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NATURA IMPACT STATEMENT OF A PROPOSED DEVELOPMENT AT DRUMCROW AND ARDKILL MORE, CARRICKABOY, CO. CAVAN



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1 INTRODUCTION

1.1 BACKGROUND

In February 2023, Whitehill Environmental was appointed by Traynor Environmental Ltd to provide the necessary information to allow the competent authority (in this case Cavan County Council) to conduct an Article 6 (3) Appropriate Assessment for a proposed quarrying development at Drumcrow and Ardkill More, Carrickaboy, Co. Cavan. This information is being submitted as a Natura Impact Statement (NIS). This NIS was undertaken on the basis that potential significant effects upon the European sites within the Zone of Influence of the proposed development cannot be ruled out. It will allow the Competent Authority (in this case Cavan County Council) to undertake an Appropriate Assessment determination as required under Article 6 (3) of the Habitats Directive.

The purpose of this NIS was to determine the appropriateness of the proposed project, in the context of the conservation status of the site or sites. In Ireland, an Appropriate Assessment takes the form of a Natura Impact Statement (NIS), which is a statement of the likely impacts of the plan or project on a Natura 2000 site. The NIS comprises a comprehensive assessment of the plan or project and it examines the direct and indirect impacts that the plan or project might have on its own or in combination with other plans or projects on one or more Natura 2000 sites in view of the sites' conservation objectives.

1.2 THE AIM OF THIS REPORT

This Natura Impact Statement (NIS) has been prepared in accordance with the current guidance (DoEHLG, 2009, Revised February 2010), and it provides an assessment of the potential impacts of a proposed development at Drumcrow and Ardkill More, Carrickaboy, Co. Cavan on certain European sites.

An NIS should provide the information required in order to establish whether or not a proposed development is likely to have a significant impact on certain Natura sites in the context of their conservation objectives and specifically on the habitats and species for which the Natura 2000 conservation sites have been designated.

Accordingly, a comprehensive assessment of the potential impacts of this proposed development on the relevant Natura 2000 sites was carried out in April 2023 by Noreen McLoughlin, MSc, MCIEEM of Whitehill Environmental. This assessment allowed areas of potential ecological value and potential ecological constraints associated with this proposed

development to be identified and it also enabled potential ecological impacts associated with the proposed development to be assessed and mitigated for.

1.3 REGULATORY CONTEXT

RELEVANT LEGISLATION

The Birds Directive (Council Directive 2009/147/EC) recognises that certain species of birds should be subject to special conservation measures concerning their habitats. The Directive requires that Member States take measures to classify the most suitable areas as Special Protection Areas (SPAs) for the conservation of bird species listed in Annex 1 of the Directive. SPAs are selected for bird species (listed in Annex I of the Birds Directive), that are regularly occurring populations of migratory bird species and the SPA areas are of international importance for these migratory birds.

The EU Habitats Directive (92/43/EEC) requires that Member States designate and ensure that particular protection is given to sites (Special Areas of Conservation) which are made up of or support particular habitats and species listed in annexes to this Directive.

Articles 6(3) and 6(4) of this Directive also call for the undertaking of an Appropriate Assessment for plans and projects not directly connected with or necessary to the management of, but which are likely to have a significant effect on any European designated sites (i.e. SACs and SPAs).

The Water Framework Directive (WFD) (2000/60/EC), which came into force in December 2000, establishes a framework for community action in the field of water policy. The WFD was transposed into Irish law by the European Communities (Water Policy) Regulations 2003 (S.I. 722 of 2003). The WFD rationalises and updates existing legislation and provides for water management on the basis of River Basin Districts (RBDs). RBDs are essentially administrative areas for coordinated water management and are comprised of multiple river basins (or catchments), with cross-border basins (i.e. those covering the territory of more than one Member State) assigned to an international RBD. The aim of the WFD is to ensure that waters achieve at least good status by 2027 and that status does not deteriorate in any waters.

Appropriate Assessment and the Habitats Directive

Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Fauna and Flora – the 'Habitats Directive' - provides legal protection for habitats and species of European importance. Article 2 of the Directive requires the maintenance or restoration of habitats

and species of European Community interest, at a favourable conservation status. Articles 3 - 9 provide the legislative means to protect habitats and species of Community interest through the establishment and conservation of an EU-wide network of sites known as *Natura 2000*. Natura 2000 sites are Special Areas of Conservation (SACs) designated under the Habitats Directive and Special Protection Areas (SPAs) designated under the Conservation of Wild Birds Directive (79/409/EEC).

Articles 6(3) and 6(4) of the Habitats Directive sets out the decision-making tests for plans or projects affecting Natura 2000 sites. Article 6(3) establishes the requirement for Appropriate Assessment:

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

Article 6(4) deals with the steps that should be taken when it is determined, as a result of appropriate assessment, that a plan/project will adversely affect a European site. Issues dealing with alternative solutions, imperative reasons of overriding public interest and compensatory measures need to be addressed in this case.

Article 6(4) states:

"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, the Member States shall take all compensatory measures necessary to ensure that the overall coherence of 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 beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest."

The Appropriate Assessment Process

The aim of Appropriate Assessment is to assess the implications of a proposal in respect of a designated site's conservation objectives.

The 'Appropriate Assessment' itself is an assessment which must be carried out by the competent authority which confirms whether the plan or project in combination with other plans and projects will have an adverse impact on the integrity of a European site.

Screening for Appropriate Assessment shall be carried out by the competent authority as set out in Section 177U(1) and (2) of the Planning and Development Act 2000 (as amended) as follows:

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

(2) A competent authority shall carry out a screening for appropriate assessment under subsection (1) before—

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

(b) consent for a proposed development is given.'

The competent authority shall determine that an Appropriate Assessment is not required if it can be excluded, that the proposed development, individually or in combination with other plans or project will have a significant effect on a European site.

Where the competent authority cannot exclude the potential for a significant effect on a European site, an Appropriate Assessment shall be deemed required.

Where an Appropriate Assessment is required, the conclusions of the Appropriate Assessment Report (Natura Impact Statement (NIS)) should enable the competent authority to ascertain whether the plan or proposed development would adversely affect the integrity of the European site. If adverse impacts on the integrity of a European site cannot be avoided, then mitigation measures should be applied during the appropriate assessment process to the point where no adverse impacts on the site remain. Under the terms of the

Habitats Directive consent can only be granted for a project if, as a result of the appropriate assessment either (a) it is concluded that the integrity of any European sites will not be adversely affected, or (b) after mitigation, where adverse impacts cannot be excluded, there is shown to be an absence of alternative solutions, and there exists imperative reasons of overriding public interest for the project should go ahead.

Section 177(V) of the Planning and Development Act 2000 (as amended) outlines that the competent authority shall carry out the Appropriate Assessment, taking into account the Natura Impact Statement (amongst any other additional or supplemental information). A determination shall then be made by the competent authority in line with the requirements of Article 6(3) of the Habitats Directive as to whether the plan or proposed development would adversely affect the integrity of a European site, prior to consent being given.

2 METHODOLOGY

2.1 APPROPRIATE ASSESSMENT

This NIS has been prepared with reference to the following:

- European Commission (2018). Managing Natura 2000 Sites: The Provisions of Article 6 of the 'Habitats' Directive 92/43/EEC.
- European Commission (2021). 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 (2006). Nature and Biodiversity Cases: Ruling of the European Court of Justice.
- European Commission (2007). Clarification of the Concepts of: Alternative Solution, Imperative Reasons of Overriding Public Interest, Compensatory Measures, Overall Coherence, Opinion of the Commission.
- Department of Environment, Heritage and Local Government (2009). Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities.

The EC Guidance sets out a number of principles as to how to approach decision making during the process. The primary one is 'the precautionary principle' which requires that the conservation objectives of Natura 2000 should prevail where there is uncertainty.

When considering the precautionary principle, the emphasis for assessment should be on objectively demonstrating with supporting evidence that:

- There will be no significant effects on a Natura 2000 site;
- There will be no adverse effects on the integrity of a Natura 2000 site;
- There is an absence of alternatives to the project or plan that is likely to have an adverse effect to the integrity of a Natura 2000 site; and
- There are compensation measures that maintain or enhance the overall coherence of Natura 2000.

This translates into a four stage process to assess the impacts, on a designated site or species, of a policy or proposal.

The EC Guidance states that "each stage determines whether a further stage in the process is required". Consequently, the Council may not need to proceed through all four stages in undertaking the Appropriate Assessment.

The four-stage process is:

Stage 1: Screening – The process which identifies the likely impacts upon a Natura 2000 site of a project or plan, either alone or in combination with other projects or plans, and considers whether or not these impacts are likely to be significant;

Stage 2: Appropriate Assessment – The consideration of the impact on the integrity of the Natura 2000 site of the project or plan, 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 adverse impacts, an assessment of the potential mitigation of those impacts;

Stage 3: Assessment of Alternative Solutions – The process which examines alternative ways of achieving objectives of the project or plan that avoid adverse impacts on the integrity of the Natura 2000 site;

Stage 4: Assessment where no alternative solutions exist and where adverse impacts remain – An assessment of the compensatory measures where, in the light of an assessment of imperative reasons of overriding public interest (IROPI), it is deemed that the project or plan should proceed.

In complying with the obligations set out in Articles 6(3) and following the guidelines described above, this screening statement has been structured as a stage by stage approach as follows:

- Description of the proposed project;
- Identification of the Natura 2000 sites close to the proposed development;
- Identification and description of any individual and cumulative impacts on the Natura 2000 sites likely to result from the project;
- Assessment of the significance of the impacts identified above on site integrity. Exclusion of sites where it can be objectively concluded that there will be no significant effects;
- Description of proven mitigation measures.

2.2 STATEMENT OF COMPETENCY

This NIS report was carried out by Noreen McLoughlin, BA, MSc, MCIEEM. Noreen has an honours degree in Zoology and an MSc in Freshwater Ecology from Trinity College, Dublin and she has been a full member of the Chartered Institute of Ecology and Environmental Management for over 17 years. Noreen has over 18 years' experience as a professional ecologist in Ireland and in that time has completed numerous AA reports for large and small-scale developments.

2.3 STUDY AREA / ZONE OF INFLUENCE

The Zone of Influence (Zol) is a distance within which the proposed works could affect key ecological receptors. The Zol is likely to vary for each receptor, and ultimately it will depend on the source and type of the impact, the longevity of the impact, the sensitivity of the receptor and the presence of a pathway between the two. In this instance, the most significant impacts will arise from the construction works and the potential for these to generate pollution to local surface waters.

2.4 DESK STUDIES

Information on the site and the area of the proposed development was studied prior to the completion of this statement. The following data sources were accessed in order to complete a thorough examination of potential impacts:

- National Parks and Wildlife Service - Aerial photographs and maps of designated sites, information on habitats and species within these sites and information on protected plant or animal species, conservation objectives, site synopses and standard data forms for relevant designated sites.
- Environmental Protection Agency (EPA)- Information pertaining to water quality, geology and licensed facilities within the area;
- Myplan.ie – Mapped based information;
- National Biodiversity Data Centre (NBDC) – Information pertaining to protected plant and animal species within the study area;
- Bing maps & Google Street View – High quality aerials and street images;
- Traynor Environmental Ltd – Plans and Information Pertaining to the Development
- Cavan County Council – Information on planning history in the area for the assessment of cumulative impacts.

2.5 ASSESSMENT METHODOLOGY

The proposed development was assessed to identify its potential ecological impacts and from this, the Zone of Influence (Zoi) of the proposed development was defined. Based on the potential impacts and their Zoi, the Natura 2000 sites potentially at risk from direct, indirect or in-combination impacts were identified. The assessment considered all potential impact sources and pathways connecting the proposed development to Natura 2000 sites, in view of the conservation objectives supporting the favourable conservation condition of the site's Qualifying Interests (QIs) or Special Conservation Interests (SCIs).

The conservation objectives relating to each Natura 2000 site and its QIs/SCIs are cited generally for SACs as "to maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or Annex II species for which the SAC has been selected", and for SPAs "to maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA".

As defined in the Habitat's Directive, the favourable conservation status of a habitat is achieved when:

- Its natural range and area it covers within that range is stable or increasing;
- 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;

The favourable conservation status of a species is achieved when:

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

Where site-specific conservation objectives (SSCOs) have been prepared for a European site, these include a series of specific attributes and targets against which effects on conservation condition, or integrity, can be measured. Where potential significant effects are identified, then these SSCO should be considered in detail.

3 STAGE I - SCREENING

3.1 DEVELOPMENT DESCRIPTION

John Nulty Ltd is applying to Cavan County Council for a 20 year permission for the quarrying and extraction of rock that will include drilling, blasting, crushing and screening along with alterations to boundaries & all associated site works on lands at Ardkill More Townland and Drumcrow Townland, Carrickaboy, County Cavan.

Works will also include for the provision of new settlement ponds and installation of associated site drainage infrastructure and surface water pump to proposed new settlement ponds along with provision of discharge outlet via a Klargester Interceptor.

Ancillary site works to include for landscape works, planting, restoration of the quarry perimeter and reprofiling of overburden as required to facilitate development of the quarry and restoration of the associated site area.

An extract from the drawings is shown in Figure 1.

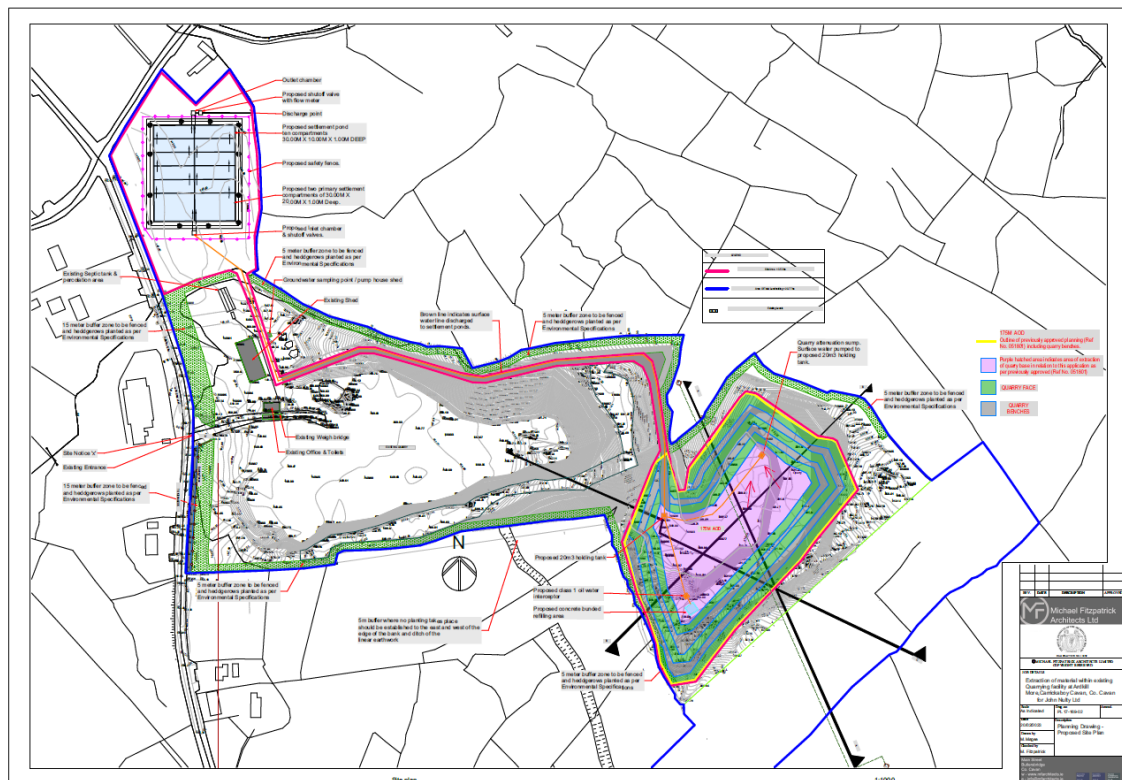


Figure 1 – Extract from Planning Drawings (as prepared by Michael Fitzpatrick Architects Ltd)

Project Overview

- The proposed development seeks for a 20-year permission to complete extraction of material granted within existing quarry envelope (upper level) as per previously approved under planning (Ref No.051801 in 2007) & all associated site works.
- Deepening of extraction from it's current level of 209mOD down to 175mOD over the proposed 20-year lifespan. The previously permitted planning permission proposed a quarry floor level of 175mOD.
- The quarry is located in a naturally occurring rock outcrop which rises above the surrounding area. The top of the quarry face is approximately 248 mOD with the bottom of the quarry face being approximately 209mOD. The road level at the quarry entrance is 154mOD and 150mOD at the Site Office.
- It is proposed that surface water runoff will be collected and processed by passing through a cleaning/polishing system of settling pond and oil water separator to remove silt and any potential oil or grease before being discharged into the naturally occurring surface water drain at green field discharge rates.
- The quarry has an existing discharge licence in accordance with the Water Pollution Discharge Licensing Regulations.
- Approximately 500,000 tonnes of material will be extracted over a twenty-year period, resulting in an average extraction rate of 25,000 tonnes per year up to a maximum of 50,000 tonnes per annum.
- It is proposed to install a new settlement pond and oil water separator to service the application site area. The settlement pond will be located to the north of the existing site office on lands in the ownership of John Nulty Ltd.
- The existing ponds on site will continue to service the existing QY7 Registered quarry and are outside the proposed red line boundary for this application.

Surface Water Management Proposals

The surface water management proposed for the site is as follows:

- All rainwater falling on the extraction floor of the quarry will be directed to a quarry sump located on the floor of the quarry(application site).
- Rainwater will then be pumped to a 20m³ (20,000 litre) holding tank from the quarry sump automatically by a high-level float switch.
- Some concrete bunded area for refuelling of vehicles will be located in the southern corner of the application site.
- Water from the bunded area will also be directed to the holding tank, after a Class 1 oil water separator.

- Water will then flow by gravity to the Settlement Pond passing through a 100mm pipe at a controlled rate set by the Hydro-Valve.
- Water will first enter the inlet chamber before flowing into one of the primary settlement sections.
- The ponds have been designed to facilitate maintenance and silt removal. Water will enter the primary settlement area via a diffuser pipe inlet. The pond consists of two primary settlement compartments, followed by a series of interconnected settlement compartments which can be used all together or separately for cleaning and seasonal variations.
- The settlement pond will have a freeboard of 0.5m. The depth of the pond will be 1m. This will allow sufficient retention time for the solids to settle out of the water.
- The proposed settlement ponds will be divided into 5 chambers. The 2 primary settlement compartments will be 30m x 20m x 1m deep (600m³) in size where initial settlement will take place. The water will then flow through consecutive chambers of 30m x 10m x 1m each (3000m³). This will provide for a maximum retention volume in the settlement pond of (3600m³).
- The pond has been designed allowing for a climate change factor of 20%.
- The settlement pond will be lined with an impermeable material.
- The estimated maximum discharge per day from the proposed extraction area is (24.204 l/s) equivalent to 2052m³ leaving the pond. In conjunction with QY7 this will comply with a maximum of 4000m³ as per the existing discharge licence.
- The existing discharge licence has allowed for QY7, and Quarry approved under 05/1081. The maximum flow will not exceed 4000m³ per day as per the discharge licence SS/W004/18.
- The volume of water being discharged will be recorded on a daily basis by installing a flow meter at the point of discharge.
- The settlement pond will be cleaned and maintained on a regular basis to ensure that they continue to operate efficiently. (Every 3 – 6 months)
- Surface water sampling will be undertaken as per the existing discharge licence limits.

3.2 SITE LOCATION AND SURROUNDING ENVIRONMENT

The proposed development site is 3.6 km in area and it is located in the townlands of Drumcrow and Ardkill More. It is located approximately 1.4km south-west of Carrickaboy village and 4.9km south-east of Bellanagh. Access to the site is via an existing entrance that is just off a local, third class road.

The land-use surrounding the site is largely low intensity agriculture and improved and semi-improved grasslands are the dominant habitats locally. Other habitats represented in the area include the hedgerows, treelines and wet grasslands, along with the scrub, and wet and dry heath habitats associated with the Ardkill More Hill. Site location maps are shown in Figures 2 and 3.

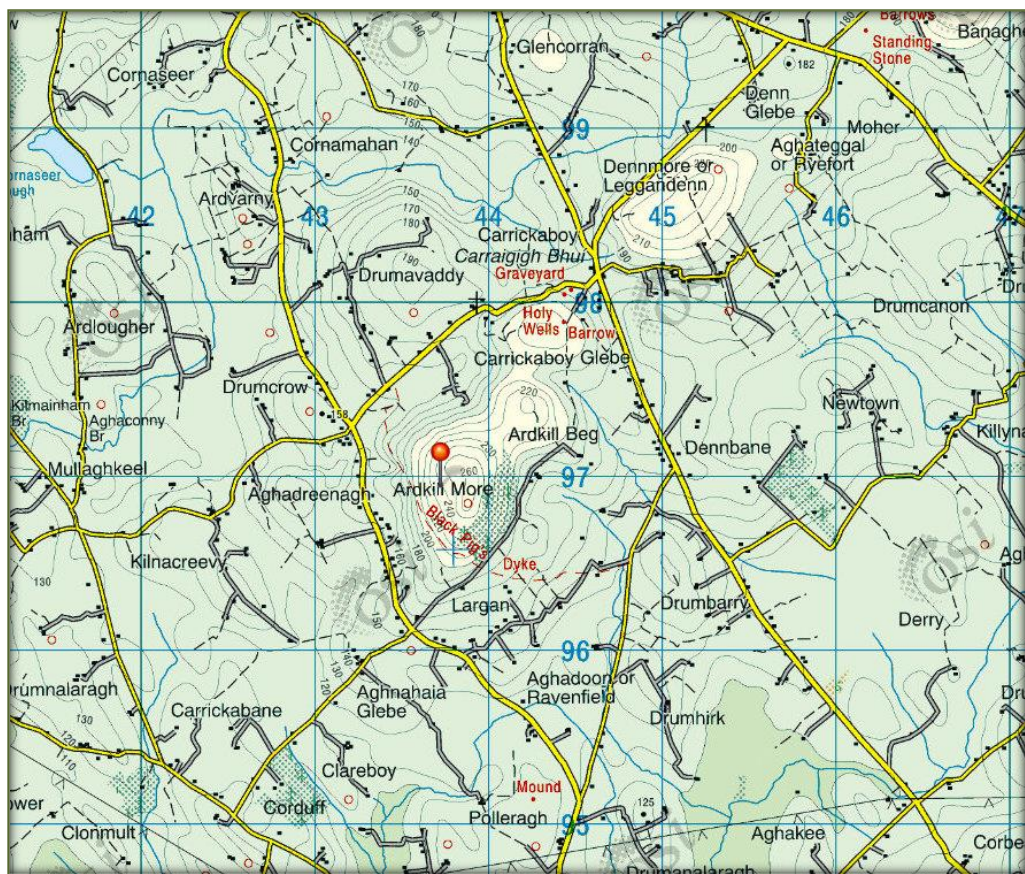


Figure 2 – Site Location Map (Site is Pinned)

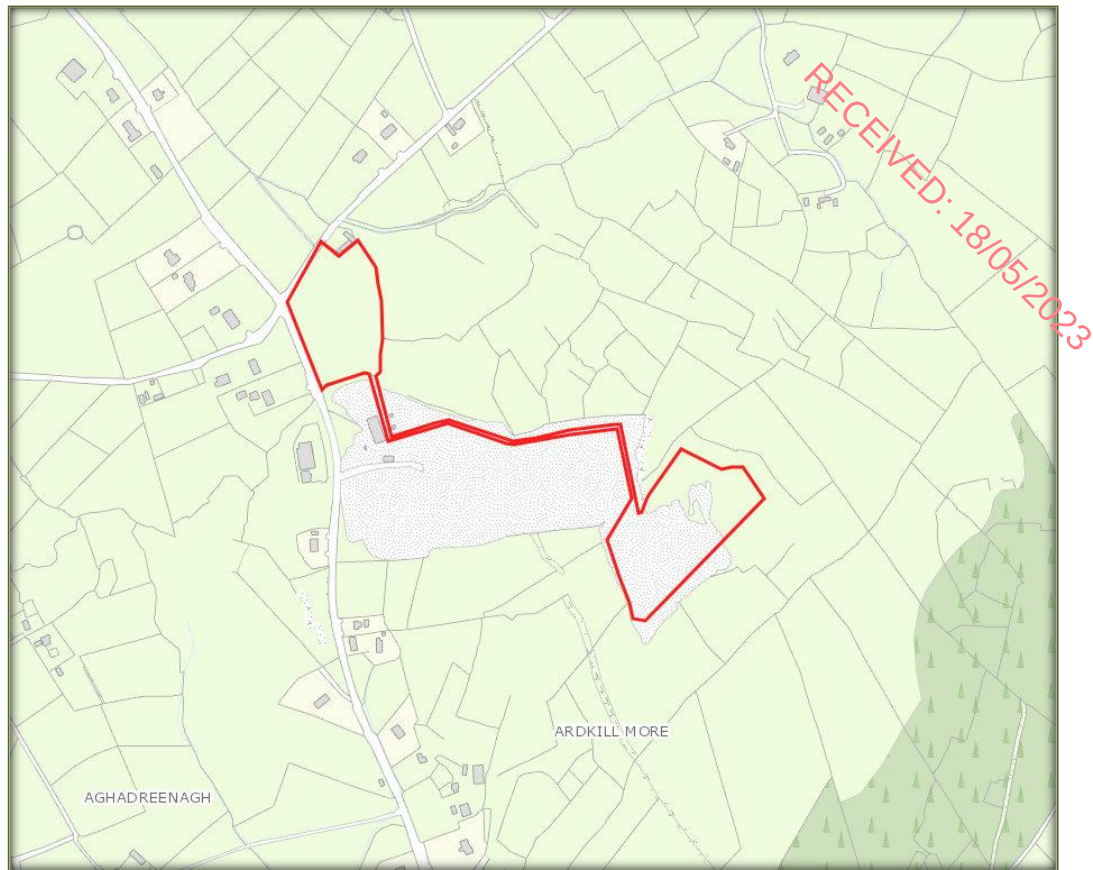


Figure 3 – Map Showing the Location of the Proposed Works. The Extent of the Proposed Quarry Works are Outlined in Red.

HABITATS WITHIN THE APPLICATION SITE

No part of the site lies within any area that is designated for nature conservation purposes. The proposed deepening works will occur on lands that are currently associated with the existing quarry, i.e., active quarries and mines and / or exposed sand, gravel or till. These areas will be excavated further and no previously unquarried land will be excavated.

The proposed settlement ponds are located to the north of the existing quarry site, in a field where the current habitat is dominated by improved grassland. The boundaries of this field consists of hedgerows.

Beyond the main footprint of the quarry, the dominant habitats include spoil and bare ground, recolonising bare ground and the undisturbed habitats immediately surrounding the quarry, i.e., dry siliceous heath, wet heath, dry-humid acid grassland, wet grassland and scrub. Areas of improved agricultural grassland, treelines and hedgerows occur beyond the areas surrounding the quarry. An aerial photograph of the application site and its surrounding habitats is shown in Figure 4.



Figure 4 – Aerial Photograph of the Site and its Surrounding Habitats.

WATER FEATURES AND QUALITY

EPA Data

Ardkill More is within the Erne Hydrometric Area, Catchment, Sub-Catchment and Sub-Basin. There is a field drain present alongside the northern boundary of the site and this field drain is the receiving water for the discharge from the settlement ponds. Water in this field drain connects to the Ballinagh Stream which is north-west of and 1.2km downstream of the application site. The Ballinagh Stream flows generally north, through the towns of Ballinagh and Crossdoney and on towards its confluence with the River Erne at Legalana, at a point approximately 14km downstream of the application site.

The EPA have defined the ecological status of the Ballinagh Stream and its tributaries as moderate status, deteriorating to poor status downstream of Ballinagh. The River Erne at its confluence with the Ballinagh Stream is noted to be of moderate status. Under the requirements of the Water Framework Directive, this is unsatisfactory and good status must be achieved in this water course by 2027.

Surface Water Quality

Surface water samples (2 no.) were taken from the field drain by Traynor Environmental approximately 0.8km downstream of the existing settlement pond discharge point and from the Ballinagh Stream approximately 2km downstream of the discharge point on 15th

November 2022 and the results are shown below (From Table 7.2 of the EIAR). There is no channel flow in the field drain upstream of the existing discharge point therefore only downstream sampling was possible (the quarry site is located at the start of the field drain). Suspended solids are reported to be < 5mg/L or less which is significantly below the threshold of 25mg/L with regard S.I. No. 293/1988. Results for phosphorus are below the existing discharge license threshold limit. Ammonia N was below the Good Status threshold in SW1 and below the High-Status threshold in SW2.

Parameter	Existing Discharge License ELV (Ref: SS/WW004/18)	EQS	Sample Date – 15/11/2022	
			SW1 Field Drian	SW2 Ballinagh Stream
pH	6-9	-	7.4	7.2
Total Suspended Solids (mg/L)	30	25	< 5	<5
Ammonia (mg/L)	0.16	Good Status: ≤0.065 High Status ≤ 0.04	0.06	0.02
Nitrite NO ₂ (mg/L)	-	-	0.03	<0.01
Total Phosphorus (mg/l)	0.05	-	<0.02	0.02
Nitrate - NO ₃ (mg/L)	-	-	5.9	5.1
COD (mg/L)	-	-	7	11
BOD (mg/l O ₂)	3	Good Status: ≤ 1.5 High Status: ≤ 1.3	1.4	1.1
Total Hydrocarbons (mg/l)	1	-	<0.5	<0.5

Surface Water Discharge Quality

A condition of the existing Discharge License (Ref: SS/WW004/18) requires annual sampling of discharge water quality. It is evident from the samples taken to date that the discharge complied with the provisions of the license at all times. Discharge from the existing site comprises of water by gravity from the extraction area (upper and lower voids). The samples are taken at the discharge point downstream of the existing settlement ponds. A summary of the annual discharge water quality data for the years 2020, 2021 & 2022 is presented in the extract below taken from Table 7.3 of the EIAR, along with the emission Limit Values (ELVs as defined in the discharge license). There were no exceedances with regard the discharge license ELVs. The installation the new settlement pond will further enhance the treatment of the final discharge of surface water from the site. Results outlined in the table below confirm that the existing settlement ponds are working efficiently, however in the interest of further protecting the surface water and groundwater the new settlement pond has been intentionally oversized to facilitate the works the next 20 years.

Parameter	Emission Limit Value	Sample Result						No. of Exceedances
		08/02/20	06/05/20	02/08/20	05/11/20	10/02/21	02/02/22	
pH	6 – 9 pH Units	7.4	7.2	7.8	7.8	7.9	7.3	0
BOD	3 mg/l	2.3	1.8	2.7	1.9	2.4	2.2	0
Suspended Solids	30mg/l	22	26	20	18	25	21	0
Total Phosphorus	0.05 mg/l	0.01	0.023	0.036	0.015	0.037	0.033	0
Ammonia as N	0.16 mg/l	0.10	0.09	0.02	0.07	0.09	0.10	0
Total Hydrocarbons	1 mg/l	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0

Groundwater Vulnerability

The vulnerability rating (www.gsi.ie) of the aquifer underlying the proposed site area is “Extreme (X)”. This is consistent with the subsoil mapping where subsoils were mapped to be absent in this area of the site. This would have been the case prior to the existence of the quarry as subsoil cover away from disturbed areas is relatively thin or even absent.

3.3 NATURA 2000 SITES IDENTIFIED

In accordance with the guidelines issued by the Department of the Environment and Local Government, a list of Natura 2000 sites within 15km of the proposed development has been identified and described according to their site synopses, qualifying interests and conservation objectives. In addition, any other sites further than this, but potentially within its zone of interest were also considered. The zone of impact may be determined by an assessment of the connectivity between the application site and the designated areas by virtue of hydrological connectivity, atmospheric emissions, flight paths, ecological corridors etc.

For significant effects to arise, there must be a potential impact facilitated by having a *source*, i.e., the proposed development and activities arising out of its construction or operation, a *receptor*, i.e., the European site and its qualifying interests and a subsequent *pathway* or *connectivity* between the source and receptor, e.g., a water course. The likelihood for significant effects on the European site will largely depend on the characteristics of the source (e.g., nature and scale of the construction works), the characteristics of the existing pathway and the characteristics of the receptor, e.g., the sensitivities of the Qualifying Interests (habitats or species) to changes in water quality.

The site of the proposed development is within 15km of four sites that have been designated under the EU Habitats Directive and the EU Birds Directive. These designated areas and their closest points to the proposed development site are outlined in Table 1 and maps showing their locations relative to the application site are shown in Figures 5 and 6. A full description of these sites can be read online on the website of the National Parks and Wildlife Service.

Site Name & Code	Distance	Qualifying Interests / Special Conservation Interests	Screened In / Out
Lough Oughter and Associated Loughs SAC 000007	9km north-west / 18km downstream	- Natural eutrophic lakes with <i>Magnopotamion</i> or <i>Hydrocharition</i>-type vegetation - Bog woodland - Otter <i>Lutra lutra</i>	<i>Screened In - Having regards to the connectivity of the application site to this SAC, potential effects upon the QIs of this site arising during construction and operation cannot be ruled out.</i>
Lough Oughter Complex SPA 004049	9km north-west / ~17.5km downstream	- Great Crested Grebe (<i>Podiceps cristatus</i>) - Whooper Swan (<i>Cygnus cygnus</i>) - Wigeon (<i>Anas penelope</i>) - Wetlands & Waterbirds	<i>Screened In - Having regards to the connectivity of the application site to this SPA, potential effects upon the QIs of this site arising during construction and operation cannot be ruled out.</i>

Lough Sheelin SPA 004065	10.5km south	• Great Crested Grebe <i>Podiceps cristatus</i> • Pochard <i>Aythya ferina</i> • Tufted Duck <i>Aythya fuligula</i> • Goldeneye <i>Bucephala clangula</i> • Wetlands & waterbirds	Screened Out - No hydrological connectivity therefore potential significant effects upon this site can be ruled out.
Moneybeg and Clareisland Bog SAC 002340	14.5km south	• Active raised bog • Degraded raised bog • Rhynchosporion vegetation	Screened Out - No hydrological connectivity therefore potential significant effects upon this site can be ruled out.

Table 1 – Designated Sites within 15km of the Proposed Development

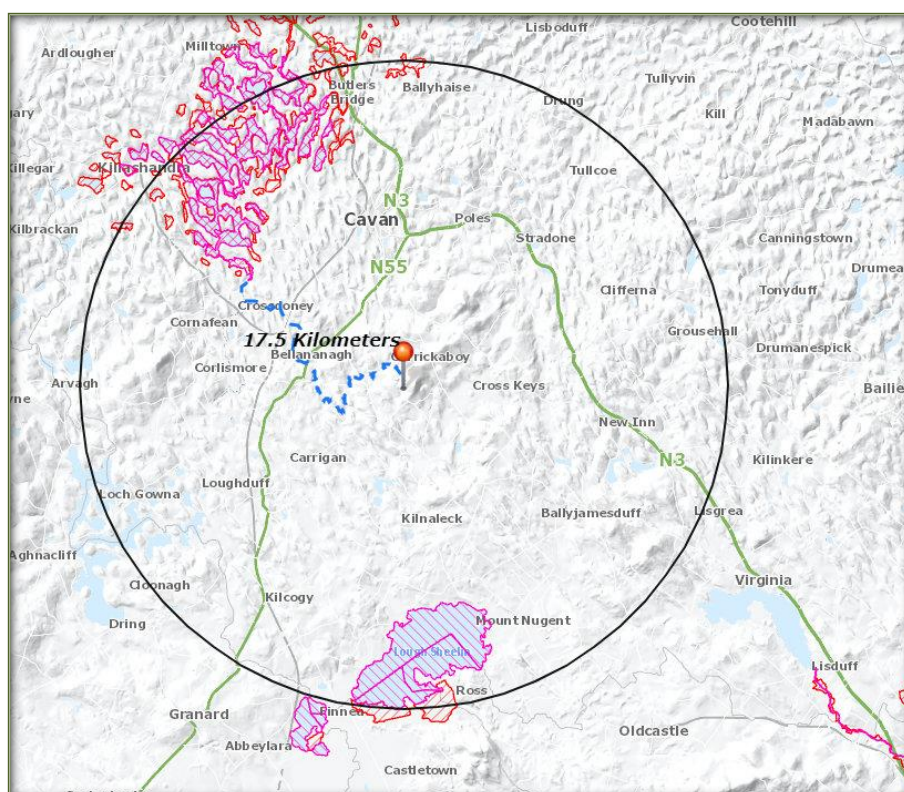


Figure 5 – Application Site (Pinned) in Relation to Designated Sites within 15km. SACs – Red Hatching, SPAs – Pink Hatching. Hydrological Connectivity is Shown.

3.4 IDENTIFICATION OF POTENTIAL IMPACTS

The proposed development at Ardkill More will occur on lands that are hydrologically connected to the Lough Oughter and Associated Loughs SAC and Lough Oughter Complex SPA via the Ballinagh Stream. Therefore, taking a conservative approach, in a worst-case scenario and in the absence of mitigation, an accidental pollution event of a sufficient magnitude during the lifetime of the quarry, either alone or in-combination with other pollution sources, could potentially affect the surface water quality in these local watercourses to an extent that undermines the conservation objectives of certain qualifying interests of the European sites associated with Lough Oughter that is 17.5km downstream of the site. A reduction in water quality locally has the potential to affect the aquatic habitats and natural conditions that are required to maintain or achieve the specific attributes and targets of the qualifying interests associated with the Lough Oughter and Associated Loughs SAC and the Lough Oughter SPA and the conservation objectives that have been set for these QIs.

Therefore, following an evaluation of the relevant information including the characteristics of the proposed development, the surface water quality protection methods proposed in the plan and the likelihood of significant effects on the sites and with regards to the tenets of the precautionary principal, it is considered in the opinion of this author that it is not possible to exclude, on the basis of objective information, that the proposed development, either individually or in combination with other plans or projects, will have a likely significant effect on the above European sites.

Only those features of the development that have the potential to affect the integrity and conservation objectives of the identified Natura sites and protected species have been considered. A number of factors were examined at this stage and dismissed or carried forward for Appropriate Assessment as relevant. The following areas were examined in relation to potential impacts and subsequent effects from the proposed development on the Natura 2000 sites identified:

- Deterioration of water quality in the Lough Oughter and Associated Loughs SAC and the Lough Oughter Complex SPA arising from pollution to surface or groundwaters during the initial construction phase of this proposal, including the construction of the settlement ponds.
- Deterioration of water quality in the Lough Oughter and Associated Loughs SAC and the Lough Oughter Complex SPA arising from pollution to surface or groundwaters during the remaining lifetime of the quarrying activities.

- Cumulative impacts with other proposed/existing developments.

These impacts could give rise to negative effects upon the QIs of these sites. Any negative effects on the Lough Oughter and Associated Loughs SAC and the Lough Oughter Complex SPA could be significantly negative at an international scale.

3.5 ASSESSMENT OF SIGNIFICANCE

This section considers the list of sites identified in Section 3.3. It can be considered that with the exception of Lough Oughter and Associated Loughs SAC and the Lough Oughter Complex SPA that the remainder of the sites identified in Section 3.3 can be excluded from the Appropriate Assessment process. This is based on their distance from the proposed development and the fact that they are outside of its Zone of Influence as there is no hydrological connectivity. The remaining concerns will therefore focus upon the protected habitats and species of the Lough Oughter and Associated Loughs SAC and the Lough Oughter Complex SPA.

3.6 SCREENING CONCLUSIONS

The proposed development is not directly connected with or necessary to the nature conservation management of the designated site. Therefore, following consideration of the location of the Lough Oughter and Associated Loughs SAC and the Lough Oughter Complex SPA in relation to the proposed development at Ardkill More and the potential impacts that may occur, this project must proceed to the next stage of Appropriate Assessment, namely the Natura Impact Assessment.

4 STAGE II – APPROPRIATE ASSESSMENT

4.1 INTRODUCTION

The main objective of this stage (Stage 2, Natura Impact Statement) in the Appropriate Assessment process is to determine whether the proposed development at Ardkill More (either alone or in combination with other plans, programmes and projects) will result in significant adverse impacts to the integrity of the Natura 2000 sites identified in the previous section with respect to the site's structure, function and/or conservation objectives. This stage also outlines the mitigation measures that should be taken in order to avoid any negative impacts of this proposed development upon the European sites that have been screened in.

In this section, the Natura 2000 sites identified in the previous section will be described in greater detail in terms of their characteristics and conservation objectives.

4.2 NATURA 2000 SITES IDENTIFIED

NPWS Site Summary

Lough Oughter and its associated loughs occupy much of the lowland drumlin belt in north and central Cavan between Upper Lough Erne, Cavan and Cavan town. The site is a maze of waterways, islands, small lakes and peninsulas including some 90 inter-drumlin lakes and 14 basins in the course of the Erne River. The area lies on Silurian and Ordovician strata with Carboniferous limestone immediately surrounding.

This site is a candidate Special Area of Conservation for natural eutrophic lakes and bog woodland, two habitats listed on Annex I of the E.U. Habitats Directive and for the otter, a species listed on Annex II of the same Directive. The site also contains areas of dry woodland, marsh, reedbed and wet pasture.

The Lough Oughter area contains important examples of two habitats listed on Annex I of the E.U. Habitats Directive and supports a population of the Annex II species, otter. The site as a whole is the best inland example of a flooded drumlin landscape in Ireland and has many rich and varied biological communities. Nowhere else in the country does such an intimate mixture of land and water occur over a comparable area, and many of the species of wetland plants, some considered quite commonplace in Lough Oughter and its associated loughs, are infrequent elsewhere.

Site Specific Conservation Objectives

Site Specific Conservation Objectives (SSCOs) for this site have recently been prepared (NPWS, 2021)¹. These SSCO are outlined in Tables 2 – 4.

Natural Eutrophic Lakes with Magnopotamion & Hydrocharition-type Vegetation 3150

The SSCO for this habitat is to *restore* its favourable conservation condition which is generally defined by the following list of attributes and targets:

Attribute	Measure	Target
Habitat area	Hectares	Area stable or increasing, subject to natural processes
Habitat distribution	Occurrence	Restore, subject to natural processes
Vegetation composition: Typical species	Occurrence	Typical species present, in good condition, and demonstrating typical abundances and distribution
Vegetation composition: characteristic zonation	Occurrence	All characteristic zones should be present, correctly distributed and in good condition
Vegetation distribution: maximum depth	Metres	Maintain maximum depth of vegetation, subject to natural processes
Hydrological regime: water level fluctuations	Metres	Maintain appropriate natural hydrological regime necessary to support the habitat
Lake substratum quality	Various	Maintain appropriate substratum type, extent and chemistry to support the vegetation
Transparency	Metres	Maintain/restore appropriate Secchi transparency. There should be no decline in Secchi depth/transparency
Nutrients	µg/l P; mg/l N	Restore the concentration of nutrients in the water column to sufficiently low levels to support the habitat and its typical species
Phytoplankton biomass	µg/l Chlorophyll a	Restore appropriate water quality to support the habitat, including good chlorophyll a status
Phytoplankton composition	EPA phytoplankton composition metric	Restore appropriate water quality to support the habitat, including good phytoplankton composition status
Attached algal biomass	Algal cover	Maintain/Restore trace/ absent attached algal biomass (<5% cover)
Water quality: macrophyte status	EPA macrophyte metric (The Free Index)	Restore good macrophyte status
Acidification status	pH units; mg/l	Maintain appropriate water and sediment pH, alkalinity and cation concentrations to support the habitat, subject to natural processes
Water colour	mg/l PtCo	Maintain/Restore appropriate water colour to support the habitat
Dissolved organic carbon (DOC)	mg/l PtCo	Maintain/Restore appropriate organic carbon levels to support the habitat
Turbidity	Nephelometric turbidity units/ mg/l SS/ other appropriate units	Maintain/Restore appropriate turbidity to support the habitat
Fringing habitat: area and condition	Hectares	Maintain?restore the area and condition of fringing habitats necessary to support the natural structure and functioning of the lake habitat

Table 2 – Natural Eutrophic Lakes with Magnopotamion and Hydrocharition-type Vegetation 3150

¹ NPWS (2021) Conservation Objectives: Lough Oughter and Associated Loughs SAC 000007. Version 1. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage

Potential Significant Effects

This is a qualifying interest of the Lough Oughter and Associated Loughs SAC. Natural eutrophic lakes have nutrient levels that are higher than those of oligotrophic, dystrophic or mesotrophic lakes, resulting in higher natural productivity. They are typically species-rich. However, many such lakes have been damaged by over-enrichment with nutrients, resulting in hypertrophic conditions and a reduction in species-richness. The application site is upstream of a number of lakes which contain examples of this habitat. The closest of these is Coalpit Lough, which then leads to Derrygid Lough.

The downstream distance between the application site and this QI is over 20km. Therefore, having regards to this separation distance, potential significant effects upon this QI are unlikely to arise. However, as there is hydrological connectivity and in the absence of mitigation, effects upon this QI cannot be ruled out with absolute certainty and mitigation measures should be included to prevent run-off from the works causing local deteriorations in water quality which could subsequently result in significant effects upon this habitat.

Bog Woodland g1Do

The SSCO for this habitat is to *maintain* its favourable conservation condition which is defined by the following list of attributes and targets:

Attribute	Measure	Target
Habitat area	Hectares	Area stable or increasing, subject to natural processes
Habitat distribution	Occurrence	No decline, subject to natural processes
Woodland size	Ha	Area stable or increasing. Where topographically possible, "large" woods at least 25ha in size and "woods at least 3ha in size
Woodland structure: canopy cover and height	Percentage cover; metres	Total canopy cover at least 30%; downy birch (<i>Betula pubescens</i>) comprises at least 50% of canopy cover; median canopy height at least 4m.
Woodland structure: community diversity and extent	Ha	Maintain diversity and extent of community types.
Woodland structure: tree size classes	Occurrence	Downy birch (<i>Betula pubescens</i>) present in each tree class size.
Woodland structure: regeneration	Occurrence	At least one downy birch (<i>Betula pubescens</i>) sapling of at least 1m tall present within each monitoring stop.
Woodland structure: senescent and dead wood	Occurrence	Senescent or dead wood present
Woodland structure: indicators of local distinctiveness	Occurrence; population size	No decline in distribution and in the case of red listed and other rare or localised species, population size.
Woodland structure: indicators of overgrazing	Occurrence	All four indicators of overgrazing absent.
Woodland structure: dwarf shrub cover	Percentage cover at a representative number of monitoring stops	Native dwarf shrub layer cover less than 50%; ling (<i>Calluna vulgaris</i>) cover less than 40%.

Woodland structure: bryophyte cover	Percentage cover at a representative number of monitoring stops	Bryophyte cover at least 50%; bog moss (<i>Sphagnum</i> spp) cover at least 25%.
Vegetation composition: positive indicator species	Number in a representative number of monitoring stops	Downy birch (<i>Betula pubescens</i>), bog moss (<i>Sphagnum</i> spp) and at least five other positive indicator species present
Vegetation composition: negative indicator species	Percentage cover at a representative number of monitoring stops	Both native and non-native invasive species absent or under control. Total cover should be less than 10%

Table 3 – SSCOs for Bog Woodland

Potential Significant Effects

This is a priority habitat and a qualifying interest of the Lough Oughter and Associated Loughs SAC. Bog woodland includes woodlands of intact ombrotrophic bogs, bog margins and cutover bog. It typically occurs on deep acid peat that is relatively well-drained in the upper layers and is commonly associated with former turf cutting activity or drainage. It may also occur in areas of cutover bog where most of the peat has been removed.

Map 4 of the SSCO document illustrates the current known location of this habitat within the SAC, and it is stated that other locations of this habitat within the SAC are likely. An examination of aerial maps along with EPA soil maps shows that there are no areas of woodland on peat soil close to the application site and this habitat does not occur within the Zone of Influence of the application site. There are no areas of designated/non-designated bog woodland that have the potential to be impacted upon from this proposed development. Water quality is not a listed attribute for the maintenance of this habitat at favourable conservation condition.

Otter (1355)

The SSCO for this species is to *maintain* its favourable conservation condition which is defined by the following list of attributes and targets:

Attribute	Measure	Target
Distribution	% positive survey sites	No Significant Decline
Extent of Terrestrial Habitats	Hectares	No significant decline. Area mapped and calculated as 364.4ha along river banks/ lake shoreline/around ponds
Extent of Freshwater (River) Habitat	Km	No significant decline. Length mapped and calculated as 71.3km
Extent of Freshwater (Laker) Habitat	Hectares	No significant decline. Area mapped and calculated as 1,730.6ha.
Couching Sites and Holts	Number	No significant decline
Fish Biomass Available	Kg	No significant decline
Barriers to connectivity	Number	No significant increase

Table 4 – SSCOs for Otter

Potential Significant Effects

The otter occurs throughout the Lough Oughter system. The presence of this species is positively correlated with good water quality and deterioration of same will lead to impacts upon this species. Otters have two basic requirements – aquatic prey and safe refuges where they can rest. In freshwater areas, the diet of the otter comprises of a variety of fish from sticklebacks to salmon and eels, whilst crayfish and frogs can also be important. Impacts that reduce the availability or quality of, or cause disturbance to, their terrestrial or aquatic habitats are likely to affect otters. The main threats to otters in Ireland are thought to be: (1) habitat destruction, including river drainage and the clearance of bank-side vegetation; (2) pollution, particularly organic pollution resulting in fish kills; (3) disturbance of habitat due to recreational activities, and (4) accidental deaths (NPWS, The Otter Threat Response Plan, 2009).

Records for this species exist from the Zone of Influence of this application site. It is known that the territory of the otter is quite large. However, the territory of female otters in mesotrophic rivers is approximately 7.5 +/- 1.5km in length (Ó Néill, L., 2008), whilst the territories of males otters in mesotrophic and oligotrophic rivers is approximately 13.2 +/- 5.3km in length, with a high degree of variability as territorial males respond quickly to social perturbation. Therefore, as otters occur within the Zone of Influence of the application site (downstream), mitigation measures will be included as part of this assessment to protect the overall status of the otter within the SAC and to prevent deteriorations in water quality which could affect this species.

THE LOUGH OUGHTER SPA 004049

Site Summary

The Lough Oughter SPA is of importance for both wintering and breeding birds. Of particular note is the internationally important population of Whooper Swan that is based in the area. The site also supports nationally important populations of a further four wintering species. The site is of especial importance for one of the highest breeding concentrations of Great Crested Grebe in the country. Of note is that three of the species which occur regularly are listed on Annex I of the E.U. Birds Directive, i.e. Whooper Swan, Greenland White-fronted Goose and Common Tern.

Site Specific Conservation Objectives

Site specific conservation objectives for this site have not yet been prepared and objectives for this site remain generic. Overall, the SSCOs for SPAs are largely similar. Therefore, the attributes and targets that should define the favourable conservation condition of the QIs for this site were taken from the most common attributes and targets used for the conservation objectives of SPA bird species in general. These are outlined in Table 5 below.

Parameter	Attribute	Measure	Target
Population	Population trend	Percentage change as per population trend assessment using waterbird count data collected through the Irish Wetland Bird Survey and other surveys	Long term population trend stable or increasing
Range	Distribution	Range, timing and intensity of use of areas used by waterbirds, as determined by waterbird surveys.	No significant decrease in the range, timing or intensity of use of areas by the QI, other than that occurring from natural patterns of variation

Table 5 – Conservation Objectives for SPAs

For wetlands, the conservation objectives are:

Parameter	Attribute	Measure	Target
Area	Habitat Area	Hectares	The permanent area occupied by the wetland habitat should be stable and not significantly less than the area of 765 hectares, other than that occurring from natural patterns of variation

Table 6 – Conservation Objectives for SPAs (Wetlands)

Potential Significant Effects

The proposed development will not lead to any direct impacts or effects upon the bird species that are listed as QIs of this SPA. There will be no loss or fragmentation of their habitats within the SPA. However, in order to prevent any deterioration in water quality during the construction and operation of the proposed development, mitigation measures will need to be included. Any deterioration in water quality in the Erne system could indirectly affect these bird species and the habitats and food chains that they depend on.

4.3 SUMMARY OF POTENTIAL IMPACTS

INTRODUCTION

The identification of potential effects and the assessment of their significance typically requires the identification of the type and magnitude of the effects. For example, will the impacts be short term or long term, direct, indirect or cumulative and will they occur during construction or operation.

In the screening section of this report, the following possible future impacts on Lough Oughter and Associated Loughs SAC / SPA were listed. These concerns are again listed below and they will be dealt with in more detail in this section.

1. Deterioration of water quality in the Lough Oughter and Associated Loughs SAC and the Lough Oughter Complex SPA arising from pollution to surface or groundwaters during the initial construction phase of this proposal, including the construction of the settlement ponds.
2. Deterioration of water quality in the Lough Oughter and Associated Loughs SAC and the Lough Oughter Complex SPA arising from pollution to surface or groundwaters during the remaining lifetime of the quarrying activities.
3. Cumulative impacts with other proposed/existing developments.

The conventional source-pathway-receptor model for groundwater / surface water impact prediction was applied to assess potential impacts on groundwater and surface water specifically on downstream sensitive ecological receptors (Lough Oughter SAC / SPA). In the case of the subject site the primary potential hazards are suspended solids, leaching and spillages, and accidental discharges of potential pollutants to the local surface waters and groundwater causing a deterioration in water quality locally and further downstream.

POTENTIAL EFFECTS DURING CONSTRUCTION PHASE

1. Deterioration in downstream surface water quality in the field drain within the site and further downstream in the Ballinagh Stream arising from suspended sediments generated during soil stripping /removal - There will be a requirement to strip and store soil/subsoil from the proposed settlement pond area. Soil removal will be an intermittent operation but will be completed in the early stages of the work, This material will be retained and used during restoration activities such as vegetating the upper benches of the quarry during restoration.

POTENTIAL EFFECTS DURING OPERATIONAL / EXTRACTIVE PHASE

1. Increased groundwater vulnerability and potential for groundwater contamination - The proposed development will not result in an increase of the quarry size from that previously approved. It will involve the extraction of material granted within existing quarry envelope planning (Ref No.051801). This will not increase groundwater vulnerability and potential for groundwater contamination.
2. Deterioration in surface water quality in the field drain close to the settlement ponds and further downstream in the Ballinagh Stream arising from sediment laden surface water run-off generated from the proposed development.
3. Deterioration in water quality locally arising from leakages and spillages from oil / diesel refuelling.
4. Deterioration in water quality locally arising from unsuitable discharge of wastewater effluent to groundwater.

CUMULATIVE IMPACTS

The potential for cumulative impacts arising from other significant existing or permitted infrastructure are assessed here. Cumulative impacts encompass the combined effects of multiple developments or activities on a range of receptors. Potential cumulative impacts associated with the existing and permitted significant infrastructure within the same water catchments as the proposed development should be considered.

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

Cavan County Development Plan

Planning policy at the local level is provided by the Cavan County Development Plan 2022–2028. This plan contains a number of policies relevant to the ecology and nature conservation in Co. Cavan. These are summarised below:

Policy / Objective NHEP1 - To protect, conserve, manage, enhance and safeguard natural amenity assets and natural heritage features for future generations while maximising their recreational, amenity and tourism potential for the present generation by resisting development that could have a negative impact.

NHEP₂ - To maximise the social, economic and environmental benefits that may be derived from the conservation and management of Cavan's Natural Heritage and green infrastructure.

NHEP₄ - To protect, manage, conserve and seek to enhance the County's biodiversity.

NHEP₅ - To integrate biodiversity consideration into all County activities through the County Biodiversity Action Plan process.

NHEP₆ - To ensure the protection of species of flora and fauna afforded legal protection under Irish and European Legislation.

NHEP₇ - To assess the impact of biodiversity of proposals for large developments, particularly those on Greenfield sites, or in environmentally sensitive areas. Such developments must include measures for the enhancement and protection of biodiversity.

NHEO₂ - To promote the conservation of biodiversity outside of designated areas, including features such as wetlands, woodlands, hedgerows and uplands.

Future Plans / Other Projects

The Cavan County Council planning map tool was used to identify any future plans or projects in the Ardkill More area which may potentially impact in combination with the proposed works on the designated sites identified. A search was made for applications in Ardkill More / Cavan within the last five years. In this time, five other applications were granted permission, as follows:

- 19227 - To extend existing quarrying facility on a site of c 10.25 hectares (existing quarry permitted under Cavan County Council Reg. Ref. 051801, 1162 and Quarry Registration No. QY7). This pertains to a previous application on the current site. This application was screened for AA, and potential significant effects were ruled out.
- 19487 – Construction of a replacement bungalow. This development was screened for AA within the Cavan County Council's planner's report.
- 20207 – Construction of a dwelling house. This development was screened for AA within the Cavan County Council's planner's report.
- 20222 - To complete extraction of material granted within existing quarry envelope as per previously approved planning (Ref No. 051801) for a 10 year lifespan of the quarry &

all associated site works. This pertains to a previous application on the current site. This application was screened for AA, and potential significant effects were ruled out.

- 22155 - Construction of a dwelling house. This development was screened for AA within the Cavan County Council's planner's report.

In relation to current and future planning applications, Cavan County Council, as the competent authority, will screen each application for AA. Any new application will be examined and the requirement for screening for AA (NIS) will be determined on a case by case basis to comply with the requirements of Article 6 of the Habitats Directive. Therefore, it is not considered that there will be any significant adverse in combination effects with the proposed works and any other development.

In summary, it is considered that with the implementation of effective mitigation (see Section 5) to avoid/negate any potential adverse impacts, there will be no potential for cumulative impacts arising in combination with any other plans or project which would be of significance in respect of impacts affecting the conservation objectives or integrity of Lough Oughter and Associated Loughs SAC and the Lough Oughter Complex SPA.

5 MITIGATION MEASURES

In order to protect certain designated sites and species and in order to avoid any reductions in water quality in the area surrounding the proposed development site, a number of site-specific mitigation measures have been recommended and these must be implemented and followed. Many of these measures have been incorporated into the plan, but for the purpose of AA are considered mitigation.

The implementation of these measures will ensure the protection of Natura 2000 habitats and species that are downstream of the site.

Pre-Development

- Prior to the commencement of any site works, the applicant and the contractors must be made aware of the overall sensitivity of this site. They must be made familiar with the overall content of this NIS and they must be made aware of the mitigation measures contained in this NIS and accompanying EIAR.
- Site preparation and construction should be confined to the development site only and should adhere to the particulars laid out in the plan for submissions, and all the mitigation measures outlined in this NIS and the accompanying EIAR.
- Work areas must be kept to the minimum area required to carry out the proposed works and the area must be clearly marked out in advance of the proposed works.

Initial Construction Phase of Settlement Pond

- Prior to the commencement of soil excavation to facilitate the new settlement pond, silt fencing will be placed downslope of the proposed area. This will be embedded into the local soils to ensure all site water is captured and filtered.
- Daily monitoring of the soil stripping/landscaping earthworks will be completed by a suitably qualified person.
- All necessary preventative measures will be implemented to ensure no entrained sediment, or deleterious matter will enter the downstream receiving waters.
- Soil stripping and landscaping works will be scheduled for periods of low rainfall (summer months) to reduce run-off and potential siltation.
- The Construction Industry Research and Information Association (CIRIA) provides guidance on the control and management of water pollution from construction sites (Control of Water Pollution from Construction Sites, guidance for consultants and contractors, CIRIA, 2001). This guidelines will be followed in full and this will ensure that

surface water arising during the course of soil stripping and landscaping activities will contain minimum sediment.

Operation / Extraction Phase

- No untreated water will discharge directly to the watercourse. All such water will pass through the settlement pond followed by discharge to the nearby watercourse. The discharge water quality from the settlement pond will be monitored on an annual basis. Discharge volumes will be continuously monitored at the discharge point location as per the current Discharge License requirements (Ref: SS/WW004/18).
- A sampling and analysis programme of the discharge from the settlement pond prior to discharge to the watercourse will be in place.
- John Nulty Ltd. will inform the Cavan County Council of any exceedances.
- A logbook will be maintained, noting all transactions associated with the proposed oil/water separator, settlement pond and other details as required.
- Weekly visual examination of the oil/water separator, settlement pond and the receiving watercourse will be carried out by a competent person. All inspection findings will be recorded in the logbook.
- Routine servicing and maintenance of the oil/water separator and settlement ponds will be carried out. A record of all service and maintenance will be maintained in the logbook. This will include the frequency of the work and the name of the person and or company carrying out the work.
- John Nulty Ltd. will provide and maintain a sampling location prior to discharge to the watercourse and direct access to the sampling location will be available at all reasonable times to personnel authorised by Cavan County Council.
- All sludges generated at the oil/water separator and settlement pond will be disposed of taking cognisance of the relevant Waste Management Regulations. A record of all sludges removed from the oil/water separator and silt in the settlement pond will be kept in the logbook noting the date, volumes removed and name of waste contractor involved.
- Sources of hydrocarbons are and will be located within safely bunded areas that safely contain all spillages and prevent the migration of contaminants into the underlying bedrock aquifer.
- Refuelling of quarry plant will only take place in designated bunded refuelling area which drains to an oil water separator. All discharge from the development area will

pass through the proposed impermeable lined settlement pond, to be being released into the receiving surface water drain.

- The domestic wastewater from the site will continue to be discharged via the existing on site-septic tank and percolation area which complies with the EPA guidelines 2021.

RECEIVED: 18/05/2023

6 APPROPRIATE ASSESSMENT CONCLUSION

This current NIS has been undertaken to evaluate the potential impacts of the proposed development with regard to the effects upon the conservation objectives and qualifying interests (including the habitats and species) of the Lough Oughter and Associated Loughs SAC and the Lough Oughter Complex SPA. It is considered that following mitigation, that the proposed project does not have the potential to significantly affect the conservation objectives of these aforementioned Natura 2000 sites and the integrity of these sites as a whole will not be adversely impacted.

The qualifying interests of the site and their potential to be impacted upon from the potential development were listed in Section 4.2. It is considered that these potential impacts can be successfully mitigated against. With implementation of the mitigation measures there will be no deterioration in water quality or impacts upon natural eutrophic lakes, there will be no loss or disturbances to any habitat that is used by the otter and there will be no direct or indirect impacts upon the bird species that use the lake.

In light of the above, it is considered that the proposed works do not have the potential to significantly affect the conservation objectives or qualifying interests of Lough Oughter and Associated Loughs SAC and the Lough Oughter Complex SPA. The integrity of the site will not be adversely affected. Table 7 follows the integrity of the SAC / SPA checklist, which shows that the integrity of the site would not be affected by the proposed development.

Conservation Objective: Does the project have the potential to:	Yes / No
Cause delays in progress towards achieving the conservation objectives of the site?	N
Interrupt progress towards achieving the conservation objectives of the site?	N
Disrupt those factors that help to maintain the favourable conditions of the site?	N
Interfere with the balance, distribution and density of key species that are the indicators of the favourable condition of the site?	N
Other Objectives: does the project have the potential to:	
Cause changes to the vital defining aspects (e.g. nutrient balance) that determine how the site functions as a habitat or ecosystem?	N
Change the dynamics of the relationships (between, for example, soil and water or plants	N

and animals) that define the structure and/or function of the site?	
Interfere with predicted or expected natural changes to the site (such as water dynamics or chemical composition)?	N
Reduce the area of key habitats?	N
Reduce the population of key species?	N
Change the balance between key species?	N
Reduce diversity of the site?	N
Result in disturbance that could affect population size or density or the balance between key species?	N
Result in fragmentation?	N
Result in loss or reduction of key features (e.g. tree cover, tidal exposure, annual flooding, etc.)	N

Table 7 – Integrity of Site Checklist (From NPWS, Information Checklist for AA, Box 6, EC (2002))

APPENDIX I - REFERENCES AND FURTHER READING

Boland, H. & Crowe, O. 2012. Irish Wetland Bird Survey: waterbird status and distribution 2001/02 – 2008/09. BirdWatch Ireland, Kilcoole, Co. Wicklow.

Bowers Marriott, B. (1997) Practical Guide to Environmental Impact Assessment: A Practical Guide. Published by McGraw-Hill Professional, 1997, 320 pp.

Department of the Environment, Heritage and Local Government (2009) Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities.

Dwyer, (2000) *Protecting Nature in Ireland, The NGO Special Areas of Conservation Shadow List*. Published by the Irish Peatland Conservation Council, Meath.

EPA (2001) Parameters of Water Quality - Interpretation and Standards. Environmental Protection Agency, Ireland.

EPA (2002) *Guidelines on the Information to be contained in Environmental Impact Statements*. Environmental Protection Agency, Ireland.

EPA (2003) *Advice Notes on Current Practice in the Preparation of Environmental Impact Statements*. EPA, Wexford, Ireland.

Fossit, J.A. (2000) *A Guide to Habitats in Ireland*. The Heritage Council, Kilkenny.

Institute of Environmental Assessment (1995) *Guidelines for Baseline Ecological Assessment*. Institute of Environmental Assessment, Great Britain.

IUCN (2003) *Red List of Threatened Species*. International Council for Conservation of Nature and Natural Resources.

Natura Environmental Consultants (2005) Draft Habitat Survey Guidelines: A Standard Methodology for Habitat Survey and Mapping in Ireland. The Heritage Council, Kilkenny.

NPWS (2019) The Status of EU Protected Habitats and Species in Ireland. Species Assessments Volume 3. Version 1.0. Unpublished Report, National Parks & Wildlife Services. Department of Arts, Heritage and the Gaeltacht, Meath, Ireland.

NPWS (2012) Article 12 Reports on the Status of SPA Bird Species in Ireland

NPWS (2021) Conservation Objectives: Lough Oughter and Associated Loughs SAC 000007. Version 1. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage

NRA (2004) *Guidelines for Assessment of Ecological Impacts of National Road Schemes*. National Roads Authority, Meath.

Reid, N., Hayden, B., Lundy, M.G., Pietravalle, S., McDonald, R.A. & Montgomery, W.I. (2013). National Otter Survey of Ireland 2010/12. Irish Wildlife Manuals No. 76. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht, Dublin, Ireland.

Smith, G.F., O'Donoghue, P., O'Hora, K. and Delaney, E. (2010) Best Practice Guidance for habitat survey and mapping. The Heritage Council, Kilkenny. Available at: www.heritagecouncil.ie/wildlife/publications/

Wearn, O. & Glover-Kapfer, P. (2019) Snap happy: camera traps are an effective sampling tool when compared with alternative methods. 6, Royal Society Open Science.

Whilde, A. (1993) *Threatened Mammals, Birds, Amphibians and Fish in Ireland*. Irish Red Data Book 2: Vertebrates. HMSO, Belfast.