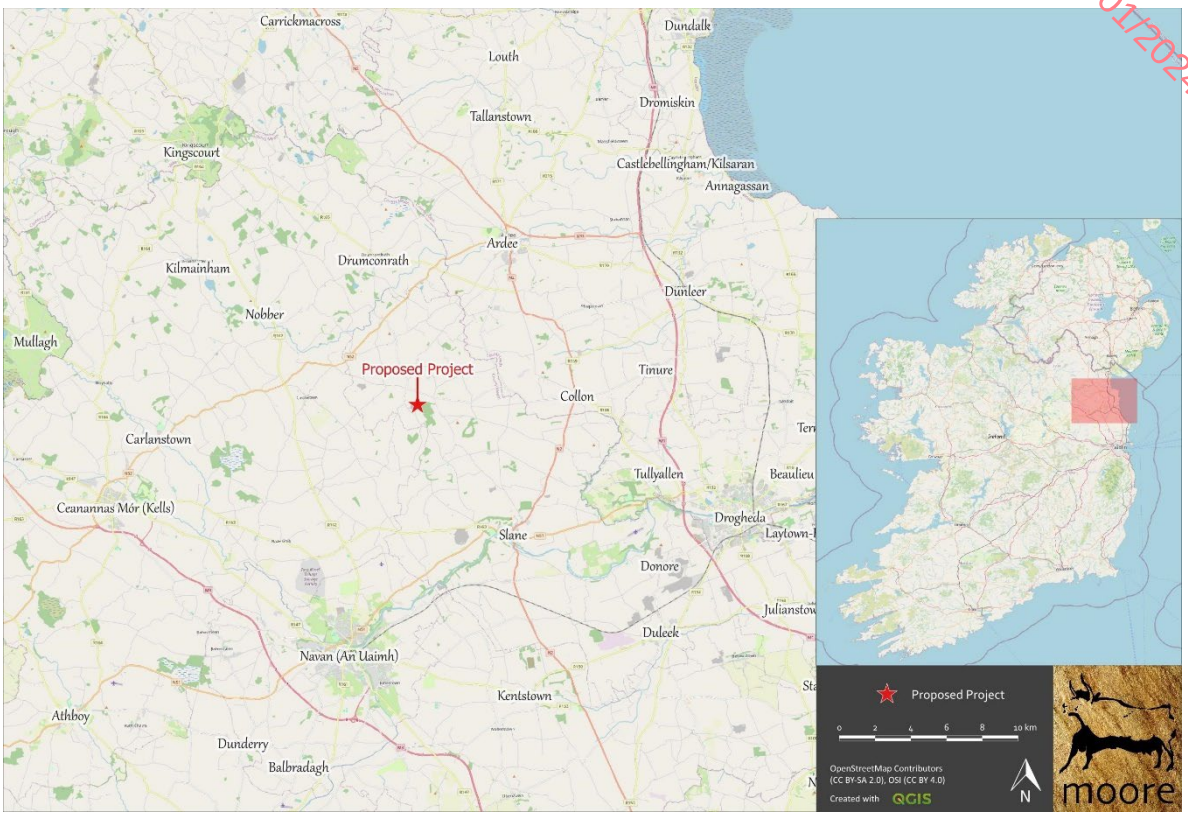

Figure 5.1 Site outlined in Red First Order Rivers (Purple) - (www.epamaps.ie).

The quarry is located in the townland of Heronstown, c. 2 km southeast of Lobinstown, Co. Meath at Irish Transverse Mercator (ITM) Coordinates 690900E, 781500N (Refer Figures 1.1 and 1.2).

The applicant, Breedon have full control of the lands via a freehold interest in the c. 24.8 ha landholding that encompasses the existing quarry and proposed extension area.

5.3.2 LAND USE

Land use in the area is almost exclusively agricultural, which is divided relatively evenly between tillage and moderate-intensity agricultural grassland supporting livestock production and dairy.

Residential development in the area consists of sporadic one-off housing alongside local roads, with some of these having farmyards attached. Ribbon developments are evident around junctions at Rathkenny and Lobinstown, 3.2 km southwest and 2.0 km northwest of the site, respectively.

There are no occupied residences within the application site or landholding. The nearest residence is 120 m to the southwest of the permitted extraction area. There are 7 residences within 250 m, 15 within 500 m, 31 within 750 m and 45 within 1 km of the proposed extraction area. Heronstown National School is c. 627 metres north of the extraction area (Refer to Figure 4.1).

The lands have access onto the L1603 Local Road, which extends from the N52 south before crossing the L1604 Local Road (i.e., Collon Road) c. 1.2 km east of Lobinstown and continuing on to the N51 c. 1km west of Slane. The L1603 is known as the Slane Road south of the intersection with the L1604 at McEntegart's Crossroads, and in the vicinity of the site access. The quarry has direct access onto the L1603 with a well spayed, paved and secure entrance with CCTV and large, lockable industrial gate. Visibility along the L1603 from the quarry access is adequate for the prevailing vehicle speeds, with sightlines of c. 160 m in each direction as required under P.A. Ref. LB200106.

The topography of the region is characterised by relatively flat to undulating landform to the northwest, which is largely devoid of lakes and peatlands, and is relatively typical of the lowlands in County Meath. However, a series of NE-SW trending hills, known as the Ferrard Hills are located c. 1 km southeast of the site, the highest of which, Mount Oriel, rises to 251 m AOD. The lands in the vicinity of the site are typically at elevations of 90-120 m AOD and overlie Palaeozoic rocks of the Longford-Down Massif, close to the northeastern margin of the Irish Midlands.

The existing quarry is surrounded by agricultural fields, mostly pasture, with minor levels of scrub and forestry plantation in the wider area, although a large tract of mature afforestation lies c. 75 m to the east of the site bordering the landholding. The lands in the vicinity of the site are typically at elevations of 85-120 m OD and gradually increase to the southeast from c. 83 m OD at the northwestern boundary of the landholding to c. 111 m OD at the southeastern boundary.

As the quarry has been developed into ground that rises to the southeast, there are 3 benches currently developed in the southeastern corner of the extraction area. It is proposed to deepen the quarry within the current permitted extraction area by 1 no. 15 metre bench from 50 m OD to 35 m OD. The site will be worked from the existing quarry area in an easterly direction in a series of c. 15 m benches between c. 105 and 35 m OD (Refer to EIAR Figures 3.1 to 3.3).

The Killary Stream runs adjacent to the northern boundary of the active quarry and outfalls to the Killary Water_010, which in turn enters the River Dee. The Dee subsequently empties to Dundalk Bay at Annagassan.

5.3.3 SITE LAYOUT

The development will consist of the continuance of operation of the existing permitted quarry and associated infrastructure (ABP Ref. 17.QD.0017; P.A. Ref. LB200106 & ABP Ref. 309109-21), deepening of the quarry extraction area by 1 no. 15 metre bench from 50 m OD to 35 m OD, a lateral extension to the quarry over an area of c. 4.8 ha to a depth of 35 m OD, provision for aggregates and overburden storage, and restoration of the site to natural habitat after uses following completion of extraction, within an overall application area of c. 18.5 hectares. An extraction capacity of up to 300,000 tonnes per annum is sought to provide the applicant with the ability to respond to demand for aggregates in the region. Permission is sought for a period of 20 years.

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To date, extraction has taken place to a depth of c. 65 m OD in the southern and central sections of the active, permitted quarry. The quarry comprises disturbed ground with a large, level processing area located in the central section of the site and an oval-shaped extraction area developed into the central and southern sections of the site. The northern section of the site accommodates the settlement pond and screening embankment along the northern site boundary with the Killary Stream (KILLARY WATER_010, IE_NB_06K010100). The site holds a current, valid, Section 4 Discharge Licence (Ref. 20/01), which was issued by Meath County Council in 2020, for a discharge from the treatment systems (settlement lagoons) to the Killary Stream.

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quarry. The application area under consideration will require no new access roads and can be accessed from the internal routes already established within the quarry.

5.3.4 SITE WATER MANAGEMENT

Development of the quarry at depth below the current floor will require increased dewatering of rainfall-runoff and groundwater and discharge to surface water in order to maintain a dry working environment on the floor of the quarry

The site holds a current, valid Section 4 Discharge Licence (Ref. 20/01), which was issued by Meath County Council in 2020, for a discharge from the treatment systems (settlement lagoons) to the Killary Stream.

5.4 RECEIVING ENVIRONMENT

5.4.1 HABITATS AND FLORA

5.4.1.1 Designated Sites

A Zone of Influence (ZoI) of a proposed development is the geographical area over which it could affect the receiving environment in a way that could have significant effects on the Qualifying Interests of a European site. In accordance with the OPR Practice Note, PN01, the ZoI should be established on a case-by-case basis using the Source- Pathway-Receptor framework.

The European Commission's "*Assessment of plans and projects in relation to Natura 2000 sites guidance on Article 6(3) and (4) of the Methodological Habitats Directive 92/43/EEC*" published 28 September 2021 states at section 3.1.3:

Identifying the Natura 2000 sites that may be affected should be done by taking into consideration all aspects of the plan or project that could have potential effects on any Natura 2000 sites located within the zone of influence of the plan or project. This should take into account all of the designating features (species, habitat types) that are significantly present on the sites and their conservation objectives. In particular, it should identify:

- *any Natura 2000 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 Natura 2000 sites within the likely zone of influence of the plan or project Natura 2000 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;*
- *Natura 2000 sites in the surroundings of the plan or project (or at some distance) which host fauna that can move to the project area and then suffer mortality or other impacts (e.g. loss of feeding areas, reduction of home range);*
- *Natura 2000 sites whose connectivity or ecological continuity can be affected by the plan or project.*

The range of Natura 2000 sites to be assessed, i.e. the zone in which impacts from the plan or project may arise, will depend on the nature of the plan or project and the distance at which effects may occur. For Natura 2000 sites located downstream along rivers or wetlands fed by aquifers, it may be that a plan or project can affect water flows, fish migration and so forth, even at a great distance. Emissions of pollutants may also have effects over a long distance. Some projects or plans that do not directly affect Natura 2000 sites may still have a significant impact on them if they cause a barrier effect or prevent ecological linkages. This may happen, for example, when plans affect features of the landscape that connect Natura 2000 sites or that may obstruct the movements of species or disrupt the continuity

of a fluvial or woodland ecosystem. To determine the possible effects of the plan or project on Natura 2000 sites, it is necessary to identify not only the relevant sites but also the habitats and species that are significantly present within them, as well as the site objectives.

The Zone of Influence may be determined by considering the Proposed Development's potential connectivity with European sites, in terms of:

- Nature, scale, timing and duration of all aspects of the proposed works and possible impacts, including the nature and size of excavations, storage of materials, flat/sloping sites;
- Distance and nature of potential pathways (dilution and dispersion; intervening 'buffer' lands, roads etc.); and
- Location of ecological features and their sensitivity to the possible impacts.

The potential for source pathway receptor connectivity is firstly identified through GIS interrogation and detailed information is then provided on sites with connectivity. European sites that are located within a potential Zone of Influence of the Proposed Development are presented in Figure 5.2 and Figure 5.3. Spatial boundary data on the Natura 2000 network was extracted from the NPWS website (www.npws.ie) on 14 November 2023. This data was interrogated using GIS analysis to provide mapping, distances, locations and pathways to all sites of conservation concern including pNHAs, NHA and European sites.

The nearest European sites to the Proposed Development are associated with the River Boyne and include the River Boyne and River Blackwater SAC (Site Code 002299), which is located almost 8 km to the southeast, and the River Boyne and River Blackwater SPA (Site Code 004232), which is located approximately 8.3 km to the southeast. However, the Proposed Development lies in a separate hydrological catchment to the River Boyne and the associated sites referenced above, and there is no connectivity to these sites and the River Boyne.

The Killary Water flows into the River Dee almost 10 river kilometres downstream, which in turn discharges into Dundalk Bay a further 30 river kilometres downstream.

5.4.1.2 Quarry Habitats

The quarry habitats are best identified on the site Habitat map in Figure 5.4 being a mosaic of mixed woodland (WD1) on the eastern and western boundaries with scattered scrub (WS1) areas elsewhere and improved grassland (GA1) around the attenuation pond. The active quarry areas (ED4) are shown in grey.

5.4.1.2.1 Water courses (FW1)

This habitat refers to the small upland stream / drainage channel which flows from south to north and downhill forming part of the eastern boundary of the application extension area. The stream is upland and eroding with no floral or infaunal species noted during fieldwork. It is proposed to retain this feature and associated hedgerow, while the extraction area will not encroach within 10 m of the eastern site boundary. As such this feature was excluded

from the assessment after reviewing its location and connectivity to the Killary Stream further north.

The Killary Stream (KILLARY WATER_010, IE_NB_06K010100) also forms the northern site boundary where it runs along the boundary of an area of improved grassland in which the settlement pond. The site holds a current, valid Section 4 Discharge Licence (Ref. 20/01), which was issued by Meath County Council in 2020, for a discharge from the treatment systems (settlement lagoons) to the Killary Stream.

Data from the EPA (www.epa.ie/epamaps/) shows that the nearest downstream station at Killary Bridge reports a Q Value of 3-4 indicating Moderate water quality status for the most recent sampling period 2020.

5.4.1.2.2 Calcareous springs (FP1)

This habitat refers to seeps of groundwater that emerge from the quarry face on the eastern quarry face. Here surface/groundwater from the proposed extension area is seeping through the rock face and emerging as springs. The habitat is recognised as such as FP1. However, they are not considered natural and do not strictly correspond to the Annexed category Petrifying springs with Tufa formation as they are artificial and present due to the quarrying activity.

5.4.1.2.3 Improved grassland (GA1)

Improved grassland is the dominant habitat remaining in the proposed quarry extension area. This area comprises two fields in the north of the site. Improved grassland is also the dominant habitat comprising the northern most part of the lands which accommodates the settlement pond and screening embankment along the northern site boundary with the Killary Stream (KILLARY WATER_010, IE_NB_06K010100). Thes lands will also accommodate the proposed readymix concrete plant which was recently granted planning permission (P.A. Ref. 22/328).

Improved grassland is of negligible ecological value due to its impoverished flora, and with its low species diversity.

The dominant plant species in this habitat is Perennial rye grass (*Lolium perenne)* with Greater plantain (*Plantago major)*, White clover (*Trifolium repens*) and Meadow buttercup (*Ranunculus acris*) noted occasionally. Other species noted included Curled dock (*Rumex crispus*) and Silverweed (*Potentilla anserina*).

The grassland areas were heavily grazed by Cattle and the sward much reduced.

5.4.1.2.4 Hedgerows (WL1)

There are four remnant hedgerows extending into the footprint of the proposed extension area. The hedgerows are not well managed and the dominant species present are Hawthorn and Ash.

HR1 runs vertically from north to south from the northern perimeter of the proposed extension area and comprises a gappy line of Hawthorn of low local value of c. 80 m.

HR2 runs horizontally from east to west from the eastern perimeter of the proposed extension area and comprises a line of Hawthorn with gaps of a size created by Cattle poaching that it could be considered a poor treeline of low local value of c. 100 m. There is a small group of mature Ash at the far eastern corner of the site boundary which are under the redline boundary but excluded from the assessment after revision of the proposed extraction area so as not to encroach within 10 m of the eastern site boundary.

HR3 comprises the tail end of a longer hedge running in a NW-SE direction. The end of this hedge is c. 50 m in length and mostly of Hawthorn.

HR4 forms the southwestern boundary of the proposed extension area and forms the topmost corner of a hedge parallel to HR3. It forms c. 70 m of the boundary of the proposed extension in this area, and the topmost short length adjacent to the western boundary of the area is c. 40 m comprising mixed Ash and Hawthorn of low local value.

The ground flora under hedgerows was relatively poor due to cattle poaching with species recorded including bramble, Ivy (*Hedera helix*), Cleavers (*Galium aparine*), Bush vetch (*Vicia sepium*), Dock (*Rumex* spp.), Nettle (*Urtica dioica*), and Herb Robert (*Geranium robertianum*).

5.4.1.2.5 Mixed woodland (WD1)

The western and eastern boundaries of the existing quarry comprise hedgerow boundaries that contain semi-mature Ash and old Hawthorn that have grown into colonising scrubland forming narrow bands of mixed woodland.

Patches of scrub are interspersed with worked areas of the quarry forming dispersed patches. Species present in areas of scrub include gorse, bramble, bracken and hawthorn. The ground flora beneath this scrub is poor and restricted to shade-tolerant species such as bracken, ivy, bramble and occasional hart's-tongue fern.

5.4.1.2.6 Scrub (WS1)

Patches of gorse scrub are located around a rocky outcrop at the southwestern corner of the proposed extension area along with ivy, bramble and occasional hart's-tongue fern.

Scrubby areas form part of the fringing woodland described along the western and eastern boundaries of the active quarry.

5.4.1.2.7 Active quarries and mines (ED4)

The majority of the existing quarry site surveyed is currently an active quarry. These areas have little or no vegetation due to the high levels of disturbance.

5.4.2 FAUNA

5.4.2.1 Bats

There are no records of bats from a custom polygon encompassing the quarry site for a distance of up to 100 m from the site boundary from the National Biodiversity Database which was consulted on 04/12/2023.

The night-time detector survey of the site recorded several individuals of two species of bats: Common pipistrelle (*Pipistrellus pipistrellus*) and Leisler's bats (*Nyctalus leisleri*) were recorded along the eastern boundary of the quarry, i.e. the western boundary of the proposed extension area during the survey of 10th August 2022.

The first calls occurred at 21:49 when Leisler's bats were recorded and this was later followed by the majority of calls from Pipistrelle bats. All calls were concentrated around the area of HR3 and HR4.

A large mature Ash at the eastern boundary corner of the proposed extension area was surveyed for emergence but not bats were recorded in this area.

Semi-mature and early mature Ash located in the woodland strip on the western boundary of the proposed extension area did not have bat roosting potential. Few Leisler's calls were recorded in this area both from within the proposed extension area and from within the lower quarry worked area.

5.4.2.2 Badgers

No specific feeding signs or setts were found within the quarry site boundary. A survey of the proposed extension area did not reveal any setts.

5.4.2.3 Otters

There are no suitable habitats for otters on the proposed development site and no signs of otter were recorded within the site. Potential impacts on otters are considered under indirect impacts on water quality downstream.

5.4.2.4 Birds

Birds recorded during the site visit were typical of the wider countryside. The following species were recorded; Blackbird (*Turdus merula*), Robin (*Erithacus rubecula*), Wren (*Troglodytes troglodytes*), Great tit (*Parus major*), Chaffinch (*Fringilla coelebs*), Rook (*Corvus frugilegus*), Hooded crow (*Corvus corone cornix*), Starling (*Sturnus vulgaris*), Magpie (*Pica pica*), Jackdaw (*Corvus monedula*), Wood pigeon (*Columba palumbus*), Coal tit (*Parus ater*) and Pied wagtail (*Motacilla alba*).

The presence of Peregrine falcons *(Falco Peregrinus)* at Lobinstown Quarry is well documented and a management plan has been in place for a number of years to promote use of the quarry by these birds of prey and to enhance their chances of successful regeneration. In accordance with Condition No. 16 (b) of P.A. Ref. LB200106 "*an annual Peregrine falcon survey shall be undertaken in accordance with best practice standards (minimum of 3 site visits). The survey report and suitable mitigation measures to be agreed in consultation with the NPWS (if this species is found to be breeding on site) and shall be submitted to the Planning Authority for agreement in writing*". The most recent and separate (confidential) report on the status of this bird species will be submitted to Meath County Council in support of this planning application.

5.5 ASSESSMENT OF IMPACTS

The procedure for determination of potential impacts on the receiving environment comprised the identification of potential receptors within the site boundary and surrounding environment. The information gathered during the field work and desk study was used to assess the degree to which these receptors will be impacted upon.

The majority of the application site lies within the existing quarry void, and when the full application area (comprising the existing quarry and extension area) is considered as a whole, the entire site is of moderate quarry size. In line with best practice, the individual impacts will be considered with respect to the application site, plus the cumulative impacts with respect to the application site and surrounding area.

The Planning and Development Regulations 2001-2021 require Impact Assessment under the headings of Do Nothing, Transboundary, Direct, Indirect, Cumulative, Residual & Worst Case. Impacts are also assessed in relation to construction, operational and decommissioning stages.

The main anticipated impact associated with the proposed quarry development, in relation to Biodiversity, relates to the cumulative removal of hedgerow of c.340 metres and a strip of mixed woodland of c. 190 m.

The below Impact Assessment matrix provides an indication of the significance of potential effects arising during the life cycle of the development not accounting for any mitigation measures.

Table 5.1 Biodiversity - Impact Matrix

'Do Nothing' Impacts	X		
Factors	**Construction**	**Operation**	**Decommissioning**
Direct Impacts	●	●	●
Indirect Impacts	X	●	X
Cumulative Impacts	X	X	X
Residual Impacts	X	X	●
`Worst Case' Impacts	●	X	X

None: X; Slight: ●; Moderate: ●; Significant: ● (Negative) ●.(Positive)
Refer to Appendix 3 for definition of Significance

JSPE

5.5.1 'DO NOTHING' IMPACTS

If the development did not proceed, the proposed extension area would remain as rough pasture and the existing excavated quarry area would continue to operate under existing planning permission P.A. Ref. LB200106. Thus, it would be expected that the application site would not undergo any significant changes in a 'do-nothing' scenario.

Under the 'Do Nothing' scenario, all quarrying and ancillary activities would be completed under P.A. Ref. 200106 and operations would cease thereafter. The site would then be restored as per the requirements of the existing planning permission (P.A. Ref. 200106). Habitat development would occur slowly and lead to a general increase in biodiversity as the plant cover became more varied.

As mentioned, the site does not contain species of particular ecological interest at present but the successional stage of open scrub that occurs within the worked-out areas of the quarry has a positive biodiversity value in such agricultural surroundings.

5.5.2 DIRECT IMPACTS

5.5.2.1 Quarry Habitats

There will be no significant change to the quarry habitats from the continued working of the quarry. The quarry base and surrounding upper levels comprise areas of bedrock and have been prepared for quarrying with no predicted significant effects on footprint habitats. The predicted direct effect on footprint habitats is neutral, imperceptible and permanent.

The surrounding Scrub/Grassland mosaic will continue to be managed as part of the quarry operation with similar levels of grazing and maintenance of tracks and access areas. The predicted direct effect on surrounding habitats is neutral, imperceptible and long term.

5.5.2.2 Grassland, Hedgerow and Woodland Habitats

The loss of improved grassland habitat will not result in a significant effect on biodiversity. The predicted direct effect on Woodland is negative, 'not significant' and permanent. The predicted direct effect on Hedgerow is negative, slight and permanent.

5.5.2.3 Fauna

Bats

There are no records of bats from a custom polygon encompassing the quarry site for a distance of up to 100 m from the site boundary and night time detector surveys returned relatively low numbers of bats.

There are no roosting habitats in the footprint of the proposed development and there are no predicted significant direct effects on bats. There will be significant remaining hedgerows and woodland surrounding the existing quarry and proposed extension area which will continue to provide commuting connectivity and foraging habitats for bats in the area.

Badgers

There will be no direct effects on badgers as a result of the proposed development.

Otters

There will be no direct effects on otters as a result of the proposed development.

Birds

Birds recorded during the site visit were typical of the wider countryside. There will be no cutting of vegetation during the bird nesting season and no direct effects on nesting birds.

Potential effects on the nesting Peregrines can be avoided by timing of works specific to the area identified in the ongoing Peregrine Management Plan for the quarry. In accordance with Condition No. 16 (b) of P.A. Ref. LB200106 "an annual Peregrine falcon survey shall be undertaken in accordance with best practice standards (minimum of 3 site visits). The survey report and suitable mitigation measures to be agreed in consultation with the NPWS (if this species is found to be breeding on site) and shall be submitted to the Planning Authority for agreement in writing". The most recent and separate (confidential) report on the status of this bird species will be submitted to Meath County Council in support of this planning application.

5.5.3 INDIRECT IMPACTS

5.5.3.1 European Sites

The nearest European sites to the Proposed Development are associated with the River Boyne and include the River Boyne and River Blackwater SAC (Site Code 002299), which is located almost 8 km to the southeast, and the River Boyne and River Blackwater SPA (Site Code 004232), which is located approximately 8.3 km to the southeast.

However, the Proposed Development lies in a separate hydrological catchment to the River Boyne and the associated sites referenced above, and there is no connectivity to these sites and the River Boyne.

The Killary Stream runs adjacent to the northern boundary of the active quarry and outfalls to the Killary Water_010, which in turn enters the River Dee. The Dee subsequently empties to Dundalk Bay at Annagassan.

The site's interaction with the Killary_Water_010 surface water is regulated and controlled by the site's Section 4 Discharge Licence, whose ELVs ensure compliance with the WFD and Water Pollution Act.

With respect to designations, none of the watercourses connecting the site with Dundalk Bay are European sites. Dundalk Bay is designated as an SAC (000455), an SPA (004026) and pNHA (000455). The hydrological distance between the site and this designated site is c. 43 km. Given all site measurements for the discharge flow and quality, the low volume calculated for future water management at the entire proposed excavation area and the

large, underutilised capacity of the site's existing water treatment infrastructure, there will be no impact on Dundalk Bay SAC and SPA.

5.5.3.2 Habitats

The quarry comprises areas of bedrock and have been prepared for quarrying with no predicted indirect effects on surrounding habitats.

Fauna

Bats

The predicted indirect impact on surrounding habitats is neutral, imperceptible and long term and as such there will be no indirect impact on bats in the surrounding area.

Badgers

There will be no indirect impacts on badgers as a result of the proposed development.

Otters

There will be no indirect impacts on otters as a result of the proposed development.

Birds

The predicted indirect impact on surrounding habitats is neutral, imperceptible and long term and as such there will be no indirect impact on Peregrine Falcons feeding in the surrounding area.

Freshwater Ecology

The proposed development includes specific measures for the attenuation and discharge of surface water and there will be no indirect effects on water quality as a result of the proposed development. The site holds a current, valid Section 4 Discharge Licence (Ref. 20/01), which was issued by Meath County Council in 2020, for a discharge from the treatment systems (settlement lagoons) to the Killary Stream.

5.5.4 CUMULATIVE IMPACTS

The aim of the cumulative impact assessment is to examine whether any other proposed developments have the potential to act in-combination with the proposed application, subsequently giving rise to effects that would not otherwise be significant.

A review of the National Planning Application Database was undertaken. The database was queried for developments granted planning permission within 1km of the Proposed Development within the last three years, these are presented in Table 5.2 below.

There are several major extractive and waste management developments in the wider area, including the O'Reilly Concrete Lobinstown Quarry c. 2.5 km to the west (currently in final stages of restoration), Roadstone's Slane Quarry, c. 7 km to the south, an unidentified quarry at Knockmooney on the N2 c. 8.5 km to the southeast, and a disused quarry, now operating as an SRF, at Mullaghdillon c. 6 km to the southeast. The only significant industrial activity within 5 km of the site is the industrial/warehouse estate in Grangegeeth, c. 4.5 km to the southeast, which houses Hibernia Steel Products, R&M Buckets, WK Composites, Dawn Paper & Tissue Manufacturing and Eiregramco.

The nearest substantial commercial activity is Meade Farm Group's Packing, Storage and Distribution facility c. 1.25 km northeast of the site at Braystown. The substantial facility employs c. 340 employees. Whites Auto Electrical have a small commercial unit in Matthews Transport Yard, Heronstown, c. 800 m north of the site on the L1603 (c. 185 m north of McEntegart's Cross Roads). PS Supplies, which is a company supplying doors and floors based in Navan, maintains a small commercial unit in Lobinstown Village, while Myles Staircases Ltd. also maintains a workshop and showroom c. 785 m south of the site on the L1603.

There are also other developments nearby, including solar farms, both existing and proposed, that could give rise to potential cumulative impacts. However, these developments are subject to planning and/or the requirements for EIA and are subject to compliance with both planning and licensing conditions. There is no other significant industrial/commercial activity within a 5 km radius of Lobinstown Quarry.

These developments are expected to be subject to similar mitigation measures with respect to protection of groundwater. In our review of the projects, no connection that could potentially result in significant cumulative impacts was identified.

A separate Cumulative Impacts Assessment has been included as Appendix 15, which provides an assessment of other projects located within the wider area that are potentially significant with respect to cumulative impacts.

Table 5.2 Recent Planning Development History (c. 1 km)

Planning Ref.	Description of development	Comments
LB201976	The construction of new 1.5 storey dwelling with proprietary waste water treatment system and percolation area, new entrance onto public road and all associated site works. Significant further information/revised plans submitted on this application.	There are no predicted significant effects from the proposed development and there is no potential from in-combination or cumulative effects.
211266	Dwelling house, detached domestic garage, wastewater treatment system and percolation area and all associated site works. Significant further information/revised plans submitted on this application.	There are no predicted significant effects from the proposed development and there is no potential from in-combination or cumulative effects.
211304	Permission consequent on a grant of outline permission ref no. LB/181553 for dwelling house, wastewater treatment system and percolation area and all associated site works.	There are no predicted significant effects from the proposed development and there is no potential from in-combination or cumulative effects.
211445	Outline permission for dwelling house, detached domestic garage, wastewater treatment system and percolation area and all associated site works.	There are no predicted significant effects from the proposed development and there is no potential from in-combination or cumulative effects.
211729	The construction of a single storey dwelling, packaged wastewater treatment system with polishing filter, domestic garage, new entrance and all ancillary site works. Significant Further information/Revised plans submitted on this application.	There are no predicted significant effects from the proposed development and there is no potential from in-combination or cumulative effects.
211801	Planning permission for a prefab classroom and all associated site works.	There are no predicted significant effects from the proposed development and there is no potential from in-combination or cumulative effects.
22328	The installation and operation of a readymix concrete batching plant, closed circuit water management system, hardstanding area, aggregate storage bays and all ancillary works within an application area of c.0.8 hectares.	There are no predicted significant effects from the proposed development and there is no potential from in-combination or cumulative effects.
23917	a) construction of a new single storey office building and associated ancillary works (c. 189 sq. m gross), b) proposed new viewing deck to the north of the office building overlooking existing quarry (c. 30 sq.m), c) installation of 9 no. car parking spaces, d) installation of sheltered bicycle parking. The development also consists of e) retention of existing wastewater treatment system and associated percolation area (c. 30 sq. m) that will serve the proposed new office building, all within an application area of c. 0.29 hectares.	There are no predicted significant effects from the proposed development and there is no potential from in-combination or cumulative effects.
221279	The construction of a new single-storey extension to the front of the existing school and all associated site works.	There are no predicted significant effects from the proposed development and there is no potential from in-combination or cumulative effects.

There are no predicted in-combination or cumulative effects given that it is predicted that the Proposed Development will have no significant effect on Biodiversity.

5.5.5 TRANSBOUNDARY IMPACTS

The EIA Directive 2014-52-EU invokes the Espoo Convention on Environmental Impact Assessment in a Transboundary Context, 1991, and applies its definition of transboundary impacts. Given the location (c. 30 km from the border with N. Ireland), the nature, size and scale of the proposed development, it is expected that the impacts of the development would not have any significant transboundary effects with respect to biodiversity.

5.5.6 RESIDUAL IMPACTS

Based on the mitigation measures provided for during the operational phase, there will be no significant residual impacts envisaged in terms of biodiversity. On completion of the full restoration and closure of the site, it is expected that there will not be any significant, long-term, adverse impacts.

5.5.7 'WORST CASE' IMPACTS

The accidental release of fuel or other hydrocarbons to surface water represents the most likely and significant Worst-Case scenario. However, extensive mitigation measures implemented in the design and operation of the development will mitigate this scenario to the largest degree possible. In particular, significant mitigations against spills of hydrocarbons are in place at the fuel storage and refueling area at Heronstown (Refer to EIAR Section 7.7). The site holds a valid, current Section 4 Discharge Licence (Ref. 20/01), which was issued by Meath County Council in 2020, for a discharge from the treatment systems (settlement lagoons) to the Killary Stream.

5.6 MITIGATION MEASURES

The predicted impacts can be resolved under the mitigation measures set out in Table 5.3.

Table 5.3 Mitigation Measures

Activity	Attribute	Character of Impact	Mitigation	Residual Impact
1. Fuel storage/ usage on site	Groundwater & Surface waters	Accidental spillage of contaminants during site operations could cause short to temporary, significant impacts to soils, groundwater and the surface water environment, if not stored and used in an environmentally safe manner.	• Breedon Ireland SOPs have been designed to ensure responsible activity on their sites. • Potentially contaminating substances will be stored in a designated area that is isolated from surface water drains or open waters and not within 30 m of drainage ditches or surface waters. • Hazardous wastes such as waste oil will be stored in designated, sealed containers. All waste containers and fuel tanks shall be stored within a secondary containment system (e.g., a bund for static tanks or a drip tray for mobile stores and drums). The bunds will be capable of storing 110% of tank capacity, plus a minimum 30 mm rainwater allowance where the bund is uncovered. • Where more than one tank is stored, the bund must be capable of holding 110% of the largest tank or 25% above the aggregate capacity • Drip trays used for drum storage must be capable of holding at least 25% of the drum capacity. • Regular monitoring of water levels within drip trays and bunds due to rainfall will be undertaken to ensure sufficient capacity is maintained at all times. • Refuelling and lubrication of semi-mobile plant and haulage vehicles is carried out by a trained and dedicated operative. Control measures exist as standard operating procedures in the overall quarry. • A double skinned fuel tank is provided on-site for refueling of some mobile plant and machinery. For larger mobile plant such as crushers and screeners, refuelling takes place on the quarry floor on an as-needs basis by a mobile fuel truck. • Servicing of vehicles will take place off-site. • Small amounts of oils and lubricants will be stored on-site for use on mobile equipment. • Spill trays and hydrocarbon spill kits will continue to be provided as necessary. • The operator has in place an emergency response procedure for hydrocarbon spills and appropriate training of site staff in its implementation. • The site access from the wheel wash to the entrance has been paved. • All waste oils will be collected and removed off-site by an approved waste collection contractor in the area.	Neutral

Activity	Attribute	Character of Impact	Mitigation	Residual Impact
			• Regular monitoring and maintenance of silt traps will be undertaken in accordance with the manufacturer's specifications. • Oil that accumulates within hydrocarbon interceptors shall be regularly removed by an appropriately licenced contractor. In addition, the hydrocarbon interceptor shall be appropriately maintained in accordance with the manufacturer's specifications.	
2. Surface Water Runoff	Surface waters	Surface runoff or drainage systems have potential, if not correctly designed, to result in contamination of surface waters and groundwater. Accidental spillage could contaminate the aquifer by direct percolation or via the superficial water network.	• All rainfall-runoff generated on quarried areas will drain towards the quarry sump. These waters are pumped to the settlement lagoon prior to leaving site. A water management system is already in place and will continue to serve the proposed application area. There is no direct connectivity between site activities and local surface waters. • Quarry waters pass through a recently installed HDPE lined settlement lagoon. This feature clarifies pumped quarry waters prior to them leaving the site. The quarry sump and settlement lagoon system have sufficient volumetric capacity to accommodate all waters for the required residence time. • Particulate matter captured in settlement lagoons to be transferred to landscaped perimeter bunds. • The wheelwash is to be maintained in accordance with manufacturer's specifications. Overflow from the wheelwash collection tank passes through the main two settlement tanks and hydrocarbon interceptor prior to leaving site. • The site holds a Section 4 Discharge Licence (Ref. 20/01), which was issued by Meath County Council in 2020, for a discharge from the treatment systems (settlement lagoons) to the Killary Stream. • Spoil heaps will be safely sloped and situated away from surface waters. • Minimum of 10 m setback from all open drains and watercourses to be maintained around the excavation perimeter. • Interceptor drains 500 mm wide and 500 mm deep will be excavated around the toe slope of any soil. Silt fences to be installed within the interceptor drains. Interceptor drains will divert captured runoff back in towards the site where runoff will enter the settlement lagoons. These will clarify any runoff waters prior to them leaving the site. • The volumetric capacity of the settlement sump on the floor of the quarry has been specified to accommodate the required extreme rainfall storm event waters for the required residence time. • A Hydrocarbon Interceptor has been incorporated into the Water Settlement Management System.	

Activity	Attribute	Character of Impact	Mitigation	Residual Impact
			• Assimilation capacity simulations have been completed and appropriate Emission Limit Values have been proposed. • Discharge will be of a quality that will not impact water quality. • A flow meter has been installed on the discharge. • Hydrocarbon spill kits are located at specified locations throughout the site and contain spill containment booms and absorbent mats that can be used in the event of a hydrocarbon spill at the site.	
3. Extraction works, Blasting and vehicle movement on site	Peregrine falcons	Extraction works can affect bird species.	• Extraction works will be completed using Best Practice blasting methods. • Site data from the operational rock quarry undertaking regular blasting has shown that nesting peregrines here have successfully raised and fledged chicks for the last three years. • Vegetation clearance will be undertaken outside the bird nesting season from 1st March to August 31st. • The quarry face where Peregrine falcons are currently nesting (Summer) will be retained. • "Peregrine Falcon" signs will be erected near the nest site to ensure all colleagues are aware of the location to ensure protection. • An annual Peregrine Falcon survey and report will continue to be undertaken.	Neutral

5.7 MONITORING

In accordance with Condition No. 16 (b) of P.A. Ref. LB200106 “an annual Peregrine falcon survey shall be undertaken in accordance with best practice standards (minimum of 3 site visits). The survey report and suitable mitigation measures to be agreed in consultation with the NPWS (if this species is found to be breeding on site) and shall be submitted to the Planning Authority for agreement in writing”. The most recent and separate (confidential) report on the status of this bird species will be submitted to Meath County Council in support of this planning application.

Monitoring of water quality is outlined in EIAR Section 7.

5.8 CONCLUSIONS

There are no predicted significant adverse effects on local biodiversity, flora or fauna as a result of the proposed development given the inclusion of workable industry standard mitigation measures that will be monitored to ensure continued efficacy.

The finding of ***no adverse effects*** is a confident assertion because all risks are mitigated and that the proposed development will have no impact on designated sites, if the existing mitigating measures continue to be implemented.

There are no predicted in-combination or cumulative effects given that it is predicted that the Proposed Development will have no significant effect on Biodiversity.

It has previously been concluded that the continuation of quarrying was feasible at the site.

It is concluded, in light of demonstrated compliance with the requirements of the Groundwater and Surface Water Regulations, as well as aiding the objectives of the Water Framework Directive’s implementation in the region, that there are no ‘Water’ impediments to the proposed development.

5.9 REFERENCES

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5.10 FIGURES

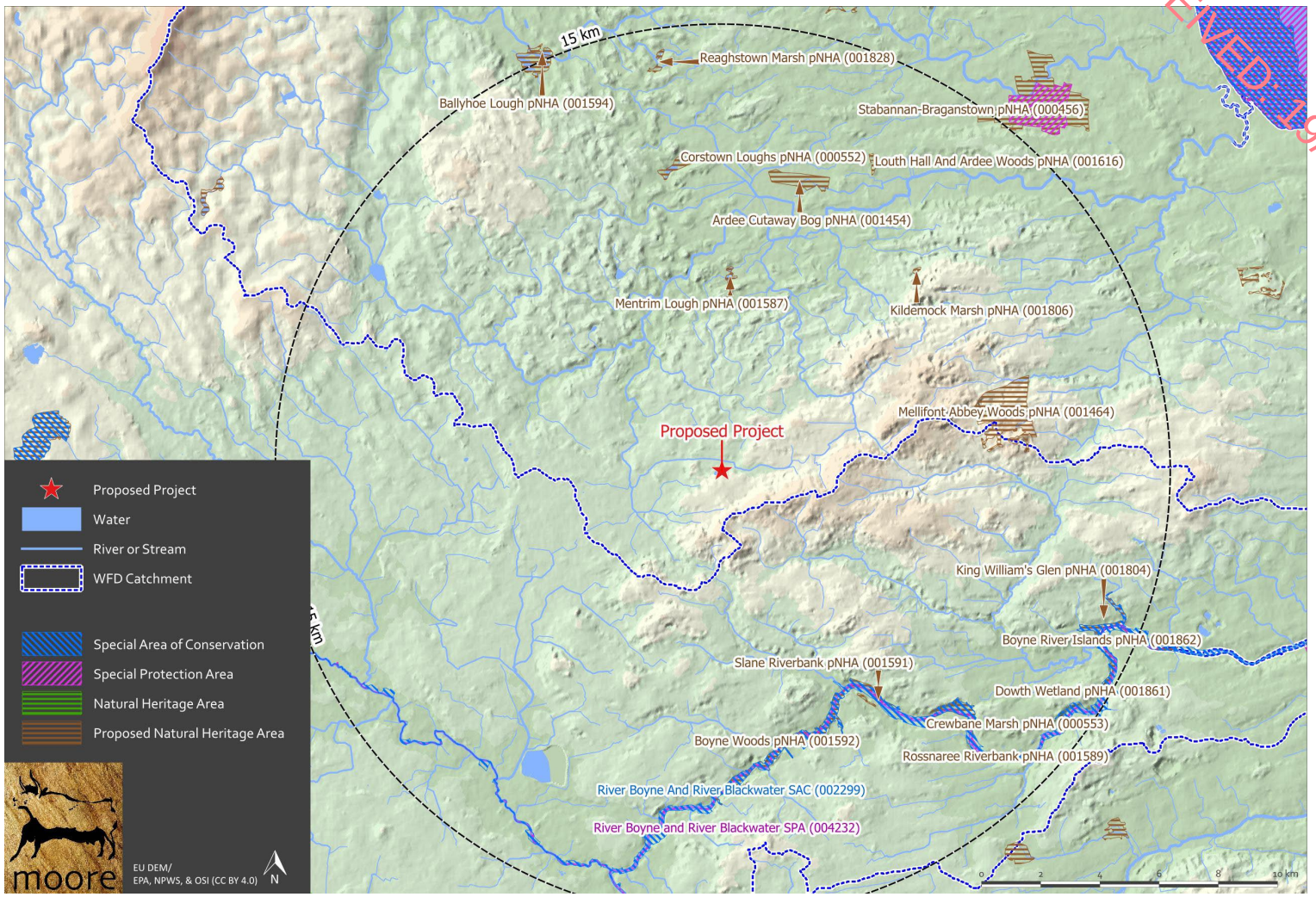

Figure 5.2 Showing European sites and NHAs/pNHAs in the wider area of the proposed development.

JSPE

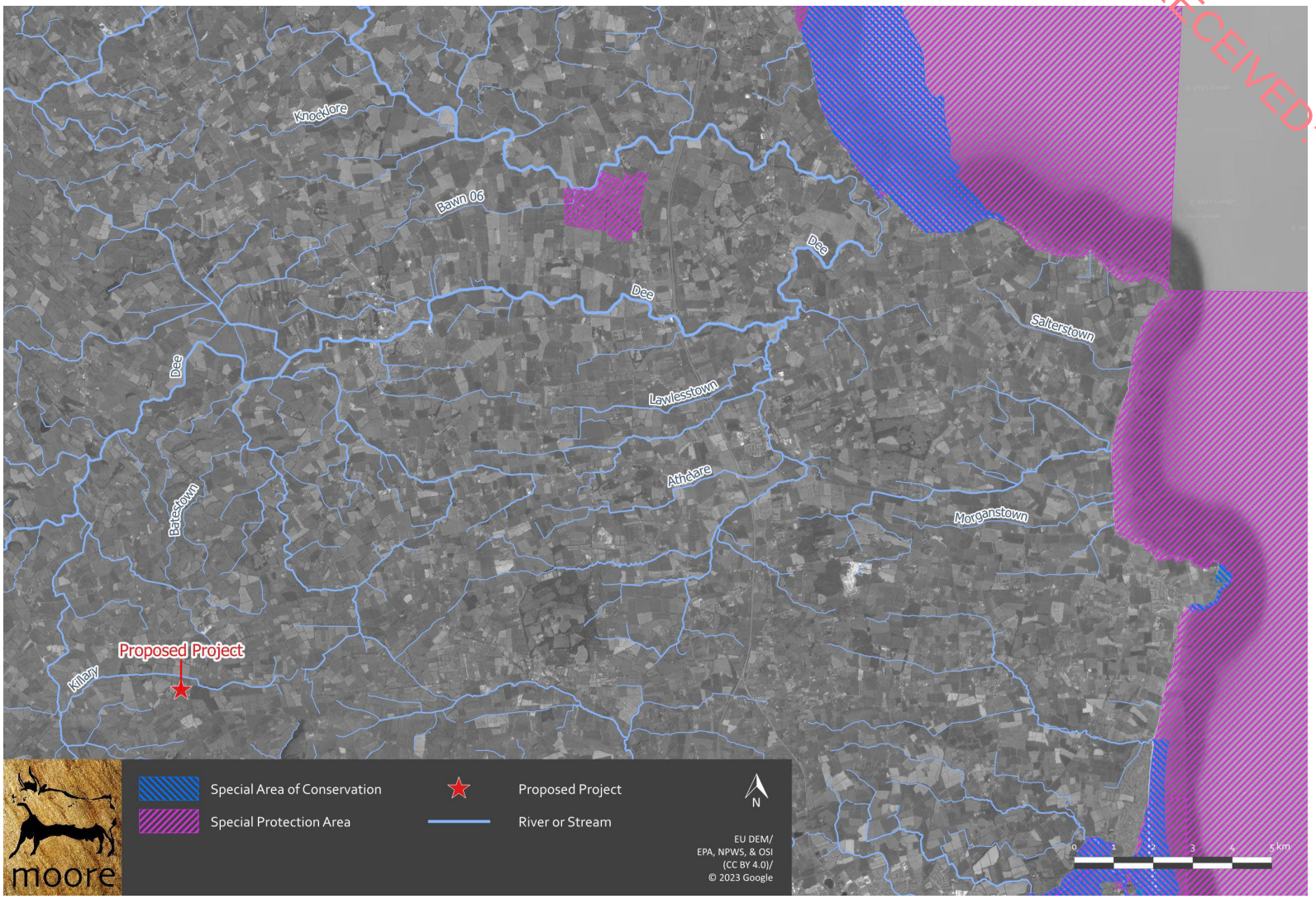

Figure 5.3 Detail of designated conservation sites in the vicinity of the proposed development.

JSPE

- Mixed Woodland (WD1)
- Scattered Scrub (WS1)
- Improved Grassland (GA1)
- Active Quarry Areas (ED4)
- Water Courses (FW1)
- Ingress 1 & 2 *(Calcareous Springs (FP1))*
- Hedgerows (WL1)
- *HR1 to HR4 Individual Hedgerows*

Figure 5.4 Habitat Map

JSPE