NON-TECHNICAL SUMMARY

FEBRUARY 2025

QUARRY CONSULTING

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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 continued operation and expansion of an existing limestone quarry and concrete manufacturing facility at Barrettspark, Athenry, Co. Galway.

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:

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

1.4 The quarry already extracts limestone on-site, which is processed for construction materials. The project seeks 20 more years of operation, including an extension of the extraction area to about 13 hectares and ongoing concrete production. The goal is to secure a reliable, long-term supply of locally sourced building materials, meet regional construction demands, and address previous planning permission issues.

Size and Location

1.5 The application site covers approximately 27.5 hectares (ha) and lies about 13 km east of Galway City and 7 km west of Athenry – refer to Figure NTS 1. A new extraction area covering about 4.6 ha is planned, bringing the total extraction area to around 13 ha – refer to Figures NTS 2 & NTS 3.

Quarry Operations

1.6 Activities include drilling, blasting, crushing, and stockpiling (storing) of materials, along with a concrete manufacturing facility on the same site.

The Proposed Development

1.7 This project involves the continued operation and lateral extension of an existing limestone quarry in Barrettspark, Athenry. The quarry extraction area currently will cover about 13 hectares, with extraction reaching a depth of minus five meters relative to sea level (mOD, a measurement comparing height to sea level). Refer to Figure NTS 3.

1.8 Plans include extending the quarry area, maintaining existing onsite facilities (such as a concrete production plant and offices), and continuing activities like drilling, blasting, crushing, and screening of rock.

1.9 Once quarrying is complete, the site will be returned to a natural state by creating a water-filled area and encouraging native plants to grow.

1.10 The total lifespan for extraction is expected to be around 20 years, with an additional two years for final site restoration.

Quarry Operations:

1.11 Limestone is extracted using controlled blasting, then processed (crushed and screened) to produce building materials.

1.12 A concrete production plant is on site, using both locally quarried stone and imported materials like sand and cement.

Site Infrastructure:

1.13 Existing facilities include a weighbridge (a scale to measure vehicle loads), a wheelwash (equipment to clean vehicle wheels), and a wastewater treatment system.

1.14 Roads, fences, and screening berms (earthen mounds) are already in place to manage traffic, security, and visibility.

Environmental Controls:

1.15 Dust is managed using water sprays and a covered conveyor system.

1.16 Noise is minimised by conducting crushing and screening in the lower quarry area and regularly maintaining machinery.

1.17 Blasting rules limit the times and usage of explosives and include regular vibration and noise monitoring.

1.18 Water runoff is managed using a sump (a low area where water collects) and settlement tanks.

Employment and Policy Alignment:

1.19 The quarry directly employs around 12 people and supports additional indirect jobs.

1.20 The project aligns with national and regional guidelines, which emphasize secure supplies of construction materials and best environmental practices.

Alternatives

Key Findings

Demand for Limestone:

1.21 Local and national building activities require a large amount of limestone. This includes housing developments, commercial buildings, and infrastructure projects (such as roads).

1.22 Keeping quarry operations local reduces the need to transport limestone over long distances, which helps cut down on fuel use and carbon emissions.

Legal and Policy Framework:

1.23 The Environmental Impact Assessment (EIA) Directive (a European law for evaluating the environmental effects of certain projects) requires considering alternatives and choosing the option with the least environmental impact.

1.24 The Galway County Development Plan supports extractive industries that meet proven needs and do not harm the environment.

Alternatives Explored:

"Do Nothing":

1.25 Stopping quarry operations would mean losing a nearby source of stone, leading to higher costs and environmental impacts from transporting materials from elsewhere.

Other Sources of Aggregates:

1.26 Recycled or manufactured materials can help but cannot currently meet the high demand for limestone.

Different Locations:

1.27 Limestone can only be quarried where it naturally occurs. A new "greenfield" (previously undeveloped) site would require more effort, cost, and time.

Alternative Quarry Designs:

1.28 Options like going deeper or shifting activities to other parts of the site would demand more water management or disrupt existing concrete production and storage facilities.

Different Processes:

1.29 Blasting (the use of controlled explosives to break rock) is still the most efficient method, although other processes were considered.

Summary of Impacts and Mitigation

Potential Impacts:

1.30 Increased noise and dust from quarry operations and transport.

1.31 Effects on water quality if extraction goes deeper or involves changing water flows.

1.32 Visual impacts on the surrounding area, depending on how the quarry is extended or screened.

Mitigation Measures:

1.33 Mitigation measures include continued compliance with environmental guidelines and monitoring systems.

1.34 Final restoration to a natural habitat once extraction ends, helping return the area to a more natural state and reduce long-term environmental effects.

Conclusion

1.35 The assessment shows that keeping and extending the existing quarry is the most suitable choice. Alternatives either fail to meet the local demand for construction stone or risk greater environmental or economic impacts. The chosen design makes good use of existing infrastructure, fits with local and national policies, and includes plans for responsible site restoration. The project will continue to be monitored to reduce noise, dust, and other potential impacts while ensuring a steady supply of vital construction materials.

Summary of Environmental Effects

Population and Human Health

1.36 This chapter looks at how extending or continuing the use of an existing limestone quarry might affect local people and their health. It explores factors like jobs, living conditions, and potential changes that could occur during and after quarry operations. The goal is to ensure a clear understanding of both benefits and possible drawbacks for the nearby community.

Existing Environment

1.37 The quarry is located in a rural setting with farmland and a small number of houses spread out along local roads. Local homes are mostly one-off rural houses.

1.38 Current land uses include agriculture, a substation, and light industry.

1.39 Public amenities include schools, sports clubs, and other facilities in nearby towns like Athenry and Oranmore.

1.40 The quarry has established operations with staff facilities, access roads, plus measures to manage noise and dust.

Potential Impacts

Employment and Economy:

1.41 Continues to provide jobs, supporting local families and businesses.

1.42 Supplies construction materials that are important for local projects.

Living Conditions and Amenity:

1.43 Noise from equipment and blasting might temporarily affect nearby homes, but it is monitored and follows recommended limits.

1.44 Dust may arise from vehicle movements and rock crushing, although existing control systems help reduce it.

1.45 Traffic volumes on local roads could increase slightly, but studies suggest the road network has enough capacity.

Health and Safety:

1.46 Radon (a naturally occurring radioactive gas) levels can be tested to protect workers.

1.47 Respirable crystalline silica (tiny dust particles) has a low presence in limestone but is managed through safety measures like water spraying and protective equipment.

Tourism and Recreation:

1.48 No major effects anticipated on nearby recreation spots due to distance and established quarry practices.

Mitigation Measures

Dust Control:

1.49 Spraying haul roads to keep dust down.

1.50 Using wheel washes so trucks do not bring dust onto local roads.

1.51 Regular cleaning and maintenance of crushing and screening equipment.

Noise Management:

1.52 Monitoring noise levels and scheduling noisy activities (like blasting) to reduce disturbance.

1.53 Maintaining machinery to ensure quieter operation.

Health and Safety:

1.54 Testing indoor work areas for radon (a naturally occurring radioactive gas) and keeping levels below recommended limits.

1.55 Providing safety gear and training for workers to manage dust.

1.56 Maintaining fencing and signs around the site to prevent unauthorised entry.

Traffic Safety:

1.57 Continuing to use existing access routes with good visibility.

1.58 Carrying out regular checks on site vehicles and following local road safety rules.

Residual Impacts

1.59 After applying the above measures, noise and dust levels are expected to stay within acceptable limits.

1.60 The site will be restored when operations cease. This includes letting quarry floors fill with water and allowing vegetation to regrow, offering a long-term improvement for local biodiversity.

1.61 Road traffic impacts are likely to remain minor and managed.

1.62 Overall, the project is not expected to cause significant negative health effects once all mitigation steps are in place.

Monitoring

Dust and Noise Checks:

1.63 Regular inspections and tests at set points around the quarry.

1.64 Results shared with local authorities for review.

Water Monitoring:

1.65 Ongoing checks of water sources to ensure no negative effects on quality.

Radon and Workplace Safety:

1.66 Periodic radon tests in indoor areas.

1.67 Reviewing health and safety procedures to keep hazards under control.

Conclusion

1.68 By continuing safe and responsible quarry activities, this project supports local jobs and construction needs while limiting inconvenience to nearby residents. With careful monitoring, strong safety practices, and eventual restoration of the site, the overall impact on people and their health is expected to remain low and well-managed over the life of the quarry.

Biodiversity

1.69 This chapter focuses on how the ongoing and planned extension of a limestone quarry in Barrettspark, near Athenry in County Galway, might affect local plants, animals, and habitats.

1.70 It explains how studies were done to identify species and habitats that might be influenced by quarry activities.

1.71 The goal is to ensure any effects on wildlife are clearly understood so that proper steps can be taken to protect important species, particularly nesting birds like the peregrine falcon.

Existing Environment

Location and Habitats:

1.72 The quarry covers an area already in use for extracting limestone and associated activities.

1.73 It features bare ground and patches of grass where some wildflowers have started to grow.

1.74 Stone walls and boundary hedgerows are present.

1.75 There are no official nature designations (such as Special Areas of Conservation) within 2 km of the site.

Key Species:

1.76 Peregrine falcon (a bird protected under European law) has been nesting on a quarry ledge since 2016.

1.77 Other birds, such as swallow and house martin, have been noted in the quarry area.

1.78 No rare plants or invasive (harmful non-native) plants were found, and protected mammal signs (like badger setts) were absent during recent site visits.

Potential Impacts

Habitat Loss and Changes:

1.79 Extending quarry operations could remove small areas of vegetation or ledges used by birds.

1.80 Most vegetation on site is common and of low value for wildlife, but the falcon's nesting area needs special attention.

Disturbance (noise, vibration, and people)

1.81 Quarry work can create noise and vibration from blasting.

1.82 Although wildlife can get used to regular sounds, special care is needed for sensitive birds like peregrine falcons during breeding season.

Mitigation Measures

Bird Protection:

1.83 Maintain a nesting ledge for peregrine falcons by not quarrying the nesting area they use.

1.84 If any removal of shrubs or grass is necessary, it should happen outside bird-nesting season (March to August). If that is not possible, a check will be made first to ensure no active nests are disturbed.

Safeguards for Peregrine Falcons:

1.85 A buffer area (an untouched zone) of around 125 meters is kept when the falcons are nesting each spring, avoiding blasts in that zone.

1.86 Quarry operations (including blasting) must follow a plan that respects peregrine breeding times.

Residual Impacts

1.87 After the measures above are put in place, no lasting negative effects on local biodiversity are expected.

1.88 Any short-term inconvenience to birds is minimised by careful timing of quarry work and by keeping the falcon ledge intact.

Monitoring

Ongoing Checks

1.89 Regular surveys of peregrine falcons in years 1, 2, 3, 5, and 10 will be done to confirm they remain safe and undisturbed.

Conclusion

1.90 With proper care for nesting birds—especially the peregrine falcon—quarry operations can continue without major harm to local biodiversity.

1.91 By preserving the falcons' ledge and following best practices, wildlife is protected during both the quarry's operation and its eventual return to more natural habitats.

Land Soils and Geology

1.92 This chapter explains the local land, soil, and geology conditions, along with possible effects of extending the quarrying activities within the exiting site boundary. It also covers how these effects can be reduced, what impacts might remain after taking precautions, and how the quarry will be monitored and eventually restored. Overall, the aim is to continue providing valuable construction materials whilst ensuring continued protection of the environment at and outside the quarry. In addition, the chapter presents information for planning for a safe, attractive site once the extraction of rock ends.

Existing Environment

Location and Land Use

1.93 The quarry is located in Barrettspark, close to roads that connect Galway City and nearby towns. Also nearby is the M6 Motorway connecting Galway City to Dublin. The broader area is mostly agricultural, with some homes and light industry. The quarry itself has been in use for some time, with much of the soil already removed or used in screening berms around the site perimeter.

Topography

1.94 The land gently slopes from east to west. There is an excavated operational rock quarry with lower elevations where the main quarry floor currently sits and higher ground in some sections. Generally, the landscape has elevations of 30m above sea level, approximately, across the eastern boundary of the site and the natural landscape to the west is 20m above sea level, approximately.

Soils and Subsoils

1.95 Most of the soil has been taken away where the quarrying is active. Where it remains, the soil is generally well-drained and formed mostly from weathered limestone. In the wider landscape surrounding the quarry, natural subsoils are reported by the Teagasc and the Geological Survey of Ireland as Tills derived from Limestone origins.

Bedrock Lithology (types of rock)

1.96 The site is underlain by a thick layer of a sedimentary type of rock named limestone, which was deposited on prehistoric sea beds. Hence, the rock is solid, compressed and the beds of limestone layers are clear evidence of the different timeframes of deposition and compression. The Geological Survey of Ireland reports this bedrock with a name 'The Burren Formation' and it is also referred to as Dinantian (meaning age, time or era) Pure Bedded Limestones. Drilling and testing at this site shows that the bedrock is strong, with very little pore space or open cracks or channels where water can flow. This is evidenced by the dry nature of the perimeter walls of the excavated rock. In addition, the tight rock means that the floor of the quarry does not accumulate water from the walls but at times of intense rainfall, there is a short period of time in which the compressed floor holds onto water. Within days, the water is gone but this is as much an operational effect because the quarry management are authorised by Galway County Council to pump water from the operational hard rock excavation area to a location in the south west of the site, outside the quarrying area, where water finds it easier to move.

Epikarst (near-surface rock layer)

1.97 Between the overlying subsoil and the hard rock beneath, there is a shallow, weathered rock layer known as the epikarst. This is a feature of all limestone environments. Rainwater percolates through overlying soils and subsoils and it can temporarily accumulate In the epikarst. At limestone quarries, the epikarst is exposed along the perimeter of the excavated

void and therefore, the recent rainfall can enter there, to be managed under licence by the quarry. There is no net loss to the environment because all waters are recirculated. However, this part of the geological system is not a large component environmental water.

Geological Studies

1.98 Extensive tests (for example, boreholes and geophysical assessments) confirm that the mass of quarried rock beneath natural ground level at the site is a solid mass of limestone where groundwater or major water pathways are only found at deep levels beneath the current and proposed elevation of the quarry floor, if at all. Water is not encountered in the geological formations within the planned quarry depth.

Potential Impacts

Removal of Limestone

1.99 Quarrying means permanent removal of limestone. This is an unavoidable effect of extracting raw materials for use in the provision and maintenance of society's roads and housing and commercial buildings.

Changes to Land and Soils

1.100 Most topsoil and subsoil in the active quarry areas have already been removed. Any remaining material has been previously relocated or will be transferred to other parts of the site as new extraction areas are opened.

Dust and Noise

1.101 Blasting and the operation of heavy machinery can generate dust and noise, which may have temporary effects on the surrounding area. Established tree cover provides a natural barrier, helping to mitigate dust movement towards the motorway to the south. In addition, effective site management practices are in place to control and minimise dust emissions beyond the site boundary.

Risk of Spills

1.102 Fuel, oil, or chemicals used on site may accidentally spill, possibly affecting the exposed rock and soil if not controlled properly.

Slope Stability and Safety

1.103 Quarry faces are carefully designed and managed to avoid rock falls or other hazards.

Mitigation Measures

Responsible Quarry Design

1.104 Quarry faces will be formed on safe angles or "benches" (stepped levels in the quarry) to reduce the risk of collapse and keep workers and neighbours safe. This is industry standard.

Dust and Noise Control

1.105 Using water suppression methods to reduce dust.

1.106 Regularly servicing plant and machinery to keep noise levels down.

1.107 Building or maintaining screening berms to help buffer nearby areas.

Spill Prevention

1.108 Storing fuels in secure tanks with bunds (protective walls to contain spills).

1.109 Training staff on spill-response procedures.

Progressive Restoration

1.110 Planning landscape work alongside extraction—this means returning topsoil or vegetation to finished sections whenever appropriate. Creating stable final edges by designing the quarry appropriately.

Access for Geological Study

1.111 Cooperating with geologists who may wish to inspect exposed rock layers. If interesting rock features are found, the quarry will explore ways to preserve them safely.

Residual Impacts

Permanent Loss of Rock

1.112 Even with all measures in place, the limestone is permanently removed. However, this rock is an important material for roads, buildings, and other construction.

Improved Restoration and After-Use

1.113 In the long run, the site will become a water-filled area with planted slopes, providing new habitats for wildlife. Once extraction ends, an attractive, safe landscape will emerge.

Monitoring

Regular Checks

1.114 Stability of quarry faces during the operational period will be reviewed regularly by specialists. A Geotechnical specialist visits the site routinely and the aggregate rock products are tested to demonstrate suitability and quality.

1.115 Ongoing dust, noise, and water testing (for example, checking runoff and groundwater levels) will continue through the proposed lifetime of the rock excavation and afterlife restoration phase, ensuring the quarry operates within set limits.

Inspection Records

1.116 Site operators keep logs of all monitoring activities, which can be shared with local authorities.

Future Requirements

1.117 Any new conditions from the planning authority will be included in the existing monitoring plan to maintain a safe, low-impact operation.

Conclusion

1.118 This chapter demonstrates how the quarry can keep operating without major Impact on the environment or local community. Using standard safety measures, controlling dust and noise, and both the proper storage and proper use of fuels ensures daily impacts will remain limited. Although the removal of limestone is permanent, it meets an important local need for construction materials. In the end, restoring the land will allow the site to become a valuable area for wildlife and potential community benefit once quarrying stops.

Water

1.119 The Water Chapter provides information on the baseline water environment, both water at or close to the land's surface (hydrology) and deep within the earth (groundwater), the occurrence or not of water within the site, how water components are managed, what potential effects could happen, how they can be mitigated and whether there are any long term (residual effects) envisaged. The proposed project relates to a proposal laterally expand rock excavation within the existing site boundary of an existing quarry and continued use of a concrete manufacturing facility. There is a current working floor in the middle of the site. No deepening of the working floor is proposed. Instead, it is proposed to laterally extend the rock excavation outwards from the floor, mainly to the east and south west of the operational excavation area. The proposed lateral extension areas will be excavated to the same level as the current permitted floor elevation of 5m below sea level. The proposal is presented to the planning authority with the objective of ensuring a steady local supply of limestone-based materials for construction and other needs. It aims to balance economic benefits with the continued protection of the surrounding water environment. There are no surface waters in the immediate vicinity of the site and neither is there a direct hydrological link between the site and any flowing surface waters. The groundwater body in the area is mapped by the EPA as Good Status (Quality) and Not At Risk. The quarry has had a licence since 2013 to discharge any waters accumulating on the floor to groundwater and for all of the time since, continuing to this day, the EPA continues to report good groundwater quality in the area.

Existing Environment

Location and Landscape

1.120 The quarry sits in a mostly level landscape in which lands gently slope from an elevation of 30m above sea level in lands to the immediate east of the quarry to 20m above sea level in lands to the immediate west of the quarry.

1.121 The quarry is surrounded by agricultural lands, local roads, and a few rural homes.

1.122 No rivers or streams flow within the vicinity of the site.

1.123 Water is supplied to homes by Uisce Eireann. There are historic reports for Group Water Scheme Boreholes but the Local Authority has confirmed that those schemes are not now in use and all water supply is by mains. Homes are sufficiently remote from the site that if they did decide to supply their own water by groundwater well, there is no potential for interference by the quarry because the quarry remains separate from the conduit controlled groundwater flow system, which is deeper than the block of rock quarried.

1.124 The quarry is relatively close to Galway city but also conveniently situated so as to be able to supply materials for use in the eastern suburbs. The quarry is closer to Athenry. The M6 Motorway connecting Galway to Dublin is not far from the site.

Geology and Water

1.125 The limestone bedrock at the site is part of an aquifer that is mapped by the Geological Survey of Ireland as a Karst aquifer in which groundwater flow is controlled by conduits, which are explained simply as corridors or pipe networks similar to plumbing in a home. There may be pipes (conduits) running through a home, but it does not mean that the rooms are full of water. In the vicinity of the quarry, the groundwater flow pathways (conduits) are deeper in the rock and occur below the current and proposed quarry floor level.

1.126 As with all limestone quarries, rain falls from the sky and when it reaches the bedrock of the quarry floor, it flows naturally across the floor into the lowest elevation in one specific corner

of the quarry floor and is then pumped to a settlement lagoon before safe discharge into the ground under a water discharge licence.

Potential Impacts

Water Quality

1.127 As at all sites involving industry with machines, there is a risk of accidental spills or leaks of fuel and lubricants from quarry machinery.

1.128 The site has been operating as a quarry for almost 20 years and there has been no groundwater quality incidents. Ongoing and routine quarterly monitoring reveals good quality water.

1.129 There is no real risk of silt entering water systems because sediment is properly contained and managed.

1.130 There is no risk of affecting deeper groundwater flows in conduits because the permeability of the bedrock matrix is very low, meaning that water cannot travel through it easily.

1.131 Rainfall runoff is the main source of waters arising on site. This has been proven by mathematically relating the volumes of discharge measured by the flow meter on the licensed discharge to annual rainfall contributions.

Aquifer Drawdown (lowering water levels)

1.132 Given that the main water arising at the site is rainfall and that the main underground water flow system occurs and moves in conduits that lie well below the quarry floor, lowering local water levels will not occur. Whilst some attempt to apply a simplified concept of a 'water table' to Irish limestone karstifed conduit bedrock, it is not at all appropriate to refer to a water table in a karst conduit aquifer in which a quarry with dry perimeter walls are observed, which is the case at this site. There are walls of rock exposed at the quarry and they extend across all four sides of the void. Whilst there is some subsoil bedrock interface (epikarst) water in a small portion of the walls, this is natural. There is no contiguous saturated pore space and no evidence of any karst conduits in any wall of the void. The proposed lateral expansion areas' walls are already excavated at the interface with the current excavation. No groundwater body or conduit occurs. There is no potential to lower groundwater levels.

Flooding and Surface Water

1.133 The quarry void has enough capacity to hold ordinary and extreme rain fall event volumes. Therefore, there is minimal flood risk to nearby properties.

1.134 A site specific flood risk was completed and concluded that the quarry posed no risk of flood local lands. The 2009 flood experience in local townlands, and inundation into the quarry, was not repeated in the experiences of the 2015/2016 national flood extents, which is reported by the GSI as the worst on record. OPW Flood relief measures in the immediate and wider landscape have removed future risks of flooding.

1.135 The site specific flood risk concluded that the quarry complies with Galway County Council's County Development Plan 2022 - 2028 and its Strategic Flood Risk Assessment (SFRA).

Mitigation Measures

Spill and Sediment Control

- All fuel and chemicals are stored in sealed, bunded (contained) areas with regular inspections.

- Interceptors (devices that trap oil) and settlement ponds collect and treat any water before it leaves the site.

Water Management

- Pumped water passes through settlement and infiltration areas to remove solids and prevent pollution.
- Routine cleaning of wheel-wash and drainage systems ensures dust and sediment are minimised.

Safe Blasting Practices

- Blasting uses carefully managed materials to reduce leftover residues.
- Any small amounts of nitrogen-based residue from explosives dissipate quickly and remain below safe limits.

Residual Impacts

Minimal Groundwater Effects

- There will be no influence on the deep conduit controlled groundwater flow system, as the limestone layer being quarried does not connect to the main aquifer conduit channels.

Limited Surface Water Changes

- Discharge is licensed to groundwater and there is no surface water in the vicinity of the site.
- Water treatment measures keep any discharge clean and within permitted limits.

Overall Outcome

- After all preventive steps, no noticeable harm to water sources or habitats is expected.

Monitoring

Ongoing Checks

- Regular sampling on a quarterly basis for discharge water's chemical and sediment levels.
- Quarterly groundwater well testing of the deeper groundwater flow system, using perimeter groundwater wells that are drilled to depths significantly deeper than the floor of the quarry, demonstrate that deep groundwater is not impacted.

Long-Term Oversight

- Operating under a water discharge licensed system ensures continuous compliance with environmental standards.
- Discharge volumes and water quality data are recorded and reviewed by local authorities.

Conclusion

1.136 The project to continue and extend the limestone quarry and concrete manufacturing facility will maintain a vital local resource for construction while keeping water impacts to an absolute minimum. By focusing on careful water management, effective spill prevention,

and regular monitoring, the quarry's operations are designed to protect both nearby groundwater and broader environmental interests.

Climate

1.137 This chapter focuses on how a proposed limestone quarry extension and concrete manufacturing facility continued operations may affect the local climate and how climate change could influence the quarry's activities. It also explains the plan to manage greenhouse gas (GHG) emissions (gases that trap heat in the atmosphere) and reduce any potential impacts on the environment.

Existing Environment

1.138 The quarry is located in a mild, maritime climate, where temperatures remain relatively moderate year-round.

1.139 Recent observations show small but steady increases in average temperatures and rainfall.

1.140 Climate predictions suggest more frequent storms and periods of heavy rainfall, though overall flood risk at the site remains low.

1.141 The quarry has planted screening berms (raised earth banks) with vegetation, which capture some carbon and help offset part of the site's emissions.

Potential Impacts

Greenhouse Gas Emissions:

1.142 Operating machinery and transporting materials generate emissions.

1.143 On-site concrete production creates additional emissions, although they are a relatively small part of national GHG totals.

Vulnerability to Extreme Weather (e.g., higher wind speeds, flooding, and lightning):

1.144 Flooding could damage quarry equipment or cause chemical spills.

1.145 Strong winds could blow debris.

1.146 Heatwaves or very cold temperatures might affect operations, but these events are expected to have minimal impact according to the risk assessment.

Indirect Effects:

1.147 Materials produced here (like aggregates and concrete) will eventually be used in construction, which may add more emissions that are hard to track once they leave the site.

Mitigation Measures

Greenhouse Gas Reduction:

1.148 Keep vehicles and equipment well-maintained to reduce fuel usage and emissions.

1.149 Switch off machinery when not being used to lower unnecessary idling.

1.150 Continue to preserve and enhance vegetated berms as carbon sinks (natural areas that store carbon).

Handling Extreme Weather:

1.151 A flood-relief channel is already in place to divert excess water.

1.152 Pause pumping water from the quarry void in severe flood events to avoid overloading local drainage.

1.153 Design buildings and structures to withstand heavy winds and storms in compliance with engineering standards.

Operational Practices:

1.154 Use best-practice site management (for instance, keep clear schedules for when equipment runs).

1.155 Integrate climate considerations, like adjusting work plans during unusually hot or cold spells.

Residual Impacts

1.156 After putting the above measures in place, the remaining (residual) effects on climate are expected to be minimal and not significant.

1.157 Although the quarry's operations release some carbon, the overall contribution to national emissions is very small.

1.158 Flood and weather-related risks remain low because of planned engineering controls and site management.

Monitoring

1.159 Regular checks on machinery fuel usage and emissions can help keep track of carbon output.

1.160 General observation of site drainage systems will ensure the flood-relief channel works correctly.

1.161 Routine evaluations of berm vegetation can help gauge ongoing carbon capture efforts.

Conclusion

1.162 The analysis concludes that the quarry's continued operations and extension are unlikely to cause significant impacts on the climate when managed responsibly. By following good practices—such as keeping equipment efficient, planning for heavier rainfall, and retaining vegetated berms—the site can reduce emissions and handle future weather challenges. Overall, the project supports local industry needs while keeping any climate effects within safe limits.

Air Quality

1.163 This chapter deals with how a continued and extended limestone quarry operation and concrete manufacturing facility near to Athenry, County Galway might affect local air quality. It looks at how dust and other emissions could arise from activities like blasting, moving materials, and transporting stone. The aim is to ensure that these activities stay within legal limits for air quality and do not interfere with people's wellbeing or the surrounding environment.

Existing Environment

1.164 The quarry is in a rural area near Athenry, close to farmland, roads, and a small number of homes.

1.165 The quarry site is already operational and includes a concrete manufacturing facility, stockpiles of materials, and internal roads for trucks.

1.166 Local weather is often rainy, which naturally helps settle dust. Most winds blow from the southwest, meaning any dust or emissions would likely travel in that general direction if not properly controlled.

Potential Impacts

Dust Generation:

1.167 Blasting, crushing, moving, and stockpiling stone can create dust (fine particles) that can settle on nearby surfaces or travel in the air (PM10 refers to tiny dust particles that can pollute the air).

Traffic Emissions:

1.168 Vehicles used to transport stone can produce exhaust fumes, although the number of trucks is considered moderate.

Human and Environmental Receptors:

1.169 Nearby houses and workplaces are the main areas of interest, but these are mostly located more than a few hundred meters away. Local ecology is unlikely to be affected because the site is already disturbed, and significant nature areas are further away.

Mitigation Measures

Dust Control:

1.170 Spraying water on roads and stockpiles, especially during dry and windy conditions, to keep dust levels low.

Speed Limits:

1.171 Vehicle speed is restricted on internal roads so that less dust is kicked up.

Existing Screening Berms (earthen banks) and Vegetation:

1.172 These help minimise dust and shield nearby areas.

Maintenance:

1.173 Regular checks of equipment and haul roads reduce unnecessary dust.

Wheel Washing:

1.174 Trucks are washed before leaving to avoid tracking dust onto public roads.

Residual Impacts

1.175 After using these dust control and emission-reduction steps, leftover (residual) impacts on air quality are expected to be minimal.

1.176 Ongoing measures mean dust levels should stay below the permitted limits, and traffic emissions will remain low.

1.177 Overall, significant air pollution issues for nearby homes or businesses are unlikely.

Monitoring

1.178 Dust monitoring points are placed around the quarry boundary. Samples are taken regularly to check levels against a standard 30-day dust limit.

1.179 Results are shared with the local authorities upon request.

1.180 Adjustments to the mitigation plan can be made if monitoring shows a need for improvement.

Conclusion

1.181 By combining established dust-control methods with regular checks, the quarry's operations should continue without creating major air quality problems for the surrounding community. Dust levels will be managed well within acceptable limits, ensuring the environment and local residents' well-being are protected.

Noise and Vibration

1.182 This chapter focuses on the expected noise and vibration that may arise from continuing and expanding an existing limestone quarry and continued use of the concrete manufacturing facility. It looks at how blasting, crushing, transporting materials, and other site activities could affect nearby receptors, local roads, and the wider area. The chapter explores the current noise levels, the possible changes once operations expand, and the steps proposed to manage sound and vibration so that local receptors are minimally disturbed.

Existing Environment

1.183 The quarry is located in Barrettspark, Athenry, Co. Galway, and already has permission to extract limestone to a certain depth.

1.184 There are homes, a school, and other properties near the site. There is a peregrine falcon nesting in the quarry void area.

1.185 Current noise surveys show that local noise is mostly from traffic, with only faint sounds from the existing quarry or distant machinery at some locations.

1.186 Periodic blast vibration measurements have confirmed that past blasting activities stayed within allowable limits.

Potential Impacts

On-site Activities:

1.187 Drilling, blasting, breaking and processing rock, running conveyors, and moving heavy vehicles can create noise and vibration.

1.188 Fixed plant (permanent equipment) such as the concrete batching plant, crushers (machines that crush or break down material), and screeners (machines that separate materials by size) can also add to overall noise levels.

Off-site Traffic:

1.189 Trucks carrying products away can increase noise on local roads, though projections show these increases are small and not likely to be very noticeable.

Vibration:

1.190 Blasting can cause ground vibrations and air overpressure (airborne shock waves). If not well managed, it could disturb houses or other sensitive places.

Mitigation Measures

Noise Control:

1.191 Continue using screening berms (earth mounds that shield noise) around the quarry.

1.192 Maintain all equipment so it works efficiently and without unnecessary noise.

1.193 Keep noisy machinery within the quarry's lower levels, using the surrounding rock as a natural sound barrier.

1.194 Reduce engine revving, keep speeds low on-site, and close truck tailgates to limit banging sounds.

1.195 Use rubber linings and set up enclosures around equipment where practical.

Vibration Control:

1.196 Design each blast so that the amount of explosive ignited at once (the maximum charge) stays within set limits.

1.197 Monitor blast levels at nearby properties to ensure vibrations stay below established guidelines.

1.198 Special care is taken the peregrine falcon, which has been nesting on an existing quarry ledge. When the falcon is breeding, a 125 m buffer zone is maintained, and blasting schedules are adjusted to avoid direct disturbance.

1.199 Only blast on weekdays and communicate with neighbours before each blast.

Residual Impacts

1.200 With careful management and regular checks, noise from day-to-day operations is expected to stay within recommended limits at nearby homes.

1.201 After all mitigation measures are implemented blasting vibrations will stay low enough that neighbouring houses and structures are not disturbed.

1.202 Overall, the quarry's continued operation is likely to have only minor, long-term noise and vibration impacts on the surrounding area.

Monitoring

Regular Noise Checks:

1.203 Ongoing noise monitoring will help verify that on-site activities meet recommended sound level targets.

Blasting and Vibration:

1.204 Each blast will be monitored for ground vibration and air pressure waves.

1.205 Monitoring equipment (devices that measure noise and vibration) will be maintained and calibrated (checked to ensure it is accurate).

Conclusion

1.206 Effective noise and vibration measures will help this limestone quarry operate with minimal disturbance to nearby communities. By following best practices—such as maintaining equipment, scheduling blasts responsibly, and regularly monitoring noise levels—the project can continue providing valuable limestone resources without causing significant noise or vibration for local receptors.

Visual and Landscape

1.207 This chapter looks at how extending the existing limestone quarry at Barrettspark, Athenry, could affect the surrounding landscape (the land's appearance and character) and views (what people see when they look towards the quarry). It explains the existing situation, possible issues, how the quarry plans to reduce any problems, and what to expect as a result.

Existing Environment

1.208 The quarry is located in a mostly flat rural area near the M6 motorway.

1.209 Surrounding land is mainly used for farming, with fields bordered by hedgerows and stone walls.

1.210 Other noticeable features include an electrical substation and a nearby factory, which contribute to the area's "working landscape (a setting where industry, farming, and other human activities are common)."

1.211 Mature hedgerows and gentle changes in ground level provide natural screening (cover or concealment) for the quarry, making it hard to see from nearby roads and homes.

Potential Impacts

Extended Quarry Operations:

1.212 The extension involves enlarging the quarry void within the already approved boundary, which could slightly change the local landscape.

Visual Changes:

1.213 From the M6: Drivers might see quarry machinery or trucks, but distance and existing hedgerows block most of the view.

1.214 From Local Roads: People on nearby roads may notice extra quarry-related traffic over a longer period. However, buildings, trees, and other vegetation will limit direct views of the extended quarry area.

Landscape Character:

1.215 The local area already includes industrial and farming operations, so adding a small quarry extension is unlikely to cause major changes in how the land looks or feels.

Mitigation Measures

Mitigation by Avoidance:

1.216 The quarry extension stays within the existing site, which is already well-screened by trees, hedgerows, and gentle terrain. This helps keep the quarry visually discreet.

Perimeter Vegetation:

1.217 Existing boundary vegetation (plants, bushes, and trees) will remain in place to shield the quarry from view.

Progressive Restoration:

1.218 After they finish quarrying in certain areas, natural recolonisation (the process where local plant species naturally return) or other revegetation will help the quarry blend back into the surroundings over time.

Residual Impacts

1.219 Minor Visual Effects: Because the quarry is highly screened and the surrounding area is already influenced by industrial and agricultural activities, any remaining impact on views is expected to be slight.

1.220 Landscape Restoration: Once quarrying ends and restoration is completed, the long-term appearance of the site will likely improve, making any residual impacts minimal or even beneficial.

Conclusion

1.221 Overall, the quarry's lateral extension is not expected to cause significant changes to the local landscape or reduce visual quality. Existing vegetation and the gently rolling ground level offer natural screening. While there may be some minor increase in traffic and slight changes close to the quarry, the plan to restore the land once quarrying ends will help maintain a generally pleasant and functional rural environment without major effects on the area's character or views.

Traffic

Background

1.222 This chapter examines the traffic impacts associated with the extending and continuing operations at an existing limestone quarry and continued use of the concrete manufacturing facility in Barrettspark, Athenry, County Galway.

1.223 The quarry is located approximately 7km west of the town of Athenry, and approximately 13km northeast of Galway City.

Existing Conditions

Existing Site and Road Network

1.224 Quarry traffic will utilise an existing access from the L7109 Local Road to the south of its junction with the R339 Regional Road. In the vicinity of the site, the L7109 is approximately 6m with no footpaths or hard strips.

1.225 The lands surrounding the site can be characterised as rural or industrial in nature.

Traffic Volumes

1.226 Traffic count surveys (formal recordings of vehicle numbers and types) were carried out to understand existing traffic patterns.

1.227 Measured traffic volumes were converted into AADT (average annual daily traffic) to estimate the daily flow on nearby roads.

1.228 Most roads in the study area have sufficient capacity for current traffic levels.

Potential Impacts

Traffic Analysis

1.229 The proposed development comprises the continued operation of the existing quarry, including all existing associated uses and activities. To account for possible variations in the average operating figure for the Quarry, the worst-case scenario to accommodate periods where demand for the proposed development, ancillary and manufacturing activities occurs in concentrated peaks was assessed.

1.230 Both link and junction capacity analysis were undertaken to determine if the proposed development would lead to congestion on the local road network. The results of the Link

and Junction Capacity Analysis indicate that the local road, and local road junctions, will continue to operate within capacity for each of the assessment years 2025, 2030, and 2040. Therefore, the risk of congestion within the local road network is imperceptible.

Mitigation Measures

Road and Junction Upgrades

1.231 To ensure the safe and efficient operation of the local road network and quarry access the ongoing maintenance of junction markings (lines on the road) to improve clarity for drivers, installing or updating signs (e.g., "Concealed Entrance" or "Agriculture Machinery") to warn drivers about quarry traffic and regular trimming of roadside vegetation to maintain good sightlines (clear views of the road) are proposed as mitigation measures.

Good Practices for Safe Access

1.232 Ensuring the quarry entrance has visibility splays (clear views to the left and right) that meet safety guidelines and maintaining the road surface near the entrance, including repairing any potholes to prevent accidents.

Emergency Response Preparation

1.233 Having a plan ready for unexpected incidents (such as spills or collisions), including coordination with local authorities and clear diversion routes.

Residual Impacts

1.234 After implementing the recommended road markings, signs, and ongoing maintenance, any residual impact on local traffic flow and road safety is expected to be minimal. The analysis shows that traffic conditions will remain stable, with no major disruptions for regular road users.

Conclusion

1.235 Following traffic analysis, it is concluded that the proposed development will have an imperceptible impact on traffic on the existing road network for each of the assessment years 2025, 2030, and 2040.

1.236 Proposed safety measures, regular maintenance, and careful adherence to traffic guidelines will help ensure that the local road network remains safe and runs smoothly, even with the increased quarry-related vehicles.

Cultural Heritage

1.237 This chapter looks at how continuing and extending an existing limestone quarry might affect any cultural heritage (historical sites or features) in the surrounding area. All proposed development lands have already been studied by reviewing at maps, old documents, and known historical records. Archaeological experts also visited the site in the past and found no evidence of historical or cultural sites within the quarry area.

Existing Environment

1.238 The quarry is located in Barrettspark, Athenry, Co. Galway, on low-lying land used mainly for farming.

Nearby Cultural and Historical Sites:

1.239 No protected buildings or structures are located on the site or immediately next to it.

1.240 A few historical monuments (such as ringforts (circular earthen forts)) are recorded in adjacent townlands, though they are far enough away that they are not affected by the quarry area.

1.241 Previous archaeological testing (careful digging and examination) within the planned quarry site did not find any ancient remains, structures, or artefacts (objects from the past).

Potential Impacts

1.242 No Direct Impacts: Because there are no known historic or cultural resources on the quarry land, there is no direct threat of damage or loss to valuable archaeological or historical features.

1.243 No Indirect Impacts: Nearby monuments are too distant to be visually or physically affected by the quarry.

1.244 “Do Nothing” Scenario: If no quarry activities took place, the cultural heritage of the area would remain as it is; however, the project would lose the opportunity to continue providing local limestone and supporting local jobs.

Mitigation Measures

1.245 None Required: Given that there are no important cultural features on or near the site, no special protective measures or further archaeological digs are needed.

1.246 Good Practice: Although not strictly necessary, quarry operators typically remain alert during any land-clearing or soil removal to ensure that if anything unexpected is uncovered, it is reported to an archaeologist or the relevant authorities.

Residual Impacts

1.247 No Lasting Effects: As there are no cultural heritage elements within the quarry boundary, the project will not leave behind any negative impact on archaeological or historical sites.

Monitoring

1.248 Not Currently Required: Because no remains or cultural sites have been identified, ongoing archaeological monitoring is not planned. However, if anything unusual is found during the project, a qualified archaeologist would be called in promptly.

Conclusion

1.249 The investigations confirmed that extending and continuing work at the existing limestone quarry will not harm any historical buildings, archaeological remains, or other cultural heritage features. No additional protective actions are needed. The project can proceed

without affecting heritage resources, ensuring that it continues to offer local limestone supplies and contribute to the wider community without causing damage to any cultural heritage.

Material Assets

1.250 Chapter 15 (Material Assets): Examines how the quarry's activities could affect local roads, property, utilities, and natural resources.

Existing Environment

Location and Setting

1.251 The quarry is located in an area already used for limestone extraction. Surrounding land includes farmland, homes, industrial activities, and some tree cover or woodland areas.

1.252 Roads near the site include local routes, regional roads, and motorways that serve as transport links for shipping quarry products.

Current Quarry Operations

1.253 The site already has a working quarry, crushing and processing areas, and facilities for producing materials like blocks and, ready-mix concrete.

1.254 Overburden (surface soil and rock) is stored on-site, and any exposed areas are either being worked or awaiting restoration.

Key Material Assets (things valued by people)

Human-Origin Assets:

1.255 Local roads, properties, and public services like power and water.

1.256 Nearby amenities include towns, recreational trails, and community facilities.

Natural-Origin Assets:

1.257 Land resources: mostly non-sensitive farmland and quarry land, plus some boundary trees.

1.258 Geological resources: the site holds high-quality limestone reserves, which are important for construction and other uses.

Potential Impacts

Land Use and Property

1.259 The quarry extension will continue to use land for extracting limestone. This is not expected to harm local property values because the quarry is already part of the area's landscape and provides jobs.

Transport and Traffic

1.260 Traffic from quarry trucks could add to local road use, but assessments suggest it will not overburden the roads.

Recreational Amenities

1.261 No direct impacts are expected on local recreation areas because the quarry is mostly out of view, and noise levels at distant amenities are unlikely to be significant.

Utilities

1.262 Existing overhead power lines cross the site, but they will not be moved, and there is no forecast impact on electricity or water supplies.

Geological Resources

1.263 Continuing the quarry will permanently remove some limestone. While this is unavoidable in quarrying, there are no known rare geological sites nearby that would be affected.

Natural Resources and Waste

1.264 Extraction uses local raw limestone, reducing reliance on distant sources.

1.265 Waste volumes from the quarry operations (such as packaging or used equipment parts) are minimal and unlikely to affect local landfills significantly.

Mitigation Measures

Land and Property

1.266 Continued use of screening berms (mounds of earth) and landscaping to reduce visual, dust, and noise impacts on neighbours.

1.267 Ongoing quarry design to work within the site's footprint and reduce off-site disturbances.

Transport Management

1.268 Existing road safety measures, such as clear signposting and safe site exits, will be maintained.

Pollution Prevention

1.269 Refuelling on designated surfaces to avoid ground spills.

1.270 Having a written plan for handling possible fuel leaks.

Waste Handling

1.271 Sorting waste into proper categories (for example, general, hazardous, recyclable) and using licensed waste disposal services.

1.272 Keeping records to ensure safe and correct disposal.

Restoration Planning

1.273 Gradual site restoration once extraction ends, creating a lake (water filled quarry void) and planted areas (with native species) to enhance wildlife habitats.

Residual Impacts

After Mitigation

1.274 Most impacts on neighbours, roads, and local amenities will remain low.

1.275 Removing limestone is permanent, but it supplies needed construction materials.

1.276 Final site restoration will improve the local habitat and landscape, offering a long-term positive effect on biodiversity (the variety of living things).

Monitoring

Site Activities

1.277 No additional monitoring is specifically required for "material assets."

1.278 Other standard quarry checks (for noise, dust, and water quality) will continue as described in separate chapters of the EIAR.

Conclusion

1.279 Extending the quarry will help meet ongoing demand for limestone in construction, agriculture, and other areas without major harm to local roads, properties, or public services. By carefully managing traffic, noise, and environmental safeguards, the project balances economic needs with local quality of life. Restoration plans will enhance wildlife habitats in

the long run, showing that well-managed quarry operations can provide both local benefits and responsible resource use.

FIGURES

72.01.PLANNING DRAWING 1 2 3 4 FINAL.dwg

NOTES

Extract from Ordnance Survey Discovery Series Mapping - Map Sheets: OS1222; OS1422

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LEGEND

APPLICATION AREA

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COSHLA QUARRIES LTD.

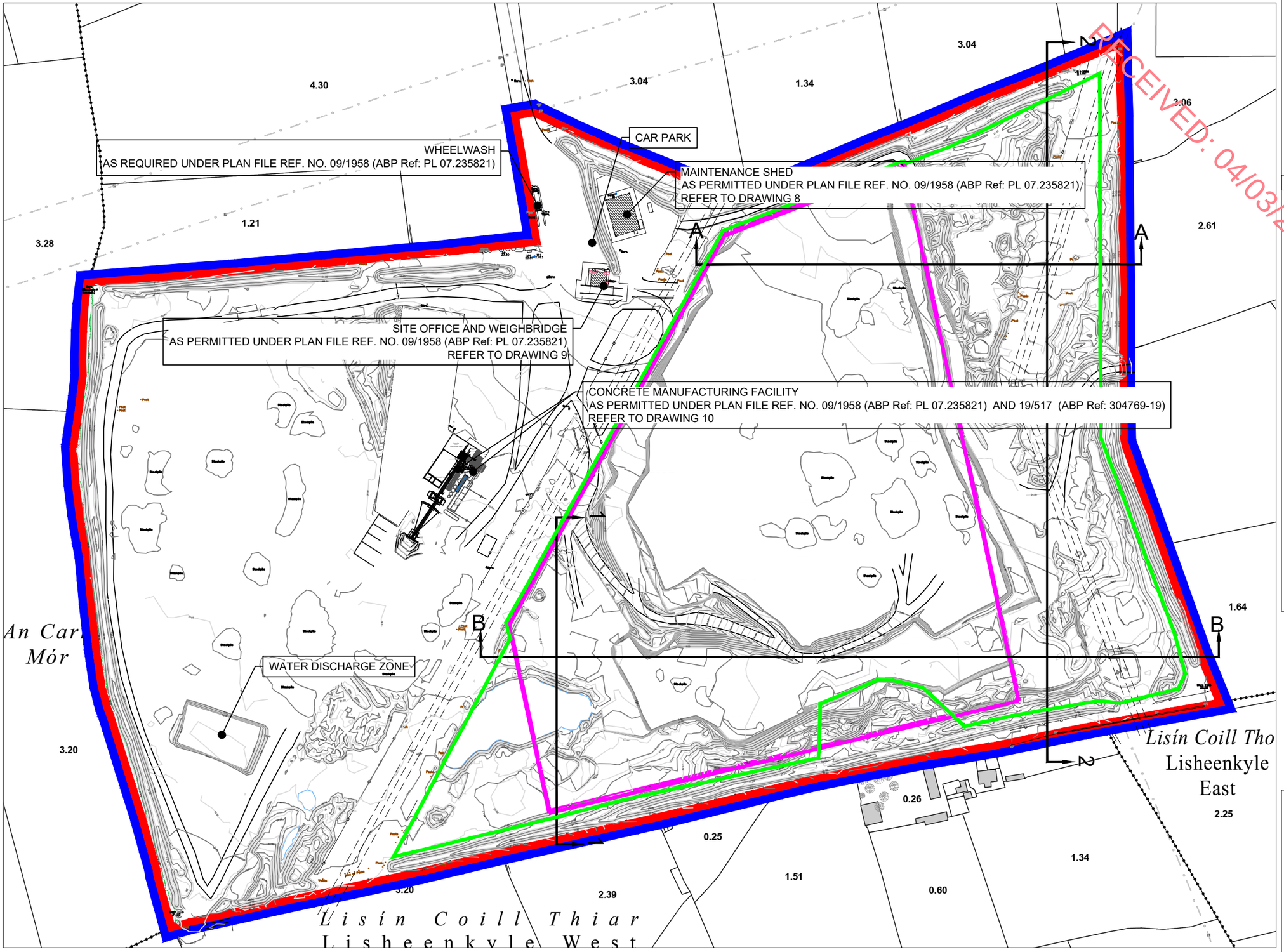
CONTINUATION OF USE & EXTENSION
COSHLA QUARRY, BARRETTSPARK
ATHENRY, CO. GALWAY

SITE LOCATION

FIGURE NTS 1

Scale	Date
1:50,000 @ A3	FEBRUARY 2025

72.01.PLANNING DRAWING 1 2 3 4 FINAL.dwg



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Metres 1:2500

NOTES

Extract from Ordnance Survey 25 Inch Mapping - Map Sheets: 3348; 3348-B

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TOPOGRAPHICAL SURVEY CARRIED OUT BY CONTROL SURVEYS JANUARY 2025

LEGEND

- APPLICATION AREA
- CROSS SECTION LOCATION REFER TO FIGURE 3.2
- PERMITTED QUARRY EXTRACTION AREA PLAN FILE REF. NO. 09/1958 ABP PL 07.235821
- PROPOSED QUARRY EXTRACTION AREA

N

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COSHLA QUARRIES LTD.

CONTINUATION OF USE AND EXTENSION
COSHLA QUARRY, BARRETSPARK
ATHENRY, CO. GALWAY

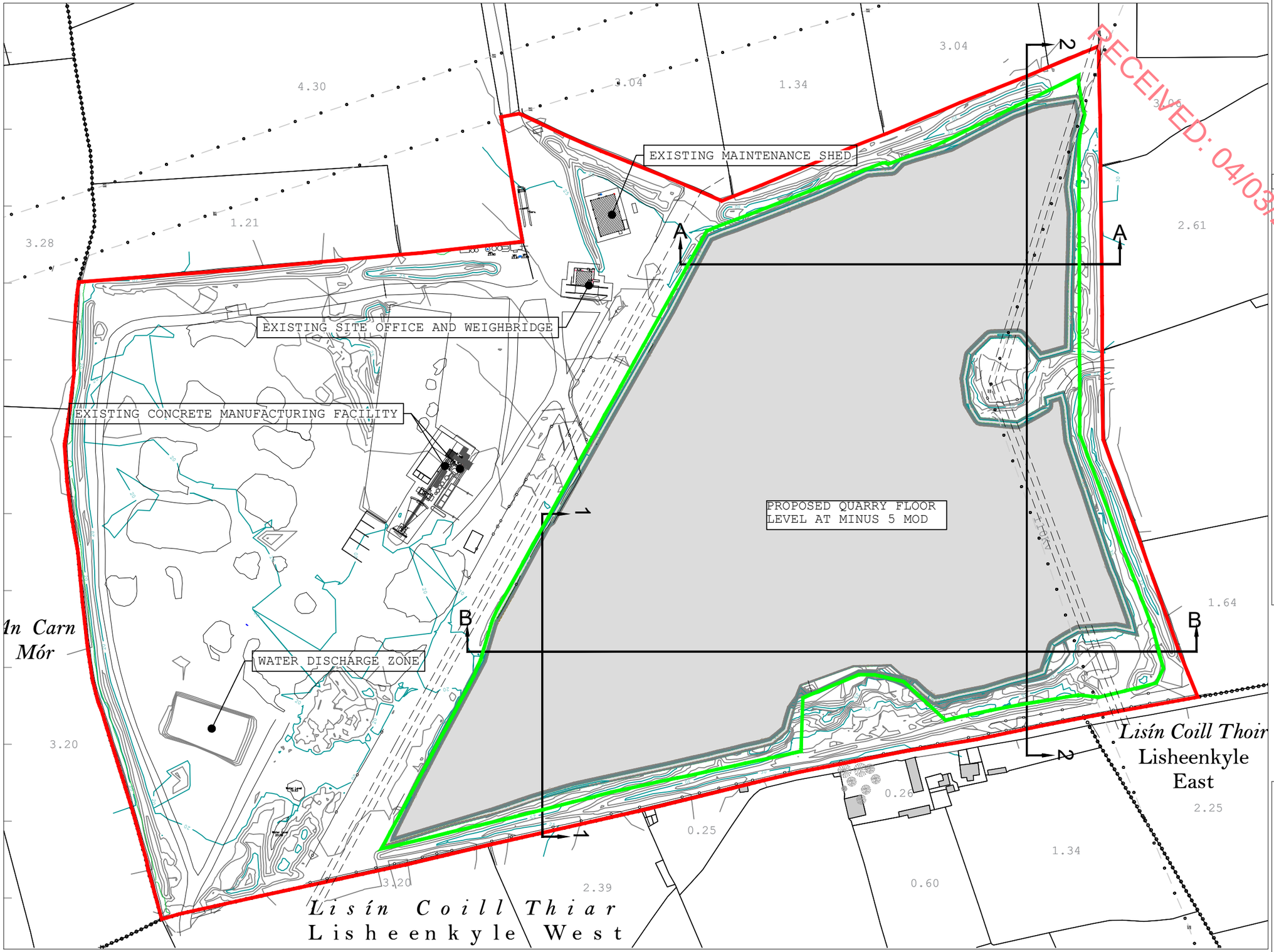
EXISTING SITE LAYOUT

FIGURE NTS 2

Scale 1:2,500 @ A3

Date FEBRUARY 2025

72.01.PLANNING DRAWING 5 FINAL.dwg



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NOTES

Extract from Ordnance Survey 25 Inch Mapping - Map Sheets: 3348; 3348-B

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TOPOGRAPHICAL SURVEY CARRIED OUT BY CONTROL SURVEYS JANUARY 2025

LEGEND

APPLICATION AREA

CROSS SECTION LOCATION REFER TO FIGURE 3.2

PROPOSED QUARRY EXTRACTION AREA

N

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CONTINUATION OF USE & EXTENSION
COSHLA QUARRY, BARRETTSPARK
ATHENRY CO. GALWAY

PROPOSED SITE LAYOUT

FIGURE NTS 3

Scale 1:2500 @ A3

Date FEBRUARY 2025