

ENVIRONMENTAL IMPACT ASSESSMENT SCREENING REPORT

AT

ARDKILL MORE & DRUMCROW

CARRICKABOY

CO. CAVAN



Prepared for

John Nulty Ltd

Prepared by

Traynor Environmental Ltd

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Belturbet Business Park,

Creeny.

Belturbet,

Co Cavan

T: + 353 49 9522236

E: nevin@traynorenv.com

www.traynorenvironmental.ie



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This report refers, within the limitations stated, to the condition of the site at the time of the report. No warranty is given as to the possibility of future changes in the condition of the site. The report as presented is based on the information sources as detailed in this report, and hence maybe subject to review in the future if more information is obtained or scientific understanding changes.

	CONTENTS	PAGE
1.0	INTRODUCTION	5
1.1	EIA Screening Legislation and Guidance	7
1.2	Screening Methodology	7
1.3	Contributors to the EIA Screening Report	9
2.0	SCREENING EVALUATION	10
2.1	Is The Development A Project	10
2.2	Is The Development A Project That Requires a Mandatory EIA	10
2.3	Is The Project Above the Threshold For EIA	11
2.4	Conclusion – Sub Threshold Development and Requirement for EIA	11
3.0	CHARACTERISTICS OF PROPOSED DEVELOPMENT	12
3.1	Size And Design of The Proposed Development	12
3.2	Cumulation With Other Existing or Permitted Development	13
3.2.1	Population	14
3.2.2	Permitted Development	15
3.3	Use Of Natural Resources (Land, Soil, Water, Biodiversity)	16
3.3.1	Land and Soil	16
3.3.2	Water Consumption	17
3.3.3	Biodiversity	17
3.4	Production Of Waste	17
3.5	Pollution And Nuisances	18
3.6	Production of Waste	19
3.7	Risk Of Major Accidents and/or Disasters	19
3.7.1	Landslides, Seismic Activity and Volcanic Activity	19
3.7.2	Flooding/Sea Level Rise	19
3.7.3	Major Accidents/Hazards	20
3.7.4	Minor Accidents/Leaks	20
3.8	Risks To Human Health	20
4.0	LOCATION AND CONTEXT OF THE PROPOSED DEVELOPMENT	22
4.1	Existing and approved land use	22
4.2	Relative abundance, availability, quality, and regenerative capacity of natural resources in the area and its underground	22
4.2.1	Land Use	22
4.2.2	Hydrogeology	23
4.2.3	Soils	24
4.2.4	Quaternary Sediments	25
4.2.5	Bedrock Geology	26
4.2.6	Hydrology	26
4.2.7	Flood Risk	28
5.0	TYPES AND CHARACTERISTICS OF POTENTIAL IMPACTS	29
5.1	Population And Human Health	31
5.1.1	Construction Phase	31
5.1.2	Operational Phase	31
5.2	Land, Soils, Geology, Hydrogeology, Hydrology	32
5.2.1	Construction Phase	32
5.2.2	Operational Phase	34
5.3	Biodiversity	36

	5.3.1	Construction Phase	36
	5.3.2	Operational Phase	37
5.4		Air Quality and Climate	38
	5.4.1	Construction Phase	38
	5.4.2	Operational Phase	39
5.5		Noise And Vibration	40
	5.5.1	Construction Phase	40
	5.5.2	Operational Phase	41
5.6		Landscape And Visual Impact	41
	5.6.1	Construction Phase	41
	5.6.2	Operational Phase	42
5.7		Cultural Heritage, And Archaeology	42
	5.7.1	Construction Phase	42
	5.7.2	Operational Phase	43
5.8		Traffic And Transportation	44
	5.8.1	Construction Phase	44
	5.8.2	Operational Phase	44
5.9		Material Assets, Including Waste Management	45
	5.9.1	Construction Phase	45
	5.9.2	Operational Phase	46
5.10		Potential Impacts from Interactions	47
5.11		Potential Cumulative Impacts	47
6.0		FINDINGS AND CONCLUSION	50

1.0 INTRODUCTION

Traynor Environmental Ltd. has prepared the following Environmental Impact Assessment ('EIA') Screening Report for a proposed development at Ardkill More and Drumcrow, Carrickaboy, Co. Cavan for John Nulty Limited (the Applicant'). The development description is as follows:

"for a 20-year permission for quarrying and extraction of rock that will include drilling, blasting, crushing and screening along with alterations to boundaries & all associated site works. 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 Environmental Impact Assessment Report (EIAR) and a Natura Impact Statement (NIS) have been prepared and accompanies this application, significant further information has been received."

The proposed surface-water management arrangements have subsequently been revised in response to the Further Information request. The revised development provides for a new settlement and attenuation pond and associated drainage infrastructure, including oil-water interception, flow control, flow monitoring, shut-off arrangements and an additional controlled discharge point. The existing QY7 drainage system and licensed discharge arrangement will remain operational and hydraulically separate from the proposed development drainage system. The assessment contained within this Screening Report is based on the development as revised by the Further Information response.

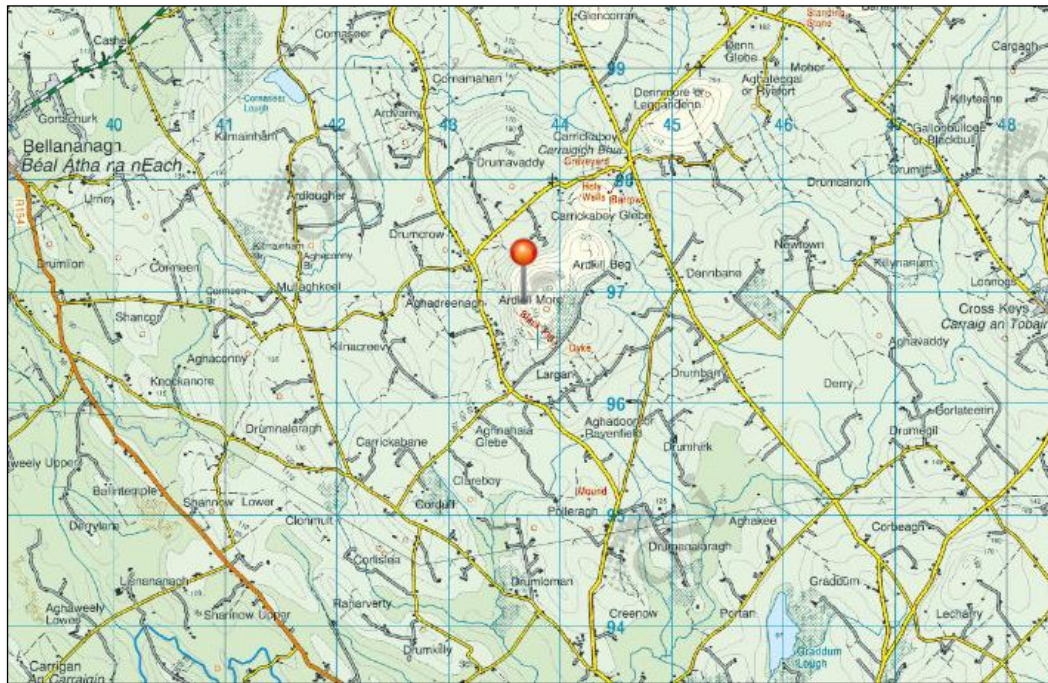
This report has been completed in response to a request for further information from An Coimisiún Pleanála, which reads as follows:

"Item 6 - Revised drawings/application documentation, including EIAR/AA Screening/NIS which reflect any changes resulting from a response to the items of further information".

This EIA Screening Report has been prepared retrospectively at the request of An Coimisiún Pleanála in connection with the current appeal. A full Environmental Impact Assessment Report (EIAR) was prepared and submitted with the original planning application. The red-line application area associated with the proposed development comprises approximately 3.53 ha and therefore, when considered in isolation, does not exceed the 5-hectare threshold specified under Schedule 5, Part 2, Class 2(b) of the Planning and Development Regulations 2001, as amended. However, the proposed development does not comprise an isolated new quarry development.

It relates to the continuation and completion of extraction within the established John Nulty Ltd quarry complex, which extends over a substantially larger quarry area and has previously been subject to Environmental Impact Assessment. The proposal also provides for a 20-year operational period, continued extraction and deepening of the quarry, the permanent removal of a finite geological resource, and the provision of new surface-water management and settlement infrastructure. In deciding to prepare an EIAR, regard was therefore had not simply to the 3.53 ha application area in isolation, but to the characteristics of the proposed development, its relationship with the wider established quarry, the sensitivity of the receiving environment and the potential for direct, indirect and cumulative effects. In particular, potential effects associated with surface water and groundwater, biodiversity and downstream European sites, population and human health, dust, noise and vibration, traffic, landscape, cultural heritage and the cumulative operation of the wider quarry required detailed assessment. Having regard to the criteria contained in Schedule 7 of the Planning and Development Regulations 2001, as amended, it was considered that significant effects on the environment could not be excluded at screening stage.

The proposed development was therefore screened in for Environmental Impact Assessment and a full EIAR was prepared and submitted with the planning application. The purpose of this retrospective Screening Report is to formally document that screening rationale and to provide the information required under Schedule 7A, having regard to the criteria contained in Schedule 7.



The purpose of this report is to provide the information required under Schedule 7A, having regard to the criteria set out in Schedule 7, and to retrospectively document the EIA Screening assessment for the proposed development. The report has been prepared at the request of An Coimisiún Pleanála notwithstanding that a full EIAR had previously been prepared and submitted with the planning application.

1.1 EIA SCREENING LEGISLATION AND GUIDANCE

- Directive 2011/92/EU of the European Parliament and of the Council on the assessment of the effects of certain public and private projects on the environment, as amended by Directive 2014/52/EU.
- Planning and Development Act 2000, as amended.
- Planning and Development Regulations 2001, as amended.
- European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 (S.I. No. 296 of 2018).
- Guidelines on the Information to be Contained in Environmental Impact Assessment Reports, Environmental Protection Agency, May 2022.
- Environmental Impact Assessment Screening – Practice Note PN02, Office of the Planning Regulator.
- Guidelines for Planning Authorities and An Bord Pleanála on Carrying out Environmental Impact Assessment, Department of Housing, Planning and Local Government, August 2018.
- Environmental Impact Assessment of Projects – Guidance on Screening, European Commission, 2017.

- Environmental Impact Assessment of Projects – Guidance on the Preparation of the Environmental Impact Assessment Report, European Commission, 2017.
- Interpretation of Definitions of Project Categories of Annex I and II of the EIA Directive, European Commission, 2024.

The national requirements to provide an EIA with a planning application are outlined in *Planning and Development Act 2000 as amended* (the Act') and *Planning and Development Regulations, 2001 as amended* ('the Regulations'). In addition to the national legislation there are requirements set out in the EIA Directive (Directive 2011/92/EU as amended by 2014/52/EU); for relevant purposes, the EIA Directive has been transposed into Irish planning legislation through amendments to the Act and the Regulations.

This includes: the criteria set out in Schedule 7 of the Regulations; the information set out at Schedule 7A; any further relevant information on the characteristics of the development and its likely significant effects on the environment submitted by the applicant; any mitigation measures proposed by the applicant; the available results, where relevant, of preliminary verifications or assessments carried out under other relevant EU environmental legislation, including information submitted by the applicant on how the results of such assessments have been taken into account, and; the likely significant effects on certain sensitive ecological sites.

The screening process followed in this report is in accordance with the EIA Directive 2011/92/EU of the European Parliament and of the Council as amended by 2014/52/EU and as transposed by the Act and the Regulations and follows the format as per Section 3.2 of the EPA Guidelines (2022). The potential for significant effects of the proposed Project has been considered against the criteria under Schedule 7 of the *Planning and Development Regulations, 2001 as amended*. In producing this report due regard has been paid to other EIA guidance including the European Commission's 2017 *EIA of Projects Guidance on Screening* as well as the published *Guidelines for Planning Authorities* and the OPR Practice Note PN02 Environmental Impact Assessment Screening.

Preliminary Screening for EIA

The Planning and Development Regulations 2001 (as amended) provide for the preliminary examination for EIA. The Departmental Guidelines (August 2018) state as follows in relation to such a preliminary examination:

"For all sub-threshold developments listed in Schedule 5 Part 2, where no EIAR is submitted or EIA determination requested, a screening determination is required to be undertaken by the competent authority unless, on preliminary examination it can be concluded that there is no real likelihood of significant effects on the environment. This is initiated by the competent authority following the receipt of a planning application or appeal.

1.2 SCREENING METHODOLOGY

The screening process followed in this report is in accordance with the EIA Directive 2011/92/EU of the European Parliament and of the Council as amended by 2014/52/EU and follows the format as per Section 3.2 of the EPA Guidelines (2022).

The key steps to screen for an EIA are set out in Section 3.2 of the EPA Guidelines are as follows:

1. Is the development a type that requires EIA?
2. Is it of a type that requires mandatory EIA?
3. Is it above the specified threshold?
4. Is it a type of project that could lead to effects? and/or
5. Is it a sensitive location? and/or
6. Could the effects be significant?

The information required to be submitted to make a determination on EIA Screening is set out in Schedule 7A of the Regulations of 2001 (see also Annex IIA of the EIA Directive).

However, it is important to note that Schedule 7A states 'The compilation of the information at paragraphs 1 to 3 [of Schedule 7A] shall take into account, where relevant, the criteria set out in Schedule 7.' Having regard to this for the purposes of compiling the relevant information on the likely effects of the proposed development and to address points 4 to 6 above, an evaluation of the characteristics of the project, the sensitivity of the location of the proposed development, and the potential for significant impacts has been made with regard to Schedule 7 of the Regulations.

Schedule 7 of the Regulations of 2001 sets out the criteria to determine whether a development would or would not be likely to have significant effects on the environment. The criteria are broadly set out under the three main headings:

1) *Characteristics of proposed development (Section 3.0)*

- a) *the size and design of the whole of the proposed development,*
- b) *cumulation with other existing development and/or development the subject of a consent for proposed development for the purposes of section 172(1A) (b) of the Act and/or development the subject of any development consent for the purposes of the Environmental Impact Assessment Directive by or under any other enactment,*
- c) *the nature of any associated demolition works,*
- d) *the use of natural resources, in particular land, soil, water, and biodiversity,*
- e) *the production of waste,*
- f) *pollution and nuisances,*
- g) *the risk of major accidents, and/or disasters which are relevant to the project concerned, including those caused by climate change, in accordance with scientific knowledge, and*
- h) *the risks to human health (for example, due to water contamination or air pollution).*

2) *Location of proposed development (Section 4.0)*

- a. *the existing and approved land use,*
- b. *the relative abundance, availability, quality, and regenerative capacity of natural resources (including soil, land, water, and biodiversity) in the area and its underground,*
- c. *the absorption capacity of the natural environment, paying particular attention to the following areas:*
 - i. *wetlands, riparian areas, river mouths.*
 - ii. *coastal zones and the marine environment.*
 - iii. *mountain and forest areas.*
 - iv. *nature reserves and parks.*
 - v. *areas classified or protected under legislation, including Natura 2000 areas designated pursuant to the Habitats Directive and the Birds Directive and.*
 - vi. *areas in which there has already been a failure to meet the environmental quality standards laid down in legislation of the European Union and relevant to the project, or in which it is considered that there is such a failure.*
 - vii. *densely populated areas.*
 - viii. *landscapes and sites of historical, cultural, or archaeological significance.*

3) *Types and Characteristics of Potential Impacts (Section 5)*

The likely significant effects on the environment of proposed development in relation to criteria set out under paragraphs 1 and 2, with regard to the impact of the project on the factors specified in paragraph (b)(i)(I) to (V) of the definition of 'environmental impact assessment report' in section 171A of the Act, taking into account—

- a. *the magnitude and spatial extent of the impact (for example, geographical area and size of the population likely to be affected),*
- b. *the nature of the impact,*
- c. *the transboundary nature of the impact,*
- d. *the intensity and complexity of the impact,*

- e. *the probability of the impact,*
- f. *the expected onset, duration, frequency, and reversibility of the impact,*
- g. *the cumulation of the impact with the impact of other existing and/or development the subject of a consent for proposed development for the purposes of section 172(1A) (b) of the Act and/or development the subject of any development consent for the purposes of the Environmental Impact Assessment Directive by or under any other enactment, and*
- h. *the possibility of effectively reducing the impact.*

However, it is important to note that Schedule 7A states 'The compilation of the information at paragraphs 1 to 3 [of Schedule 7A] shall take into account, where relevant, the criteria set out in Schedule 7.' The main body of this report (Sections 3.0, 4.0 and 5.0) will cover Schedule 7A fully, but it has been set out to present the information under the headings provided for in Schedule 7 in order to assist the Planning Authority in its screening assessment.

1.3 CONTRIBUTORS TO THE EIA SCREENING REPORT

This EIA Screening Report has been informed by the environmental assessments, technical reports, drawings and other documentation prepared for the proposed development, including the relevant mitigation measures identified therein. The preparation and coordination of this Screening Report has been undertaken by Traynor Environmental Ltd., with reliance placed, where appropriate, on specialist input provided by the project design team and environmental specialists. This Screening Report should therefore be read in conjunction with the plans, particulars and environmental documentation submitted in respect of the proposed development.

2.0 SCREENING EVALUATION

2.1 IS THE DEVELOPMENT A PROJECT

The first step in screening is to examine whether the proposal is a project as understood by the EU Directive. For the purposes of the EU Directive, 'project' means: *"the execution of construction works or of other installations or schemes, or other interventions in the natural surroundings and landscape including those involving the extraction of mineral resources."*

The EPA Guidance (2022) states that if a proposed project is not of a type covered by the Directive, there is no statutory requirement for it to be subject to environmental impact assessment. In determining if the proposed project is of a type covered by the Directive it may be necessary to go beyond the general description of the project and to consider the component parts of the project and/or any processes arising from it.

If any such parts or processes are significant and, in their own right fall within the class of development covered by the Directive, the proposed Project as a whole may fall within the requirements of the Directive.

Each element of the proposed development has been examined and the development clearly meets the definition of a Project as understood by the EU Directive.

2.2 IS THE DEVELOPMENT A PROJECT THAT REQUIRES A MANDATORY EIA

The next step is to determine whether the proposed development falls within a class of development listed in Schedule 5, Part 1 or Part 2 of the Planning and Development Regulations 2001, as amended, and whether the relevant threshold for mandatory EIA is exceeded.

Having regard to the nature of the proposed development and its component parts, the relevant class under Part 2 of Schedule 5 is:

2. Extractive Industry

(b) Extraction of stone, gravel, sand or clay, where the area of extraction would be greater than 5 hectares.

The immediate application area at Nulty's Quarry comprises approximately 3.53 hectares. Accordingly, when considered in isolation, the proposed development does not exceed the 5-hectare threshold specified under Class 2(b). The proposed development is therefore considered to be a sub-threshold development for the purposes of EIA Screening.

A sub-threshold development may nevertheless require Environmental Impact Assessment where it would be likely to have significant effects on the environment, having regard to the criteria set out in Schedule 7.

Although the immediate application area comprises approximately 3.53 ha, the proposed development cannot be considered solely as an isolated 3.53 ha quarry development. The application relates to the continuation of extraction within the established John Nulty Ltd quarry complex, which extends over a larger area, shares existing quarry infrastructure and operational arrangements and has previously been subject to Environmental Impact Assessment.

Accordingly, regard has been had to the nature, scale and 20-year duration of the proposed activities; the continued extraction and deepening within the established quarry; the permanent removal of approximately 500,000 tonnes of a finite geological resource; the new settlement pond and drainage infrastructure; hydrological connectivity to downstream receptors; and the potential for direct, indirect and cumulative effects arising in combination with the existing quarry operation.

Having regard to these characteristics and to the Schedule 7 criteria, significant environmental effects could not be excluded at screening stage. The proposed development was therefore screened in for Environmental Impact Assessment and a full EIA was prepared.

2.3 IS THE PROJECT ABOVE THE THRESHOLD FOR EIA

No. The relevant threshold under Schedule 5, Part 2, Class 2(b) of the Planning and Development Regulations 2001, as amended, is extraction of stone, gravel, sand or clay where the area of extraction would be greater than 5 hectares.

The immediate application area comprises approximately 3.53 ha and therefore does not, when considered in isolation, exceed this threshold. The proposal is consequently treated as sub-threshold development for the purposes of this EIA Screening assessment.

The fact that the numerical threshold is not exceeded does not, however, remove the requirement to consider whether the proposed development may be likely to have significant effects on the environment having regard to the Schedule 7 criteria.

2.4 CONCLUSION – SUB-THRESHOLD DEVELOPMENT AND REQUIREMENT FOR EIA

The proposed development falls within Schedule 5, Part 2, Class 2(b) of the Planning and Development Regulations 2001, as amended. The immediate application area is approximately 3.53 ha and therefore does not, when considered in isolation, exceed the 5-hectare threshold for mandatory EIA.

Notwithstanding its sub-threshold status, the proposal forms part of an established quarry complex rather than representing an isolated new 3.53 ha development. The proposed works comprise the continuation and completion of extraction within the existing quarry envelope over a further 20-year period, including deepening of extraction to 175 mOD, extraction of approximately 500,000 tonnes of rock and the provision of new settlement, attenuation and drainage infrastructure.

The screening assessment has therefore had regard to the characteristics of the development as a whole and to its relationship with the existing quarry operation. Relevant considerations include:

- the scale and 20-year duration of the proposed extraction activities;
- the permanent and irreversible removal of a finite geological resource;
- the relationship with, and cumulative operation of, the wider established quarry complex;
- the potential for effects on surface water and groundwater, including sediment and hydrocarbon pathways;
- the hydrological connection to the Ballinagh Stream and downstream European sites;
- the permanent alteration of a limited area of grassland associated with the proposed settlement pond;
- potential effects associated with drilling, blasting, crushing, screening, dust, noise and vibration;
- potential effects on nearby residential receptors, traffic, landscape and cultural heritage; and
- the potential for interactions and cumulative environmental effects.

Having regard to the nature, scale, location and duration of the proposed development, its relationship with the wider quarry operation and the criteria set out in Schedule 7, it was considered that significant effects on the environment could not be excluded at screening stage.

Accordingly, notwithstanding that the 3.53 ha application area does not exceed the numerical 5 ha threshold, the proposed development was screened in for Environmental Impact Assessment and a full EIA was prepared.

3.0 CHARACTERISTICS OF PROPOSED DEVELOPMENT

This section addresses the characteristics of proposed development by describing the physical characteristics of the whole proposed development and a description of the location of the proposed development.

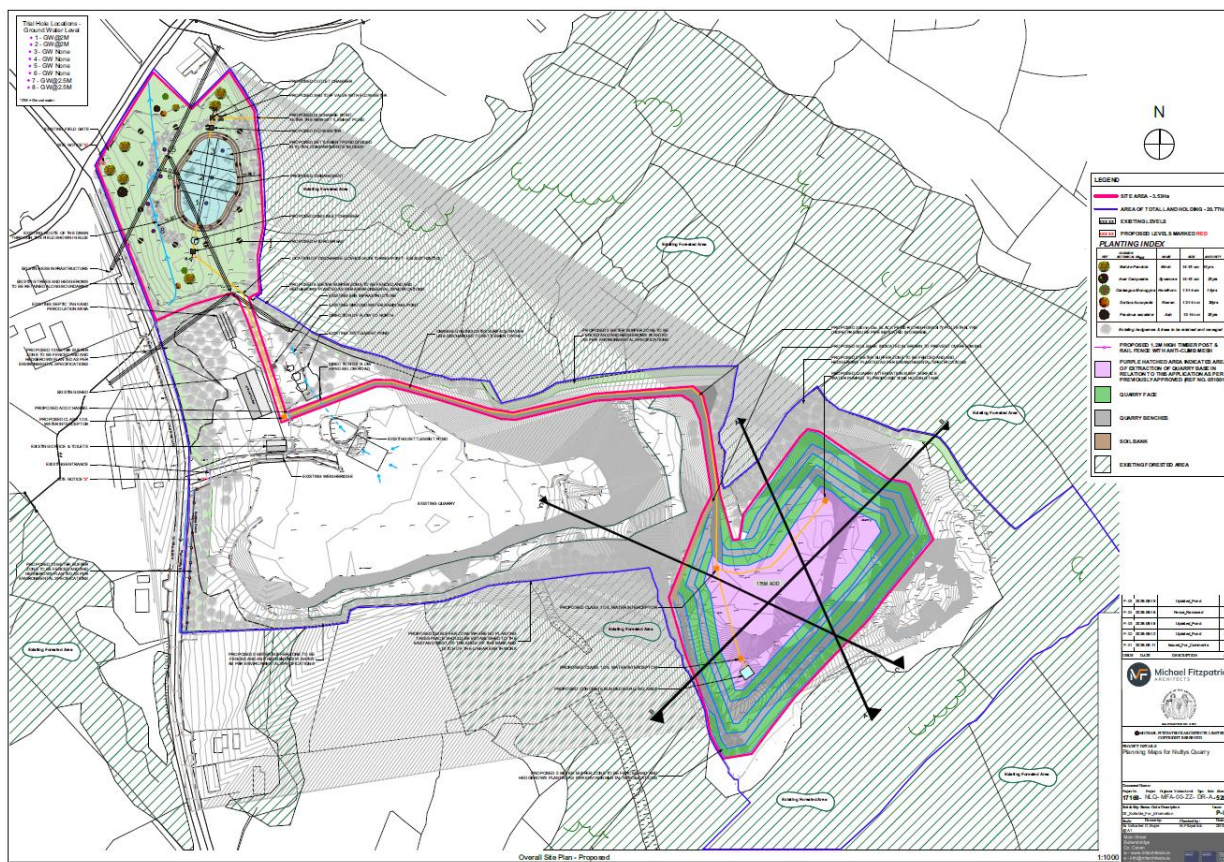


Figure 3.1 –Revised Site Layout the Proposed Development

3.1 SIZE AND DESIGN OF THE PROPOSED DEVELOPMENT

The red-line application area comprises approximately 3.53 hectares and is located within the townlands of Ardkill More and Drumcrow, County Cavan. The site forms part of the established John Nulty Ltd quarry complex and is located approximately 7 km south-west of Cavan Town along the L2517 Cavan to Kilnaleck road. Ballinagh and Kilnaleck are located approximately 4.5 km to the west and 6.3 km to the south-east of the site respectively.

The wider receiving environment is predominantly rural and agricultural in character. Surrounding lands comprise agricultural land together with detached residential properties and farmsteads located principally to the east and west of the quarry. Commercial premises operated by Breffni Air are located to the west of the site along the L2517. Residential development within the wider area generally comprises one-off rural housing and farmsteads, with some ribbon development along the local road network. Further details of the surrounding population and human receptors are provided within Chapter 4 – Population and Human Health of the EIAR.

The proposed development does not represent the establishment of a new standalone quarry. The application area forms part of the wider established John Nulty Ltd quarry complex and the proposal provides for the continuation and completion of extraction within the existing quarry envelope over a proposed 20-year permission period.

The proposed development includes drilling, blasting, crushing and screening of rock and the progressive deepening of the quarry from its current floor level of approximately 209 mOD to approximately 175 mOD. Approximately 500,000 tonnes of

material will be extracted over the proposed 20-year period, corresponding to an average extraction rate of approximately 25,000 tonnes per annum and a maximum annual extraction rate of approximately 50,000 tonnes.

The proposed development also includes the construction and operation of a new settlement pond and associated surface-water management infrastructure, together with an additional controlled discharge arrangement and ancillary landscaping, restoration and reprofiling works.

Quarrying undertaken to date has altered the natural topography of the site and resulted in the formation of an established quarry void. Existing ground levels within the quarry range from approximately 209 mOD at the existing quarry floor to approximately 248 mOD along the eastern part of the site. Continued extraction to approximately 175 mOD will result in the further permanent alteration of the landform and removal of a finite geological resource.

The proposed development will operate as part of the wider established quarry complex and will utilise existing quarry infrastructure, including the established site access, processing activities and ancillary facilities. Existing infrastructure and activities located outside the red-line application boundary have therefore been considered, where relevant, in assessing the potential cumulative and interacting environmental effects of the proposed development.

The immediate application area of approximately 3.53 ha does not, when considered in isolation, equal or exceed the 5 ha threshold applicable to quarries and open-cast mining under Schedule 5, Part 2, Class 2(b) of the Planning and Development Regulations 2001, as amended. However, the proposed development cannot appropriately be considered solely as an isolated 3.53 ha quarry development. It forms part of a larger established quarry complex which has previously been subject to Environmental Impact Assessment and provides for the continuation of quarrying activities over a further 20-year period.

Accordingly, in determining the requirement for EIA, regard was had not only to the size of the immediate application area but also to the nature and scale of the proposed extraction, the permanent alteration of the landform, the duration and intensity of quarrying activities, the relationship with the wider established quarry operation and the potential for cumulative and interacting environmental effects.

Having regard to these characteristics, together with the environmental sensitivity of the receiving environment considered in Section 4, significant effects on the environment could not reasonably have been excluded at the screening stage solely on the basis that the immediate application area was below the applicable 5 ha threshold. These considerations supported the decision to undertake Environmental Impact Assessment and prepare a full EIA.

3.2 CUMULATION WITH OTHER EXISTING OR PERMITTED DEVELOPMENT

The potential for cumulative effects with other existing and permitted development has been considered having regard to the nature, scale and location of the proposed development and the characteristics of the surrounding receiving environment.

Of particular importance is the relationship between the proposed development and the wider established John Nulty Ltd quarry complex. Although the immediate red-line application area comprises approximately 3.53 ha, the proposed development does not represent an isolated new quarry development. It provides for the continuation and completion of extraction within an established quarry complex and will operate in conjunction with existing quarry activities and infrastructure. The proposed development will utilise established access arrangements, quarry plant and processing activities, ancillary infrastructure and environmental-management arrangements associated with the wider quarry operation. The existing ponds serving the existing QY7 Registered quarry are located outside the red-line application boundary but form part of the wider quarry environment and have therefore been considered, where relevant, in the assessment of cumulative effects. Accordingly, the potential environmental effects of the proposed development cannot appropriately be considered solely by reference to the 3.53 ha application area in isolation. Regard is required to be had to the combined and cumulative effects of the proposed development together with the existing quarry operation.

Potential cumulative effects may arise in relation to, inter alia:

- Continued alteration of the landform and extraction of the geological resource;
- Surface-water drainage, treatment and discharge;
- Potential interaction with groundwater;
- Dust and particulate emissions;
- Noise, blasting vibration and air overpressure;
- Quarry-related HGV and other traffic movements;
- landscape and visual effects;
- effects on biodiversity and downstream ecological receptors; and
- combined effects on nearby residential and other sensitive receptors.

The potential for cumulative effects with other existing, permitted or reasonably foreseeable development in the surrounding area has also been considered where a potential temporal or environmental interaction could arise.

At the EIA Screening stage, the relationship between the proposed development and the wider established quarry complex was an important consideration in determining whether significant effects on the environment could reasonably be excluded. While the immediate application area is below the applicable 5 ha EIA threshold when considered in isolation, the characteristics and potential effects of the proposed development required consideration in the context of the wider quarry operation and the cumulative effects associated with the continuation of quarrying over the proposed 20-year permission period.

In particular, the potential for cumulative and interacting effects in relation to land and geology, surface water, groundwater, biodiversity, dust, noise, vibration and traffic meant that significant environmental effects could not reasonably have been excluded solely on the basis of the size of the red-line application area. The potential for cumulative effects was therefore one of the principal considerations supporting the decision to undertake Environmental Impact Assessment and prepare a full EIA.

3.2.1 Population

The review of population is based on the electoral divisions of Cavan, in which the application site is located. The change in population from 2016 to 2022, as per Census 2022 for the electoral divisions, the county, the province, and the state is outlined below.

Census 2022 results show that Ireland's population stood at 5,123,536 in April 2022, an increase of 361,671 (7.6%) since April 2016. The population of County Cavan stood at 81,201, an increase of 6.6% over the five years. With regard to population growth in the surrounding counties of the proposed development Table 3.1 provides a summary.

Table 3.1 Population for state, regions, counties, hinterland 2011, 2016, 2022

Region and County	Population				Share of total population %		
	2011	2016	2022	Change 16 – 22 %	2011	2016	2022
Border	392.0	394.3	419.5	6.4	8.5	8.3	8.1
Cavan	73.2	76.2	81.7	7.2	1.6	1.6	1.6
Donegal	161.1	159.2	167.1	5.0	3.5	3.3	3.2
Leitrim	31.8	32.0	35.2	10.	0.7	0.7	0.7
Monaghan	60.5	61.4	65.3	6.3	1.3	1.3	1.3
Sligo	65.4	65.5	70.2	7.2	1.4	1.4	1.4
Midland	282.4	292.3	318.0	8.8	6.2	6.1	6.2

3.2.2 Permitted Development

The Site is within the administrative jurisdiction of Cavan County Council.

The planning history for the Site of the Proposed Development was reviewed from data sources including:

- Cavan County Council planning website, <https://www.cavancoco.ie/>
- An Bord Pleanála website, <http://www.pleanala.ie/>.
- EIA Portal, as provided by the Department of Housing, Planning and Local

Please refer to Table 3.2 detailing the planning history within the overall quarry site.

Table 3.2 Planning History of the Site.

Reg. No	Applicant name and Development address	Proposed Development	Decision
647325	Sean Nulty	Quarry production of stone asphalt tarmacadam plant, storage and office accommodation, carpark and machinery repair workshop	Granted with Conditions
97166	John Nulty Ltd	Erect offices, material testing laboratory, canteen, toilets, store and machinery work-shop, the provision of weigh-bridge, wheel wash facility and 2 no. Mobile crushers	Granted with Conditions
Cavan coco: 051801 ACP: PL 02.219928	John Nulty Limited	include additional 3.37 hectares of land within the existing quarry envelope - planning reg. no. 7325 ¹ & 97/166, new entrance onto county road and all ancillary site works	Cavan coco: Granted with Conditions post F.I. ACP: Granted (Conditional)
1162	John Nulty Ltd.	Retention to retain and complete partially constructed structure and all ancillary works at quarry development. The structure will be used as a conveyor system to transfer crushed materials from the upper levels to the quarry floor. The site is within the vicinity of a registered monument CV031-004, the Worm Ditch or Black Pig's Race.	Granted with Conditions
Cavan coco 19227 ACP: ABP-306803-20	John Nulty	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). The development will consist of the inclusion of an additional extraction of 1.04 hectares to the southeast boundary. The quarry extension is sought to a maximum depth of c. 40 metres od and will be extracted at a rate of c. 50,000 tonnes per annum. The proposed development includes all ancillary site development, areas of stockpiling, landscaping and boundary treatment works above and below ground, including the progressive restoration of the site. An Environmental Impact Assessment Report (EIA) will be submitted to the planning authority with the application. Significant further information and revised plans have been submitted	Cavan coco: Granted with Conditions ACP: Refused

Cavan coco 20222 ACP: ABP- 310961-21	John Nulty Ltd	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. Significant further information and revised plans have been submitted which includes the submission of an Environmental Impact Assessment Report (EIAR)	Cavan coco Granted with Conditions ACP: Refused
Cavan coco 2360027 ACP: ABP- 319457-24	John Nulty Ltd	for a 20-year permission for quarrying and extraction of rock that will include drilling, blasting, crushing and screening along with alterations to boundaries & all associated site works. 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 Klargest 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 Environmental Impact Assessment Report (EIAR) and a Natura Impact Statement (NIS) have been prepared and accompanies this application, significant further information has been received	Cavan coco: Granted with Conditions ACP: Appealed

Note: The development description above reflects the application as originally submitted. The surface-water management arrangements have subsequently been revised through the Further Information response. The environmental assessment contained within this Screening Report considers the proposed development as revised.

3.3 USE OF NATURAL RESOURCES (LAND, SOIL, WATER AND BIODIVERSITY)

The proposed development will involve the continued use of natural resources, principally through the extraction of the existing geological resource within the established quarry complex. The development will also interact with land and soils through excavation and permanent alteration of the quarry landform and with water and biodiversity through the construction and operation of the proposed surface-water management infrastructure and the continuation of quarrying activities.

The proposed development provides for the extraction of approximately 500,000 tonnes of rock over a proposed 20-year permission period, with extraction progressing to a quarry floor level of approximately 175 mOD. The extraction of rock represents the permanent and irreversible use of a finite, non-renewable geological resource.

The scale and duration of extraction, together with the potential interactions with land, soils, groundwater, surface water and biodiversity, are therefore relevant considerations in determining the potential for significant effects on the environment.

3.3.1 Land and Soil

The principal use of land and geological resources will arise from the continuation and completion of extraction within the established quarry complex. Quarrying will result in the permanent removal of geological material and the continued alteration of the existing quarry landform.

Construction of the proposed settlement pond and associated drainage infrastructure will also require localised excavation of soil and subsoil within the northern part of the site to form the pond footprint, side slopes and associated works.

Excavated soil, subsoil and other materials will be appropriately managed during construction. Where suitable material can lawfully be retained and reused within the site, it may be used for landscaping, reprofiling, reinstatement or restoration works. Any material that cannot lawfully or suitably be retained or reused will be managed in accordance with applicable waste-management requirements.

Construction materials will also be required for the settlement pond, drainage infrastructure and associated works. The quantities involved will be limited relative to the overall quarry operation.

The principal effect on natural resources therefore arises from the permanent extraction of the rock resource rather than from the temporary use of soil and construction materials associated with the settlement pond works.

3.3.2 Water Consumption and Water Resources

Water will be required for the normal operational requirements of the quarry and associated ancillary activities, including dust suppression, wheel washing and general site use. Temporary water requirements may also arise during construction of the proposed settlement pond and drainage infrastructure.

The proposed settlement pond and associated drainage infrastructure are primarily intended to collect, attenuate, treat and manage surface-water runoff arising from the proposed development rather than to create a significant additional demand for water resources.

Notwithstanding the relatively limited consumptive demand for water, the proposed development has the potential to interact with the water environment through quarry drainage, surface-water runoff, potential groundwater interaction and controlled discharge to the receiving drainage network. The quality and sensitivity of surface-water and groundwater resources are therefore relevant considerations in the overall assessment of the use and protection of natural resources.

3.3.3 Biodiversity

The proposed development has the potential to interact with biodiversity through land disturbance associated with the settlement pond and ancillary works and indirectly through dust, noise, surface-water runoff, sediment mobilisation and potential accidental pollution.

Of particular relevance is the identified hydrological pathway between the site and the downstream surface-water network. Potential effects on water quality may therefore result in secondary effects on aquatic and other ecological receptors.

Appropriate habitat protection, pollution-prevention, surface-water management and restoration measures have subsequently been identified through the detailed environmental assessments contained within the EIA.

At the EIA Screening stage, having regard to the proposed 20-year duration of extraction, the permanent removal of approximately 500,000 tonnes of a finite geological resource, the continued alteration of the quarry landform and the potential interactions with groundwater, surface water and biodiversity, the use of natural resources represented an important consideration under the Schedule 7 criteria. These matters, particularly when considered in combination with the potential effects on the water environment and biodiversity, supported the requirement for detailed assessment within the EIA.

3.4 PRODUCTION OF WASTE

Waste will arise during both the construction/preparatory works and the operational phase of the proposed development.

Construction-related wastes will principally be associated with excavation and construction of the proposed settlement pond, drainage infrastructure and associated site works. Excavated soil, subsoil and other naturally occurring materials will be appropriately managed. Where suitable material can lawfully be retained and reused within the site, it may be used for appropriate landscaping, reprofiling, reinstatement or restoration purposes. Material that cannot lawfully or suitably be retained or reused will be removed by an appropriately authorised waste contractor and transferred to an appropriately authorised waste facility.

Other construction and operational wastes may include packaging, timber, cardboard, scrap metal, general waste, waste oils, oily rags, filters and other maintenance-related materials. Such wastes will be appropriately segregated and securely stored pending collection.

Suitably authorised waste contractors will be employed for the collection and transport of waste requiring removal from the site, with waste transferred to appropriately authorised recovery or disposal facilities.

The proposed settlement and oil-water interception infrastructure will also require periodic maintenance. Sediment, silt and interceptor wastes arising from maintenance activities will be appropriately characterised and managed in accordance with applicable waste-management requirements.

Having regard to the nature and anticipated quantities of waste generated and the established waste-management arrangements associated with the existing quarry, waste generation was not identified as a principal standalone factor giving rise to the requirement for EIA.

At the EIA Screening stage, however, the generation and management of excavated materials, sediment, hydrocarbon-related wastes and other quarry wastes required consideration, particularly because inappropriate handling or storage could result in secondary effects on land, soils, groundwater and surface water. Waste generation and management therefore formed part of the overall Schedule 7 assessment and was subsequently considered within the detailed EIA.

3.5 POLLUTION AND NUISANCES

The proposed development has the potential to give rise to pollution and nuisance during both the construction and operational phases. Potential sources include surface-water runoff, suspended solids and sediment, accidental releases of fuels or hydrocarbons, dust and particulate emissions, exhaust emissions, noise, vibration, air overpressure and traffic movements.

During construction of the proposed settlement pond and associated drainage infrastructure, potential pollution effects may arise from excavation and soil disturbance, sediment-laden runoff, operation of plant and machinery and accidental spills or leaks of fuels, oils or other potentially contaminating materials.

During the operational phase, drilling, blasting, crushing, screening, aggregate handling, movement of mobile plant and HGV movements have the potential to generate dust, noise, vibration, air overpressure and exhaust emissions. These activities will continue over the proposed 20-year permission period.

Surface-water management represents a particularly important potential pollution pathway. In the absence of appropriate controls, quarry runoff containing elevated concentrations of suspended solids or sediment, or accidental releases of fuels, oils or hydrocarbons, could potentially enter the local drainage network or groundwater environment and adversely affect downstream receptors.

The principal potential pollution and nuisance sources therefore include:

- Discharge of surface-water runoff containing suspended solids, sediment or hydrocarbons to the receiving surface-water environment;
- Accidental contamination of soils or groundwater by fuels, oils, hydraulic fluids or other potentially polluting substances;
- Generation of dust and particulate matter from drilling, blasting, crushing, screening, aggregate handling, exposed surfaces and vehicle movements;
- Generation of noise from quarry plant, processing activities and HGV movements;
- Vibration and air overpressure associated with blasting;
- Exhaust emissions from quarry plant, machinery and vehicles; and
- Temporary pollution and nuisance effects associated with construction of the settlement pond and drainage infrastructure.

The proposed development incorporates a range of measures intended to manage these potential effects, including settlement and attenuation infrastructure, oil-water interception, controlled surface-water discharge, pollution-prevention and spill-response procedures, dust suppression, controlled blasting, plant maintenance, traffic management and environmental monitoring. These measures were subsequently developed and assessed in detail as part of the EIA.

At the EIA Screening stage, however, and prior to the completion of the detailed environmental assessments and confirmation of the necessary mitigation and monitoring measures, significant effects arising from pollution and nuisance could not reasonably have been excluded. This was particularly relevant in relation to the potential for sediment, suspended solids or

hydrocarbons to affect the surface-water and groundwater environment and for dust, noise and blasting-related effects to affect nearby sensitive receptors.

Pollution and nuisance, particularly when considered in combination with the proposed 20-year duration of quarrying and the cumulative operation of the wider established quarry complex, were therefore important considerations in the overall Schedule 7 assessment and contributed to the decision to screen the proposed development in for Environmental Impact Assessment and to prepare a full EIA.

3.6 RISK OF MAJOR ACCIDENTS AND/OR DISASTERS

Having regard to the nature of the proposed development, consideration has been given to the potential vulnerability of the development to major accidents and/or disasters and to the potential for such events to result in significant effects on the environment.

The principal hazards relevant to the proposed development relate to quarrying activities, including blasting, operation of heavy plant and machinery, steep quarry faces, storage and handling of fuels and oils, accidental pollution events and extreme rainfall or flooding. Regard has also been had to natural hazards including landslides and seismic activity.

3.6.1 Landslides, Seismic Activity and Volcanic Activity

No recorded landslide events have been identified within the proposed development site. Having regard to the available information, existing quarry setting and local ground conditions, the risk of a naturally occurring landslide affecting the proposed development is considered low.

Ireland is an area of relatively low seismic activity and the risk of a significant seismic event affecting the proposed development is considered very low. Volcanic activity is not considered a relevant hazard in the context of the proposed development.

The continuation and deepening of quarry extraction will result in the ongoing formation and management of quarry faces. The stability of quarry faces and working areas will therefore continue to be managed through appropriate quarry-design, inspection and operational health and safety procedures.

3.6.2 Flooding and Extreme Rainfall

Potential flood risk has been considered through review of available historical flood information, OPW flood mapping, site topography and the local hydrological environment.

The site is located on elevated ground relative to the principal watercourses in the surrounding area and is not identified as being at significant risk of fluvial flooding. No recurring flood events have been identified within the proposed development boundary from the available OPW Past Flood Event Mapping.

Notwithstanding the low external fluvial flood risk, extreme rainfall represents a relevant consideration because rainfall and surface-water runoff can accumulate within the quarry workings and must be appropriately collected, managed, treated and discharged. Inadequate management during an extreme rainfall event could potentially result in uncontrolled runoff, elevated suspended solids or impacts on downstream surface-water receptors.

The proposed development therefore incorporates dedicated settlement, attenuation and controlled-discharge infrastructure. The detailed design and assessment of the surface-water management system, including allowance for climate change and extreme rainfall, is addressed within the Water and Climate assessments contained in the EIA.

Subject to implementation and maintenance of the proposed drainage and surface-water management measures, the proposed development is not predicted to materially increase flood risk elsewhere.

3.6.3 Major Accidents and Hazards

The proposed development is not considered to constitute a development with an inherently high risk of a major accident or disaster. Nevertheless, quarry operations involve hazards associated with drilling and blasting, operation of heavy plant and

machinery, steep quarry faces and the storage and handling of fuels, oils and other materials required for normal quarry operations.

Potential environmental consequences of an accident could include the release of fuels or hydrocarbons to soil, groundwater or surface water, uncontrolled discharge of sediment-laden water or effects associated with an abnormal blasting event.

These risks will be managed through established quarry operating procedures, appropriate health and safety controls, controlled blasting procedures, inspection and maintenance of quarry faces and plant, appropriate storage and handling of potentially polluting materials and emergency-response procedures.

3.6.4 Minor Accidents and Leaks

More likely accidental events comprise small-scale releases of fuel, oil or hydraulic fluid from plant and machinery, spills during refuelling or maintenance and localised releases associated with construction or operational activities.

In the absence of appropriate controls, such incidents could result in contamination of soils or, where a pathway exists, groundwater or surface water. This is particularly relevant having regard to the groundwater vulnerability and the identified hydrological connection between the site and the downstream surface-water network.

Potential risks will be managed through designated refuelling arrangements, appropriately bunded storage, spill-response equipment and procedures, routine inspection and maintenance of plant and machinery and prompt containment and clean-up of any accidental release. The proposed surface-water management system, including settlement and oil-water interception measures, will provide additional protection to the receiving water environment.

At the EIA Screening stage, the proposed development was not identified as being particularly vulnerable to major natural disasters such as flooding, seismic activity or landslides. However, the potential environmental consequences of quarry-related accidents, particularly accidental releases of fuels, oils, hydrocarbons or sediment to the groundwater or surface-water environment, required consideration as part of the Schedule 7 assessment.

Risk of major accidents and/or disasters was not identified as a principal standalone factor giving rise to the requirement for EIA. Nevertheless, the potential for accidental pollution to interact with the site's groundwater and surface-water environment contributed to the overall assessment of environmental risk and was subsequently examined in detail within the EIA.

3.7 RISKS TO HUMAN HEALTH

The European Commission (2017) Guidance on the preparation of Environmental Impact Assessment Reports recognises that human health is a broad and project-specific consideration and should be considered in the context of the other environmental factors identified in the EIA Directive. Environmentally related health considerations may include, amongst other matters, exposure to air pollutants, noise and vibration, contamination of water, traffic-related effects and risks associated with accidents or major hazards.

The EPA Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (2022) similarly recognise that the assessment of population and human health should be proportionate to the characteristics of the proposed development and should consider potential effects on matters such as residential amenity, employment, land use, access, noise, dust, water quality and health and safety.

Having regard to the characteristics of the proposed development, potential risks to population and human health may arise principally through environmental pathways associated with dust and air quality, noise and vibration, traffic movements, surface-water and groundwater quality and the operation of heavy plant and machinery.

During the operational phase, the proposed development will involve the continuation of quarry activities including drilling, blasting, crushing, screening, movement of mobile plant and HGV movements over a proposed 20-year permission period. These activities have the potential, in the absence of appropriate controls, to result in dust emissions, noise, vibration, air overpressure and traffic-related effects at nearby sensitive receptors.

Potential risks may also arise through the water environment. Quarrying, construction of the proposed settlement pond and drainage infrastructure, refuelling, plant maintenance and the management of surface-water runoff have the potential to result in the release of suspended solids, sediment, fuels, oils or hydrocarbons. Where a pathway exists, such contaminants could potentially affect surface-water or groundwater quality and result in secondary effects on human or ecological receptors.

The proposed development incorporates a range of measures intended to manage these potential risks, including settlement and surface-water management infrastructure, oil-water interception, controlled discharge arrangements, pollution-prevention and spill-response procedures, plant maintenance, dust suppression, traffic-management measures and controlled blasting procedures. These measures were subsequently examined and developed through the detailed environmental assessments undertaken as part of the EIA.

At the EIA Screening stage, however, and prior to completion of those detailed assessments and confirmation of the required mitigation and monitoring measures, the potential for effects on human health arising through dust, noise, vibration, traffic and particularly surface-water and groundwater pathways could not reasonably have been excluded.

The potential risks to human health were therefore relevant to the overall Schedule 7 assessment, particularly through their interaction with water, air quality, noise and vibration and traffic. While risks to human health were not identified as a standalone principal factor giving rise to the requirement for EIA, these potential pathways contributed to the overall conclusion that significant environmental effects could not reasonably have been excluded at the screening stage and supported the decision to prepare a full EIA.

4.0 LOCATION AND CONTEXT OF THE PROPOSED DEVELOPMENT

This section considers the location and environmental context of the proposed development having regard to the relevant criteria contained in Schedule 7 of the Planning and Development Regulations 2001, as amended. Particular regard has been had to the existing and approved land uses, the relative abundance, availability, quality and regenerative capacity of natural resources in the area and its underground, and the absorption capacity and environmental sensitivity of the receiving environment.

The proposed development is located within the established John Nulty Ltd quarry complex at Ardkill More and Drumcrow, Carrickaboy, County Cavan. While the immediate red-line application area comprises approximately 3.53 ha, the proposal forms part of a wider established quarry operation and must therefore be considered in the context of both the existing quarry and the surrounding receiving environment.

4.1 EXISTING AND APPROVED LAND USE

The application area is principally associated with the existing quarry and established extractive use. The proposed development provides for the continuation and completion of extraction within this established quarry complex, together with the construction and operation of a new settlement pond, associated drainage infrastructure and ancillary site works.

The wider surrounding area is predominantly rural in character and is principally associated with agricultural land uses. Habitats represented in the surrounding environment include agricultural grassland, hedgerows, treelines, areas of woodland and scrub and local drains and watercourses.

Residential properties, farmsteads and commercial premises are also present within the wider receiving environment and represent potential sensitive receptors in relation to environmental effects including noise, vibration, dust, traffic and water quality.

A detailed description and assessment of habitats and ecological receptors associated with the proposed development and surrounding area is provided within the Biodiversity assessment contained in the EIA.

The proposed development is therefore not considered as an isolated new land use within an undeveloped rural area. It represents the continuation of an established quarry use within a wider rural and agricultural environment containing a range of human, ecological and water-related receptors.

4.2 RELATIVE ABUNDANCE, AVAILABILITY, QUALITY AND REGENERATIVE CAPACITY OF NATURAL RESOURCES IN THE AREA AND ITS UNDERGROUND

4.2.1 Land Use

Available CORINE land-cover mapping identifies the wider area surrounding the proposed development as being predominantly agricultural in character. This broad-scale land-cover classification is consistent with the rural setting of Ardkill More and Drumcrow.

The application area itself, however, is substantially associated with the existing quarry environment and should be considered in the context of the established extractive use rather than solely by reference to the broad-scale CORINE agricultural land-cover classification.

The proposed development will result in the continuation and completion of extraction within the established quarry complex over a proposed 20-year permission period. Quarrying will result in the continued physical alteration of the landform and the

permanent removal of geological material. The proposed settlement pond and associated drainage infrastructure will also result in the alteration of a limited area of land associated with the proposed surface-water management system.

The permanent nature of mineral extraction and the finite and non-regenerative nature of the geological resource are relevant considerations under the Schedule 7 criteria. The potential effects on land must also be considered in conjunction with soils, geology, groundwater, surface water, biodiversity, landscape and the proposed restoration of the quarry.

At the EIA Screening stage, the established quarry land use, the proposed continuation of extraction over a further 20-year period, the permanent alteration of the landform and the removal of a finite geological resource formed part of the overall assessment of the characteristics and location of the proposed development. These considerations, particularly when considered together with the potential effects on water, hydrogeology, biodiversity and the wider quarry operation, supported the requirement for detailed assessment within the EIA.



Figure 4.1: Corine Landcover (2018)

4.2.2 Hydrogeology

Groundwater vulnerability represents the intrinsic geological and hydrogeological characteristics that determine the ease with which groundwater may become contaminated by human activities. Vulnerability is principally influenced by the type, permeability and thickness of the subsoil overlying the groundwater body and the nature of groundwater recharge.

According to the available EPA groundwater mapping, the proposed development site is classified as having Extreme (E) groundwater vulnerability. This classification indicates that groundwater beneath the site is potentially sensitive to contamination where pollutants are released at or near ground level and where a pathway to groundwater exists.

No mapped karst features have been identified within or immediately adjacent to the proposed development site from the available geological and groundwater information. The groundwater vulnerability classification for the proposed development site is presented in Figure 4.2.

The proposed development involves the continuation and completion of extraction within the established quarry complex, including progressive deepening of the quarry floor to approximately 175 mOD over the proposed 20-year permission period. The proposal also includes construction of a new settlement pond and associated surface-water management infrastructure.

These activities have the potential to interact with the groundwater environment. Potential effects include alteration of local groundwater levels or flow patterns associated with quarry deepening, groundwater inflow to the quarry workings, and potential effects on groundwater quality arising from accidental releases of fuels, oils, hydrocarbons or other contaminants. The relationship between groundwater and surface-water receptors is also relevant because changes in groundwater conditions may potentially influence downstream water-dependent receptors.

The proposed settlement pond and associated drainage infrastructure also require consideration in the context of the underlying groundwater environment, including the potential for interaction between retained surface water and groundwater. Appropriate design and pollution-prevention measures are therefore required to protect groundwater quality.

At the EIA Screening stage, having regard to the Extreme groundwater vulnerability classification, the proposed continuation and deepening of extraction to approximately 175 mOD, the proposed 20-year operational period and the potential for interaction between quarry activities, groundwater and the downstream surface-water environment, significant effects on the groundwater environment could not reasonably have been excluded without further detailed assessment.

Hydrogeology was therefore one of the principal environmental considerations supporting the decision to screen the proposed development in for Environmental Impact Assessment. The groundwater environment, its interaction with surface water and the potential for secondary effects on downstream receptors were subsequently subject to detailed hydrogeological and hydrological assessment within the EIA.

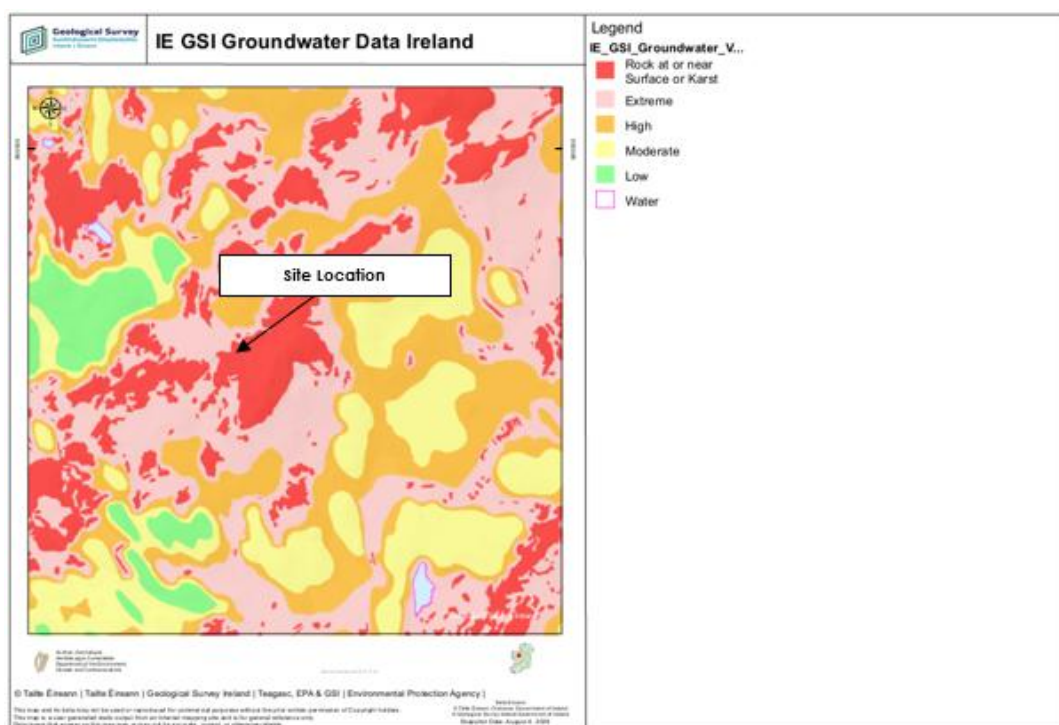


Figure 4.2: Groundwater Vulnerability

4.2.3 Soils

The "Teagasc Soils" from the EPA Mapping indicates the predominant soil type underlying the area to be Bedrock at surface Non calcareous (RckNcA) which is derived from mainly non-calcareous parent materials.

The Soil Cover map for the site is presented below Figure 4.3.



The quaternary geological period extends from about 1.5 million years ago to the present day and is sub divided into two epochs: the Pleistocene epoch, which covers the Ice Age period, and extends up to 10,000 years ago and the Holocene Epoch, which extends from that time to the present day. Information available on the EPA Online Mapping ("Quaternary Sediments") indicate that the site is classified as 'Rck, Bedrock outcrop or subcrop" (refer to Figure 4.4).



4.2.5 Bedrock Geology / Aquifer

The information obtained from the GSI Map indicates that the proposed development site is predominantly underlain by poor aquifer – Bedrock which is generally Unproductive except for Local Zones. The Bedrock geology for the proposed site is presented below in Figure 4.5.

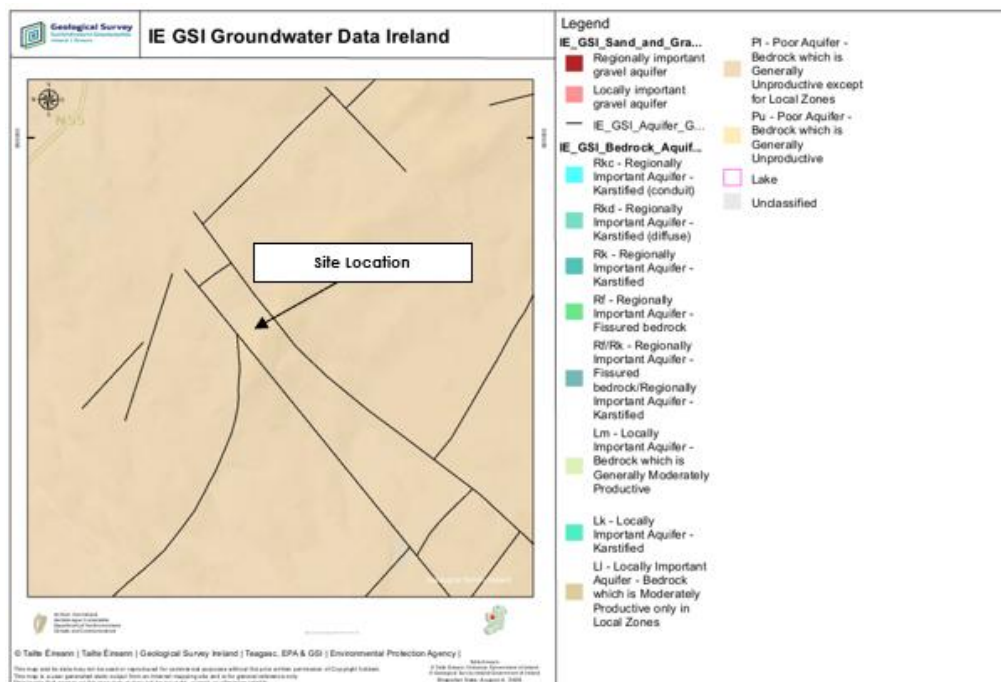


Figure 4.5: Bedrock Geology

4.2.6 Hydrology

The proposed development is located within the Erne Hydrometric Area and Catchment. The local surface-water drainage network ultimately forms part of the wider River Erne catchment.

A small watercourse is present along the perimeter of the field proposed for the settlement pond and associated surface-water management infrastructure. An existing field drain also bisects this field. These drainage features provide a hydrological pathway from the proposed development area to the downstream surface-water network.

Water from these features ultimately connects with the Ballinagh Stream, located approximately 1.2 km downstream and to the north-west of the application site. The Ballinagh Stream flows generally northwards through Ballinagh and Crossdoney before its eventual confluence with the River Erne at Legalana, approximately 14 km downstream of the application site.

The available EPA Water Framework Directive information identifies the Ballinagh Stream and its tributaries as being of Moderate ecological status, with Poor status recorded further downstream of Ballinagh. The River Erne in the vicinity of its confluence with the Ballinagh Stream is identified as being of Moderate status. These water bodies therefore represent sensitive downstream receptors in the context of the Water Framework Directive objective of protecting existing water-body status and achieving the applicable environmental objectives.

The presence of a hydrological connection between the proposed development and the Ballinagh Stream is an important consideration in the EIA Screening assessment. Quarrying and associated construction and operational activities have the potential, in the absence of appropriate controls, to generate surface-water runoff containing suspended solids, sediment or hydrocarbons. Such contaminants could potentially migrate through the local drainage network to downstream surface-water receptors.

The proposed development also includes new settlement, attenuation and associated surface-water management infrastructure, together with a controlled discharge arrangement. The potential effects associated with the collection, treatment and discharge of quarry water therefore required detailed consideration.

At the EIA Screening stage, having regard to the identified hydrological pathway, the existing ecological status of the receiving water bodies, the proposed continuation of quarrying over a 20-year period and the potential for sediment, suspended solids or accidental pollution to enter the surface-water network, significant effects on the receiving water environment could not reasonably have been excluded without further detailed assessment.

Hydrology was therefore one of the principal environmental considerations supporting the decision to screen the proposed development in for Environmental Impact Assessment. The potential for secondary effects on downstream ecological receptors further reinforced the requirement for detailed assessment within the EIA.

The main hydrological features associated with the site are presented in Figure 4.6.



Figure 4.6. Hydrological Features of the Area

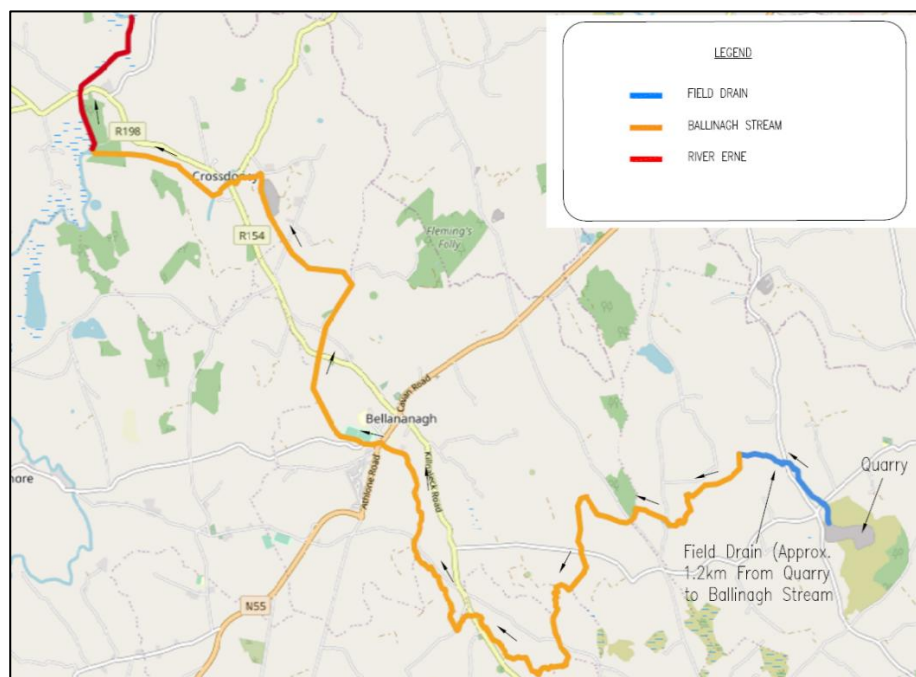


Figure 4.6.1 Surface Water Flow Map

4.2.7 Flood Risk

The OPW Flood Information Portal, including available Past Flood Event Mapping and National Indicative Fluvial Mapping, together with available historical Ordnance Survey mapping, was reviewed to identify potential flood-risk constraints relevant to the proposed development. No recurring flood events have been identified within the proposed development site boundary from the available OPW Past Flood Event Mapping. Available historical 6-inch and 25-inch mapping does not identify the proposed development site as lands liable to flooding.

The site is located on elevated ground relative to the principal watercourses in the surrounding area and is not identified as being within an area of significant fluvial flood risk. Having regard to the available flood mapping, site topography and the nature of the surrounding drainage environment, the proposed development is considered to be located within Flood Zone C in respect of fluvial flooding.

Notwithstanding the low fluvial flood risk, surface-water management is an important consideration for the proposed development. Rainfall and surface-water runoff accumulating within the quarry extraction area will require appropriate collection, attenuation, treatment and controlled discharge. The proposed development therefore includes dedicated surface-water management infrastructure, including the proposed settlement pond and associated drainage and discharge arrangements.

Potential groundwater interaction associated with the continued deepening of the quarry has also been considered as part of the hydrogeological assessment. Surface-water and groundwater conditions, including the management of quarry water and the potential effects of extreme rainfall events, are assessed in detail within Chapter 7 – Water of the EIA.

At the EIA Screening stage, while the site was not identified as being at significant risk from external fluvial flooding, the potential effects associated with extreme rainfall, accumulation of water within the quarry, surface-water management and potential groundwater interaction required further consideration. These matters formed part of the overall assessment of hydrology and hydrogeology and contributed to the requirement for detailed assessment within the EIA.

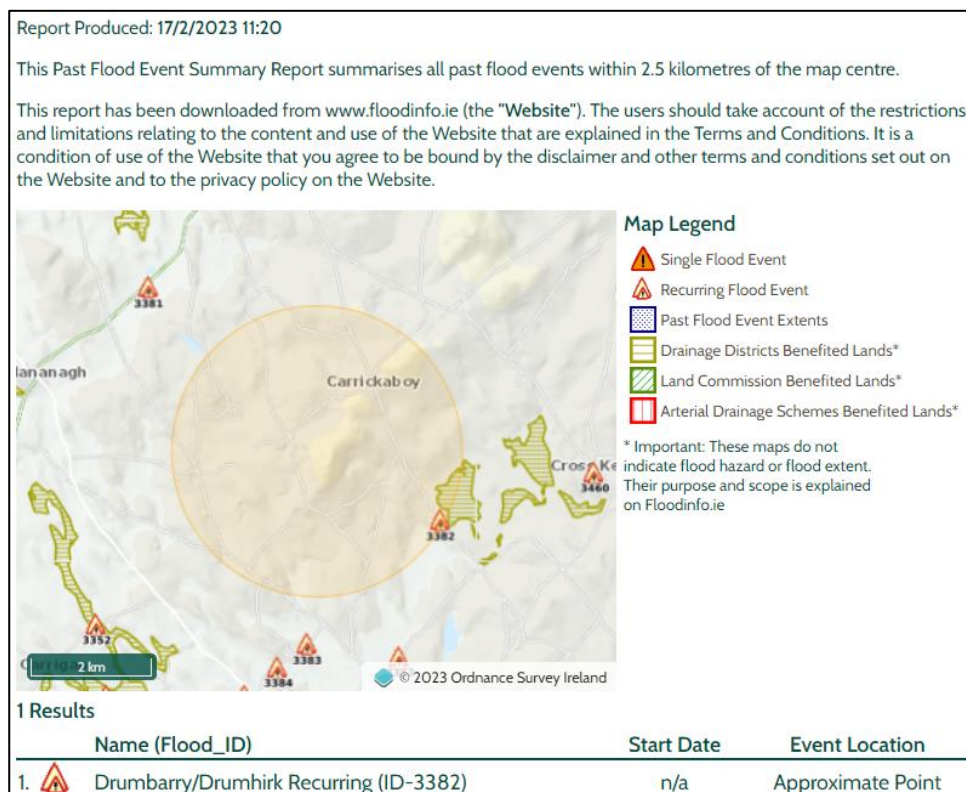


Figure 4.7. OPW's Flood Map

5.0 TYPES AND CHARACTERISTICS OF POTENTIAL IMPACTS

For the avoidance of doubt, the purpose of this retrospective EIA Screening Report is to consider whether likely significant effects on the environment could have been excluded at the EIA screening stage. References within this section to mitigation measures and residual effects reflect the findings of the detailed environmental assessments subsequently undertaken as part of the EIA.

The fact that significant adverse residual effects are not predicted following detailed assessment and the implementation of appropriate mitigation and monitoring measures does not alter the screening-stage conclusion. At the screening stage, and prior to the completion of those detailed assessments, significant effects on the environment could not reasonably have been excluded. Accordingly, the proposed development was screened in for Environmental Impact Assessment and a full EIA was prepared.

This section considers the types and characteristics of the potential effects of the proposed development on the environment, having regard to the characteristics of the proposed development and the environmental sensitivity of its location, as considered in the preceding sections of this Screening Report. The assessment has been undertaken having regard to the relevant criteria set out in Schedule 7 and the information requirements of Schedule 7A of the Planning and Development Regulations 2001, as amended.

Regard has also been had to the potential effects of the proposed development on the environmental factors specified in section 171A of the Planning and Development Act 2000, as amended, including population and human health; biodiversity; land, soil, water, air and climate; material assets, cultural heritage and the landscape; and the interaction between these factors.

Particular consideration has been given to the magnitude and spatial extent of potential effects, their nature, duration, frequency and reversibility, the potential for cumulative effects, and the possibility of effects on environmentally sensitive receptors.

The quality, significance, extent, probability and duration of potential effects are described, where applicable, using the terminology contained in the **EPA Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (2022). The relevant descriptive terminology is reproduced in Table 5.1 below.

In applying these criteria, regard has been had to the fact that the proposed development comprises a sub-threshold application area of approximately 3.53 ha but forms part of a wider established quarry complex and provides for the continuation and completion of extraction over a proposed 20-year period. The potential for direct, indirect, interacting and cumulative effects has therefore been considered as part of the overall screening assessment rather than considering the application area solely as an isolated development.

Table 5.1 Description of Effects

Characteristic	Term	Description
Quality of Effects It is important to inform the non-specialist reader whether an effect is positive, negative, or neutral	Positive	A change which improves the quality of the environment (for example, by increasing species diversity, or improving the reproductive capacity of an ecosystem, or by removing nuisances or improving amenities).
	Neutral	No effects or effects that are imperceptible, within normal bounds of variation or within the margin of forecasting error.
	Negative/Adverse	A change which reduces the quality of the environment (for example, lessening species diversity or diminishing the reproductive capacity of an ecosystem, or damaging health or property or by causing nuisance).

Describing the Significance of Effects 'Significance' is a concept that can have different meanings for different topics – in the absence of specific definitions for different topics the following definitions may be useful (also see Determining Significance).	Imperceptible	An effect capable of measurement but without significant consequences.
	Not significant	An effect which causes noticeable changes in the character of the environment but without significant consequences.
	Slight Effects	An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.
	Moderate Effects	An effect that alters the character of the environment in a manner that is consistent with existing and emerging baseline trends.
	Significant Effects	An effect, which by its character, magnitude, duration, or intensity alters a sensitive aspect of the environment.
	Very Significant	An effect which, by its character, magnitude, duration, or intensity significantly alters most of a sensitive aspect of the environment.
	Profound Effects	An effect which obliterates sensitive characteristics
Describing the Extent and Context of Effects Context can affect the perception of significance. It is important to establish if the effect is unique or, perhaps, commonly, or increasingly experienced.	Extent	Describe the size of the area, the number of sites, and the proportion of a population affected by an effect.
	Context	Describe whether the extent, duration, or frequency will conform or contrast with established (baseline) conditions (is it the biggest, longest effect ever?)
Describing the Probability of Effects Descriptions of effects should establish how likely it is that the predicted effects will occur so that the CA can take a view of the balance of risk over advantage when making a decision	Likely Effects	The effects that can reasonably be expected to occur because of the planned project if all mitigation measures are properly implemented.
	Unlikely Effects	The effects that can reasonably be expected not to occur because of the planned project if all mitigation measures are properly implemented.

Characteristic	Term	Description
Describing the Duration and Frequency of Effects Duration 'is a concept that can have different meanings for different topics – in the absence of specific definitions for different topics the following definitions may be useful.	Momentary Effects	Effects lasting from seconds to minutes
	Brief Effects	Effects lasting less than a day
	Temporary Effects	Effects lasting less than a year
	Short-term Effects	Effects lasting one to seven years.
	Medium-term Effects	Effects lasting seven to fifteen years
	Long-term Effects	Effects lasting fifteen to sixty years
	Permanent Effects	Effects lasting over sixty years

	Reversible Effects	Effects that can be undone, for example through remediation or restoration
	Frequency of Effects	Describe how often the effect will occur. (Once, rarely, occasionally, frequently, constantly – or hourly, daily, weekly, monthly, annually)

5.1 POPULATION AND HUMAN HEALTH

The assessment of population and human health considers the potential for the proposed development to affect the local community, nearby residential receptors, commercial activities and other users of the surrounding area. Particular regard has been had to potential effects arising through changes in air quality, noise and vibration, traffic and road safety, surface-water and groundwater quality and the interaction of these environmental factors.

The surrounding area is predominantly rural in character, comprising agricultural land, detached residential properties and farmsteads, together with a number of commercial activities. The principal sensitive human receptors comprise residential properties located in the surrounding area and other premises and road users that may potentially be affected by quarry-related activities.

5.1.1 Construction Phase

Construction activities will principally relate to the proposed settlement pond, drainage infrastructure and associated site works. Potential temporary effects on population and human health may arise from construction noise, dust, vibration, vehicle movements and the operation of construction plant and machinery.

Potential effects may also arise through environmental pathways associated with surface water and groundwater. Excavation and soil disturbance have the potential to generate sediment-laden runoff, while accidental spills or leaks of fuels, oils or other potentially contaminating materials could affect water quality if not appropriately controlled.

These potential effects will be managed through appropriate construction working hours, dust-control measures, noise and vibration controls, traffic management, pollution-prevention measures and management of construction runoff and excavated materials.

Subject to implementation of the identified construction controls and mitigation measures, significant adverse residual effects on population and human health during the construction phase are not predicted.

At the EIA Screening stage, however, and prior to the detailed assessment and identification of the required mitigation measures, potential effects on nearby human receptors arising from construction noise, dust, traffic and particularly surface-water and groundwater pathways could not be considered entirely in isolation. The potential for these effects to interact and result in secondary effects on population and human health was therefore relevant to the overall Schedule 7 assessment.

5.1.2 Operational Phase

During the operational phase, the proposed development will involve the continuation and completion of extraction activities within the established Nulty Quarry complex over a proposed 20-year permission period. Operational activities will include drilling, blasting, crushing, screening, movement and operation of quarry plant and HGV movements.

Potential effects on nearby residential and other sensitive human receptors may therefore arise from dust, noise, vibration, air overpressure, traffic movements and the operation of quarry plant. The duration of the proposed development and the potential for these effects to occur in combination were relevant considerations in assessing the potential effects on population and human health.

Potential effects may also arise through surface-water and groundwater pathways. Quarry runoff containing suspended solids or sediment, or accidental releases of fuels, oils or hydrocarbons, could adversely affect water quality if not appropriately controlled. The potential for effects on water quality is particularly relevant because environmental effects arising through the water environment may result in secondary effects on human and ecological receptors.

The proposed development therefore incorporates dedicated surface-water management infrastructure, including settlement and attenuation measures, oil-water interception, controlled discharge arrangements and associated monitoring and maintenance provisions. These measures, together with appropriate pollution-prevention procedures, are intended to protect the receiving water environment.

Operational dust, noise and vibration effects will similarly be managed through established quarry operating procedures, dust suppression, controlled blasting practices, appropriate operating controls, maintenance of plant and machinery and environmental monitoring. Quarry-related traffic will continue to use the established site access and will be managed in accordance with the traffic and road-safety measures identified within the detailed assessment.

The continued operation of the quarry will also provide socio-economic benefits through the retention of existing employment and continued economic activity associated with the quarry and its supply chain. These beneficial effects have been considered alongside the potential adverse environmental effects.

Subject to implementation of the mitigation, operational-control and monitoring measures identified within the EIA, significant adverse residual effects on population and human health are not predicted.

At the EIA Screening stage, however, the potential effects on population and human health could not be assessed solely by considering any individual environmental factor in isolation. Regard was required to be had to the proposed continuation of quarrying over a further 20-year period and to the potential combined effects of dust, noise, blasting vibration and air overpressure, HGV movements and potential surface-water and groundwater contamination on nearby human receptors.

Population and human health was therefore an important receptor within the overall Schedule 7 assessment, particularly through its interaction with water, air quality, noise and vibration and traffic. While population and human health was not identified as a standalone principal factor giving rise to the requirement for EIA, the potential for these interacting effects on human receptors contributed to the conclusion that significant environmental effects could not reasonably have been excluded at the screening stage and supported the decision to prepare a full EIA.

5.2 LAND, SOILS, GEOLOGY, HYDROGEOLOGY, HYDROLOGY

5.2.1 Construction Phase

The proposed development has the potential to affect land, soils, geology, groundwater and surface water during both the construction and operational phases. These environmental factors are particularly relevant to the EIA Screening having regard to the excavation and permanent removal of geological material, construction of the proposed settlement pond and drainage infrastructure, continued deepening of the quarry, alteration of surface-water drainage patterns and the potential for sediment, suspended solids or hydrocarbons to enter the receiving water environment. Potential interactions with biodiversity and downstream ecological receptors have also been considered.

Potential for Increased Sediment and Runoff from Excavation and Soil Handling

Earthworks and excavations will be required during the construction phase, principally to facilitate construction of the proposed settlement pond, drainage infrastructure and associated site works. These works will involve excavation and disturbance of soil and subsoil and may involve excavation of stone or bedrock where encountered.

Construction activities have the potential to temporarily alter local surface-water drainage patterns and to increase the rate of runoff from areas of exposed or disturbed ground. Excavation, soil handling, stockpiling and movement of construction plant may also result in the mobilisation of sediment and suspended solids.

Excavated material will be appropriately managed during construction. Where suitable material can lawfully be retained and reused within the site, it may be used for landscaping, reprofiling, reinstatement or restoration works. Any material that cannot lawfully or suitably be retained or reused will be managed in accordance with applicable waste-management requirements.

Movement and handling of excavated materials will be minimised where practicable. Excavations will remain open for the minimum period necessary and stockpiles will be appropriately located and managed to minimise erosion, dust generation and the mobilisation of sediment.

Stockpiles of soil, overburden and construction aggregate have the potential to affect air and water quality if inadequately managed. Stockpiles will therefore be located, where practicable, away from surface-water drainage pathways and will be appropriately managed to minimise erosion and sediment-laden runoff.

In the absence of appropriate controls, excavation and soil-disturbance activities have the potential to result in increased sediment and suspended-solid loading in surface-water runoff and potentially affect groundwater or downstream surface-water receptors. Appropriate earthworks, drainage and pollution-prevention measures will therefore be required during construction.

Subject to implementation of the identified construction controls and mitigation measures, significant adverse residual effects arising from sediment mobilisation and construction runoff are not predicted.

Potential for Contamination from Accidental Spills and Leaks

Construction activities will involve the use of plant and machinery and may involve the temporary storage and use of fuels, oils and other potentially contaminating materials. Accidental spills or leaks have the potential to contaminate soils and, where a pathway exists, migrate to groundwater or surface-water receptors.

Potential effects could arise from accidental releases of fuels, oils, hydraulic fluids or other construction-related substances and from contaminated runoff generated within working areas. In the absence of appropriate controls, such releases could adversely affect soil, groundwater and surface-water quality.

Construction works will therefore be undertaken in accordance with appropriate pollution-prevention and good-practice measures. Fuels, oils and other potentially polluting materials will be appropriately stored and managed, plant and machinery will be maintained in good condition, and appropriate spill-response equipment and procedures will be available.

The construction works will be undertaken having regard to relevant good-practice guidance for the control of water pollution from construction activities.

Subject to implementation of appropriate pollution-prevention measures, significant adverse residual effects on soils, groundwater or surface water arising from accidental spills or leaks are not predicted.

Dewatering, Runoff and Sediment Loading

Excavation, site preparation and construction of the proposed settlement pond and drainage infrastructure have the potential to generate water containing elevated concentrations of suspended solids. Sources may include exposed ground, excavations, stockpiles, temporary working areas and vehicle access routes.

Where dewatering of excavations is required, uncontrolled discharge of silty or contaminated water could adversely affect surface-water quality or, depending on local ground conditions, groundwater.

Construction water will therefore be appropriately managed and treated prior to discharge. Where dewatering is required, water will be passed through appropriate sediment-control measures, such as settlement arrangements or silt-control systems, before discharge. No untreated silty or contaminated construction water will be permitted to discharge directly to a receiving watercourse or surface-water drainage system.

Subject to implementation of the identified construction-stage water-management and pollution-prevention measures, significant adverse residual effects arising from dewatering, runoff or sediment loading are not predicted.

At the EIA Screening stage, however, and prior to the detailed assessment of the site drainage, groundwater conditions, receiving water environment and the identification of the required mitigation measures, significant effects associated with excavation, sediment mobilisation, altered runoff, dewatering and accidental pollution could not reasonably have been excluded.

The potential for effects on surface water and groundwater, together with the potential for secondary effects on biodiversity and downstream ecological receptors, was therefore one of the principal environmental considerations supporting the decision to screen the proposed development in for Environmental Impact Assessment and to prepare a full EIA.

5.2.2 Operational Phase

During the operational phase, potential effects on land, soils, geology, hydrogeology and hydrology principally relate to the continued extraction and deepening of the quarry, the permanent removal of geological material, management of groundwater and surface-water runoff, potential changes to the local drainage regime and the risk of accidental release of suspended solids, sediment, fuels or hydrocarbons.

The proposed development provides for the continuation and completion of extraction within the established quarry complex over a proposed 20-year permission period. Approximately 500,000 tonnes of rock will be extracted, with the quarry floor progressively deepened to approximately 175 mOD.

Extraction will result in the permanent and irreversible removal of a finite geological resource and the continued alteration of the existing quarry landform. These effects are inherent to the nature of the proposed development and were therefore relevant considerations in the EIA Screening assessment.

The proposed extraction occurs within an established quarry environment and will be undertaken in accordance with the proposed quarry development and restoration arrangements. Appropriate management of overburden and restoration materials will be implemented throughout the operational life of the development.

Wastewater Treatment

Domestic wastewater generated by existing site personnel will continue to be managed through the existing on-site wastewater treatment arrangement serving the established ancillary facilities. No new welfare facilities or significant increase in domestic wastewater loading is proposed as part of the development.

Surface-Water Management

Surface water generated within the proposed development catchment will be managed through a dedicated surface-water collection, treatment, attenuation and controlled-discharge system. Runoff from the upper quarry extraction area will be collected within the quarry-floor attenuation sump and conveyed through the proposed drainage infrastructure to the 20 m³ holding/inlet arrangement serving the impermeably lined, ten-compartment settlement and attenuation pond.

Runoff associated with the bunded refuelling area will pass through a Class 1 oil-water interceptor prior to entering the surface-water management system. Runoff from the associated access road will be collected by the proposed ACO channel and will pass through a separate Class 1 oil-water interceptor before joining the drainage system serving the proposed settlement pond. The proposed development drainage system will remain hydraulically separate from the existing QY7 drainage system. The existing QY7 settlement ponds will continue to serve the existing quarry and discharge through the existing licensed discharge point under Discharge Licence Ref. SS/WW004/18.

The revised hydraulic assessment considers the approximately 3.53 ha contributing development catchment using site-specific 1-in-100-year rainfall depths across a range of storm durations, including a 20% climate-change allowance and a conservative runoff coefficient of 1.0. The assessment identifies the 9-hour storm as the governing preliminary attenuation event, with a climate-adjusted rainfall depth of 77.76 mm and a calculated preliminary attenuation-storage requirement of approximately 1,961 m³.

The proposed settlement pond will have a maximum active design water depth of approximately 1.5 m and a nominal volume below the maximum design water level of approximately 2,552 m³. The final constructed pond will provide not less than 2,200 m³ of verified usable active attenuation storage below the maximum design water level. A minimum 0.5 m hydraulic freeboard will be maintained above and below the settlement pond. Discharge from the proposed settlement pond will be controlled by a Hydro-Brake to a maximum rate of 24.204 L/s. The actual discharge rate will vary with hydraulic head and the characteristics of the final flow-control device but will not exceed this maximum rate. The outlet arrangement will incorporate an in-line flow meter and shut-off valve to facilitate monitoring and operational isolation where required.

Treated surface water will discharge through the proposed additional discharge point to the existing surface-water drainage network, which ultimately drains to the Ballinagh Stream. The proposed additional discharge point will be incorporated into the necessary amendment to Discharge Licence Ref. SS/WW004/18 prior to commissioning.

The proposed settlement pond, interceptors, Hydro-Brake, flow meter, shut-off valve and associated drainage infrastructure will be subject to routine inspection and maintenance. Accumulated sediment will be removed before it materially reduces the required attenuation or settlement capacity.

The existing and proposed drainage arrangements are shown on Drawing No. 17169-NLQ-MFA-00-ZZ-DR-A-520 - Proposed Site Layout. Subject to implementation and maintenance of the proposed drainage, treatment, attenuation, monitoring and operational-control measures, significant adverse residual effects on the receiving surface-water environment or downstream flood risk are not predicted.

Hydrogeology and Groundwater

Continued deepening of the quarry has the potential to interact with the local groundwater regime. Potential effects include groundwater inflow to the quarry workings, alteration of local groundwater levels or flow patterns and the potential migration of contaminants to groundwater in the event of accidental pollution.

These matters were subsequently subject to detailed hydrogeological assessment within the EIA, including consideration of groundwater conditions, quarry floor levels, the proposed settlement pond and the relationship between the proposed development and the surrounding groundwater environment.

In particular, potential pathways existed by which suspended solids, sediment or hydrocarbons could affect surface-water or groundwater quality, with the potential for secondary effects on downstream aquatic and ecological receptors. Having regard to these pathways, the sensitivity of the receiving water environment and the relationship of the proposed development with the wider quarry operation, significant effects on water and associated receptors could not reasonably have been excluded at the EIA Screening stage.

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36

5.3 BIODIVERSITY

5.3.1 Construction Phase

The Proposed Development site is not within a European site. The nearest European sites are the Lough Oughter and Associated Loughs SAC (000007) and Lough Oughter Complex SPA (004049) approximately 9km north-west of the site. There is a small drainage ditch present along the eastern perimeter of the field proposed for the settlement pond. There is also a drain that bisects the field. Water in these features connect to the Ballinagh Stream which is north-west of and 1.2km downstream of the application site. The identification of hydrological connectivity to downstream European sites further demonstrated the environmental sensitivity of the receiving environment and reinforced the need for detailed assessment of hydrology, water quality and biodiversity within the EIAR.

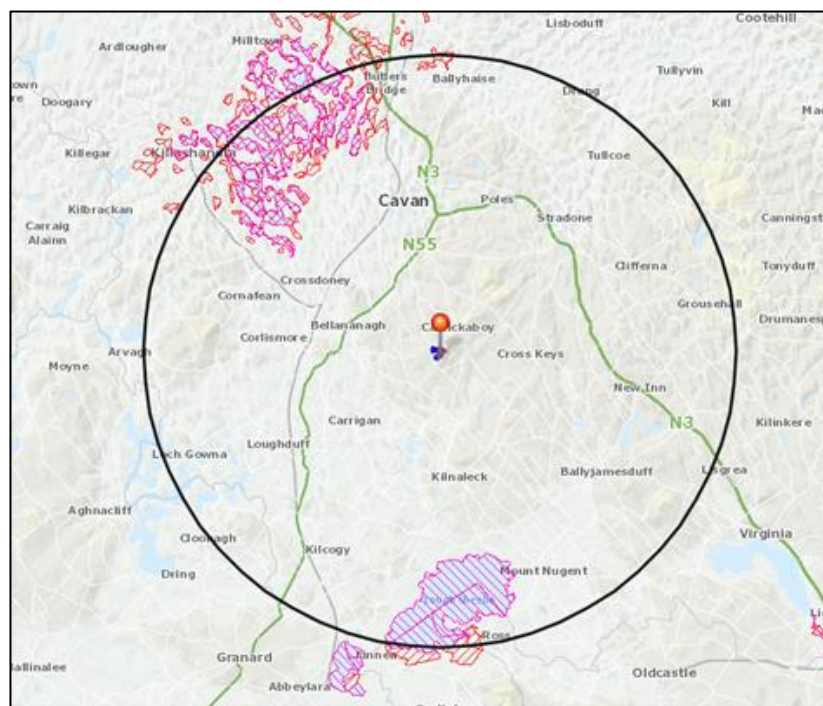


Figure 5.2 Designated Sites within 15km of the Application Site (Pinned). SACs – Red Hatching, SPAs – Pink Hatching

Construction Phase

The following impacts have been identified during the construction phase:

1. Habitat loss will occur as a result of the construction of the proposed settlement pond within the area identified as agricultural grassland, particularly in the lower areas near the stream where wet grassland is the dominant habitat. This habitat is considered to be of moderately High Local Value due to its semi-natural character, the diversity of plant species present and its role in supporting local biodiversity. The habitat provides suitable foraging and sheltering opportunities for a range of invertebrates, birds and small mammals and contributes to the ecological diversity of the wider agricultural landscape.

The construction of the settlement pond may result in the permanent loss and alteration of a portion of this wet grassland habitat through excavation and associated groundworks. This will lead to the direct removal of vegetation and a reduction in the extent of the habitat within the site. In addition, localised changes to ground levels and drainage patterns may alter the hydrological conditions that currently support the wet grassland community in adjacent areas.

2. Deterioration in downstream surface water quality in the watercourses within the site and further downstream in the Ballinagh Stream arising from suspended sediments generated during soil stripping and excavation associated with construction of the proposed settlement pond and associated drainage infrastructure - 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.

Within Chapter 5 it is detailed how the settlement pond can be enhanced in relation to biodiversity. Therefore, the residual impact of the proposed development with respect to local biodiversity during the construction phase after the implementation of mitigation measures set out in Chapter 5, is positive, slight effects and long term.

5.3.2 Operational Phase

The following elements were considered in relation to the operational phase and these were assessed for their potential to cause effects on European Sites within proximity to the proposed development.

1. Potential interaction with groundwater arising from the continued extraction and deepening of the quarry, including potential groundwater inflow and the risk of groundwater contamination in the event of accidental releases of fuels, oils or hydrocarbons.
2. Deterioration in surface water quality in the field drain close to the settlement pond 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.

Within Chapter 5 there is a number of mitigation measures which must be taken into account during the operation/extraction phase at the site. Therefore, the residual impact of the proposed development with respect to local biodiversity during the operational phase after the implementation of mitigation measures set out in Chapter 5, is **neutral, slight effects and long term**.

5.4 AIR QUALITY AND CLIMATE

Potential effects on air quality and climate have been considered having regard to the construction works associated with the proposed settlement pond and drainage infrastructure and the continuation of quarry activities over the proposed 20-year permission period.

The site is located within Zone D – Rural Ireland for the purposes of ambient air-quality assessment. Existing ambient air quality is therefore expected to be generally characteristic of a rural environment, with potential local influences from road traffic, agricultural activities, domestic fuel combustion and the existing quarry operation.

The principal air-quality consideration associated with the proposed development is the potential generation of fugitive dust and particulate matter. Potential dust-generating activities include excavation and earthworks, drilling, blasting, crushing, screening, aggregate handling and stockpiling, movement of quarry plant and HGVs and wind erosion from exposed surfaces.

Potential effects on climate principally relate to greenhouse gas emissions arising from fuel and energy consumption by construction equipment, quarry plant, processing equipment and transport. The vulnerability of the proposed development to climate change, including extreme rainfall and severe weather events, has also been considered.

5.4.1 Construction Phase

Construction-phase activities will principally relate to the construction of the proposed settlement pond, drainage infrastructure and associated site works. Potential temporary air-quality effects may arise from soil stripping, excavation, movement and handling of materials, operation of construction plant and vehicle movements.

The principal potential effect during this phase is the generation of fugitive dust, which may result in dust deposition and localised increases in airborne particulate matter. Exhaust emissions will also arise from diesel-powered construction plant, machinery and vehicles.

Potential dust emissions will be controlled through the implementation of appropriate good-practice and dust-minimisation measures, including:

- During prolonged dry periods, working areas and haul routes will be dampened or sprayed with water where required to control dust.
- Construction plant, machinery and vehicles will be appropriately maintained and serviced to minimise unnecessary exhaust emissions.
- Vehicle speeds will be restricted within the site.
- Internal haul roads and working surfaces will be maintained to minimise the generation of dust.
- Public roads used by construction traffic will be inspected and cleaned where necessary to prevent the accumulation of mud, dust or debris arising from the works.
- Wheel-wash facilities will be provided where required to prevent the tracking of mud and debris onto the public road network.
- Construction methods will be selected and managed to minimise unnecessary dust generation.
- Visual inspections will be undertaken during dust-generating activities to assess the effectiveness of the dust-control measures.
- Where dust nuisance is observed beyond the site boundary, the relevant activity will be reviewed and additional suppression or management measures implemented before unrestricted works resume.

Greenhouse gas emissions during the construction phase will arise principally from fuel consumption by plant, machinery and vehicles and from the embodied carbon associated with construction materials. Given the limited scale and duration of the construction works relative to the overall quarry operation, construction-related greenhouse gas emissions are not expected to represent a significant climate effect. Measures including avoidance of unnecessary engine idling, appropriate maintenance of plant and efficient use of materials will minimise avoidable emissions.

Subject to implementation of the identified mitigation and good-practice measures, significant adverse residual effects on air quality during the construction phase are not predicted.

5.4.2 Operational Phase

During the operational phase, the principal potential effects on air quality will arise from dust generated by drilling, blasting, crushing, screening, aggregate handling and stockpiling, movement of quarry plant and HGVs and wind erosion from exposed quarry surfaces.

These activities are characteristic of the established quarry operation. However, the proposed development provides for their continuation over a further 20-year permission period and therefore the potential for effects on nearby sensitive receptors required consideration as part of the EIA Screening assessment.

Dust emissions will continue to be managed through established operational controls, including water suppression where required, maintenance of haul roads and working surfaces, appropriate management of stockpiles, restriction of vehicle speeds, regular maintenance of plant and machinery and environmental monitoring.

Combustion emissions will also arise from diesel-powered quarry plant, processing equipment and vehicles. These activities will result in greenhouse gas emissions over the operational life of the development. Measures to minimise avoidable fuel and energy consumption will include regular plant maintenance, avoidance of unnecessary idling, efficient planning of vehicle and material movements and consideration of more energy-efficient plant and equipment where practicable.

The proposed development has also been considered in terms of its vulnerability to climate change. In particular, the potential for increased extreme rainfall has informed the design of the proposed surface-water management and attenuation system. The detailed assessment of climate resilience and greenhouse gas emissions was subsequently undertaken within the EIA.

Subject to implementation of the identified dust-control, operational and environmental-management measures, significant adverse residual effects on local air quality are not predicted. The greenhouse gas emissions associated with the proposed development are also not predicted to give rise to a significant project-level climate effect.

At the EIA Screening stage, however, the potential for dust and particulate emissions associated with drilling, blasting, crushing, screening, aggregate handling, quarry plant and HGV movements required consideration having regard to the proposed 20-year operational period and the presence of nearby sensitive receptors. Potential interactions between air quality, population and human health, traffic and biodiversity were also relevant to the Schedule 7 assessment.

Air quality, particularly the potential for nuisance dust associated with the continuation of quarry activities over the proposed 20-year period, was therefore a relevant factor in the overall decision to undertake detailed Environmental Impact Assessment. Climate effects were not identified as a principal factor giving rise to the requirement for EIA but were appropriately included within the EIA having regard to greenhouse gas emissions, the duration of the development and the need to consider the project's resilience to future climate conditions.

5.5 NOISE AND VIBRATION

Potential noise and vibration effects have been considered having regard to the construction works associated with the proposed settlement pond and drainage infrastructure and the continued operation of the quarry, including drilling, blasting, crushing, screening, movement of mobile plant and HGV movements. Regard has also been had to the proximity of noise-sensitive receptors and the potential interaction of noise and vibration effects with population and human health.

5.5.1 Construction Phase

During the construction phase, temporary noise and vibration effects may arise from excavation, earthworks, movement of construction plant and machinery, vehicle movements and construction of the proposed settlement pond, drainage infrastructure and associated site works.

The magnitude of construction noise will depend on a number of factors, including the type and number of plant operating at any one time, the duration and location of the works, construction methods, prevailing conditions and the separation distance between the works and the nearest noise-sensitive receptors.

In the absence of appropriate controls, construction activities have the potential to result in temporary adverse noise effects at nearby sensitive receptors. Vibration effects may also arise locally from the operation and movement of heavy plant, although such effects will be temporary and associated with specific construction activities.

Construction noise and vibration will be controlled through the implementation of appropriate good-practice measures, including:

- Construction activities will generally be undertaken between 08:00 and 18:00 hours Monday to Friday and between 08:00 and 13:00 hours on Saturdays. No construction works will normally be undertaken on Sundays or Bank Holidays.
- Appropriate channels of communication will be maintained between the applicant and nearby residents where necessary.
- A site representative will be appointed with responsibility for environmental matters, including noise.
- Noise monitoring will be undertaken during critical periods and at sensitive locations where appropriate.
- Plant and equipment will be selected having regard to their noise-emission characteristics.
- Site roads and working surfaces will be appropriately maintained to minimise unnecessary noise and vibration associated with vehicle movements.
- Temporary acoustic screening will be provided around particularly noisy stationary plant, such as generators or compressors, where required.
- Noisy plant will, where practicable, be located as far as possible from sensitive receptors.
- Engines, vehicles and equipment will not be left idling unnecessarily.

- Plant and machinery will be appropriately maintained and serviced in accordance with manufacturers' recommendations.
- Where practicable, particularly noisy activities will be planned and managed to minimise the duration of potential effects on nearby sensitive receptors.

Construction activities will be undertaken having regard to the relevant provisions of **BS 5228-1 and BS 5228-2, Code of Practice for Noise and Vibration Control on Construction and Open Sites**, together with applicable health and safety and construction plant noise requirements.

Subject to implementation of the identified good-practice and mitigation measures, significant adverse residual noise or vibration effects during the construction phase are not predicted.

5.5.2 Operational Phase

During the operational phase, noise and vibration will arise from the continuation of quarry activities, including drilling, blasting, crushing, screening, movement and operation of quarry plant and HGV movements.

These activities are characteristic of the established quarry operation. However, the proposed development provides for their continuation over a further 20-year permission period and therefore the potential for effects on nearby noise-sensitive receptors required consideration as part of the EIA Screening assessment.

Operational noise may arise from fixed and mobile plant, drilling, crushing and screening activities and vehicle movements within the quarry. Blasting will result in short-duration and intermittent vibration and air-overpressure effects.

Potential operational effects will be managed through appropriate quarry operating procedures, maintenance of plant and machinery, controlled blasting practices, appropriate operating hours and compliance with the applicable noise, vibration and air-overpressure criteria. Quarry-related traffic may also contribute to noise along the local road network and has been considered in conjunction with the Traffic and Transportation assessment.

The detailed Noise and Vibration assessment undertaken as part of the EIA assesses the potential effects associated with continued quarry operations and identifies the mitigation and operational controls required to protect nearby sensitive receptors. Subject to implementation of these measures, significant adverse residual noise and vibration effects are not predicted.

At the EIA Screening stage, however, the potential effects associated with drilling, blasting, crushing, screening, mobile plant and HGV movements could not be considered solely by reference to the existing quarry use. Regard was required to be had to the proposed continuation of these activities over a 20-year period, the proximity of residential receptors, the potential for intermittent blasting vibration and air overpressure, and the interaction of noise and vibration with population and human health.

The potential for noise and vibration effects, particularly when considered together with dust, traffic and the cumulative operation of the wider established quarry complex, was therefore a relevant factor in the overall Schedule 7 assessment and supported the decision to undertake detailed Environmental Impact Assessment. The subsequent EIA assessed these effects in detail and identified the mitigation, operational controls and monitoring measures required to ensure that significant adverse residual effects are not predicted.

5.6 LANDSCAPE AND VISUAL IMPACT

Potential landscape and visual effects have been considered having regard to the existing quarry setting, the construction of the proposed settlement pond and associated drainage infrastructure, the continuation and completion of extraction over the proposed 20-year permission period, and the proposed landscape and restoration measures.

5.6.1 Construction Phase

Construction-phase activities will principally relate to the proposed settlement pond, drainage infrastructure and associated site works. These activities will introduce temporary excavation works, construction plant, stockpiled materials and vehicle movements within the northern part of the site.

The construction works will occur within and immediately adjoining an established quarry environment and will be limited in duration. Existing boundary trees and hedgerows will be retained and protected where practicable, and disturbed areas will be appropriately reinstated and landscaped following completion of the works.

Potential landscape and visual effects during construction will principally arise from temporary ground disturbance, plant movements and the presence of construction materials. Having regard to the existing quarry setting, the limited extent and duration of the works, existing screening and proposed reinstatement measures, significant adverse landscape or visual effects during the construction phase are not predicted.

5.6.2 Operational Phase

During the operational phase, the proposed development will involve the continuation and completion of extraction within the established quarry complex over a proposed 20-year permission period. The quarry is an existing feature within the local landscape and the proposal will not introduce a new or fundamentally different land use.

The proposed development will, however, result in the continued physical alteration of the landform through extraction and deepening of the quarry. These changes will occur principally within the established quarry environment. The proposed settlement pond and associated drainage infrastructure will comprise relatively low-level features and will benefit from screening provided by existing boundary vegetation and the surrounding landform.

Landscape planting, restoration and reprofiling measures will be implemented as quarrying progresses and following the cessation of extraction, where appropriate. These measures will assist in integrating disturbed areas into the surrounding landscape and reducing longer-term landscape and visual effects.

Having regard to the established quarry setting, the location of the proposed extraction activities, existing screening and the proposed landscape and restoration measures, significant adverse landscape or visual effects are not predicted following implementation of the identified mitigation measures.

At the EIA Screening stage, however, regard was required to be had to the proposed 20-year duration of quarrying, the continued and permanent alteration of the existing landform through extraction, the construction of the proposed settlement pond and associated infrastructure, and the potential for these changes to affect landscape character and visual receptors. These matters were relevant considerations under the Schedule 7 criteria and warranted detailed assessment.

Landscape and visual effects were not identified as principal factors giving rise to the requirement for EIA. Nevertheless, the scale and duration of the proposed extraction activities, their permanent effect on the landform and their potential interaction with land, soils, biodiversity and nearby receptors formed part of the overall screening assessment and were subsequently examined in detail within the EIA.

5.7 CULTURAL HERITAGE AND ARCHAEOLOGY

Potential effects on cultural heritage and archaeology have been considered having regard to the existing quarry environment, the proposed continuation and completion of extraction, the construction of the proposed settlement pond and associated works, and the proximity of recorded archaeological and cultural heritage features.

5.7.1 Construction Phase

The cultural heritage assessment identified no surface traces of archaeological remains within the proposed extraction area. The majority of this area lies within the existing quarry envelope, where the original overburden and ground surface have previously been removed. However, limited areas of previously undisturbed ground may remain around the quarry perimeter and above the active working faces, and such areas have the potential to contain previously unrecorded subsurface archaeological remains.

The field proposed for the settlement pond and associated works has been subject to detailed archaeological assessment, including geophysical survey and targeted archaeological testing. The geophysical survey identified no clear archaeological responses and no archaeological features were recorded within the tested footprint of the proposed settlement pond.

The Black Pig's Dyke linear earthwork is located in proximity to the quarry, with the surviving section located more than 50 m from the proposed extraction area. The archaeological assessment concludes that the proposed development will not result in a direct impact on the Black Pig's Dyke or on any other known archaeological or cultural heritage feature.

Notwithstanding the absence of identified archaeological remains within the proposed settlement pond footprint, archaeological monitoring is recommended during ground disturbance in areas where the original ground surface survives. This will provide for the identification and appropriate management of any previously unrecorded archaeological material encountered during the works.

Subject to implementation of the recommended archaeological monitoring and protection measures, significant adverse effects on cultural heritage or archaeology during the construction phase are not predicted.

5.7.2 Operational Phase

The operational phase will comprise the continuation and completion of extraction within the established quarry complex. The cultural heritage assessment concludes that the proposed development will not result in a direct impact on any known archaeological site or monument, including the Black Pig's Dyke.

Potential indirect effects associated with the continued operation of the quarry have also been considered. Having regard to the existing quarry environment, the location and separation of known archaeological and cultural heritage features and the findings of the specialist archaeological assessment, significant additional indirect effects on cultural heritage or archaeology are not predicted.

Subject to implementation of the recommended archaeological monitoring and protection measures, significant adverse residual effects on cultural heritage and archaeology are not predicted.

At the EIA Screening stage, the proximity of the Black Pig's Dyke, the potential for previously unrecorded subsurface archaeological remains within areas of surviving original ground and the ground-disturbance works associated with the proposed settlement pond were relevant considerations under the Schedule 7 criteria. These matters warranted appropriate investigation and were subsequently subject to detailed archaeological assessment, including geophysical survey and targeted archaeological testing.

The subsequent specialist investigations did not identify significant archaeological constraints within the proposed development footprint. Cultural heritage and archaeology were therefore not identified as principal factors giving rise to the requirement for EIA. Nevertheless, their potential effects and interaction with land and soils formed part of the overall environmental assessment undertaken within the EIA.

5.8 TRAFFIC AND TRANSPORTATION

Potential effects on traffic and transportation have been considered having regard to both the temporary construction works associated with the proposed development and the continued movement of quarry-related traffic during the operational phase. Regard has also been had to the potential interaction of traffic with population and human health, noise, air quality and the local road network.

5.8.1 Construction Phase

Construction traffic at Nulty's Quarry will principally be associated with the construction of the proposed settlement pond, drainage works and associated site infrastructure. Temporary additional vehicle movements will arise from construction personnel, plant and machinery and deliveries of materials required for these works.

All construction traffic will use the existing quarry access onto the L2517, which already serves the established quarry operation. The construction works will be limited in duration and will not require the provision of a separate site access.

Potential effects during this phase include temporary increases in vehicle movements, interaction with existing quarry and local traffic, noise and dust associated with vehicle movements and potential effects on road safety. Appropriate traffic-management measures and delivery controls will be implemented where required.

Having regard to the limited scale and temporary nature of the construction works, the use of the established quarry access and the proposed traffic-management measures, significant adverse construction-phase effects on traffic and transportation are not predicted.

5.8.2 Operational Phase

The operational phase will involve the continuation and completion of extraction within the established quarry complex rather than the introduction of a separate new traffic-generating land use. Approximately 500,000 tonnes of material will be extracted over the proposed 20-year permission period, corresponding to an average extraction rate of approximately 25,000 tonnes per annum and a maximum annual extraction rate of 50,000 tonnes.

Quarry-related traffic will continue to use the existing access onto the L2517, with the established road network continuing to provide access to the wider regional and national road network.

The detailed Traffic and Transport Assessment undertaken as part of the EIA considered the capacity and operation of the existing site access and surrounding road network. The assessment indicates that the L2517/site access junction will continue to operate with substantial spare capacity and that the level of traffic associated with the proposed development can be accommodated by the existing road network. Road-safety improvement measures are also proposed at the site entrance.

On the basis of the detailed assessment and subject to implementation of the identified traffic-management and road-safety measures, significant adverse operational effects on traffic and transportation are not predicted.

At the EIA Screening stage, however, the proposed 20-year operational period, the potential maximum extraction rate of 50,000 tonnes per annum and the associated continuation of HGV movements on the local road network required consideration under the Schedule 7 criteria. Potential interactions between traffic, road safety, noise, dust, air quality and nearby residential receptors were also relevant to the overall assessment.

While traffic and transportation were not identified as the principal factors giving rise to the requirement for EIA, the potential effects and interactions associated with quarry-related traffic formed part of the overall screening assessment and were subsequently examined in detail within the EIA.

5.9 MATERIAL ASSETS, INCLUDING WASTE MANAGEMENT

Material assets relevant to the proposed development include existing built services and infrastructure, including electricity, telecommunications, water supply, wastewater infrastructure and surface-water management infrastructure, together with the generation and management of waste and the use of natural resources.

The proposed development represents the continuation and completion of extraction activities within the established Nulty Quarry complex and will make use of existing quarry infrastructure and servicing arrangements. The proposal also includes the construction and operation of new settlement, attenuation and associated surface-water management infrastructure.

The EIA Screening has therefore considered the potential for the proposed development to affect existing services and infrastructure, generate additional waste or require the use of additional resources during the construction/preparatory and operational phases.

Potential effects on material assets have also been considered in combination with other environmental factors, particularly land and soils, surface water, groundwater, traffic and population and human health. These interactions, together with the relationship of the proposed development to the wider established quarry operation, formed part of the overall Schedule 7 assessment and the consideration of whether Environmental Impact Assessment was required.

5.9.1 Construction Phase

The proposed development relates to the continuation and completion of extraction activities within the existing Nulty Quarry complex. As the development will utilise the existing quarry infrastructure and ancillary facilities, the extent of conventional construction activity will be limited. However, preparatory and construction works will be required in connection with the proposed settlement pond, associated drainage and surface-water management infrastructure and other ancillary site works.

Existing site infrastructure includes mains electricity serving the site office for lighting and heating, telecommunications and broadband connections, together with existing welfare and wastewater facilities within the ancillary area adjacent to the site entrance. These existing facilities will continue to serve personnel associated with the proposed development and there will be no requirement to establish a separate construction compound or additional permanent welfare facilities.

There are no built services located within the proposed quarry extraction area and no material alterations to the existing use of electricity or telecommunications infrastructure are proposed. Existing quarry plant, access arrangements and ancillary facilities will be utilised, where appropriate, during the preparatory and construction works.

Accordingly, the proposed development will not require significant additional connections to electricity, telecommunications, potable water or wastewater infrastructure during the construction/preparatory phase. Any temporary requirements associated with construction of the settlement pond and drainage infrastructure will be managed through the established infrastructure and site-management arrangements operating at the quarry.

Having regard to the limited nature of the construction works, the availability of existing quarry infrastructure and the absence of a requirement for significant new utility connections, significant adverse direct or indirect effects on existing water-supply, wastewater, telecommunications or electricity infrastructure are not predicted.

Waste Management

The proposed development does not involve the construction of substantial buildings or other major built infrastructure. Construction-related waste will therefore be principally associated with site preparation and the construction of the proposed settlement pond, drainage infrastructure and associated ancillary works.

Excavated soil, overburden and other naturally occurring materials arising from the works will be managed in accordance with applicable waste-management requirements. Where suitable material can lawfully be retained and reused within the site, it will be managed appropriately for that purpose. Any material that cannot lawfully or suitably be retained or reused will be removed from the site by an appropriately authorised waste contractor and transferred to an appropriately authorised waste facility.

Other construction-related wastes may include small quantities of packaging, general waste, scrap metal, waste oils, oily materials and maintenance-related wastes associated with plant and machinery. Such wastes will be appropriately segregated and stored prior to collection by appropriately authorised waste contractors for recovery or disposal at appropriately authorised facilities.

Plant and mobile equipment operating at the site will be regularly maintained and kept in good working order. Appropriate pollution-prevention measures will be implemented during the preparatory and construction works to minimise the potential for accidental releases of fuels, oils or other potentially contaminating materials.

Having regard to the limited scale of the construction works, the established nature of the quarry and the continued use of existing waste-management arrangements, significant adverse effects on material assets arising from construction-related resource consumption or waste generation are not predicted following implementation of appropriate management and mitigation measures.

At the EIA Screening stage, however, the potential effects associated with excavation and construction of the proposed settlement pond and drainage infrastructure, including the generation and management of excavated materials and the potential interaction of these works with land, soils, surface water, groundwater and biodiversity, formed part of the overall Schedule 7 assessment. While construction-related material-assets and waste effects were not identified as the principal factors giving rise to the requirement for EIA, these effects could not be considered entirely in isolation from the other environmental effects of the proposed development. They were therefore considered as part of the detailed EIA prepared for the proposed development.

5.9.2 Operational Phase

The proposed development relates to the continuation and completion of extraction activities within the existing Nulty Quarry complex and will utilise the existing servicing and utility infrastructure associated with the established quarry operation. No new welfare or ancillary facilities requiring additional connections to public water or wastewater infrastructure are proposed.

An existing EN-certified septic tank is located within the ancillary area to the west of the application area, adjacent to the site entrance, and will continue to provide wastewater servicing for the existing site facilities.

There are no built services within the proposed quarry extraction area and no material changes to the existing use of utility infrastructure are proposed. Accordingly, the proposed development is not anticipated to result in significant additional demand on public water-supply or wastewater infrastructure.

Surface-water management represents a more substantive element of the proposed development. The proposal includes new settlement, attenuation, oil-water interception and controlled-discharge infrastructure to manage surface water arising from the proposed development area. Potential effects associated with surface water and groundwater are assessed separately under the Water section of this Screening Report and were subsequently subject to detailed assessment within the EIA.

As the proposed development represents the continuation of an established quarry operation, it is well placed to utilise existing infrastructure and servicing arrangements without requiring significant new utility infrastructure. Subject to the proposed surface-

water management arrangements, significant adverse effects on material assets associated with water supply, wastewater or other utility infrastructure are not predicted.

Waste and Waste Management

During the operational phase, the proposed development will generate relatively small quantities of waste associated with continued quarrying and processing activities and with employees working at the site. The development does not include residential or other uses that would generate significant additional waste streams.

Existing waste-management arrangements at the quarry will remain in place for the duration of the operational phase. The principal routine waste generated will comprise general domestic/canteen waste associated with site personnel. Other wastes associated with quarry operations may include scrap metal, waste oils, oily wastes and maintenance-related materials. Solid and liquid wastes will be appropriately segregated and stored and will be collected by appropriately authorised waste contractors for recovery or disposal at appropriately authorised waste facilities.

Wastewater generated by site personnel will continue to be managed through the existing on-site wastewater treatment arrangement.

The proposed surface-water management infrastructure will also require periodic inspection, maintenance and removal of accumulated sediment, silt and interceptor waste. Materials removed from the oil-water interceptors and settlement system will be appropriately characterised and managed in accordance with applicable waste-management requirements. Records will be maintained of relevant maintenance activities and the removal of waste materials from the site.

A structured approach to waste management will therefore continue throughout the operational life of the quarry, with emphasis on waste prevention where practicable and appropriate segregation, storage, recovery and disposal through authorised waste contractors and facilities. Having regard to the nature and anticipated quantities of waste generated and the established waste-management arrangements at the quarry, significant adverse effects associated with operational waste generation are not predicted following implementation of appropriate waste-management controls.

At the EIA Screening stage, however, the proposed development was considered in the context of its 20-year operational period, its relationship with the wider established quarry complex, the permanent extraction of approximately 500,000 tonnes of rock and the requirement for new surface-water management infrastructure. While material-assets and waste effects considered individually were not identified as the principal factors giving rise to the requirement for EIA, their potential interaction with land, soils, water, traffic and other environmental factors formed part of the overall Schedule 7 assessment. These matters were therefore considered as part of the detailed EIAR prepared for the proposed development.

5.10 POTENTIAL IMPACTS FROM INTERACTIONS

This section considers the potential interactions and inter-relationships between the environmental factors relevant to the proposed development during both the construction and operational phases. In addition to considering individual environmental effects, regard has been given to the potential for an effect on one environmental factor to result in secondary or combined effects on another.

During the construction phase, the principal potential interactions relate to land, soils, hydrology, hydrogeology and biodiversity. In particular, soil stripping and excavation associated with construction of the proposed settlement pond and drainage infrastructure have the potential to generate sediment-laden runoff, while accidental releases of fuels or hydrocarbons could affect surface water, groundwater and associated ecological receptors. Potential interactions may also arise between air quality and population and human health through dust generation, and between noise, vibration and population and human health as a result of construction plant and associated activities.

During the operational phase, an important potential interaction relates to surface-water and groundwater quality and the potential for secondary effects on biodiversity and downstream environmental receptors where runoff, suspended solids, sediment or hydrocarbons are not adequately controlled. Other potential interactions arise between drilling, blasting, crushing and screening activities, quarry traffic, noise, vibration, dust, landscape and nearby residential receptors.

The proposed development forms part of the wider established quarry complex and these interactions cannot therefore be considered solely by reference to the individual 3.53 ha application area. Regard has also been had to the potential for environmental interactions associated with the proposed development to combine with those arising from the continuing operation of the wider quarry.

The detailed EIA subsequently identified a range of design, mitigation, operational-control and monitoring measures, including the proposed settlement and attenuation system, oil-water interception, controlled surface-water discharge, dust suppression, noise and vibration controls and environmental monitoring. Subject to implementation of these measures, significant adverse residual effects arising from interactions between environmental factors are not predicted.

At the EIA Screening stage, however, and prior to the detailed assessment and identification of the required mitigation measures, the potential for significant effects arising from interactions between land, soils, water, biodiversity, population and human health, air quality, noise, vibration, traffic and other environmental factors could not reasonably have been excluded. The potential for these interacting effects, particularly those associated with surface water, groundwater and biodiversity, was therefore a relevant factor in the decision to screen the proposed development in for Environmental Impact Assessment and to prepare a full EIA.

5.11 POTENTIAL CUMULATIVE IMPACTS

As part of the EIA Screening for the proposed development, consideration has been given to the potential for cumulative effects with the existing quarry operation and with existing, permitted and reasonably foreseeable developments in the surrounding area. Cumulative effects may arise where the effects of the proposed development combine with those arising from other activities, resulting in an increased effect on environmental receptors.

The proposed development represents the continuation and completion of extraction within an established quarry complex rather than the operation of a separate standalone quarry. Although the immediate red-line application area comprises approximately 3.53 ha, the proposed development will operate in conjunction with the wider established quarry and will share existing access, processing, ancillary infrastructure and environmental management arrangements. The relationship between the proposed development and the wider quarry operation is therefore an important consideration in determining the potential for cumulative environmental effects.

Potential cumulative interactions may arise in relation to traffic, noise, vibration, dust, landscape and surface-water management. Particular consideration has been given to cumulative effects on land, soils, hydrology, hydrogeology and biodiversity, including the potential for combined effects associated with surface-water runoff, suspended solids, sediment and accidental pollution. Cumulative effects on nearby residential receptors may also arise through the combined influence of quarry traffic, dust, noise and vibration.

The traffic assessment confirms that the proposal represents the continuation of established quarrying activity and that no separate additional quarry traffic stream will arise. Nevertheless, the potential for the proposed development to interact cumulatively with the existing quarry operation and with other development or construction activity occurring in the locality remains relevant to the environmental assessment.

Any permitted or future development in the surrounding area will also be subject to its own planning and environmental requirements and, where appropriate, project-specific mitigation measures. Appropriate operational controls, drainage measures, dust suppression, traffic management and environmental monitoring will also be implemented as part of the proposed development.

At the EIA Screening stage, however, having regard to the relationship between the proposed development and the wider established quarry complex, the proposed 20-year operational period and the potential for cumulative effects particularly in relation to water, biodiversity, traffic, noise, vibration and dust, significant cumulative environmental effects could not reasonably have been excluded without further detailed assessment.

The potential for cumulative effects was therefore one of the factors supporting the decision to screen the proposed development in for Environmental Impact Assessment and to prepare a full EIAR. The detailed EIAR subsequently assessed these cumulative effects and identified the mitigation and monitoring measures required to ensure that significant adverse residual cumulative effects are not predicted.

6.0 FINDINGS AND CONCLUSIONS

The purpose of this EIA Screening Report is to formally document the basis upon which an Environmental Impact Assessment Report was prepared for the proposed development at Nulty's Quarry.

The proposed development falls within Schedule 5, Part 2, Class 2(b) of the Planning and Development Regulations 2001, as amended. The immediate red-line application area comprises approximately 3.53 ha and therefore does not, when considered in isolation, exceed the 5-hectare threshold applicable to this class of development. Accordingly, mandatory EIA does not arise solely by reference to the numerical threshold.

However, the proposed development does not comprise an isolated new quarry development. It relates to the continuation and completion of extraction within the established John Nulty Ltd quarry complex, which extends over a larger area and has previously been subject to Environmental Impact Assessment. The proposed development will operate in conjunction with the established quarry infrastructure and provides for a further 20-year operational period, continued extraction and deepening to 175 mOD, the extraction of approximately 500,000 tonnes of rock and new surface-water settlement, attenuation and discharge infrastructure.

The screening assessment has therefore considered the characteristics and location of the proposed development and the nature of its potential environmental effects in accordance with the criteria set out in Schedule 7. Particular regard has been had to the permanent removal of a finite geological resource; surface-water and groundwater pathways; hydrological connectivity with the Ballinagh Stream and downstream European sites; biodiversity and habitat effects; dust; noise and vibration; traffic; population and human health; landscape and visual effects; cultural heritage; interactions between environmental factors; and cumulative effects arising in combination with the wider established quarry operation.

While many of these potential effects are capable of being appropriately mitigated and the detailed EIA concludes that significant adverse residual effects are not predicted subject to implementation of the identified mitigation measures, that conclusion is the result of the detailed environmental assessment. At the screening stage, and prior to that detailed assessment, significant environmental effects could not reasonably be excluded having regard to the nature, scale, duration and environmental context of the proposal.

Accordingly, the proposed development was screened in for Environmental Impact Assessment. A full EIA was therefore prepared and submitted with the planning application.

This Screening Report confirms and documents the basis for that decision.