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# **CHAPTER 3: PROJECT DESCRIPTION**

# **Existing Development**



- 3.1 The existing operational limestone quarry (henceforth referred to as the "overal quarry site") has an area of approximately 62.45 hectares, with details of the site layout shown on Figure 1.2.
- 3.2 The existing operations at the site are currently regulated by conditions attached to three separate planning permissions and have been divided into three areas as shown below (referror Plate 1.1):
  - Area A: The 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 was provided for the extraction of material to 5 mOD, consistent with the previous 37L application to maintain uniformity in the site's operations and ensure the effective monitoring and management of environmental impacts.
- 3.3 The existing quarry operations comprise extraction of limestone using blasting techniques, processing (crushing and screening) of the fragmented rock to produce aggregates.
- 3.4 Various products are currently produced at the manufacturing area of the quarry from extracted material. These products will also be produced from material extracted from the application site. McGrath's produce a range of 50 products including graded aggregates, readymix concrete and other concrete products, asphalt products, armour and decorative stone. Materials are also used to produce agricultural products such as agricultural grolime, animal feeds, farmcal cubic lime and calcium carbonate powders and grits.
- 3.5 Ancillary facilities at the existing quarry include an office, weighbridge, canteen, toilets and a wheelwash (with side and overhead spray bars).

# **The Proposed Development**

**Operational Phase (Limestone Extraction and Processing)** 

- 3.6 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) (Areas B & C – referred to as "the site" ) from 5 mOD to -12 mOD;
  - Haulage of material to existing fixed plant within the main quarry for processing.
  - All associated ancillary facilities/works.
  - Landscaping and restoration of the site.



3.7 Upon the cessation of extraction operations, it is proposed to return the quarry area to natural habitat after-uses – refer to Figure 3.2 and paragraphs 3.71 – 3.81.

3.8 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.

Nature and Quantity of Material to be Extracted

3.9 The total recoverable reserve of limestone from within the proposed extraction area, from 5 m OD to -12 m OD has been calculated as c. 7 million tonnes.

#### **Duration of Extraction**

3.10 An outline of the proposed extraction plan and the final ground level contours is shown in Figure3.1. Cross-sections through the final landform are shown in Figure 3.3.

Material	Quantity
Topsoil / Overburden	0 m <sup>3</sup> (lands will have been stripped of all overlying material)
Limestone	7 Million Tonnes

Table 2-3 Material Quantities

- 3.11 The proposed deepening would release an additional 7 million tonnes of high-quality limestone, significantly extending the quarry's operational life.
- 3.12 The duration of quarrying activities at the site will largely be dictated by the rate at which the limestone reserve 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).
- 3.13 The application area contains reserve which will be extracted over an extended period in conjunction with the main quarry. Extraction of material at the application site will not result in an increased extraction rate of the overall quarry. Therefore the applicant is seeking a planning permission in excess of 25 years in order to extract the available resource from this area of the quarry.

#### Method of Extraction

- 3.14 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.
- 3.15 Blasting will be undertaken by a third party operator, as currently occurs on site. Drill rigs on the existing quarry floor will be used to drill the charge holes ready for blasting to begin the process of lowering the floor. The rigs will be equipped with dust suppression equipment and noise and vibration monitoring will take place as part of the process.
- 3.16 The recovered rock from the active face will be processed in a similar manner to that already occurring on site using existing site infrastructure and plant. The blasted rock will be crushed and screened and conveyed to stockpiles for subsequent loading to trucks by loading shovels.



3.17 Industry standard slope angles, bench heights, and bench widths will continue to be used for extraction operations at the site.

Operating Hours (Condition 4 of Reference QD 16.QD0009 and Condition 5 of Plan Ref. File No. 20/77/ ABP Ref: ABP-308748-20)

3.18 The quarry operates from 07:00 to 18:00 Monday to Friday and 0700 to 1800 hours on Saturday for processing. No operations are carried out on Sundays or public holidays. There is no change proposed to operating hours as part of the proposed development.

## Employment

- 3.19 The proposed development will provide continued employment of up to 90 no. people directly on-site, in addition to a number of indirect employees such as crushing contractors, HGV drivers, maintenance contractors, local suppliers, etc.
- 3.20 The continued development of the site is consistent with the policies set out in the National Planning Guidelines for the sector; the Regional Planning Guidelines and the Mayo County Development plan which recognise the requirement for:
  - A secure supply of construction aggregates and related products is necessary for the continued development of the region;
  - Proven aggregate reserves need to be safeguarded for future extraction;
  - 'Best environmental management practice' to be implemented within quarry developments.

## Site Access

- 3.21 The quarry gains access off the R345 via an entrance located at the southwestern corner of the overall quarry area. The entrance consists of a paved area with water sprayed on the area during dry windy conditions to prevent dust blow. Both the entrance and the R345 are swept regularly using a mobile sweeper to ensure that there is no build-up of material on the R345 road. Traffic is dealt with in more detail in Chapter 13 of the EIAR. There is no change proposed to these site access arrangements as part of the proposed development.
- 3.22 Site traffic volumes are expected to continue at current levels, subject to the usual market fluctuations. Departing trucks use the R345 westbound and eastbound with the majority heading east.

# Site Security

- 3.23 The boundary of the overall quarry site is secured around its entire perimeter and consists of stock proof concrete post and wire fencing and stone walls. Overburden stripped from the surface has been used to construct berms along the perimeter of the overall quarry site. Constructed berms have been planted with native trees and shrubs and have vegetated overtime to provide additional security and screening from the surrounding environs. A gate is located at the entrance onto the R345 which is locked outside working hours. Quarry faces are inspected after each blast and on a regular basis to ensure that they are stable and that no loose debris is present that could fall from height. Suitable edge protection is in place around elevated areas or deep excavation. Warning signs are also in place around the majority of the overall quarry site.
- 3.24 All quarry staff have attended the Solas Safe Pass Health and Safety Awareness Training Programme and attend regular toolbox talks in relation to safety. These are compiled and presented by McGraths Environmental & Health Safety Manager. All visitors to the site are



required to sign in and out at the main office and receive a health and safety induction prior to access to the site.

## Site Roads, Parking and Hardstanding Areas

- 3.25 HGV's access the site from the existing entrance directly off the R345 and travel north over a section of paved internal roadway.
- 3.26 Adequate car parking provision for employees and visitors is provided at the existing office as indicated in Figure 1.2.

# Weighbridge

3.27 All HGV traffic is directed across the existing weighbridge, the location of which are also indicated on the site infrastructure layout in Figure 1.2.

#### Wheelwash

3.28 There is an existing wheel wash system (with side and overhead spray bars) in place at the site at the location shown on Figure 1.2.

# **Utilities & Welfare Facilities**

- 3.29 A water supply well has also been installed. The well is located in Area A where staff parking and welfare facilities are also provided. The requirement for water on the site is limited and confined mainly to dust suppression during crushing activities and suppression of dust in the quarry floor and access route by means of sprinklers and also a water bowser during dry weather.
- 3.30 There is no electrical telecommunications or potable water supply connection at the site and this will not be required going forward. There is an existing, electricity, telephone and water connection provided at Area A. There is also an existing potable water supply to the offices and canteen area at Area A. The applicant was granted planning permission in 2006 to construct an extension to the existing offices and to install an effluent treatment system and percolation area. An EPS bison sewage treatment system and percolation area was installed as part of this permission which is serviced on a regular basis. The waste water treatment facility is emptied and maintained on regular basis by Comhlacht lompar Clochmor Teo to ensure that the system operates efficiently.
- 3.31 All of the aforementioned infrastructure will remain in place to facilitate the proposed development.

# **Offices and Ancillary Facilities**

3.32 There are no office facilities located within the application site. All facilities such as testing laboratory, workshops, a weighbridge, wheel wash facilities and offices are located in Area A close to the quarry entrance.

#### Water Management

3.33 Surface water generated as a result of precipitation at the site that does not percolate to ground will continue to be directed to a sump located at the lowest point of the site to ensure safe water levels during extraction. From here, water will be directed to the sump on the floor of the existing quarry. Water will be retained at this location for a period of time before being abstracted and pumped to a concrete settlement lagoon located on the upper rim of the quarry on the southeastern boundary of Area A – refer to Figure 1.2. The settlement lagoon consists of a series of chambers with internal baffles and is designed to regulate the flow of water though the lagoon thereby allowing any suspended solids that may be present in the water to settle out of suspension. As the water moves through the lagoon the solids settle out under gravity



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and fall to the floor of the lagoon. Silt is removed from the lagoons on a regular basis and used for berm construction.

3.34 Water is discharged from the lagoon to the adjoining Cong Canal via a culvert. The discharge to the Cong Canal is undertaken in line with a discharge licenced granted by Galway Co. Co. (Ref No. W391/05 R1). Water quality monitoring of the discharged water and the Cong Canal at locations both upstream and downstream of the discharge point is undertaken on an ongoing basis with the flow from the lagoon also recorded using a flow measuring device. Both groundwater and surface water monitoring is undertaken on a regular basis. Water management is dealt with in greater detail in Chapter 8.0 of the EIAR.

#### **Fuel Storage**

3.35 Fuel is not stored on site. Fuel for site machinery is delivered to the site by a dedicated fuel bowser. Oils and lubricants are stored on bunded pallets. This will remain the case.

#### Processing methods, Machinery & Plant

3.36 Machinery and plant used on the site include concrete batching plant, asphalt plant, lime plant, calcium carbonate plant, fixed processing plant, mobile screener, mobile crusher, excavators, wheel loaders, dumper trucks, drilling rig – refer to Figure 1.2. These machinery and plant will be retained on site to facilitate the proposed development.

#### Lighting

3.37 Sufficient lighting is provided at the site to ensure safe operations during winter periods.

#### Waste management

#### Extractive Waste Management

3.38 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 Mayo County Council.

#### General Waste Management

3.39 McGraths Limestone Works Ltd. are a member of the Irish Concrete Federation and commit themselves to the principles of the Federations Environmental Code. The code states:

"ICF members will minimise production of waste and where appropriate consider its beneficial use including recycling. They 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"

- 3.40 Potential waste produced and the measures used to control it are described as follows:
  - Scrap metal these materials are chiefly produced from the maintenance of the
    possessing plants and can cause a nuisance if allowed to build up in an uncontrolled
    manner. A designated scrap metal area will be demarcated on site and the build-up of
    scrap will be controlled by the regular removal by licensed scrap metal dealers.
  - Used Oil and Oil Filters any waste oil/oil filters that may arise from servicing of fixed or mobile plant will be removed from the site by a licensed waste contractor.
  - Used Batteries –all used batteries will be removed from site for collection and recycling by a licensed waste contractor in accordance with the Waste Management Regulations.



- Domestic Style Waste (Canteen Waste) domestic waste generated at the offices and canteen facility will be collected by a licensed waste collection contractor.
- Waste timber any waste timber generated at the site will be stored at a designated .37107,2025 location until collection by a permitted waste collector.

# EXISTING ENVIRONMENTAL CONTROLS

# General

- 3.41 Extraction, processing and ultimately restoration activities at the 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 in place at the site are outlined in the relevant EIAR Chapters.
- 3.42 The existing operations at the site are currently regulated by conditions attached to Plan Reference QD 16.QD0009 and Plan Ref. File No. 20/77: ABP Ref: ABP-308748-20 and conditions imposed under Section 261 ref. no. QY/18.
- 3.43 Any additional control measures, over and above those already in place and/or outlined below, which may be instructed on foot of this planning application, will also be implemented.

# **Bird Control**

3.44 As the process of stone 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 at the site as is the case at present.

# **Traffic Control**

3.45 As the planning application relates to the deepening of the existing quarry operation, the proposed development will continue to utilise the existing entrance and established haul routes.

# **Litter Control**

- 3.46 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 any specific litter control measures at the site.
- 3.47 In the unlikely event that any litter waste is identified, it will be immediately removed off-site to an authorised waste disposal or recovery site.

# **Odour Control**

3.48 As the extracted materials 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**

3.49 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**

- 3.50 In the unlikely event that a fire does occur, the local fire station 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.
- 3.51 A range of fire extinguishers (water, foam and CO2) are kept at the site office and or quarry vehicles 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.

#### **Surface Water and Groundwater Management**

- 3.52 Incidental rainwater and groundwater seepages entering the quarry extraction area will drain across the quarry floor to a sump located to the west of the existing quarry extraction area and be managed in the existing water management system for the quarry.
- 3.53 Water is discharged from the lagoon to the adjoining Cong Canal via a culvert. The discharge is undertaken in line with a discharge licenced granted by Galway Co. Co. (Ref No. W391/05 R1).

## **Dust Generation and Control**

- 3.54 In dry, windy weather conditions, site activities may give rise to dust blows across and beyond the existing or planned development site areas.
- 3.55 The incidence of fugitive dust outside of the operation is reduced by the 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 10 Air Quality). Dust generation occurs from three main sources:
  - Point sources such as operating plant and machinery.
  - Line sources such as roads.
  - Dispersed Sources- such as quarry floors and stockpiles.
- 3.56 In order to control dust emissions, the following measures will continue to be implemented:
  - Water will continue to be sprayed from a tractor drawn bowser on dry exposed surfaces and stockpiles (paved roads, unsealed haul roads and hardstand areas);
  - 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 periodic sweeping of internal paved site roads and surrounding public roads as required;
  - All HGVs exiting the quarry site will pass through the existing wheel wash facility;
  - 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, where possible.
- 3.57 Dust deposition monitoring is currently carried out as part of the environmental monitoring programme carried out at the quarry site refer to EIAR Chapter 10 Air Quality.
- 3.58 Mitigation measures are provided in accordance with the DoEHLG (2004) guidelines for the sector and EPA (2006), refer to EIAR Chapter 10.

# **Noise Generation and Control**

3.59 The sources of noise located within the planning application area will primarily be related to machinery / plant operation.



- 3.60 The potential for noise generation from the site will be reduced by locating the mobile crushing and screening plant within the quarry void. This means that the potential for noise generation from activities associated with the operation of the plant such as the movement of vehicles and maintenance will be reduced refer to Chapter 11.
- 3.61 In addition to the above the following good housekeeping measures are in place and will be extended to include the application area, where applicable, in order to reduce noise emitted from plant and machinery as much as possible:
  - All machinery used is CE certified for compliance with EU noise control limits;
  - The machinery will continue to 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 are fixed or replaced immediately;
  - If there are further noise-reducing modifications available for any machinery, they will be fitted wherever practical (e.g. rubber-decked screens, rubber chute linings etc.)
  - Haul road grades are kept as low as possible to reduce engine / brake noise from heavy vehicles.
- 3.62 Mitigation measures are provided in accordance with the DoEHLG (2004) and EPA (2006) guidelines for the sector.

# **Blasting Control**

- 3.63 Blasting mitigation measures relate to blasting procedures such as the quantity of explosive and charge-hole spacing along the quarry face. Additional mitigation measures currently carried out at the overall quarry site and extended to include the application area include:
  - Geological considerations in blast design;
  - No blasting outside the hours of 10:00 and 16:00 during Monday to Friday and none taking place at the weekend or public holidays;
  - Optimised blast design along the rock-face with adequately spaced charges;
  - Minimised air overpressure through proper blast design, spacing and timing of multiple charges;
  - Blast monitoring at the nearest occupied dwelling for each blast carried out on site;
  - Inform nearby residents on day prior to planned blasting schedule using house-calls, telephone and written note/signage at the quarry entrance (or combination).

# **EXISTING ENVIRONMENTAL MONITORING**

# General

3.64 The overall quarry site has an established environmental management system in operation. Noise, dust, water and blast monitoring is carried out on a regular basis, to demonstrate that the development is not having an adverse impact on the surrounding environment.

# Dust Monitoring: (Condition 8 of Reference QD 16.QD0009 and Condition 9 of Plan Ref. File No. 20/77/ ABP Ref: ABP-308748-20)

3.65 Dust deposition monitoring is currently carried out at the overall quarry site – refer to Chapter
 10. Dust monitoring locations shall be reviewed and revised where necessary to include the application area.



Noise Monitoring: (Condition 7 of Reference QD 16.QD0009 and Condition 8 of Plan Ref. File No. 20/77/ ABP Ref: ABP-308748-20)

3.66 Noise monitoring is currently carried out at the overall quarry site, as requested by the Local Authority – refer to Chapter 11.

Vibration (Condition 45 of QY/66 and Condition 7 of Plan Ref. File No. 20/77/ABP Ref: ABP-308748-20)

3.67 Monitoring of blasts (both for groundborne vibration and air overpressure) is carried out for all blasts carried out at the overall quarry site and will be extended to include the site - refer to Chapter 11.

# Water Monitoring

- 3.68 The overall quarry site will continue to operate an Environmental Management System (EMS), which includes surface water and groundwater sampling.
- 3.69 Groundwater levels will be monitored in the existing monitoring wells as the quarry is developed.
- 3.70 Surface water monitoring at the overall quarry site will continue in line with the water discharge licence (Ref No. W391/05 R1) for the site.

# **PROPOSED FINAL RESTORATION**

Proposed Restoration Scheme

- 3.71 The restoration scheme for the planning application area is shown on the restoration plan Figure 3-2.
- 3.72 The site will be restored to a natural habitat, which is one of the beneficial after uses listed in the EPA Guidelines: 'Environmental Management in the Extractive Industry' (2006). This will be achieved by the following measures:
  - The site will be left for natural recolonisation by locally occurring grass and shrub/scrub species and the void will fill with water.
  - All existing boundary fences and hedgerows will be retained to ensure that the site is secure.
  - All plant and machinery will be removed from the quarry void.
- 3.73 The restoration works will be carried out in accordance with the EPA Guidelines (2006).
- 3.74 Access to quarry faces will be provided to qualified scientists, upon request and in accordance with Health and Safety guidelines, during quarrying operations. This will allow for the examination of newly exposed stratigraphy and geological relationships, helping to determine whether the quarry site warrants recognition for its geological significance after extraction and during the restoration phase. A representative section of the quarry face may be preserved at the end of the quarry's operational life, with the potential inclusion of information panels to promote geological education, tourism, or other site uses as appropriate. Should any significant bedrock exposures be identified, McGraths Limestone Works Ltd. will collaborate with the Geological Survey of Ireland (GSI) to ensure that such features remain visible, rather than covered, in accordance with safety standards and engineering constraints. This approach will contribute to the ongoing enhancement of geological knowledge and may result in the site being included in the Geoheritage dataset, if relevant.



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3.75 The Applicant will clearly define the management responsibility for the site restoration work and will ensure that this person has the necessary information (from the planning application) and authority to manage the whole restoration process. 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 Safety and Security

3.76 Existing hedges surrounding the development will be gapped up and thickened where required. These combined with fencing and the secure and locked entrance gates to the development will prevent unauthorised third party access.

#### Long Term Surface Water and Groundwater

- 3.77 Surface water in the quarry area will percolate to ground or be directed to the water body within the void created by quarrying refer to EIAR Chapter 8.
- 3.78 On completion of extraction operations, a lake will be formed in the quarry void as water returns to its natural level.

#### Decommissioning of Plant and Machinery

- 3.79 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 Mc Graths on other sites, or be sold as working machinery or scrap.
- 3.80 As part of the overall decommissioning process, all fuel, oil storage and septic / effluent treatment tanks within the overall quarry site will be removed 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.

#### Aftercare and Monitoring

3.81 No aftercare or monitoring is required for the restoration proposals for the application area.



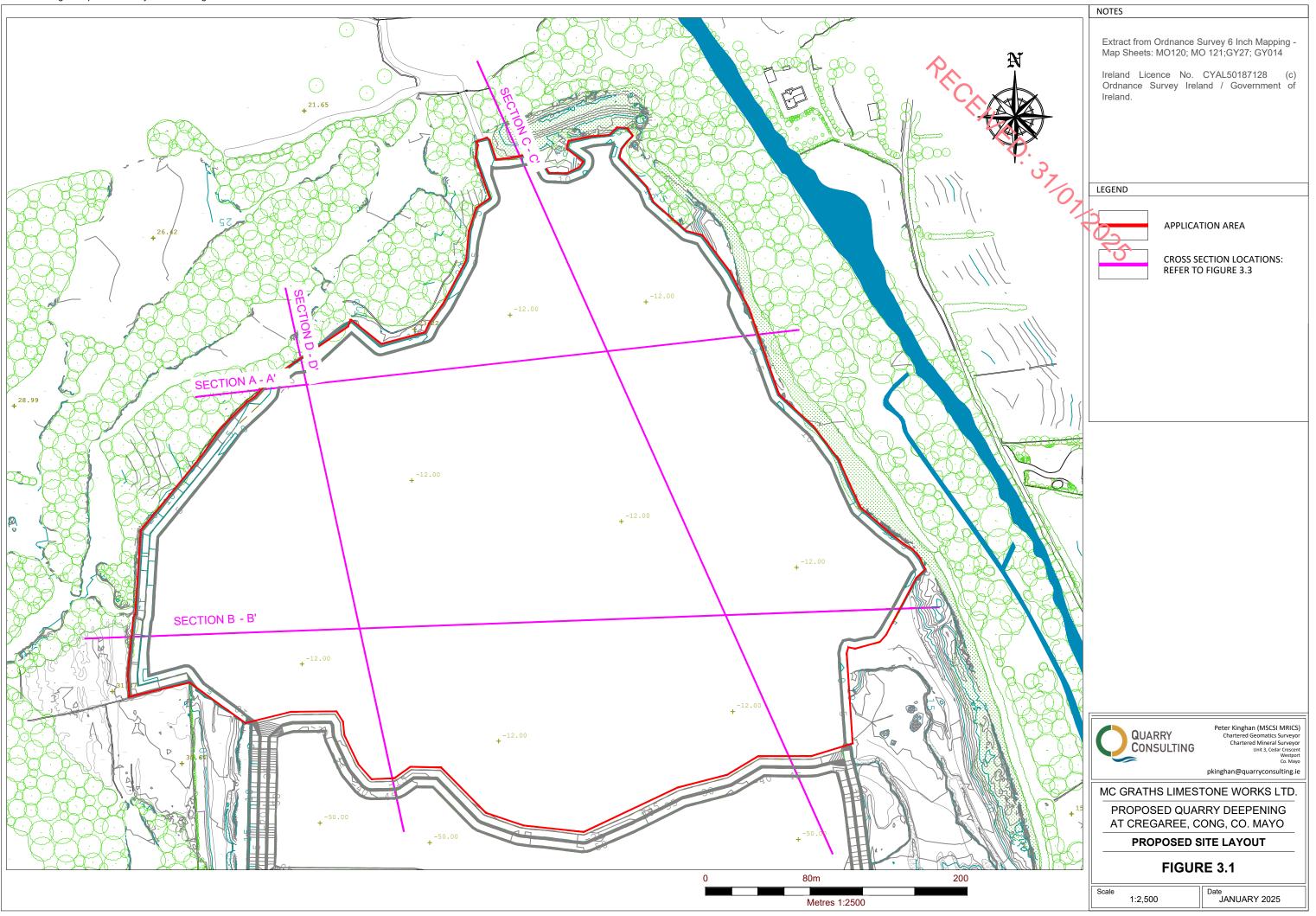
Figure 3.1: Proposed Site Layout (Final Extraction)

Figure 3.2: Proposed Restoration Plan

Figure 3.3: Existing and Proposed Cross Sections







#### **Proposed Restoration Scheme Summary:**

The site will be restored to a natural habitat, with the following key measures:

 Natural recolonisation by local grass and shrub species, with the quarry void filling with water.

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- Retention of boundary fences and hedgerows for site security.
- Removal of all plant and machinery from the quarry void.
- A representative section of the quarry face may be preserved for geological education, with potential collaboration with the Geological Survey of Ireland (GSI) to maintain visible bedrock exposures if of geological significance.
- The restoration will follow EPA Guidelines (2006), with site management and supervision ensuring adherence to the restoration plan.
- The site will be secured through reinforced hedgerows, fencing, and locked entrance gates.
- Surface water will be directed into the quarry void, forming a lake upon completion of extraction operations.
- Decommissioning of plant and machinery will involve the removal of all redundant equipment and waste by licensed contractors.
- No aftercare or long-term monitoring is required for the restoration.

28.99

A lake will be formed in the quarry void as water returns to its natural level.

80m

0

200



