

ENVIRONMENTAL IMPACT ASSESSMENT REPORT NON TECHNICAL SUMMARY

To Accompany a Planning Application
For a Quarry Development
Located At
Rhyne, Killoe,
Co. Longford.

AN COIMISIÚN PLEANÁLA	
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Prepared For



Prepared By

Earth Science Partnership Ire. Ltd
July 2024

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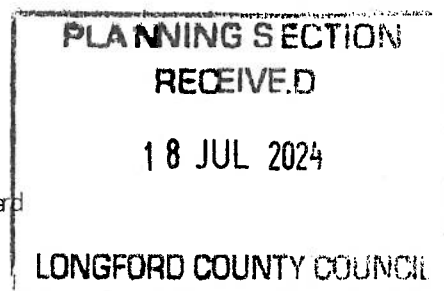
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1.0 Introduction

This Environmental Impact Assessment Report (EIAR) NonTech Summary has been prepared to accompany an application to Longford Co. Co. for planning permission under Section 34 of the Planning & Development Act 2000 (as amended) in relation to a quarry development located in the townlands of Rhine, Killoe, Co Longford. The location of the quarry is illustrated on NTS Figure 1 located at the end of this report. The application is being submitted on behalf of Rhyne Rock Ltd.

The development consists of a total area of 18.6 hectares and comprises of the following:

- Extraction of rock by blasting means down to a level of 20mOD from an area of approximately 14.2 Hectares.
- Erection of a concrete batching plant, processing plant, block yard, storage sheds, workshop, office buildings, weighbridge, wheelwash, settlement lagoon and all other associated ancillary facilities at the proposed manufacturing area of approximately 2.1 Hectares.
- Landscaping consisting of Planted Berms Surround (1.6 Hectares).
- Entrance and access road from the public road to the manufacturing area (0.7 Hectares). Landscaping and restoration of the site on completion of extraction.
- The Planning permission is for a 25-year period.

The application site is located at Rhine, Killoe, Co. Longford as detailed in Plate 1.1 (NTS Figure 1). The closest urban centres are the villages of Aghaboy and Ballinalee located 1.4km to the northwest and 3.5km to the east respectively. Longford town is located 7km to the southwest.

Plate 1.1 Site Location Map



The application site consists of a greenfield site located in proximity to an existing quarry owned and operated by Rhyne Rock (Plate 1.2). The application site consists of greenfield paddocks separated by hedgerows, an area of peatland to the northwest which was historically subject to peat extraction and an area of planted mixed woodland located on the eastern boundary. The reserve of material at the existing quarry is nearly exhausted therefore the applicant is applying for planning permission for the proposed development to authorise a reserve of material which will meet the demand for material over a long-term period. Should the proposed development site be granted planning permission, operations at the existing quarry will cease once the proposed development site becomes fully operational. The existing quarry will be restored in line with a restoration plan agreed with Longford County Council.

Plate 1.2: Application Site & Existing Quarry



The site has an elevation range between 55mOD and 70mOD. The proposed development consists of an extraction area where material will be extracted by blasting means down to a level of 20mOD and a manufacturing area where material will be processed into various grades of aggregate and sold to market or used to manufacture ready-mix concrete and concrete products. The extraction of rock will be carried out in 12 phases as indicated on the planning application drawings. Access to the application site will be via the L5097 Local Road off the R194 Regional Road which connects the towns of Longford and Granard. A haul road will be constructed along the northern and western boundaries which will link the manufacturing area to the L5097 Local Road.

The proposed manufacturing area will consist of the processing plant, concrete batching plant, block yard, storage sheds, workshop, office buildings, weighbridge, wheelwash, settlement lagoon and all other associated ancillary facilities. The plant and machinery at the existing quarry would be relocated to the proposed development.

The land use in the vicinity of the application site consists mainly of agricultural land with livestock farming being the predominant sector practiced. A mixture of pasture types is found in the general surrounding area ranging from improved grasslands to rush infested wet fields.

Rhyne Rock Ltd. is a family-owned business that has grown into one of the largest suppliers of all types of crushed rock, road chippings, bulk excavation and ready-mix concrete in the Co. Longford area. They also operate a quarry at near Drumlish with both Drumlish and the existing quarry at Killoe situated close to the major towns in the County. The company has developed a customer base that includes Government Departments, well known building firms, civil engineering contractors and a host of valued customers in the agricultural and private sectors that have all seen the benefit of the Rhyne Rock service. The company's success has been built on producing high quality products at competitive prices which allied with high levels of customer service.

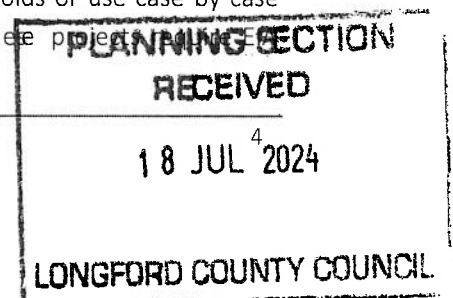
The primary objective of this EIAR is to identify baseline environmental and socioeconomic conditions in the area of the proposed development, predict potential beneficial and/or adverse effects of the development and propose appropriate mitigating actions where necessary. The EIAR is presented in the 'Grouped Format Structure' which gives an introduction an overall project description, then examines each topic as a separate section. The coverage of each topic includes descriptions of the relevant characteristics of the proposed project, the existing environment, predicted impacts, mitigation measures and residual impacts.

2.0 Screening & Consideration of Alternatives

2.1 Screening

The first step of the EIA process is screening which establishes whether an EIA is required or not. The project needs to be considered in its entirety for screening purposes.

Screening involves an initial determination to establish whether the proposal is a project which is listed in one of the Annexes to the Directive 2011/92/EU (as amended by Directive 2014/52/EU). The EIA Directive lists projects for which EIA is mandatory (Annex I) and those projects for which EIA may be required (Annex II). With regard to Annex II projects, Member States can choose to apply thresholds or use case by case examination or a combination of both, to assess whether the project is a project.



These Annexes have been transposed into Irish law and the prescribed classes of development which require EIA are outlined in Schedule 5 of the Planning and Development Regulations 2001 (S.I. 600 of 2001) as amended.

The proposed development consisting of 18.6 hectares is less than the 25 hectare threshold listed under Part 1, Class 19 (EIA Directive lists of projects for which EIA is mandatory under Annex I).

However, the proposed development is greater than the 5 hectare threshold listed under Part 2, Class 2(b) (under Annex II projects, Member States can choose to apply thresholds) as the application area is 18.6 hectares.
Therefore, EIA is a mandatory requirement.

2.2 Consideration of Alternatives

EIA guidance and legislation requires that consideration should be given to alternatives which should include, where relevant; sites, routes, alignments/layouts, processes and strategies. A number of alternatives were considered as part of the project which consisted of three locations in vicinity of the existing quarry (Plate 2.1) with the fourth option consisting of closing all quarry activity in this area once the material from the existing quarry is exhausted, and in the future supplying material from available resources in another existing quarry in Drumlish. The applicant would then solely rely on the Drumlish Quarry to supply aggregate directly to the area while importing aggregates to supply the concrete production facility which will remain in the existing quarry.

Plate 2.1: Alternative Locations



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In terms of environmental considerations and constraints, the proposed site was considered the preferred option given it fulfilled a number of advantages over other alternatives.

The resource at the existing quarry and proposed development site at Killoe consists of a Dark limestone & shale ('calp') of the Lucan Formation which existing customers prefer as a source of aggregate as opposed to the resource at the Drumlish Quarry. The reserve of material at the existing quarry is nearly exhausted therefore the applicant is applying for planning permission to authorise a long-term resource to supply customer requirements.

All plant and infrastructure would be relocated from the existing quarry at Killoe to the proposed location and the existing quarry would be restored once quarrying activity at the subject development commences.

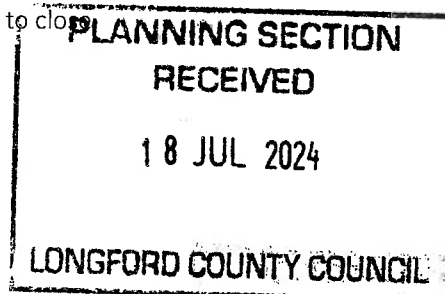
2.3 Alternative Processes

The proposed application area will be subject to extraction and processing of rock into various grades of aggregate. The method of extraction will be blasting which is deployed at the existing working quarry. The only other alternative to blasting is rock breaking using a hydraulic impact breaker attached to an excavator which can result in increased noise levels over a prolonged basis.

Material processing is undertaken at quarries using either fixed or mobile plant and in some cases both are used. The applicant proposes to erect a fixed crushing, screening and washing plant at the site. Mobile plant will continue to be used as required once the fixed plant is operational with the majority of processing undertaken at the fixed crushing and screening plant.

2.4 'Do-Nothing Alternative

If the proposed development was not to proceed, the site would remain as a greenfield site with existing land uses remaining which include livestock grazing, planted mixed woodland and historical peat extraction. The existing working quarry would continue to operate with extraction and processing of material and manufacturing of quarry products. If the quarry were to close due to the lack of material, this would result in a significant loss of jobs and employment and supply of quarry products to the local and regional market as the quarry would be forced to close.



3.0 Description of the Development

The application site consists of greenfield paddocks separated by hedgerows, an area of peatland to the northwest which was historically subject to peat extraction and an area of planted mixed woodland. An operational quarry is located to the east of the application site which is operated by Rhyne Rock. There are a number of residences in the immediate vicinity of the development comprising of isolated farm dwellings and ribbon development.

The majority of the application site is located on the western side of north south ridge which has a peak level of 71mOD. The extraction/manufacturing area of application site varies from a level of 55mOD along the western boundary to 70mOD along the eastern boundary.

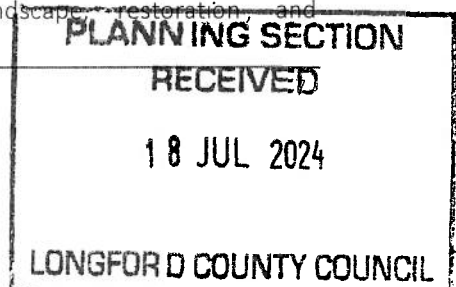
The main surface water course in the area is the river Camlin which flows in a south easterly direction joining the River Shannon at the Cloondara village. The river Camlin is located 360m to the south of the application site at its closest point. A number of tributaries flow into the River Camlin along its course including the Rhine Stream which flows in an easterly direction along the northern boundary of the existing quarry. The Rhine Stream is located approximately 50m to the east of the point where the haul road joins the L5097 Local Road (NTS Figure 3).

The existing and proposed layouts and sections through the application site and quarry are illustrated on the figures located at the end of this section.

The proposed development of 18.6 Ha. consists of an extraction area (14.2 Ha.) where rock will be extracted by blasting means and a manufacturing area (2.1 Ha.) where material will be processed into saleable aggregate and sold to market or used to manufacture concrete products. The remaining areas consists of the haul road and berms.

The proposal will include a construction phase associated with the construction of a haul road from the entrance to the manufacturing area and the erection of plant and infrastructure at the manufacturing area. The operational phase will include the day to day operations undertaken at the proposed development which will include vegetation and overburden removal, extraction and processing of rock and the manufacturing of concrete products.

Berm construction will be undertaken in tandem with vegetation and overburden removal which will be undertaken during the operational phase therefore assessed under the operational phase of the proposed development. Once the available resource has been extracted final restoration works and decommissioning of the plant and infrastructure will be undertaken as per the landscape restoration and

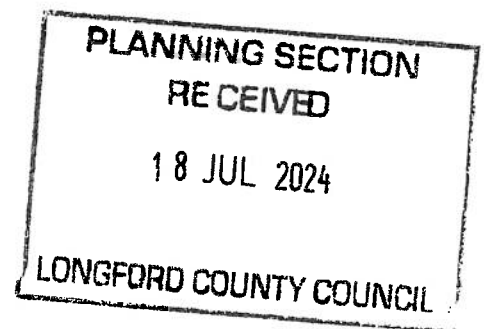


decommissioning plan. The construction, operational and restoration/decommissioning phases are described under the respective heading.

3.1 Construction Phase

The construction phase of the proposed development will consist of the levelling of the manufacturing area where the concrete batching plant, processing plant, block yard area and settlement lagoon will be located, erection of the concrete batching plant and processing plant, construction of a concrete block yard area and settlement lagoon. Details of the yard are given in NTS Figure 5. The construction works associated with the proposed development will take approximately 6 to 12 months to complete and will consist of the following:

- Construction of Haul Road
- Levelling of Manufacturing Area
- Erection of Concrete Batching Plant
- Construction of Block Yard
- Construction of Settlement Lagoon
- Erection of Fixed Processing Plant



Construction of Haul Road

It is proposed to construct a haul road along the northern and eastern boundary of the application site from the entrance off the public road to the manufacturing area. Overburden will be removed, and the road will be constructed with aggregate sourced from the existing quarry. The overburden will be used to construct a berm around the boundary of the site. An excavator and dump trucks will be used to undertake this activity.

Construction of Manufacturing Area

The manufacturing area will be located in the southern area of the development site and will consist of a concrete batching plant, processing plant, block yard, storage sheds, workshop, office buildings, weighbridge, wheelwash, settlement lagoon and all other associated ancillary facilities. Overburden will be removed and used to construct a berm around the external boundary of the manufacturing area. The yard will then be constructed using aggregate sourced from the quarry. An excavator and dump trucks will be used to undertake this activity.

Erection of Concrete Batching Plant and Buildings

Once the ground has been levelled, works will commence on the construction of the concrete batching plant. This will involve pouring concrete bases which the plant will be erected on. Areas around the plant which will be heavily trafficked will also be concreted. The plant will be erected using mechanical lifting equipment such as a truck mounted crane. The plant will then be connected to mains power supply. Once erected,

the plant will undergo a series of checks as part of the commissioning process. All works will be undertaken by competent personnel either employed by Rhyne Rock directly or by subcontractors. The other plant and infrastructure will require similar construction methods.

Construction of Block Yard

The block yard will consist of a concrete slab where moulded blocks will be laid out to cure. The block yard will be located adjacent to the concrete batching plant to provide ease of access for the block making machine.

Construction of Settlement Lagoon

It is proposed to construct a settlement lagoon which will remove any suspended solids that may be present in the excess water before it is passed through a hydrocarbon interceptor and discharging off-site. Water from the lagoon will also be recycled and used for production.

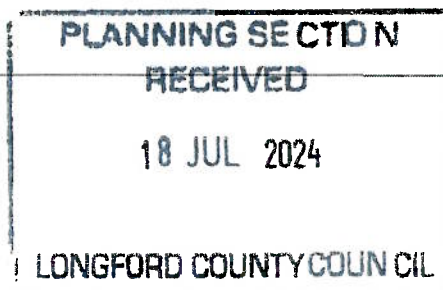
Erection of Fixed Processing Plant

It is proposed to construct a fixed processing plant in the manufacturing area which will consist of a crushing, screening and washing plant. This will involve pouring a concrete base and walls which the plant will be erected on. The plant will be transported to the quarry and erected by competent fitters using mechanical lifting equipment.

3.2 Operational Phase

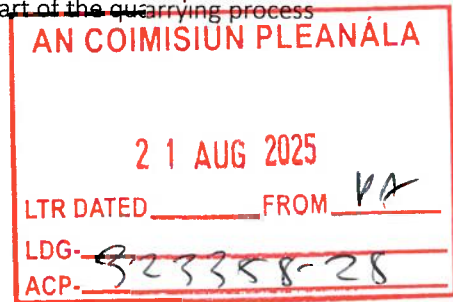
The operational phase will consist of the day-to-day activities which will be undertaken associated with the provision of quarry products to market. Plate 3.1 below gives a summary of the activities that will be undertaken as part of the operational phase of the proposed development.

Plate 3.1: Flowchart Describing the Operational Phase of the Proposed Development



Activities that will be undertaken at the application site as part of the quarrying process are detailed below:

1. Vegetation, Overburden Removal & Berm Construction
2. Extraction of Material
3. Transportation of Material
4. Processing of Material
5. Products
6. Transportation to Market



Vegetation, Overburden Removal & Berm Construction

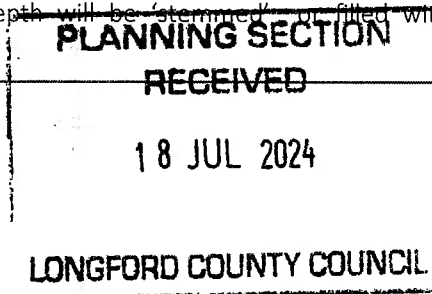
Vegetation and overburden will be removed in phases in advance of extraction of the underlying rock. Vegetation removal will be undertaken on an intermittent basis outside the bird breeding season. The wood, within the development area, has no commercial value and will be used for firewood with smaller branches chipped on site.

Overburden removed will be used in berms around the application site boundary or stored in stockpiles for restoring quarry faces once extraction has ceased. Trees will be planted on the proposed berms in order to offset the impact associated with the removal of vegetation. Soil and stone material removed during the processing of extracted material will also be used for berm construction. The construction of berms is dealt with under the operational phase as this activity will be ongoing during the operational phase of the development.

Material will be transported to the site of the proposed berm, unloaded and shaped using an excavator. A suitable growth medium such as topsoil will be placed on the berm which will allow vegetation to establish. Berms will be planted with native trees and shrubs to provide screening.

Extraction of Material

Blasting will be the method used to fragment the material to a manageable size. Occasionally it may be necessary to fragment rocks using a hydraulic impact breaker attached to an excavator. A licenced blasting contractor will be employed to design and carry out the blasting of in-situ bedrock. The process will begin with a detailed survey of the quarry face. This will allow the explosives engineer to design the blast and to plot where the shot holes should be drilled. After the face profiling survey, the drilling contractor will drill the holes to the required depths and angles. After the shot holes are drilled, they will be surveyed to check that they correspond to the blast design. The placement of explosives will be professionally planned to ensure that the required fragmentation of the rock is achieved with the minimum environmental impact. Blasts will take place at predetermined times in advance of any blast occurring. On the day of the blast, the explosives will be delivered to the site of the blast. A detonator will be placed in each hole and the holes will be loaded with high explosives to within a few metres of the top. The remaining depth will be 'stemmed' or filled with quarry



material. Prior to the blast, the site will be cleared and a siren sounded to make sure that everyone nearby is warned. When the final all clear is given, the shot firer will set off the explosives. Vibration and air overpressure levels associated with this part of the operation will be monitored using monitors set up at predetermined sensitive locations. After the blast, the face and shot pile will be inspected by the explosive engineer to check that all the shot holes are fired correctly.

Blasting will be undertaken on an as required basis and will be designed so as to not exceed recommended guidelines in relation to blasting.

Transportation of Material

An excavator will be used to fill dump trucks which will transport the material via haul roads to the fixed processing plant. The material will be unloaded directly into the fixed crusher for processing. Material will be processed on the quarry floor occasionally using mobile plant, when required, prior to transporting the material to the fixed processing plant or to market.

Processing of Material

The fixed processing plant will process the material into various aggregate sizes with washing undertaken where required. The processed material will be directed via conveyors to a series of stockpiles. Mobile processing plant may also be deployed close to the point of extraction to process material to a certain grade before transporting to the fixed processing plant for further processing. Soil material present in the blasted rock is separated from the material as it is passed through the crushing and screening plant and stockpiled. This material will be used to construct berms around the boundary of the quarry and for landscaping and restoration.

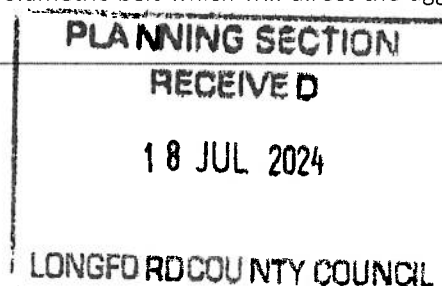
Products

Aggregate

The majority of the processed aggregate will be sold as graded aggregate to the client's requirements. Aggregate will be loaded onto open back trucks using wheel loaders and transported to the market destination. According to the Geological Survey of Ireland (GSI) mapping the bedrock of the application site is classified as dark limestone & shale ('calp') of the lucan formation. Each load will be weighted prior to exiting the site and a weighbridge docket printed out to accompany the load to the destination.

Ready-mix Concrete

Aggregate will also be used to produce ready-mix concrete to the required strengths depending on the order. Sand and cement which are a requirement of the mix will be imported from reputable suppliers on an as required basis. Sand will be stockpiled on-site and fed into storage bins close to the batching plant as required while cement will be stored in silos. The aggregate required for the production of concrete will be released from the storage bins on a volumetric belt which will direct the aggregate to



the mixing chamber of the batching plant. The mixed batch of concrete is then fed through a shoot at the base of the mixing tower into 'bottle trucks' which transports the load to market.

Concrete Blocks

Concrete blocks will also be produced at the quarry. Concrete required for the manufacturing of concrete blocks will be batched in a similar way to ready-mix concrete. Water will be added and mixed to the batch prior to discharging into the concrete block manufacturing machine. Blocks will be moulded in batches and laid out on the concrete block yard to cure for a number of days. Once cured the blocks will be baled and stored at designated areas until they are transported to construction sites or builder suppliers.

3.3 Plant On-Site

Due to the various processes undertaken, the following plant and equipment is typical of what will be required as part of the proposed development.

Mobile Crushing & Screening Plant

Wheel loaders	Concrete Batching Plant
Excavators	Mobile Concrete Block Making Machine
Dump Trucks	Forklift / Concrete Block Handler.
Drilling Rig	Wheelwash
Hydraulic Impact Breaker	Weighbridge
Tractor & Bowser	Office and workers facilities
Fixed Crushing, Screening & Washing Plant	Garage
	Ancillary plant and equipment

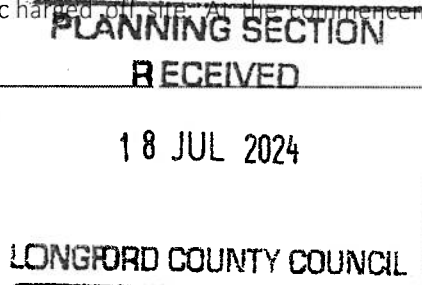
Aggregate trucks, concrete bottle trucks and concrete block trucks fitted with a grab will be used to transport products from the application site to the required destination.

3.4 Fuel & Chemical Storage

For security reasons, very little fuel is stored at the quarry. A small volume of fuel is stored in a bunded fuel storage tank located close to the site office. Fuel is delivered to the quarry by authorised fuel distributors who dispense the fuel directly into plant and equipment. A mobile fuel bowser on site is used to transport fuel between plant and fuel storage tanks. Procedures are in place for dispensing fuel into plant and vehicles.

3.5 Surface Water & Groundwater Management

Surface water generated at the quarry as a result of precipitation evaporates where conditions prevail or percolates through the underlying bedrock layers over time. Surface water will flow to a sump on the quarry floor and is recycled for use in the quarry or is treated before being discharged off site. At the commencement of the



proposed development the size of the area of the quarry void will be small and there will be no requirement to manage surface water. However, once the quarry expands further into the greenfield areas and excavated depth goes below the existing water table, there will be a requirement to manage surface/ground water on site.

A sump will be constructed on the quarry floor in the deepest part of the quarry, which will collect all surface water from the quarry floor, quarry faces and elevated areas. Water will be retained for a period of time to allow suspended solids to settle out of suspension and will be pumped to a proposed settlement lagoon located in the manufacturing area of the quarry.

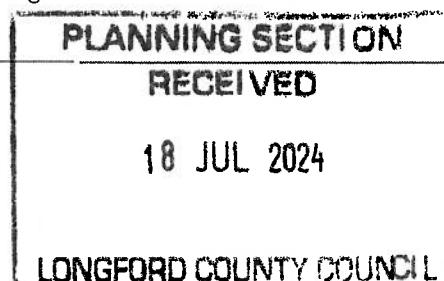
Water will be stored in the settlement lagoon and used for the day-to-day operations at the quarry such as manufacturing concrete products, aggregate washing, dust suppression etc. Excess water, which may occur during storm conditions, will be treated and passed through an oil interceptor before being discharged off site to the local surface water network at a rate which is below the maximum greenfield runoff, thereby preventing flooding. This discharge will be the subject of a discharge licence application to Longford Co. Co. During extended periods of extreme storm conditions the discharge will continue to be pumped at a constant rate from the quarry floor which will be allowed to flood and excess water will be pumped out at a normal rate over an extended period of time after the storm subsides.

3.6 Working Hours & Employment

Operating hours for the development will be between 0700 hours and 1900 hours, Monday to Friday and between 0700 hours and 1600 hours on Saturdays. There may be a requirement to operate outside these hours for certain projects such as works required to be undertaken at night time. Should there be a requirement to operate outside normal operating hours prior agreement will be obtained from Longford Co. Co. The quarry development will provide employment for approximately 15 people directly with a further 15 people employed indirectly. Sub-contractors for blasting, hauling products and maintenance contractors will also be a source of indirect employment at the quarry.

3.7 Utilities and Services

Connections to the relevant utilities such as ESB, telecommunications and water supply will be sought from the relevant providers. The electricity connection to the existing quarry is a 200KVa – 240v – 3 Phase over-headline which will be diverted to the proposed quarry manufacturing area. An overhead telecommunications line services the existing quarry and dwellings houses to the east of the application site along the L5097 road. A connection will be obtained from this line to serve the administrative infrastructure located at the application site. A water connection will be obtained from an existing Irish Water main that runs along the L5097 road.



3.8 Transport & Access

The proposed development site is located within proximity of the existing quarry operated by Rhyne Rock, which is nearly exhausted. Access to the development will be via a short section of 120 metres along the L5097 Local Road which the existing quarry gains access. The proposed development will become operational on closure of the existing quarry. Therefore, there will no increase traffic on the local road infrastructure as all quarry related traffic will transfer to the new development site. The R194 will be the main transport route for the quarry development. The maximum daily output from the quarry will be in the region of 77 loads/day.

3.9 Offices & facilities

All traffic and personnel entering the quarry will report to the site office prior to proceeding further to the extraction area. A weighbridge facility will be located adjacent to the site office. A wheel wash facility will be located along the haul road to the manufacturing area. Canteen and toilet facilities will be located at the manufacturing area.

3.10 Waste Management

(i) Overburden & Waste Soil

All overburden material arising from the development site will be used for screening around the boundary of the application site and other areas of the quarry. Soil and silt from crushing & screening will also be used for this purpose. Overburden material will be retained onsite for restoration of the quarry.

(ii) Waste Metal

Waste metal which originates from parts replaced on plant & vehicles and end of life vehicles is collected by licensed contractors on an as required basis and recycled at appropriately licensed plants or facilities.

(iii) General/ Canteen Waste

General/Canteen waste created by staff is held in wheelie bins supplied by the waste contractor and collected on a regular basis and transported to a licensed facility for recovery, recycling or disposal.

3.11 Safety & security

The boundaries of the quarry will be enclosed by a combination of berms with planted hedgerows which will be designed to blend into the surrounding landscape. Stock proof post and wire fencing and security fencing will be put in place around the site. Warning signs will be erected at locations around quarry where required.

The boundary of the quarry consists of stock proof post and wire fencing and constructed berms. Fencing will be erected where required around the boundary of the

site to provide additional security and screening from the surrounding environs. Warning signs will be erected at the quarry site.

3.12 Dust Generation & Control

The extraction and processing of material and transporting of quarry product can have the potential to generate wind-blown dust if not managed effectively. Haul roads will be dampened down during dry windy conditions which are ideal conditions for dust blow. The quarry void created as a result of extraction will also prevent dust from escaping due to the depth below ground level. Stockpiles will be kept to a minimum and will be sprayed with water to reduce dust blow where required. Dust deposition monitoring will be undertaken on a regular basis to ensure that the levels of dust emissions beyond the site are kept to a minimum.

3.13 Noise Generation & Control

Sources of noise as a result of day to day activities being undertaken at the application site will be associated with blasting, extraction, processing, production and transporting of products around and off-site. All necessary precautions will be put in place to ensure that the operations at the quarry will not impact significantly on the local environment. Noise monitoring will be carried out on a regular basis to ensure that the noise generated on the site are within the parameters specified.

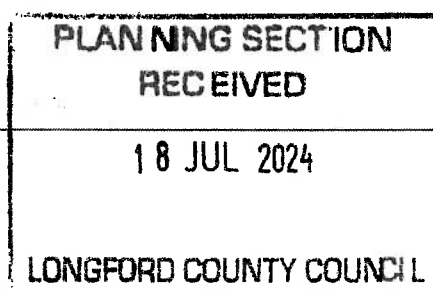
3.14 Extraction Duration & Phases of Extraction

The total application area is 18.6 hectares of which 14.2 hectares will be subject to extraction of the available resource. The total reserve of material at the quarry is estimated to be 4.1 million tonnes of material. The maximum rate of extraction from the quarry is anticipated to be a maximum of 400,000 tonnes/annum with the average anticipated extraction rate indicated to be 200,000 tonnes. The applicant is requesting a 25-year permission in order to allow for adequate time to commence works post grant of permission and to restore the quarry on completion of extraction of the available resource. The proposed phases of extraction are detailed in NTS Figure 4.

3.15 Restoration & Aftercare

When the planning period has expired at the application site and no further planning permission has been obtained, the applicant will be required to implement a decommissioning and restoration plan in accordance with the Landscape & Restoration Plan for the site. The final decommissioning/restoration will consist of the following:

After stockpiles, plant equipment and unused structures are removed from the site an inspection will be undertaken to ensure that all plant and equipment has been decommissioned and removed.



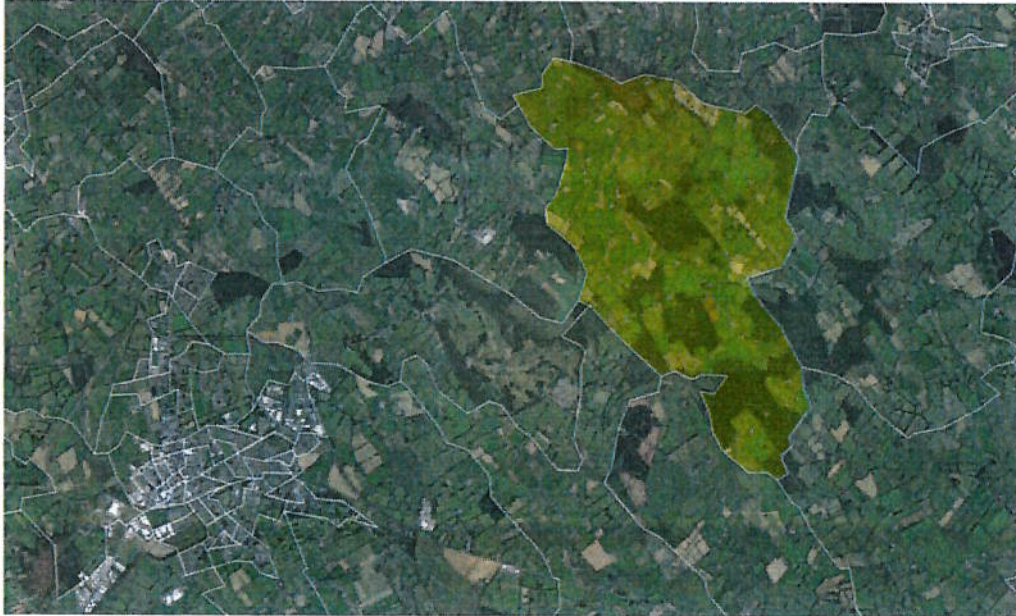
The main feature of the worked out area will be a new quarry lake and all preparations for the formation of that lake are designed to make it support plant and animal life. Creating benches in rock, varying rock faces and fine materials which often gets trapped in rock crevices aid rooting of plants and provide varied habitats. These areas of the quarry above the quarry lake that will be formed will be covered with subsoil, topsoil and allowed to regenerate. Additional planting of trees and shrubs may be necessary in some areas. The existing berms and planting will be retained. No pesticides will be used on the topsoil which will allow the seed bank within the soil to quickly regenerate to re-establish native grasses and plants.

4.0 Population & Human Health

This section of the EIA Report considers the potential effects of the proposed development on human beings, living, working and visiting in the vicinity of the proposed development.

The closest urban centres to the application site are the villages of Aghaboy and Ballinalee located 1.4km to the northwest and 3.5km to the east respectively. Longford town is located 7km to the southwest. The existing quarry is located in the townland of Rhine which is situated in the Cloonee District Electoral Division (DED) and the Small Area A137017003.

Plate 4.1: Small Area A137017003 Highlighted in Green



The Small Area experienced an increase in population between 2016 and 2022 of 19 people which constituted a 5.9% increase which is less than Co. Longford (14.4%) and the State (8.1%). The Small Area had a labour participation rate of 60.4% which is higher

than the County (53.2%) and State (56.1%). It also had a lower percentage of retired (4.6%) and Unable to Work (11.5%) than the County and State.

As illustrated on Plate 4.2, there are 34 dwelling houses located within a 500m radius of the application site boundary with a further 68 located between 500m and 1km of the site.

Plate 4.2: Dwelling Location Map



The application site is located at Rhine, Killoe, Co. Longford as detailed in Plate 1.1. The closest urban centres are the villages of Aghaboy and Ballinalee located 1.4km to the northwest and 3.5km to the east respectively. Longford town is located 7km to the southwest. Aghaboy consists of a church and public house and community centre. Scoil Náisiúnta Naomh Treasa primary school is located 1km northeast of Aghaboy. Ballinalee is a small village with infrastructure consisting of shops, service station, church, Scoil Samhthann national school, public houses and hardware.

The likely significant effects on Population & Human Health associated with the development relate to the issues of socio-economic activity, human health and safety and nuisance relating to emissions from the quarry, specifically in relation to dust, noise, and blasting. The assessment indicates that there will be no significant negative impacts arising from the proposed development, during the construction and operational phase of the project, on Population & Human Health providing that mitigation measures referred to in various sections of the EIAR particularly in relation to

noise, air and water are adhered to. Each of these issues is dealt with in detail in the relevant section of the Environmental Impact Assessment Report and summarised in the relevant sections of this Non-Technical Summary.

5.0 Biodiversity

This purpose of this chapter of the EIAR is to assess the potential effects of the proposed development on the biodiversity of the proposed application area and surrounding environs. This mainly concentrates on ecological receptors of particular significance within the proposed development area, primarily protected habitats and species.

The zone of influence is defined as the area in which the proposed development has the potential to result in direct or indirect effects on biodiversity. This size and shape of this zone varies according to the particular ecological receptor being evaluated.

Areas of conservation interest located within 15km of the development site are outlined in Table 5.1. There are 5 No SACs, 2 No SPA, 6 No NHAs and 11 No pNHAs located within a 15km radius of the application site.

Table 5.1: Designation Conservation Areas within 15Km Radius of the Site

Site Code	Site Name	Distance from Site (Km)
1818	Lough Forbes Complex SAC	8.9 km northwest
2202	Mount Jessop Bog SAC	9.7 km northwest
2341	Ardagullion Bog SAC	10.8 km southwest
2346	Brown Bog SAC	12.8 km northwest
2348	Clooneen Bog SAC	13.7 km northwest
4045	Glen Lough SPA	14.2 km northwest
4101	Ballykenny-Fisherstown Bog SPA	8.9 km northwest
422	Aghnamona Bog NHA	12.8 km northwest
691	Rinn River NHA	9.7 km northwest
1405	Cashel Bog (Leitrim) NHA	13.7 km northwest
1420	Corracramph Bog NHA	14.2 km northwest
1423	Cloonageeher Bog NHA	8.9 km northwest
1450	Mount Jessop Bog NHA	10.8 km southwest
424	Clooncoe Wood & Lough pNHA	13.6 km northwest
442	Brown Bog pNHA	9.7 km southwest
445	Clooneen Bog pNHA	11.6 km northwest
447	Derrymore Bog pNHA	7.3 km southwest
992	Lough Gowna pNHA	10 km northeast
1417	Lough Rinn pNHA	13.3 km northwest
1687	Glen Lough pNHA	14.9 km southeast
1818	Lough Forbes Complex pNHA	8.9 km west
1822	Carrickglass Demesne pNHA	2.7 km southwest

2069	Ardagullion Bog pNHA	12.3 km southeast
2103	Royal Canal pNHA	7.4 km southeast

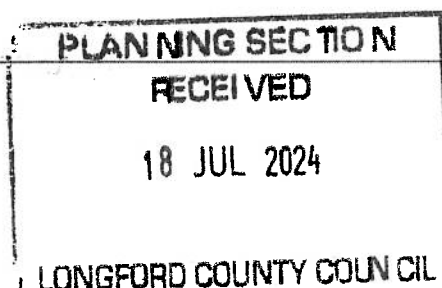
The biodiversity assessment of the proposed development was carried out by Ms Sarah Jorgensen (nee Ingham), of Applied Ecology Ireland Ltd, who graduated from Anglia Ruskin University, Cambridge with a BSc. (Hons) in Zoology. Following her undergraduate degree, she attained her MSc. in Biodiversity and Conservation from Trinity College Dublin, graduating in 2009.

The biodiversity report includes the following:

- A Phase I habitat survey was undertaken to inform an ecological evaluation of the habitats present within the proposed development site in accordance with methods outlined in the Heritage Council publication, *"Guidance for Habitat Survey and Mapping"* (Smith *et al.*, 2011).
- Habitats were recorded using the habitat classification scheme published by the Heritage Council in *A Guide to Habitats in Ireland* (Fossitt, 2000) and evaluated using the geographical frame of reference scheme as per *"Guidelines for Assessment of Ecological Impacts of National Road Schemes"* (NRA, 2009).
- Other ecological receptors such as birds, non-volant mammals, bats, amphibians, reptiles and invertebrates were also recorded during the site walkovers, as per best practice survey methods.
- Habitats onsite are comprised of a variety of ubiquitous categories such as improved agricultural grassland (GA1) and recolonizing bare ground (ED3) which are ecologically evaluated as being Local importance (Lower value).
- Areas of wet grassland (GS4), scrub (WS1) and hedgerows/treelines (WL1/2) which dominate the proposed area are evaluated as being of Local Importance (Higher value), given their importance to breeding passerines.
- All habitats that are in and around the subject site were assessed. Mitigation measures were included where appropriate.

Following a detailed ecological impact assessment of the proposed application, it is concluded that the proposed quarry development will not have any significant residual effects on biodiversity assuming the mitigation measures outlined herein are strictly adhered to during continuing operations at the quarry.

It is recommended that the proposed operational works are monitored periodically by a qualified ecologist to ensure that the mitigation proposed is implemented and that the conservation interests within the receiving environment are effectively protected. Ongoing monitoring of water quality will also be undertaken. Reports on the findings should be submitted to the competent authority (Longford County Council).



6.0 Land, Soils and Geology

The proposed development is a new quarry within a greenfield site at Rhine, Killoe, Co. Longford. An existing working quarry operated by the applicant is located to the northeast of the application site which will close subject to granting of permission at the application site. The total reserve of material at the quarry is estimated to be 4.1 million tonnes of material which will be extracted over a number of phases within the proposed 25 year period. The extracted material will be processed into various grades of aggregate which will be sold to market or used to manufacture a range of concrete products.

The following surveys and investigations were carried out:

- A walkover survey to assess the ground conditions and layout of the proposed site including surveys of adjacent lands;
- APEX Geophysics carried out geophysical surveys over the northern part of the site in 2018 and they completed further surveys in 2020.
- Drilling of 7 no. investigation holes/monitoring wells to assess overburden lithology, depth to the bedrock and for groundwater level monitoring and sampling.

The majority of the application site is located on the western side of a north south ridge which has a peak level of 71mOD. The extraction/manufacturing area of the application site varies from a level of 55mOD along the western boundary to 70mOD along the eastern boundary. The main surface water course in the area is the river Camlin which flows in a south easterly direction joining the River Shannon at the Cloondara village.

Land-use in the vicinity of the application site include agriculture consisting of livestock farming. Historical peat extraction and commercial forestry is also evident. There are a number residences in the vicinity of the development comprising of isolated farm dwellings and ribbon development.

Based on the GSI bedrock geology map (www.gsi.ie), Dark limestone & shale ('calp) of the Lucan Formation underlie the proposed development.

The results of drilling showed that the overburden ranged in thickness from 3.7 metres in the north of the site to greater than 15 metres in the southeast. The overburden consisted of heavy brown sticky boulder clay with pebbles and boulders of limestone, sandstone and Lower Palaeozoic greywacke and slate. The bedrock is fresh to very slightly weathered immediately below the overburden and there was no evidence for deep weathering or karstification. Following drilling and analysis on site the following conclusions were made:

- The bedrock in the recently drilled area is like the limestone exposed in the nearby existing quarry.
- All the drillholes encountered siliceous fine calcarenites and micrites, no shales or calcareous mudstones were observed.
- The bedding is almost flat lying, with no evidence of folding or significant faulting.
- The overburden consists of sticky glacial till. It ranges from 3.7 metres thick in the north to more than 15m in the south.
- The Silica content of the cores averages 19.5%; this is quite high but less than the silica content of the samples from the existing quarry.
- The Total Sulphur and Acid Soluble Sulphate values are low and are fully compliant for an S.R.21 aggregate

Land in the vicinity of the application site consists of agricultural land with livestock grazing being the predominant sector practiced. Forestry plantations exist on marginal lands which are not suitable for agricultural use.

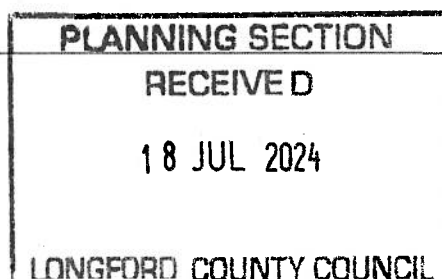
Site earthworks and aggregate extraction will result in a direct impact on the local geological environment, albeit this is an acceptable and unavoidable part of the proposed quarry development. These impacts will be localised (i.e. only at the point of extraction) and will be mostly mitigated through the adoption of a suitable landscape and restoration plan which will be undertaken on completion of extraction.

The operation of plant and machinery for overburden removal, construction of the yard and haul road and erection of plant and machinery which will be mainly diesel powered and operated using hydraulics increases the potential for leaks of hydraulic oils and fuel during the operational phase. Only small volumes of fuel/oils will be present on-site and therefore no significant effects are expected as long as standard mitigation is implemented. The stripped topsoil will be used for berm construction and restoration on completion of extraction which will result in the creation of new habitats.

Rock will be extracted down to a level of 20mOD in benches, in line with Guidelines to the Safety, Health and Welfare at Work (Quarries) Regulations 2008 (S.I. No. 28 of 2008). A buffer will be left around the external boundary of the application site which will ensure the stability of the external quarry faces.

The potential for accidental emissions from plant and machinery operating at the quarry also exist. However, this is unlikely as plant and machinery are serviced regularly to reduce the likelihood of accidental emissions occurring.

No impacts on local geological heritage sites or designated sites are expected from a land, soils, and geology perspective.



7.0 Water

The general area is dominated by Corn Hill (278m a.OD) about 3.95km to the North of the proposed quarry area. Locally, the lands are located on the toe slope of the aforementioned hill: the topography is generally flat with the culminating points consisting of a series of low-lying ridges (c. 60m – 70m a.OD depending on location), which is typical of an extensive drumlin field area. The proposed quarry will be located on the South-Western flank of a low drumlin ridge (c. 72m a.OD), which trends in a NW – SE direction.

The proposed quarry will operate a series of up to three benches of about 15m to 20m each down to a final depth of 20m a.OD. The proposed application area covers 18.6 Ha as follows of which the extraction area will cover 14.2 Ha and the manufacturing and batching plant will cover 2.1 Ha.

The general area is served by the Longford Central Public Water Scheme, which takes its source from the Lough Forbes Treatment plant.

The GSI national well database (www.gsi.ie) does not show the presence of any private wells in the vicinity of the quarry. The site is not located within any EPA / GSI delineated public or private groundwater supply source protection zones.

A walkover survey covering a radius of 350m around the boundaries of the proposed site extraction area was carried out and the locations of old wells, which were shown on the historical OSI 25" maps were also assessed, where possible. The results of the well survey for relying on a private supply well for the provision of water showed that no response was received at that time.

The proposed quarry will have a portoloo which will be maintained by a specialist contractor. The surface hydrological environment includes all surface waters such as overland flow, rivers, lakes, wetlands, estuaries, and seas were assessed. Long-term rainfall and evaporation data was sourced from the Met Eireann weather station in Mount Dillon (Station no. 4329) c. 19.7km to the WSW of the proposed quarry boundary. It lies at an elevation of 39mOD (above Ordnance Datum).

The proposed application area covers 18.6 Ha and is currently a greenfield area. The area proposed for extraction and the manufacturing & batching plant lie across a bog and poorly drained soils. A ditch runs along the southwestern part of the proposed site area, which effectively drains all the proposed area. Based on the soil cover and the density of drainage ditches in the area within the site and its surrounding, it is anticipated that only a small portion of the effective rainfall will soak into the ground. Given the poorly drained soil cover, it is anticipated that most of the effective rainfall will generate surface water runoff and it is proposed that the water is recycled within

the quarry and used for quarry activity and the manufacture of concrete. Only in times of extreme weather there may be a discharge back to the ditch. However the discharge should not exceed the natural flow which occurs at present before any development occurs. This is known as the greenfield runoff. The greenfield runoff rate based entire area of the quarry was estimated to be 56 litres per second. Based on this information the quarry. The water management system which has been designed will not allow the discharge to exceed the greenfield runoff and therefore the proposed development shall have no detrimental impact on the existing area drainage system. As the bulk of the effective rainfall naturally ends up as surface water and as the quarry will act as a buffer prior to discharge, it is anticipated that the proposed development will not pose any additional risk of flooding downgradient. The quarry will act as a buffer and will reduce the potential for flooding during heavy rainfalls.

Surface water within the quarry will be monitored on an ongoing basis and a water discharge licence application will be obtained for all discharge off the site to the local drainage system.

The hydrogeological environment concerns groundwater and the bedrock and subsoil bodies which contain and transmit water as part of the hydrological cycle. Rainfall infiltrates the ground and recharges the groundwater table before discharging to the surface. Groundwater is an important water source as it provides base-flow to rivers and surface water bodies. It has inherent value as a natural resource and warrants protection for the prevention of pollution and contamination. To preserve the quality of groundwater, Groundwater Protection Schemes, informed by the Geological Survey of Ireland (GSI), provide a framework to local authorities and environmental professionals in managing and protecting the resource.

The bedrock in the quarry is comprised of the Lucan Formation, which has been classified by the GSI as a locally important bedrock aquifer, which means that the bedrock is moderately productive only in local zones. In this type of aquifer, the flow paths will be short, localised and shallow (c. 15m). This will result in very small groundwater flows.

In addition, the results of the on-site investigations carried out to date have not shown the presence of any major water bearing features within the proposed site area, such as a fault or a fracture zone. The shallow groundwater inflows will largely be fed by rainfall and limited by low groundwater storage. Due to the poor ground water flows, potential impacts on groundwater quantity are not anticipated to be significant. The loss in recharge to the aquifer has been calculated as being of c. 45m³/day.

The proposed quarry will be excavated down to a maximum depth of 20mOD and is below the water table, which is at approximately 43mOD. This will require dewatering

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and as a result, a cone of drawdown will develop around the quarry excavation. As such, it is considered that once the upper, most weathered part of the bedrock has been excavated, the contribution from the bedrock aquifer will be limited to seepages from the quarry faces.

Upon cessation of the quarry activities, groundwater levels will slowly rebound to a level closer to the existing water table level and in periods of extended rainfall may rise above it on a temporary basis.

There is potential for contamination of the groundwater environment due to accidental emissions from the plant and machinery operating at the site. However, mitigation measures proposed will minimise the risk to groundwater.

It is proposed to collect all water in a sump on the quarry floor. Water will be stored at this location and used in the day-to-day operation of the site and concrete manufacturing. During periods of extreme weather excess water will be pumped to a settlement lagoon which will remove suspended solids before passing through an oil interceptor and discharged off-site.

Provided the mitigation measures are implemented, it is unlikely that the proposed development will have a negative impact on the water environment. To ensure that this is the case, monitoring will be undertaken on a regular basis to assess the impacts as a result of the day-to-day activities.

The proposed quarry will result in the loss of approximately 0.15% of the catchment area of the Camlin River at the point of discharge from the proposed quarry, which cannot be mitigated. Most of the water drained within the proposed quarry, will however discharge back to the Camlin River. The overall water budget of the receiving water from the Camlin River will therefore not be affected.

The bulk of the cone of drawdown induced by the quarry is likely to occur within 250m from the quarry boundaries. Beyond this distance, the drawdown would likely remain within the order of the natural fluctuation of the water table.

Pollution control and other preventative measures have been incorporated into the project design to minimise any adverse impacts to water quality. Mitigation drainage designs have been incorporated in the water management plans for the proposed works so that no residual significant impacts will occur on the water environment or on sensitive downstream aquatic receptors.

8.0 Climate

The Irish climate is subject to strong maritime influences, the effects decreasing with increasing distance from the Atlantic coast. The climate of the study area is typical of the Irish climate, which is temperate maritime. Impacts associated with the quarry will be from the day-to-day activities being undertaken at the site which will include the extraction and processing of rock, production of concrete and transport of material internally and off site to market. Vehicles and plant associated with these activities will give rise to CO₂ and N₂O emissions. Emissions associated with the development are assessed as having a slight impact over a long-term period.

It is proposed to implement energy audits in order to assess energy requirements and areas where energy usage can be reduced which will lead to a reduction in greenhouse gas emissions. Longford County Council have published a Climate Adaptation Strategy Plan in September 2019 and the proposed development will implement the strategy and guidance of the Plan where possible.

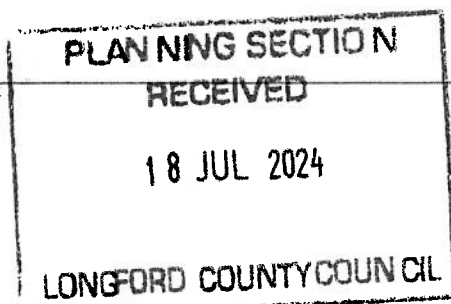
9.0 Air

Day to day activities have the potential to give rise to elevated dust levels if activities associated with extraction, processing, manufacturing of quarry products and transportation of product to market are not managed efficiently. The action of wind over dry ground can lead to particles being carried in the air. This can occur in most environments where particles are present.

There are a number of human receptors in the vicinity of the application site in the form of occupied dwellings. Vegetation, berms and the natural topography can act as breaks between a source and a receptor. Tree lines can also act as an efficient dust filter and can be a useful dust control safeguard.

Overburden stripping will be undertaken during periods of dry weather with some moisture and little or no wind to prevent dust blow. Emissions from drilling and blasting are generally relatively low and do not travel far from the source. The impact associated with this activity will be brief in duration and assessed to be imperceptible.

Processing can act as a point source of dust as it has the potential to generate dust emissions in a defined location. Aggregate stockpiled at the end of each conveyor attached to the processing plant is also a potential source of dust blow during dry windy conditions. This activity will be undertaken on a daily basis which will result in a slight impact on the air environment within the quarry boundary. Fugitive dust emissions generated during the aggregate processing, screening and stockpiling of material is confined to the zone within the quarry void. The manufacturing of concrete products is unlikely to lead to emissions to air as material used for the production of these products



is stored in bins with the mixed product loaded directly into vehicles used to transport the material.

Vehicle movements on the internal access/haul roads are a source of dust blow as emissions can increase rapidly in proportion to vehicle speed and traffic volume. The majority of dust particles, typically produced from un-surfaced roads, deposit rapidly within the immediate vicinity of the source. This activity is assessed as a slight localised impact; however, if mitigation measures are practiced such as dust suppression, the impact will be imperceptible. The operation of vehicle & plant will result in emissions to air which will result in a slight localised impact during the life of the permission.

The air quality assessment has been carried out following procedures described in the publications by the EPA and using the methodology outlined in the guidance documents published by the USEPA. An air dispersion model was created using input data which consisted of information on the physical environment, design details from all emission sources on-site and five full years of meteorological data. The model also took into consideration mitigating measures proposed for the site as follows:-

- A wheel wash which trucks must pass through prior to exiting onto the public road.
- A water bowser will be used during dry periods to dampen site roads.
- Speed restrictions will be in place for on-site roads.
- Stockpiles will be dampened during dry periods.

The modelling assessment found that there was an imperceptible impact on the ambient air quality environment as a result of the development and therefore further mitigation is not required. These mitigation measures will be enforced to prevent significant dust emissions from the site.

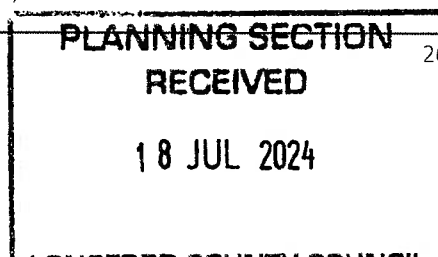
10.0 Noise & Vibration

Quarrying activity by its nature will generate noise and vibration on an ongoing basis, the level of emissions will depend on the nature of activity being undertaken. Day to day activities associated with the blasting, extraction, processing, manufacturing and transport of products have the potential to contribute to background noise levels

The EPA has produced Environmental Management Guidelines- 'Environmental Management in the Extractive Industry (Non-Scheduled Minerals) ²', 2006. This document references 'A Guidance Note for Noise in Relation to Scheduled Activities (EPA, 1996¹)'. It deals with the approach to be taken in the measurement and control of

² Quarries and Ancillary Activities, Guidelines for Planning Authorities Dept of the Environment, Heritage and Local Government April 2004

¹ Ref. EPA's Guidance Note for Noise In Relation to Scheduled Activities, 1996



noise and provided advice in relation to the setting of emission limits values and compliance monitoring.

In relation to quarry developments and ancillary activities, it is recommended that noise from the activities; it recommended that noise from the activities on site shall not exceed the following noise limits at the nearest noise-sensitive receptor:

Daytime	08.00-20.00 hrs	LAeq (1h) = 55dBA
Night-time	20.00-08.00 hrs	LAeq (1h) = 45dBA

95% of all noise levels shall comply with the specified limits values(s). No noise level shall exceed the limit value by more than 2dBA.

A baseline noise survey was carried out at some of the nearest receptors to the proposed development to assess existing noise levels in the area and to predict noise levels associated with the proposed development. These noise sources ranged from quarry activity, road traffic near and far, birds and local domestic activity normal in the everyday environment. Attendance at each noise monitoring location for periods allowed for interpretation to appropriate the noise levels generated by the quarry activity.

Calculations were then undertaken to predict the maximum noise levels at the nearest receptors associated with the plant and machinery operating at the proposed development during the construction, operational and decommissioning phases.

The noise levels associated with construction activity are predicted to be all well within the recommended guidelines values. This phase of the development will be for a period of 6-12 months.

The maximum predicted noise levels (in 1hr Leq dBA) when extraction and manufacturing is operating in tandem the noise levels at all receptors is given in Table 10.1. There is an assumption made that all plant will be working together which is unlikely to occur with 50% of plant working together the cumulative levels will be reduced at all receptors by 3dBA. The predictions are made as maximum levels with plant operating at the nearest location to all receptors. The predicted levels are below recommended guideline values at the various locations.

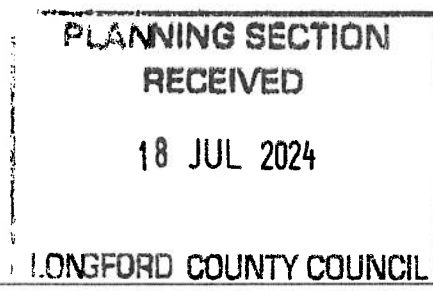


Table 10.1: Predicted maximum cumulative noise levels from extraction and manufacturing

Receptor	Extraction noise levels	Manufacturing noise levels	Drilling shot holes noise levels	Resultant cumulative noise level
N1	41.8	33.5	40.3	45.2
N2	42.0	32.6	40.7	45.4
N3*	40.9	50.8	45.4	52.3
N4	39.3	39.5	44.0	46.5
N5	30.8	39.3	45.1	46.3
N6*	40.8	46.8	40.5	48.7
N7	36.4	43.3	40.6	45.8
N8	38.4	43.1	43.3	47.1
N9	49.0	42.0	52.1	54.0

Drilling and blasting will be undertaken by competent contractors at predetermined times. Drilling involves the use of a mobile rig to drill holes through the upper rock surface. The impact associated with this activity will be brief in duration which will lead to a slight impact within the quarry boundary. Processing plant will consist of fixed and mobile processing plant. The unloading of material from the dump truck into the crusher and processing of material is a source of noise. The impact associated with processing will result in a moderate impact within the quarry boundary.

The transportation of material by trucks in and around and off site to market would also act as an intermittent source of noise and vibration. This activity is not predicted to cause a significant noise impact to the nearest sensitive receptors.

Blasting events are designed to ensure that blasts are within the recommended guideline values so as to not lead to an impact on nearest sensitive locations. Vibration monitoring will be undertaken during all blasting events to ensure that levels are within the recommended guideline values for peak particle velocity (12mm/s) and air over pressure threshold (125 dB(A)).

A number of mitigation measures, good site management and good working practices are in place to ensure that noise and vibration levels are kept to a minimum. Noise and vibration monitoring will be undertaken to ensure that levels associated day to day activities are within the recommended guideline values.

11.0 Traffic

The development generates a number of traffic movements associated with the transport of material to market, delivery of raw materials and employee related traffic. The proposed development will generate in the region of 73 truckloads per day associated with the transport of product to market. The distribution of development traffic was determined from discussions with the applicant based on his knowledge of the current operation of the Rhyne Rock Quarry and future projections.

All the quarry traffic will exit onto the L5097 for a distance of approximately 50 meters before meeting the R194 which links the quarry to Sligo/Mullingar via the N4 to the west and Cavan/Athlone via the N55 to the east.

Products that will be produced at the quarry will consist of graded aggregate, ready-mix concrete and concrete products. Aggregate trucks, concrete bottle trucks and concrete block trucks fitted with a grab will be used to transport products from the application site to the required destination.

In order to determine the magnitude of the existing traffic flows, the results of a manual classified junction turning counts was used. The traffic surveys were carried out by Traffinomics Limited. This survey distinguished between light good vehicles and heavy good vehicles. The results of this survey indicated that the peak traffic levels occurred between the hours of 08:30 and 09:30 and between 16:30 and 17:30.

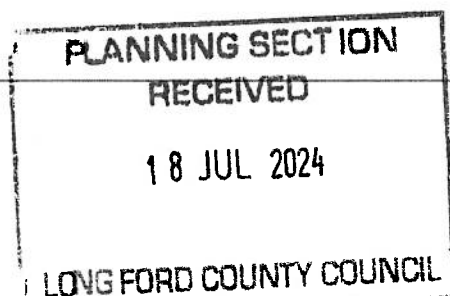
The quarry accesses will operate below the desired 0.85 RFC up to and including the design year of 2039, with the inclusion of quarry-generated traffic. Traffic arriving and departing for the quarry will have a high content of HGV movement. The assessments indicate that the site access is expected to operate well within capacity in all the assessment years. As the proposed development will generate the same traffic and replace the existing quarry traffic it will have an imperceptible effect on the existing site access and a no additional impact on the road network in the area

12.0 Landscape & Visual

A landscaping and visual assessment was undertaken to assess the impact of the proposed development on the surrounding landscape. This involved undertaking a visual impact assessment of the area and a desk-based study to gather information on the existing landscape, visual resource, planning context and landscape designations.

The County of Longford is subdivided into seven landscape character areas and the application site is located in Landscape Character Unit No. 4 'Central Corridor'. Sensitivity of the landscapes in this unit are generally LOW. Potential areas of MEDIUM to HIGH sensitivity exist in the vicinity of protected woodlands, riverbanks and in the vicinity of the Aquifer.

This area consists of the centre of the County and includes the settlements of Newtownforbes, Longford Town and Edgeworthstown extending in a northerly direction towards Drumlish in the west and Granard in the east. The southern boundary is mainly formed by the N4 National route from Longford to Mullingar. As with the rest of the County, the main landcover constituent in this unit consists of agricultural pastures.



The sensitivity of the landscapes in this unit is generally LOW. Potential areas of MEDIUM to HIGH sensitivity exist in the vicinity of protected woodlands, riverbanks and in the vicinity of the Aquifer.

The Longford County Development Plan includes a Protected View Map which illustrates all protective views within the county. These scenic views are of an amenity and tourism value and contribute to our quality of life. There are two distinct types of views identified Full (uninterrupted) and intermittent (broken or sporadic). The application site is located within proximity of FS2 and FS3 and IS11, however is not visible from these locations.

The proposed development is considered to have a Low Landscape Value as parts of the landscape are not unspoilt and have degrading elements such as man-made structures and infrastructure present. The landscape of the site of the proposed development is considered to have a Medium Landscape Susceptibility and a Medium Landscape Sensitivity.

The visibility of the application site was initially assessed by a desktop study of OS maps in order to identify potential viewpoints. This was followed up by a field survey where fourteen viewpoints were generally chosen to give a representative sample of views of the development within the landscape to illustrate the impact on local residential properties and on protected views, where relevant. The application site is not visible from the majority of locations due to the natural topography and the hedgerows growing along field boundaries. It is proposed to construct berms around the boundary of the application site which further aid in screening the application site.

The construction phase of the proposed development will be short in duration and will include the construction of a haul road and quarry infrastructure which will be located in the southern corner of the development. As part of the construction phase, the site's landscape will undergo some changes:

- A general site clearance to remove overburden and vegetation to construct the haul road and infrastructure.
- The use of construction machinery, cranes, excavators, dump trucks etc. operating on the site.
- Change in colour and form of topography due to the excavation, removal and storage of soils.

It is concluded that the proposed development will, therefore, have a minor to moderate, neutral to negative, short-term impact on the landscape character of the site during the construction phase mainly due to the removal of existing vegetation.

The operational phase of the proposed development will cause some negative landscape impact in the long term within the site due to the removal of the available resource. Once the quarrying is complete the applicant will vegetate areas around the open lagoon. The Site land use will become largely a scrubland and water deposit.

It is concluded that the proposed development and the implementation of the proposed mitigation measures will result in a negative, moderate, permanent effect on landscape.

Once quarrying has ceased and all stockpiled, plant and machinery has been removed, the groundwater levels will recover over time up to a level of approximately 43mOD. This level will fluctuate with the water table in the area over the seasons.

The existing perimeter berms and vegetation will be retained. Landscape work and planting as part of the restoration process will serve to reduce the long-term visual impact of the development.

The proposed landscape and restoration plan will reduce the impact of the proposed development on the landscape of the area and increase the biodiversity of the area with the creation of new habitats with the establishment of a man made lake associated with the quarry void filling with water to the natural groundwater table.

13.0 Material Assets

Material assets comprise of the physical resources in the environment, which may be of human or natural origin. As per the EIAR Guidelines (EPA, 2022), this Chapter address built services, roads & traffic and waste management in terms of material assets relative to the proposed development.

Built Services

The electricity connection to the existing quarry is a 200KV_a – 240v – 3 Phase over-head line which enters the existing quarry from the north near the entrance to the quarry. This connection at the existing quarry will be diverted to the proposed quarry manufacturing area via the proposed access road and will provide the principal energy supply.

An overhead telecommunications line services the existing quarry and dwellings houses to the east of the application site along the L5097 road. A connection will be obtained from this line to serve the administrative infrastructure located at the application site.

Water Supply Infrastructure - A water connection will be obtained from an existing Irish Water main that runs along the L5097 road. This connection will provide a potable water supply to the office and canteen. Production water for dust suppression,

concrete production, aggregate washing etc. will be sourced from the quarry sump. Excess water collected in the quarry sump will be discharge periodically from the proposed quarry via a drainage ditch running alongside the south-western which will ultimately flow to the Camlin River.

A wastewater treatment system will be installed at the application site which will treat effluent toilet and welfare facilities at the proposed development. The facility to be installed will be specified based on the results of a site suitability assessment.

Roads & Traffic

Access to the application site will be via a new proposed gated entrance off the L5097 Local Road. The L5097 connects to the R194 Regional Road approximately 120m north west of the proposed new quarry entrance. The R194 is the main Longford to Granard road and links the quarry to Sligo/Mullingar via the N4 and Cavan/Athlone via the N55. There will be no net increase in quarry traffic on he public road as quarry related traffic will transfer from the existing quarry to the application site once operational.

Waste Management

Waste generated at the application site will consist of general/domestic waste, garage waste and extractive waste. General/domestic and garage waste will be collected by appropriately permitted collectors and brought to permitted licensed facilities. Extractive waste consists of the overburden removed to extract the underlying resource. This material will be used to construct berms around the boundary of the site and retained for restoring the site on cessation of the works.

Proposed management measures in relation to quarrying activities are listed in various sections of the EIAR. These measures will aid in reducing the impact of quarrying activity.

14.0 Cultural Heritage

The archaeological and cultural heritage component of an Environmental Impact Assessment Report consisted of a paper and fieldwork assessment which was carried out in September – October 2021. A wide variety of paper, cartographic, photographic and archival sources was consulted. All the lands impacted by the proposed development were visually inspected. There is no archaeology, cultural heritage or buildings of heritage interest known in the application area. There will be no direct or indirect impacts on any known items of archaeology, cultural heritage or buildings of heritage interest in the application area or the vicinity during any phase of the proposal. In the worst-case scenario soil stripping in the application area during the construction stage might disturb previously unknown subsurface deposits or artefacts without preservation by record taking place. Due to the possibility of the survival of previously

unknown subsurface archaeological deposits or finds within the application area, all soil-stripping will be archaeologically monitored.

15.0 Interactions/Inter-relationships

When examining the interactions of the impacts for the development one must investigate the Inter-relationships which relate to the interactions between impacts within a project and the interactions between impacts identified under one topic with impacts identified under another topic. Each of the various environmental and related topics have been discussed separately in the sections of the EIAR where the major interactions between the recorded environmental impacts are assessed. In examining the interactions of the potential impacts for this development one must investigate the combined physical, environmental, visual and socio-economic impact of the development on the receiving environment. Table 15.1 illustrates the interaction of impacts assessed for this project.

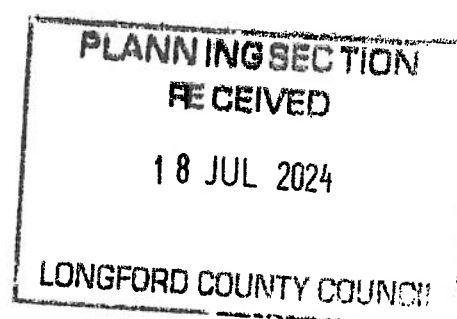


Table 15.1: Interactions

	Pop. & Human Health			Biodiversity			Land, Soils & Geology			Water			Climate			Air			Noise			Traffic			Landscape			Material Assets			Cultural Heritage		
	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D			
Pop. & Human Health																																	
Biodiversity																																	
Land, Soils & Geology					✓																												
Water		✓			✓			✓																									
Climate		✓																															
Air		✓			✓			✓			✓			✓																			
Noise		✓			✓																												
Traffic		✓																															
Landscape		✓			✓			✓																									
Material Assets		✓																															
Cultural Heritage																																	

Weak Interaction = ✓ Some Interaction = ✓ Strong Interaction = ✓

C = Construction Phase O = Operational Phase D = Decommissioning Phase

The assessment revealed that if mitigation measures proposed are implemented and adhered to it is unlikely that there will be no significant adverse impacts to the area as a result of the proposed development and related activities. A summary of mitigation and monitoring measures has been compiled and included in Section 16.0 of the EIAR. These will be extended or implemented at the development and audits will be undertaken to ensure that measures are in place.

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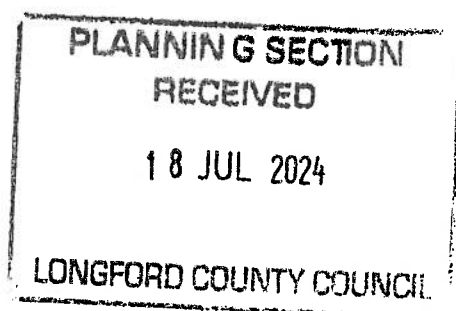
18 JUL 2024

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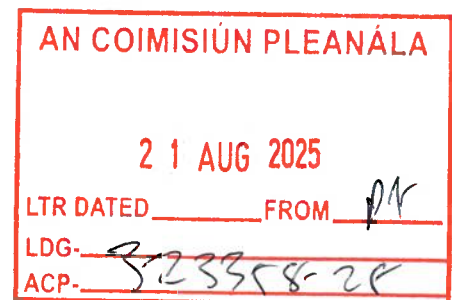
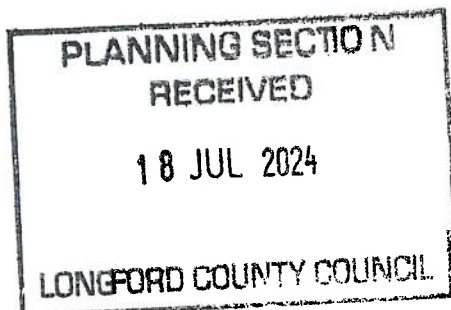
16.0 Mitigation & Monitoring Summary

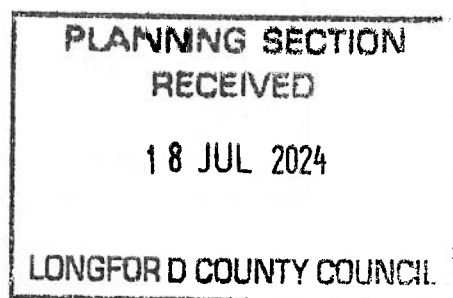
This section provides a summary of the mitigation measures proposed in order to avoid, reduce or remedy the potential impacts identified and a summary of monitoring proposed is listed in section 16 of the EIAR, to ensure that mitigation measures are effective.

Environmental monitoring will be carried out in accordance with those specified in each relevant section of the EIAR together with the requirements of the conditions attached to the grant of planning permission and discharge licence to ensure that levels are within recommended guideline values.



Figures





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Site Location



Legend

LONGFORD COUNTY COUNCIL

OSI Discovery Map Ref. No. 41

ITM Coordinates E 619157, N 797936

EARTH SCIENCE PARTNERSHIP
 (01) 452 0000 or 01 452 0001
 www.earthsciencepartnership.ie
 e-mail: earthsciencepartnership@gmail.com

Client: Blessington Stone & Concrete
 Plant Hire Limited, trading as
 Ryan's Rock

Project: Non-technical Summary to accompany a Planning application consisting of a total area of 18.6 hectares and comprises of the following:
 Extraction of rock by blasting means from an area of approximately 14.2 Ha.

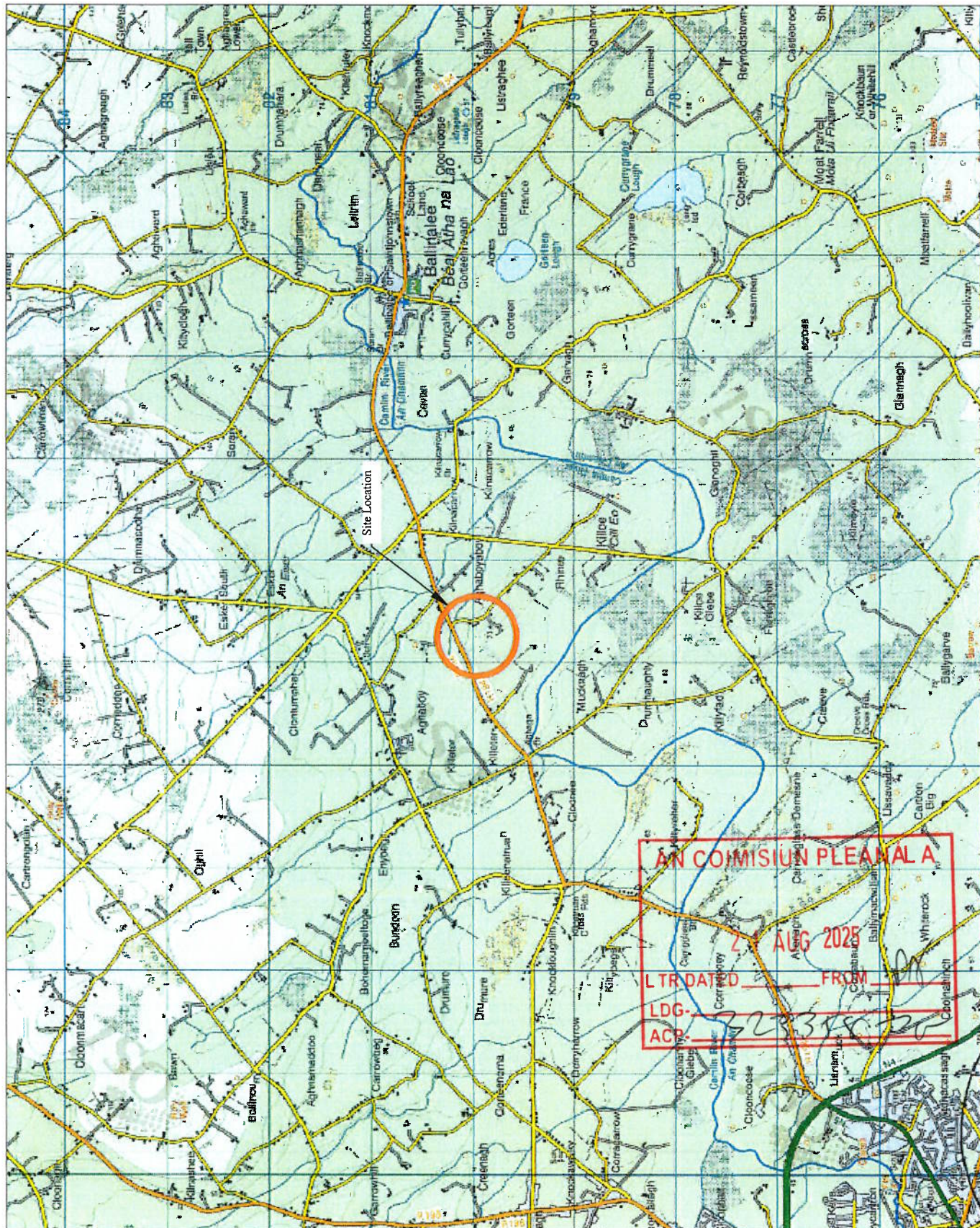
Erection of a concrete batching plant, processing plant, block yard, storage sheds, workshop, office buildings, weighbridge, wheelwash, settlement lagoon and all other associated ancillary facilities at the manufacturing area. Access road from entrance to the manufacturing area. Landscape and restoration of the site. Planning permission for a 25 year period and all associated ancillary facilities located at Rhine, Killoe, Co. Longford.

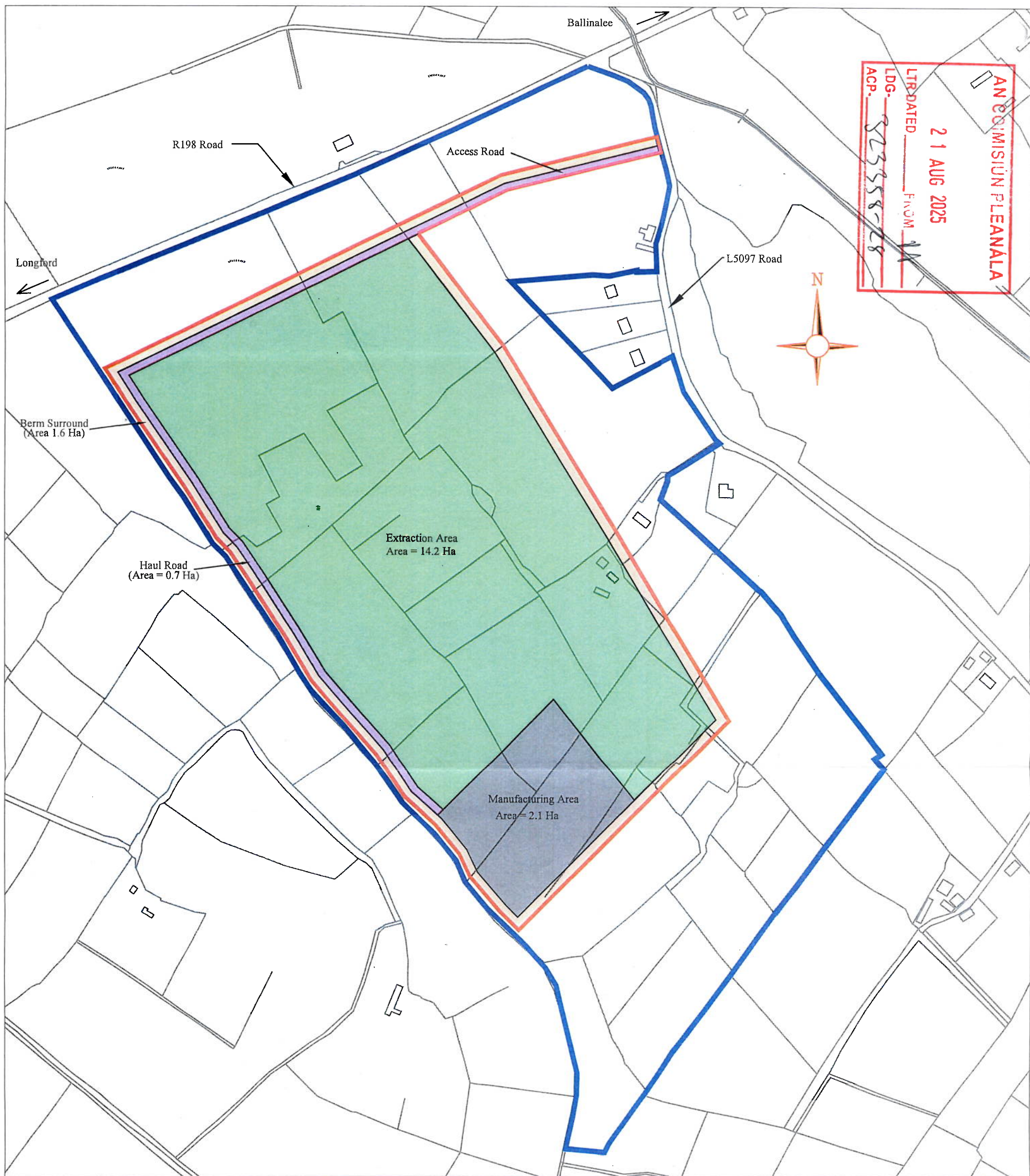
Title: Site Location Map
 Drawn By: P. O'Donnell

Scale: 1:50,000 @ A4 Date: May 2024

Job No: EI 161 Rev: 0

NTS Figure 1





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Legend

Ownership/Consent Boundary

Application Area

Area = 18.6 Ha

OS Sheet Ref. No. LD 009

ITM Coordinates E 619157, N 779736

- Extraction Area = 14.2 Ha
- Manufacturing Area = 2.1
- Landscaping Berm Surround
- Entrance & Access Road = 0.7 Ha

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EARTH SCIENCE PARTNERSHIP

TONRANNY WESTPORT CO. MAYO
Tel: +353(0)98 28999 Fax: +353(0)98 24727
e-mail: earthsciencepartnership@gmail.com
Online Survey Licence Copyright Licence No.: CYAL503/3507

Client: Blessington Stone & Concrete Plant Hire Limited, trading as Rhine Rock

Project: Non-Technical Summary to accompany a Planning application consisting of a total area of 18.6 hectares and comprises of the following: Extraction of rock by blasting means from an area of approximately 14.2 Ha. Erection of a concrete batching plant, processing plant, block yard, storage sheds, workshop, office buildings, weighbridge, wheelwash, settlement lagoon and all other associated ancillary facilities at the manufacturing area. Access road from entrance to the manufacturing area. Landscape and restoration of the site. Planning permission for a 25 year period and all associated ancillary facilities located at Rhine, Killoe, Co. Longford.

Title: Planning Application Area Map

Drawn By: P. O'Donnell

Scale: 1:5,000 @ A4

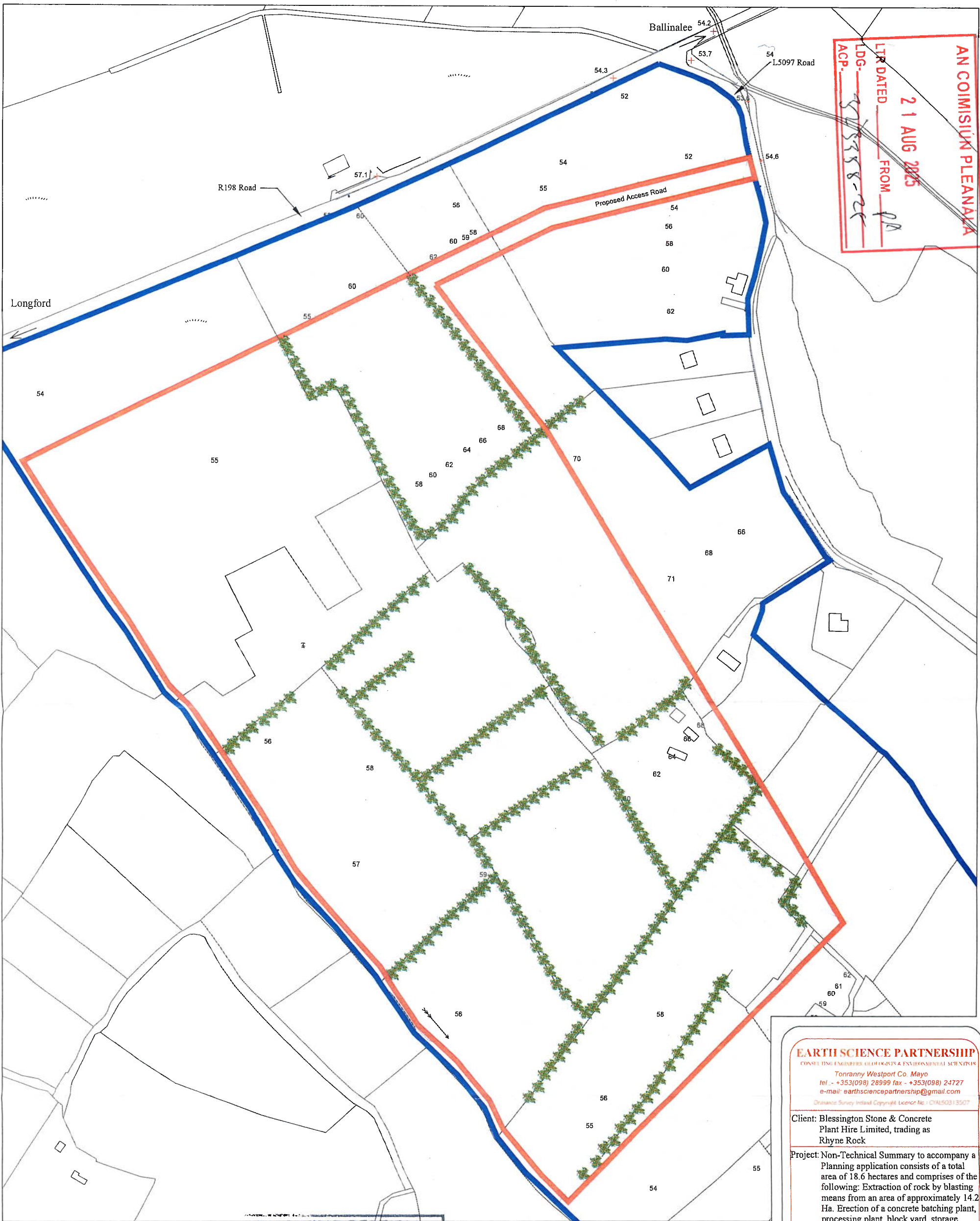
Job No: EI 161

Date: May 2024

Rev: 0

NTS Figure 2

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21 AUG 2025
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ACP-50538-2C



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Legend

Ownership/Consent Boundary

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LONGFORD COUNTY COUNCIL



Application Area
Area = 18.6 Ha



OS Sheet Ref. No. LD 009
ITM Coordinates E 619157, N 779736
All Levels Relative to Ordnance Datum

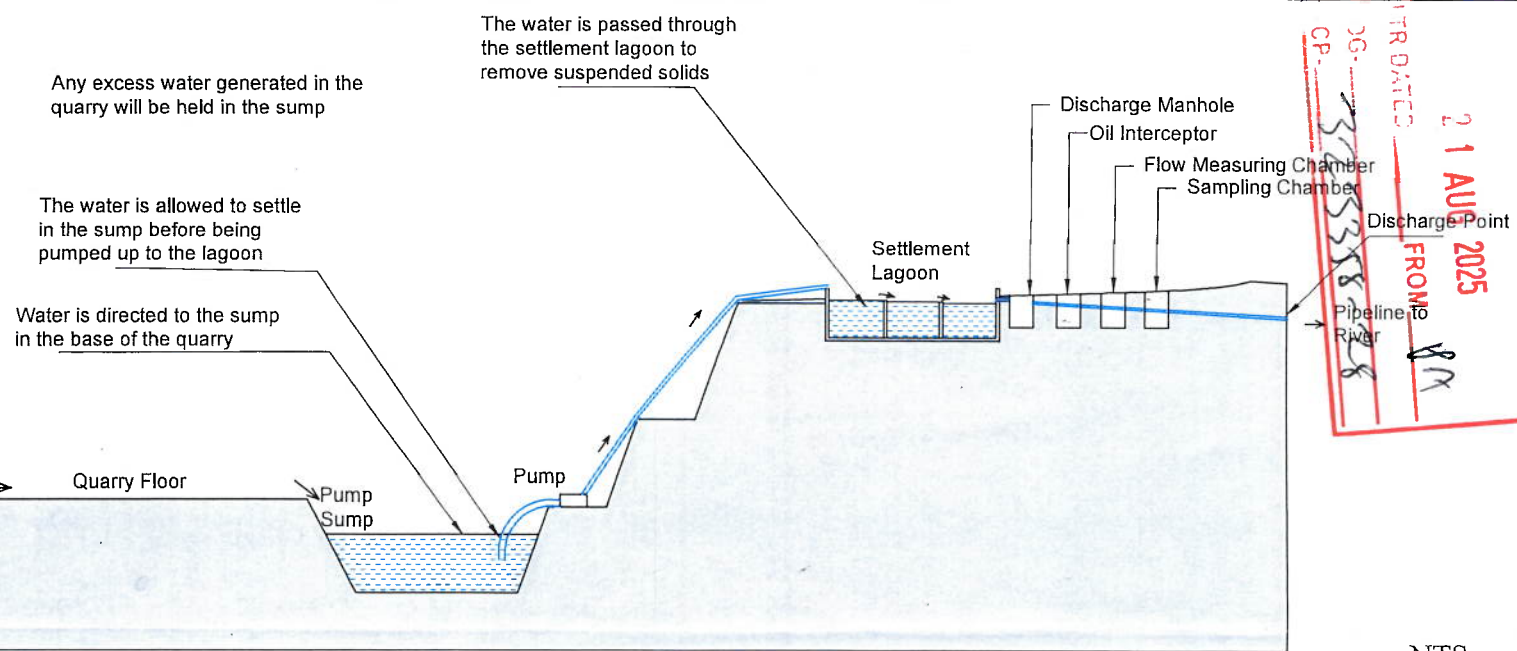
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CONSULTING ENGINEERS, GEOLOGISTS & ENVIRONMENTAL SCIENTISTS
Tonranny Westport Co. Mayo
Tel: +353(0)98 28999 fax: +353(0)98 24727
e-mail: earthsciencepartnership@gmail.com
Ordnance Survey Ireland Copyright Licence No: CYAL50813507

Client: Blessington Stone & Concrete Plant Hire Limited, trading as Rhyme Rock
Project: Non-Technical Summary to accompany a Planning application consists of a total area of 18.6 hectares and comprises of the following: Extraction of rock by blasting means from an area of approximately 14.2 Ha. Erection of a concrete batching plant, processing plant, block yard, storage sheds, workshop, office buildings, weighbridge, wheelwash, settlement lagoon and all other associated ancillary facilities at the manufacturing area and all associated ancillary facilities located at Rhine, Killoe, Co. Longford.

Title: Existing Site Layout Map
Drawn By: P. O'Donnell
Scale: 1:2,500 @ A3 Date: May 2024
Job No: EI 161 Rev: 0
NTS Figure 3

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21 AUG 2025	
LTR DATED	FROM
LDG.	323358-25
ACP.	

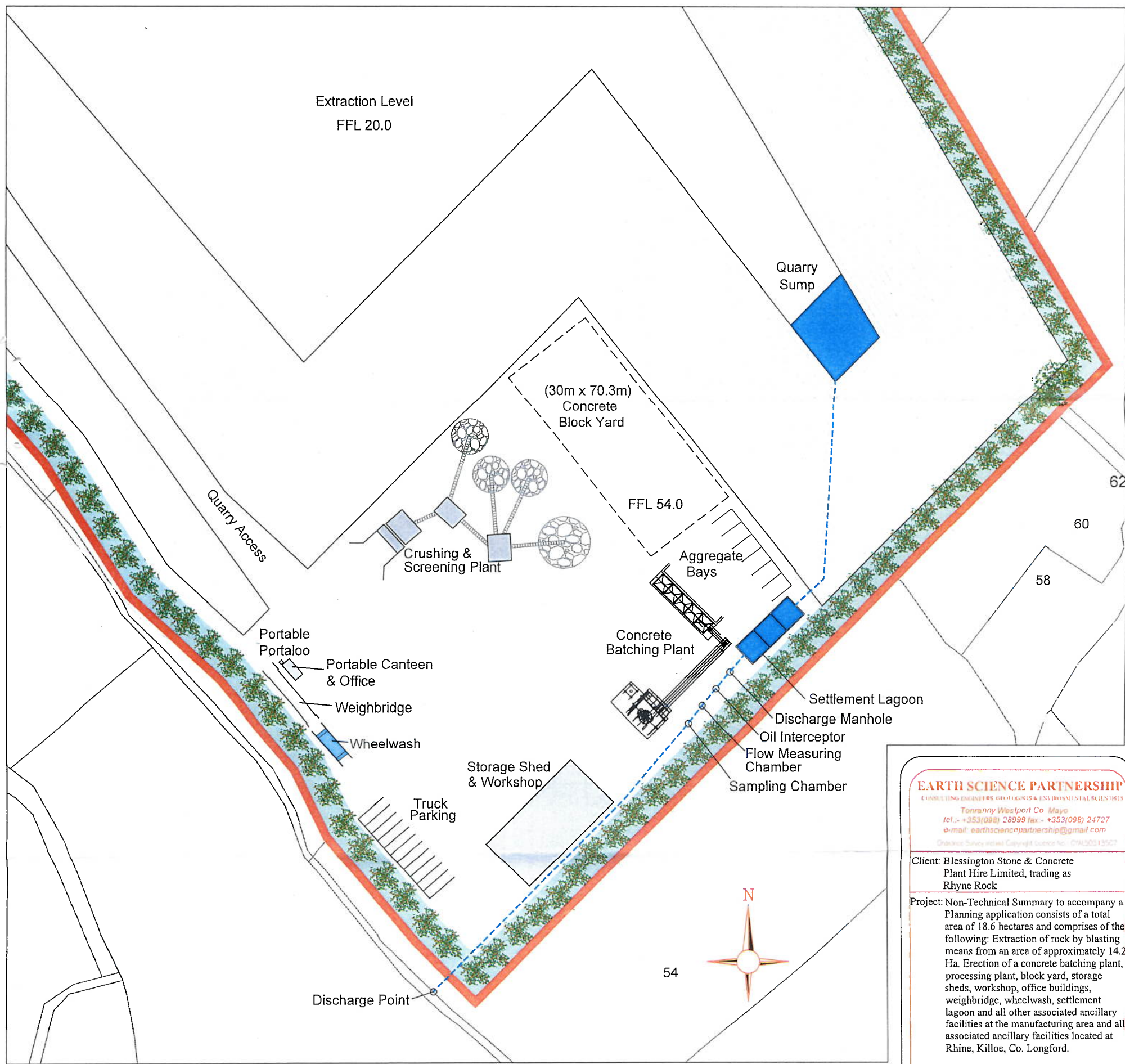
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21 AUG 2025
FROM
CP
30-33388

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NTS



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e-mail: earthsciencepartnership@gmail.com
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Client: Blessington Stone & Concrete Plant Hire Limited, trading as Rhyme Rock

Project: Non-Technical Summary to accompany a Planning application consists of a total area of 18.6 hectares and comprises of the following: Extraction of rock by blasting means from an area of approximately 14.2 Ha. Erection of a concrete batching plant, processing plant, block yard, storage sheds, workshop, office buildings, weighbridge, wheelwash, settlement lagoon and all other associated ancillary facilities at the manufacturing area and all associated ancillary facilities located at Rhine, Killoe, Co. Longford.

Title: Proposed Layout of Manufacturing Yard

Drawn By: P. O'Donnell

Scale: 1:1,250 @ A3

Date: May 2024

Job No: EI 161

Rev: 0

NTS Figure 5

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Legend

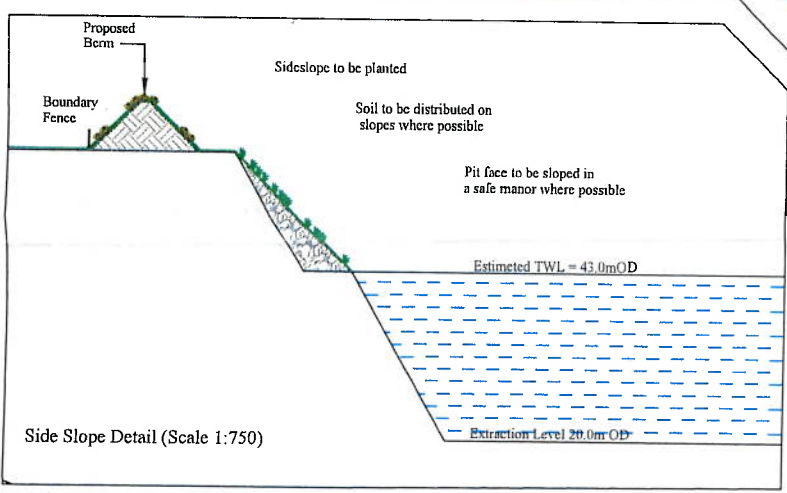
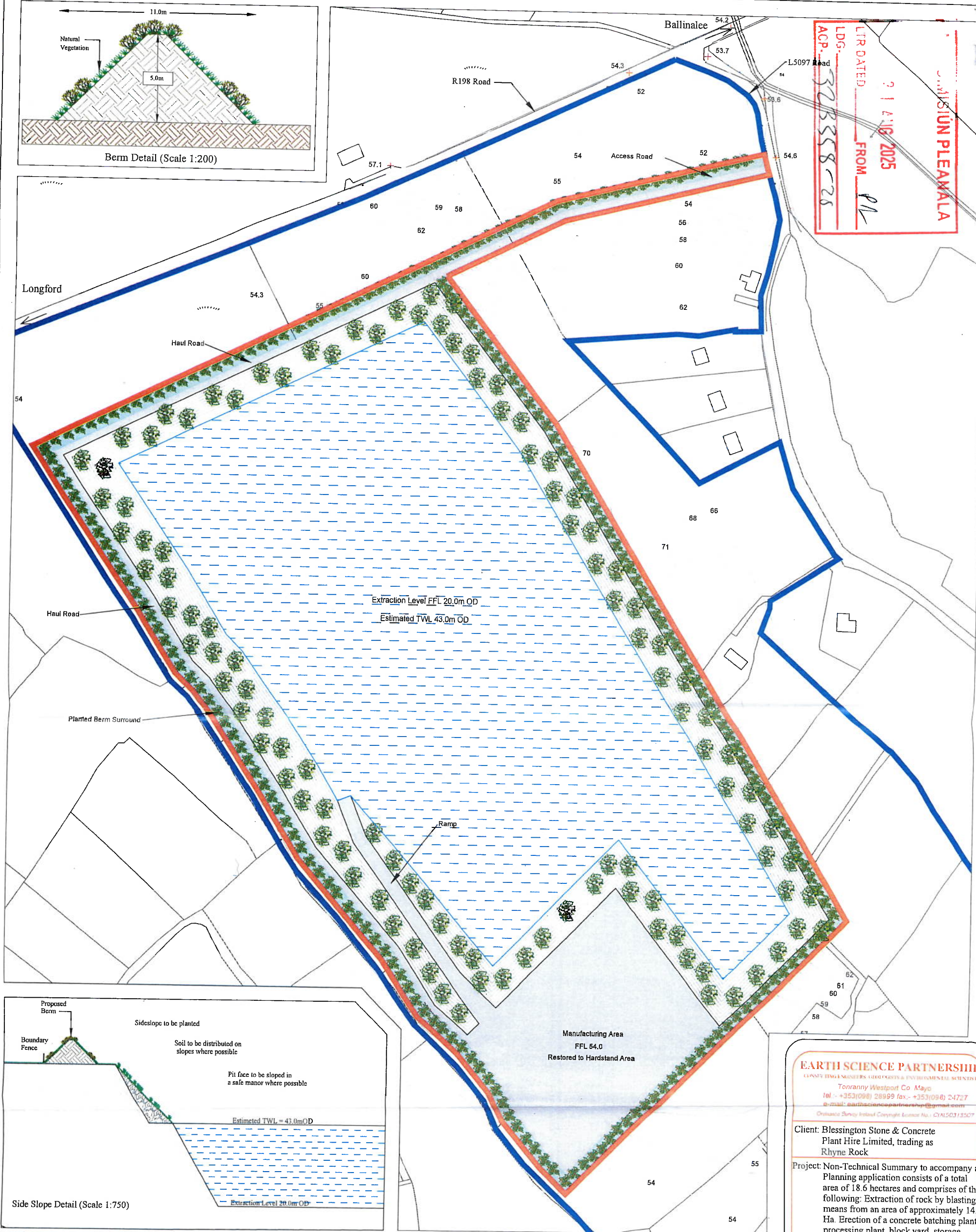
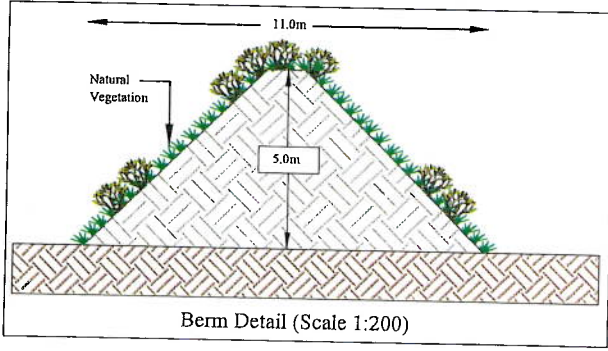
Planted Berms (Vegetation)

Application Area
Area = 18.6 Ha

OS Sheet Ref. No. LD 009
ITM Coordinates E 619157, N 779736
All Levels Relative to Ordnance Datum

LTR DATED 21.4.18.2025
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 LDG. 323558-25
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 e-mail: earthsciencepartnership@gmail.com
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Client: Blessington Stone & Concrete
 Plant Hire Limited, trading as
 Rhyne Rock

Project: Non-Technical Summary to accompany a
 Planning application consists of a total
 area of 18.6 hectares and comprises of the
 following: Extraction of rock by blasting
 means from an area of approximately 14.2
 Ha. Erection of a concrete batching plant,
 processing plant, block yard, storage
 sheds, workshop, office buildings,
 weighbridge, wheelwash, settlement
 lagoon and all other associated ancillary
 facilities at the manufacturing area and all
 associated ancillary facilities located at
 Rhine, Killoe, Co. Longford.

Title: Proposed/ Restored Site Layout Map

Drawn By: P O' Donnell

Scale: 1:2,500 @ A3 Date: May 2024

Job No: EI 161 Rev: 0

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Legend

Ownership/Consent Boundary

- Application Area
Area = 18.6Ha
- Vegetated Side Slopes
- Water
- Haul Road / Manufacturing Area
- Planted Berms

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OS Sheet Ref. No. LD 009
 ITM Coordinates E 619157, N 779736
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