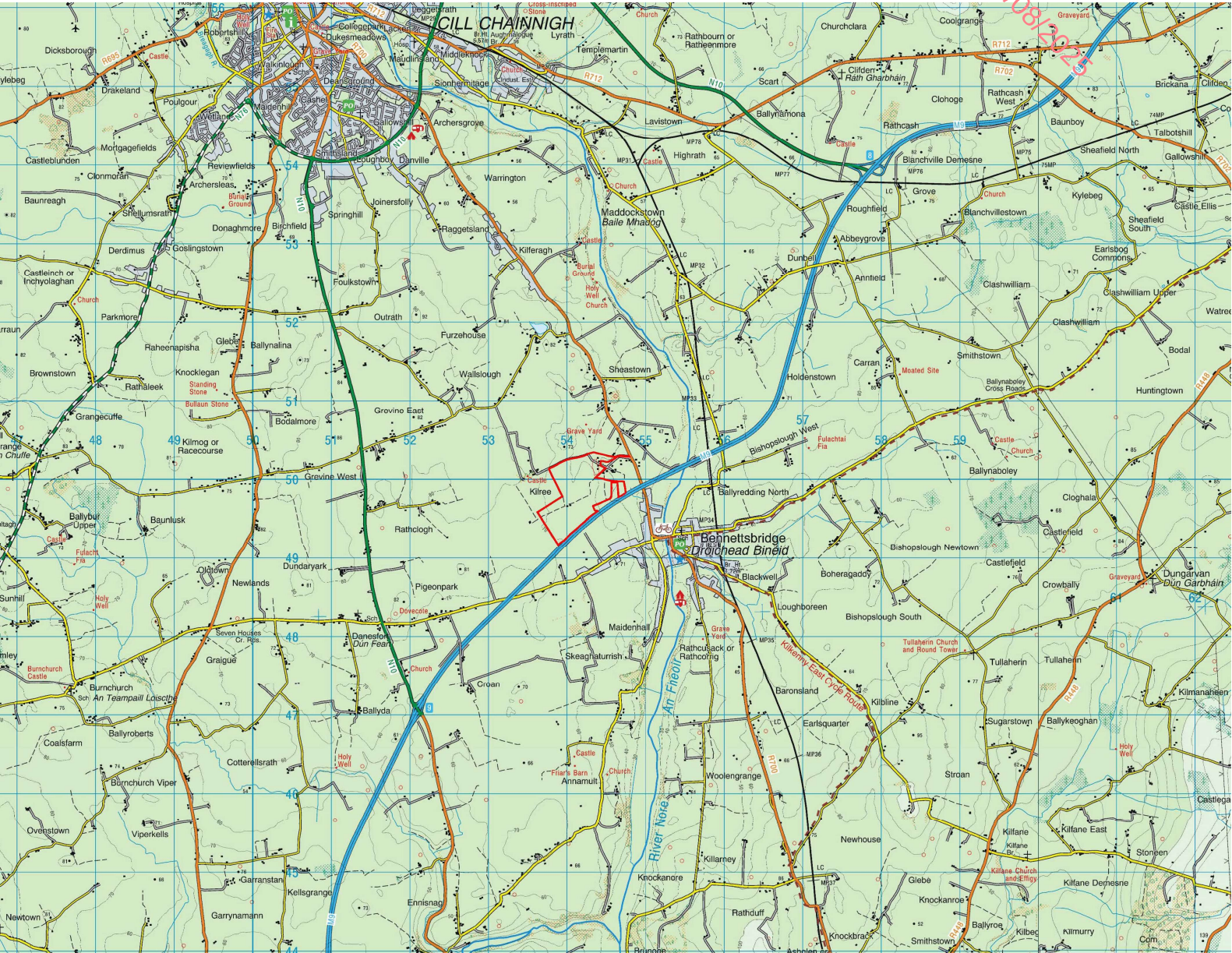


# NON-TECHNICAL SUMMARY

RECEIVED: 18/08/2025



## JULY 2025

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## NON-TECHNICAL SUMMARY

### Introduction

- 1.1 Bennettsbridge Limestone (the applicant) is proposing a lateral extension to an existing limestone quarry at Kilree, Bennettsbridge, Co. Kilkenny.
- 1.2 An Environmental Impact Assessment Report (EIAR) has been prepared in accordance with EU Directive 2014/52/EU and Irish regulations. This Non-Technical Summary (NTS) presents the main findings.

### Site location and scale

- 1.3 The application site, which includes an existing permitted quarry that has been in operation since the 1980's, is located in the townland of Kilree, Sheastown, Bennettsbridge, Co Kilkenny, situated approximately 0.8 km northwest of the village of Bennettsbridge and approximately 7km south of Kilkenny City centre. The site is approximately 32km southwest of Carlow Town 38km north of Waterford and 44km west of Enniscorthy.
- 1.4 The existing permitted limestone quarry comprises a c. 36.5 Ha quarry operated by Bennettsbridge Limestone. Bennettsbridge Limestone owns the site where the proposed development will take place.
- 1.5 Access to the site is from a minor road (L26322) that branches from the R700 regional road that links Bennettsbridge Village with Kilkenny City. To the east of the existing quarry there is an office building, weighbridges and wheelwash located near the entrance to the quarry. The M9 motorway forms the southernmost boundary. The wider local landscape is undulating, with well-drained agricultural areas comprising a network of improved agricultural fields and associated hedgerows.
- 1.6 Existing manufacturing plants at the quarry include processing infrastructure (crushing, screening & lime plant), a precast manufacturing facility, and associated ancillary works for the manufacturing of concrete products, batching of lime products, general storage of products and plant, and an asphalt plant operated by Breedon Group.
- 1.7 The asphalt plant is also located within the wider quarry site and is operated independently by the Breedon Group under planning permission P18/150, which authorises its operation until 31st December 2028. This plant does not form part of the current application but is referenced where relevant in this EIAR for cumulative assessment purposes.
- 1.8 The proposed quarry extension lands currently comprise some agricultural land consisting of rectangular fields of gently sloping pastureland, enclosed by hedgerows. There is an approx. 6.8 ha area of commercial forestry in the south of the application area.
- 1.9 The site is situated between the 59m and 72m contour lines with the highest point corresponding with the west part of the site, which slopes downwards towards the east.
- 1.10 Beyond the site, the landscape is rural in character, consisting primarily of agricultural land interspersed with some areas of forestry. The main land use in the study area is agricultural, with dairy farming being the predominant sector practiced. Products from the quarry are used by the agricultural sector. Livestock winter accommodation associated with the adjoining landholding is located to the west of the greenfield area. There are two other operational quarries located to the northeast of the subject quarry.
- 1.11 The River Nore (EPA code: IE\_SE\_15N012090) flows in a north-south direction approx. 1.1km to the east of the application site. The Dunbell\_Little stream (EPA code: IE\_SE\_15N012090) is located 620m east of the application area.

- 1.12 Development in the area is characterised by a mix of one-off rural houses, farmsteads and ribbon development along the local and regional road network. The nearest dwelling to the proposed extension area is a detached house, approximately 329m to the northwest, beyond which are several further dwellings located along the local road network to the north and south of the site.

## Proposed development

### Operational Phase (Extraction and Processing)

- 1.13 The proposed development will take place within an overall application area of approximately 61 hectares and will consist of the following:

- The continued extraction of rock — including periodic blasting to fragment the rock prior to excavation — from the existing permitted quarry area (Plan File Ref. No. 18/858) beyond the current permission expiry date;
- The continued use of existing quarry infrastructure (including crushing, screening and lime processing plant), existing pre-cast manufacturing facility (including associated ancillary works for manufacturing of concrete products), batching of lime products, workshop, canteen, toilet facilities, weighbridges, wheelwash, fuel storage area and switch room, settlement lagoons, haul roads, ESB substation, plant and product storage areas and all other ancillary facilities as permitted under Plan File Ref. No. 18/858;
- The continued use of site offices authorised under Plan File Ref. No. 20/891;
- A lateral extension of the existing limestone quarry, within an area of approx. 24.5 Ha., comprising:
  - approximately 18.2 hectares of extraction, including blasting, over 2 no. c 19 metre high benches to a final floor level ranging from 25 to 30m OD; and
  - overburden storage areas and landscaped screening berms (6.3 Ha).
- To access the extension lands rock will be extracted - including by controlled blasting - from under:
  - approx. 1.4 hectare of land that is currently under landscaping measures authorised under Plan File Ref. No. 18/858;
  - approx. 2.1 hectare of land that is currently in use as an access ramp authorised under Plan File Ref. No. 18/858.
- The removal of topsoil and overburden, construction of landscaped screening berms, and provision of an overburden storage area;
- Demolition of an existing farmyard and associated buildings and structures, permitted under Plan File Ref. No. 15/595, and removal of approximately 6.81 hectares of commercial forestry within the proposed extension area to allow for the proposed quarry development;
- All associated ancillary site facilities/works, including surface water management, internal haul roads, phased restoration, and landscaping.

- 1.14 The applicant is seeking a 25-year permission for extraction and associated activities, with an additional 2 years for final site restoration.

- 1.15 Aggregate extracted by blasting from the application area will be processed using both static and mobile crushing and screening plant within the existing quarry void – refer to Figure 3.1. Processed rock will be stored in the existing permitted quarry area pending use in the ancillary manufacturing plants (concrete and lime) on site or sale off site. An asphalt plant, operated by Breedon Group, has its own planning permission—granted in 2018 (Plan Ref File No. 18150)—and does not operate under the quarry’s planning permission
- 1.16 Due to the nature of the proposed development, the construction stage—consisting primarily of the stripping of topsoil and overburden, removal of existing woodland within the extraction area, and demolition of the farmyard structures—will proceed concurrently with initial operational activities, including the construction of screening berms. This integrated approach is designed to optimise site preparation and resource use while minimising environmental disturbance.

## Alternatives

### Need for the Development

- 1.17 There is an increasing demand for construction aggregates, particularly limestone, driven by residential, commercial, and infrastructure development in Kilkenny and Ireland . Key drivers of demand include:
- Housing developments to meet local needs .
  - Economic growth supported by commercial construction .
  - Public infrastructure projects aligned with the National Development Plan .
- 1.18 The continued operation of the quarry is critical to provide a local supply of limestone, thereby reducing transportation emissions and supporting national sustainability objectives.

### Construction Aggregates

- 1.19 Limestone is favoured for its physical and chemical properties that make it suitable for various construction applications. The document stresses the importance of maintaining a local supply of limestone aggregates for ongoing construction and agricultural needs.

### Agricultural Ground Limestone

- 1.20 The production of agricultural ground limestone helps local farmers manage soil acidity while minimising transport emissions.

### Policy Alignment

- 1.21 The development aligns with national frameworks such as Project Ireland 2040, which emphasises balanced regional development and sustainable resource management. The Kilkenny County Development Plan supports the extractive industry as vital for economic growth.

### Alternatives Considered

- **Do Nothing Scenario:** Ceasing quarry operations on expiration of the existing permission would disrupt local supply chains and increase reliance on distant sources, leading to higher costs and emissions.
- **Alternative Sources of Aggregates:** While recycled aggregates can reduce virgin limestone demand, they cannot fully replace high-quality limestone for critical applications.

- **Alternative Locations:** Continuing operations at the existing site is preferred over developing new quarries, which would incur higher environmental impacts and costs.
- **Alternative Designs and Processes:** Various extraction methods were considered, with blasting being chosen for its efficiency and lower environmental impact compared to rock breaking.

## Conclusion

- 1.22 The assessment concludes that the continuation and extension of the existing quarry is the most viable and sustainable option. It supports local construction needs while minimising environmental impacts, aligning with policy objectives and ensuring a stable supply of limestone aggregates for the region.

## Summary of Environmental Effects

### Population and Human Health

#### Purpose of this chapter

- 1.23 Irish and EU law insist that Environmental Impact Assessment Reports (EIARs) look carefully at how a project could affect people and their health. This plain-language summary distils the key findings for the planned continued use and sideways (lateral) extension of the existing limestone quarry at Kilree.

#### How the study was carried out

- 1.24 Quarry Consulting assessed the project on behalf of Bennettsbridge Limestone. The work was led by a chartered mineral surveyor and a chartered town-planner who examined legislation, census and health statistics, site surveys and professional guidance. Both descriptive and measurement-based methods were applied to an area roughly five kilometres around the quarry.

#### What the area is like today

- 1.25 The quarry lies in gently undulating farmland 0.8 kilometres from Bennettsbridge village and seven kilometres from Kilkenny City centre. Roughly thirty-six hectares are already in use; another thirty hectares of farmland and forestry are earmarked for extraction. About fifty-three houses sit within 500 metres. Population density is low to moderate and many residents work in farming, retail, manufacturing or professional services. Local attractions include Kilkenny Castle, the Nore Valley Walk and Mount Juliet Estate. County health statistics are on a par with, or slightly better than, national averages and the site is not in a High-Radon Area.

#### Potential effects on people and health

##### *Construction phase*

- 1.26 During soil-stripping and demolition of two farm sheds there will be short-lived increases in noise, dust and construction traffic. These effects will be temporary and local and will not alter property values or community structure.

##### *Operational phase*

- 1.27 Day-to-day quarrying will continue to generate noise, dust, heavy-goods traffic and periodic blasting, but at levels already permitted and monitored. New landscaped berms and existing landform will screen most views. Employment for about thirty on-site staff and many contractors will be maintained, supporting local spending. Health risks from silica dust or radon remain well below legal limits.

##### *Post-operation phase*

- 1.28 When extraction ends, the quarry void will be allowed to fill naturally, creating a lake surrounded by native woodland and grassland. Quarry traffic and noise will cease, visual amenity will improve and biodiversity will benefit.

#### Key mitigation and management measures

- **Dust and air quality** – water sprays, covered conveyors, wheel-wash facilities, speed limits on internal roads and regular boundary monitoring.
- **Noise, vibration and blasting** – restricted working hours, modern muffled plant, carefully designed blasts, ongoing annual surveys.

- **Traffic** – no increase in truck numbers; existing entrance and road network confirmed as adequate; driver safety briefings maintained.
- **Worker health** – personal protective equipment, Safe-Pass training, routine radon and respirable crystalline silica testing, all within EU limits.
- **Emergency procedures** – updated spill-response plans and quarry-face stability protocols in line with Health & Safety Authority guidance.
- **Site restoration** – topsoil stored for future use; final landform designed to support wildlife and visual amenity.

### Residual impacts and monitoring

- 1.29 With these measures in place, any remaining impacts on nearby residents, visitors or workers will be imperceptible to slight and therefore not significant. An Environmental Management System will track dust, noise, vibration and water quality, log any incidents and ensure corrective actions. Radon and workplace-air measurements will be repeated at recommended intervals and the effectiveness of screening berms and haul-route management will be reviewed periodically.

### Overall conclusion

- 1.30 The quarry extension can proceed with only minor, short-term disturbances and no adverse effect on public health. It will secure local employment and the regional supply of essential construction stone, keep environmental impacts within strict legal limits and, when quarrying ends, deliver a lasting positive legacy in the form of a lake, woodland and grassland that will enhance the local landscape and biodiversity.

### Biodiversity

- 1.31 Quarrying changes land, noise levels, lighting and water flows. Chapter 6 explains how the proposed development could affect local habitats and wildlife, what will be done to avoid harm and the improvements planned for the long term.

### What is on site now

- **Size & context** – 36.5 ha. already worked or permitted quarry; 24.5 ha of adjoining farmland/young woodland proposed for extraction. Two protected river systems (the River Barrow & River Nore SAC and the River Nore SPA) lie nearby but are physically separate from the quarry.
- **Main habitats** – active quarry floor, grazed pasture, 6.8 ha of ash-dominated immature woodland (much diseased), ~1.8 km of hedgerow/treeline, small settlement ponds.
- **Key species** – badger setts in the wider landscape; several bat species foraging along hedges; occasional otter in adjoining streams; 19 common farmland/woodland birds. No rare plants, reptiles or significant invertebrates recorded.

### What could change without safeguards

- **Habitat loss** – felling 6.8 ha of woodland, removing c.1.4 km of hedges/treelines and converting grazed fields to quarry floor.
- **Disturbance** – temporary rises in noise, dust and vibration from blasting; potential glare if extra lighting were used; construction traffic.

- **Water risks** – continued discharge of treated quarry run-off to a small stream feeding the River Nore; theoretical risk of silt, fuel or chemical pollution; minor draw-down of groundwater in the worked rock mass.

#### Built-in safeguards (mitigation)

- **Habitat replacement & enhancement**
  - Plant 5.5 ha of native broad-leaf woodland on new screening berms.
  - Establish 860 m of new hedgerow and upgrade a further 300 m of existing hedge.
- **Species-specific measures**
  - Survey for badger setts before felling; licence and exclude if found.
  - “Soft-fell” three mature ash trees in two stages to allow any roosting bats to escape.
  - Clear scrub outside bird-nesting season (March–August) or cordon off active nests.
- **Disturbance control**
  - Retain current blast schedule (1–2 blasts per month, weekdays 11:00-18:00).
  - Keep plant and haul-road dust down with sprays, slow speeds and wheel-washing.
  - No extra night lighting; existing lamps remain directed into the quarry bowl.
- **Water protection**
  - Maintain settlement ponds and oil interceptors; no increase in discharge volume.
  - Emergency spill-kits and monthly visual checks of discharge clarity.

#### Likely outcomes after mitigation

- **Protected rivers** – monitoring shows no measurable change in water level, pH or suspended solids; qualifying species and habitats of the SAC and SPA remain unaffected.
- **Habitats** – net local woodland/hedge area is maintained; eventual restoration will further increase semi-natural cover.
- **Species** – badger, bat, otter and bird populations expected to remain stable because foraging and commuting routes are kept and new planting provides replacement shelter and food.
- **Overall significance** – residual effects are none to slight, short-term and local; long-term ecological value improves.

#### Monitoring & adaptive management

- Pre-clearance ecological walk-over to confirm absence of new setts or nests.
- Quarterly noise, monthly dust and water-quality monitoring (as already required by the county council) continues.
- Annual check of planted woodland and hedges; failed trees replaced for five years.

#### Final conclusion

- 1.32 With standard good practice and the additional measures listed, the quarry extension can proceed without significant harm to local biodiversity. Lost habitats will be compensated on-site, protected rivers remain safe, and when quarrying ends a restored lake, woodland and hedgerow network will leave the area richer in wildlife than it is today.

## Land Soils and Geology

### Current situation

- 1.33 The quarry lies in gently rolling farmland seven kilometres south-east of Kilkenny City, directly beside a short stretch of the M9 motorway and 0.8 kilometres from Bennettsbridge village. Two other quarries already operate north-east of the site.
- 1.34 Only a shallow layer of soil and subsoil (between one and five metres thick) covers very solid limestone of the Ballyadams Formation. Tests show this limestone is strong and almost impermeable, so it stores little groundwater. Rain-water that falls on the quarry is already collected in lined settlement ponds and released under an existing discharge licence. No sites of geological or scientific interest lie inside the extraction area.

### Main risks if nothing were done

- 1.35 Permanent loss of the thin overburden and of the limestone that will be extracted.
- 1.36 Short-term dust, noise and heavy-vehicle traffic during soil stripping and blasting.
- 1.37 Minor risk of fuel or oil spills from working plant.
- 1.38 Low probability of vibration affecting the nearby motorway if blasting were managed inappropriately.

### Key protection measures

- 1.39 *Soil handling and screening* – Strip topsoil only in dry weather. Store it in boundary berms (earth mounds) that act as visual, dust and noise screens.
- 1.40 *Blasting and vibration* – Use licensed specialists, keep an extra safety distance from the M9, and measure vibration every time.
- 1.41 *Water and spills* – Keep fuel in double-skinned, bunded tanks; retain settlement ponds, oil interceptors and on-site spill-kits.
- 1.42 *Dust and noise* – Spray haul roads with water, operate a wheel-wash for lorries, sweep public roads when required and keep silencers on all equipment.
- 1.43 *Stability checks* – Maintain bench heights and batter angles agreed with a geotechnical engineer and repeat independent stability inspections every two years, with extra attention along the motorway boundary.

### What will remain after mitigation

- 1.44 The only unavoidable, long-term change is removal of limestone. In regional terms this is minor because large reserves exist nearby. All other effects—dust, noise, vibration, traffic and water quality—should stay brief, local and within legal limits.

### Monitoring

- 1.45 The operator will continue routine dust, noise, ground-vibration and water-quality sampling, and will submit the results to Kilkenny County Council. Quarry faces will be surveyed at least every two years, and working methods will be adjusted if any reading nears a limit.

### Restoration

- 1.46 When quarrying finishes, pumps will be switched off and the void will fill naturally with clean water, creating a permanent lake. Stored soils will be spread and planted so the area becomes a mix of native woodland and grassland, providing habitat and informal amenity.

## Overall conclusion

- 1.47 Because the proposed development forms part of an existing long established quarry site and applies modern controls, no significant long-term harm to land, soils or geology is expected. The project will secure a local supply of stone and jobs while leaving, after restoration, a safe, landscaped water-body that provides wildlife habitat and informal amenity.

## Water

- 1.48 Bennettsbridge Limestone proposes to extend its existing quarry westwards and northwards, increasing the total site to c. 61 ha. Rock will still be excavated only to 25–30 m OD—shallower than today's deepest bench—so no additional deepening is planned.

### Existing water setting

- **Surface water:** The River Nore and its minor tributary, Dunbell Little, flow 1 km east of the quarry and form part of a Special Area of Conservation / Special Protection Area.
- **Rainfall & recharge:** Local mean rainfall is 851 mm/yr, of which ~392 mm/yr becomes groundwater recharge.
- **Groundwater:** The quarry sits on the Regionally Important Ballyadams limestone aquifer. Flow is west-to-east toward the Nore. Permeability tests show the rock is very tight ( $10^{-8}$  –  $10^{-10}$  m/s).
- **Existing controls:** Water entering the quarry drains to sumps, then through lined settlement lagoons and an oil interceptor before discharge under a Section 4 licence (ENV/W/78). Licence limits are consistently met.

### Potential impacts of the extension

| Phase                               | Unmitigated risk                    | Key mitigation                                                              | Residual impact                                    |
|-------------------------------------|-------------------------------------|-----------------------------------------------------------------------------|----------------------------------------------------|
| <b>Soil-stripping &amp; haulage</b> | Silt-laden runoff, dust             | Grass-seeded berms, wheel-wash, road sweeper, water bowzers                 | Imperceptible / short-term                         |
| <b>Blasting</b>                     | Minor nitrate residues, vibration   | Licensed blasting company, charge optimisation, vibration monitoring        | Below EQS; vibration within quarry boundary limits |
| <b>Operations</b>                   | Hydrocarbon leaks, extra dewatering | Double-skinned tanks, drip trays, spill kits, routine sump-pump maintenance | Negligible; all pumped water returned to Nore      |
| <b>Flood routing</b>                | Small change to local overland flow | Settlement lagoons sized for 1-in-100-yr storm; final lake adds storage     | No off-site flood risk                             |

### Monitoring & compliance

- **Discharge:** Continuous flow logging with daily meter checks; monthly lab analysis for pH, SS, BOD, nutrients, hydrocarbons.
- **Groundwater:** Quarterly level and quality sampling in on-site wells and neighbouring domestic wells.
- **Blasting:** Vibration recorded at nearest receptors; results reported to Kilkenny County Council.
- **Annual review:** Data collated in an Annual Environmental Report; any trend toward limits triggers corrective action.

### Overall conclusion

- 1.49 Hydrogeological studies, borehole logs (67 in total) and 20 + years of monitoring show the quarry's extension can proceed without significant effect on groundwater, the River Nore

SAC/SPA or public water supplies. With current settlement lagoons, bunded fuel storage, strict blast management and the established monitoring regime, remaining effects are negligible. After closure, the void will fill naturally, creating a permanent water body that provides both wildlife habitat and extra flood-storage capacity.

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## Climate

- 1.50 This chapter of the EIAR assesses local climate conditions and greenhouse gas emissions resulting from the quarry's operations. The quarry employs blasting techniques for extraction and processes the limestone into aggregates for construction and agricultural purposes.

### Scope of Work

- 1.51 The report covers several key areas:
- Climate change legislative framework and policy context .
  - Analysis of local environmental trends .
  - Identification of climate change concerns related to the quarry .
  - Assessment of cumulative effects and uncertainties .
  - Identification of alternatives and mitigation measures .
  - Monitoring and adaptive management strategies .

### Climate Change and Greenhouse Gases

- 1.52 Climate change is accelerated by human activities, particularly through increased greenhouse gas emissions from fossil fuel combustion. Ireland's performance in climate change mitigation is monitored by the Climate Change Performance Index (CCPI), where Ireland's ranking improved from 47th in 2022 to 29th in 2025, indicating a medium performance.

### Ireland's Greenhouse Gas Emissions Projections

- 1.53 The EPA's projections indicate that under the "With Existing Measures" scenario, Ireland will exceed its emissions allocation by 80.3 Mt CO<sub>2</sub> equivalent from 2021-2030. In contrast, the "With Additional Measures" scenario predicts a lesser exceedance of 50.1 Mt CO<sub>2</sub> equivalent. The quarrying sector is expected to reduce emissions by 35% by 2030, necessitating a shift to more energy-efficient technologies .

### Legislation and Policy

- 1.54 The Climate Action and Low Carbon Development (Amendment) Act 2021 mandates a 51% reduction in greenhouse gas emissions by 2030 and net-zero emissions by 2050. This legislation requires sector-specific carbon budgets and comprehensive climate action plans.

### Current Climate and Weather

- 1.55 Ireland's climate is characterised by mild temperatures and high precipitation levels, which are expected to change significantly due to climate change. Projected impacts include rising temperatures, altered precipitation patterns, and increased storm intensity.

### Climate Change Risk Assessment

- 1.56 The assessment evaluates the vulnerability of the proposed development to climate hazards such as flooding, extreme temperatures, wildfires, and droughts. The findings indicate that the site has low vulnerability to these hazards.

### Greenhouse Gas Emissions Assessment

- 1.57 The report quantifies the greenhouse gas emissions associated with the project, including emissions from plant machinery, site infrastructure, and transport. The total annual emissions for the operational phase are estimated to be 13,057.5 tonnes of CO<sub>2</sub> equivalent, which represents a small fraction of Ireland's annual greenhouse gas emissions

## Mitigation Measures

- 1.58 Various mitigation measures are outlined to enhance resilience against climate change and reduce carbon emissions, such as implementing energy-efficient practices and utilising renewable energy sources.

## Conclusion

- 1.59 The assessment concludes that the proposed quarry development will not significantly impact Ireland's overall carbon emissions, and with effective mitigation measures, the residual effects are deemed not significant.

## Cumulative Assessment

- 1.60 The cumulative impacts of the quarry alongside other local operations have been evaluated, indicating that the additional emissions from nearby quarries are negligible.

## Do-nothing Scenario

- 1.61 If the quarry is not developed, the local economy may suffer due to job losses and increased transportation emissions from sourcing materials further away.

## Worst-case Scenario

- 1.62 Potential worst-case scenarios include severe flooding and droughts impacting operations, necessitating robust mitigation strategies.

## Monitoring

- 1.63 No specific monitoring of greenhouse gas emissions is required for the proposed development.

## Air Quality

### Purpose of the Chapter

- 1.64 This chapter aims to assess and document potential air quality impacts from the quarry's operations. It outlines the baseline conditions, identifies sources of air pollutants, estimates their magnitude and significance, and proposes mitigation measures to ensure compliance with relevant air quality regulations.

### Scope of the Assessment

- 1.65 The assessment focuses on the operational phase of the quarry, analysing effects from blasting, extraction, crushing, and transportation. It employs Irish and UK guidelines to ensure thorough evaluation of potential air quality impacts.

### Legislative Context and Policy

- 1.66 The document discusses air quality standards established by the Clean Air for Europe (CAFE) Directive and its subsequent updates. The latest directive (EU) 2024/2881 introduces stricter air quality standards and monitoring obligations to reduce health and environmental impacts from air pollution.

### Present-Day Conditions

- **Setting:** Rural farmland with scattered houses; nearest home  $\approx 25$  m from the site boundary.
- **Weather:** Over half the days are wet, naturally suppressing dust; prevailing south-west winds carry any dust mainly to the north-east.
- Existing Air Quality:
  - Background dust  $\approx 39$  mg/m<sup>2</sup>/day (limit = 350 mg/m<sup>2</sup>/day).
  - Annual mean background concentration PM<sub>10</sub>  $\approx 15$  µg/m<sup>3</sup>; maximum 24-hour averaging period (as a 90.4th%ile) PM<sub>10</sub>  $\approx 8$  µg/m<sup>3</sup>; annual mean background concentration PM<sub>2.5</sub>  $\approx 6$  µg/m<sup>3</sup>. **These are below Irish/EU limits.**

### Predicted Effects of the Extension

| Parameter                                  | Highest Modelled Level*                                                                            | Standard/Limit                       | Compliance         |
|--------------------------------------------|----------------------------------------------------------------------------------------------------|--------------------------------------|--------------------|
| Dust Deposition                            | 199 mg/m <sup>2</sup> /day at boundary;<br>94 mg/m <sup>2</sup> /day at nearest sensitive receptor | 350 mg/m <sup>2</sup> /day (TA Luft) | 57% & 38% of limit |
| 24-h Mean (as 90.4th%ile) PM <sub>10</sub> | 49 µg/m <sup>3</sup>                                                                               | 50 µg/m <sup>3</sup>                 | 98% of limit       |
| Annual Mean PM <sub>10</sub>               | 25 µg/m <sup>3</sup> (incl. background)                                                            | 40 µg/m <sup>3</sup>                 | 62% of limit       |
| Annual Mean PM <sub>2.5</sub>              | 12 µg/m <sup>3</sup> (incl. background)                                                            | 25 µg/m <sup>3</sup>                 | 49% of limit       |

\* "Worst-case" modelling assumes dry weather and full production.

- 1.67 Traffic exhaust from  $\sim 128$  HGV movements per day is too small to materially change roadside NO<sub>2</sub> or particles. Therefore, the impact is classed as *imperceptible*.

## Health Conclusion

- 1.68 All predicted concentrations stay inside health-based Irish and EU standards. Therefore, there are no significant risk to residents' or workers' health expected.

## Key Mitigation Already Built into the Design

- 1.69 Engineering controls:
- Wheel-wash for every truck leaving site;
  - Fixed sprinkler network for haul roads, stockpiles & crushers;
  - Permanent earth berms to screen and trap dust.
- 1.70 Good practice operations:
- Loads covered; strict on-site speed limits on mainly paved roads;
  - Limit or stop dusty work during very dry, windy spells.
- 1.71 Ongoing monitoring & rapid response:
- Dust jars ("Bergerhoff") at west, east & north boundaries – aim < 350 mg/m<sup>2</sup>/day;
  - If readings rise, increase dust suppression, surface sealing or temporary work pauses.

## Residual Impact & Cumulative Outlook

- 1.72 With mitigation in place the residual effect is *slight, negative, local and long-term* but not significant.
- 1.73 Potential overlap with nearby Hennessy's Quarry is minor; combined levels remain well within standards.

## Overall Finding

- 1.74 The proposed quarry extension can proceed without breaching clean-air limits. Continued monitoring and the proven control measures will safeguard local air quality while allowing the quarry to keep supplying essential building stone and jobs to the Bennettsbridge area.

## Noise and Vibration

- 1.75 Bennettsbridge Limestone plans to expand its existing quarry at Kilree, Co. Kilkenny, by laterally extending the working area by 25.4 hectares. Over a 25-year period the quarry floor will be deepened to 25-30 metres above Ordnance Datum. When extraction ends, the worked-out land will be restored to natural habitats. The scheme also requires demolition of an old farmyard and slatted shed, on-site crushing, screening and washing of stone, stockpiling, and construction of landscaped screening berms.
- 1.76 Because quarrying involves blasting, heavy mobile plant and truck traffic, a detailed assessment of potential noise, ground vibration and air-over-pressure was carried out for the Environmental Impact Assessment Report (EIAR). The study concentrated on the closest noise-sensitive locations—mainly a bungalow at the site entrance and several small house clusters lying between 300 metres and one kilometre away—and compared predicted levels with limits published by the Environmental Protection Agency (EPA) and the World Health Organisation.

### Existing conditions

- 1.77 Typical daytime sound measured near the quarry lies between 45 dB and 55 dB LAeq and is already dominated by quarry machinery and passing traffic on local roads (the R700 is about 200 m east; the M9 lies farther south). Blasts occur roughly monthly; recorded vibration is well under the EPA guideline of 12 mm/s peak particle velocity (PPV) and recorded air-over-pressure averages about 109 dB, again comfortably below the 125 dB guideline.

### Predicted changes

- 1.78 With the extension in place—and after standard best-practice mitigation—daytime noise at the nearest house is forecast to range from 32 dB to 55 dB, staying at or below the EPA daytime limit of 55 dB. Traffic associated with the extension will raise HGV flows on the R700 by only about three per cent, too little to produce a perceptible change in overall road noise. For blasting, the highest predicted vibration at the nearest house is approximately 8 mm/s PPV and the highest predicted air-over-pressure is around 123 dB. Both values are within, and generally well below, the relevant EPA limits.

### Mitigation and management

- 1.79 The quarry layout itself helps to control noise because most heavy equipment will operate on the quarry floor, shielded by rising rock faces. Additional measures include maintaining plant silencers, using broadband reversing alarms, lining metal chutes with rubber, minimising stone drop heights, and constructing or improving earth berms and a 2-metre-high acoustic fence beside the nearest bungalow. Blasting will be restricted to 11:00–18:00 on weekdays, with strict limits on the explosive charge in each delay interval and rigorous design to keep vibration low. Residents will be notified before every blast.
- 1.80 The site's Environmental Management System provides for staff training, clear complaint handling and prompt corrective action where necessary. Routine monitoring will underpin these commitments: quarterly daytime noise surveys at three fixed positions; vibration and air-over-pressure measurements for every blast; and retention of calibration certificates, records and any complaints for at least seven years.

### Residual effects

- 1.81 After all mitigation is applied, predicted noise, vibration and air-over-pressure remain within Irish and international guidelines at every noise-sensitive location. Moreover, as extraction extends the quarry floor the surrounding rock faces will provide progressively better acoustic screening. No significant adverse effect on the health, well-being or quality of life of local

residents is, therefore, expected, and the extension can operate in compliance with accepted environmental standards throughout its life.

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## Visual and Landscape

- 1.82 The Bennettsbridge Limestone operation intends to extend its existing quarry by roughly 24.5 hectares, of which 18.2 hectares will be actively quarried and 6.3 hectares used for over-burden storage and landscaped screening berms. Situated about a kilometre west of the River Nore and 780 metres north-west of Bennettsbridge, the site already accommodates a working quarry, lies beside the M9 motorway and occupies gently rolling farmland framed by hedgerows and scattered woodland. Extraction is expected to continue for some 25 years before the void is restored to a new habitat.

### What the LVIA set out to do

- 1.83 The Landscape and Visual Impact Assessment (LVIA) evaluates two distinct questions:
- **Landscape effects** – how the extension will alter landform, vegetation and the overall character of the area.
  - **Visual effects** – what those alterations will look like to people living, travelling or recreating nearby.
- 1.84 Following national guidelines (GLVIA3), the study combined desk analysis, field survey, computer-generated zones-of-theoretical-visibility and verified photomontages.

### The landscape today

- 1.85 Most of the study area consists of medium-scale pasture fields enclosed by hedgerows, punctuated by small copses and farm buildings. The M9 to the south and the existing quarry have already introduced strong man-made elements. By contrast, the River Nore valley, a kilometre to the east, retains a well-regarded “high scenic” character and supports popular walking and cycling routes. Scattered dwellings and farmsteads lie within 300 metres to a kilometre of the proposed extension, while Bennettsbridge village and several historic estates sit farther afield.
- 1.86 Overall sensitivity is judged medium-low across the working farmland but rises to medium-high or high along the Nore corridor and at the edges of the village.

### Anticipated change during construction

- 1.87 For the first five to seven years hedgerows and a small farmyard will be removed, earth mounds up to eight metres high will be formed, and there will be a noticeable increase in heavy-plant activity. Within about half a kilometre of the site these temporary works will introduce a moderate change in both landscape character and visual amenity. Beyond that distance, existing landform and vegetation will screen most activity, so effects will be slight or imperceptible.

### Long-term operational effects

- 1.88 When extraction is under way the main permanent change will be the appearance of a larger quarried void and fresh rock faces contiguous with the current pit. Moderately adverse landscape and visual effects will persist for residents and land-users to the west and north (again, largely within a 500-metre band). Travellers on the M9, users of the R700 and recreationists along the River Nore will register only slight changes, while the vast majority of viewpoints within the three-kilometre study area will experience little or no discernible difference.
- 1.89 A separate analysis examined cumulative views with Hennessy Quarry, located to the east. Because simultaneous visibility of both sites is rare, combined impacts are assessed as minor.

### How impacts will be reduced

- 1.90 Mitigation relies first on **avoidance**: the extension sits snugly beside the existing excavation and close to the already-modified motorway corridor. Substantial earthen berms will be created around the working area and planted with a layered mix of native woodland. Field boundaries that do not hamper operations will be retained, and vegetation clearance along with berm construction will be phased, so that screening grows as quarrying progresses.
- 1.91 When extraction ceases all plant will be dismantled, pumps switched off and the void allowed to fill naturally, creating a lake fringed by the maturing woodland. This long-term restoration will soften the industrial footprint and deliver new habitat.

### Residual outcome

- 1.92 After mitigation has been implemented, the highest landscape and visual effects fall into the **moderate** category close to the site; across most of the study area they drop to **slight** or **imperceptible**. None of the predicted effects reaches the “significant” threshold used in planning guidance. Routine monitoring during construction and a three-year after-care regime for the planted berms will ensure the screening remains effective.
- 1.93 In summary, extending the quarry will alter views and land-use in its immediate neighbourhood, but thoughtful siting, robust screening and a clear restoration strategy mean the wider landscape and key public views will not suffer significant, lasting harm.

## Traffic

- 1.94 This section of the EIAR explains how extending the existing Bennettsbridge limestone quarry – and raising its permitted output from approx. 525 000 t to 675 000 t per year (assessment stress tested at 750,000 tonnes) – is likely to influence the surrounding road network over the next quarter-century, from the anticipated start of works in 2025 through to final restoration in 2050. It deals separately with the construction and operational stages of the proposed development. The focus is the R700 Regional Road, because all traffic generated by the proposed development must use this road, and its junction with the 230-metre-long private access road that connects the Site to the R700.

### The roads and traffic situation today

- 1.95 *Location and layout.* The quarry sits in gently undulating farmland just north of the M9 motorway. Its access road joins the R700 at a ghost-island right-turn junction. The carriageway is seven metres wide, surfaced to good rural standards and enjoys sight lines that exceed current TII junction-design guidance.
- 1.96 *Recorded flows.* A twelve-hour automated traffic survey on Tuesday 12<sup>th</sup> November 2024 recorded an average flow of 6 102 passenger-car units (PCU) on the R700, of which 658 movements were by HCVs (expressed as PCUs) – a 10.7% share, which is not un-typical for a regional route that already serves several quarries and farms. Pedestrians and cyclists were almost absent. Garda and Road Safety Authority databases list no recent serious collisions at or near the junction.
- 1.97 *Other users.* Eight houses and one farmyard use the access road and share it with quarry traffic.

### How traffic is forecast to change

- 1.98 Traffic on the R700 will grow naturally over the operational life of the proposed development. This growth is incorporated into the assessment by applying growth factors from TII Project Appraisal Guidelines to the traffic survey carried out in November 2024.
- 1.99 Approval for the existing quarry operation expires in 2039. Up to that year, the proposed development will increase HCV movements relative to those generated by the existing quarry, this increase corresponding to the ratio of the proposed increased extraction rate to the existing extraction rate (i.e. 675,000 tonnes per annum vs 550,000 tonnes per annum).
- 1.100 After 2039, the proposed development will increase HCV movements on the R700 by an amount corresponding to the proposed extraction rate (i.e. 675,000 tones per annum) and will increase movements by light vehicles by an amount corresponding to the staff and visitors travelling to and from the Site by car.
- 1.101 The study predicts:
- A modest overall increase in daily flow on the R700 – around 1.6 % to 1.7 % in the period up to 2039 and about 8 % in the years thereafter.
  - A more pronounced increase in the proportion of HCVs on the R700: 15–18 % extra before 2039 and approximately doubling thereafter, equating to 102 HCV movements in and 102 out on average.
  - The junction of the R700 and the private access road will continue to operate at Level-of-Service A, with minimal queuing or delay. Note that this assessment used traffic movements that were factored upwards by 15% to allow for day-to-day fluctuations in the extraction rate.

### Potential impacts without mitigation

- *Road-capacity and delay*: negligible on the R700, slight on the access road
- *Road-surface wear*: increased HCV axle-loading will accelerate maintenance needs on both the private road and a short stretch of the R700.
- *Amenity and safety for residents*: more frequent encounters with large trucks could feel intrusive for the properties on the access road; risk of debris or silt being tracked onto the public road requires management.
- *Construction traffic*: a short-lived peak in articulated deliveries of plant and fuel, absorbed comfortably by existing capacity.

### Mitigation measures to be put in place

- 1.102 **Traffic-management plan** – a concise, site-specific document agreed with Kilkenny County Council, detailing HGV routes, driver protocols (speed, courtesy, engine-brake restrictions), and emergency contacts.
- 1.103 **Access-road housekeeping** – retention and regular servicing of the on-site wheel-wash; daily visual checks and prompt sweeping if any clay, stone chips or water is deposited on the R700.
- 1.104 **Pavement condition monitoring** – baseline visual condition survey of the access road and R700 to be carried out before the proposed development commences, to be followed by regular inspections at intervals with the Roads Authority. The extent and frequency of these surveys to be agreed with the Roads Authority. Should these surveys identify deterioration in the structural integrity of the pavement, further assessment or remedial measures to be agreed with the Roads Authority.
- 1.105 **Passing-bay review** – if future volumes justify it, additional short bays can be added on the private road so that quarry trucks and local traffic can comfortably pass.

### Residual effects after mitigation

- 1.106 On the R700 the difference in daily flow and junction performance remains slight negative: drivers will notice little change apart from a few more quarry lorries in the traffic mix.
- 1.107 On the private access road the presence of those lorries will still be moderately negative for the handful of residents, but with driver protocols, speed control and passing provision the impact stays within acceptable limits.
- 1.108 Road safety remains comparable with present-day conditions, provided housekeeping measures keep the carriageway free of mud and loose stone.
- 1.109 Pavement life will shorten; routine monitoring ensures wear is spotted and repaired before the deterioration increases.

### Ongoing monitoring and review

- 1.110 The quarry operator will:
- audit the traffic-management plan annually (or sooner if any complaint or incident occurs);
  - keep a log of wheel-wash maintenance and road-cleaning actions;
  - share pavement-survey findings with Kilkenny County Council and agree any remedial works;
  - incorporate any new guidance from TII or the Council over the project's 25-year life.

## Overall conclusion

- 1.111 With practical measures that are already familiar to the quarry industry – disciplined traffic management, clean-road practices and periodic pavement inspections – the planned expansion can be accommodated on the existing R700 corridor without significant loss of capacity and with only moderate inconvenience for immediate neighbours. The scheme therefore secures a locally important supply of aggregate and maintains skilled employment while keeping road safety and functionality well within national standards.

## Cultural Heritage

The cultural and archaeological heritage component of an Environmental Impact Assessment Report of the Quarry development at Kilree Co. Kilkenny consisting of a paper and fieldwork study was carried out in July – December 2024. There are no items of archaeological, architectural or cultural heritage significance known from the application area. There are no direct or indirect effects on any known items of archaeological, architectural or cultural heritage significance in the application area or the vicinity. Due to the possibility of the survival of previously unknown subsurface archaeological deposits or finds within the forest plantation (Area 3) topsoil-stripping in this area should be monitored by a qualified archaeologist.

Four appendices are included dealing with Recorded Monuments and sites in the SMR, The Archaeological Geophysical Survey and the Archaeological Test Excavation in the study area. This section should be read in conjunction with the appendices.

## Material Assets

- 1.112 “Material assets” are the physical things people depend on – land and buildings, roads, utilities, raw materials and natural resources.

### What exists now

- *Land and property* – The working quarry occupies thirty-six hectares. The land earmarked for extension is mainly pasture and commercial conifer forestry. The closest dwelling lies three-hundred-and-thirty metres away, while Bennettsbridge village is one-and-a-half kilometres to the south-east.
- *Transport* – The quarry access road meets the R700 regional road; the M9 motorway forms the southern boundary. Current traffic studies show plentiful spare capacity on the R700. Kilkenny rail station is seven kilometres to the north.
- *Utilities* – Overhead electricity lines already serve the site. There are no gas pipes or public water mains across the extension area. The quarry relies on its own well and septic system.
- *Recreation and tourism* – Popular amenities such as the Nore Valley Walk and Mount Juliet resort are at least one kilometre distant and screened by woodland or landform. They do not see or hear existing quarry activity.
- *Geology* – The bedrock is high-grade limestone, classified by the Geological Survey as having “very high crushed-rock potential”, making it regionally important for construction and agriculture.
- *Protected nature sites* – The River Nore Special Area of Conservation is seven-hundred-and-ninety metres to the east. The quarry and its extension are outside any protected designation.

- *Waste* – Present operations generate small volumes of inert or recyclable waste, all handled by licensed contractors.

#### Effects that could arise

##### *Positive effects*

- Continued employment and local spending.
- Secure, affordable supply of limestone products for regional building projects and farming.

##### *Potential negative or neutral effects*

- *Change of land use* – About eighteen hectares of farmland and 6.81 hectares of forestry will be turned into quarry ground; two small farm sheds will be removed.
- *Loss of geological resource* – Limestone will be permanently removed, but that is the project's purpose.
- *Traffic* – The results of the traffic and transport assessment confirm that the development would not have a significant effect on traffic flows due to the background traffic volumes, the volumes of traffic being generated during the operational phase and the capacity of the road network.
- *Noise, dust and vibration* – Modelling confirms guideline limits will be met at all nearby houses once standard quarry controls are applied.
- *Public utilities and tourism* – No power lines, water mains or telecoms require relocation. Tourist sites are far enough away and screened so they will not be affected.
- *Waste and fuel use* – Demolition of the two sheds will yield minor inert waste. Ongoing operations will continue to consume diesel and lubricants, all managed under existing procedures.

#### Safeguards and good practice

- *Design and visual screening* – Existing eight-metre-high soil berms will be retained; new berms built from stripped topsoil will screen the extended area.
- *Dust and noise control* – Water-sprays on haul roads, strict speed limits, routine plant maintenance.
- *Traffic management* – Wheel-wash at the exit; driver code of practice; regular joint reviews with the County Council.
- *Fuel handling* – All refuelling on a bunded pad; spill-kits available; staff trained.
- *Waste* – On-site segregation, storage on sealed surfaces, removal by licensed contractors with full record keeping.
- *Progressive restoration* – As each phase is exhausted, slopes will be regraded, native woodland planted and, finally, the quarry void will be allowed to fill naturally with water to form a wildlife lake.

#### What will remain after mitigation

- 1.113 After applying the controls above, the only lasting change of note is the permanent extraction of limestone and the conversion of farmland/forestry to quarry, followed by a lake and woodland. Noise, dust, vibration and traffic will stay within legal and guidance thresholds. Utilities, tourism assets, and local property values are expected to remain unaffected.

### Monitoring commitments

- 1.114 The company will continue routine dust, noise and traffic monitoring already required by its existing permission. Annual pavement inspections of the quarry access and the R700 will be carried out with the local authority. Fuel-storage bunds, wheel-wash and berm integrity will be inspected regularly.

### Overall conclusion

- 1.115 The lateral extension involves additional land-take and permanent removal of limestone but allows a long-established local industry to continue providing jobs and essential raw materials. With standard quarry controls and the extra measures listed, residual impacts on material assets are slight to negligible and are outweighed by the economic and resource benefits. Final restoration will deliver new woodland and a lake, adding long-term environmental and community value.

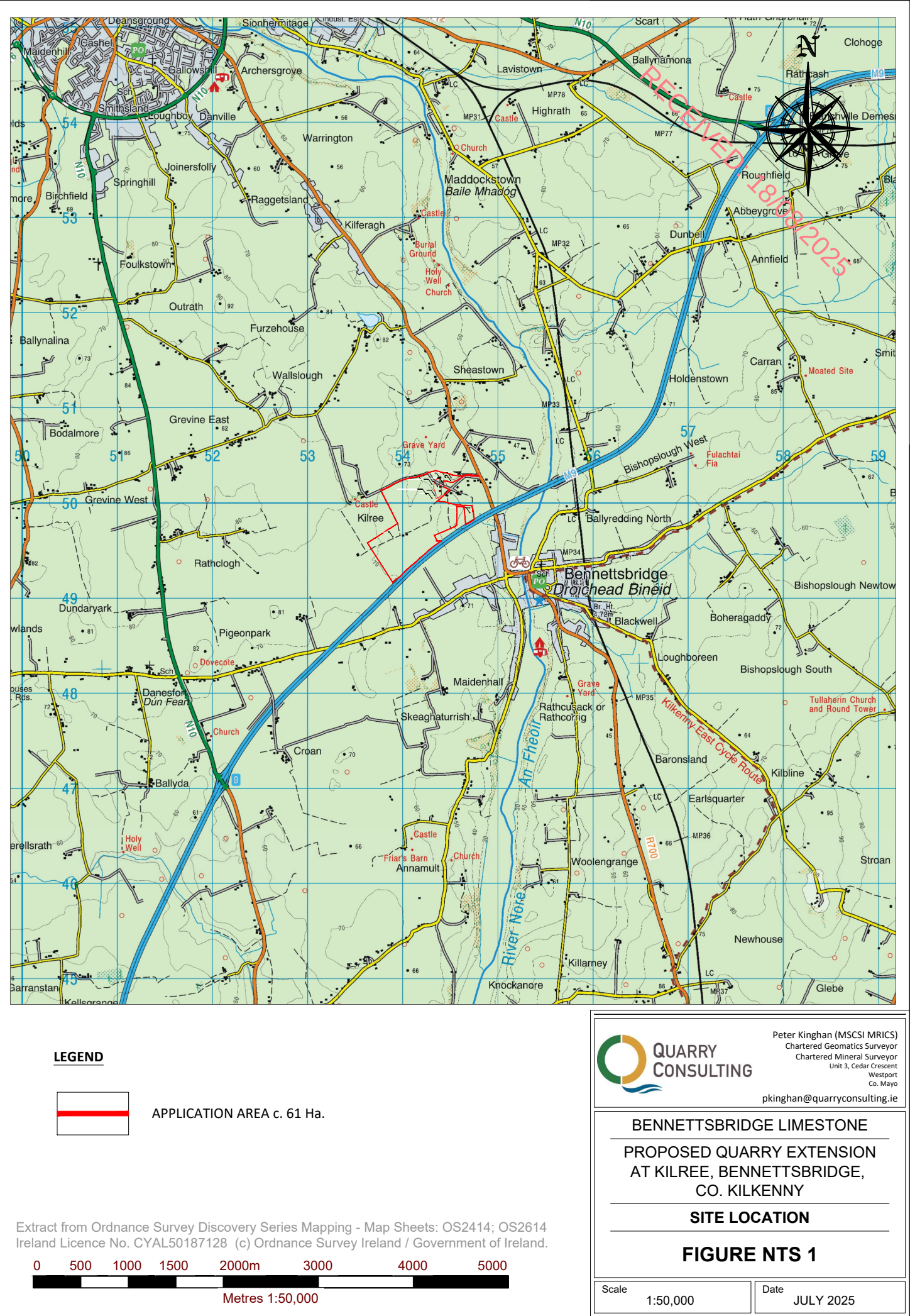
## FIGURES

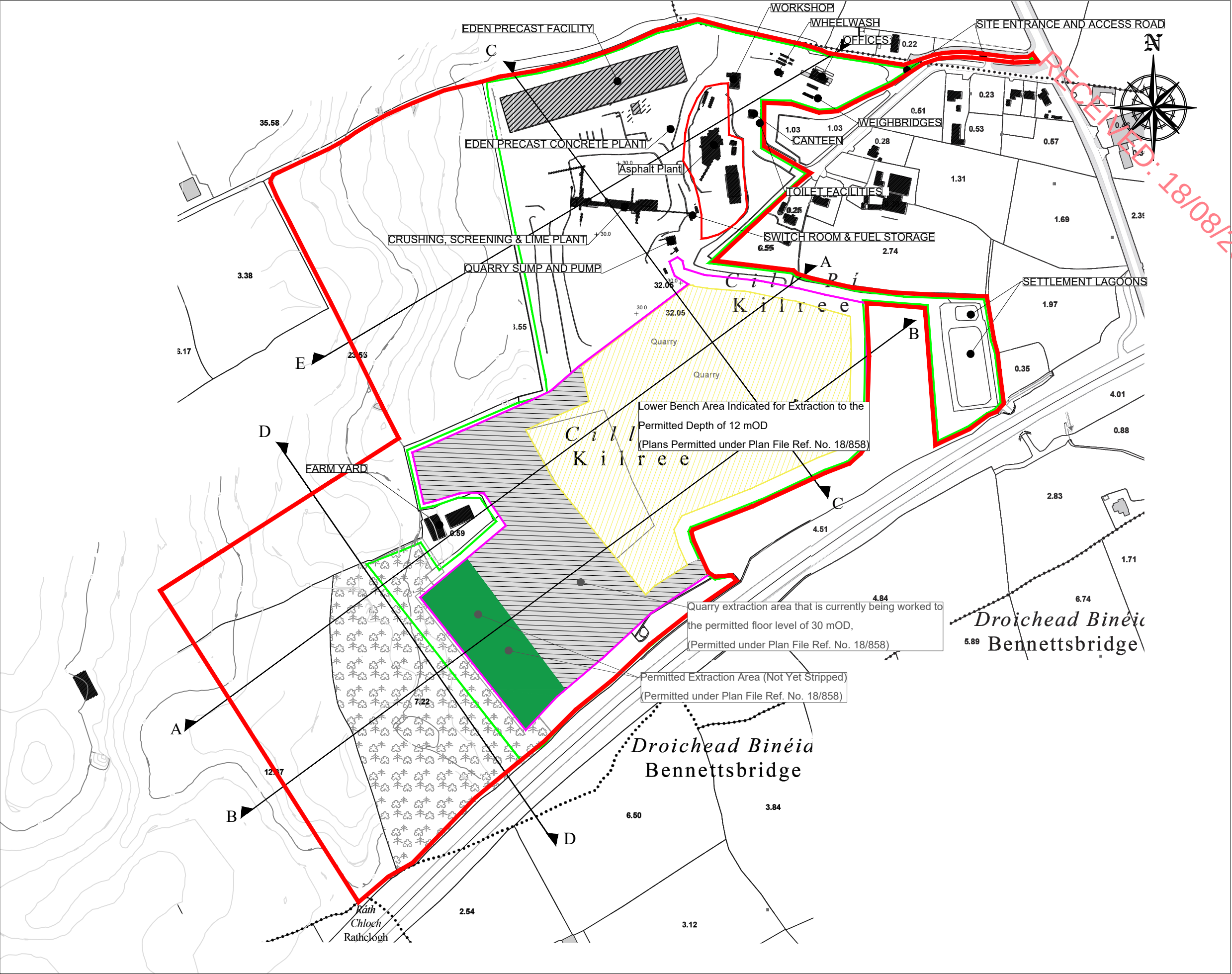
FIGURE NTS 1: SITE LOCATION

FIGURE NTS 2: EXISTING SITE LAYOUT

FIGURE NTS 3: PROPOSED SITE LAYOUT

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- NOTES
- 1. Topographical Survey Data from Survey completed in March 2024 by ASM Ireland;
  - 2. All points are coordinated relative to Irish Transverse Mercator (ITM);
  - 3. All elevations are relative to Malin Head.

LEGEND

- PLANNING APPLICATION AREA
- PERMITTED AREA (PLAN FILE REF. NO. 18858)
- PERMITTED EXTRACTION AREA (PLAN FILE REF. NO. 18858)
- PERMITTED AREA INDICATED FOR EXTRACTION TO 12 MOD (PLAN FILE REF. NO. 18858)
- CROSS SECTION LOCATIONS: REFER TO FIGURE 3.3

Peter Kinghan (MCSI MRICS)  
Chartered Geomatics Surveyor  
Chartered Mineral Surveyor  
Unit 3, Cedar Crescent  
Westport  
Co. Mayo  
pkinghan@quarryconsulting.ie

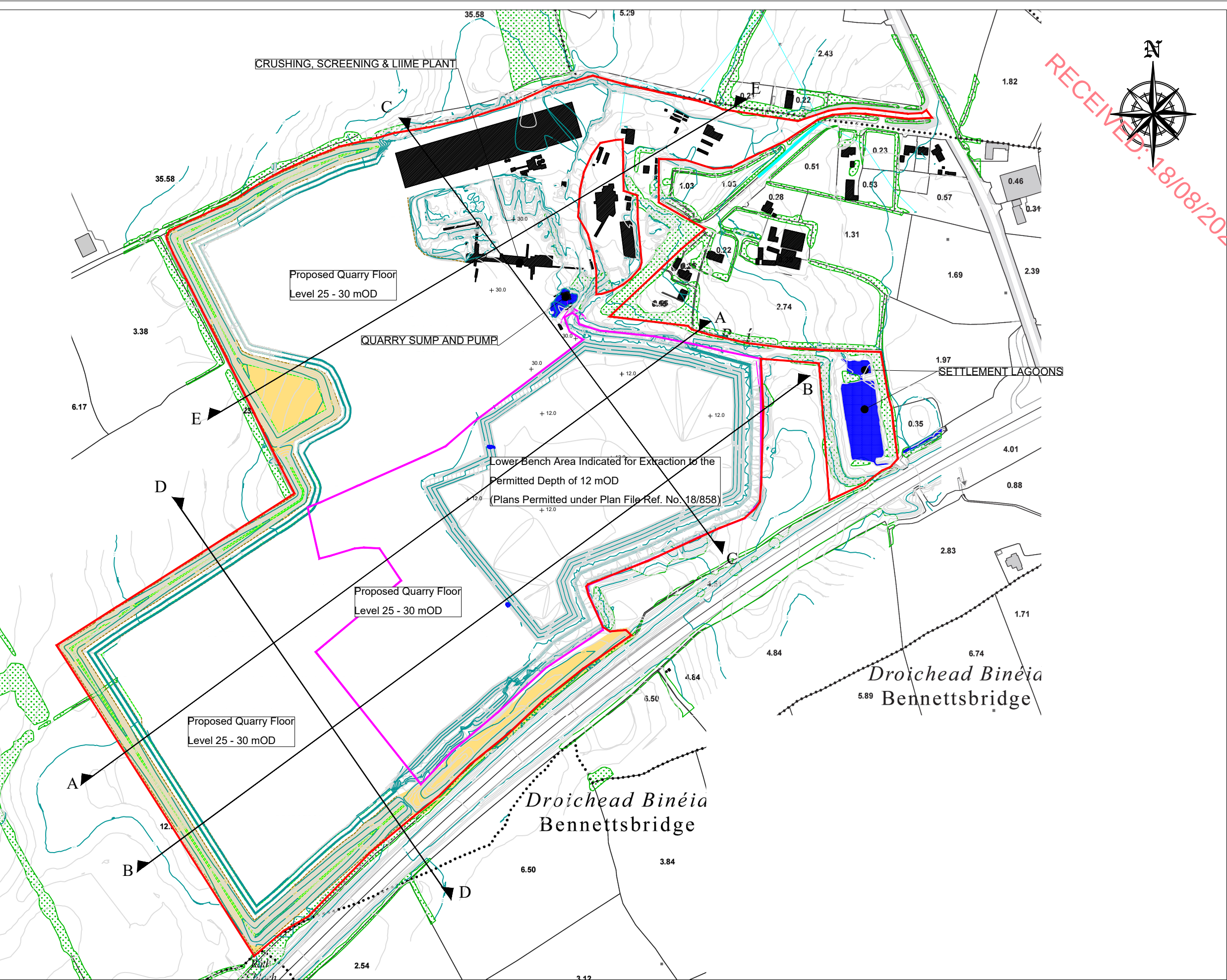
BENNETTSBRIDGE LIMESTONE  
PROPOSED QUARRY DEVELOPMENT  
AT KILREE, BENNETTSBRIDGE  
CO. KILKENNY

EXISTING SITE LAYOUT

FIGURE NTS 2

Scale 1:5,000

Date JULY 2025



- NOTES
1. Topographical Survey Data from Survey completed in March 2024 by ASM Ireland;
  2. All points are coordinated relative to Irish Transverse Mercator (ITM);
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- LEGEND
- PLANNING APPLICATION AREA
  - CROSS SECTION LOCATIONS: REFER TO FIGURE 3.3
  - PERMITTED EXTRACTION AREA (PLAN FILE REF. NO. 18858)

**QUARRY CONSULTING**  
Peter Kinghan (MCSI MRICS)  
Chartered Geomatics Surveyor  
Chartered Mineral Surveyor  
Unit 3, Cedar Crescent  
Westport  
Co. Mayo  
pkinghan@quarryconsulting.ie

**BENNETTSBRIDGE LIMESTONE**  
**PROPOSED QUARRY DEVELOPMENT**  
**AT KILREE, BENNETTSBRIDGE**  
**CO. KILKENNY**  
**PROPOSED SITE LAYOUT**

**FIGURE NTS 3**  
Scale 1:5,000 Date JULY 2025

