NON TECHNICAL SUMMARY

1 Background

This remedial Environmental Impact Assessment Report (rEIAR) has been prepared to accompany an application to An Bord Pleanála for substitute consent planning permission) in respect of a quarry development located within the townland of Drumbeagh, Mountcharles, Co. Donegal, (Latitude 54.653 Longitude -8.234). Gabriel Murray is the applicant trading under the name 'Murray Stone'.

The development consists of a quarry located on a 3.45-hectare site in the rural townland of Drumbeagh. The site is located immediately north of the N56 between the villages of Mountcharles and Inver. The site is approximately 2.5 km west of Mountcharles, 3 km east of Inver and 1.7 km south of the villages of Frosses. The site is accessed off a local slip road immediately off the N56. The site is surrounded by a mixture of poor-quality agricultural land, improved agricultural grassland and one-off rural houses and farmsteads. There are also peatlands and isolated forestry blocks in the surrounding area.

Figure 1.1 shows the location of the quarry in a regional context.

Figure 1.1: Location in a regional context

CYAL50381113 © Ordnance Survey Ireland/Government of Ireland

1.1 Environmental Impact Assessment (EIAR)

Planning regulations require that certain types of projects be subject to Environmental Impact Assessment as part of the planning consent process. The report on this assessment is called a remedial Environmental Impact Assessment Report (rEIAR). The purpose of an rEIAR is to publicly provide information about the effects of the project on the environment and allow An Bord Pleanála to make a determination as whether to grant consent for previous activities/development.

It has been recognised that a rEIAR can become quite large and complex in order to satisfy these legal requirements. This can make people feel unable to easily understand what the effects of the project will be. To try to address this problem, the regulations also require the preparation of a summary, in non-technical language, of the main content and findings of the rEIAR, to be submitted to An Bord Pleanála with the substitute consent application.

The following pages provide a non-technical summary of the main information that is contained in the rEIAR. It is laid out in the same order and using the same headings as the rEIAR. If you feel that you need to know more about any topic that is summarised here, you can look it up under the same heading in the main rEIAR. Here are explanations of a key terms that are used and may need some clarification:

EIA	Environmental Impact Assessment – The process of preparing and assessing potential environmental impact
rEIAR	remedial Environmental Impact Assessment Report – The document that describes the environmental impacts
Scope	The coverage of the rEIAR
Likely Impacts	Effects that are likely to occur
Mitigation Measures	Steps taken to avoid or reduce unwanted effects

2 Project Description

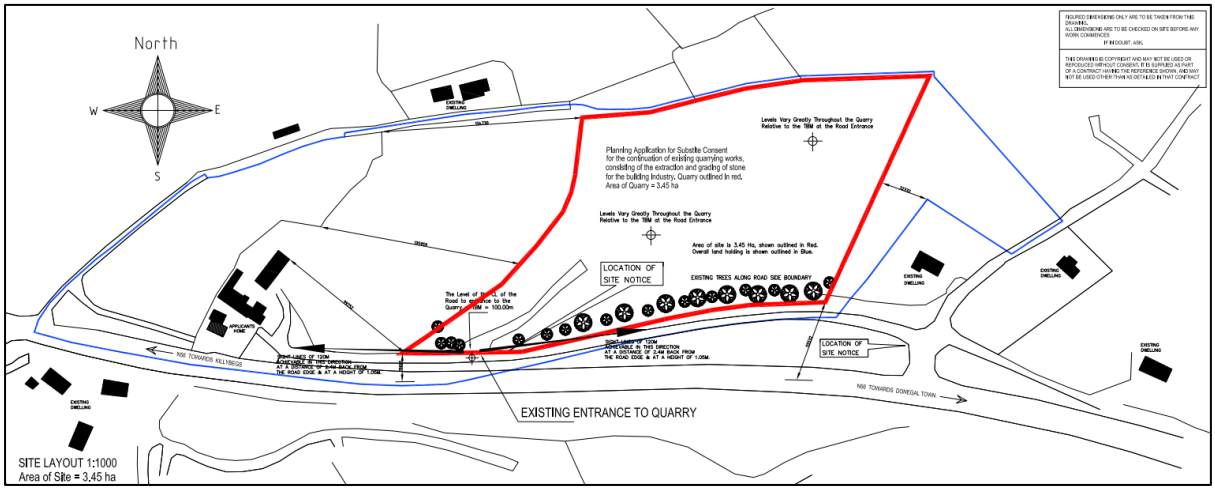
See Chapter 3 of the rEIAR for full details.

The quarry contains a central access road leading to the main quarry deck where stockpiles of product are stored on pallets and tonne bags awaiting collection. This central area is also used to park vehicles and to access the working quarry faces.

There is a small processing area in the east of the site where stone is cut to size. Within this processing area there is a guillotine and a circular saw. Both these fixed pieces of plant are covered by temporary sheds. The circular saw area is serviced by a concrete surround graded towards a central sump which collects the runoff from this area. Effluent within the sump is periodically emptied into the main settlement tank via a portable pump. Sludge at the base of the sump is periodically cleaned out by an authorised waste collector and disposed at a licenced facility.

The location of this site infrastructure is shown on the main site layout drawing in Figure 2.1 below.

Figure 2.1: Site layout



(Extract from Drawing provided by McMullin Associates)

2.1 Extraction

Extraction of the product is by mechanical means using a ripping claw on an excavator. Occasionally boulders have to be broken down further using an impact breaker mounted on an excavator down into smaller more manageable pieces. In the distant past, the applicant states that occasionally blasting occurred on site to win rock. The practice was discontinued after it was seen to induce unwanted fracture patterns into the rock lessening its value as cut-stone product. There are no further plans to blast at the site. Material has been extracted in benches in line with the Safe Quarry Guidelines to the Safety, Health and Welfare at Work (Quarries) Regulations 2008 (S.I. No. 28 of 2008).

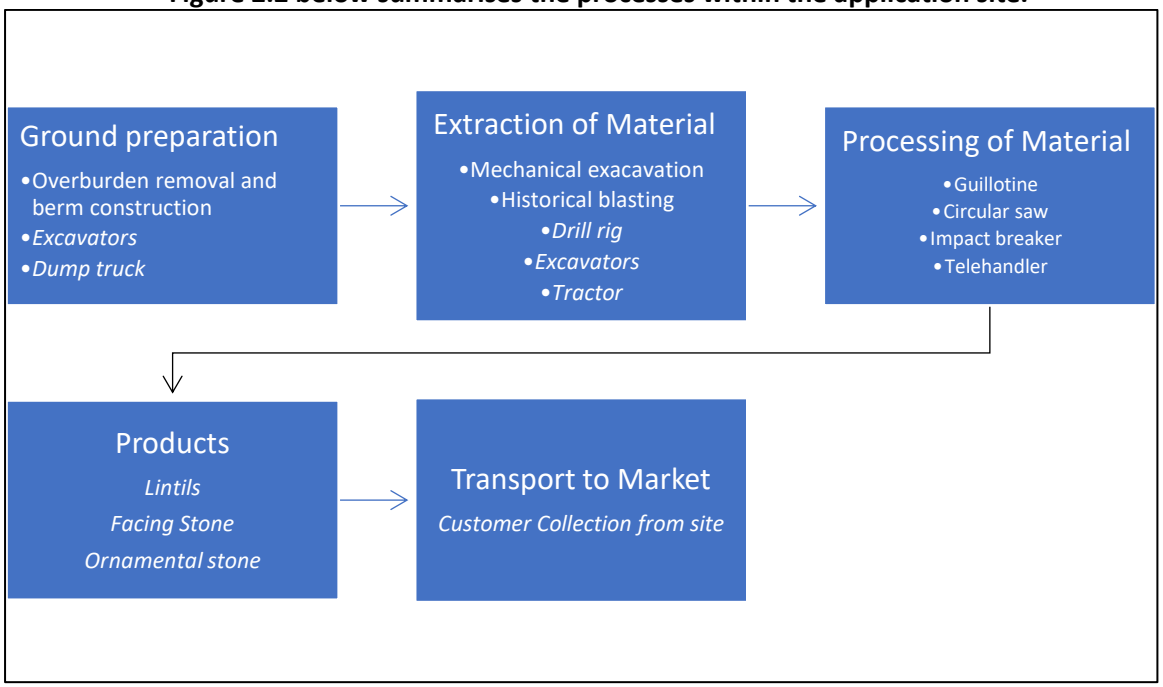
2.2 Processing

Won rock is then transported using excavator bucket or telehandler to the guillotine area. Rock is then guillotined by hand and stacked on pallets ready for collection. Some rock pieces are cut with a circular saw to size and then stacked on pallets ready for collection.

2.3 Product Collection/Delivery

Murray Stone do not have any delivery vehicles. Most customers are long-standing and collection arrangement are in place whenever sufficient product is available. Product is either stacked on pallets, or in tonne bags and loaded onto customer lorries with the on-site telehandler. On average, there is one lorry pick-up (rigid or articulated) from site. There are also occasional smaller loads collected from the site by customers (on average one per week). These are usually done in smaller pick-up 3.5 T lorries or using vans and trailers. Figure 2.2 summarizes the main activities on site.

Figure 2.2 below summarises the processes within the application site.



2.4 Environmental Management

Effluent from the main extraction areas is collect in the main settlement pond whereby any suspended solids settle out of solution and clean water is discharged through an open vegetated channel to a tributary of the Eany Water River.

The processing area is covered in a concrete base. All effluent is directed into a central sump. Water is recycled for use in cooling the cutting saws or utilised for dust suppression in times of prolonged dry weather. No fuels or lubricants are stored on site. Strict refueling protocols are adhered to.

2.5 Site Management

Working hours are 8am – 5pm Monday to Friday. The quarry is shut on Saturdays, Sundays and Public Holidays. The applicant provides employment for approximately 2-3 people directly. Canteen, toilet and welfare facilities are provided at the applicant home approximately 130 m west of the quarry entrance. There is no electricity supply or mains water supply to the site. There is no telecommunications connection to the site.

3 Environmental Effects

The following headings summarise each of the environmental topics that are examined in the rEIAR.

3.1 Population and Human Health

See Chapter 5 of the EIAR for full details.

3.1.1 Overview

This section focuses on Population including potential direct and indirect effects of the proposed development regarding principal socio-economic indicators, including population, land use, employment, tourism and residential amenity. It also assesses the potential effects on human health associated with the development.

3.1.2 Impacts

The quarry is located in an area which consists of one-off dwellings and farmhouses situated along local and minor roads in the vicinity. There has been a number of houses built in the vicinity of the quarry in recent years which demonstrates that quarrying activity to date has not deterred people from living in the area.

Murray Stone is a small but significant employer in the area with 2-3 local people directly employed at the quarry site. The quarry supplies products to the construction industry in Donegal and throughout the northwest of Ireland. Therefore, the quarry is deemed to have had a positive impact on the local community in terms of employment levels. Security fencing, screening and other landscaping around the perimeter has secured the site from unauthorised access.

Sampling and analysis of receiving waters have shown there to be no negative impact from the quarry activities. The discharge of water off site to a tributary of the Eany Water River system stream is proposed to be licenced and controlled by way of a discharge licence application to Donegal Co. Co. In addition to the discharge licence, a hydrocarbon interceptor is proposed to be installed into the drainage system on site to add a further layer of protection to the receiving natural waters. The assessments concluded that given the mitigation proposed, there will be no significant impact on surface water or groundwater.

Noise limits have been, and will be, complied with at all times. The human health effect for all receptors arising from noise and vibration are assessed as being imperceptible. Dust deposition monitoring was undertaken at the boundaries of the site and shown to be compliant with the relevant guideline value of 350 mg/m2/day. The day-to-day activities undertaken at the quarry were assessed and provided that mitigation measures are adhered to the impact on human health associated with these activities are assessed as being imperceptible.

3.2 Biodiversity

See Chapter 6 of the EIAR for full details.

3.2.1 Overview

This section assesses the likely significant effects that the proposed development may have on Biodiversity, Flora and Fauna and sets out mitigation measures to avoid, reduce, or offset any potential significant effects that are identified. A combination of desk-based research along with baseline ecological surveys were undertaken at the proposed site over a 12-month period from July 2023 – July 2024. Field surveys included habitat surveys (which included surveying for invasive species), mammal surveys, bird survey and bat habitat assessment to aid in identifying Key Ecological Receptors (KERs). KERs are defined as sensitive sites, habitats, ecological features, species or individuals that occur within the vicinity of a proposed development upon which effects are likely. Particular attention has been paid to species and habitats of ecological importance. These include species and habitats with national and international protection under the Wildlife Acts 1976 to 2018 (as Amended), EU Habitats Directive 92/43/EEC as amended and EU Birds Directive 2009/147/EC.

3.2.2 Impacts

Impacts identified on KERs from the proposed development include habitat loss from stripping works and rock extraction, water quality degradation through unregulated release of suspended sediment and hydrocarbon pollution, spread of invasive species (stands of Himalayan Knotweed and Giant Rhubarb were identified within the site) disturbance to fauna from dust/noise from clearance works and impacts on air quality from dust emissions.

A comprehensive suite of mitigation measures is listed within chapter 6 to counteract the potential impacts of the loss of habitat, spread of invasive species, disturbance from dust/noise and air emissions generated by the construction/operational phase on flora and fauna and the contamination of surface waters through sedimentation/hydrocarbon pollution. Some of these mitigation measures have been, and continue to be, in place, and some are proposed. The main mitigation measures proposed to protect the wider environment are regularization of the effluent capture and treatment system within the site, application for a trade discharge licence, installation of a hydrocarbon interceptor and various measure to reduce dust and noise generation.

Potential impacts on biodiversity, flora and fauna with the exception of habitat loss have all been assessed as imperceptible post mitigation. Loss of habitat associated with the proposal is assessed as slight negative.

3.3 Land, Soils and Geology

See Chapter 7 of the EIAR for full details.

3.3.1 Overview

This section presents baseline information on land, soils and the geological environment and to then assess potential impacts, assign mitigation measures and then reassess the potential residual impacts. The only undisturbed soils remaining on the site are in the far eastern side where extraction has not taken place. Almost all ground has been stripped of soil for excavation or for the creation of other site infrastructure. Pre-development the site is most likely to have been covered by the same soil type as that remaining in the east of the site – poorly drained mineral soils (mainly acidic). The bedrock geology is a buff/brown sandstone and a blue sandstone both belonging to the Mullaghmore Sandstone Group.

Quarrying activity in the general area has been noted since the 1200's when the Mountcharles Sandstone Mine was first active. There are records of quarrying on the site on maps drawn up in the late 1800's and early 1900's. It can be assumed that quarrying, although likely to have been sporadic, has been ongoing on the site for at least 100 years.

There are two County Geological Sites near the application site:

- The nearest County Geological Site is the Mountcharles Sandstone Mine c. 1.5 km northeast of the site. The Mountcharles Sandstone Mine (DL029) is an old sandstone mine with extant adits and excellent exposures of the Mullaghmore Sandstone Formation.
- Doorin Point (DL012) is located c. 3.2 km southwest of the site, where there are good exposures of the Bundoran Shale Formation and composite dolerite dyke along a 6 km length of coast which exhibits coastal erosion.

3.3.2 Impacts

The development of the existing quarry to date has involved the stripping of soils and overburden followed by the extraction and processing of rock. This has taken place within the footprint of the current quarry. Removal of soils and subsoils to facilitate extraction of further bedrock is considered to be an impact of moderate significance, largely due to the areal footprint. The removal of soil/subsoil will remove the capacity of the subject lands to provide agricultural production. Soil/subsoil stockpiled in perimeter berms shall be reused or integrated as a fundamental part of site restoration.

Extraction of bedrock within the current application site and associated activities such as mechanical removal of rock will have a direct impact on the geology of the sandstone within the bedrock extraction area. This is therefore considered to be a direct and permanent impact to

bedrock. The significance of the continued extraction of bedrock from this geological unit is considered to be significant/moderate, again as a function of scale. There is potential for contamination of exposed overburden and bedrock as a result of spillages and leakages. Providing adequate mitigation control measures have been, and are, in place, the risk of such is deemed to be negligible.

3.4 Water

See Chapter 8 of the EIAR for full details.

3.4.1 Overview

The purpose of this section is to present the baseline hydrological and hydrogeological environment and to then assess potential impacts, assign mitigation measures and then reassess the potential residual impacts.

The site lies with the catchment of the Eany Water River System and discharge is made from the quarry to the tributaries of the Eany water. The discharge is made via settlement ponds to ensure that any potential suspended sediment load within the site effluent has had sufficient time to settle out. Attenuation calculations were carried out to estimate residence time both currently and historically to demonstrate the effectiveness of the settlement ponds on site. Some minor unregulated flows were noted within the quarry which were directed to the open discharge channel which was heavily vegetated and provided appropriate attenuation. Effluent from the processing area is captured in a central sump which is a closed loop system with no discharge.
The site overlies a locally important sandstone aquifer where yields are reported to be moderate to good. Boreholes were commissioned to assess groundwater levels and quality. Water quality monitoring was carried out of the surface waters and groundwater and the results have shown that there was no negative impact to the surface water or groundwater environment.
The site was shown not to be in an area of flood risk.

3.4.2 Impacts

A series of surface water testing was carried out and demonstrated that current and historical activity had been unlikely to cause any negative impact on the water quality of the receiving waters. Water quality testing was also carried out on the groundwater underlying the site and demonstrated that historic oil leaks had not impacted on groundwater quality.
A range of mitigation measures have been in place for existing activities and additional mitigation measures are proposed to provide an extra layer of protection of the surface water and groundwater regimes. Thes additional mitigation measures include a regularized effluent capture system to direct all flow to the main settlement pond, installation of a hydrocarbon interceptor and application of a trade discharge licence from Donegal County Council. Procedures and infrastructure are in place for the refueling of plant and vehicles and storage of fuels/lubricants off-site.

It is concluded that, with the application of the specified mitigation measures, there has been, and will be, no residual impact on the water environment.

3.5 Noise & Vibration

See Chapter 9 of the EIAR for full details.

3.5.1 Overview

Quarrying has the potential to cause noise impacts through all stages. Heavy machinery/plant is required to strip soil/subsoil from the new extraction areas. Periodic blasting was used up until 2007 to fracture the rock resource into manageable pieces. A ripping claw on an excavator and occasionally hydraulic impact breakers on excavators are used to reduce the rock into various useable grades, and the cutting saws and guillotine are used to grade the finished product. Transport to the end user is collection by articulated lorry, rigid lorry or van/trailer. All these activities have potential to cause noise nuisance.

Sources of vibration are historical only with the last blast carried out in 2004. Approximately one blast per year was carried out between 2004 and 2007, and prior to 2004 one blast was carried out every 5 years. No records have been maintained of blast vibration reports. No complaints were received about historical blasting activity.

3.5.2 Impacts

A noise monitoring survey was carried out in September 2023 to assess the current noise levels from quarry activity. Three noise sensitive locations surrounding the site were chosen as monitoring locations. The results of the survey showed that noise levels from quarry activity at the sensitive location were below recommended threshold levels (55 dBA during daytime) when the quarry is fully operational. The dominant noise source was the adjacent nation N56 route. Screening berms and other noise mitigation measures have been put in place to acoustically screen activities, and other mitigation measures relating to management practices are in place and have been proposed.

The impact on noise and vibration is assessed as having no significant negative effects.

3.6 Air

See Chapter 10 of the EIAR for full details.

3.6.1 Overview

Quarrying has potential to cause air emissions through the generation and distribution of dust during the extraction, processing and transport phases of development. When a new area is being prepared for extraction the topsoil and subsoil has to be stripped from the land to allow access to the bedrock. Stockpiles of soil or stones have the potential to generate windblown dust. Processing activities have the potential to generate dust.

3.6.2 Impacts

To assess the likely dust generation and deposition at the site boundaries, a dust deposition study was carried out using dust monitors over a study period. The dust deposition study showed that dust deposition rates were considerably lower than guideline values. A series of mitigation measures is already in place for existing activities including management practices and dust suppression measures

The impact on air quality and in particular dust generation and dust deposition from the site is assessed as having no significant negative effects.

3.7 Climate

See Chapter 11 of the EIAR for full details.

3.7.1 Overview

The operation of plant and movement of vehicles will generate exhaust emissions. These emissions are an inevitable consequence of construction. There will also be an inevitable loss of vegetation with clearance for site infrastructure and to facilitate extraction.

3.7.2 Impacts

The quantities of exhaust emissions and CO_2 released from construction activities will not result in an adverse impact to the local micro-climate or the broader macro climate. These emissions are an inevitable consequence of the production of quarry product. Inevitably over the lifetime of the project plant and quarry vehicles will need replaced. Priority will be given to energy efficient low emission vehicles and plant when considering new replacement plant and vehicles.
The development of the site as a quarry supplying quality product to the local market is likely to reduce emissions by reducing the distance customers have to travel to source product. This may have an overall positive effect of emissions levels in a regional context. Overall, the development is assessed as having a slightly positive impact.

Any loss of vegetation will be offset within the landscaping plan for the site which will increase biodiversity in the overall site and introduce a tree planting scheme for carbon sequestration.
No residual impacts are expected, other than a slight positive impact on climate due to the reduced distance customers have to travel for quarry product.

3.8 Material Assets Traffic

See Chapter 12 of the EIAR for full details.

3.8.1 Overview

Murray Stone do not have any delivery vehicles. Most customers are long-standing, and collection arrangement are in place whenever sufficient product is available. Product is either stacked on pallets, or in tonne bags and loaded onto customer lorries with the on-site telehandler. On average, there is one lorry pick-up (rigid or articulated) from site per week. There are also occasional smaller loads collected from the site by customers (on average one per week). These are usually done in smaller pick-up 3.5 T lorries or using vans and trailers.

3.8.2 Impacts

Traffic details were accessed via the National Roads Authority for movements on the N56 which would be the primary transport route for vehicles collecting product and staff travelling to work. The HGV movements associated with the quarry would represent 0.1 % of the weekly HGV movements on the N56 and van/LGV movements associated with the quarry would make up 0.2 % of the weekly van/LGV movements on the N56.

The contribution of quarry traffic to the road traffic network is negligible. Historically there may have been temporary increases to quarry traffic but these are also likely to have been insignificant in relation to the volume of traffic flowing on the nearby N56. The impact on the roads and traffic is therefore assessed as imperceptible.

The impact on roads and traffic is assessed as imperceptible.

3.9 Material Assets Site Services

See Chapter 13 of the EIAR for full details.

3.9.1 Overview

The material assets considered are Surface Water Drainage, Foul Drainage, Water Supply, Power, Gas and Telecommunications. These are resources that are valued and are intrinsic to the area. Surface water drainage is treated by settlement and discharge is to the local watercourse. There is no wastewater treatment on site. There are no ESB, telecommunications or water connections to the site.

Natural material assets include the landscape amenity value of surrounding area. This subject is dealt with in Chapter 15*, Landscape & Restoration*.

3.9.2 Impacts

No residual impacts are envisaged.

3.10 Cultural Heritage

See Chapter 14 of the EIAR for full details.

3.10.1 Overview

There are two Recorded Archaeological Monuments which are listed on the Sites and Monuments Record within a 1 km distance from the subject site. Both are located approximately 500m south of the site. A third is located 600m to the east of the site. The closest two protected structures are1.4 km and 1.7 km west of the subject site. The nearest is the Inver Creamery Managers House at 1.4 km distant. There is a Corn Mill at 1.7 km distant and it is a detached 2-bay 3-storey cornmill built c. 1870 with single bay 2-storey extension to the west, with external waterwheel to the north.

3.10.2 Impacts

The national N56 route lies in between the monuments and the site. There is not expected to have been any negative impact to these sites from historical quarrying activity. The closest two protected structures are well over 1 km distant from the site and not likely to have had been affected by historical quarrying activity. There are not likely to be any significant negative effects due to current/future quarrying activity at the site.

No significant impact to Cultural Heritage is predicted.

3.11 Landscaping, Visual Impact & Restoration

See Chapter 15 of the EIAR for full details.

3.11.1 Overview

This section of the EIAR will establish potential landscape and visual impacts/effects arising from development associated with this quarry site at Drumbeagh. It aims to identify and assess the effects on the appearance and character of the local environs arising from the proposed development. A restoration plan is proposed which will be implemented upon closure of the quarry.

The site is located in an area of high scenic amenity but outside areas of especially high scenic amenity and no views identified in the County Donegal Development Plan are impacted by the

existing or proposed development. A visual impact assessment was carried out involving assessing the proposal from all common viewpoints surrounding the site.

3.11.2 Impacts

Based on the field survey and reference to the current Donegal County Development Plan, the landscape character has been given a landscape value and sensitivity of "*High*". The area is considered of high scenic amenity in the Donegal County Development Plan, however due to the existing established quarry site, the surrounding landscape would be reasonably tolerant to change. While rock extraction and processing operations to date have altered the landform and vegetation cover, the magnitude of additional change as a result of the proposed development has been assessed as 'Low/*Medium'* due to the localised nature of the proposal and location within an established quarry site. The significance of landscape impacts of the development without the mitigation measures is assessed as "*Slight/Moderate*". The quarry is very well screened by the nature of the surrounding topography and the vegetation/tree growth around the perimeter of the site. There have been numerous mitigation measures in place such as the development of hedgerows along the northern boundary, development of a wooded area along the southern boundary and the construction of screening berms along the eastern boundary. There are also a number of additional proposed mitigation measures such as wildflower seeding of the screening berms and supplementary planting of native trees/shrubs along the western boundary.

The impact is assessed as imperceptible for the visual impact on the landscape character to the surrounding environs from stripping, extraction and processing activities once the proposed mitigation measures are put in place.

3.11.3 Restoration

The greatest potential for increased biodiversity in relation to the subject site is after the operation has ceased. With time, nature reclaims a quarry, and the landscape can revert to a rich zone of biodiversity with little intervention from human hands. The aim of any natural restoration plan is to restore ecological balance and to produce self-sustaining plant and wildlife communities and habitats. Restoration of redundant quarry faces will occur while the quarry is still operational. This will include forming 70° slopes to the quarry faces and suitable side slopes will be covered with a layer of subsoil/topsoil and allowed to regenerate with natural vegetation indigenous to the area. Final restoration will occur when all extraction activities cease. All plant and machinery will be removed from site. Additional planting of trees and shrubs may be necessary in some areas. The existing berms and planting will be retained. A varied mix of native shrubs, trees and plants will be planted which are reflective of those in the surrounding environs. These will be planted in clusters to provide adequate habitat and to promote diversity. Native species will support a wider variety of wildlife.

The impact is assessed as imperceptible for the visual impact on the landscape character to the surrounding environs when the site is redundant once the proposed mitigation measures are put in place.

3.12 Interactions & Inter-relationships

See Chapter 16 of the EIAR for full details.

3.12.1 Overview

This section addresses the cumulative impacts, indirect impacts and main interactions between different aspects of the environment that may be impacted on as a result of the development. Only topics that could be logically linked to the development have been examined in detail. Accordingly, when a topic is not mentioned, it is concluded that no potential for conflict exists.

3.12.2 Impacts

Inter-relationships 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 preceding Chapters of the rEIAR and the major interactions between the recorded environmental impacts are accessed within the individual chapters of the rEIAR.

On 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. The Table below illustrates the interaction of impacts assessed for this project
and is consistent with Figure 3.5 of the EPA's 'Guidelines on the information to be contained in Environmental Impact Assessment Reports', May 2022.

	Population & Human Health	Biodiversity	Lands, soils & Geology	Water	Climate	Air	Noise and Vibration	Traffic	Landscape and Restoration	Material Assets	Cultural Heritage
Population & Human Health											
Biodiversity											
Land, soils & geology		X									
Water	X	X	X								
Climate	X										
Air	X	X	X	X	X						
Noise and vibration	X	X									
Traffic	X					X	X				
Landscape and Restoration	X	X	X								
Material assets	X		X					X	X		
Cultural Heritage											

With the exception of interlinked impacts on biodiversity and lands, soils and geology through habitat loss which represents a slight negative effect at a site level after mitigation, all other interlinked impacts have been assessed as imperceptible.