March 2024

Non - Technical Summary (NTS) Volume 1



Environmental Impact Assessment Report

Proposed Extension to Scotshouse

Quarry

Scotshouse Quarries Ltd. Aghnaskew, Scotshouse, Co. Monaghan





Form ES - 04



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Title: Non - Technical Summary (NTS) Volume 1, Environmental Impact Assessment Report Proposed Extension to Scotshouse Quarry, Scotshouse Quarries Ltd. Aghnaskew, Scotshouse, Co. Monaghan

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lssue No.	Date	Description	Remark	Prepared	Checked	Approved
01	14/03/24	Non-Technical Summary	Final	RC	DD	KG

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Non - Technical Summary (NTS) Volume 1 Environmental Impact Assessment Report Proposed Extension to Scotshouse Quarry Scotshouse Quarries Ltd. Aghnaskew, Scotshouse, Co. Monaghan

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1 INTRODUCTION

1.1 General

Malone O'Regan Environmental (MOR) was commissioned by Scotshouse Quarries Ltd ('the Applicant') to prepare an Environmental Impact Assessment Report (EIAR) as part of a planning application to An Bord Pleanála (ABP) under Section 37L of the Planning and Development Act 2000 (as amended) for the extension of Scotshouse Quarry (per Planning Reference 83/09). The site covers an area of 14.6 hectares and constitutes an extension to Scotshouse Quarry in the townland of Aghnaskew, in the Barony of Dartree (Dartree By), Scotshouse, County Monaghan at ITM coordinates 649474 818324 (henceforth referred to as 'the Site'). See Figure 1-1 below.

This extension application is further to their application to ABP for Substitute Consent under Section 177E of the Planning and Development Act 2000 (as amended), which was made to regularise a 5.6hectare (ha.) area of land within the Applicant's landholding (ABP case reference 316144-23). It is the intention of the Applicant for this application to be considered in conjunction with the Substitute Consent application, in accordance with Section 37L of the Planning and Development Act 2000 (as amended).

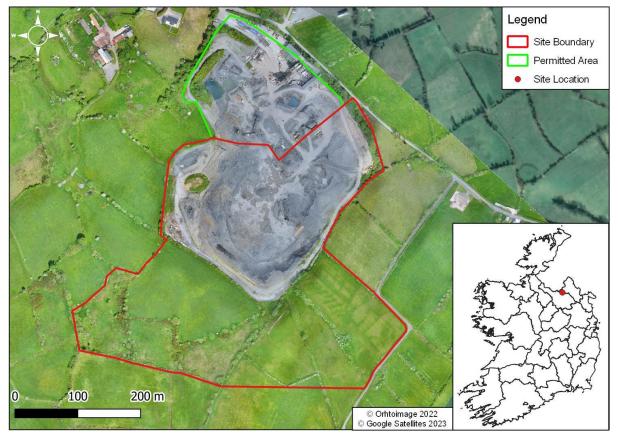


Figure 1-1: Site Location

The permitted area boundary shown is the 3.3ha. area that constitutes Scotshouse Quarry which received planning permission for extraction of minerals in 1983 (Planning Reference 83/09). The remaining excavated area shown in Figure 1-1 is predominantly that area for which Substitute Consent is currently being sought from ABP. For the purposes of the planning permission sought under Section 37L of the Planning and Development Act 2000 (as amended), the Site includes both the Substitute Consent area and the extensions lands to the south. See Figure 1-2 below for the delineation of the different areas.

Figure 1-2: Boundary Lines



This Non-Technical Summary (NTS) document constitutes Volume 1 of the submitted EIAR. The NTS provides a summary in non-technical language of the information contained within the EIAR (Volume 2). Supporting technical documents can be found in the Appendices (Volume 3). It should be noted that the phrase 'not significant' is a term which means that the activity or impact referred to will have effects, but that these will not cause any unacceptable environmental effects or be a nuisance to persons or companies in the area.

1.2 Applicant

Scotshouse Quarries Ltd. is an Irish-owned family-run aggregates business, operating under Managing Director Mr Connolly. The company produces:

- Greywacke aggregate;
- Crushed quarry stone;
- Fill materials (for below concreate floors and footpaths);
- Surface dressing chips (for drives and roads);
- Macadam; and,
- Asphalt.

Scotshouse Quarries Ltd is the largest manufacturer of bituminous materials in Co Monaghan and a local employer.

1.3 Overview of the Site and Context

The Site is situated ca.1km south-southeast of Scotshouse village and ca.30km southwest of Monaghan Town. The Site is immediately southwest of Scotshouse Quarry which has been used to extract and process greywacke stone, with origins prior to 1963.

The L6280 forms the north-eastern boundary of Scotshouse Quarry and adjoins the R212 to the west. This road provides the primary transport route for Heavy Goods Vehicles (HGVs) accessing and egressing Scotshouse Quarry. The R212 is a regional road which links Cavan Town and Clones in County Monaghan.

The immediate area is primarily agricultural with scattered single-dwelling developments on all sides. There are several residential dwellings in proximity, with the nearest being 135m from the northern Site boundary.

The Site will be accessed solely via the existing entrance at Scotshouse Quarry. The Site will make use of the infrastructure within Scotshouse Quarry (see section 3.1.1 below).

1.4 Environmental Impact Assessment Report (EIAR)

This Environmental Impact Assessment Report has been prepared in accordance with all relevant legislative and best practice guidelines in support of the planning application.

2 PLANNING CONTEXT & NEED FOR THE PROPOSED DEVELOPMENT

2.1 Planning History at the Site

Initial planning permission for a greywacke quarry at the location was granted on 25th July 1983 (planning ref 83/09) to Mr Patrick Cunningham for a 3.3ha area. The map of the area granted planning permission (the Permitted Area) shows that it stood within a larger area under the same ownership.

In November 2004, the then-landowner (Mr Thomas Leddy) applied to Monahan County Council (MCC) under S261 to register an area of 11.5ha, including 10ha under extraction. Supporting documentation showed that by this point, the area under extraction had expanded out from the Permitted Area. Registration of the quarry under S261 was completed in 2006 and a restoration plan for the entire area (the Registered Area) was submitted to MCC and accepted. The Registered Area was provided with a reference number of QY1.

In 2006, Paddy Connolly bought land with the understanding that the S261 registration had granted authorisation for extraction to the entire Registered Area. In 2009, ownership passed to Mr Connolly's family-run company Scotshouse Quarries Limited, who retain ownership.

Table 2-1: Scotshouse Quarry Planning History				
Planning Ref	Applicant	Details	Grant Date	
08/787	Paddy Connolly	Floodlights for site.	02/10/2008	
09/618	Páraic Connolly	Portal Framework building & associated works	25/03/2010	
10/127	Paddy Connolly	Single-story pre-fab office building Weighbridge 2.4m roadside fence	23/06/2010	

The historic MCC planning applications are listed in Table 2-1 below.

Planning Ref	Applicant	Details	Grant Date	
		A crushing plant, including:		
		Screening plant		
		Concrete storage facility		
		Conveyors		
14/124		Concrete feeding chute	27/02/2015	
		Concrete supporting structure		
		Electrical services control container		
		Mobile concrete batching plant		
		Utilities and associated works		
	Scotshouse	Site office		
	Quarries Ltd	Wastewater treatment unit		
14/157		Raised filter percolation area	25/07/2014	
14/13/		Car park	23/07/2014	
		Storm drainage		
		Foul drainage and associated works		
15/113		Construction of hot mix tarmacadam plant and associated works		
18/485		Construction of electrical sub-station and switch room	13/12/2018	
16/9011		Extension of duration of planning permission under 14/157 until August 2024	11/09/2019	

2.2 Planning Context

The planning context of the Proposed Development has been considered in terms of all relevant national, regional, and local planning policies and documents.

The Site is located on un-zoned lands outside the planning area for Scotshouse village. Under the MCDP 2019-2025, this means that the land may be used for agricultural and "any ancillary" uses. As the MCDP also prohibits extractive/quarrying uses on land zoned for any specific purpose, extractive industrial development is restricted to such un-zoned land by default.

2.3 Need for the Proposed Development

The NPF2040 sets out a target of sustainable growth of Ireland's rural communities, with approximately 50% of the projected population growth to 2040 intended to take place outside of the five major Irish cities (Dublin, Cork, Galway, Limerick and Waterford). Of this 50%, a minimum of 30% (15% of total population growth) is planned to take place within the existing built-up footprint of current settlements. The projected growth requires new infrastructure, including housing, schools and other public services and transport networks. The Regional policy seeks to make efficient use of the Region's natural resources and to carry out major developments within the framework of national policy.

Even within the context of a circular economic model, this will require substantial quantities of raw materials including aggregates and the intended rural growth means that the market for building materials will have a strong regional and local element. The potential scarcity in the midland and eastern region (as highlighted in the ICF report) increases the importance of supplies from other regions such as the Proposed Development.

There is only one working quarry within the local (10km-radius) area, including over the border into Northern Ireland: Nulty's Quarry (owned by John Nulty Ltd), located in Co. Cavan at ITM 646530 808416, ca 10km south of the Site. This fact alone provides an insight into the regional importance of the Proposed Development.

Following the Proposed Development, the extended quarry is estimated to be capable of producing ca.8,000,000 tonnes of aggregate, with an annual output of ca.350,000 tonnes. This does not represent an increase of previous extraction rates. The extension will allow Scotshouse Quarries Ltd to continue at previous production rates and enable the company to compete on a secure footing for the anticipated 35-year lifetime of the extended quarry. This (35 years) is the proposed term for this regionally and nationally important resource.

Scotshouse Quarries Ltd has supported the economy of the local area through direct employment of up to 25 staff. However, the very limited reserves available within the area originally permitted means that without the Proposed Development, Scotshouse Quarries Ltd is unlikely to be able to maintain these employment levels.

It is considered that the Proposed Development aligns with the objectives/polices of the NPF, NDP, RSES, and CDP and will in many cases directly contribute to the successful implementation of objectives/policies.

3 DESCRIPTION OF DEVELOPMENT

3.1 Scotshouse Quarry (existing infrastructure)

Scotshouse Quarry first received planning permission in 1983 (83/09) and has known pre-1963 origins. Refer to Chapter 2 for further details. It has been operated by Scotshouse Quarries Limited since 2009.

Scotshouse Quarry lies immediately on the southwest side of the L6280, ca. 700m south of the junction between the L6280 and the R212. The R212 joins the N54 at Clones (8km north of Scotshouse Quarry), providing access to Monaghan Town to the northeast and Cavan to the southwest. Approximately 6km south of Scotshouse Quarry, the L6280 joins the L2023 which runs east to Cootehill and connects to numerous regional roads.

Scotshouse Quarry includes the following established components/infrastructure (see Figure 3-1 below):

- A working quarry within the original area;
- ESB substation;
- Site office;
- Vehicle parking;
- Staff welfare facilities;
- Weighbridge;
- Wheel wash;
- Associated settlement ponds;
- Crushing/screening plant;
- Hot-mixed macadam plant; and,
- Kerosene-fired backup generator for the macadam plant.



Figure 3-1: Infrastructure within Scotshouse Quarry

3.2 Proposed Development

The Proposed Development incorporates an area of ca.14.6ha, extending the registered quarry QY1 in a southerly direction. This consists of:

- Zone A covers 6.5 ha. area of land previously exposed to extraction activities, including that area for which substitute consent has been applied; and,
- Zone B covers 8.1 ha. area of land to the south of the existing excavated area which is currently and previously used for pasture.

Figure 3-2 below shows the different zones within the Site.

Figure 3-2: Overview of Site



The Proposed Development will consist of the following elements:

- Continued extraction from the Substitute Consent area to a depth of ca.90mOD;
- The expansion of extraction activities into the extension lands;
- The extraction of aggregates within the extension lands to a depth of ca.90mOD; and,
- The restoration of the Site (see section 3.4 below).

The Proposed Development will not result in an increase in annual extraction rates but will allow the Applicant to continue to extract at the pre-Substitute Consent application rate of ca. 350,000 tonnes per annum. The Proposed Development will be accessible only through the existing entrance and will utilise all of the infrastructure listed above. The Applicant will seek to utilise existing haul routes to access the extension lands and alter them as the profile changes.

Extraction will take place over a phased process, with some extraction work in the Substitute Consent Area commencing while the expansion lands are opened up and some taking place concurrently with extraction in the expansion lands. See Volume 2, section 3.3 for a detailed breakdown of the phases of extraction.

3.2.1 Continued Extraction

Zone A consists of exposed rock faces and a working quarry floor. Further to the granting of planning permission, the rock faces will continue to be worked as per the industry standard:

- Rock faces will be brought down by periodic controlled blasting carried out by an explosives expert (see section 3.2.3 below);
- High-specification, highly effective and fuel-efficient mobile plant will be used for initial processing and to transport the aggregates to existing infrastructure in

Scotshouse Quarry for additional processing (where necessary). The mobile plant consists of:

- One (1)x Volve 300 extractor,
- One (1) x Sandvick QJ341 Jaw Primary Crusher,
- One (1) x Roco 1600 Scalping Screen,
- One (1) to Two (2) x Roco tracked conveyer/stacker and
- One (1) x Volvo L180 Wheel Loader

The blasted rock will be mechanically crushed and passed through the scalping screen, which contains at least two differently-sized screening decks. Mechanical vibration allows the material to fall down through the screens. This sorts the crushed rock into different sizes. The material will then generally be transported to existing infrastructure within Scotshouse Quarry for secondary processing within the fixed plant established there. The rock is passed through the crushing and screening process repeatedly until all material is of the sizes required by clients. Processed aggregate is then stock-piled on-site prior to removal to client sites via HGV or prior to utilisation in the on-site hot-mix macadam plant. The macadam plant discharges finished product directly into HGVs for delivery to clients.

3.2.2 Expansion

Expansion works will commence with the removal of the overburden and top-soil. This will be carried out by Scotshouse Quarries Ltd. staff with the use of excavators and bulldozers. The removed material will be utilised to create screening berms. Existing hedgerows around the periphery of the Site will be left in-situ.

3.2.3 Extraction

Extraction will take place by the utilisation of controlled blasting. Blasts are planned by an external explosives expert. Notice of planned blasts will be given to the local population, and records kept of the time and date of each blast. For the safety of personnel, the Site will be closed during and immediately after the blasting. Following a blast event, the explosives expert will determine the safety of the Site before personnel are permitted to enter the blasted area. Once the explosives expert is satisfied that the Site is safe following a blast, the mobile plant will be used to sort and transport the blasted rock to existing infrastructure at Scotshouse Quarry for processing.

3.3 Operational Details

3.3.1 General Details

The northeast boundary of Scotshouse Quarry is bounded by the L6280 and secured partly by a palisade fence and partly by a high bank with trees and low-growing bushes on the road-ward side of the bank. These serve to screen the quarry workings from the road. The remaining boundaries currently consist of ditches and trees. To the north, west and south the land beyond the quarry boundary is entirely made up of fields. There is only one entrance, onto the L6280, which is secured by a lockable gate. There is safety signage erected along the site boundary at relevant locations. Scotshouse Quarry includes internal lighting and security cameras.

A security fence will be constructed around the Site to prevent unauthorised access into the Proposed Development. The working hours of the quarry are/will be:

- Monday-Friday 08:00 18:00
- Saturday 08:00 14:00 and
- Sundays/Bank Holidays closed.

Scotshouse Quarry employs 14-20 persons for on-site operations and 5-6 persons for off-site crew. The Proposed Development is not anticipated to increase this number. However, current Scotshouse Quarry staffing numbers will not be sustainable in the long-term without the Proposed Development.

3.3.2 Deliveries

The hot-mix macadam plant requires additional stone along with limestone and bitumen. These are delivered by HGV. Fuel for the plant/equipment and vehicles is delivered to the quarry by road tanker.

3.3.3 Utilities

Mains electricity is provided to Scotshouse Quarry via the ESB sub-station adjacent to the Site entrance. An ESB powerline that intersects the Site will be re-routed by ESB prior to works commencing. An application to move the powerline will be submitted to ESB Networks if the planning application is successful.

Potable water is provided via mains supply and private well. There is no sewage supply at Scotshouse Quarry. Onsite toilets and welfare waste are collected by licensed specialist (refer to Section 3.6.1 in Volume 2 for further details).

No change to the above is planned due to the Proposed Development.

3.3.4 Site Drainage

3.3.4.1 Foul Drainage

Welfare foul water from the site office and canteen is discharged via gravity-fed pipe to a septic tank located opposite the site office. Further hygiene facilities are provided in a portable toilet located just inside the quarry access gate onto the public road. Both the porta-loo and the septic tank are emptied on an as-needed basis by licensed contractors and disposed of at a suitably licensed off-site facility. As there is no change to staffing numbers arising from the Proposed Development, there will be no change to foul drainage.

3.3.4.2 Stormwater drainage

The quarry floor has a shallow gradient which slopes towards the quarry access gate. Run-off from the quarry floor to the north of the Proposed Development currently drains overland via informal channels and large puddles. This run-off is intercepted either by the wheel-wash or by the yard interceptor drain at the quarry access gate. The drain is 20m x0.7m and is ca0.1m deep below a removable metal grate. This discharges into an open channel at the eastern end and flows via a 150mm pipe into the settlement tanks (see section 3.6.3 below). As the Proposed Development extends ground level below the current level of 105mOD it will be necessary to commence pumping water to the existing lagoons for use in onsite processes as gravity will no longer provide a suitable means of drainage (refer to Chapter 3 in Volume 2). The dewatering will be completed at a rate which will ensure the discharge limit of 360m³/day will not be exceeded at any time. The extraction of the lower bench in Phase 4 (refer to Chapter 3 in Volume 2) will provide a natural attenuation and settlement pond during periods of excessive rain that may occur while the upper benches are worked.

3.3.4.3 Trade Effluent

Scotshouse Quarries Ltd were granted a trade effluent discharge licence by MCC (WP26/15) following the granting of planning ref 14/124. The trade effluent is collected and held within a concrete-lined pit containing four (4No.) linked settlement tanks. This is located close to the northeastern boundary fence. The tanks have a combined surface area of ca.230m² and are divided by interior walls. Water enters the first tank at the northwest end and discharges via

the final tank at the southeast via a hydrocarbon class interceptor (refer to Chapter 3 in Volume 2 for further details). From the interceptor, the effluent flows via a buried 150mm pipe to the open roadside drain to the exterior of the quarry fence. The drain flows to the northwest, being culverted under the L2780, and flows through neighbouring agricultural land before discharging to a wetland area downstream of Dunsrim Lough.

The existing quarry discharges account for only a fraction of the licence limits (i.e., approximately 25-30% of the permitted volume of water allowed to be discharged from the Site). The Proposed Development will seek to utilise the existing discharge licence to remove groundwater/surface water encountered during the operational phase of the Proposed Development (that is excess to processing requirements) (refer to Chapter 8 in Volume 2 for further details).

3.4 Restoration and Aftercare

No part of Scotshouse Quarry has undergone any restoration at the time of writing (March 2024). A full Restoration Plan forms part of this EIAR and is supplied with this planning permission. The restoration will be carried out in accordance with then-current best practice guidelines and in compliance with relevant legislation. It is envisaged that the Restoration Plan will take 18 months to complete, with a suitable following period of monitoring.

4 ALTERNATIVES CONSIDERED

4.1 Alternative Locations

Extraction/quarrying can only take place where there is suitable material. The nearest alternative high PSV source in regular production is in north Longford, with lesser quality materials available elsewhere in the north-east. Alternative site locations that would produce the same volume of aggregate of the required quality are not readily available.

4.2 Alternative Extension

There is limited potential for alternative extensions.

The L6280 local road borders the quarry along its northeastern side. Extension in this direction would therefore require a second quarry to be opened. The presence of the road would also require either the purchasing of an entire second set of highly-specialised plant and equipment at a huge investment cost, or the repeated movement of plant/equipment across a public road.

The land to the northwest drops in elevation and the resource quality of aggregates in this direction is unknown.

Extension to the east may be a feasible future option but this would require the purchase of lands not currently available.

4.3 'Do Nothing' Option

The 'Do Nothing' option would restrict extraction activity to Scotshouse Quarry. This would lead to exhaustion of the available resources. A larger footprint is essential to the future viability of the company.

4.4 Alternative Uses of Surrounding Land

The area around the Site is largely agricultural with single-dwelling residential developments. Given the projected population growth, the pressure for housing and public infrastructure within Ireland will increase over the coming decades. This is reflected in the MCDP objectives concerning rural housing, which include the facilitation of sustainable rural housing and the accommodation of appropriate rural development. Therefore, should the Proposed

Development not take place, it is possible that later expansion will be curtailed due to other development onto or near the Site.

5 POPULATION AND HUMAN HEALTH

Scotshouse Quarry has been an important local employer since extractive work began, and no known complaints have been lodged with the owner or with MCC. The Applicant has confirmed there have been no historical accidents or incidents associated with Scotshouse Quarry. The Proposed Development is not a health-related project and will not create additional specific demands on the local heath infrastructure.

The Proposed Development is considered to be in alignment with the objectives/policies of the relevant national, regional and county planning documents.

The Proposed Development is for the extraction of greywacke, a high PSV rock resource of regional and potentially national importance given the shortage of 'friction course' resources across the country. Industry experts suggest that high PSV sites represent only 4-5% of extractive sites in the country. The high PSV source nearest to the Proposed Development which is in regular production is in north Longford. Lesser quality materials are also available elsewhere in the north-east. The Proposed Development resources are, therefore, of regional importance for the production of chippings for surface dressing of roads, the main form of road maintenance in Ireland.

The local population was determined to have a 'low' sensitivity to environmental changes. The potential impacts on human health were assessed in light of this assessed low sensitivity. The conclusion was that effects would be negligible to 'not significant'.

6 BIODIVERSITY

6.1 Methodology

In order to evaluate likely significant effects of the Proposed Development on ecological receptors in the receiving environment, a number of survey area extents were required. These comprised the Site plus a wider survey area extent as recommended by specific published best practice guidance for specific ecological receptors.

A desk study was carried out to collate the available existing ecological information on the selected study area. The Site and the surrounding area were viewed using available satellite imagery.

A site visit to identify habitats and the suitability of the various habitats and other features present to support fauna (protected and/or notable species) was carried out. Habitats were surveyed and classified according to Fossitt (2000) and following best practice.

The site visit assessed the Site for evidence of, and suitability to support, mammals. Any signs of mammal activity (including the presence of setts/holts/dens/dreys, foraging evidence, access runs, hairs caught on wires and bushes, tracks and prints) occurring within the study areas were recorded using field notes and/or digital mapping software and subsequently digitised using GIS. Incidental sightings and evidence of birds, reptiles, and other terrestrial fauna were also noted.

A survey for bats was carried out in May and June 2023 by Flynn Furney Environmental Consultants.

6.2 Receiving Environment

The primary habitats identified in the study area were Active Quarries and Mines (ED4) and Agricultural Grassland (GA1), with Scrub (WS1), Dry Meadows and Grassy Verges (GS2),

Wet Grassland (GS4), Hedgerow (WL1), Treeline (WL2), and Recolonising Bare Ground (ED3) also identified.

6.3 Potential Impacts

6.3.1 Protected Sites

Due to the presence of Natura 2000 Sites within the 15km study radius of the Proposed Development, an Appropriate Assessment Screening Report (AA) was prepared to accompany the Proposed Development application.

The only Natura 2000 site found to have a connection to the Proposed Development was Lough Oughter and Associated Loughs SAC.

There was no risk of habitat damage, loss or fragmentation of any Natura 2000 site arising from the Proposed Development. There were no impacts of the Proposed Development that could affect the qualifying interests of the Lough Oughter and Associated Loughs SAC. There was therefore no in-combination impact with impacts of other proposed or permitted plans or projects.

The AA concluded that the Site is not directly connected with, or necessary to the management of, any Natura 2000 site.

6.3.2 Habitat Loss

There will be a permanent loss of habitats during the construction phase within the removal of overburden and creation of a haul road between Scotshouse Quarry and the Proposed Development. Although it is proposed that ca.220m of treeline and 190m of hedgerow will be retained around the boundary of the Site.

6.3.3 Potential Impacts on Species

Site clearance has potential to result in the mortality of small mammals and will destroy breeding and resting sites. Although there was no evidence of badger setts within the Site, it is considered likely that badger and other larger mammals (e.g., red fox Vulpes vulpes) will be found utilising the site for foraging and / or commuting. Site clearance for the Proposed Development will remove foraging and resting places for these mammals.

An increase in noise and activity for the Proposed Development has potential to impact mammals in the short- term where mammals will become habituated to any additional noise from the operational phase. A long-term impact is considered to be imperceptible when there are already existing quarry operations in the immediate area to which mammals will be accustomed. The increase will be phased through the extension area and consequently mammals will become habituated as the works progress.

The potential impact to bats is the permanent loss of low value foraging and commuting habitat. The bat survey report did not find any bat roosts in the survey area. There are suitable habitats for foraging and commuting in the immediate and wider area. From the results of the bat survey, the potential impact on bats is considered to be long-term medium impact.

Bird species recorded during the field survey are commonly occurring species and are considered likely to use the hedgerows, treeline and scrub habitats as a nesting and foraging resource. The removal of these habitats will have a short-term negative impact on local bird populations. There are suitable habitats in the immediate area that can be utilised in the long-term by displaced birds.

6.4 Mitigation Measures

The mitigation measures in the original planning permission have been adhered to through the life of Scotshouse Quarry.

The overburden removed during the expansion work will be used to create berms at the Site boundaries, which will be planted with native species. These berms will reduce emission effects to air and provide habitat for local fauna. There will be control measures in place for refuelling and fuel storage to prevent pollution of ground and surface water. The discharge licence already in place will continue to require that any quarry discharge passes through a hydrocarbon interceptor.

Mitigation measures for fauna will include the supervision of the removal of the derelict building and mature trees and the requirement for an additional bat survey if such works are carried out more than 18 months after the date of the initial bat survey. Most works will take place during daylight hours, reducing the potential impact on foraging and commuting bats.

Mitigation measures for birds will include controls on the timing of vegetation removal to avoid the breeding season and a breeding bird check should works to the quarry face be required during the breeding season.

Further general mitigation measures during the operational life of the quarry will include the installation of mammal gates in the boundary fencing and the use of directed low-level lighting. General mitigation measures following the closure of the Site will include the maintenance of the matured berms and the installation of bird and bat boxes.

6.5 Residual Impact

Based on the information outlined in this chapter, it is considered that, with suitable mitigation in place, the Proposed Development will not result in adverse effects on the ecological environment in the long term.

There are no habitats on site that are considered to be of significant ecological value and there is no predicted impact on any designated site within the zone of influence.

The phasing of the Proposed Development will help to mitigate any immediate impacts by allowing mobile species that have potential to be found on site to dissipate to similar habitats within the immediate area.

The retention of existing hedgerows and treelines along the quarry boundary will maintain connectivity from the Site to the wider areas.

Restoration plans for the Construction Phase (e.g., vegetated berms) and on cessation of the operation will enhance the Site in the long term.

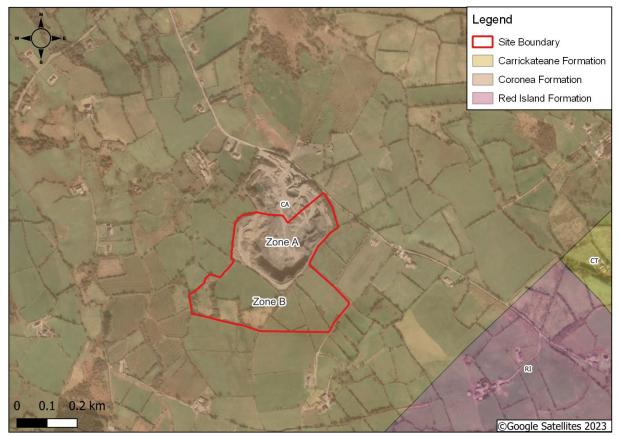
7 LAND AND SOILS

Based on the topographic survey, the lands within Zone A have been extracted to a depth of approximately 105mOD, at the lowest point. Topography around the periphery of Zone A varies between 115-135mOD.

The extension comprising Zone B of the Site is approximately 130mOD, with an increase in topography generally to the south, the highest point being in the southeast of 151mOD.

The bedrock beneath the Site comprises of pale to dark green, non-calcareous greywackes with beds of red shale known as the Coronea Formation as shown in Figure 7-1 below.

Figure 7-1: Bedrock Geology



The Site lies within a Monaghan County Geological Site (CGS) – the Scotshouse-Redhills Cross-cutting Ribbed Moraines, covering approximately 4,280ha over an area covering ca.12km east-to-west point and ca.6.5km north-to-south and sitting partly within County Monaghan and partly within County Cavan.

In order to extract the bedrock within Zone B of the Proposed Development, the stripping and removal of soils and topsoil above the bedrock will be required. These soils would then be utilised in the construction of perimeter berms around the peripheries of the stripped areas. These berms will be vegetated to aid screening, with the vegetation providing stabilisation that will help prevent erosion from the berms. However, during the restoration stage of the Proposed Development, no reinstatement of soils is planned, and they will remain within the planted berms following completion of restoration and closure of the Site.

The reworking of the soils in and around the moraines and drumlins intersecting the Proposed Development will have a slight but irreversible negative effect on the geology and geomorphology within the CGS. However, the proposed extracted area within the Site constitutes <0.5% of the total area of the CGS, and as such represents a not significant negative effect on the CGS.

Additionally, the Proposed Development will result in changes in land use in both Zone A and Zone B. Zone B will change from agricultural pasture to a mineral extraction site during the operations of the Proposed Development. Following the closure and restoration of the Site, both Zone A and Zone B will change land use from a mineral extraction site to vegetated area with an open waterbody (comprised of groundwater and collected rainwater). Overall, these changes in land use represent neutral effect, with the land providing different benefits dependent on use.

The residual effect on soils as a result of the onsite extraction are likely to be slight irreversible long-term negative effects. This is due to the permanent alteration of the original soil character

from the baseline conditions to a new character derived from reworking and mixing of soils and subsoils during overburden stripping.

8 WATER

The Site is within the Erne hydrometric area and the Subcatchment Finn[Monaghan]_SC_020. A subcatchment divide is located ca. 5m to the southeast of the Site. The River Gortnana is located ca. 399m northeast of the Site within the Finn catchment. Dunsrim Lough is downstream of the licensed discharge point (see Figure 8-1 below) for Scotshouse Quarry and is connected via open roadside drain/drainage ditches feeding into local wetland that connects to Dunsrim Lough.

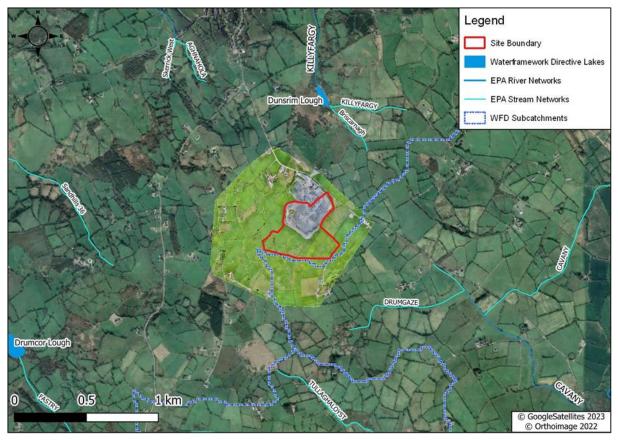


Figure 8-1: Hydrological Connection and Discharge Points

A review of the OPW flood risk mapping indicates that there is no potential risk of fluvial / pluvial flooding on / near to the Site. This is in-line with the experience of the operator.

The entire Site is underlain by a Poor Aquifer–(PI) - Bedrock which is Generally Unproductive except for Local Zones.

From the GSI dataset, the south-western portion of Zone A is classified as having Extreme (E) vulnerability, whereas the north-eastern section, along with a small section in the north-western corner of Zone A, is classified as having Rock at or near Surface or Karst (X), which is in-line with observations on site of the extent of the exposed rock ground through most of the Site. The majority of Zone B is classified as having Extreme (E) vulnerability, but has a region to the south-east with High (H) trending to Low (L) groundwater vulnerability towards the south-eastern corner of the Zone B.

It should be noted that Zone A has been extracted to bedrock since the last issuing of this dataset. As such, areas that are within the Zone A quarry void should be classified as having Rock at or near Surface or Karst (X) instead of the GSI classification.

In relation to surface waters, the Site has a discharge license, relating to a discharge point behind the portal frame workshop. This discharge point allows for surplus water up to 4L/s or 360m³/day to be discharged to the land drain adjacent the road. It is likely that there will be an increase in the discharge rate when compared to current measured levels, however, the discharge rate will remain within the 360m³/day limit within the discharge license. This increased discharge is sourced from the dewatering of areas of the guarry extracted below the groundwater table, however, there is no indication that the increase will result in flooding downstream of the discharge. The discharge acts as a potential pathway for suspended solids from onsite activities and ammonia from the run-off of neighbouring agricultural land and onsite blasting activities to enter into the connected drainage network that joins the Gortnana waterbody at Dunsrim Lough, and other surface waterbodies downstream. There are exceedances in ammonia and suspended solids in the offsite drainage network, the effects do not extend consistently downstream. The removal of overburden during the operational phase activities in Zone B will push the Proposed Development to the edge of the Finn sub-catchment boundary. As such it will reduce the amount of run-off sourced from agricultural lands surrounding the Site through a change in land use, reducing ammonia inputs from this source. Therefore, negative effects associated with ammonia discharging from the Proposed Development are predicted to be not significant to slight and limited locally.

In relation to groundwater, restoration works onsite will not include a reinstatement of previous ground levels, with the quarry void planned to be left open. As such, following the restoration of the Site, the increased groundwater vulnerability associated with the open void will remain. This represents a permanent but not significant negative effect to the Cavan groundwater body as the Site only represents a small area of the overall groundwater body.

The mitigation provided by the sumps for water retention at Site low points within the phased design of the Proposed Development allow for additional settlement of suspended solids before discharge through the settlement tank. As such, the effects of increasing discharge volumes resulting in increased suspended solids are mitigated against by the increased capacity for water retention allowing for increased sediment settlement. Therefore, the effects associated with suspended solids from the Proposed Development are predicted to be similar to current effects - not significant to slight and limited locally. Long-term effects on surface waters in the vicinity of the Proposed Development during operations will be not significant. Following Site restoration and closure, effects on surface water quality will be negligible.

9 AIR QUALITY

All phases of the Proposed Development were assessed to determine impacts on air quality in relation to sensitive receptors and the environment.

The main potential effects on air quality from the Proposed Development are dust emissions, which could give rise to the following impacts;

- Disamenity due to dust deposited on surfaces, which leads to 'soiling;' and,
- Increased concentrations of dust particles suspended in the air (PM₁₀).

A disamenity dust risk assessment was completed in accordance with the Institute of Air Quality Management's (IAQM) Guidance on the Assessment of Mineral Dust Impacts for Planning. This assessment aimed to determine the risk of impact from dust soiling on properties (or receptors) in the vicinity of the Site.

In brief, the risk assessment followed the source-pathway-receptor concept. The assessment quantified the likely emissions from the source (the Proposed Development), identified the pathway effectiveness (frequency of wind >5.5m/s) and determined the distance/orientation of receptors to the source. Following the analysis, it was determined that there was a 'Negligible Risk' of dust soiling occurring at all receptors in the absence of mitigation. The potential dust soiling at these receptors has the potential to be a 'Negligible Effect'. Nevertheless, a number of site-specific mitigation measures were identified. The

implementation of these measures reduces the risk of dust soiling occurring at these receptors from 'Negligible to 'Imperceptible'. The disamenity dust risk assessment was extended to assess the potential cumulative and in-combination effect from other sources. In brief, the pathway from other potential sources was deemed to be ineffective, hence the risk of impact from in-combination effects was also identified to be 'Negligible'. Moreover, between November 2022 to present, monthly Bergerhoff monitoring was conducted at four to six locations located around the Site. All dust deposition values recorded were below the TA Luft limit value of 350mg/m²/day.

Increased concentrations of dust particles in the air (PM_{10}) can affect human health. Therefore, the methodology outlined by the IAQM guidelines was followed to determine the risk of increased PM_{10} particles in the air arising from the Proposed Development. In brief, given the existing background concentrations of PM_{10} , it was determined that there was little risk of process contributions from the Proposed Development leading to an exceedance of the annual mean objective of Air Quality Standards.

Monitoring of dust deposition will be completed at four locations (D1, D2, D3, D4,) located around the boundary of the Proposed Development.

10 CLIMATE

The potential effects of the Proposed Development on climate primarily stem from the release of greenhouse gas (GHG) emissions. Additionally, the assessment considered the potential effects of current and future climate change on the Proposed Development.

During a typical Operational Year, assumed to be 294 days, it was calculated that the Proposed Development would be responsible for approximately 669.65 tonnes of carbon dioxide equivalent (CO_{2e}). These emissions were distributed as followed:

- Approximately 505.2 tonnes of CO_{2e} from plant operating onsite on mineral diesel across the year; and,
- Approximately 164.5 tonnes of CO_{2e} per annum from vehicles associated with the Proposed Development (including heavy good/ light good and employee vehicles).

These emissions were compared as a percentage to the relevant sectoral emission ceilings, assigned by the Irish Government as targets of CO_{2e} for specific sectors (e.g. the Transport sector) to achieve across two periods (2021 top 2025 and 2026 to 2030). Emissions that could not be compared against a specific sector (such as plant emissions) were compared as a percentage against the total National Carbon Budget for these two periods. Based on the low contributions of the plant and transport emissions to the relevant budgets, the effects of the Proposed Development on GHG emissions were considered 'not significant'.

To determine the potential effects of modern and future climate change on the Proposed Development, a Climate Change Risk Assessment was conducted following the Government of Ireland's, Annex B Guidelines. The assessment determined the potential risk of the Proposed Development to potential hazards such as Droughts, Flooding, Extreme Rainfall and Wildfires. Based on the frequency and the perceived impact of these hazards on assets associated with the Proposed Development, it was perceived that the risk to the Proposed Development from these hazards are those already assessed by the local council's climate vulnerability assessment. Considering the nature of the hazards and their recognition in the Monaghan County Council Climate Change Risk Assessment, the effects of climate change on the Proposed Development were considered not significant.

11 NOISE AND VIBRATION

A comprehensive noise and vibration impact assessment was undertaken based on best practice guidance and statutory and non-statutory noise impact assessment criteria in relation to construction.

The assessment on vibration incorporated historical blasting events. Site-associated traffic vibration was screened out, as no significant vibration impacts from traffic arising from the Proposed Development was deemed likely.

Noise modelling was carried out using Soft Noise Predictor version 2023.01 software. The noise model incorporated the Site-specific noise sources and the topography of the local environment but did not incorporate off-site noise sources (e.g., road traffic). The noise model assumed all sources were fully operational for the full working day.

A total of twelve (12No.) Noise Sensitive Receptors (NSRs) were identified in the locality. Ambient noise monitoring of daytime sound levels undertaken in 2022 and 2023 were utilised. The ambient acoustic environment was found to be influenced by noise from offsite agricultural, transport and on-site quarrying sources from within Scotshouse Quarry, with the over-all existing sound levels at the Site being low to moderate in 2022, with L_{Aeq,1hr} values from 47dB to 55dB. Following implementation of improvements to the on-site asphalt plant the subsequent 2023 noise survey determined that noise levels from the Site were lower, with L_{Aeq,1hr} from 36dB to 47dB.

Noise during the construction phase (or site preparation) of the Proposed Development will consist mainly of topsoil and overburden removal and construction of soil embankments. Due to the activities proposed this phase was assessed to typical construction noise standards namely BS5228-1. All proposed works during this phase were found to be below typical construction noise limits. In accordance with good practice, standard noise mitigation measures will be implemented.

The outputs from the operational phase noise model were combined with the measured ambient background levels, as per best practice, to ascertain the likely future sound environment. This ensures the assessment accommodates the cumulative as well as project specific, impacts on identified NSRs.

The predicted operational noise levels at NSRs, are predicted to be below the typical noise nuisance values as per the Department of the Environment Heritage and Local Government 'Quarries and ancillary activities: Guidelines for Planning Authorities' 2004 and the Environmental Protection Agency's 'Environmental management guidelines: Environmental management in the extractive industry (non-scheduled minerals) 2006.

In addition to set noise limit criteria a noise level change assessment was also undertaken for the operational phase. Four NSRs were identified to have an effect as per the IOA/IEMA guidelines, with a predicted change of 5-7dBA at these NSRs. The Proposed Development works will potentially be audible at these NSRs, the predicted future noise levels will be equal to the existing noise levels from the current Scotshouse Quarry, as the same machinery and plant used for the Proposed Development will be the same. Given that there are no known noise complaints from existing NSRs, it is reasonable to consider that there will be no reason to expect this to change in the future.

One NSR (NSR03) was deemed moderate as per the IOA/IEAM guidelines, with a predicted change of +4dB compared to the background noise level ($L_{A90,T}$). This predicted noise level change will potentially be audible at the NSR, however due to the low absolute noise level (38dB), it is considered unlikely to be intrusive. As such, as per the IOA/IEMA guidelines, the impact was deemed locally slight with predicted noise been non-intrusive, where no mitigation was presented. The remaining NSRs were deemed to experience negligible effects, with no

predicted change occurring. Standard mitigation measures will be implemented during the operational phase.

A key aspect to the operational phase will be the breaking of aggregates from the face via blasting. The blast event itself is a short duration, high intensity, predominately low acoustic frequency event. An integral part of the rock blast is the emission during the event into the air, known as air overpressure. The predominant sound pressure within this air overpressure is low frequency and inaudible. Under current on-site practices, as a standard procedure, all blast events on the Site are monitored by the blast specialist for both air-over pressure and vibration. A review of the blast record indicate that previous blast events were below the industry standard compliance limits.

Operational Phase localised vibration will occur during quarry face blasting. Blasting during previous operations at the Site is considered a good representation of future predicted blast events at the Proposed Development as the Site setting remains the same and blasts will be designed in line with historical blast experience.

Based on the existing experience at this Site, a 150m buffer will be used to offset effects from blasting vibration. NSR01, 02 and 03 are just inside the 150m buffer, however the distance to the blasting locations (Zone B) is greater or equal of 200m. There have not been any exceedances historically, through competent blast design. Design methods to reduce ground borne vibration will be implemented as identified in BS 5228-2.

The blast event is therefore a temporary local moderate effect, considering the standard control measures on site and known experience through years of blast management within this quarry.

During the Restoration Phase of works the noise will be associated with the creation of ramp for access to the waterbody. Much of this work will occur within the proposed extraction area and will require a bulldozer. It is not anticipated that this phase will produce noise levels in exceedance of typical construction noise limit guidelines.

The residual construction stage effect is deemed to be imperceptible and short-term.

The residual operational noise effect, based on the predicted emissions, phasing and intensity of the Site, mitigation measures and practices that will be implemented and within the context of the existing and long history of operations within the Scotshouse Quarry, is deemed to be neutral long term, and reversible effect.

Noise monitoring will occur twice annually and assessed against the site-specific noise limit, measured or calculated to NSRs of Daytime $L_{Ar,1hr}$ 55dB. The results will be reported to the Competent Authority. Additionally blast monitoring will continue with both air over pressure and vibration monitoring at the closest NSR's to the proposed blast event location.

12 LANDSCAPE AND VISUAL

A Landscape and Visual Impact Assessment (LVIA) was undertaken to describe the visual context of the Site and assess the potential effect of the Proposed Development on the local landscape in terms of both landscape character and visual amenity. This assessment informed the writing of Chapter 12 of the EIAR.

The visual impact assessment involved assessing six (6 No.) Visual Receptor Points (VRPs) representing a range of viewing angles, distances and contexts. An assessment was made of the extent of the local area from which either the Site, the existing quarry or both were likely to be visible using Zone of Theoretical Visibility (ZTV) mapping. The impact of the quarry was assessed for a distance of 3km from the quarry boundaries. See Figure 12-1 below.

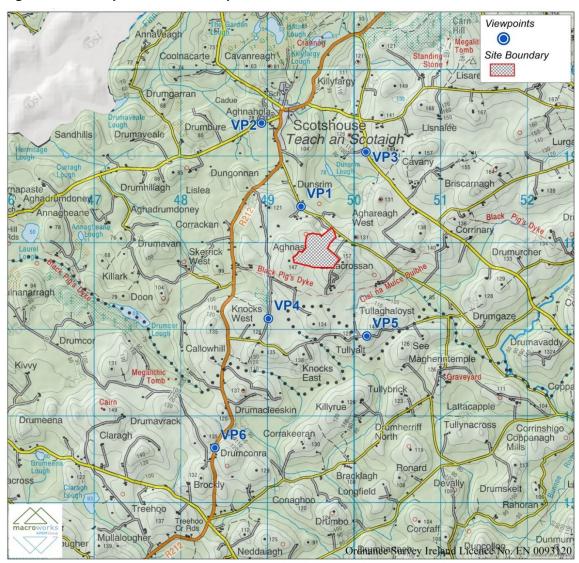


Figure 12-1: Viewpoint Location Map

An LVIA requires the separate assessment of:

- Landscape Impact the impacts of the development on the landscape itself. This looks at the effect on the elements that make up the landscape, the aesthetic and perceptual aspects of the landscape and its distinctive character. The landscape assessment looks at the physical impacts on the terrain and the consequences of those impacts for landscape character. The landscape character, its value and sensitivity and the magnitude and significance of likely landscape effects are all considered.
- Visual Impact the impacts of the Proposed Development on specific views and the visual amenity experienced by people. Visual impacts can occur from obstruction (the blocking of a previous view by the development) or intrusion (the interruption of a view). The key views, the existence of designated scenic routes/views, the local community views and amenity and heritage features are amongst the considerations when assessing visual impact.

The LVIA assessed that the landscape sensitivity of the local landscape was 'Medium-Low' and that the magnitude of landscape impact was 'Medium'. This gave an over-all significance of landscape effect of 'Moderate' within the immediate vicinity of the Site, reducing to 'Slight to Imperceptible' at greater distances.

The VRPs were deemed to be of 'Medium-Low' visual sensitivity. The currently excavated area alone was deemed to be potentially visible from 1.7% of the study area. The extension area alone was deemed to be potentially visible from 10.5% of the study area and both elements were deemed to be potentially visible from 14% of the study area. In total, 73.8% of the study area had no potential for any view of the current or expanded quarry. All the areas with potential visibility of the extension lands were to the north and east. Please note that this is potential visibility and does not account for the screening effect of any vegetation, treelines or buildings. The actual area from where there is any visibility is therefore likely to be considerably less than the figures stated.

Each VRP was assessed, with the results summarised in Table 12-1 below.

Point	Magnitude of Change	Site Visible	Significance of Effect	Quality of Effect
VP1	Negligible	No	Imperceptible	Neutral, long-term
VP2	Low-Negligible	Yes	Slight-Imperceptible	Negative, long-term
VP3	Medium-low	Yes	Moderate-Slight	Negative, long-term
VP4	Negligible	Berm only	Imperceptible	Neutral, long-term
VP5	Negligible	Berm only	Imperceptible	Neutral, long-term
VP6	Negligible	No	Imperceptible	Neutral, long-term

Table 12-1: Summary of Visual Effect at VRPs

The assessment concluded that the Development did not obstruct or unduly impact on views from the local community.

13 CULTURAL HERITAGE

A desk-based assessment and site survey were undertaken by an experienced archaeologist to identify the likely significance and sensitivity of any known or any potential archaeological, architectural and cultural heritage sites.

There are no structures within either the Site, Scotshouse Quarry or the wider study area listed in the National Inventory of Architectural Heritage. There are no recorded monuments within either the Site or Scotshouse Quarry. None of the twelve (12No) upstanding structures within 0.3km of the Site that were identified on the 1908 edition of the six-inch OS map were deemed to have any architectural impact or significance.

There are four Recorded Monuments within 500m of the Site. All remaining Recorded Monuments in the area were deemed to be too far from the Site to be impacted in any way. There were no entries in the Sites and Monument Record within the Site.

The examination of the 1st and 2nd edition six-inch OS maps and the 1st edition 25-inch OS map did not indicate any previously unrecorded archaeological sites or cultural heritage materials in the Site. The examination of aerial photography from 1995 to date did not indicate any additional archaeological sites.

¹ These categories relate to the UK Landscape Institute and IEMA Guidelines and do not directly corelate to the EPA categories as described in the EIAR Chapter 1.

Examinations of archaeological works on prehistoric artefacts did not reveal any additional material from the area around the Site. An examination of the Excavations Bulletins indicated that no licensed excavations have been carried out within the site. Two excavations have been carried out in the wider study area:

- Excavation of part of the Black Pig's Dyke, which found no artefacts;
- Excavation in the vicinity of Black Pig's Dyke.

A field inspection carried out on 17th November 2022 found no evidence of cultural, archaeological or architectural heritage materials at the Site.

After the proposed mitigation measures have been implemented, there will no residual impacts on archaeological, architectural or cultural heritage present within the Site or the vicinity.

14 MATERIAL ASSETS – TRAFFIC AND TRANSPORT

The quarry is served by the L6280 local road, which forms the eastern boundary of Scotshouse Quarry. A Traffic and Transport assessment was undertaken, the findings of which are presented in Chapter 14 of Volume 2 of the EIAR.

The scope of this assessment included a junction count at quarry gate – i.e., the point of entry from the L6280. The baseline traffic flows of the adjoining roads were also established.

The average number of vehicles was calculated as being:

- Staff cars 15-20 vehicles per day,
- HGVs (Rigid Truck) 54 vehicles per day and
- HGVs (Articulated Truck) 11 vehicles per day.

The Transport Research Laboratory computer programme JUNCTION 10 – PICADY was utilised for junction analysis.

The detailed assessment concluded that, with the mitigation measures already in place (e.g., sufficient car-parking, sufficient space between the quarry gate and the edge of the L6280 carriageway to accommodate 1 HGV etc), the surrounding roads and the junction of the L6280 with the entrance/exit point from Scotshouse Quarry will continue to operate within capacity during the operational lifetime of the Proposed Development.

It can therefore be concluded the Proposed Development will have an imperceptible effect on the existing site access and a not significant effect on the road network.

15 INTERACTION OF ENVIRONMENTAL IMPACTS

In accordance with Environmental Impact Assessment Report (EIAR) best practice procedures, the cumulative impacts associated with all of the relevant interactions have been addressed in the specific specialist chapters of the main EIAR report.

16 SCHEDULE OF ENVIRONMENTAL COMMITMENTS

As part of the EIAR, all of the mitigation measures arising from each of the individual assessments were summarised in an overall Schedule of Environmental Commitments. Scotshouse Quarries Ltd. are fully committed to implementing any such measures that are not already in place. The implementation of these measures will ensure that the Proposed Development will not result in any significant adverse impacts on the receiving environment.