Castlepollard Quarry, Deerpark, Castlepollard, Co. Westmeath

Castlepollard Quarry

Environmental Impact Assessment Report

Appendix 9

Westmeath County **Natura Impact Statement**



Prepared by:

J Sheils Planning & Environmental Ltd

31 Athlumney Castle, Navan, Co. Meath

Natura Impact Statement

Appropriate Assessment

Castlepollard Quarry Development

Prepared by: Moore Group - Environmental Services

15 December 2021



Westmeath County Council On behalf of Lagan Materials Ltd

Project Proponent	Lagan Materials Ltd	
Project	Castlepollard Quarry Development	
Title	Natura Impact Statement	
	Appropriate Assessment of	
	Castlepollard Quarry Development	

			Castle	Lagan ii	
Project Proponent	Lagan Material	s Ltd			
Project	Castlepollard C	uarry Development			
Title	Natura Impact	Statement			
	Appropriate As	sessment of			- 1/3
	Castlepollard C	uarry Development			
Project	21024	Document Ref	JSPE_277_Castlepollard_EIAR	Appendix9 NIS	
Number					
Revision	Description	Author	4. 611 . 2	Date	
Rev1	Client Edits	G. O'Donohoe	gre D' Youthor	15 December 2021	
	16,				
Moore Archae	ological and Environme	ntal Services Limited			

Abbreviations

AA Appropriate Assessment

EEC European Economic Community

EPA Environmental Protection Agency

EU European Union

GIS Geographical Information System

NHA Natural Heritage Area

NIS Natura Impact Statement

Authorityl. Inspection Purposes Only **NPWS** National Parks and Wildlife Service

OSI Ordnance Survey Ireland

pNHA proposed Natural Heritage Area

SAC Special Area of Conservation

SPA Special Protection Area

ye Systa Council Planni Nestmeath Sustainable Drainage System

TABLE OF CONTENTS

9 NA	ATURA IMPACT STATEMENT	1
	NTDODUCTION	
	NTRODUCTION	1
9.1.1	General Introduction	1
9.1.2	Legislative Background: The Habitats and Birds Directives	1
9.1.3	<i></i>	2
9.1.4	Guidance	3
	Data Sources	4
	Statement of Authority	4
9.1.7	Description of Development	5
9.2	Data Sources Statement of Authority Description of Development STAGE 1 – SCREENING FOR APPROPRIATE ASSESSMENT STAGE 2 – APPROPRIATE ASSESSMENT Description of European Sites Potentially Affected 1.1 Lough Derravaragh SPA [004043] Description of the Existing Environment	10
9.3	STAGE 2 – APPROPRIATE ASSESSMENT	15
9.3.1	Description of European Sites Potentially Affected	15
9.3	.1.1 Lough Derravaragh SPA [004043]	15
9.3.2	Description of the Existing Environment	16
9.3	.2.1 habitats & Flora	16
9.3	Description of the Existing Environment 2.1 habitats & Flora 2.2 Fauna 3.3.2.2.1 Bats 3.3.2.2.2 Badgers 3.3.2.2.3 Otters 3.3.2.2.4 Birds	17
9	9.3.2.2.1 Bats	17
9	9.3.2.2.2 Badgers	17
9	9.3.2.2.3 Otters	18
9	9.3.2.2.4 Birds	18
9.3	.2.3 Freshwater Ecology	18
9.3.3	Conservation Objectives of European Sites	19
9.3	.3.1 Lough Derravarragh SPA [004043]	19
9.3.4	Consideration of Impacts on European Sites	20
9.3	.4.1 Annex I Habitats Directive Habitats	20
9.3	.4.2 Annex I Birds Directive Birds	20
9.3	.4.3 Habitats Directive Annex II Species	21
9.3	.4.4 Ecological Network Supporting Natura 2000 Sites	21
9.3.5	Impacts on the Qualifying Interests of European Sites	21
9.3	.5.1 Direct Impacts	21
9.3	5.2 Indirect Impacts	21
9.3.6	Mitigation Measures	22
9.3.7	Assessment of In-Combination Effects	23
9.3.	.7.1 ConclusionS of In-Combination Effects	26
9.4 N	NATURA IMPACT STATEMENT & CONCLUSIONS	27
9.5 F	REFERENCES	28

LIST OF TABLES AND FIGURES

	Table 1 European Sites located within the potential Zone of Influence of the Proposed Develop		
	Table 2 Planning Applications granted Permission in the Vicinity of the Proposed Development24		
	Figure 1. Map Showing Location of Proposed Development at Deerpark, Castlepollard, Co. Westmeath7		
	Figure 2. Aerial Image Showing Proposed Development Boundary		
	Figure 4. Physiographic Map Showing European Sites and NHAs/pNHAs in Wider Area of Proposed Development		
	Figure 5. Aerial Photograph showing Detail of Designated Conservation Sites in Vicinity of Proposed Development		
	CUITHOL		
	A CONTRACTOR OF THE PROPERTY O		
	il Plain		
	COUNCIL		
	zath County Court		
	Con		
n	20th		
Nestil			

9 NATURA IMPACT STATEMENT

9.1 INTRODUCTION

9.1.1 GENERAL INTRODUCTION

This Natura Impact Statement (NIS) has been prepared by Moore Group – Environmental Services on behalf of Lagan Materials Ltd . This NIS report contains information to assist the competent authority in carrying out an Appropriate Assessment (AA) on the effects of the proposed continuation and deepening of the existing quarry at Deerpark, Castlepollard, Co. Westmeath (hereafter referred to as the Proposed Development) on designated European sites, and to ascertain whether or not the Proposed Development would adversely affect European site integrity.

This NIS informs the Appropriate Assessment (AA) process in the determination of the significance of potential impacts on the conservation objectives of European sites. It is necessary that the proposed development has regard to Article 6 of the Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora (as amended) (referred to as the Habitats Directive). This is transposed into Irish Law by Part XAB of the Planning and Development Act 2000 as amended and the European Communities (Birds and Natural Habitats) Regulations, 2011 (S.I. 477) (referred to as the Habitats Regulations). The focus of the assessment is on objectively assessing by reference to the evidence as to whether the Proposed Development will adversely affect the integrity of the European sites in light of their conservation objectives.

9.1.2 LEGISLATIVE BACKGROUND: THE HABITATS AND BIRDS DIRECTIVES

The Habitats Directive (Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora) is the main legislative instrument for the protection and conservation of biodiversity in the EU. Under the Directive Member States are obliged to designate Special Areas of Conservation (SACs) which contain habitats or species considered important for protection and conservation in a European Union context.

The Birds Directive (Council Directive 79/409/EEC and Council Directive 2009/147/EC on the Conservation of Wild Birds) is concerned with the long-term protection and management of all wild bird species and their habitats in the EU. Among other things, the Directive requires that Special Protection Areas (SPAs) be established to protect migratory species and species which are rare, vulnerable, in danger of extinction, or otherwise require special attention.

Special Areas of Conservation (SACs) designated under the Habitats Directive and Special Protection Areas (SPAs), designated under the Birds Directive, form a pan-European network of protected sites known as Natura 2000. The Habitats Directive sets out a unified system for the protection and management of SACs and SPAs.

Articles 6(3) and 6(4) of the Habitats Directive set out the requirement for an assessment of proposed plans and projects likely to affect Natura 2000 sites. Article 6(3) establishes the requirement to screen all plans and projects and to carry out a further assessment if required (Appropriate Assessment (AA)); Article 6(4) establishes requirements in cases of imperative reasons of overriding public interest:

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

Article 6(4): "If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, Member States shall take all compensatory measures necessary to ensure that the overall coherence of the Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted. Where the site concerned hosts a priority natural habitat type and/or a priority species the only considerations which may be raised are those relating to human health or public safety, to the beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest."

9.1.3 METHODOLOGY

The Commission's methodological guidance (EC 2002) promotes a four-stage process to complete the AA and outlines the issues and tests at each stage. An important aspect of the process is that the outcome at each successive stage determines whether a further stage in the process is required.

Stages 1-2 deal with the main requirements for assessment under Article 6(3). Stage 3 may be part of Article 6(3) or may be a necessary precursor to Stage 4. Stage 4 is the main derogation step of Article 6(4).

Stage 1 Screening: This stage examines the likely effects of a project either alone or in combination with other projects upon a Natura 2000 site and considers whether it can be objectively concluded that there are not likely to be significant effects on a Natura 2000 site. Mitigation measures (i.e., measures intended to avoid or reduce the harmful effects of the project on the site concerned) cannot be taken into account at this stage.

Stage 2 Appropriate Assessment: In this stage, there is a consideration of the impact of the project with a view to ascertain whether there will be any adverse effect on the integrity of the Natura 2000 site either alone or in combination with other projects or plans, with respect to

the site's structure and function and its conservation objectives. Additionally, where there are predicted impacts, an assessment of the potential mitigation of those impacts is considered.

Stage 3 Assessment of Alternative Solutions: This stage examines alternative ways of implementing the project that, where possible, avoid any adverse impacts on the integrity of the Natura 2000 site.

Stage 4 Assessment where no alternative solutions exist and where adverse impacts remain: Where imperative reasons of overriding public interest (IROPI) exist, an assessment to consider whether compensatory measures will or will not effectively offset the damage to the sites will be necessary.

9.1.4 GUIDANCE

The NIS has been compiled in accordance with guidance contained in the following documents:

- Appropriate Assessment of Plans and Projects in Ireland Guidance for Planning Authorities. (DoEHLG 2010 rev.);
- Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities. Circular NPWS 1/10 & PSSP 2/10;
- Assessment of Plans and Projects Significantly Affecting Natura 2000 sites: Methodological Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC (European Commission Environment Directorate-General 2001), hereafter referred to as the EC Article Guidance Document;
- Managing Natura 2000 Sites: The Provisions of Article 6 of the Habitat's Directive 92/43/EEC (EC Environment Directorate-General 2000), hereafter referred to as MN2000;
- Managing Natura 2000 Sites: The Provisions of Article 6 of the Habitat's Directive 92/43/EEC (EC 2018);
- Guidance document on the strict protection of animal species of Community interest under the Habitats Directive (EC 2021);
- Assessment of plans and projects in relation to Natura 2000 sites Methodological guidance on Article 6(3) and (4) of the Habitats Directive 92/43/EEC (EC 2021); and
- OPR Practice Note PN01 Appropriate Assessment Screening for Development Management (OPR 2021).

9.1.5 DATA SOURCES

Sources of information that were used to collect data on the Natura 2000 network of sites, and the environment within which they are located, are listed below:

- 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;
 - Open Street Maps;
 - Digital Elevation Model over Europe (EU-DEM);
 - Google Earth and Bing aerial photography 1995-2021;
- 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 in neighbouring areas;
 - Westmeath County Development Plan 2021-2027.

9.1.6 STATEMENT OF AUTHORITY

This report was compiled by Ger O'Donohoe (B.Sc. Applied Aquatic Sciences (GMIT 1993) & M.Sc. Environmental Sciences (TCD 1999)), who has over 25 years' experience in environmental impact assessment and has completed numerous reports for the purposes of Appropriate Assessment Screening and Natura Impact Statements.

Engineering and technical data was supplied by J Sheils Planning and Environmental Ltd. (JSPE). JSPE were commissioned on behalf of the client, Lagan Materials Ltd, to prepare the EIAR in respect of the quarry at Castlepollard. Data on Water Quality, Hydrology and Hydrogeology included in Chapter 7 of the EIAR was provided by Dr. Pamela Bartley (Hydro-G) and Dr. Colin O'Reilly (Envirologic).

9.1.7 DESCRIPTION OF DEVELOPMENT

The development will consist of the continued use and operation of the existing quarry (permitted under P.A. Ref. 01/525), including deepening of the quarry, along with minor amendments to the permitted quarry layout comprising an extraction area of c. 4 ha within an overall application area of c. 11.4 ha. The development will include provision of new site infrastructure, including water management system, wheelwash and other ancillaries.

The floor of the existing quarry is at c. 88 m AOD. It is proposed to develop an additional bench to c. 70 m AOD. The development will include upgrading of the Water Management System. The proposed discharge to surface water will be subject to a licence to discharge to surface water as required under Section 4 of the Local Government (Water Pollution) Act, 1977.

The asphalt plant previously granted planning permission under P.A. Ref. 01/525 has been removed and will not be reinstalled as part of this proposed application.

There will be no changes to the method of extraction and processing (crushing, screening, rinsing, etc) as a result of this planning application. Drilling and blasting will continue to be utilised with processing of extracted rock using mobile crushing and screening plant located within the quarry void. This will reduce handling of material and will also have the benefit of screening these activities from outside views, and being at depth, will also mitigate impacts associated with noise and dust.

A wheeled loading shovel and/or backhoe excavator will be used to feed the blasted rock to the mobile crushing and screening plant that will be relocated close to the working face so as to reduce handling of materials. This is the extraction method that has been in use at the quarry over many years.

The aggregates produced will then be stockpiled and subsequently loaded out by a front-end loader to road trucks for transport off-site to market.

It is proposed that surface/groundwater water accumulating within the processing and extraction area will be conveyed to a new series of settlement tanks via the quarry sump. This water will be utilised for dust suppression, if required, and/or discharged off-site to an external watercourse subject to a Discharge licence.

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.

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

Ayout Only ayout Only Ranning Authority. In spection Purposes Only westmeath County Council Planning Authority. The water abstraction pumps will be switched off and groundwater will be allowed to return to natural equilibrium, at which sump water levels are maintained by way of an existing

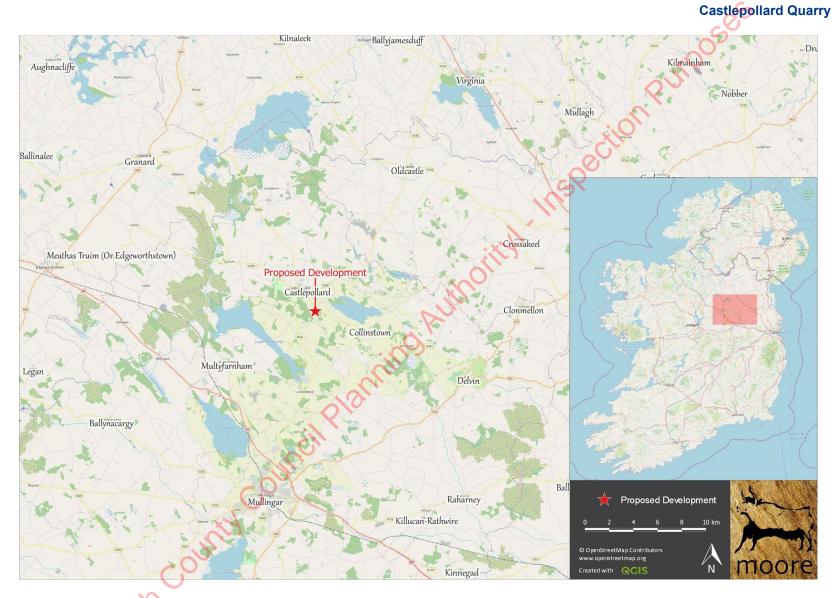
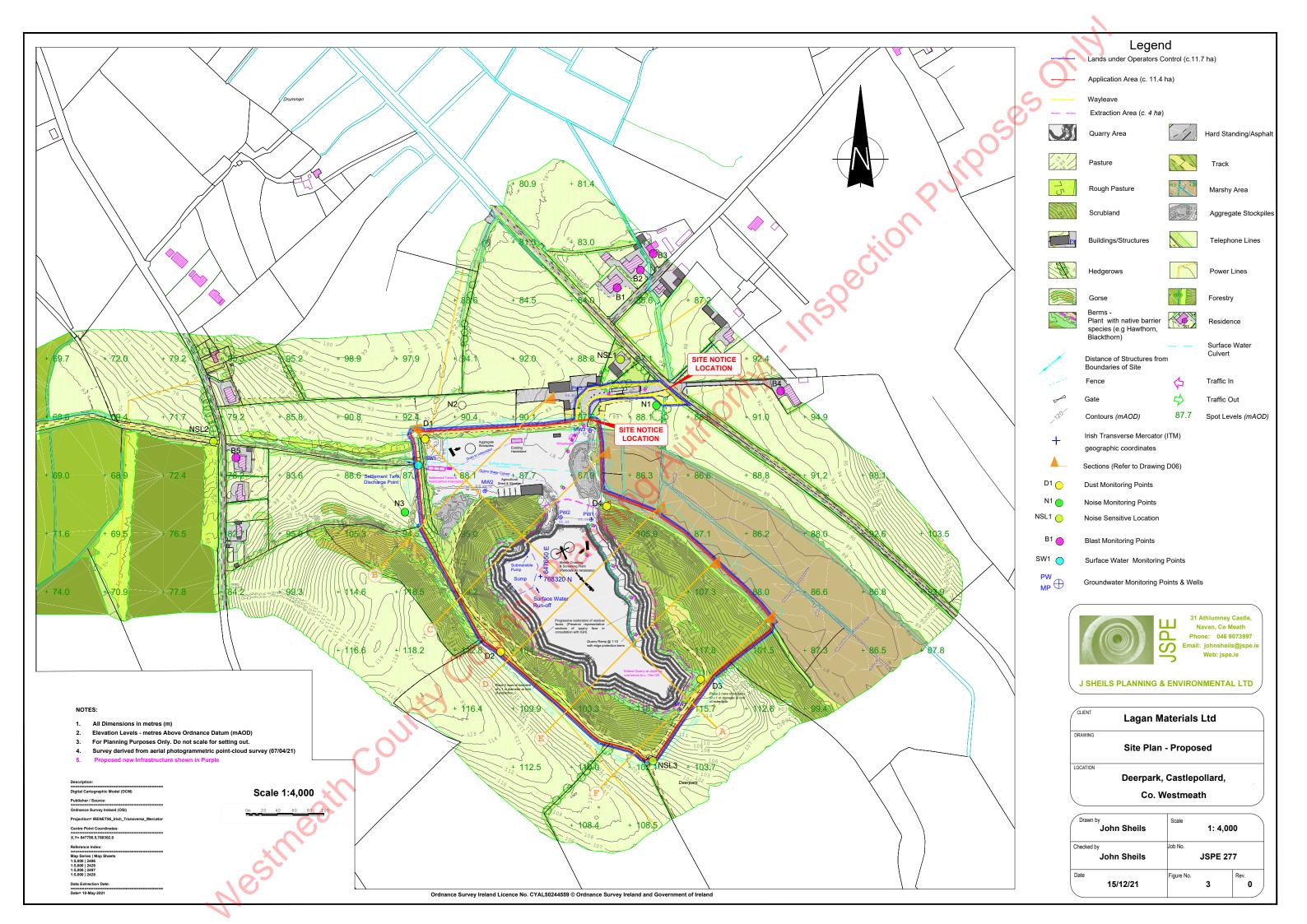


Figure 1. Map Showing Location of Proposed Development at Deerpark, Castlepollard, Co. Westmeath.



Figure 2. Aerial Image Showing Proposed Development Boundary.



9.2 STAGE 1 - SCREENING FOR APPROPRIATE ASSESSMENT

Screening determines whether appropriate assessment is necessary by examining:

- 1. Whether a plan or project can be excluded from AA requirements because it is directly connected with or necessary to the management of the site, and;
- 2. The potential effects of a project or plan, either alone or in combination with other projects or plans, on a Natura 2000 site in view of its conservation objectives and considering whether these effects will be significant.

If the effects are deemed to be significant, potentially significant, or uncertain, or if the screening process in certain circumstances, becomes overly complicated, then the process must proceed to Stage 2 (AA).

The Department of Housing, Planning and Local Government (previously DoEHLG)'s Guidance on Appropriate Assessment (2009) recommends an assessment of European sites within a Zone of Influence (ZoI) of 15 km. This distance is a guidance only and a zone of influence 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. This should be established on a case-by-case basis using the Source-Pathway-Receptor framework and not by arbitrary distances (such as 15 km).

The Zone of Influence may be determined by connectivity to the Proposed Development in terms of:

- Nature, scale, timing and duration of works and possible impacts, nature and size of excavations, storage of materials, flat/sloping sites;
- Distance and nature of pathways (dilution and dispersion; intervening 'buffer' lands, roads etc.); and
- Sensitivity and location of ecological features.

The potential for source pathway receptor connectivity is firstly identified and detailed information is then provided on sites with connectivity. European sites that are located within the potential Zone of Influence of the Proposed Development are listed in Table 1 and presented in Figures 4 and 5 below. Spatial boundary data on the Natura 2000 network was extracted from the NPWS website (www.npws.ie) on the 11 November 2021.

Nestmedi

Table 1 European Sites located within the potential Zone of Influence of the Proposed **Development**

Site Code	Site name	Distance (km) ¹
002121	Lough Lene SAC	1.18
004043	Lough Derravaragh SPA	4.00

The nearest European sites to the Proposed Development are associated with Lough Lene and include the Lough Lene SAC (Site Code 002121), which is located just over 1.18 km to the east. However, this site is located in a different hydrological catchment.

The proposed development is located within the hydrological catchment of two streams.

- 1. Castlepollard Stream this is the northernmost of the streams in the vicinity of the site and Castlepollard village is located within its catchment. Historical mapping shows that the pond adjacent to the northern boundary previously outfalled at its northwestern end to the headwater of the Castlepollard Stream. This northern outfall ditch has become inactive. The stream is now mapped by the EPA as rising 300 m north of the site entrance. It travels westwards from this point towards the village, and is culverted below the R395, 1 km northwest of the site entrance. The Castlepollard Stream outfalls to the Yellow River 2.6 km west of the site.
- 2. Deerpark Stream This is a small stream / drainage channel that connects the site to the Yellow (Castlepollard) 030. The northwestern corner of the site is connected to this drainage channel. The Deerpark Stream passes a tract of forestry before joining the Yellow (Castlepollard) 030 at a distance of almost 400 m from the site. The marshy pond to the east of the working quarry reaches the northwestern corner of the site by overflow through an underground 300 mm diameter culvert that traverses the northern part of the site. There is a steep sided drain at the northwestern site boundary that transmits waters to the Deerpark Stream, which then flows beneath the local road (L5739).

Downstream, the waters of these streams enter the Yellow River which in turns flows west into Lough Derravaragh with its European site, the Lough Derravaragh SPA (Site Code 004043), which is located approximately 4 km west of the proposed development and c. 7 river km downstream of the quarry discharge point.

The most recent EPA Biological Water Quality results from the closest station to the site, 3km downstream on the Yellow River, persistently returns Q Ratings of 4, which indicates Good Ecological Status (see Chapter 7).

¹ Distances indicated are the closest geographical distance between the Proposed Development and the European site boundary, as made available by the NPWS. Connectivity along hydrological pathways may be significantly greater.

The Source-Pathway Connectivity model was examined at the AA Screening Stage and there is no connectivity to any of the other European sites considered and they were screened out of the assessment at this stage—specifically Lough Lene SAC as it is located in a different hydrological catchment and at a distance of removal (over 1 km), whereby significant effects are not possible.

A worst-case scenario may be considered whereby the proposed development would be the source of a significant detrimental change in water quality in Lough Derravaragh, either alone or in combination with other projects or plans, as a result of indirect pollution from contaminated discharge water (surface water and/or groundwater). The effect would have to be considered in terms of changes in water quality that would affect the species and/or habitats or food sources for which the Lough Derravarragh SPA is designated.

The potential for significant adverse effects on the Lough Derravarragh SPA (004043) is uncertain in the absence of control of potential pollution of discharge water during operation.

Development of the quarry at depth will require dewatering and discharge to SW subject to a Water Discharge licence.

In the absence of mitigation measures for the control of surface water discharge, it cannot be excluded, on the basis of objective information, that the proposed development, individually or in combination with other plans or projects, will have a significant effect on a European site and as such Stage 2 AA is required.

Thus, in line with Departmental Guidance and having regard to ECJ case law and the 'Precautionary Principle', a Stage 2 Appropriate Assessment of this Proposed Development has been prepared as follows.

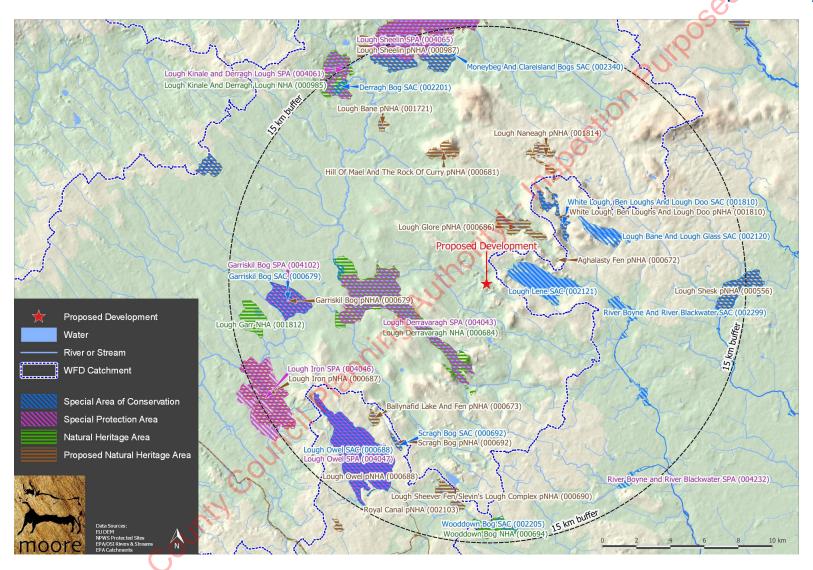


Figure 4. Physiographic Map Showing European Sites and NHAs/pNHAs in Wider Area of Proposed Development.

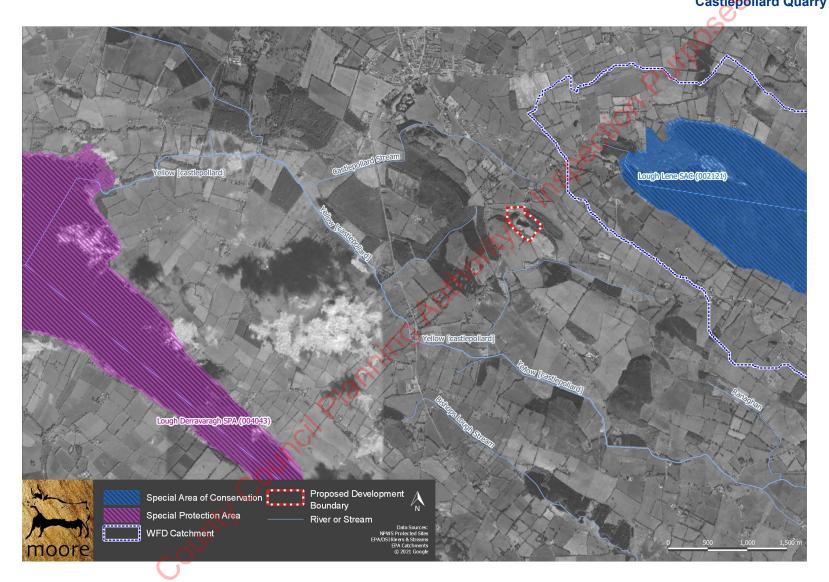


Figure 5. Aerial Photograph showing Detail of Designated Conservation Sites in Vicinity of Proposed Development.

9.3 STAGE 2 - APPROPRIATE ASSESSMENT

This stage considers whether the Project, alone or in combination with other projects or plans, will have adverse effects on the integrity of a European site, and includes any mitigation measures necessary to avoid, reduce or offset negative effects. The Stage 2 Appropriate Assessment comprises a scientific examination of the plan / project and the relevant European site; to identify and characterise any possible implications for the site in view of the site's conservation objectives, structure and function; taking account of in combination effects.

9.3.1 DESCRIPTION OF EUROPEAN SITES POTENTIALLY AFFECTED

Potential impacts on the following European sites have been identified:

Lough Derravaragh SPA (004043).

9.3.1.1 LOUGH DERRAVARAGH SPA [004043]

The NPWS provides the following Site Synopsis in relation to the Lough Derravaragh SPA (Version date 7 July 2014):

Lough Derravaragh is located approximately 12 km north of Mullingar town in Co. Westmeath. It is a medium- to large-sized lake of relatively shallow water (maximum depth 23 m). The lake extends along a south-east/north-west axis for approximately 8 km. The Inny River, a tributary of the River Shannon, is the main inflowing and outflowing river. It is a typical limestone lake with water of high hardness and alkaline pH, and is classified as a mesotrophic system.

At the western end of the lake are extensive areas of swamp dominated by Common Reed (Phragmites australis). Elsewhere along the shore there is freshwater marsh vegetation dominated by sedges (Carex spp.) and tussock-forming grasses such as Tufted Hair-grass (Deschampsia cespitosa) and fescues (Festuca spp.), with a range of flowering herbs. The lakeshore is a mineral-rich substrate and several plant species of fen habitats occur in abundance, such as Black Bog-rush (Schoenus nigricans) and Long-stalked Yellow-sedge (Carex lepidocarpa). Deciduous woodland fringes the lake in some areas.

The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Whooper Swan, Pochard, Tufted Duck and Coot. The E.U. Birds Directive pays particular attention to wetlands and, as these form part of this SPA, the site and its associated waterbirds are of special conservation interest for Wetland & Waterbirds.

Lough Derravaragh is one of the most important midland lakes for wintering waterfowl. It supports nationally important populations of Whooper Swan (102), Pochard (3,129), Tufted Duck (1,073) and Coot (1,358) - all counts are mean peaks for the five winters 1995/96-1999/2000. The Pochard population is of particular note as it represents over 6% of the all-Ireland population total, and at times has exceeded the threshold for international importance (i.e. 3,500). Other species which occur include Mute Swan (159), Little Grebe (42) Great Crested Grebe (34), Cormorant (34), Wigeon (207), Teal (52), Mallard (195), Pintail (6),

Shoveler (12), Goldeneye (46), Golden Plover (158) and Lapwing (1,079). The lake is occasionally used as a roost site by small numbers of Greenland White-fronted Goose.

Lough Derravaragh is of major ornithological importance as it regularly supports nationally important populations of four species, and at times is used by the internationally important population of Greenland White-fronted Goose which is based in the region. Also of note is that three of the species which occur at the site, Greenland White-fronted Goose, Whooper Swan and Golden Plover, are listed on Annex I of the E.U. Birds Directive. Lough Derravaragh is a Ramsar Convention site.

9.3.2 DESCRIPTION OF THE EXISTING ENVIRONMENT

The site was surveyed on 16 June 2021 and the quarry habitats are best described as active quarry with woodland, scrub and grassland mosaics. The following Flora and Fauna were recorded.

9.3.2.1 HABITATS & FLORA

Dry calcareous and neutral grassland (GS1)

This category is used for unimproved or semi-improved dry grassland that may be either calcareous or neutral, but not acid. It is associated with low intensity agriculture and typically occurs on free-draining mineral soils of various depths. Calcareous grassland is restricted in its distribution and is now largely confined to the steep slopes of esker ridges and moraines in the midlands, and to other areas with shallow and rocky limestone soils.

This grassland type is found in scattered patches on the application site and along linear features such as the access tracks to the north and south. Typical grass species encountered include cock's foot (Dactylis glomerata), creeping bent (Agrostis stolonifera), perennial ryegrass (Lolium perenne), Yorkshire fog (Holcus lanatus), crested dog's tail (Cynosurus cristatus) and meadow grasses (Poa spp.). A variety of herbaceous species were recorded including indude yarrow (Achilea millefolium), ribwort plantain (Plantago lanceolata), knapweed (Centaurea nigra), mouse-ear chickweed (Cerastium fontanum), self-heal (Prunela vulgaris), creeping buttercup (Ranunculus repens), red and white clover (Trifolium pratense and Trifolium repens), meadow buttercup (Ranunculus acris) and bird's foot trefoil (Lotus corniculatus). Commonly recorded weedy species include frequent ragwort (Senecio jacobaea), spear thistle (Cirsium vulgare), broad-leaved dock (Rumex obtusifolius) and nettle (Urtica dioica). There are occasional stands of sot rush (Juncus effusus) in poorly drained areas.

Mixed Broadleaved Woodland & Scrub Mosaic (WD1/WS1)

There are two remnant areas of mixed broad leaved woodland located on the verges of the main quarry area. The dominant species are Ash and Hazel, with hawthorn, blackthorn, holly, willow, ivy, bramble and gorse.

The ground flora below is typically poor in denser areas. Species recorded include bramble, ivy (Hedera helix), cleavers (Galium aparine), bush vetch (Vicia sepium), tufted vetch (Vicia cracca), wood sorrel (Oxalis acetosella), bracken (Pteridium aquilinum), docks (Rumex sp.),

nettle (Urtica dioica), male fern (Dryopteris Nix-mas), harts tongue fem (Asplenium scolopendrium) and herb Robert (Geranium robertianum).

Patches of scrub are found interspersed with areas of woodland. Other species present in areas of scrub include bramble, bracken and hawthorn. An area of more dense bracken is found in the south eastern part of the site where the track rises to the upper level of the quarry. The ground flora beneath this scrub is poor and restricted to shade-tolerant species such as bracken, ivy, bramble and occasional hart's-tongue fem.

A topographically enclosed depression along the eastern boundary contains water and is referred to locally as the marsh. Historical OS maps indicate that this is a legacy of gravel extraction in the 1900's. Before the site's development, runoff from this marshy pond was diverted northwards, ultimately entering the Castlepollard Stream. During the Hydrology site walkover, it was confirmed that this northern outlet ditch is now redundant. The area corresponds to Wet willow-alder-ash woodland and is outside the boundary and hydrology of the Proposed Development.

Recolonising bare ground (ED3)

This category is used for any areas where bare or disturbed ground, derelict sites or artificial surfaces of tarmac, concrete or hard core have been invaded by herbaceous plants. Areas along the northern boundary of the site and at the quarry entrance support a variety of plant species including; creeping bent, mouse-ear chickweed, cock's-foot, red and white clover, ribwort plantain, creeping buttercup, spear thistle, ragwort, groundsel, yarrow, knapweed, foxglove (Digitalis purpurea), hogweed (Heracleum sphondylium), docks, occasional rushes and colt's-foot.

Active quarries and mines (ED4)

The majority of the site is dominated by a worked quarry, where limestone is extracted, crushed and processed. The nature of this activity means a high level of disturbance, which prevents the colonisation of this area of the site by vegetation.

9.3.2.2 FAUNA

9.3.2.2.1 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 11/07/2021.

The night time detector survey of the site recorded three contacts from one species of bat: Leisler's bats (Nyctalus leisleri) calls were heard from the woodland area to the north.

9.3.2.2.2 Badgers

No specific feeding signs or setts were found within the quarry site boundary and the soils present tend to be either waterlogged or very thin over the underlying rock. A survey of the upper southern boundary with the adjacent conifer plantation did not reveal any setts.

9.3.2.2.3 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.

9.3.2.2.4 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), Blue tit (Parus caeruleus), Great tit (Parus major), Chaffinch (Fringilla coelebs), Song thrush (Turdus philomelos), Dunnock (Prunella modularis), Rook (Corvus frugilegus), Hooded crow (Corvus corone cornix), Starling (Sturnus vulgaris), Magpie (Pica pica), Jackdaw (Corvus monedula), Wood pigeon (Columba palumbus), Stonechat (Saxicola rubicola), Coal tit (Parus ater), Greenfinch (Cardueis chloris), Bullfinch (Pyrrhula pyrrhula) and Pied wagtail (Motacilla alba).

A single Peregrine Falcon (Falco peregrinus) was recorded nesting on the cliff face of the northwestern area of the site.

9.3.2.3 FRESHWATER ECOLOGY

The proposed development is located within the hydrological catchment of two streams.

- 1. Castlepollard Stream this is the northernmost of the streams in the vicinity of the site and Castlepollard village is located within its catchment. Historical mapping shows that the pond adjacent to the northern boundary previously outfalled at its northwestern end to the headwater of the Castlepollard Stream. This northern outfall ditch has become inactive. The stream is now mapped by the EPA as rising 300 m north of the site entrance. It travels westwards from this point towards the village, and is culverted below the R395, 1 km northwest of the site entrance. The Castlepollard Stream outfalls to the Yellow River 2.6 km west of the site.
- 2. Deerpark Stream This is a small stream / drainage channel that connects the site to the Yellow (Castlepollard)_030. The northwestern corner of the site is connected to this drainage channel. The Deerpark Stream passes a tract of forestry before joining the Yellow (Castlepollard)_030 at a distance of almost 400 m from the site. The marshy pond to the east of the working quarry reaches the northwestern corner of the site by overflow through an underground 300 mm diameter culvert that traverses the northern part of the site. There is a steep sided drain at the northwestern site boundary that transmits waters to the Deerpark Stream, which then flows beneath the local road (L5739).

Downstream, the waters of these streams enter the Yellow River which in turns flows west into Lough Derravaragh with its European site, the Lough Derravaragh SPA (Site Code 004043), which is located approximately 4 km west of the proposed development and c. 7 river km downstream of the quarry discharge point. These data are based on the information available from the EPA Maps website.

The most recent EPA Biological Water Quality results from the closest station to the site, 3km downstream on the Yellow River, persistently returns Q Ratings of 4, which indicates Good Ecological Status (see Chapter 7).

There are no rare or protected habitats recorded in the study area within the site boundary. The site may be considered of Low to Moderate Ecological Value at a Local level.

9.3.3 CONSERVATION OBJECTIVES OF EUROPEAN SITES

9.3.3.1 LOUGH DERRAVARRAGH SPA [004043]

Generic Conservation Objectives are set by the NPWS (Generic Version 8. 23rd March 2021) for the Lough Derravarragh SPA (004043) as follows.

The overall aim of the Habitats Directive is to maintain or restore the favourable conservation status of habitats and species of community interest. These habitats and species are listed in the Habitats and Birds Directives and Special Areas of Conservation and Special Protection Areas are designated to afford protection to the most vulnerable of them. These two designations are collectively known as the Natura 2000 network.

European and national legislation places a collective obligation on Ireland and its citizens to maintain habitats and species in the Natura 2000 network at favourable conservation condition. The Government and its agencies are responsible for the implementation and enforcement of regulations that will ensure the ecological integrity of these sites.

The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level.

Favourable conservation status of a habitat is achieved when:

- its natural range, and area it covers within that range, are stable or increasing, and
- the specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and
- the conservation status of its typical species is favourable.

Favourable conservation status of a species is achieved when:

- population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and
- the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and
- there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

Objective: To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA:

Bird Code	Common Name	Scientific Name
A038	Whooper Swan	Cygnus cygnus
A059	Pochard	Aythya ferina
A061	Tufted Duck	Aythya fuligula
A125	Coot	Fulica atra

To acknowledge the importance of Ireland's wetlands to wintering waterbirds, "Wetland and Waterbirds" may be included as a Special Conservation Interest for some SPAs that have been designated for wintering waterbirds and that contain a wetland site of significant importance to one or more of the species of Special Conservation Interest. Thus, a second objective is included as follows:

Objective: To maintain or restore the favourable conservation condition of the wetland habitat at Lough Derravarragh SPA as a resource for the regularly-occurring migratory waterbirds that utilise it.

9.3.4 CONSIDERATION OF IMPACTS ON EUROPEAN SITES

9.3.4.1 ANNEX I HABITATS DIRECTIVE HABITATS

There are no Annex I habitats located under the footprint or in the vicinity of the downstream Special Protection Area. There will be no direct impacts on the Lough Derravarragh SPA and there will be no habitat loss or fragmentation as a result of the proposed development. Having considered direct impacts and ruling them out, indirect impacts are then considered in terms of source pathway vectors.

Potential impacts on the Lough Derravarragh SPA are considered in terms of hydrological connectivity between the Proposed Development and the Yellow River.

A worst-case scenario may arise were the Proposed Development to result in a significant detrimental change in water quality in the Yellow River and Lough Derravaragh downstream either alone or in combination with other projects or plans as a result of indirect pollution. The effect would have to be considered in terms of changes in water quality that would significantly affect the habitats or food sources for which the Lough Derravaragh SPA is designated.

9.3.4.2 ANNEX I BIRDS DIRECTIVE BIRDS

The Proposed Development site is located over 4 km from the Lough Derravaragh SPA (Site Code 004043). The site does not have potential for foraging or nesting Annexed bird species and is unlikely to present potential disturbance issues to the birds species using the lough.

There will be no direct impacts on Annexed birds and so the main concern is with regard to water quality and indirect impacts on water quality, food sources and wetland supporting habitats.

9.3.4.3 HABITATS DIRECTIVE ANNEX II SPECIES

There are no Annex II species located in the potential zone of influence of the proposed development.

9.3.4.4 ECOLOGICAL NETWORK SUPPORTING NATURA 2000 SITES

An analysis of the proposed Natural Heritage Areas and designated Natural Heritage Areas in terms of their role in supporting the species using Natura 2000 sites was undertaken. These supporting roles mainly relate to mobile fauna, such as mammals and birds, that may use pNHAs and NHAs as "stepping stones" between Natura 2000 sites.

Article 10 of the Habitats Directive and the Habitats Regulations 2011 place a high degree of importance on such non-Natura 2000 areas as features that connect the Natura 2000 network. Features such as ponds, woodlands and important hedgerows were taken into account during the AA process.

There are no Natural Heritage Areas or proposed Natural Heritage Areas that will be affected by the proposed Project.

9.3.5 IMPACTS ON THE QUALIFYING INTERESTS OF EUROPEAN SITES

9.3.5.1 DIRECT IMPACTS

There will be no direct impacts on the Lough Derravarragh SPA as a result of the implementation of the Proposed Development. Direct impact refers to physical impacts defined in the Departmental Guidance as 'Loss of habitat area' and/or 'Habitat Fragmentation'. There are no direct impacts identified which may affect the Annexed habitats or species of the SPA. The proposed development will have **no impacts** upon the integrity or the site structure of the Lough Derravarragh SPA.

Having established this, the assessment emphasis is placed on potential indirect and cumulative impacts.

The primary consideration in terms of source-vector-pathways for indirect impacts relates to surface water and potential indirect impacts on hydrologically linked habitats and aquatic species.

9.3.5.2 INDIRECT IMPACTS

The potential for impact is considered whereby the Proposed Development would result in a significant detrimental change in water quality either alone or in combination with other projects or plans as a result of indirect pollution of surface water. The effect would have to be considered in terms of changes in water quality which would affect the habitats or species for which the Lough Derravarragh SPA is designated.

Consideration of impacts on Surface Water

The likelihood of impacts on hydrologically connected environmental sites is low and will be avoided by best practice management.

It is proposed that surface/groundwater water accumulating within the processing and extraction area will be conveyed to a new series of settlement tanks via the quarry sump. This water will be utilised for dust suppression, if required, and/or discharged off-site to an external watercourse subject to a Discharge licence.

A Water Management Plan is included in the operational phase of the Proposed Development, which will avoid potential adverse effects on downstream habitats and species.

9.3.6 MITIGATION MEASURES

There is one active surface water outfall from the site to the western catchment of Lough Derrayarragh.

The following measures are included in the Water Management Plan:

- Lagan's SOPs have been designed to ensure responsible activity on their sites.
- There will be no bulk fuels stored on-site. Hazardous wastes, such as waste oil and chemicals will be stored in sealed containers. Fuelling, lubrication and storage areas will not be located within 30 m of drainage ditches or settlement sumps.
- All waste containers (including all ancillary equipment such as vent pipes) will 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 the tank capacity. Where more than one tank is stored, the bund must be capable of holding 110 % of the largest tank or 25 % of the aggregate capacity (whichever is greater). Drip trays used for drum storage must be capable of holding at least 25 % of the drum capacity. Where more than one drum is stored the drip tray must be capable of holding 25 % of the aggregate capacity of the drums stored.
- 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.
- A wheel wash facility will be installed on the site and the roads have sprinkler systems.
- 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.
- Regular visual monitoring of the attenuation sump will be undertaken to ensure no visual oil or fuel contamination is present.

- 23
- An oil interceptor shall be fitted with the capacity to deal with the throughflow rate to the settlement ponds limited to 0.02 m³/s and a maximum daily discharge volume of 170 m³/d (0.002 m³/s).
- Excavation works will be completed using Best Practice maintenance of machinery & blasting methods.
- Spoil heaps will be safely sloped and situated away from surface waters.
- 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 proposed for the line to the discharge control settlement ponds.
- The overflow rate from the final settlement pond is designed to be the same or less than the permissible predevelopment Greenfield Runoff Rate.
- Assimilation capacity simulations have been completed and appropriate Emission Limit Values have been proposed.
- The Emission Limit Value (ELV) proposed for the daily maximum discharge volume, worst case, end of life amount of 170 m³/d (0.002 m³/s) is an order of magnitude lower than the calculated 95%ile low flow river condition of 0.024 m³/s at the mixing point of the Deerpark Stream and the Yellow (Castlepollard)_030.
- Discharge will be of a quality that will not impact water quality. The Emission Limits
 proposed for the site are better quality for Suspended Solids than currently exists in the
 natural environment receiving the water and the Ammonia ELV proposed is the same as
 the EQO for Good Status water bodies as specified in the Surface Water Regulations.
- A flow meter has been proposed for the discharge.

9.3.7 ASSESSMENT OF IN-COMBINATION EFFECTS

The Commission services' interpretation document 'Managing Natura 2000 sites', makes clear that the phrase 'in combination with other plans or projects' in Article 3(3) refers to cumulative effects caused by the projects or plans that are currently under consideration together with the effects of any existing or proposed projects or plans. When impacts are assessed in combination in this way, it can be established whether or not there may be, overall, an impact which may have significant effects on a Natura 2000 site or which may adversely affect the integrity of a site.

As part of the Appropriate Assessment, in addition to the proposed works, other relevant projects and plans in the region must also be considered at this stage. This step aims to identify at this early stage any possible significant in-combination or cumulative effects / impacts of the proposed development with other such plans and projects on the Natura 2000 site.

A review of the National Planning Application Database was undertaken. The first stage of this review confirmed that there were no data outages in the area where the proposed Project is located. The database was then queried for developments granted planning permission within 2 km of the Proposed Development within the last three years, and these are presented in Table 2.

Table 2 Planning Applications granted Permission in the Vicinity of the Proposed Development

Planning Ref.	Description of development	Comments
186038	private dwelling house, connection to public foul drainage infrastructure, entrance onto public road, domestic garage and all ancillary site services.	A screening exercise has been carried out in relation to this development and it has deemed that the development is unlikely to have significant effects on the Natura 2000 network.
186058	construction of a bell mouth entrance onto public road to facilitate access to forestry plantation together with internal access road and all associated site works.	It is considered that the proposal would not give rise to significant adverse direct, indirect or secondary impacts on the integrity of any nearby Natura 2000 sites having regard to their conservation objectives.
186059	construction of three bell mouth entrances A, B and C onto public roads to facilitate access to forestry plantations together with internal access roads and turning heads and all associated site works.	It is considered that the proposal would not give rise to significant adverse direct, indirect or secondary impacts on the integrity of any nearby Natura 2000 sites having regard to their conservation objectives.
186061	development of an existing entrance and upgrade it to forestry harvesting standard (bell mouth entrance) onto public road to facilitate access to forestry plantation together with internal access road and all associated site works.	It is considered that the proposed development would not give rise to significant adverse direct, indirect or secondary impacts on the integrity of any nearby Natura 2000 sites having regard to their conservation objectives.
186281	construction of a single storey extension at the rear of the existing building for use in primary healthcare provision, change of use of the existing building for use in primary healthcare provision, alterations to layout at ground floor level of the existing building, demolition of existing blockwork shed attached to the rear eastern side of the existing building, widen the existing vehicular entrance onto the public road, provision of carparking spaces to the rear of the building and all ancillary site services. This building and its environs is a protected structure.	It is considered that the proposal would not give rise to likely significant effects on any nearby Natura 2000 sites, due to location and the fact that the proposal is serviced via existing public watermains and sewerage system.
186318	private dwelling house, property effluent treatment system and percolation area, domestic garage, entrance onto public road and all ancillary site services.	An appropriate assessment was carried out. The report found that the proposed development is unlikely to have significant effects on any Natura 2000 sites.
196076	extension to accommodate an after-school room and associated toilets to the western side of the existing crèche building, extension to the southern side of the existing crèche building to accommodate a sleep room, 2 no. playrooms and associated toilets, retention permission for the existing 32 sqm shelter covering the play area immediately to the rear of the existing building and all ancillary site services	A screening exercise has been carried out in relation to this development and it has deemed that the development is unlikely to have significant effects on the Natura 2000 network.
196082	demolition of existing domestic garage & store, construction of a single storey rear extension to existing dwelling incorporating kitchen & living area, utility, bathroom & plant room, make internal alterations & modifications to existing dwelling, construction of a replacement domestic garage & store and all associated site development works	A screening exercise has been carried out in relation to this development and it has deemed that the development is unlikely to have significant effects on the Natura 2000 network.

Planning Ref.	Description of development	Comments
196116	private dwelling house, propriety effluent treatment system and percolation area, domestic garage, entrance onto public road and all ancillary site services	It is considered that the proposal would not give rise to likely significant effects on any nearby Natura 2000 sites, due to location and scale.
196117	partial material change of use to extend the existing dwelling house into the existing garage area, demolition works to the existing building, construction of an extension to the rear of the existing dwelling and modifications to the existing elevations	It is considered that the proposed development would not give rise to significant adverse direct, indirect or secondary impacts on the integrity of any nearby Natura 2000 sites having regard to their conservation objectives.
196123	alterations to existing church including the provision of a ramped access to the front door. St Michael's Church is a Protected Structure (Ref 007-027)	It is considered that the proposal would not give rise to likely significant effects on any nearby Natura 2000 sites, due to location and the fact that the proposal is serviced via existing public watermains and sewerage system.
196224	Construction of 4 No. 3 bed two storey semi- detached dwellings and 6 No. 3 bed two storey townhouse dwellings, all associated carparking, access roadways and connection onto public road, connections to the existing public drainage infrastructure, all private and public open spaces and all ancillary site services.	It is considered that the proposed development would not give rise to significant adverse direct, indirect or secondary impacts on the integrity of any nearby Natura 2000 sites having regard to their conservation objectives.
196251	a storey and a half type dwelling, detached domestic garage and store, install a proprietary wastewater treatment system and all associated site development works	It is considered that the proposed development would not give rise to significant adverse direct, indirect or secondary impacts on the integrity of any nearby Natura 2000 sites having regard to their conservation objectives.
196277	a private dwelling house, proprietary effluent treatment system and percolation area, domestic garage, entrance onto public road and all ancillary site services	It is considered that the proposed development would not give rise to significant adverse direct, indirect or secondary impacts on the integrity of any nearby Natura 2000 sites having regard to their conservation objectives.
206246	open an off-licence sales facility in their premises	It is considered that the proposed development would not give rise to significant adverse direct, indirect or secondary impacts on the integrity of any nearby Natura 2000 sites having regard to their conservation objectives.
206301	Permission for a private dwelling house, connection to public foul drainage infrastructure, entrance onto public road, domestic garage and all ancillary site services	It is considered that the proposed development would not give rise to significant adverse direct, indirect or secondary impacts on the integrity of any nearby Natura 2000 sites having regard to their conservation objectives.
206339	permission for as-constructed 85.5 sqm attic floor space, 14.4 sqm conservatory and a 43 sqm domestic garage, retention permission is also sought for alterations to the front, rear and side elevations, roof type and height of existing dwelling	It is considered that the proposed development would not give rise to significant adverse direct, indirect or secondary impacts on the integrity of any nearby Natura 2000 sites having regard to their conservation objectives.

There are no predicted in-combination effects with the other development listed in Table 2, given that they have been screened for potential significant effects on European sites and/or granted permission.

9.3.7.1 CONCLUSIONS OF IN-COMBINATION EFFECTS

Given the inclusion of strict Best Practice Measures to be included and enforced through a Water Management Plan, the proposed development will have no predicted impacts on local ecology and biodiversity or on hydrologically linked European sites, such that in-combination impacts can therefore be ruled out.

The Westmeath County Development Plan 2021-2027, in complying with the requirements of the Habitats Directive, requires that all Projects and Plans that could affect the Natura 2000 sites in the same zone of influence of the Proposed Development site would be initially screened for Appropriate Assessment and if requiring Stage 2 AA, that appropriate employable mitigation measures would be put in place to avoid, reduce or ameliorate negative impacts. In this way, any in-combination impacts with Plans or Projects for the development area and surrounding townlands in which the development site is located, would be avoided.

The listed developments have been granted permission in most cases with conditions relating to sustainable development by the consenting authority in compliance with the relevant Local Authority Development Plan and in compliance with the Local Authority requirement for regard to the Habitats Directive. The development cannot have received planning permission without having met the consenting authority requirement in this regard. There are no predicted incombination effects given that it is predicted that the Proposed Development will have no effect on any European site.

Any new applications for the Project area will be initially assessed on a case by case basis initially by Westmeath County Council, which will determine the requirement for AA Screening as per the requirements of Article 6(3) of the Habitats Directive.

9.4 NATURA IMPACT STATEMENT & CONCLUSIONS

The main risk associated with the proposed development at depth for the existing quarry is the potential adverse impact it could have on receiving surface and groundwaters. The ultimate downstream receptor is the Lough Derravaragh SPA. The works completed here with respect to quantification of dewatering and the ability of the receiving waters to accept and assimilate the envisaged discharge suggest no potential for impact and no special measures are required other than those associated with all quarries, which are the appropriately specified floor sump, settlement tanks and the Section 4 Discharge licence.

This NIS has reviewed the predicted impacts arising from the Proposed Development and found that with the implementation of appropriate mitigation measures, specifically with regard to surface water, significant effects on the integrity of the Lough Derravaragh SPA can be ruled out.

It is the conclusion of this NIS, on the basis of the best scientific knowledge available, and subject to the implementation of the mitigation measures set out under Section 9.3.6, that the possibility of any adverse effects on the integrity of the European Sites considered in this NIS, or on the integrity of any other European Site (having regard to their conservation objectives), scienti scienti Mestricati Mestri arising from the Proposed Development, either alone or in combination with other plans or projects, can be excluded beyond a reasonable scientific doubt.

- DoEHLG (2010). Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities. Department of the Environment, Heritage and Local Government (DoEHLG), Dublin, Ireland.
- European Commission (2000). *Managing Natura 2000 Sites: The Provisions of Article 6 of the 'Habitats' Directive 92/43/EEC*. European Commission, Office for Official Publications of the European Communities, Luxemburg.
- European Commission (2002). Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43EEC. European Commission, Office for Official Publications of the European Communities, Luxemburg.
- European Commission (2007). Guidance document on Article 6(4) of the 'Habitats Directive '92/43/EEC: Clarification of the Concepts of: Alternative Solutions, Imperative Reasons of Overriding Public Interests, Compensatory Measures, Overall Coherence and Opinion of the Commission. European Commission, Office for Official Publications of the European Communities, Luxemburg.
- European Commission (2018). *Managing Natura 2000 Sites: The Provisions of Article 6 of the Habitat's Directive 92/43/EEC*. European Commission, Brussels, Belgium.
- European Commission (2021) Assessment of plans and projects in relation to Natura 2000 sites Methodological guidance on Article 6(3) and (4) of the Habitats Directive 92/43/EEC, Brussels 28.9.21.
- European Commission (2021). Guidance document on the strict protection of animal species of Community interest under the Habitats Directive, Brussels 12.10.21.
- NPWS (2021). Conservation objectives for Lough Derravarragh SPA [004043]. Generic Version 8.0. Department of Housing, Local Government and Heritage.
- NPWS (2019). The Status of EU Protected Habitats and Species in Ireland. National Parks and Wildlife Service, Department of Culture, Heritage and the Gaeltacht, Dublin, Ireland.
- NPWS (2021). *National Parks and Wildlife Service Metadata*. Available online at https://www.npws.ie/maps-and-data
- OPR (2021). Appropriate Assessment Screening for Development Management, OPR Practice Note PN01, Office-of-the-Planning-Regulator, Dublin, Ireland.