NON-TECHNICAL SUMMARY

QUARRY CONSULTING

Table of Contents

NON-TECHNICAL SUMMARY

Introduction

1.1 This document presents a Non-Technical Summary of the Environmental Impact Assessment Report (EIAR) that has been prepared in relation to the plans to deepen part of an existing limestone quarry in Cregaree, Cong, County Mayo.

1.2 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.

1.3 In addition to the Environmental Impact Assessment Report, a number of stand alone assessment reports are included with the Planning Application, including:

- Planning Statement;
- Traffic and Transport Assessment;
- Appropriate Assessment: Stage 1 Screening Report.

The Proposed Development

1.4 McGraths Limestone Works Ltd. proposes to deepen a section of its existing limestone quarry in Cregaree, Cong, County Mayo. The current permitted quarry floor level in this area is 5 mOD (metres above ordnance datum), with the proposal to extend the depth to -12 mOD within a 19-hectare area of the existing quarry

1.5 The quarry operation has been part of the local community since the 1950s and currently employs about 90 people. They produce limestone products such as lime, stone aggregates, ready-mix concrete, and asphalt.

1.6 The overall quarry site covers about 62.45 hectares. Most of the area around the quarry is farmland with stone walls, patches of woodland, and a canal (the Cong Canal) that connects to nearby lakes. Cong village is nearby.

1.7 Site facilities include a parking area, office, weighbridge, and areas for crushing, screening, and storing limestone products. Manufacturing facilities at the quarry include concrete, asphalt and lime.

1.8 The company follows an established Environmental Management System (EMS) accredited to ISO 14001, aiming to continuously improve its environmental practices.

1.9 After the quarry is fully worked, the plan is to restore the land to natural habitats, supporting local biodiversity and landscape value.

Location & Size

1.10 The quarry lies about 1 km north of Cong village, with the planned deepening covering 19 hectares in the northern portion.

Environmental Monitoring

1.11 Ongoing checks show no significant negative effects on groundwater or the surrounding environment. Additional geological and monitoring data confirm that deeper extraction is both safe and practical.

1.12 McGraths Limestone Works Ltd. follows the Irish Concrete Federation's Environmental Code (2005) and holds ISO 14001 accreditation, which helps ensure responsible quarry activities.

Alternatives

Growing Need for Limestone

1.13 Limestone is vital for several industries, including construction, road building, and agriculture.

1.14 Demand is driven by Ireland's housing, infrastructure, and commercial developments, as well as farming needs for soil improvement.

Local and National Policy Alignment

1.15 Deepening the quarry supports Project Ireland 2040 (a long-term national development plan) by providing necessary building materials.

1.16 It also aligns with the Mayo County Development Plan, which highlights the importance of balancing resource use with environmental protection.

Alternatives Considered

1.17 **"Do Nothing" Scenario**: If the quarry were not deepened, existing reserves would run out, forcing businesses on-site to import materials from farther away, leading to higher costs and transport emissions.

1.18 **Alternative Sources of Aggregates** (recycled construction materials, industrial byproducts) can help but cannot fully replace the need for locally extracted limestone.

1.19 **Alternative locations** would likely result in greater environmental impacts, as materials would need to be transported over longer distances, and developing a new 'greenfield' quarry would disturb an undeveloped area.

1.20 **Alternative Designs and Layouts** within the site were studied. The chosen design deepens specific areas (Areas B and C) to maintain operational efficiency and minimise impacts like noise and dust.

1.21 **Alternative Processes** such as rock breaking (a slower method of fracturing rock) were found too inefficient for large-scale limestone production. Controlled blasting (a method of using planned explosives to break rock) remains the most suitable approach.

Economic and Environmental Advantages

1.22 The on-site facilities for manufacturing concrete, asphalt, and lime benefit from reduced transport needs, cutting overall carbon emissions (the release of greenhouse gases).

1.23 Ensuring a local supply of limestone supports regional construction, roads, and farming activities, while avoiding the higher costs and emissions associated with long-distance hauling.

Summary of Environmental Effects

Population and Human Health

1.24 This chapter explains how deepening the existing limestone quarry might affect local communities and people's health. It looks at things like land use, employment, tourism, and possible effects on air and noise. It also covers how the quarry operator plans to manage and reduce any potential negative impacts.

Existing Environment

1.25 **Quarry Location:** The quarry is in a rural area close to Cong village. It already covers a large area of land where limestone is extracted and processed.

1.26 **Nearby Land Uses:** The surrounding lands are mostly farmland, woodlands, and some residences. Ashford Castle, a well-known local hotel and tourist spot, is located around 1.8 km south of the quarry.

1.27 **Local Community:** There are dwellings near the quarry, but most are more than 100 m away. The population in this wider area has generally grown, though it remains lower than the national average.

1.28 **Tourism and Recreation:** Popular local activities include walking trails, fishing on nearby lakes, and visiting nearby attractions such as the Quiet Man Museum.

1.29 **Employment:** About 90 people work directly at the quarry, with 50 extra jobs supported indirectly (e.g., hauliers and contractors).

Potential Impacts

Land Use and Property:

1.30 The quarry has existed for a long time, so deepening it is not expected to change local land use or property values.

Population and Settlement Patterns:

1.31 No direct impact on where people live because no new housing is planned, and quarry traffic levels will stay the same.

Tourism and Recreation:

1.32 The quarry is mostly hidden from view by existing landscaped screening, so its deepening is not likely to impact tourists.

1.33 Noise may be heard near woodland walks, but it is not expected to diminish visitors' experiences.

Employment and Education:

1.34 Jobs at the quarry will continue and help support the local economy.

1.35 When the quarry eventually closes, some employment will be lost.

Human Health and Safety:

1.36 Main concerns include noise, dust, and traffic. Existing controls, like regular monitoring (checking noise, air, water), and ISO14001 (an international standard for environmental management systems) certification, help keep effects very small.

1.37 Radon (a naturally occurring radioactive gas) is not considered a risk at this open-air site.

1.38 Crystalline silica (tiny dust particles) content is low in the limestone, and proper safety measures minimise harm to workers.

1.39 Unplanned events, such as accidents, are unlikely and well managed through safety procedures.

Mitigation Measures

Ongoing Controls:

1.40 The operator will continue using dust and noise controls, wheel washes, and regular checks on emissions.

1.41 Periodic radon tests in any enclosed areas will be carried out.

1.42 Regularly reviewing emergency procedures and safety policies, including handling accidental spills.

Health & Safety:

1.43 Existing workplace policies will be updated as needed to follow best practices.

Residual Impacts

During Operations:

1.44 After applying all precautions, any effects on people or the environment should be slight or not noticeable.

Post-Operations:

1.45 The quarry void will become a water feature and be allowed to re-vegetate naturally.

1.46 Local job losses will occur once operations end, with only minor aftercare employment needed.

Monitoring

1.47 The site already follows a strict monitoring program.

1.48 Checks include:

- Dust deposition (measuring dust levels).
- Noise levels.
- Water quality (surface and groundwater).

1.49 These checks ensure that the quarry's operations do not harm the surrounding area over time.

Conclusion

1.50 Deepening the existing quarry is unlikely to cause any major negative impacts on the local population or their health. With careful monitoring, established safety standards, and a plan to restore the site once work ends, the project is designed to protect nearby communities, support local jobs, and keep the local environment in good condition.

Biodiversity

Introduction/Chapter Overview

1.51 This chapter reviews how deepening part of an existing limestone quarry (from 5 meters above ordnance datum level down to 12 meters below ordnance datum level) could affect local Biodiversity. The aim is to confirm that quarry operations follow planning and environmental law and protect nearby areas of ecological interest. The assessment includes looking at local wildlife, designated areas, and recommends any measures needed to avoid harming the environment. Although the quarry is already active, this deepening proposal ensures the project continues to provide needed resources while limiting the potential impact for the surrounding biodiversity.

Existing Environment

Location and Setting

1.52 The quarry is located near Cong in County Mayo. It lies between Lough Mask to the north and Lough Corrib to the south.

1.53 Most of the area around the quarry is farmland with stone walls, patches of woodland, and a canal (the Cong Canal) that connects to nearby lakes.

Nearby Protected Areas (places with special environmental value)

1.54 Within 2 kilometres, there are several designated sites:

- Lough Carra/Mask Complex.
- Lough Corrib.

1.55 These areas are recognised at both national and international levels.

Main Habitats on Site

1.56 The quarry itself is mostly exposed rock and disturbed ground (land that has been stripped of soil).

1.57 Some small areas of grass and scrub remain, but these are limited as the quarry has been operating for many years.

Local Wildlife (Fauna)

1.58 Species such as bats, otters, various birds, and common frogs (amphibians) may move through or near the quarry site.

1.59 Most wildlife habitats on site have already been cleared under existing quarry permissions.

Potential Impacts

Habitat Loss

1.60 Because the quarry has already removed, or has planning permission to remove, soil and vegetation down to 5 meters above sea level, further deepening will not require removal of any additional habitat.

Disturbance (noise, vibration, and human activity)

1.61 Blasting (using controlled explosives to break rock), machinery, and vehicles may disturb sensitive species, such as bats and birds. However, existing noise and vibration limits are expected to keep disturbance to a minimum with no changes in baseline levels.

1.62 The quarry already operates under strict conditions, meaning the proposed new, deeper level is not likely to increase these impacts.

1.63 The area lies in what is known as a karst region, but ground investigations show no major water flows will be intersected or changed by the deeper extraction.

1.64 Water pumped out of the quarry is already managed through settlement lagoons (structures that allow particles to settle and clean the water before it is released), and testing shows no significant pollution risk.

Air Quality

1.65 Existing Monitoring data shows levels within safe ranges, and no environmental damage to plants or animals is expected from dust as the quarry deepens.

Overall Effects

1.66 Site surveys and impact assessments show no significant harm to protected areas or species. Any changes in noise, dust, or water quality are expected to remain within acceptable limits.

Mitigation Measures

Existing Controls

1.67 Water management: Continued use of settlement lagoons to keep water quality safe before it drains into nearby waterways.

1.68 Noise and blasting: Compliance with set limits on noise and blasting frequency and vibration (using monthly limits and monitoring).

1.69 Dust control: Ongoing dust monitoring and dust suppression (such as dampening the ground or covering stockpiles) when necessary.

Additional Steps

1.70 Because the quarry is already carefully managed, no extra measures are currently proposed.

1.71 Should any protected species (for example, nesting birds) appear within the deeper excavation areas, work will temporarily stop in that spot, and specialists will advise on next steps.

Residual Impacts

1.72 After the planned protection methods, the remaining impacts on wildlife, vegetation, and water are predicted to be minimal.

1.73 The deepening does not remove any large new area of habitats, so changes to the local environment are likely to stay very low.

1.74 Once quarrying ends, restoring the site to more natural conditions will offer long-term benefits to local biodiversity.

Monitoring

Water Quality

1.75 Ongoing checks will continue under the existing license to ensure no issues with surface or groundwater.

Dust and Noise

1.76 The Quarry operators will continue measuring dust and noise levels to confirm they remain within guidelines and do not harm people or wildlife.

1.77 No special new wildlife monitoring is considered necessary because the site has already been thoroughly assessed, and deepening adds minimal additional impact.

Conclusion

1.78 Deepening the existing quarry will allow continued resource extraction without causing significant harm to local habitats, water systems, or wildlife. Existing legal rules and protective methods, such as careful water management and dust control, remain effective. Once quarry work is finished, restoring the area to natural habitats will further help biodiversity. Overall, this proposal meets all relevant policy and legal requirements, ensuring that natural heritage (the local environment and wildlife) is protected.

1.79 This part of the NTS describes how extending the depth of a limestone quarry in Cong, Co. Mayo will affect land, soils, and geology. The quarry operator plans to lower part of the quarry floor from its current elevation of 5 meters Above Ordnance Datum (the standard measure of height above sea level) down to an elevation of -12 meters. The goal is to continue providing valuable limestone resources in a way that maintains safety and environmental responsibility. The Land, Soils, and Geology chapter of the EIAR presents details and explains existing ground conditions, possible effects of the project, ways to minimise impact, and any long-lasting outcomes. This summary provides a non-technical overview of the key findings and recommendations of the Land, Soils, and Geology chapter of the EIAR, highlighting the project's compliance with environmental regulations and its commitment to minimising impacts.

1.80 The assessment characterised the existing land, soils, and geological conditions using both publicly available resources and site-specific investigations. The quarry is situated on a limestone isthmus, meaning bridge of rock, between Lough Mask and Lough Corrib. The site sits in a landscape that is a rural area featuring farmland, forestry and a small number of houses. Cong village is nearby. The site has a long history of limestone extraction over an overall 62.45 hectare working quarry. The current proposal under consideration relates to 19 hectares, approximately, of the northern portion of the overall quarry. The 19 hectares has already been worked, with planning permission, as a quarry. The proposal is to deepen it further.

1.81 The site is mapped by the Geological Survey of Ireland as limestone pavement with bare rock outcrop. The underlining bedrock is mapped primarily Dinantian Pure Bedded Limestones of the Carboniferous period. Soil and subsoil layers at the site are thin or mostly removed, leaving exposed limestone. The limestone here is of high purity (very little clay or other materials mixed in) and is not easily dissolved by water compared with more typical karst (rock with underground drainage) systems. Many deep drilling studies have shown that the rock is solid and without large cavities or underground pathways.

1.82 Site investigations included extensive drilling (> 40 Drill Sites) and core sampling to significant depths at 5 locations across the entire landholding. The results indicated that the bedrock is solid and virtually impermeable, with no evidence of subterranean karst features or water-bearing conduits. Shallow water in weathered rock close to ground level has been encountered at the site but no substantial water strikes were recorded in any bored holes. This confirms the bedrock's competence and suitability for further extraction without significant risk of groundwater flow or instability. The limestone has been found to be virtually impermeable to rainwater dissolution and given its unfractured state is not prone to karstification.

1.83 The site has a very high potential for crushed rock aggregate, making it a valuable resource for construction materials. The site is currently used for quarrying, with agriculture and forestry in surrounding areas. The local planning framework recognises quarrying as an essential activity for meeting the need for construction materials.

1.84 A summary for Site Investigation results is as follows:

- Drilling Results: Extensive drilling and core sampling were conducted, revealing solid, pure limestone with no significant karst features. This is a significant reason for pursuing depth at the site.
- Bedrock Quality: The limestone is exceptionally pure, with high calcium carbonate content (up to 99.95%), making it suitable for various high-value applications. The

calcium carbonate content and other important attributes (e.g. MgO and Impurity contents) improve with depth also.

- Bedrock Permeability: The bedrock is virtually impermeable, with low permeability values confirming its solid nature.

1.85 The Impact Assessment completed concluded, as follows:

- **Direct Impacts:** The primary direct impact is the loss of bedrock due to extraction. Potential contamination from fuel spills and stability issues are also considered. Removal of a portion of the limestone resource is considered a long-term change to the land. Deepening the quarry might raise concerns about rock slope stability, but proper engineering design can help avoid slope failures. The quarry floor is almost entirely bare rock, so there is little soil or subsoil left that could be disturbed. Therefore, there are less stability concerns relative to sites where large stockpiles of soils and subsoils must be managed.
- **Indirect Impacts:** Dust generation and changes in land use are identified as potential indirect impacts. Blasting and moving rock can create dust, which could affect nearby areas if not managed properly. However, the site has been managing itself as a quarry for decades. The land will ultimately become a deeper excavation, which, after quarrying ends, can fill with water or become a habitat for wildlife.
- **Cumulative Impacts:** No significant cumulative impacts are expected from the proposed development.
- **Worst Case Impacts:** Potential hydrocarbon spills and increased groundwater management needs are identified as worst-case scenarios. However, the site's water treatment systems and spill-response plans reduce this risk. The existing water management system helps prevent off-site effects.
- **Positive Impacts**: The site can continue to provide a needed source of limestone products for homes, businesses and road maintenance. Continued operation can help sustain local employment and economic activity.

1.86 The proposed Mitigation Measures are proper fuel storage; detailed working schemes; and comprehensive restoration plans. Carefully planned quarry faces (sloped rock surfaces) to maintain long-term stability. Engineering checks (geotechnical assessment) will be completed to keep rock faces safe. Fuel and lubricants stored in secure areas to prevent leaks into the rock. Regular checks are in place as Standard Operation Systems, the site is ISO approved, and there is continuous monitoring systems in place that treat ensure high quality water before it leaves the quarry.

1.87 When extraction ends, the quarry void (the open pit) will fill or partially fill with water, forming a safe, stable feature potentially beneficial for wildlife habitat. Some rock faces may be left exposed for geoheritage (geology of special interest) purposes, helping increase scientific understanding and local educational value. That is a request of the Geological Survey of Ireland. The site water-filled void will create a habitat for wildlife.

1.88 With respect to Residual Impacts, after implementing mitigation measures, no significant long-term adverse impacts are expected. The primary residual impact is the loss of mineral resources, but the regional scale of the bedrock is large, minimising the overall impact. Whilst limestone will be permanently removed, this is the main aim of the quarry and recognised as necessary for building materials and continued societal function. Residual effects on land use and soils are minimal because the site is already a quarry and most topsoil has been removed under current planning permissions.

1.89 With proper mitigation, dust, noise, or any risk to surrounding geology will remain low.

1.90 The quarry already collects data on water quality, noise, dust, and blasting effects and these are reported as per the Conditions of Planning and the Section 4 Discharge Licence issued by Galway County Council (note, the quarry is in Mayo but the corner from which the managed water is discharged from is in County Galway).

1.91 Any new planning conditions will be followed, and monitoring reports will be sent to the local authority as needed. The goal is to keep confirming that the quarry's operations do not impact the land outside its boundary. Already established monitoring will ensure compliance with current permissions and licenses. Environmental monitoring reports will be submitted to Mayo County Council to demonstrate adherence to regulations.

1.92 The deepening of the quarry aims to continue making high-grade limestone available while creating minimal long-term disturbance. Studies show that the bedrock is competent, with little risk of unexpected voids or large water flows. By following the site's mitigation steps, such as safe quarry face design, pollution control, and well-planned restoration, it is envisaged that negative effects will remain small. Overall, the project can deliver valuable resources, preserve local jobs, and eventually become an area of new habitat or amenity once extraction finishes.

1.93 It is concluded that the quarry can continue to supply rock with appropriate mitigation measures in place. The development aligns with the Mayo County Development Plan and EU EIA Directives, ensuring sustainable and responsible quarrying practices.

1.94 The Water chapter evaluates a proposal to deepen an existing limestone quarry near Cong, located between Lough Mask and Lough Corrib. The quarry operator aims to deepen within the already approved footprint. The goal is to continue extracting high-quality limestone while carefully managing water flows and protecting local habitats. Specific permissions and licenses already guide the quarry's activities, including a Section 4 Discharge Licence that controls how water is managed and released from the site.

1.95 The EIA completed concerns extending the depth of the northern portion of the quarry from +5 mOD to -12 mOD over 19 hectares of an existing quarry that is over 60 hectares in area. The 19 hectares proposed for deepening are important because the impurities in the limestone are very low in the depth range to -12m OD. This summary provides a non-technical overview of the key findings and recommendations from the Water chapter of the EIAR, highlighting the project's compliance with environmental regulations and its commitment to minimising impacts.

1.96 The assessment characterises the existing hydrological and hydrogeological conditions using both publicly available resources and site-specific investigations. The quarry is situated on a limestone isthmus, which means limestone bridge, between Lough Mask and Lough Corrib. Nearby are rural lands with fields, woodlands, and Cong village.

1.97 The > 60 hectares overall quarry area has separate areas approved under different planning permissions. The site has an office, a materials laboratory, a wheelwash, an established sump on the floor (a low spot where water collects) with pumps that pump sump water to an established large settlement lagoon system. The site has a Section 4 Discharge Licence (W/391/05_R1) permitting discharge to the Cong Canal. The water management infrastructure and settlement lagoons have been sized to accommodate rainfall from the entire landholding and surrounding lands, as well as any groundwater contributions that might arise. Site measurements of discharge prove that water at the site mostly comes from rainfall with some shallow groundwater flows in the rock close to surface. No major springs or large water inflows have been found on-site. There is a spring to the south of the site but for the many decades that the site has been operating, no change has been observed in the usual annual cycle of that spring: it was first described in 2006 and it remains the same now 20 years later.

1.98 The Cong Canal is mapped by the EPA as an artificial channel connecting Lough Mask and Lough Corrib. The Cong Canal runs along the quarry's eastern boundary. Previous assessments at the site, following direct consultation with the EPA and Fisheries, have assessed the Cong Canal as both a surface water and groundwater system.

1.99 The site is mapped by the Geological Survey of Ireland as limestone pavement with exposed rock outcrop. The underlining bedrock is mapped primarily Dinantian Pure Bedded Limestones of the Carboniferous period.

1.100 Site investigations included extensive drilling (> 40 Drill Sites) and core sampling to significant depths at 5 locations across the entire landholding. The results indicated that the bedrock is solid and virtually impermeable, with no evidence of subterranean karst features or water-bearing conduits. Shallow water in weathered rock close to ground level has been encountered at the site but no substantial water strikes were recorded in any bored holes. This confirms the bedrock's competence and suitability for further extraction without significant risk of groundwater flow or instability. The limestone has been found to be virtually impermeable to rainwater dissolution and given its unfractured state it not prone to karstification.

1.101 A summary for Site Investigation results is as follows:

- Drilling Results: Extensive drilling (of > 40 boreholes) and core sampling revealed solid, pure limestone with no evidence of significant karst features or water-bearing conduits.
- Bedrock Permeability: Hydraulic conductivity tests confirmed the bedrock's low permeability, indicating minimal groundwater flow through the sedimentary rock matrix.

1.102 A Summary of the Hydrology and Hydrogeology is as follows:

- The site lies within the Corrib Catchment (HA30) and is influenced by regional groundwater flow from Lough Mask to Lough Corrib.
- The Cong Canal, classified as an artificial channel, runs along the eastern boundary of the site and receives the quarry's discharge.
- The site is located within a Groundwater Body (GWB) named the Cong Robe GWB.

1.103 The Water Assessment included consideration of hydrological connectivity pathways and potential interaction with Conservation Objective Sites, Water Framework Directive Mapping, Geoheritage Site mapping, Group Water Schemes, Public Water Supplies, domestic water supplies and flood risk potential.

1.104 The Impact Assessment completed concluded, as follows:

- **Direct Impacts:** The primary direct impact is the loss of bedrock due to extraction. In terms of hydrogeological impact, the loss of bedrock means that there could be a loss of the groundwater movement environment. However, at this site no groundwater movement potential found during the Site Investigations. Potential contamination from quarrying activities, blasting, and machinery use is also considered. Quarry blasting may leave small nitrogen residues from explosives. Mathematical calculations are presented in the chapter to demonstrate that, using industry standard values for likely residues, the residues of all nitrogen components of explosives used will be minimal, below harmful levels and comply with the regulations protecting water.
- **Indirect Impacts:** Dust generation, changes in land use and potential impacts on surface water habitats from sediment deposition are identified as potential indirect impacts.
- **Cumulative Impacts:** No significant cumulative impacts are expected from the proposed development.
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- Potential hydrocarbon spills and increased groundwater management needs are identified as worst-case scenarios.

1.105 The proposed Mitigation Measures are proper fuel storage, detailed working schemes, and comprehensive restoration plans. Settlement ponds, wheelwash facilities, and hydrocarbon interceptors will be used to manage water quality. Fuel tanks and refuelling areas are bunded (protected by barriers) and monitored to prevent leaks. Spill kits are available on-site. Discharge rates, water quality, and groundwater levels will be monitored. With respect to Residual Impacts, after implementing mitigation measures, no significant long-term adverse impacts are expected. In fact, minimal Long-Term changes are predicted. Any changes in water levels are expected to be minor and within approved limits. With proper

measures in place, most impacts are predicted to be "imperceptible," meaning they are so small they cannot be noticed in day-to-day life.

1.106 The primary residual impact is the loss of mineral resources, but the regional scale of the bedrock is large, minimising the overall impact. Once quarrying ceases, the site will be restored, which could include letting groundwater form a small lake.

1.107 Currently, the site's operators regularly monitor groundwater levels and groundwater quality each month. In addition, as per the Conditions of the Section 4 Discharge licence, discharge rates are continuously recorded, as is water chemistry to confirm everything meets regulatory standards. All data are summarised in the Appendices of the Water Chapter. Continuous data collection on water volume, pH (how acidic or basic the water is), and turbidity (how cloudy the water is) helps in quick detection of any issue. The quarry must submit results to the local authority, ensuring transparency and accountability. Ongoing monitoring will ensure compliance with permissions and licenses. Environmental monitoring reports will be submitted to Mayo County Council to demonstrate adherence to regulations.

1.108 It is concluded that the quarry can continue to supply rock with appropriate mitigation measures in place. The development aligns with the Mayo County Development Plan and EU EIA Directives, ensuring sustainable and responsible quarrying practices. A Water Framework Directive (WFD) Assessment was completed and reported at the end of the chapter. The quarry has not affected WFD Status of the lakes, Cong Canal or GWB. It was concluded that the proposal to continue quarrying at the site does not have the potential to negatively affect WFD Status or Risk classifications of any water body associated with the site.

1.109 Permission to continue quarrying to a deeper depth in the northern part of this limestone quarry will ensure the operator continues to meet local construction, housing, transport and economic needs while continuing to take careful steps to protect water quality, conserve nearby habitats and safeguard public water supplies. Detailed studies show that with the existing water licence and proven ground conditions, negative effects are highly unlikely. Ongoing monitoring, strict discharge controls, and responsible site management all help to ensure the project balances resource extraction with environmental care.

Climate

1.110 This chapter focuses on how the proposed quarry deepening project in Cregaree, Cong, Co. Mayo could affect the local climate (long-term weather patterns). It looks at existing climate conditions, potential greenhouse gas emissions, and how weather changes might influence quarry operations. The chapter also explains national rules and policies on climate, examines the project's possible climate impacts, and suggests ways to reduce and monitor these effects.

Existing Environment

1.111 The quarry lies in an area with a mild and changeable climate.

1.112 According to data from a nearby weather station in Claremorris (about 27 km away), temperatures are moderate, as is rainfall.

1.113 Climate change predictions for Ireland suggest warmer temperatures, changes in rainfall patterns, and a higher likelihood of extreme weather events, such as stronger storms or occasional flooding.

Potential Impacts

Greenhouse Gas Emissions:

1.114 The main source of greenhouse gases at the quarry comes from running machinery, transporting materials, and excavating limestone.

1.115 Annual emissions from these activities are calculated to be 3,521.5 tCO2e (tonnes of carbon dioxide equivalent). This accounts for a very small portion of Ireland's overall emissions.

Climate Change Risks:

1.116 A risk assessment found that certain weather events—like heavy rainfall, high winds, or heat waves—may occur but are considered low risk for the quarry's operations and safety.

Indirect Effects:

1.117 Materials (aggregates, asphalt, concrete, or lime) produced by the quarry may release emissions later when used in construction or agriculture. However, it is difficult to track and measure these indirect emissions precisely once materials leave the site.

Mitigation Measures

Weather Events:

1.118 A water management system is already in place to handle rainfall and prevent flooding or overflow.

1.119 All buildings and equipment will be designed and maintained to cope with strong winds.

1.120 Proper safety measures (for example, lightning protection) will be followed to reduce risk from rare, severe weather events.

Greenhouse Gas Emissions:

1.121 Machinery will be serviced regularly to keep engines running efficiently.

1.122 Drivers will be asked to switch off engines when not in use and follow good driving practices to save fuel.

Residual Impacts

1.123 After putting these measures in place, any negative effects from greenhouse gas emissions or extreme weather are considered minor.

1.124 Overall, the quarry's continued operation is not expected to significantly add to local or global climate issues.

Monitoring

Fuel Usage Checks:

1.125 The quarry will keep track of how much fuel is used by machinery and trucks, aiming to identify areas where they can reduce consumption.

Periodic Carbon Footprint (total greenhouse gas emissions from an activity) Reviews:

1.126 The operators will review their overall emissions regularly, including any emissions linked to generated electricity or transport.

1.127 Reviews will help them find more ways to cut emissions and improve sustainability.

Conclusion

1.128 The assessment concludes that the quarry deepening project will have a small effect on Ireland's greenhouse gas emissions and faces low risk from future climate changes such as heavier rainfall or winds. By following the recommended mitigation and monitoring methods, the project's overall impact on climate is considered not significant.

Air Quality

1.129 This chapter focuses on the potential effects on air quality from deepening an existing limestone quarry. It explains the reasons for looking into air quality, describes current conditions, and outlines how the quarry's everyday work—like blasting, extracting rock, and moving materials—might affect the surrounding community and environment. The goal is to show that any risks to air quality will be managed carefully through proper planning and protective steps.

Existing Environment

1.130 The quarry is located in a rural area, surrounded by farmland, trees, and other natural features.

1.131 The land sits between about 20 and 30 meters above sea level (mOD, a measure of height above sea level). Nearby just outside the site boundaries are woodlands and stone walls.

1.132 Local weather (including frequent rainfall) plays a big role in naturally keeping dust from rising into the air.

1.133 People live in houses some distance away from the site. The closest homes sit a little over 100 meters away.

Potential Impacts

1.134 Dust is the main concern, as it can be raised by:

- Blasting (controlled explosions) and drilling to loosen rock.
- Loading and moving the rock on haul roads within the quarry.
- Stockpiling (piling materials up on-site).

1.135 Tiny dust particles, known as PM10 (particles less than 10 micrometers in diameter), could become airborne but are expected to remain well below official health guidelines.

1.136 Vehicle and plant emissions (from trucks and machinery) may contribute slightly to air pollution. However, traffic studies show no significant change in local road use, so any effects on air quality are expected to be minor.

Mitigation Measures

1.137 Use of a tractor with a water bowser (a mobile water tank) to dampen dusty roads, especially in dry or windy weather.

1.138 Keeping haul roads short and well-maintained, including a wheel cleaning system (a setup that sprays water on truck wheels to reduce dust).

1.139 Limiting vehicle speeds, posting clear signs, and using covered loads (for loose materials) to lessen dust impact on local roads.

1.140 Existing earth berms (raised banks) plus trees or hedges around the site to help trap dust.

1.141 Avoiding work in especially windy conditions to limit dust spread.

Residual Impacts

1.142 After putting the above measures in place, dust levels around the quarry are expected to stay low.

1.143 Dust will continue to meet environmental standards for nearby homes and natural areas.

1.144 Emissions from vehicles and machinery should remain at levels too small to harm people or wildlife.

Monitoring

1.145 Ongoing dust checks (dust deposition monitoring) and visual inspections will be carried out.

1.146 Results are shared with the local authority on request, making sure any issues are dealt with promptly.

1.147 If necessary, the locations of dust-measuring equipment can be changed to improve accuracy or follow up on concerns.

Conclusion

1.148 In summary, the deeper quarry plan should not harm local or regional air quality if the recommended steps are taken. With good site management and continuous checks, dust and emissions can be kept to a level that protects both the community and the natural surroundings.

Noise and Vibration

1.149 This chapter discusses how deepening an existing limestone quarry might affect local noise and vibration levels. The quarry is in Cregaree, Cong, Co. Mayo, and the aim of the project is to extend its working life without increasing the rate of extracting rock. Key aspects include controlling noise from quarry operations and managing blasting-related vibrations.

Main Focus

- Assessing noise sources e.g. drilling, blasting, and hauling.
- Explaining vibration impacts from regular quarry activities.
- Outlining how these impacts are measured, monitored, and kept within acceptable limits.

Existing Environment

1.150 The quarry is already in operation and permitted. The existing quarry:

- Has established planning rules that set noise limits during daytime and nighttime.
- Encompasses different zones of activity, such as a processing plant and a blasting area.
- Is surrounded by rural land with some residential properties at varying distances.

Potential Impacts

Noise Impacts:

1.151 Noise mostly comes from drilling, blasting (using explosives to break rock), rock breaking, and plant / machinery.

1.152 Predicted noise levels, when measured at the nearest homes, are expected to remain below limits set by national and local authority guidelines.

Vibration Impacts:

1.153 Blasting creates ground vibrations and air overpressure.

1.154 If not properly managed, these might cause annoyance, but they are not expected to damage buildings.

1.155 Keeping within blasting limits ensures that the probability of superficial damage approaches zero.

Mitigation Measures

Noise Control

1.156 Keeping main noise sources (like processing plant) below ground level or within enclosed areas.

1.157 Using berms (earth mounds) around the site to lower noise.

1.158 Adhering to strict blasting schedules and avoiding weekends or public holidays.

Vibration Control

1.159 Carefully planning blasts to minimise the amount of explosive that goes off at once (known as the maximum instantaneous charge).

1.160 Monitoring blasts regularly to make sure vibration levels stay well below limits.

1.161 Employing methods such as proper stemming (filling holes above explosive with gravel) to reduce flyrock (pieces of rock thrown from blasts).

Residual Impacts

1.162 After implementing the above measures already in place, any remaining impacts on noise levels and vibration are expected to stay within acceptable guidelines.

1.163 Operational noise at deeper levels should not increase, as the quarry floor itself provides extra shielding.

1.164 Blasting vibration will remain at safe levels based on ongoing monitoring and existing blasting methods.

Monitoring

Noise Monitoring:

1.165 Regular noise monitoring at or near the site boundary.

1.166 Ensures the quarry's activities remain below permitted limits.

Vibration Monitoring:

1.167 Every blast is measured at locations chosen for being closest or most likely to be affected.

1.168 Data is used to fine-tune the blasting design if needed, keeping vibration below set standards.

Conclusion

1.169 Overall, deepening the quarry is not expected to cause inconvenience or damage, as long as noise and vibration control methods are consistently applied. The project extends the quarry's life, maintaining key supplies of construction materials, without raising the current extraction rate. Through careful planning, regular checks, and proven measures, both noise and vibration impacts will stay within safe and acceptable bounds for nearby residents and the environment.

Visual and Landscape

1.170 This chapter describes how deepening an existing limestone quarry might affect local scenery and viewpoints. The focus is on what changes we might see and how the quarry fits into the landscape, given that the quarry has long been in use and has already gone through previous assessments.

Existing Environment

1.171 The quarry covers around 19 hectares (a little under 50 acres) within a larger permitted site.

1.172 It sits in gently rolling (undulating) land, surrounded by farmland, hedgerows, and pockets of woodland.

1.173 There are several small roads and a regional road nearby, with houses dotted along them.

1.174 Two large lakes, Lough Mask and Lough Corrib, lie several kilometers away.

1.175 Tall screening berms (manmade mounds) and existing trees help hide the quarry.

1.176 The area is popular with tourists and locals, with nature trails, fishing lakes, and scenic drives in the wider landscape.

Potential Impacts

Visual Changes:

1.177 Because the quarry will only be deepened (rather than spreading out), most changes will happen below ground level.

1.178 Views from local roads or scenic spots are unlikely to change much because existing vegetation and berms already block most of the site.

1.179 People driving or walking nearby would see little difference and would mostly notice traffic movements entering and exiting the quarry.

Landscape Character (overall look and feel of the land):

1.180 The site has operated as a quarry for many decades, so continuing that use means the broader area's character remains largely the same.

1.181 Any deepening will be confined within current permitted boundaries, causing little visible difference from afar.

Mitigation Measures

1.182 Keep Current Layout:

- Continue using the same footprint (the same overall space) instead of opening a new location.

1.183 Preserve and Reinforce Screens:

- Retain all existing screening berms and trees around the perimeter.
- Fill any gaps in hedgerows to ensure the site remains well-hidden from the road.

Residual Impacts

1.184 After these steps, the deepened quarry will generally stay hidden by surrounding vegetation and berms.

1.185 The overall impact on landscape is predicted to be minimal, with no major change to local views.

1.186 Deepening the quarry will continue a familiar use of the land. Because the site is already well-screened, further deepening below the current floor level should not harm overall scenery. Retaining and improving existing boundary vegetation will help the quarry blend in, ensuring that nearby roads and scenic routes experience very little visual difference.

Traffic

1.187 This chapter looks at how deepening the existing limestone quarry might affect local roads and traffic. It focuses on what happens before, during, and after the proposed deepening of the existing permitted quarry, especially in terms of roads, nearby homes, and people's daily travel. The main assessment relates to the change in traffic patterns during operations and once the quarry eventually closes.

Existing Environment

1.188 The quarry is located in a rural setting near the village of Cong, about 1 km away.

1.189 The main road connected to the quarry entrance is the R345 (a regional road).

1.190 Nearby areas are mostly farmland and scattered houses, with some woodland to the south and east.

1.191 The existing entrance to the quarry is a T-junction on the R345, which has a speed limit of around 60 km/h near the site.

Potential Impacts

1.192 As the quarry plans to keep running at its current level (no increase in truck numbers or staff), traffic is not expected to become heavier on the R345 or local roads.

1.193 Assessments show that the existing road network, junctions, and entrance have sufficient capacity for the current volume of heavy vehicles and cars.

1.194 During decommissioning, fewer vehicles will use the roads, so any effects will be minimal.

1.195 Unplanned events, like flooding or road incidents, are considered unlikely to cause major problems on local roads, where existing safety procedures exist.

Mitigation Measures

1.196 Keeping the current rules and facilities that help manage traffic, such as:

- Sufficient parking inside the quarry therefore cars do not park on the public road.
- An entrance gate set back from the road to prevent blocking traffic.
- Visibility splays maintained at the entrance.
- Warning signage provided to inform drivers they are approaching the quarry entrance.
- A wheel wash to reduce dust and debris on the road.

Residual Impacts

1.197 With the quarry continuing its usual operations, the impact on traffic is predicted to be imperceptible.

1.198 Road capacity studies show that local road network has sufficient capacity for quarry-related vehicles now and in the future.

1.199 After decommissioning, road use from the quarry site will further reduce in the future.

Monitoring

1.200 The quarry operators will continue to monitor road conditions and traffic flows as part of their regular activities and safety checks.

1.201 Deepening the existing permitted limestone quarry will not significantly alter traffic and transport around the quarry. Existing roads can manage with the current level of heavy vehicles and cars. Mitigation measures, such as road signage and a wheel wash, are already in place to manage any minor effects. Overall, the project will help maintain a local supply of construction materials without causing major changes to traffic or road safety in the area.

Cultural Heritage

1.202 This chapter reviews the archaeological and cultural heritage considerations for a proposed deepening of an existing limestone quarry in Cregaree, County Mayo. It summarises the background research, field inspections, and test excavations conducted to determine if any historical or archaeological features exist within the project area. The study also looks at potential impacts on nearby monuments or buildings and outlines recommendations based on the findings.

Existing Environment

Location and Setting

1.203 The application site lies roughly 1 km north-west of Cong in south-west County Mayo.

1.204 The land is flat to gently rolling. Soil types mainly include brown earths and other shallow soils over limestone.

Archaeological and Historical Background

1.205 Prehistoric Activity: There are two Neolithic tombs and a standing stone recorded in the broader region, though none lie within the quarry site.

1.206 Early Medieval Period: This broader area was part of the kingdom of the Conmaicne, later under the Uí Briúin and Uí Chonchobair. Some cashels (stone-walled farmstead enclosures) and ringforts are known locally, but none are on the quarry site.

1.207 Later Medieval Period: Various medieval structures (including tower houses) appear in the overall region, yet none are located within the quarry site.

1.208 Protected Structures and Buildings of note: A few protected structures exist in the general area (such as parts of the Cong Canal), but these lie too far from the quarry to be impacted.

Field Inspections and Test Excavation

1.209 Experts examined all accessible parts of the quarry area.

1.210 Test trenches (shallow pits for investigation) revealed no underground archaeological deposits.

1.211 No buildings or monuments of heritage importance exist within or directly beside the quarry.

Potential Impacts

No Direct or Indirect Effects

1.212 Because the site contains no identified heritage features, the continuation of quarrying is not expected to disturb any significant archaeological or cultural remains.

1.213 Any buildings or protected structures in the study area are sufficiently distant, reducing the risk of indirect impacts such as vibration or visible changes.

Mitigation Measures

No Additional Measures Required

1.214 The findings show that there are no heritage features on or near the site that require protection.

1.215 Consequently, no special construction techniques, protective barriers, or further archaeological interventions are recommended.

Residual Impacts

1.216 No Lasting Effects on Cultural Heritage

1.217 As there are no known archaeological or historical features within the quarry boundary, no residual impacts are anticipated once work concludes.

Monitoring

1.218 Given that no archaeological features were identified, there are no monitoring requirements described.

Conclusion

1.219 The investigations confirm that continuing the quarry work at this location will have no negative effects on archaeological or cultural heritage resources. No further mitigation or monitoring is necessary, and the project can proceed without harming any known historical or archaeological assets.

Material Assets

1.220 This chapter looks at how deepening an existing limestone quarry could affect important materials and services in the area. These materials (known as "material assets") include things we use in everyday life, such as roads, property, and resources like soil and rock. The chapter also explains how any negative effects will be managed, highlights the benefits of providing building materials, and describes how the site will be restored (brought back to a natural or improved condition) once quarrying is finished.

Existing Environment

Location and Surroundings

1.221 The quarry is located near the village of Cong in County Mayo, with parts of the overall quarry site in County Galway.

1.222 Nearby features include farmland, woodlands, and two large lakes (Lough Corrib and Lough Mask).

1.223 A salmon hatchery (a place where young fish are bred) is located downstream of the quarry, and there are some houses about 100 meters away.

Roads and Transport

1.224 The quarry is directly accessed from a regional road (the R345) and uses internal roads for trucks and equipment.

1.225 Nearby roads connect the site to towns and cities, although public transport options are limited.

Land Use and Utilities

1.226 The land around the quarry is mostly agricultural, with pockets of woodland.

1.227 The site has its own water supply from a well (an underground source) and connections to electricity.

1.228 No major communication or wastewater systems cross the quarry site.

Natural Setting

1.229 Local soils and rock mostly consist of limestone (a type of sedimentary rock).

1.230 Some parts of the area are protected because they contain unique wildlife or natural features.

1.231 The site itself is not within a designated nature area, but it is near woodlands used for recreation.

Potential Impacts

Positive Impacts

1.232 Ongoing supply of limestone supports building and construction projects.

1.233 Helps the local economy by providing jobs and raw materials.

Negative/Adverse Impacts

1.234 Possible disturbance to nearby residents due to dust, noise, and vibration from quarry activities.

1.235 Changes to how the land looks during operation.

1.236 Permanent removal of some limestone resource.

Neutral/Minimal Impacts

1.237 No increase in traffic is expected beyond current levels, so major road impacts are not anticipated.

1.238 Nearby leisure trails and woodlands are unlikely to be significantly affected in the long term.

Mitigation Measures

Managing Noise, Dust, and Vibration

1.239 Continue to use existing systems like wheel-washing stations and maintain equipment to reduce dust and noise.

Protecting Resources

1.240 Fuel handling procedures (clearly outlined steps to prevent spills) to minimise soil and water pollution.

1.241 Waste management plan to sort, store, and properly dispose of rubbish on-site (limiting impact on local landfill).

Rehabilitation (returning the site to a better state)

1.242 After quarrying, leftover soil and rock will be placed in selected spots, and the quarry void will be allowed to fill with water or re-vegetate.

1.243 This approach will create more habitats for wildlife, leading to a long-term environmental gain.

Residual Impacts

1.244 Once mitigation steps are followed, any impacts on local land use, properties, and resources are expected to be minimal.

1.245 After operations finish, the flooded quarry and new habitats will improve local biodiversity (the variety of plant and animal life).

Monitoring

1.246 No specific ongoing checks are proposed solely for material assets, because the actions in other areas (like noise or dust) already cover the main issues.

1.247 Regular logs and checks will continue for waste handling to ensure correct disposal.

Conclusion

1.248 Deepening the limestone quarry will provide important building materials while maintaining careful oversight of local resources. By following the outlined mitigation steps and restoring the land afterwards, impacts on neighbours, wildlife, and overall land quality will be kept low. Over time, the site will transition to a more natural setting, offering new habitats for wildlife and leaving a positive long-term outcome for the area.

FIGURES

LEGEND

APPLICATION AREA

Extract from Ordnance Survey Discovery Series Mapping - Map Sheets: OS1024; OS1026
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0 500 1000 1500 2000m 3000 4000 5000

Metres 1:50,000

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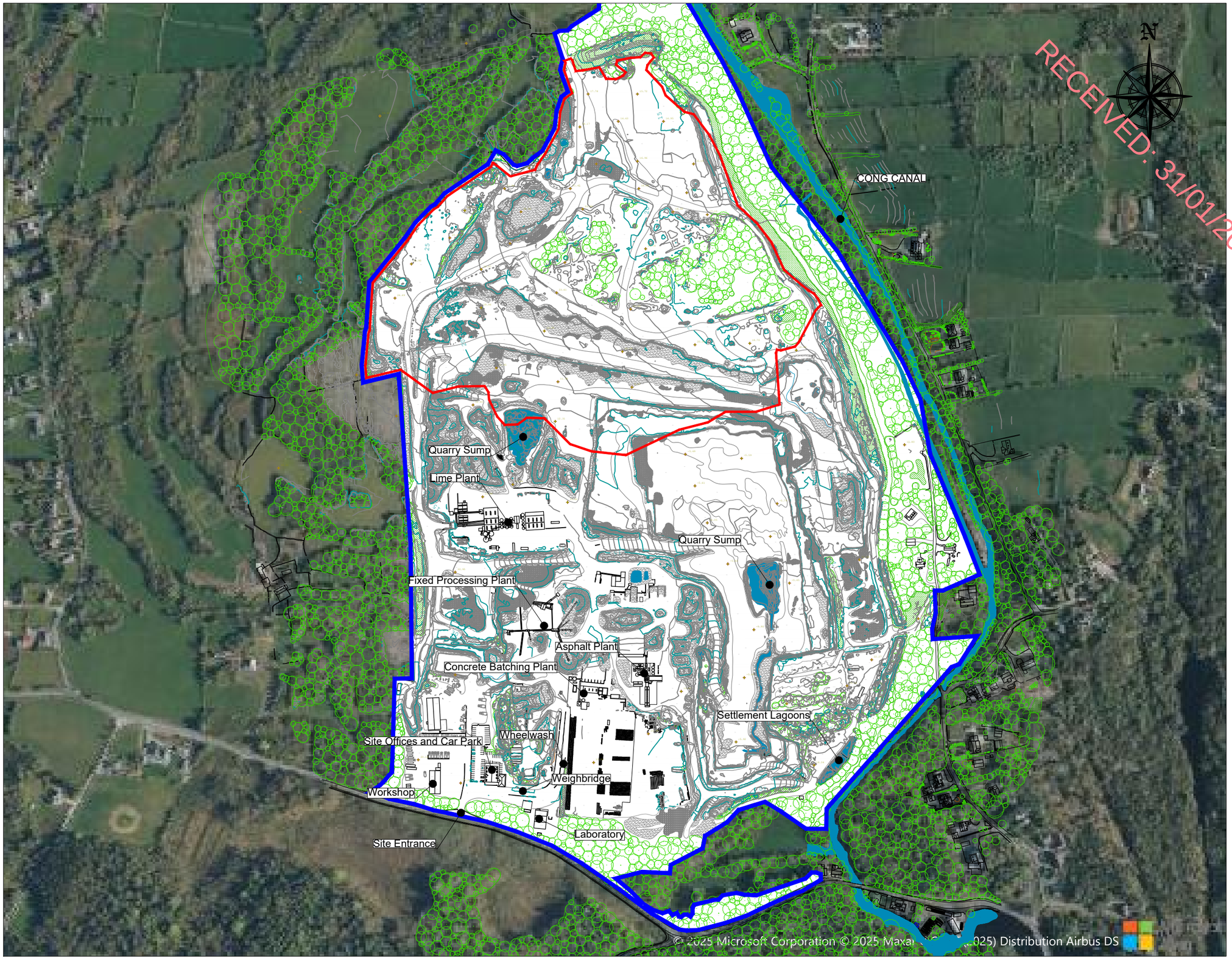
PROPOSED QUARRY DEEPENING
AT CREGAREE, CONG, CO. MAYO

SITE LOCATION

FIGURE NTS 1

Scale	Date
1:50,000	JANUARY 2025

65.01.Planning Drawings FINAL.dwg



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Metres 1:5000

NOTES

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

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LEGEND

LAND INTEREST

APPLICATION AREA

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MC GRATHS LIMESTONE WORKS LTD.

PROPOSED QUARRY DEEPENING AT CREGAREE, CONG, CO. MAYO

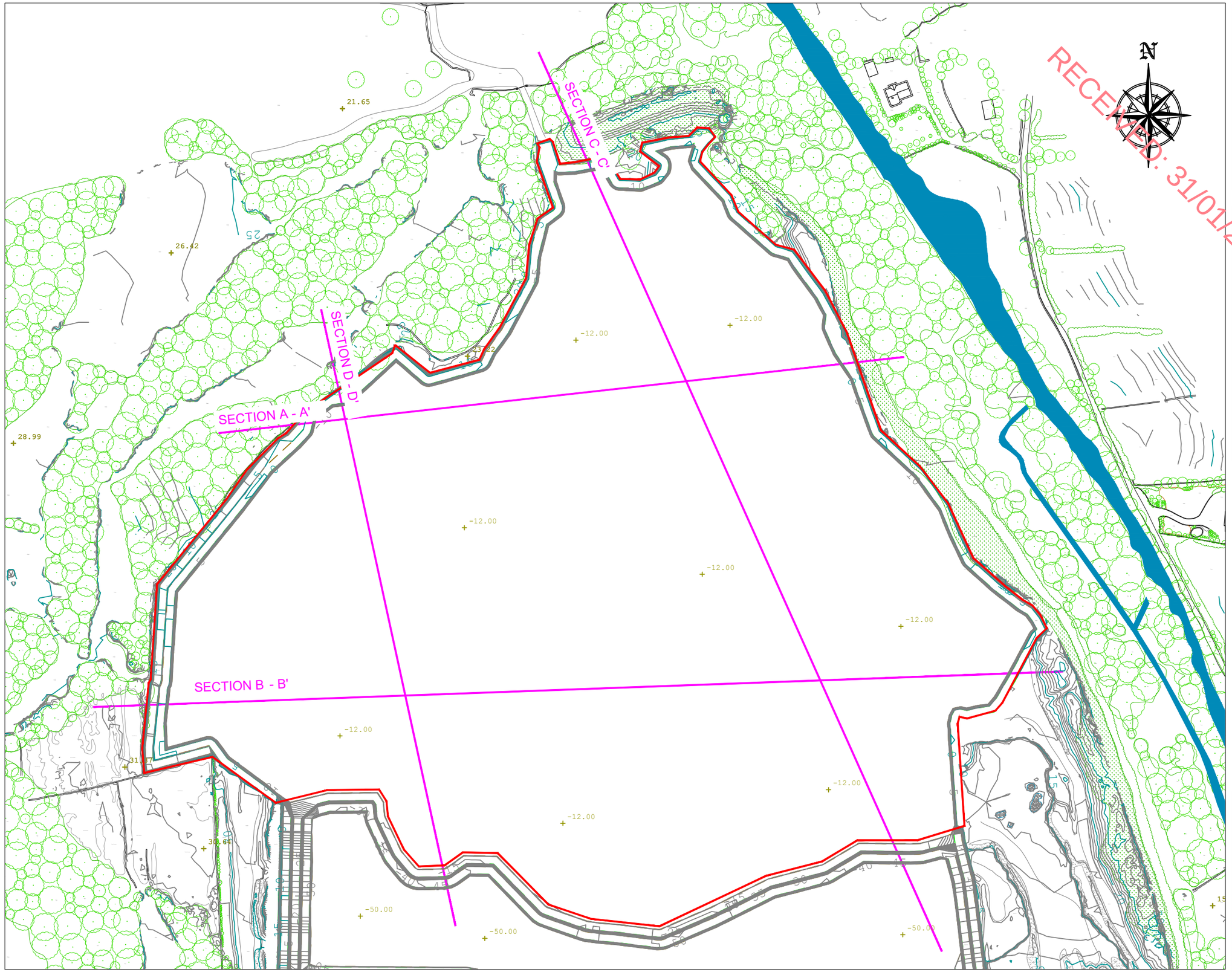
OVERALL QUARRY SITE

FIGURE NTS 2

Scale 1:5,000

Date JANUARY 2025

65.01.Drawing 5 Proposed Site Layout.Rev.0.dwg



NOTES

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LEGEND

APPLICATION AREA

CROSS SECTION LOCATIONS: REFER TO FIGURE 3.3

0 80m 200

Metres 1:2500

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PROPOSED QUARRY DEEPENING AT CREGAREE, CONG, CO. MAYO

PROPOSED SITE LAYOUT

FIGURE NTS 3

Scale	Date
1:2,500	JANUARY 2025

65.01.Drawing 5 Proposed Site Layout.Rev.0.dwg

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.
- 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.

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

N

0 80m 200

Metres 1:2500

NOTES

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LEGEND

APPLICATION AREA

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PROPOSED QUARRY DEEPENING AT CREGAREE, CONG, CO. MAYO

PROPOSED RESTORATION PLAN

FIGURE NTS 4

Scale 1:2,500

Date JANUARY 2025