NON-TECHNICAL SUMMARY ENVIRONMENTAL IMPACT ASSESSMENT REPORT (EIAR)

PERMISSION FOR THE EXTRACTION OF LIMESTONE AT ISERTKELLY NORTH TOWNLAND KILCHREEST LOUGHREA

Applicant: Isertkelly Ltd.

Issued March 2025

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Document Control

Document Number 23.129-EIAR-R02

Revision	Date	Prepared	Checked	Approved
PL0	25/03/2025	Various	MD	EC

Table of Contents

PREAMBLE

SCOPE OF THE ENVIRONMENTAL IMPACT ASSESSMENT

Environmental Impact Assessment will be carried out by Galway County Council using the information and findings included in the EIAR. The planning and development regulations require the preparation of an EIAR and the scope has been the subject of consultation with Galway County Council and the Environmental Authorities which was undertaken in accordance with the current EIAR regulations as amended. A formal request has been made to Galway Co. Co. to provided scope for this but was not been provided yet. These regulations provide an indication of the need for an EIAR. The proposed development requires for Environmental Impact Assessment report and the scope has been agreed with Galway County Council arising out of preplanning consultation in accordance with the current EIA and Planning regulations.

Each report from various topics considers the following:

- ✓ Baseline studies
- ✓ Identification of potential impacts
- ✓ Evaluation and significance of those impacts
- ✓ Mitigation measures where required

The purpose of the mitigation measures is to ensure the that the development could be undertaken without creating any significant or unacceptable adverse impacts on the environment.

PLANNING POLICY FRAMEWORK

The subject site is within the administrative area of Galway County Council and the current County Development Plan 2022-2028 Our assessment demonstrates that the proposed development accords with the policies of the County development plan.

By their nature, aggregates can only be worked where they occur. The cost of haulage affects economic competitiveness in this sector and accordingly the extractive industries seek to locate in proximity to developing settlements and major existing and proposed

roads, thus minimising haulage costs. Extractive industries can also give rise to detrimental environmental and residential amenity effects including traffic congestion, dust, noise/vibration, water pollution, visual intrusion and the effects on local road networks may also be significant. It is recognised extractive industry has an important function in the economy of the county and, furthermore, that the rural based nature of the quarrying/extractive industries offers opportunities for part-time farming to continue with quarrying providing valuable off-farm income. The Council recognises the importance to the economy of County Galway of mapping and identification of areas with aggregate potential, both in terms of cost-effective aggregates and avoiding sterilisation of resources. The Council will seek to identify the location of major aggregate deposits and will safeguard valuable un-worked deposits for future extraction. The Council seeks to ensure that the extractive and concrete products industry follows an environmental code of practice, in order to minimise potential adverse impacts on the environment and local communities.

EIA Portal Notification

A notification has been sent to the EIA Portal and a receipt of notification has been received with reference number 2025042. The complete application form and confirmation of receipt is included in Appendix L.

List of Appendices

CHAPTER 1

INTRODUCTION

1 INTRODUCTION

1.1 INTRODUCTION

1.1.1 This Environmental Impact Assessment Report (EIAR) provides supporting information to accompany a planning application to Galway County Council submitted by Isertkelly Ltd, for expansion of existing limestone quarry in respect of their land at Isertkelly North townland, Kilchreest, Loughrea, Co. Galway

1.1.2 The application site extends to 12.66 hectares – refer to site locations maps and site layout maps in Appendix A

1.1.3 The proposed development being applied for under this current planning application is shown in Appendix A

1.1.4 The EIAR is made in accordance with the requirements of Directive 2014/52/EU on the assessment of the effects of certain public and private projects on the environment and transposing national legislation.

1.2 THE SITE

1.2.1 SITE LOCATION

1.2.1.1 The lands which are the subject of this application comprise c12.66 hectares with an additional 7.4 hectares to be extracted located in the townland of Isertkelly North townland, (refer to Appendix A). Kilchreest, Loughrea, Co. Galway. The ITM coordinates for the site are 551888, 713166 the proposed development is located wholly within the red line.

1.2.1.2 The lands proposed for the extraction of limestone is accessed via a private road and enters onto a local road which is an authorised access. The site occupies ground with elevations ranging between 59m OD and 69m OD.

1.2.2 SITE DESCRIPTION

1.2.2.1 The proposed operations comprise of the stripping and storing of existing topsoil & extraction of limestone; processing (crushing and screening) to produce aggregates for use in the manufacture of value-added products for road construction, production of concrete products and site development works. It is intended to return the extracted area to a natural habitat following completion of extraction.

1..2.2.2The application site relates to the site area only. Material extracted from the proposed land area is processed within the proposed extraction area using mobile processing plant.

1.2.3 SITE ACCESS

1.2.3.1 The site is located approximately 4.5km from Kilchreest and is accessed by a local road. (L8532)

1.2.3.2 The access to the proposed quarry will be via an existing Paved private road.

1.2.3.3 All traffic enters the site via the site office and weighbridge and runs over a macadam road surface up to the infrastructure area in the centre of the processing area.

1.2.3.4 All traffic exits the site via the weighbridge (located at the site office) and road referred to in section 1.2.1.2

1.2.4 SURROUNDING LAND USE

1.2.4.1 The site area is surrounded by agricultural lands (improved agricultural grassland and arable) and private dwellings.

1.2.4.2 Residences within the general area consist of one-off rural houses, farmsteads with some ribbon development along the local road network – refer to EIAR Chapter 4 Population and Human Health.

1.2.5 THE APPLICANT

The applicant, Isertkelly Ltd. is the landowner and proposes if permission is granted to develop the facility in due course.

1.2.6 EIA SCREENING

1.2.6.1 Part 1 and Part 2 of Schedule 5 of the Planning and Development Regulations 2001 (as amended) set out the forms of development that require an environmental impact assessment report (EIAR).

1.2.6.2 Paragraph 2 of Part 2 of Schedule 5 refers to extractive industry and part (b) of that section states that the following requires an EIA.

1.2.6.3 "Extraction of stone, gravel, sand or clay, where the area of extraction would be greater than 5 hectares".

1.2.6.4 The proposed extraction area of c7.5 Ha is greater than the default area of 5Ha for a mandatory EIA. On this basis the extraction area of the quarry exceeds the area stated under Part 2 and an EIAR is required.

1.2.7 EIA SCOPING

1.2.7.1 In preparing this Environmental Impact Assessment Report, consultations were had with organisations and agencies including:

- Galway County Council (Planning / Road & Environment Section).
- Geological Survey of Ireland (to discuss geological heritage)
- National Parks and Wildlife Service (in respect of designated natural heritage sites).

1.2.7.2 A pre-planning consultation meeting was held between officials of Galway County Council and Engineers from Collins Boyd along with the client Isertkelly Ltd.

1.2.7.3 Other consultations and informal discussions held by contributors in undertaking their environmental impact assessments are detailed in the specialist environmental sections of the EIAR together with details of relevant archives and documentation held by state agencies and organisations.

1.2.8 DIFFICULTIES ENCOUNTERED WITH EIAR COMPILATION

This Environmental Impact Assessment Report was compiled on the basis of published regional and local data and site-specific field surveys. In general, no difficulties were encountered in compiling the required information. However, incidences where there were issues in accessing data are detailed in the various chapters.

1.2.9 ENVIRONMENTAL IMPACT ASSESSMENT REPORT (EIAR)

The principal objectives of an Environmental Impact Assessment Report are to:

- Identify and /or predict the significant effects / impacts of a development.
- Identify what mitigation measures should be incorporated into the development to eliminate or reduce the impacts.
- Interpret and communicate the above information on the impact of the proposed development, in both technical and non-technical terms.
- inform the Planning Authority in the decision-making process with respect to the associated planning application.

1.2.10 FORMAT OF THE ENVIRONMENTAL IMPACT ASSESSMENT REPORT (EIAR)

1.2.10.1 The EIAR shall identify, describe, and assess in an appropriate manner, in the light of each individual case the direct and indirect significant effects of a project on the following factors,

(a) Population and human health.

(b) Biodiversity with particular reference to species and habitats protected under directives 92/43 EEC and2009/147/EC

(c) Land, soil, water, air & climate

(d) Material assets, cultural heritage and the landscape

(e) The interactions between the above

1.2.10.2 In preparing this document the contributors had regard to the Guidelines on the Information to be contained in EIAR published by the EPA in May 22. They also had regard to 2014/52/EU the directive on the Assessment of the effects of certain public and private projects on the environment (EIA Directive). The EIAR is sub-divided into fifteen parts. As an overview, they comprise of:

Chapter 1: Introduction / Screening / Scoping

An introduction to the development and a brief explanation of the aims and format of the EIAR. It also identifies the various professional consultants who have contributed to this EIAR and the screening / scoping process carried out.

1.2.10.3 Chapter 2: Project Description provides:

- details of the physical characteristics of the whole project, including, where relevant, demolition works, the land-use requirements during construction and operation as well asother works that are integral to the project.
- the main characteristics of the operational phase of the project e.g., nature and quantity ofmaterials and natural resources.
- residues and emissions produced during the construction, operational and restoration phases of the proposed development.

Chapter 3: Consideration of Alternatives

1.2.10.4 Chapter 3 provides a description of the reasonable alternatives studied by the applicant, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects.

Chapters 4 – 15

1.2.10.5 These Chapters provide detailed information on all aspects of the existing (baseline) environment, identifies, describes, and presents and assessment of the likely significant impacts of the proposed project on the environment, recommends mitigation and monitoring measures to reduce or alleviate these impacts and describes the residual impacts and conclusions. They are grouped under the

following Chapters:

- Chapter 4 Population and Human Health
- Chapter 5 Biodiversity
- Chapter 6 Land, soils & Geology
- Chapter 7 Hydrology and Hydrogeology (water)
- Chapter 8 Air Quality & Dust
- Chapter 9 Climate
- Chapter 10 Noise & Vibration
- Chapter 11 Material Assets
- Chapter 12 Cultural Heritage
- Chapter 13 Landscape & Visual Impact Assessment
- Chapter 14 Traffic Impact Assessment
- Chapter 15 Interactions

1.2.10.6 The associated references, plates, figures and appendices are provided at the end of the report.

1.2.10.7 A "Non-Technical Summary of the Environmental Impact Statement", incorporating the above chapters, is provided as a separate and self-contained document.

1.3 CONTRIBUTORS

1.3.1 Isertkelly Ltd. appointed Collins Boyd Engineers & Architects to prepare this Environmental Impact Assessment Report (EIAR) in support of its Planning Application for the proposed development at Isertkelly North townland, Kilchreest, Loughrea, Co. Galway.

1.3.2 The contributors who have assisted in the preparation of this EIAR are identified in Table 1-1 below. Each contributor has the appropriate qualifications, experience, and competence for their topic.

TABLE 1 – 1 LIST OF CONTRIBUTORS

TOPIC	CONTRIBUTOR	COMPANY
Introduction	Eamon Collins Chartered Engineer FIEI	Collins Boyd Engineers& Architects
Description of Development	Eamon Collins Chartered Engineer FIEI	Collins Boyd Engineers& Architects
Consideration of Alternatives	Eamon Collins Chartered Engineer FIEI	Collins Boyd Engineers& Architects
Population and Human Health	Eamon Collins Chartered Engineer FIEI	Collins Boyd Engineers& Architects
Biodiversity	Paula Farrell	Panther Environmental
Land, Soils and Geology	Darragh Musgrave Senior Geo Environmental Scientist	Viridus Consulting Ltd
Hydrology	Anthony Cawley	Hydro Environmental Ltd.
Air Quality & Dust	Mervyn Keegan B.S.c M.S.c MIoA	Aona Environmental
Climate	Mervyn Keegan B.S.c M.S.c MIoA	Aona Environmental
Noise and Vibration	Mervyn Keegan B.S.c M.S.c MIoA	Aona Environmental
Material Assets	Stephen Boyd Chartered Engineer MIEI	Collins Boyd Engineers & Architects
Cultural Heritage	Martin Byrne	Byrne Mullins & Associates
Landscape	Ronan Mac Diarmada	Ronan Mac Diarmada & Associates
Traffic and Transport	Richard Frisbie	Roadplan Consulting Ltd
Co-ordination of EIA	Eamon Collins Chartered Engineer FIEI	Collins Boyd Engineers & Architects

1.3.3 Each contributor has been fully briefed about the proposal and the background to it. They have also visited the site and are familiar with the local environment.

1.3.4 Collins Boyd Engineers & Architects have been preparing Environmental Impact Assessment reports(previously EIS) relating to quarry developments since implementation of the EIA Directive in 1990.

CHAPTER 2

PROJECT DESCRIPTION

2 PROJECT DISCRIPTION

2.1 PROPOSED DEVELOPMENT

2.1.1 DEVELOPMENT OVERVIEW

OPERATIONAL PHASE (LIMESTONE EXTRACTION AND PROCESSING)

2.1 The proposed development being applied for under this current planning application is shown in Appendix A. This section of the EIAR describes the development proposal by Isertkelly Ltd. comprising of the continuation and extension of an existing quarry in the townland of Isertkelly North townland, Kilchreest, Loughrea, Co. Galway development under planning ref no. 05/2870.

2.2 This section also describes the existing quarrying activity, including a brief description of the current infrastructure at the site and summarises previous planning applications for the site.

2.2 Extraction of rock & stone with processing of the extracted material in preparation for use in the construction industry, the extracted material from the lands will be processed within the lands/site.

Planning permission is sought by Isertkelly Ltd. for the extension of an existing quarry, together with all ancillary site works and services, in the townland of Isertkelly North townland, Kilchreest, Loughrea, Co. Galway.

The existing quarrying activity will remain as is and the existing site infrastructure including weigh bridge and roads will broadly remain in same location with new site office building, weigh bridge office and maintenance shed to be constructed.

This EIAR is to be submitted to Galway County Council in support of an application for planning permission for the proposed development, as described above, under the Planning and Development Regulations 2001 (S.I. No 600 of 2001)

PLANNING HISTORY

The current quarry operations have been developed under planning ref. 052870 which was granted permission 15/09/2005.

Previous planning applications relating to this site are provided in the table included in Appendix B.

EXISTING OPERATION, INFRASTRUCTURE & UTILITIES

The existing quarrying activity and existing infrastructure, management and control systems will be reviewed to incorporate up to date practices. infrastructure including weigh bridge, wheelwash and roads will remain.

There will be no proposed alterations to the existing infrastructure, management, or control systems as part of the proposed development.

The site provides employment for approximately 18 to 22 personnel, depending on demand (3 administrative staff, 3 to 4 operators/ maintenance personnel and 12 to 15 drivers).

The hours of operation of the quarry are 08:00 hrs to 18:00 hrs, Monday to Friday and 08:00 hrs to 16:00 hrs on Saturdays. Truck loading activities can be undertaken between the additional hours of 07:00 and 08:00 Monday to Saturday. In accordance with condition 5 of planning ref. 05/2870

The current permitted extraction area is approximately 3.06 ha Approximately, the extraction depth permitted is 80m below original ground levels.

RESTORATION

2.3 Upon the cessation of extraction operations it is proposed to restore the site to a natural habitat.

2.4 Where feasible, restoration of exhausted and redundant areas will be carried out at the earliest opportunity. However, it is envisaged that the majority of restoration proposals will be carried out after extraction operations at the site have ceased.

AGGREGATE RESERVE ASSESSMENT

2.5 The total recoverable reserve of limestone rock within the proposed extraction area is assessed at c 1.33 million m³

DURATION OF EXTRACTION

2.6 An outline of the proposed extraction plan and the final ground levels is shown in site layout plan drawings in Appendix A.

Table 2-1 Material Quantities

Material	Quantity
Topsoil / Overburden	22,500 m³
Rock	1.33 million m3

2.7 The duration of quarrying activities at the application site will largely be dictated by the rate at which the approximately 1.33 million m³ of material is extracted from the site. There are many factors which will influence this, including, but not limited to the:

- Prevailing economic climate and related construction industry output
- Distance of construction projects from the facility (and scale of activity)
- Demand for quarry related products.

2.8 In light of these and other variables, calculation of intake rates and duration is not an exact science. It is anticipated that the average annual extraction rate will be 120,000 tonnes

The extraction operation is carried out as follows:

1. Overburden is stripped as required ahead of the working face of the quarry using a tracked excavator. The depth of overburden encountered thus far is a maximum of

c.300mm, consisting mainly of topsoil material. Those soils which have not been used in the erection of boundary earth berms are stockpiled onsite for eventual reinstatement. Earth berms have been planted to promote rapid stabilisation of soils. Some earth berms will be removed and reinstated along new site boundary, these berms will be planted as outline in proposed landscaping drawings.

2. Limestone is extracted from the working face using controlled blasting. Blasting is carried out by a contracted blasting expert approximately every 2- 2 ½ months based on demand. Charge holes are drilled into the rockface over 1-2 days, whereupon charges are placed and detonated in-series to deposit rock onto the active quarry floor. Charge type and sizes are selected by the blasting expert to environmental and health and safety criteria and taking account of conditions 7 and 8 of planning ref. 05/2870.

3. Oversized blasted stone is broken further using a tracked excavator mounted with a hydraulic rock breaker.

4. Broken stone is processed further using a mobile crushing machine. Crushed stone is transferred via the output conveyor to a mobile screening machine which separates the crushed stone into the required grades.

5. Graded stone is stockpiled within the quarry pit floor and service yard. Stone products include stone, chips, blinding and clause 804 aggregates.

Stone is provided to customers for agricultural, forestry, building development and road construction projects as requested.

Aggregate washing is not carried out at the site, however, 804 fill material is sprinkled with water to allow it to achieve optimum performance under heavy loading (for use on roads, driveways etc.).

Dewatering of the lower benches of the quarry may be required especially during winter flood periods, this water will be disposed of within the site through a proposed soakaway to be constructed under the carpark/ truck parking as indicated on the site layout plan drawings contained in Appendix A.

Truck weighing is carried out at the weighbridge and recorded at the weighbridge offices.

EXISTING MITIGATION INFRASTRUCTURE

Existing Mitigation Infrastructure

- Stone crushing and screening is carried out on the pit floor in order to avail of the noise and dust mitigation provided by the quarry walls and surrounding berms. Stone stockpiles are also stored within the quarry floor in so far as is possible. Water sprinklers are in place for stockpiles in order to provide for additional dust suppression when required.

- A 6m wide bitumen macadam access road from the main road to the weighbridge has been constructed, providing lower potential dust generation from unsurfaced trackways. Roads are wetted during dry conditions in order to aid in dust suppression via a water bowser.

- Loads containing fines are required to be covered when exiting the site.

- Internal and public roads are swept when required (road sweeping / street cleaner).

EXISTING SERVICES

- There is no general stormwater pipework or management system at the site. All rainfall that falls within the footprint of the quarry infiltrates into the services area

floor or the quarry floor and migrates vertically down to the water table. There is no discharge to surface-water from the quarry.

- There is a well onsite which provides water for dust suppression, 806 grade fill wetting, and quarry office toilets.

- The quarry office toilets discharge to a sewage treatment system located within the site close to site offices, the condition of this treatment system has been recently assessed, and the report is included in Appendix D.

ENVIRONMENTAL MANAGEMENT

Environmental Management at the site is carried out in compliance with legal requirements and under the conditions of previous planning application 05/2870. This planning decision provides general obligations for the site to maintain various aspects of the environment and amenity of the site and surrounding area, as well as specific requirements for the monitoring of potential impacts from the quarrying activity.

An environmental noise monitoring programme is in place for the assessment of noise amenity at noise sensitive receptors in the vicinity of the quarry activity. Noise monitoring is carried out quarterly in the vicinity of the site.

The noise limits for the site are as follows:

Noise Limit (monitoring duration)	Applicable period
L_{Aeq} 55dBA (60 minutes)	8:00hrs -18:00hr
L_{Aeq} 45 dBA (15 minutes)	18:00 hrs – 08:00 hrs

Each blasting event is required to be monitored at the boundary of the quarry. Blasting operations are limited to within the hours of 09:00 hrs to 18:00 hrs Monday to Friday, excluding public holidays, bank holidays and weekends.

An air pressure limit of l 25dB is applied to blasting activities at the site. A peak particle velocity (PPV) limit of 12 mm/s is in place for vibration at the nearest premises.

The results of recent noise monitoring at the site are contained in Appendix E.

Dust monitoring is carried out at three monitoring locations on the boundary of the quarry extraction area, Dust monitoring is carried out quarterly. A limit of 350 mg/m2 over a 30 day monitoring period is in place for the site, in accordance with the guidance document BPA (2006) Environmental Management in the Extractive Industry and Gennan TA Luft Air Quality Standard (Bergeroff).

The results of recent dust monitoring at the site are contained in Appendix E

The operator is required to record all complaints, including;

- the name of the complainant,
- nature, time and date,
- actions taken to deal with the complaint,
- the results of such actions,
- the response to each complainant,
- a summary of the company's investigation and response.

There have been no environmental complaints recorded to date at the quarry activity.

PROPOSED DEVELOPMENT

OVERVIEW

The applicant, Isertkelly Ltd. is requesting a 25 year planning permission for continuation of an existing quarrying operation and a 7.5 hectare extension for extraction of an average of 120,00 tonnes per annum including all ancillary site works in the townland of Isertkelly North, Kilchreest, Co. Galway.

A site location map and a site layout map for the development is provided in Appendix A of this EIAR. There are no proposed amendments to the current inputs, processes or outputs at the existing quarrying activity as part of this application, other than the proposed extension of the activity boundary and extraction areas.
The proposed development could be described as a continuation of the current quarrying activity in term of scale and methodology.

The approximate depth of excavation will be to 40m below existing ground levels this is substantially less than the previous planning which permitted extraction to an approximate depth of 80m below existing ground levels.

The site area of the proposed development will increase to 12.66 hectares., 7.5 hectares of this will be increased extraction area.

The proposal includes 2.5m (high) x 5m (wide) boundary earth berms surrounding the proposed quarry extension. The berms will be planted with a mixture of native species trees, which will visually screen the site and will reduce the amount of noise and dust leaving the site

The volume of stone within the proposed 7.5 ha extraction area has been estimated to be 1.33 million m^3. At an estimated density of 1.8 tonnes/ m3, this would equate to an estimated reserve of 2.394 million tonnes.

The quarrying excavation operation would progress in a westerly and southerly direction from the existing quarry boundary.

CLOSURE, RESTORATION & AFTERCARE

CRA for the Existing Quarry Area

Previous and current trial digging has found overburden depths of 25mm to 300mm across the proposed excavation areas. Assuming an average overburden depth of 175mm, the following estimated quantities of overburden would be available for reinstatement:

Table 2.3: Estimated stockpiled overburden volumes

Phase	Area (ha)	Overburden Volume (m3)
Proposed Extraction	7.5	22,500
Required for berms	.5	-6,800
Total	**8.0**	15,700

It is noted that, in addition to the above stored overburden, some of the extracted stone is not of a sufficient commercial grade. This material is also stored onsite and would be used in the restoration of the site. It is also noted that some of the existing removed overburden has been used to create berms on the boundaries of the extraction area these berms will be planted with native trees and will remain in place as part of restoration plan.

The ledges formed by the setting back of the quarry faces will be covered with soil and will naturally regenerate with native species. All roadways down to quarry floor will also be covered with topsoil.

The approach would allow for the establishment of flora of local provenance and would provide some open spaces required for foraging, whilst providing some cover for a variety of species.

The following would be carried out on final cessation of quarrying activities;

1. Removal of all plant and machinery.
2. Ripping up of any hardcore, macadam or concrete surfaces to a depth of 300mm,

3. Fill in with clean stone or remove any sub surface tanks,

4. Re-spreading and grading of any remaining stone/ overburden/ topsoil materials available on site.

5. The lower parts of the quarry will fill with ground water forming a pond

6. Due to the hazard of cliff faces and deep water the site will be left secure so that the general public and unable to gain entry.

All the work would be carried out by front loaders and excavator, including soil / stone movement and soil preparation. These works will be carried out in accordance with existing restoration plan or any future agreed restoration plan.

OBJECTIVES AND MEASURES FOR THE PROMOTION OF BIODIVERSITY DURING RESTORATION

Reinstatement Objectives

The development of the quarry extension will result in the loss of habitat for certain floral and faunal species but will provide habitats for other species. For example, there will be a nett loss of grassland habitat during operation, however there will be additional habitat provided for the protected species which utilise active quarries such as Sand Martin, Peregrine Falcon, amphibians etc. The objective during reinstatement is to restore some of the habitats that will be removed by the proposed development whilst retaining important habitats which developed during the operation of the quarry. This will require active management of the existing quarry and proposed extension area during the reinstatement process and in subsequent years.

The key objectives are as follows:

1. Natural recolonisation is generally preferred to large scale planting.
2. Control of invasive species on an ongoing basis.
3. Specific measures that are targeted towards certain key ecological receptors including, Sand Martins, Badgers and bats.

4. Maintenance/restoration of commuting routes/green corridors in the context of the wider landscape

5. Provision of new habitats.

Specific Measures Quarry faces

Cliffs in quarries can be important ecological elements in the wider landscape. Following decommissioning, there will be multiple faces of various heights within the quarry and along its boundary. The outer perimeter of the site will be fenced to ensure they do not create a hazard and will be left largely intact. The faces are not visually intrusive in the context of the local landscape and will naturally become colonised by vegetation over time. Such faces can provide nesting habitat for birds including ravens, peregrine falcons, etc.

Recolonisation and additional planting

It is noted that some planting of specific areas is proposed as detailed below. However, in general natural recolonisation will be allowed to proceed. This will ensure that such areas are colonised by a mixture of native species from the surrounding landscape. These species will be appropriate to the local conditions. In general, the use of wildflower mixes and extensive planting is not recommended, as natural recolonisation is considered a more effective means of revegetating a disturbed site.

New planting is recommended along external boundaries where is also serves a screening function. This will also provide enhanced foraging habitat and green corridors for bat and birds.

SITE SCREENING

2.9 Given the location and topography of the site it is unlikely that this development will be unduly prominent. The proposed planted soil berms to the perimeter of the site will mitigate against the visual impact.

REMOVAL OF TOPSOIL AND OVERBURDEN SOILS

2.10 Any topsoil and overburden not used for the construction of perimeter berms will be stockpiled and will be used in the restoration of the quarry in a phased basis in order to return the application area to a natural habitat.

SITE DRAINAGE

2.11 A hydrological / hydrogeological assessment has been carried out taking into consideration the existing water regime at the site. It addresses mitigation measures to eliminate and/or minimise the potential impacts, if any, on surface water and groundwater – refer to Chapter 7 – Hydrology and Hydrogeology (Water)

STABILITY OF THE QUARRY

2.12 Industry standard slope angles, bench heights, and bench widths will be used for extraction operations at the site, and these will be assessed in conjunction with the nature of the materials extracted on a ongoing basis.

METHOD OF EXTRACTION

2.13 The material will be extracted by means of blasting and use of excavators and dump trucks. Rock inverts are indicated in the borehole drilled on site used to establish water table, rock levels, physical & chemical information relating to the underlying materials. This information allows the various experts make informed decisions based on science and engineering.

PROCESSING METHODS

2.14 The processing of the extracted Rock, into aggregate products, will consist of crushing and screening by mobile processing plant within the application area.

QUARRY WORKING HOURS

2.15 In accordance with the current planning (PD 05/2870) on site operations, other than blasting operations will be carried out between the hours of 08:00 and 18:00 only, Monday to Friday inclusive, and between the hours of 08:00 and 16:00 on Saturdays. Truck loading activities can be undertaken between the additional hours of 07:00 and 08:00, Monday to Saturday, inclusive. Blasting shall be confined to 09:00 and 19:00 Monday to Friday.

SITE ROADS, PARKING AND HARDSTANDING AREAS

2.21 All HGVs utilising the quarry will be confined within the Applicant's landholding.

- Trucks turn into site from the local road and access the site as described above.

2.22 Adequate car parking provision for employees and visitors is indicated on the site layout plan. Truck parking is provided on site as indicated on the site layout drawing.

WEIGHBRIDGE

2.23 In order to track and record the amount of material exiting the quarry, all HGV traffic is directed across the existing weighbridge, the location of which are also indicated on the Proposed Site Layout Plan (Sheet 3) drawing no. 23.129-013 (refer to Appendix A).

OFFICES AND ANCILLARY FACILITIES

2.24 An office building is proposed which will replace the existing prefabricated buildings, this new building will include offices, toilets, changing room and canteen. Other new structures will include refuelling pad, fuel tank, carparking, truck parking, maintenance shed and weigh bridge office. There is an existing weight bridge and wheel wash on site.

2.29 Given the lack of combustible waste materials at this site, it is considered highly unlikely that a fire will break out during quarry operations. A range of fire extinguishers (water, foam and CO2) will be kept at the site office to deal with any localised small-scale fires which might occur. Additional fire-fighting capacity can be provided by storing water in a mobile bowser on unsealed hardstand areas around the infrastructure area. A fire safety certificate will be obtained for the proposed premises and a fire safety management plan will be prepared in conjunction with this and the operation of the quarry.

LIGHTING

2.30 Sufficient lighting is to be provided at the site to ensure safe operations during winter periods. It is expected that any lighting installed will not have much use as the quarry will generally only work during daylight hours. Refer to site Layout Plan drawings in Appendix A for details on proposed site lighting.

FUEL AND OIL STORAGE

2.31 There is a bunded fuel tank provided adjacent to the proposed refuelling pad. Fuel oil will be delivered to site via fuel truck and mobile machines will fuel atop an impermeable fuel pad as shown on the site infrastructure drawing and the mobile crusher during its presence will be fuelled in-situ within the extraction area. All precautions such as training spill kits will be in place to ensure no risk to the

environment.

LANDSCAPE AND BOUNDARY TREATMENT

2.32 Secure stock proof fencing will be erected at the quarry site along all perimeter boundaries, where required. Prior to any development within the permitted extraction area a survey of the entire property boundary will be undertaken and where necessary, new boundary fencing will be erected, existing fencing will be repaired and/or replaced and hedgerows will be strengthened or fortified by additional planting.

WASTE MANAGEMENT

EXTRACTIVE WASTE MANAGEMENT

2.33 Almost all products and by – products arising from the aggregate processing have commercial value. Any waste materials from the site are stored, collected, recycled and or disposed of in accordance with any requirements of Galway County Council.

GENERAL WASTE MANAGEMENT

2.34 The client will operate in accordance with the current codes of practice and the current waste management regulations. The guidelines states:
"minimise production of waste and where appropriate consider its beneficial use including recycling. The facility operator will deal with all waste in accordance with the relevant legislation and other controls in place, including using waste contractors with valid Waste Collection Permits.

2.35 Potential waste produced and the measures used to control it are described as

follows:-

- Domestic Style Waste (Canteen Waste) – domestic waste generated at the offices and employee's facility will continue to be collected by a licensed waste collection contractor, bi-weekly.

ENVIRONMENTAL CONTROLS

GENERAL

2.36 Extraction, processing and ultimately restoration activities at the application site require a number of environmental controls to eliminate or minimise the potential nuisance to the public arising from the extraction and processing operations. The environmental control measures required at the site are outlined in the relevant EIAR Chapters.

2.37 Any additional control measures, which may be instructed on foot of the proposed planning application will also be implemented.

BIRD CONTROL

2.38 As the process of rock extraction is free of putrescible (food/kitchen) waste, site activities are unlikely to attract scavenging birds such as gulls and crows for the duration of works. Accordingly, it is not intended to implement any specific bird control measures on site.

TRAFFIC CONTROL

2.39 As the planning application relates to the extraction of limestone all traffic will use the private road and use the local road on entering and exiting the site. The intensity of traffic can be controlled by the site office and there will be no queueing on the public road. The established road use hierarchy of the network will continue

for any future permitted quarrying.

LITTER CONTROL

2.40 As the proposed development will be largely free of litter, the daily operational activities are unlikely to give rise to problems with windblown litter. Accordingly, there is no requirement to implement ay specific litter control measures at the site.

2.41 In the unlikely event that any litter waste is identified, it will be immediately removed off- site to anauthorised waste disposal or recovery site.

Odour Control

2.42 As stone extraction activities at the site are not biodegradable and do not therefore emit odorous gases, site activities do not give rise to odour nuisance. No odour control is required.

VERMIN CONTROL

2.43 As the proposed development is free of putrescible (food / kitchen) waste, on-site activities will not attract vermin for the duration of the extraction or subsequent restoration operations. Accordingly, no specific vermin control measures are required.

FIRE CONTROL

2.44 In the unlikely event that a fire does occur, the local fire station in Loughrea will be contacted and emergency response procedures will be implemented. Fire extinguishers (water and foam) are provided at all offices to deal with any small outbreaks which may occur. A fire safety Certificate will be obtained from Galway County Council for the replacement building.

DUST GENERATION AND CONTROL

2.45 In dry, windy weather conditions, site activities may give rise to dust blows across and beyond the existing or planned development site areas.

2.46 The incidence of fugitive dust outside of the operation is reduced by some of the mobile crushing and screening plant being located within the quarry void. Generation of fugitive dust is generally limited to periods of very low rainfall (refer to Chapter 8 – Air Quality). Dust generation occurs from three main sources.

- Point sources – such as operating plant and machinery
- Line sources – such as roads and conveyors
- Dispersed Sources– such as quarry floors and stockpiles

2.47 In order to control dust emissions, the following measures will be implemented: -

- Water will be sprayed from a tractor drawn bowser on dry exposed surfaces and stockpiles (paved roads, unsealed haul roads and hardstand areas)
- Continuation of the provision of a fixed sprinkler system along the internal road from the site access to the office.
- Areas of bare or exposed soils will, insofar as practicable, be kept to a minimum.
- The amount of dust or fines carried onto the public road network will be reduced by periodicsweeping of internal paved site roads and surrounding public roads as required.
- Emission of fugitive dust from machinery such as processing plant will be minimised by utilising dust suppression and by locating such plant within the quarry area.

2.48 Dust deposition monitoring will continue to be carried out when the quarry is operational as part of the environmental monitoring programme. Monitoring results will be submitted to Galway County Council on an annual basis – refer to EIAR

Chapter 8. Air Quality and Dust

2.49 Mitigation measures are provided in accordance with the DoEHLG (2004) guidelines for the sector and EPA (2006) , refer to EIAR Chapter 8 – Air Quality and Dust

NOISE GENERATION AND CONTROL

2.50 The sources of noise located within the planning application area are primarily related to machinery / plant operation.

2.51 The potential for noise generation from the planning application area is reduced by locating some of the mobile crushing and screening plant at the lowest practical level. This means that the potential for noise generation from activities associated with the operation of the plant such as movement of vehicles and maintenance will be reduced – refer to Chapter 10. Noise & Vibration

2.52 In addition to the above the following good house-keeping measures are put in place to reduce noise emitted from plant and machinery as much as possible.

- All machinery used will be CE certified for compliance with EU noise control limits
- The machinery will be regularly maintained. This includes regularly checking any muffler systems and servicing or replacing as required. It also ensures any loose or damaged panels or covers that suppress noise is fixed or replaced immediately.
- If there are further noise-reducing modifications available for any machinery, they will be fitted wherever practical (eg: rubber decked screens, rubber chute linings etc)
- Haul road grades are kept as low as possible (</= 1:10) to reduce engine / brake noise from heavy vehicles.

2.53 Mitigation measures are provided in accordance with the DoEHLG (2004) and EPA (2006) guidelines for the sector.

2.54 The noise monitoring programme at the site will continue and ongoing noise monitoring will be carried out as part of the environmental monitoring programme. Monitoring results will be submitted to the County Council on an annual basis. It is intended that noise monitoring will be carried out in conjunction with adjoining development, if such a situation arises.

ENVIRONMENTAL MONITORING

GENERAL

2.55 The site will continue to have an environmental monitoring programme on site - Water, noise & dust monitoring will be carried out on a regular basis, to demonstrate that the development is not having an adverse impact on the surrounding environment.

WATER MONITORING

2.56 A water monitoring well was installed as part of the Hydrogeological assessments, and these will be monitored by an independent lab and the results will be submitted to Galway County Council as required for review and comment.

SITE MANAGEMENT AND SUPERVISION

2.57 The worked-out areas will be restored to a natural habitat, relevant staff will be briefed on the scheme and will be adequately supervised / controlled. A system of record keeping for the key restoration activities will be put in place.

LONG TERM SURFACE WATER AND GROUNDWATER

2.58 There will be no drains or watercourses leaving the site, all surface water will percolate to ground, it is likely the lower levels of the worked quarry will flood forming a pond.

DECOMMISSIONING OF PLANT AND MACHINERY

2.59 Redundant structures, plant equipment and stockpiles will be removed from site on permanent cessation of extraction activity. Machinery and buildings will either be utilised by our client on other sites or be sold as working machinery or scrap.

2.58 As part of the overall decommissioning process, all fuel, oil storage and septic / effluent treatment tanks within the existing site will be removed from the site by a licensed waste contractor. Therefore, there will be no potential for fuel, oil or sewage to cause long-term water pollution following completion of extraction activities.

CHAPTER 3

ALTERNATIVES

3. Consideration of Alternatives

3.1 Introduction

This chapter has been prepared using the EPAs guidelines on information to be contained in an EIAR (2002). The directive requires an applicant for consent to prepare description of reasonable alternatives which are relevant to the proposed project and an indication of the reasons the chosen option was selected. An analysis of high-level strategic alternatives are not normally part of a project level EIAR.

3.2 Consideration of Alternatives

The applicant examined all land in his ownership which have quarrying potential. The landowner owns 24ha in the immediate vicinity of the quarry. The preference for continued quarrying favours extension of existing facilities over greenfield set-ups. The site chosen for the application is immediately adjacent to the quarry permitted under 05/2870.

3.3 Proposed Levels

The permitted quarry has permission to excavate up to 80m below OGL. The productive area at this depth becomes small when benching and haul routes are accommodated and in the scenario of an extended quarry excavation depths less than 80m are more sustainable in terms of productive area and the reduced potential for dewatering. The balance has to be struck between maximising efficient working and reducing the loss of good agricultural land. The final chosen area has the following attributes:

- Proven qualities of usable materials
- Maintenance of present access to quarry
- Lower development costs as existing infrastructure is adequate see chapters 11 and 14 for further details.
- The proximity of the lands to major growth centres in Galway and a lesser extent in Clare and Roscommon.

3.4 Do Nothing Alternative

If quarrying is not to occur on these lands they will remain in agricultural use and the existing environment impacts will continue.

3.5 Alternative Sources

The products of limestone quarries will continue to be used in construction. In this area land base sourcing of such materials has less environmental impacts than recycling waste or

sourcing marine materials. The former because quality criteria are not widely accepted or applicable and the latter because of the nature of the material. Despite the proximity of Galway City the qualities of recycled material are not sufficient to meet the demands from planned development. The continuation of quarrying in established locations will continue to meet the construction needs of the area for the medium term which accords with the proposed lifetime of the quarry.

3.6 Alternative Sites/ Layouts

The applicant considered the potential for extraction over his entire landholding and different configurations and layouts within the landholding. The final choice was a balance between depth and area. The prospect of extraction over the whole land holding would when taken in conjunction with existing and adjacent development result in a super quarry which in terms of longevity could take up to 100years to work out at present rates of production. The environmental impacts could not be accurately predicted in such an expanded timespan nor could the regulatory frameworks that may emerge.

The direction of work in the quarry had 3 potential components north, west or south. The northern option is only viable in the context of a joint approach from adjoining landowners, moving south would increase proximity to the road and the nearest house, moving west would maintain separation from the road and the nearest house and would result in marginal increase in proximity to residences in the west but not so as to increase emissions significantly. The selection of a proposed excavation depth of 40m maximum was informed by the prospect of having the potential to continue similar levels of production and concurrently reduce the potential for de-watering to more manageable levels. The proposed extension phasing is shown below on Drg. No. 58.

CHAPTER 4

POPULATION & HUMAN HEALTH

4.0 Population and Human Health.

The study area is the surrounding local electoral areas using the results from census 22 as the most up to date information available. Human health is considered and examined in the context of relevant pathways such as air quality, noise, soils and water. The proposed development is to a large extent a continuation of the type of quarrying that has been ongoing in this area for more than 20 years.

The statutory and permitted limits that apply to these pathways have been met to date and the EIAR predicts that there will be continuity of this as the proposed development occurs. Mitigations proposed will continue to reduce impacts from quarrying activities subject to the quarry operating in accordance with good practice.

The proposed restoration plan will create new habitats which will enhance the bio-diversity of the area. There will be no waste generated from the operation of the quarry. The traffic impact assessments show that the road networks in the area subject to continuation of the current route use protocols have the capacity to accommodate the expected levels of use. There are no sensitive receptors significantly closer to the proposed quarry than to the existing quarry.

The assessment has concluded that there will not be any significant adverse impacts on human health. There will be positive impacts through the continuation of direct and indirect employment. The quarry has the potential to have an overall beneficial impact on the regional economy centred around Galway City.

CHAPTER 5

BIODIVERSITY

Biodiversity

A Stage 1 Appropriate Assessment Screening (AA) has been prepared in support of this application.

The sites considered to be within the potential zone of influence of the proposed development are the Slieve Aughty Mountains SPA (Site Code: 00004168), Peterswell Turlough SAC and pNHA (Site Code: 000318) due to close proximity, the Rahasane Turlough SPA (Site Code: 004089), Rahasane Turlough SAC and pNHA, and the Coole-Garryland SPA (Site Code: 004107 due to the presence of grassland habitats for potential link with qualifying species and potential hydrological connection via groundwater.

It is not anticipated that the proposed extension of the existing quarry at Kilchreest, by itself or in combination with other developments, would impact negatively upon the Natura 2000 network.

The EIAR Biodiversity assessment has considered the wider ecological environment, in addition to the Natura 2000 sites considered within the Appropriate Assessment.

Badger were recorded on trail cameras accessing the development site, most likely to forage. There was no evidence of any Badger setts (including latrines) observed within or adjacent the development boundary. There was no evidence of any other protected fauna recorded onsite. An ecologist will conduct a survey prior to the removal of and during the removal of vegetation onsite.

The majority of hedgerows onsite are considered as having low/negligible bat roost potential. A full bat survey will be conducted during the active bat season prior to the removal of any trees or hedgerows.

There would be no significant potential disturbance upon fauna due to noise from the proposed development. There would be no alteration to the existing baseline noise environment. The quarry face has been designed to limit noise disturbance.

There are no watercourses or drainage ditches within the red line boundary. Impacts on water quality and aquatic species are not expected.

No rare or protected flora were recorded within the site during the field assessment. No invasive flora species of concern were noted as present during the site assessment. Given the nature of the proposal, it is considered that there would be no risk of introducing invasive species during the construction or operational phase.

There will be a minor temporary loss of some existing habitats (scrub, hedgerows, grassland) until the new planting schedule has become established. These habitats are commonly found throughout Ireland and were comprised of mostly native species. The loss of these habitats would not be significant. In addition, the landscape plan proposes the planting of native and non-native non-invasive species within its design. A 5m linear strip along the boundaries of the site is proposed. This will allow continued connectivity to habitats within the wider environment.

Mitigation measures for the protection and enhancement of biodiversity at the site have been recommended and is not anticipated that the proposed development would have a significant residual negative ecological impact upon the biodiversity of the area.

CHAPTER 6

LAND SOILS & GEOLOGY

Land & Soils, (Geology)

Introduction

This is the non-technical summary of the Land and Soil (Geology) Chapter completed for the Environmental Impact Assessment Report (EIAR) of the proposed expansion of the existing Kilchreest Limestone Quarry in the townland of Isertkelly North, near Loughrea, in Co. Galway.

The site is in a rural, dominantly improved grassland agricultural setting, with some individual residential and farm properties sited in ribbon style pattern along the local road to the south, south west and south east of the site. There is a Roadstone Quarry located immediately to the north of the site. The access to the quarry is from a short private road on the north side of the local road.

The study area covers about 12.66 hectares including the active quarry that has flat to undulating grassland fields, used for animal grazing to the west, south and east. Generally, the ground heights range from 69 to 59m OD and the local topography generally slopes gently southwards.

The exiting quarry occupies about seven acres of the north eastern corner of the study area. It has a roughly square shape and extends down to a depth of about 35m below ground level. It is proposed to expand the western and southern sides to the quarry and expand it to 7.5 hectares.

Background information on the nature of the land, soils and geology, their characteristics and status was obtained from a wide variety of available documents and online references. A site walkover was completed in order to inspect the site setting and the proposed expansion area.

Existing Environment

The Regional Geological Survey of Ireland (GSI) and Teagasc Soil mapping identifies the local area as having exposed karstifed limestone bedrock (KaRck) which can be overlain by thin well drained glacial limestone Tills (TLs) which are mineral soils derived from mainly calcareous limestone parent material and a soil group of Grey Brown Podzolics Brown Earths, (BminDW).

The recent EPA/Teagasc Soil Information System (SIS) mapping identifies the Soil Association as being as being ‘Faoldroim (1150FO)’ soils which are described as “fine loamy drift with limestones” and are very widely distributed in Galway and the midland area.

The bedrock underlying the site and local area is identified as Lower Carboniferous aged Dinantian Pure Bedded Limestone (DPBL) which are comprised of shallow dipping to flat, calcium rich Newtown Member of the Tobber Formation Limestones that were deposited in a shallow marine environment. In the study area they are likely to be a combination of clean and muddy bioclastic limestones The bedrock is classified as a Regionally Important Aquifer with conduit karstic flow. No groundwater dewatering is proposed for the future bedrock extraction.

Predicted Impacts

Predicted impacts during development and operational phase include: (1) removal of the thin soil cover from the proposed expansion area to enable the construction of boundary berms with any excess stock piled for future restoration works, (2) extracting the limestone bedrock in five phases that will enable the extraction of about 120,000 tonnes of aggregate per year for about 23 years, (3) potential for accidental contamination of the ground and the under lying aquifer through fuel spillages, (3) creation of up to a maximum of 32m to 40m high quarry faces increasing risk of rock instability and (4) potential for dust generation in dry weather from the active quarry areas.

Once quarrying is finished it is proposed to place soil on the level areas and to let natural flora grow in order to increase the biodiversity potential of the locality.

The main risk to human health during the quarrying works would be the risks during rock blasts and of the collapse of an exposed quarry face, but this will be mitigated by having adequate slope angles, benching and geotechnical management of the rock faces. The potential for a large spill of fuel to occur will be mitigated by controlled refuelling and the proper storage of bulk fuels.

Mitigation Measures

Good site management and infrastructure, such as controlled refuelling of machinery, aggregate stockpiling, and dust suppression will be undertaken. Quarry activities will be controlled and limited to phased expansion areas. Quarried areas will be landscaped and vegetated as soon as is practical after completion to further reduce the potential for slope instability and dust generation.

Best practice guidelines with regard to environmental management and pollution control for the quarry industry, (e.g. Environmental Management in the Extractive Industry (EPA and CFI), will be implemented for the excavation works through the development of a site specific Environmental Management Plan.

Impact Assessment

The sites limestone bedrock is considered to have a High Importance as an aggregate resource. The bedrock and the thin layer of limestone tills are not designated as a geological heritage or ecologically important attributes. The Impact Magnitude is considered to be Insignificant and generally neutral to positive on a local level as while the soil and bedrock attributes are very common the represent a valuable rock resource in an established quarry.

Conclusion

Following the assessment of the Land and Soil (Geological) elements of the development the Magnitude of Impact on these attributes is considered to be Negligible. Some of the potential short term or brief impact such as dust occurrence or impact from

hydrocarbon spills on the site can be prevented or limited by incorporating the recommended mitigation measures into the development and operation phases. The identified impacts are rated to be Imperceptible.

CHAPTER 8

AIR QUALITY & DUST

8 Air Quality Assessment

The potential air quality impacts of the proposal for the continuation and extension of the existing Kilchreest quarry and the extraction of limestone within c 7.5 hectares using conventional drilling and blasting techniques and mineral reduction using mobile crushing and screening have been assessed.

The significance of impacts due to dust emissions from the proposed development are dependent upon the magnitude of the emissions, the prevailing meteorological conditions for that location, and the proximity of sensitive locations to the emission sources. The potential for these to occur and give rise to nuisance and health impacts has been assessed.

The air quality impact assessment was undertaken with reference the Institute of Air Quality Management (IAQM) guidance document entitled Guidance on the Assessment of Mineral Dust Impacts for Planning (2016 V1.1).

Five potentially sensitive locations (with respect to dust) were identified in the vicinity of the site that may be affected by quarry generated dust.

The distance from the source of dust emissions to a receptor plays an important role in the potential dust impact. Meteorological conditions such as rainfall and wind speed and direction have the greatest impact on potential dust deposition impacts in proximity to the site. Rainfall, wind speed and direction data have been obtained from the Athenry weather station located ~14km north of the Quarry site.

The potential for any dust arising from the proposed development site has been assessed. It is predicted that the potential for nuisance impact has been and is limited to the immediate vicinity of the existing activities. The potential for nuisance dust impacts is considered to be 'slight adverse' to 'negligible' at the nearest sensitive receptors. Therefore, the overall effect is considered to be 'not significant'.

The proposed site dust management practices are considered to be appropriate to mitigate the potential impacts. Dust deposition monitoring will continue to be undertaken to confirm that future quarrying and associated operations will result in dust deposition rates that are maintained below the recommended dust deposition limit value of 350 mg/m^2/day at all monitoring locations, as outlined in the DOEHLG 2006 guidance.

CHAPTER 9

CLIMATE

9 CLIMATE

9.1 Non-Technical Summary - Climate Impact Assessment

The potential climate impacts of the proposal for the continuation and extension of the existing Kilchreest quarry and the extraction of limestone within c 7.5 hectares using conventional drilling and blasting techniques and mineral reduction using mobile crushing and screening have been assessed.

The climate impact assessment has been prepared to assess the potential

- Impacts of climate change on the development, including the sensitivity, exposure and the overall vulnerability of the development to impacts from relevant climate hazards; and
- Impacts of the development on the climate, i.e. greenhouse gas emissions.

There are no specific tools developed for assessing climate change for extractive industries. The Climate Change and Major Project guidelines on how to make investments resilient to climate change provides a methodology for undertaking a vulnerability and risk assessment.

The aim of the vulnerability assessment is to identify the relevant climate hazards foreseen at the development location. The project was assessed to be most sensitive to extreme rainfall, flash flood, storms, and winds.

Based on the calculated total of 148,817.25 CO_{2eq} kg and a comparison to Ireland's national total emissions (including LULUCF) of 60.62 Mt CO_{2eq} in 2023, it is assessed that the proposed operations would represent a maximum of 0.000245% of Ireland's annual CO_{2eq} emissions. This represents a **negligible** impact.

As the development is not expected to affect the local climate or microclimate of the area, there is no requirement for mitigation within this development proposal in respect of climatic issues beyond those currently in place.

In the context of climate change, measures to increase the adaptive capacity of the proposed development and disaster risk reduction strategies can be developed with a view to reducing vulnerability and increasing its resilience. Mitigation measures for the proposed development relating to climate impact and climate change adaptation have been recommended.

CHAPTER 10

NOISE & VIBRATION

10 NOISE AND VIBRATION

10.1 Non-Technical Summary

The Noise Impact Assessment has considered the potential noise impact of the proposed development within and around the proposed development site at Kilchreest Quarry. The mineral will be extracted in a phased manner at the current rate of extraction, following which, the site will be restored. The proposed hours of operation will remain unchanged, i.e. 0800 – 1700 Monday to Friday and 0800 - 1300 on Saturdays.

The quarry is located in a rural setting and is surrounded by agricultural fields to the north, east and west, with a number of residential dwellings located along a local road to the south. The adjacent Roadstone Quarry has been closed since July 2024, with no known date for re-commencement.

A detailed noise impact assessment has been undertaken in accordance with Quarries and Ancillary Activities, Guidelines for Planning Authorities, April 2004, Department of the Environment, Heritage and Local Government (DoEHLG Guidance) and Environmental Management Guidelines Environmental Management in the Extractive Industry (Non-Scheduled Minerals) (EPA 2006)

Existing background noise levels have been measured. The predicted noise levels have been established based on actual measured noise levels in proximity to actual plant and machinery on the Kilchreest Quarry site. The predicted noise levels at the noise sensitive receivers due to the proposed lateral and deepening quarrying extension have been assessed against the DoEHLG Guidance noise limit of 55 dB $L_{Aeq,\ 1\ Hour}$.

The noise impact assessment has concluded that when the measured baseline noise levels and the predicted noise levels from the quarrying and extraction operations on site are compared, there will be no exceedance of the DoEHLG Guidance noise limit of 55 dB $L_{Aeq,\ 1\ Hour}$. There will be no significant change in existing noise levels at the noise sensitive receptor locations in the area.

CHAPTER 11

MATERIAL ASSETS

11 Material Assets

11.1 Introduction

This chapter examines the effects of the proposed development on material assets. The proposed development is described in Chapter 2 and should be read in conjunction with this chapter. The proposed development includes the excavation, processing and transport of rock and other natural materials within the site and externally. The excavation level will not extend beyond 40m. A settlement lagoon and a Wastewater Treatment Plan are the primary designed treatment systems on site.

11.2 Scope of Examination

The EPA Guidelines on the Information to be contained in an EIAR (2022) describe material Assets as built services and infrastructure. Traffic is included because in effect traffic consumes transport infrastructure. Sealing of agricultural land and effects on quarrying potential come under factors of land and soils. This chapter will assess the impacts on the following infrastructure – electricity, telecommunications, gas, water, sewerage and waste management. The author of this chapter is Mr. Stephen Boyd, Chartered Engineer who has over 25 years' experience in designing, delivering and monitoring infrastructure projects. There were no difficulties encountered in completing this chapter.

11.3 Regulatory Background

This chapter had regard to the Guidelines on Information to be contained in EIAR (EPA 2022). The study area is the quarry and its vicinity. The desk top study used published information, knowledge of the applicant, other sections of this EIAR and publically available mapping. The sources of information include –

- Galway County Development Plan 20-30
- My Plan 1
- OSI Maps
- Planning Register Galway County Council

11.4 Built Services

The built services in relation to this application are for the most part already in place. The scale and scope of the proposed development is similar to existing development in terms of consumption of material assets

(a) Water Supply – the onsite well services the existing washrooms and sanitary facilities. It also supplies the existing tank/reservoir on site which is used for dust suppression as required.
(b) The existing site office is already connected to telecommunications networks. These will not need to be upgraded to service the proposed development.
(c) There is an on-site sewage treatment system which has the capacity to serve the proposed development. There will not be any significant loading increase on the existing system.
(d) The site already has an electricity supply and no upgrade or additional capacity is needed.
(e) Waste Disposal – the existing quarry does not generate any waste outside of domestic type waste arising from the office, wash facilities and canteen. These are collected by a licenced waste contractor and will continue for the duration of quarrying. Any waste generated from plant maintenance also use licenced operators.
(f) Transport – the road network in the vicinity has been the subject of detailed analysis in Chapter 14 and evidence of adequate capacities have been demonstrated.

11.5 Cumulative Impacts

An examination of the planning register since 2016 indicates that there are no proposed developments which will have significant impacts on the capacity of material assets in the region. It is unlikely that new development most of which are small in scale and emote from the immediate vicinity of the quarry will be affected by the quarry. The converse is also the case.

11.6 Mitigation Measures

There are no new significant impacts on built assets arising from the proposed development. There are no mitigation measures proposed.

11. 7 Residual Impact Assessment

There are no residual impacts anticipated on the material assets.

11.8 Planning Policy Framework

The subject site is within the administrative area of Galway County Council and the current County Development Plan 22-28 provides a planning and development justification for the proposed development. The EIAR demonstrates that the proposed quarry accords with the vision of the Council with respect to the sustainable development of quarries. By their nature, stone aggregates can only be harvested where they occur. The cost of haulage is a major component and determines the economic competitiveness and efficiency of quarries. Proximity to developing settlements, existing and proposed infrastructure is what makes

quarries sustainable development. Extractive industry of the type existing and proposed in this application gives rise to detrimental environmental and residential amenity effects.

In the CDP quarries were examined in Chapter 4 Rural Living and Development as they are invariably located there. They are seen as important components of the rural economy in the county. The preference for the Council is to promote the continued sustainable extraction of existing quarries over the development of new quarries on Greenfield sites. The policy objectives in the CDP include having adequate supply of aggregates to facilitate planned development. In terms of environment protection having regard to the habitats directive, statutory guidelines for quarries and the relevant DM Standard 18. The potential for worked out quarries to become facilities for C&D waste and proper regard for landscaping quarries themselves and the landscape character of areas are relevant considerations.

The proposed development, with the mitigations included in the EIAR, meet all the relevant policy requirements in the CDP with regard to environmental impacts. In addition to the current and past environment management practices demonstrated, the existing quarry has operated at acceptable levels over long periods and the proposal to continue quarrying on these lands will accord with proper planning.

CHAPTER 12

CULTURAL HERITAGE

ARCHAEOLOGICAL, ARCHITECTURAL AND CULTURAL HERITAGE

The Cultural Heritage of the area of the proposed project was examined through an Archaeological, Architectural, and Historical study. The Archaeological and Architectural studies involved a documentary/ cartographic search and focussed field inspection of the area, while the Historical study involved a documentary search.

The subject development lands form part of the townland of Isertkelly North, the civil parish of Isertkelly and barony of Loughrea (O.S. 6" Map: Galway Sheets 104 & 114). The name Isertkelly derives from the Irish *Díseart Ceallaigh* – the 'hermitage of the Kellys' – and is first recorded in about 1200 (Placenames Database – www.logainm.ie); the 'hermitage' is likely associated with a Church and Graveyard to the west-southwest of the subject site. There are no significant historical events associated with the proposed development lands which have the ability to be impacted upon by the proposed development; consequently, no related mitigation measures are required.

There are no previously identified monuments located within the PDA and no surface traces of archaeological potential were noted by an examination of historic maps, aerial photographs of satellite imagery (e.g. Google Maps and Bing Maps); likewise, no surface traces of potential interest were noted by the surface reconnaissance surveys undertaken within the PDA and overall landholding. There are fifteen previously recorded monuments/groups of monuments, identified on the basis of the Paper Survey, located within1km outside the extent of the PDA; the nearest monument is SITE CH-12 (A) – SMR No: GA114-097002; Deserted Settlement – Medieval), the closest extent of the RMP Zone of which is located approximately 240m to the southwest.

A Geophysical Survey was undertaken within available areas of the overall landholding and a number of anomalies of archaeological potential were detected. Those anomalies within the current application area were subsequently subjected to a programme of intrusive archaeological testing; a total of twenty-nine trenches, of varying lengths and orientations were excavated and nothing of archaeological interest or potential was uncovered. It is considered that no impacts to the settings of any archaeological monuments will occur as a result of the development proceeding, as proposed. Consequently, it is considered that no mitigation measures relating to Archaeological Heritage are required.

There are no protected structures, within the meaning of the Planning and Development Act, 2000, or National Inventory of Architectural Heritage (NIAH)-listed structures, situated within the boundaries of the proposed development lands or wider 1km study area. A previously unrecorded/undesignated feature of interest (SITE CH-16: Water Pump) is located adjacent the existing entrance road to the quarry. It is considered that no physical impact on this

feature will occur as a result of the development proceeding; consequently, no mitigation measures are necessary.

It is not considered that the cumulative effect of the proposed development will cause any increased impacts to identified sites of Cultural Heritage interest. This is due to the locations of such sites with respect to the subject development lands and the existing nature of such sites.

CHAPTER 13

LANDSCAPE & VISUAL

IMPACT ASSESSMENT

4. Landscape & Visual Impact Assessment

The development of the quarry in Kilchreest is in keeping with the character of the area, with a number of similar quarries in the locality.

The proposal combines the coherency of quarry development and respects the character of the adjoining land use in the Kilchreest area.

It is set back from the road and provides extensive screening in the form of native planting.

It shall have a positive impact on the field systems, reintroducing hedgerows and trees that shall bring a renewed habitat to the locality. The addition of this landscape buffer is significant and will increase the biodiversity in the area. This a welcome addition and can shall be planted to operations in the quarry.

The location of the quarry adjacent to an existing quarry of the client and one of adjoining operator – Roadstone means that any impact is in keeping with current land use.

It also reduces truck journeys to a separate location, and the necessity for structures to be constructed to service the quarry.

All the necessary infrastructure is present in the current quarry.

The development shall provide a coherent production and extraction of materials by virtue of the location. It is providing an opportunity to provide a new habitat that shall host a greater range of biodiversity than the current field system.

The quarry shall not detract from the local landscape as the manner of the landscape mitigation shall screen it from public view. It shall extend the lifetime of the existing plant by providing readily available raw material for the production of material for the construction industry.

The quarry shall provide local employment in the extraction process and guarantee the source of material for the construction industry.

The positive social impact from the production of material for housing shall, provide jobs in the construction industry and houses for people for many years to come.

CHAPTER 14

Traffic Impact Assessment

Traffic Impact Assessment

Material Assets considers physical resources in the environment which may be of human or natural origin. Material assets of human origin include built services and infrastructure such as traffic infrastructure, potable water supply, wastewater discharge, electricity and gas supply. This section provides a non-technical summary of the traffic-related impacts associated with the development.

The development flows to and from the site were calculated based on information received from the applicant on the proposed future activity at the site. Quarry extraction is to be 120,000 tonnes on a yearly basis. The additional material being extracted will be transported from the quarry by the existing HGV's currently using the quarry. Therefore, there will be no additional HGV trips arriving and departing the quarry. Currently the daily HGV trips associated with the quarry operation is 54 two way trips. There will be no increase in staff number.

The distribution of generated traffic is assumed to mirror the pattern observed for existing arrivals and departures. At present Kilchreest quarry employ a policy that all quarry traffic exiting the quarry entrance will turn left except for local deliveries.

The Local Road L2025 is a single carriageway varying in width from approximately 5.5m to 5m. there are no centreline or edge lines markings. At present the existing L8532 has sufficient capacity for current traffic flows. Junction capacity analysis was undertaken for the quarry access for the current year, 2021, the opening year, 2024, and the future assessment years 2029 and 2039 (TII's "Traffic and Transport Assessment Guidelines" recommend the assessment of traffic in the Opening Year, the Opening Year +5 years and the Opening Year +15 years. The analysis concludes that both existing quarry access currently operates within capacity over all time periods.

The quarry access has adequate sightlines for exiting drivers and measures are provided within the layout of the development to cater adequately for the movement and turning of heavy vehicles.

In summary, traffic movements associated with the proposed development during its operational phase are low and the impacts on the capacity of the receiving road network are predicted to be small.

CHAPTER 15

Interactions Summary

Interactions Summary

15.1 Introduction

The proposed development and the measures already in place to mitigate the impacts together with additional measures have been outlined in the preceding chapters of the EIAR. However, for any development with potential for environmental impacts there is always the prospect for interaction amongst the impacts. The results of interactions may exacerbate, reduce or have a neutral effect on the magnitude of the impacts. These have to be systematically examined as part of the EIA process.

The EIAR prepared by Collins Boyd Engineers and Architects on behalf of Isertkelly Ltd is an integrated document rather than a collection of separate reports. The impacts that will arise as a result of interactions between several aspects of the proposed development have been addressed in the main body of each section.

15.1.1 The Interaction of the Foregoing

- The interaction between the various environmental topics has been covered within each of the EIAR Chapters 4-14 where relevant. The interaction between geology and groundwater for example has been examined in Chapter 7.
- The environmental components which might potentially be impacted by a development of this kind and in this location have been identified through the assessment as follows
- Effects on land use and amenity
- Impacts on sensitive receptors locally
- Loss of natural heritage, wildlife habitats and disturbance of flora and fauna.
- Impacts on groundwater, soils and geology.
- Nuisance potential and health impacts due to noise, dust and light emissions.
- Visual impacts on landscape character
- Impacts on material assets, infrastructure and utilities.

A matrix method has been used in which the environmental components are placed on each axis and their interactions summarised, see Table 15.1 below. The purpose of the exercise is to identify interactions. The significance of the interactions is examined in the relevant EIAR chapter. There is a brief overview of the bigger interactions below.

Table 15.1 Impact Interaction

	Population Human Health 1	Bio Diversity 2	Land Soils Geology 3	Water 4	Air 5	Climate 6	Noise 7	MA 8	Cultural Heritage 9	Land Scape 10	Traffic 11
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											

15.2 Overview

15.2.1 Biodiversity

- Potential interaction associated with the proposed landscape mitigation and restoration proposals are discussed in chapter 5. The impacts from noise and dust deposition on biodiversity are discussed in chapters 8 and 10.

15.2.2 Water

- The potential impacts on water are discussed on biodiversity in chapter 5, soils in chapter 6 and on material assets in chapter 11.

15.2.3 Air Quality

- The interactions of Climate chapter 9, air quality chapter 8 and population and human health are discussed in the relevant chapters of the EIAR.
- The chapter on air quality indicates that the continued implementation of standard industry mitigation measures will leave emission levels well within acceptable limit at any sensitive receptor. The interactions are therefore considered to be acceptable.

15.2.4 Noise and Vibration

- The interaction between noise and population and human health is examined in chapter 10 and biodiversity in chapter 5.
- The assessments presented in chapter 10 indicate that the continued implementation of standard mitigation measures will be sufficient to result in acceptable emission levels in the area.

15.2.5 Landscape and Visual

- The potential interaction with biodiversity is discussed in chapters 5 and 13. Ultimately the restoration plan will foster new habitats and could at that stage of the development be considered a positive impact.
- The visual impacts from the development will be at the lower end of the scale due to the topography of the area.

15.2.6 Traffic

- The potential interactions with traffic and the population, air quality and noise are examined in chapters 4, 8 and 10.

15.2.7 Population and Human Health

- Human health is considered in the context of the emissions arising. These have all been demonstrated to be within acceptable limits for both existing and proposed quarries.