CHAPTER 1

INTRODUCTION

QUARRY CONSULTING

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CHAPTER 1: INTRODUCTION

Background

1.1 McGraths Limestone Works Ltd. is proposing to further develop an existing limestone quarry at Cregaree, Cong, Co. Mayo.

1.2 This Environmental Impact Assessment Report (EIAR) is provided in accordance with the EU EIA Directive 2011/92/EU, as amended by EIA Directive 2014/52/EU and the European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018, in order to inform the consideration of the Application and provide the planning authority with the environmental information that must be taken into account when determining the Application. All the land required for the Proposed Development (included within the application site boundary) is referred to in this EIAR as 'the site'. Land outside "the site", but within the overall operational area of the quarry is referred to as the "overall quarry site". The site is entirely within the administrative boundary of Mayo County Council (MCC) and the EIAR is being provided to Mayo as part of a planning application seeking full planning permission.

1.3 This EIAR has been prepared by Quarry Consulting, with the support of other consultancy advisors and McGraths Limestone Works Ltd staff. A list of the main contributors to this EIAR is provided in Tables 1.1 & 1.2 below.

1.4 Key areas of information presented within this EIAR concern the nature and extent of the Proposed Development, the character of the receiving environment and likely interactions between the two that could result in significant environmental impacts. Information presented on the receiving environment identifies the intrinsic value and importance of potential impact receptors.

The Applicant

1.5 The Applicant - McGraths Limestone Works Ltd is a family-owned and operated business that has been a cornerstone of the local community in Cong, Co. Mayo since the 1950s. Over the decades, the company has grown from a small agricultural lime producer to a significant player in the construction and quarrying industry. The quarry produces a wide range of limestone products including stone aggregates, ready-mix concrete, and asphalt. The company directly employs 90 people.

1.6 The company is a member of the Irish Concrete Federation (ICF) and as such is committed to implementing the ICF Environmental Code (2005) at all of its operations. The company has implemented an environmental management system (EMS) at its site at Cong, which is accredited to ISO 14001. This ensures that the company's environmental performance is continuously monitored, improved, and aligned with international best practices in environmental management.

The Application Site

1.7 The application site comprises 19 ha. within an existing operational quarry operated by McGraths Limestone Works Ltd in the townland of Cregaree, Cong, Co. Mayo, approximately 1km north of the village of Cong in County Mayo. The overall quarry site is situated approximately 10km south-west of Ballinrobe, Co. Mayo and 15km north-west of Headford, while Galway is approximately 35km south-east of the site (Figure 1.1).

1.8 The overall quarry site extends to 62.45 ha and is located to the north of the R345 from which access is provided. Adjoining the entrance to the quarry is a parking area, office, weighbridge, and wheelwash area. The overall quarry site is bounded to the south by the R345 regional road and to the east by the Cong Canal, while to the north and west is agricultural land

interspersed with woodland and scrub. Boundaries are mainly defined by fencing, landscaping and screening berms.

1.9 The application area is situated within the northern section of the overall quarry site and is defined by a mix of excavated areas, overburden storage areas, and an undeveloped section of scrub to the east. This area has been subject to ongoing extraction and processing of limestone, with the site hosting various sub-habitat types resulting from quarrying activities or remnant patches of habitat that have yet to be stripped as part of the existing permitted development – refer to Chapter 6: Biodiversity: Tables 6.6 & 6.7.

1.10 Beyond the site, the landscape is rural in character, consisting of agricultural land enclosed with stone walls, with interspersed with scrub and large tracts of woodland, most notably Cong Woods, which are situated to the south, beyond the R345 regional road. Field boundaries in the surrounding area are marked by treelines and hedgerows.

1.11 Residences within the general area typically consist of one-off rural houses and ribbon development along the local road network. There are approximately 18 dwellings within 400m of the site.

The Existing Development

1.12 The layout of the overall quarry development is illustrated in Figure 1.2. The extraction area, where deepening is now proposed, is outlined in red. Cross sections of the existing and proposed development are illustrated in Figure 3.3.

1.13 The existing development involves the extraction of limestone using conventional blasting techniques and processing of rock using static and mobile crushing and screening plant on site to produce limestone products & aggregates. The processed material is stockpiled prior to transportation to market.

1.14 The frequency of the blasting operation on the entire quarry is limited to not more than four production blasts per month, as per Condition 5 of Reference QD 16.QD0009 and Condition 6 of Plan Ref. File No. 20/77/ ABP Ref: ABP-308748-20. Rock breaking is occasionally required (in situations where the blasted rock is too large to enter the crusher).

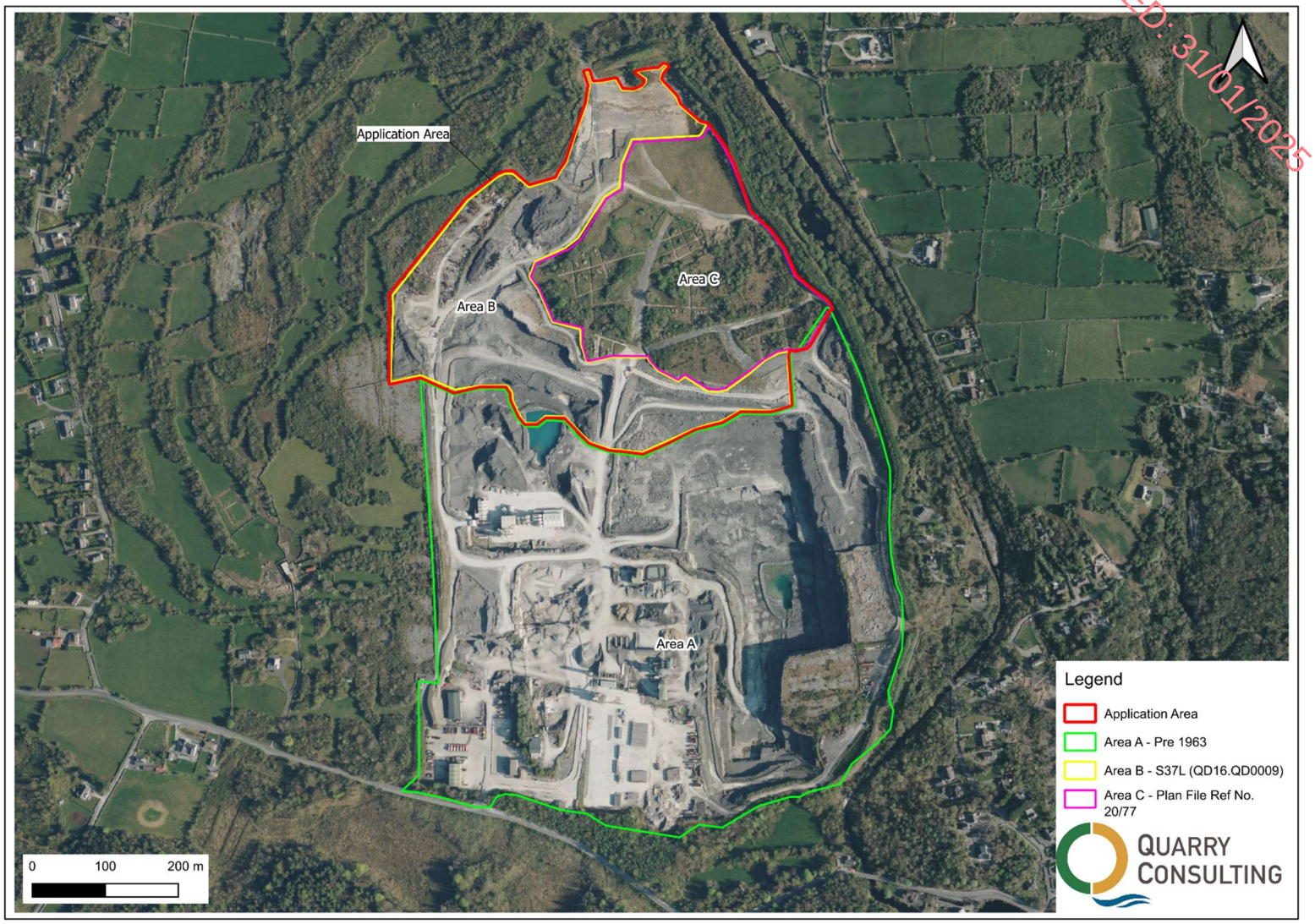
1.15 The overall quarry site can be subdivided into three separate sections as illustrated on Plate 1 and described as follows:

Area A: This southern section of the overall quarry site extends to an area of 43.47 hectares (Plan Ref File No. Q18). This existing working area benefits from a pre-1963 authorisation with conditions imposed following registration under Section 261 of the Planning and Development Act.

Area B: This section of the overall quarry site consists of an area of 10.58 hectares which has been authorised by way of a substitute consent application (Reference PL 16.SU0132) and a 37L application (Reference QD 16.QD0009) granted by An Bord Pleanála. Permission granted for the extraction of material to 5 mOD.

Area C: This section of the overall quarry site consists of an area of 8.4ha which has been authorised under a Section 34 Application (Plan Ref. File No. 20/77: ABP Ref: ABP-308748-20) in 2019. Permission provided for the extraction of material to 5 mOD.

Plate 1: Existing Development



The Proposed Development

1.16 The proposed development comprises:

- The deepening of 19 ha. of the existing permitted quarry extraction area (Plan File Ref. No. 20/77: ABP-308748-20 & Plan File Ref. No. PL16.SU0132: QD16.QD0009) (Area B & C) from 5 mOD to -12 mOD;
- Haulage of material to existing fixed plant for processing.
- All associated ancillary facilities/works.
- Landscaping and restoration of the site.

Restoration (Reinstatement to Nature Conservation Habitat Areas)

1.17 Upon the cessation of extraction operations, it is proposed to return the worked lands to natural habitat after-uses – refer to EIAR Chapter 3, Figure 3.2 and Chapter 5: Biodiversity.

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

Proposed Development Context

1.19 The proposed development, located in County Mayo, is primarily driven by the exceptional quality of limestone found in this area. The limestone extracted from this region is known for its purity and strength, making it highly sought after for various industrial, construction, and agricultural applications (refer to EIAR Chapter 7: Land, Soils and Geology).

1.20 Further details on The Proposed Development are provided in Chapter 3.

Rationale for the Application

1.21 The S37L application (Date Lodged: 18/12/2015, Date Granted: 08/12/2017) sought permission for the extraction of material to a depth of -12 mOD in Area B of the quarry. The Inspector's Report for the S37L application noted the following:

- *"Stage 2 would result in a level of minus 12 mOD, which would be significantly lower than the floor of the existing quarry. It is noted that the EIS impact predictions are correlated with the evidential absence of any significant environmental impacts as a result of past activities in the existing quarry (c.5mOD). Furthermore, the geological characteristics of the underlying bedrock and borehole evidence (assessed in Section 8.2.4 of the EIS) indicate there would be no adverse impacts on groundwater as a result of the proposed works."*
- However, the inspector expressed concerns regarding the "C-shaped configuration" of the Further Development (FD) area and the narrow width of some sections, particularly at the interface with the existing quarry. It was noted that it might not be feasible to extract to -12 mOD in a safe, benched, or practical manner. This concern was acknowledged and proposed to be addressed via a planning condition, which limited the depth to 5 mOD for the initial phase.

1.22 Since the S37L grant of permission in 2017, permission was sought and granted for Area C, a section of the overall quarry site consisting of 8.4 hectares, under a Section 34 Application (Plan Ref. File No. 20/77: ABP Ref: ABP-308748-20) in 2019. Permission was provided for the extraction of material to 5 mOD, maintaining consistency with the previous S37L application to ensure uniformity in operations and to facilitate the effective monitoring and management of environmental impacts.

1.23 Additionally, since the grant of permission in 2017, the quarry floor in the southern section (Area A) has been lowered to approx. -5 mOD, based on a survey conducted in May 2024 (refer to Planning Drawing 4). This provides new, valuable monitoring data that demonstrates the feasibility of deeper extraction within the area and confirms that no significant environmental impacts have occurred as a result of ongoing operations (refer to EIAR Chapter 8: Paragraphs 8.188 – 8.202).

1.24 The quarry's continued performance, combined with the absence of adverse environmental impacts—as indicated by environmental monitoring and the absence of groundwater or surface water issues—along with the subsequent S34 grant of permission, which improved the site configuration for extraction, confirm that the concerns regarding the safety and practicality of deeper extraction, particularly at the interface with the existing quarry, have been effectively addressed through proper management practices.

1.25 Furthermore, ongoing environmental monitoring, coupled with geological data, confirms that there are no significant adverse impacts on groundwater from the extraction activities. The underlying bedrock, as evidenced by borehole data (refer to Chapters 7 & 8), supports the continued extraction of material to depths greater than those previously permitted within the application area.

1.26 Given the successful management of these operations, the availability of additional monitoring data, and the evolving geological understanding of the site, this application seeks to lift the previous restriction on depth and permit the extraction of material to -12 mOD, in alignment with the initial application request. This will allow the quarry to fully utilise its resource, while maintaining established environmental safeguards and management practices.

1.27 Based on the above we highlight that the proposed deepening of the quarry is entirely located within areas that have been subject to previous planning applications and Environmental Impact Assessment Reports (EIAR). Specifically, the proposed development lies within Area B and Area C, both of which have undergone detailed assessments in previous applications (S37L, Section 34) and the associated EIARs. The extraction area targeted for deepening are below reserves that have already been subject to extensive environmental assessments. While the proposal does not introduce new land disturbance or significant changes to the operational footprint, it may give rise to additional environmental risks, such as potential impacts on groundwater. However, additional monitoring has been carried out since the grant of the previous permissions, and this EIAR is based on updated information that reflects the current site conditions.

1.28 From the operators perspective the key driver for the proposed deepening of the quarry is to access deeper limestone reserves that are better suited for the production of higher-value products. As outlined in the Land, Soils & Geology Chapter (Chapter 7), and supported by the detailed chemical composition results presented in Table 7-8 of the EIAR, the purity of the limestone increases with depth, with CaCO3 content rising to 99.95%. Other important attributes, such as MgO and impurity levels, also improve as the quarry deepens.

1.29 This increase in purity and quality is a significant reason for pursuing further extraction at depth. By accessing these deeper reserves, the quarry will be able to meet the demand for high-quality materials required for industrial and manufacturing applications, ensuring the continued supply of premium products to the market while maintaining the site's economic viability.

Need for an EIAR

1.30 Environmental Impact Assessment (EIA) is a process undertaken for certain types of development. It provides a means of drawing together the findings from a systematic analysis of the likely significant environmental effects of a scheme to assist local planning authorities, statutory consultees and other key stakeholders in their understanding of the impacts arising from the development.

1.31 The European Union's 1985 EIA Directive (85/337/EEC) was amended by Directives 97/11/EC, 2003/35/EC and 2009/31/EC, and the Directive and its amendments were codified in 2011 by Directive 2011/92/EU.

1.32 The current Directive 2014/52/EU amends the 2011 codified Directive but does not replace it. This amending Directive was transposed into national planning consent procedures in September 2018 through the European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 (S.I. No. 296 of 2018).

1.33 The Department of Housing, Planning and Local Government (currently the Department of Housing, Local Government and Heritage) published the following in the draft Guidelines for Planning Authorities and An Bord Pleanála in relation to carrying out Environmental Impact Assessment, (August 2018):

> *'The objective of Directive 2011/92/EU, as amended by Directive 2014/52/EU, is to ensure a high level of protection of the environment and human health, through the establishment of minimum requirements for environmental impact assessment (EIA), prior to development consent being given, of public and private developments that are likely to have significant effects on the environment.'*

1.34 The amended EIA Directive sets out 11 environmental factors which must be addressed in the EIAR. Article 3(1) of the amended Directive states:

> *The environmental impact assessment 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 attention to species and habitats protected under Directive 92/43/EEC and Directive 2009/147/EC;*
>
> *c) land, soil, water, air and climate;*
>
> *d) material assets, cultural heritage and the landscape;*
>
> *e) the interaction between the factors referred to in points (a) to (d).*

1.35 EIA is mandatory for certain types of projects and for other projects that meet or exceed thresholds as set out in Annexes I and II of the Directive (and Part 1 and Part 2 of Schedule 5 of the Planning and Development Regulations 2001, as amended). A review of the Planning and Development Regulations (as amended) Schedule 5 thresholds (Developments for the purposes of Part 10), is carried out in Chapter 2 of this EIAR.

EIAR Document and Chapter Structure

1.36 The findings of the EIA are set out in this EIAR which is arranged in the chapters presented in Table 1.1. The methodology used within the EIAR is outlined in Chapter 2.0 (Scoping and Methodology). The responsible parties examining the respective topic areas have also been provided in Table 1.2. The EIAR was completed by a project team led by Quarry Consulting, who also prepared a number of the chapters.

1.37 A Non-Technical Summary (NTS) accompanies the EIAR and provides a summary of the key findings of the EIA in non-technical language.

Table 1-1: EIAR Chapter Structure

EIAR Chapter	Chapter Title	Responsibility
1.0	Introduction	Quarry Consulting
2.0	Scope & Methodology	Quarry Consulting
3.0	Project Description	Quarry Consulting
4.0	Alternatives	Quarry Consulting
5.0	Population & Human Health	Quarry Consulting
6.0	Biodiversity	Green and Blue Ecology
7.0	Land, Soils & Geology	Hydro-G
8.0	Water	Hydro-G
9.0	Climate	Quarry Consulting
10.0	Air Quality	Quarry Consulting
11.0	Noise & Vibration	Noise and Vibration Consultants Ltd.
12.0	Visual & Landscape	Quarry Consulting
13.0	Traffic	TOBIN
14.0	Heritage	Dr. Charles Mount
15.0	Material Assets	Quarry Consulting
16.0	Interactions	Quarry Consulting
17.0	Mitigation & Monitoring	Quarry Consulting

EIA Project Team

1.38 The members of the team and their respective inputs are presented in Table 1.2. In accordance with EIA Directive 2014/52/EU, we confirm that lead specialists involved in the preparation of the EIAR are fully qualified and competent in their respective field. Each has extensive proven expertise in the relevant field concerned, thus ensuring that the information provided herein is complete and of high quality.

Table 1-2: EIA Project Team

Discipline	Specialist	Qualifications	Accreditations	Professional Experience (Years)
Introduction; Scope and Methodology; Project Description; Alternatives; Population and Human Health; Climate; Air Quality; Material Assets;	Peter Kinghan (Quarry Consulting)	Geo-Surveying (Diploma) Mineral Surveying and Resource Management (BSc Hons) Environmental Engineering (Post Graduate Diploma) Geographic Information Systems (Certificate) Business Management (MSc) Environmental Sustainability (Certificate)	Member of the Society of Chartered Surveyors Ireland Member of the Royal Institute of Chartered Surveyors UK	24
Material Assets, Climate; Air Quality	Rory Brickenden (Quarry Consulting)	Geoscience (Bachelors Hons) MEngSc Water, Waste & Environmental Engineering (currently studying)		2
Landscape & Visual; Material Assets; Population & Human Health, Planning	Irene Curran (Quarry Consulting)	Environmental Science (BSc Hons) Town and Country Planning (MSc Dist) Field Ecology (Diploma)	Chartered member of the Royal Town Planning Institute	20
Biodiversity	Steve Judge (Blue and Green Ecology)	Countryside Management / Environmental Management and Monitoring (BSc Hons)	Member of the Chartered Institute of Ecology and Environmental Management	20+
Land, Soils and Geology; Water	Dr. Pamela Bartley (Hydro-G)	Certificate in Civil Engineering in Letterkenny RTC Diploma in Water and Wastewater Engineering Bachelor of Engineering degree MSc. in Environmental Engineering	Engineers Ireland and the International Association of Hydrogeologists (Irish Group)	20+

Discipline	Specialist	Qualifications	Accreditations	Professional Experience (Years)
	Dr. Colin O'Reilly (Envirologic)	Ph.D Doctorate degree in soil's systems and hydrology	Engineers Ireland and the International Association of Hydrogeologists (Irish Group)	20
Noise and Vibration	Brendan O'Reilly (Noise and Vibration Consultants Ltd.)	Master's degree in Noise and Vibration	SFA & ISEE	20+
Traffic	Maria Rooney (TOBIN Senior Engineer: Roads and Traffic)	Bachelor of Engineering in Civil Engineering; Master of Engineering in Roads and Transport Engineering.	Chartered Engineer	10+
Heritage	Charles Mount (Dr. Charles Mount Archaeology and Cultural Heritage)	M.A. Archaeology Ph.D. Archaeology Dip. EIA & SEA Management	MIAI Member of the Discovery Programme	25+

Quarry Consulting

1.39 Quarry Consulting is an environmental consultancy based in the West of Ireland that includes in their team a Chartered Mineral Surveyor, Chartered Geomatics Surveyor, Geo-Scientist, Chartered Town Planner & Ecologist. The team have extensive experience in project managing planning applications and coordinating Environmental Impact Assessments for a range of energy, extractive and waste related developments.

Green and Blue Ecology

1.40 Steve Judge is a professional ecologist with over 20 years experience in environmental and ecological consultancy working for a large number of clients from both the private and public sectors throughout the United Kingdom and Ireland. Projects include: industrial and housing development, mining and minerals, waste management, flood defence, energy and renewables.

1.41 Highly experienced in undertaking Environmental Impact Assessment (EIA) and Ecological Impact Assessment (EcIA), Appropriate Assessments (Stage 1 and Stage 2), habitat and species surveys, and in the design and implementation of ecological mitigation strategies for a wide range of habitats and species.

1.42 Specialist in Ecology of freshwater systems that includes experience of eco-hydrology, wetland creation, biological water quality assessments, water level management plans and condition assessments of riparian features and structures.

Hydro-G: Specialists in Hydrogeological and Environmental Services

1.43 Hydro-G is a leading consultancy specialising in hydrogeology, groundwater management, and environmental engineering. With a focus on providing sustainable water management solutions, Hydro-G has extensive experience in conducting groundwater assessments, hydrogeological risk evaluations, and designing effective water management systems for various projects, including those in the extractive and construction industries. Their expertise ensures that all groundwater-related aspects of the project are thoroughly evaluated and managed, minimising environmental impacts while ensuring regulatory compliance.

Noise and Vibration Consultants Ltd.: Expertise in Environmental Acoustics and Vibration Control

1.44 Noise and Vibration Consultants Ltd. is a specialist firm dedicated to providing comprehensive noise and vibration assessments across a range of industries. With a wealth of expertise in environmental acoustics, the firm excels in measuring, analysing, and mitigating noise and vibration impacts for both regulatory compliance and community protection. Their services include predictive modelling, real-time monitoring, and custom mitigation strategies tailored to minimise acoustic and vibrational disturbances on sensitive receptors.

TOBIN

1.45 TOBIN specialises in civil, structural, and environmental engineering, offering a comprehensive range of in-house services. With expertise in roads, transportation, active travel, and sustainable urban mobility plans, the team serves a diverse client base that includes government agencies, private developers, contractors, and architects.

1.46 TOBIN integrates the latest digital technologies to deliver designs that move smoothly from feasibility to construction. The team's work is backed by a certified integrated business management system (ISO 9001:2015, ISO 14001:2015, ISO 45001:2018), ensuring quality, environmental responsibility, and safety. They provide tailored engineering solutions for both urban and rural infrastructure projects.

Dr. Charles Mount

1.47 Dr. Charles Mount is an Archaeologist with more than 30 years' experience of archaeology, cultural heritage and project management. He has extensive experience of environmental impact assessment gained over the last 30 years in a wide range of industries in the private and semi-state sectors including energy, extractive, waste, water, residential, transport and agri-food. Dr. Mount is a member of the Institute of Archaeologists of Ireland and the Discovery Programme. He is a graduate of University College Dublin with an M.A, and Ph.D. in Archaeology and has completed the UCD Diploma course in EIA and SEA Management.

References

- Environmental Protection Agency. “Guidelines on the information to be contained within an EIAR”, (EPA May 2022).

Figures

65.01.Planning Drawings FINAL.dwg

LEGEND

APPLICATION AREA

Extract from Ordnance Survey Discovery Series Mapping - Map Sheets: OS1024; OS1026
Ireland Licence No. CYAL50187128 (c) Ordnance Survey Ireland / Government of Ireland.

0 500 1000 1500 2000m 3000 4000 5000

Metres 1:50,000

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MC GRATHS LIMESTONE WORKS LTD.

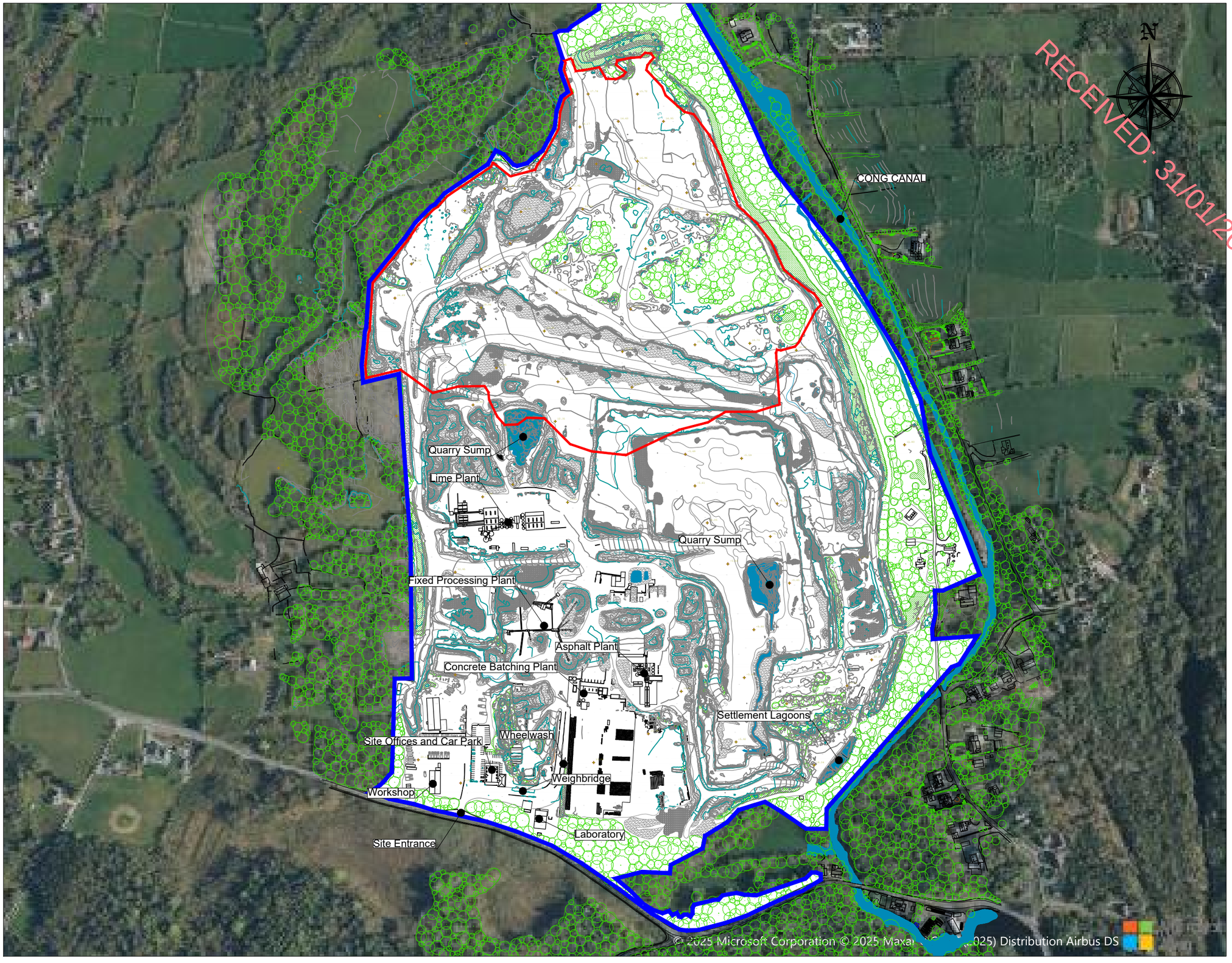
PROPOSED QUARRY DEEPENING
AT CREGAREE, CONG, CO. MAYO

SITE LOCATION

FIGURE 1.1

Scale	Date
1:50,000	JANUARY 2025

65.01.Planning Drawings FINAL.dwg



NOTES

Extract from Ordnance Survey 6 Inch Mapping - Map Sheets: MO120; MO 121;GY27; GY014

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LEGEND

LAND INTEREST

APPLICATION AREA

0 50 100 150 200m 300 400 500

Metres 1:5000

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MC GRATHS LIMESTONE WORKS LTD.

PROPOSED QUARRY DEEPENING AT CREGAREE, CONG, CO. MAYO

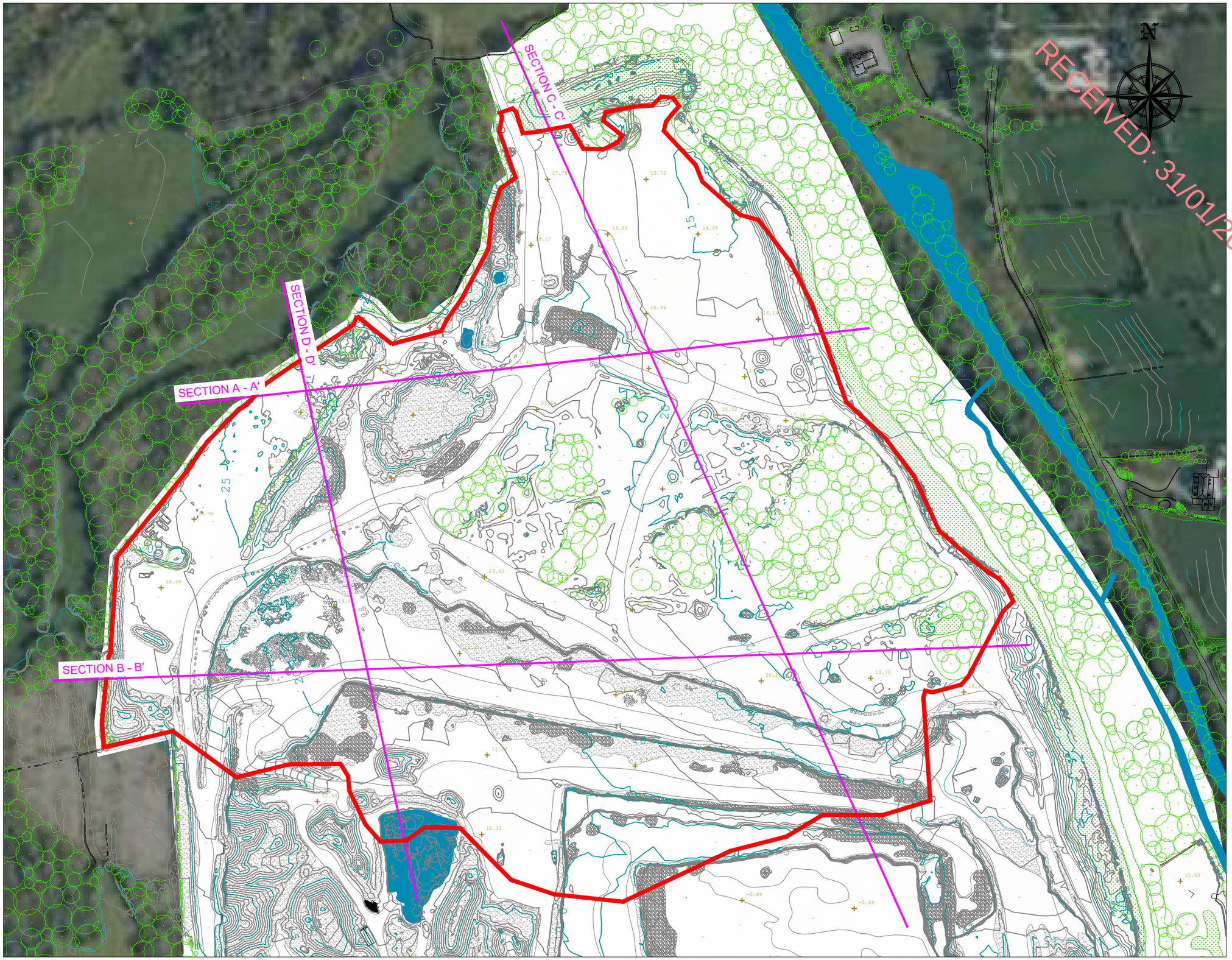
OVERALL QUARRY SITE

FIGURE 1.2

Scale 1:5,000

Date JANUARY 2025

65.01.Planning Drawings FINAL.dwg



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Metres 1:2500

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Extract from Ordnance Survey 6 Inch Mapping - Map Sheets: MO120; MO 121;GY27; GY014

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LEGEND

APPLICATION AREA

CROSS SECTION LOCATIONS: REFER TO FIGURE 3.3

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MC GRATHS LIMESTONE WORKS LTD.

PROPOSED QUARRY DEEPENING AT CREGAREE, CONG, CO. MAYO

EXISTING SITE LAYOUT

FIGURE 1.3

Scale	Date
1:2,500	JANUARY 2025