NON-TECHNICAL SUMMARY

ENVIRONMENTAL IMPACT ASSESSMENT REPORT

Proposed Quarry Extension

(Previously permitted under P. Ref. 12/101)

Mullymagowan Townland, Stradone, Co. Cavan

Prepared for: P&S Civil Works Ltd.

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1.0 INTRODUCTION

1.1 Overview

This Environmental Impact Assessment Report (EIAR) **Non-Technical Summary** provides supporting information to accompany a planning application to Cavan County Council by P&S Civil Works Ltd. in respect of a proposed quarry extension at Mullymagowan townland, Stradone, Co. Cavan (Quarry Ref. EUQY22).

The application site is indicated on an extract from the 1:50,000 scale Ordnance Survey Discovery series map in **Figure NTS-1**. It extends to c. 4.9 hectares (c. 12.1 acres), of which c. 4 ha (c. 9.9 acres) consist of the proposed extraction area. It sits within an overall landholding by the applicant of 39.7 hectares (98.1 acres). The plan extent of the land interest of P&S Civil Works Ltd. are outlined in blue on a 1:10,000 scale map of the area, refer to **Figure NTS-2**.

Figure NTS-3 outlines the overall land ownership boundary in blue on a 1:5,000 scale map, within which there are the following defined areas:

- Grey shaded area consisting of the existing established quarry (permitted by P. Ref. 07/827), including access route from the R165 regional road to the site entrance, all of the site ancillary buildings, plant, facilities, storage, processing areas, etc., and the existing quarry extraction void;
- Yellow shaded area consisting of the application site, which previously was granted planning permission (P. Ref. 12/101) for a c. 4 hectare rock extraction area. The planning permission has expired;
- Unshaded area of lands to the western side of the L7503 road which are proposed to remain in agricultural use.

The plan extent of the application site is also outlined in red on the same **Figures NTS-2** and **NTS-3**.

The application site is currently agricultural in nature, with fields sub-divided by post and wire fencing. The central part of the site has previously been used for stockpiling aggregate materials in association with the existing established quarry in agreement with Cavan County Council. The application site is connected to the existing permitted quarry operation at its south-eastern point.

The proposed development consists of the following:

- Quarry extension development for rock extraction and associated processing over an area of c. 4 hectares within an overall planning application area of c. 4.9 hectares as previously permitted under P. Ref. 12/101 (P. Ref. 17/383) and never commenced;
- A time period of 15 years is being sought to allow the previously permitted extraction be completed plus 2 years to complete restoration works (total duration sought 17 years);
- The development proposed seeks to utilise existing ancillary buildings and facilities including weighbridge, wheelwash, portacabin office/canteen/toilet, waste water treatment system, processing plant, site entrance and all other associated site works, and ancillary activities as currently permitted by P. Ref. 07/827; and
- Final restoration of the worked out quarry to a permanent water body and naturally regenerated wildlife habitat area.

As the site is part of an existing and established operation, there is no requirement for any new site infrastructure or facilities as part of this application.

1.2 The Applicant

The planning application and accompanying supporting documentation has been prepared by SLR Consulting Ireland (SLR) on behalf of P&S Civil Works Ltd.

It is a local business, founded in 1968, which provides premium stone, sand and concrete products for use in infrastructure such as roads. It is an important source of such supplies for many of Ireland's local authorities.

It is the parent company of Cleantech Civils Ltd., which has expanded to the UK and carries out a range of civil engineering work for the public, private and commercial sectors. The Group's Headquarters is based in Cavan.

The company's intention in preparing and applying to extract shale rock at this location is to continue to secure the substantial financial investment by the company in the local area and provide a local source of high polished stone value (PSV) chippings which are of the quality required for use in national and high-speed roads.

1.3 Site Location

The overall landholding of the applicant straddles the three townlands of Mullymagowan, Drummuck and Tirlahode Lower in a rural part of east County Cavan, c. 4.5km south of Stradone village and c. 10km southeast of Cavan town.

The applicant operates an existing permitted quarry, with associated infrastructure, within its landholding which encompasses the application site. The application site for the proposed quarry extension is located to the west of the existing quarry and is located fully within the townland of Mullymagowan.

Access to the existing quarry is across the local L3500 road and via the private, dedicated link road to the R165, c. 3.5km from its junction with the N3, which links Dublin and Cavan. The L7503 runs along the western boundary of the proposed quarry extension area. Both the L3500 and the L7503 pass within the overall quarry landholding.

The nearest small settlement is Lavey, which is situated c. 2km to the northwest of the application site.

2.0 SITE DESCRIPTION

2.1 Surrounding Land-Use

The general area is rural and agricultural in nature and characterised by a gently undulating topography associated with the indigenous drumlin landscape. Views in the area are generally enclosed by a series of low-lying hills, hedgerows and trees. Coniferous woodland features are also dispersed in the landscape. There are a number of minor worked gravel pits in the wider area. There is an active hard rock quarry in operation at Lavey, c. 1.4km southwest of the application site on the opposite side of the N3 road.

Small-scale residential buildings and farmsteads are scattered throughout the surrounding area. There are c. 46 dwellings within a 1km radius of the application site boundary, although this includes some unoccupied buildings.

The existing quarry is located to the east of the application site, with facilities including a weighbridge, wheelwash, portacabin office/canteen/toilet, water treatment system, processing plant, and all other associated site works and ancillary activities to the northeast and the void from previous quarry excavation present to the southeast. The application site is connected to the existing quarry by an internal haul route at its north-eastern part. The western boundary of the application site is formed by the local L7503 road, beyond which the applicant owns further land which is to be unaffected by the proposed development. Agricultural land adjoining the application site to the north and south is separated from it by mature hedgerows, treelines and post and wire fencing.

Residences within the general area are confined to along the public roads. The nearest small settlement is Lavey, which is situated c. 2km to the northwest, along the N3 and is host to a number of dispersed services within the wider area. There is a number of minor surface water features flowing within the landholding and, in particular, there is a stream flowing along the north-eastern boundary of the proposed quarry extraction area.

No overhead power lines traverse the application site. A 10KV/20KV over-head line to the east of the L3500 connects to an underground 10KV/20KV/400V/230V cable within the applicant's landholding. This connection will continue to provide the principal energy source for the overall site.

2.2 Site Access

The application site is accessed from an internal haul route which links with the existing quarry. As set out above, a dedicated link road between the existing quarry operation and the R165 road is already in place and will continue to be used for access to the proposed development. The R165 link road, which is owned by the applicant, is accessed through crossing the local L3500 road to the northeast of the application site.

The entrance gates to the established quarry site are set-back from the L3500 but are approached at an angle almost perpendicular to the local road. There is a large area of hardstanding (c. 10m width) immediately outside the entrance gates, which allows HGV vehicles to pull in off the public road should the entrance gates be locked. Either side of the metal entrance gates is a decorative cut-stone wall set-back from the western edge of the carriageway which allow for adequate sightline visibility in both directions for vehicles exiting the site. The eastern side of the L3500 carriageway also has stone walls and an angled entrance to the dedicated R165 link road to allow for sightline visibility and positioning of HGVs for entrance to the quarry.

There is currently a gate access to the application site, along its western boundary from the L7503. That access will not be used for routine access to the proposed development but will be retained for occasional maintenance tasks. The remainder of the perimeter of the landholding is closed off by hedgerows and/or post and wire fencing.

2.3 Existing Site Description

The planning application site extends to c. 4.9 hectares (c. 12.1 acres). The existing site area is shown on **Figure NTS-4**.

The site lies entirely within Mullymagowan townland and is currently a mix of rural/agricultural land, with a central portion previously used by the applicant for stockpiling of aggregate materials from the existing quarry site (in agreement with Cavan County Council).

The site is split up into a number of fields with boundaries made up of vegetation (treelines and hedgerows) and post and wire fencing. Fields within the north and south of the site contain dense scrub and woodland vegetation in parts. There are patches of agricultural grazing lands within the application site. There is a drainage ditch with running water along the western and north-western site boundary.

3.0 PROPOSED DEVELOPMENT

As this is a proposed extension of an already existing quarry, there is no requirement for new welfare or ancillary facilities and infrastructure to be installed to service the site for the duration of the proposed development.

3.1 Overview of Proposals

3.1.1 Vegetation and Overburden Removal / Site Screening

Site clearance, vegetation and overburden removal will be required within the application site to enable excavation of shale rock that underlies it

The nature of the prevailing landscape and the central positioning of the application site within the existing permitted quarry site will assist in natural screening of the proposed development from external views. The excavated material will be permanently placed along the boundaries of the 4.0 hectare extraction area in order to further provide acoustic and visual screening of the quarry activities and to provide ecological habitat. The area of landscape screening that will be formed through the management of overburden material equates to the remaining 0.9 hectares of the 4.9 hectare planning application area. The landscape screening berms will be planted with locally occurring species.

3.1.2 Extraction of Rock

Extraction will be carried out in the same format as is currently practiced in the existing permitted quarry, by way of blasting, crushing and screening of the rock. The quarry will be developed using a conventional benching system (steps), with working faces being progressively advanced in a phased westerly direction.

It is proposed that the area will be worked to the previously permitted depth of c. 110m AOD. When extraction operations commence, it is proposed that water inflows to the extraction area will be diverted to a sump within the quarry floor of the extension area for settlement of any suspended solids and then pumped to the discharge point. This will ensure the quarry area remains dry for the duration of extraction operations.

3.1.3 Restoration (Reinstatement to an ecological after-use)

Most restoration works will be carried out on permanent completion of extraction works. As the majority of the application site is to be used for phased site clearance, extraction, processing and storage purposes it is not feasible to restore any significant parts of the rock quarry void at an earlier stage. However, it is proposed that all existing grass and scrub areas which have established along the site boundaries will be protected and retained, as much as possible. It is also proposed that the landscaping screening berms that will be established along the quarry extension boundaries prior to extraction operations will be protected and retained, as much as possible.

Upon the cessation of extraction operations, it is proposed to return the worked-out area to a beneficial ecological after-use area. Pumping operations which were carried out to maintain a dry working area will cease and the natural groundwater level will return to create a permanent water body. Retained rock faces and benches will be allowed to naturally colonise with local species over time which will also provide valuable nesting ledges for birds.

The only material requirements in respect of the planned restoration scheme are those topsoils and subsoils already present. There will be no requirement for importation of material during the restoration phase.

3.2 Detailed Methodology

3.2.1 Aggregate Reserve Assessment

A detailed topographical survey of the site was undertaken by SLR Consulting on behalf of the applicant (refer to **Figure NTS-4**). The survey data was used to produce a 3D digital terrain model using a quarry design software package called LSS.

In preparing the design, specific criteria were adopted with regard to face heights, bench widths and stand-offs to the site boundaries etc. (refer to **Figure NTS-5**). Proposed standoffs to the site boundaries will be c. 10m to the north and south, c. 15m to the west along the stream channel and c. 20m along the western boundary with the L7503 road. The proposed quarry face heights to be adopted are c. 15m.

Within the proposed final extraction footprint of the P. Ref. 12/101 previous permission area there is still approximately 3.75M tonnes of rock in-situ. This is based on a final extraction design to a depth of c. 110m AOD.

3.2.2 Duration of Extraction

The previously permitted maximum annual extraction rate (P. Ref. 12/101) is 290,000 tonnes per annum over a period of 10 years. No extraction activities have been undertaken at the application site, so the total aggregate reserve as indicated above remains in-site. However, to reflect current and projected market conditions, a revised maximum annual extraction rate of 250,000 tonnes per annum over a period of 15 years is currently proposed. A further 2 year period is proposed to carry out any final restoration works, giving an overall proposed development life of 17 years.

It is considered that planning permission for the proposed quarry development should be commensurate with the life of the reserves. This will ensure the developer has security for this investment and that the operation is carried out in accordance with proper planning and development guidelines. An adequate quarry life is required to secure an acceptable return on investment, when the costs of continued investment in the site development, mobile crushing / screening plant and the on-going operational costs are considered.

3.2.3 Removal of Overlying Materials (Topsoil and Overburden)

In order to gain access to the shale deposits underlying the site, efficient removal of the overlying materials using a hydraulic excavator is required. The excavated materials will be loaded directly onto dump trucks for use in perimeter planting for screening the site and providing ecological habitat.

Stripping will be carried out in blocks to allow sufficient area for aggregate excavation as the quarry is worked in a westerly direction. The removal of the overlying materials will thus be an intermittent operation which will progress in advance of aggregate excavation with site stripping typically taking place during periods of drier weather.

All materials to be stripped will be used on site. There is no requirement for any materials to be removed from the site.

3.2.4 Vegetation (Removal)

No vegetation removal has been undertaken under the previous planning permission for the quarry extension (P. Ref. 12/101).

The proposed development will require the removal of dense scrub and woodland vegetation in parts of the application site. Please refer to **Figure NTS-5**. All existing external hedgerows, treelines, existing planting along the application site boundaries will be protected and retained as far as possible.

3.2.5 Site Screening

The boundary treatment at the existing site is typical of an agricultural setting and currently comprises post and wire fencing, treelines and mature hedgerows.

The perimeter landscape screening that is proposed to be formed by the removal of topsoil and overburden material will be planted with native species to offset removal of vegetation/trees from within the application site.

3.2.6 Site Drainage

Existing Quarry Area – P. Ref. 07/827

Water from the existing quarry void (when operational) is pumped from a sump on the quarry floor which provides retention, by use of an electric 4" pump on float switches. The water is discharged directly to the surface water drainage channel located to the north of the landholding and running along the eastern boundary of the application site for the quarry extension. The drainage channel flows into the Mullymagowan Stream, which flows north to Corfad Lough (c. 600m north of the quarry extension area), and subsequently the Stradone River.

Application Area – as previously permitted by P. Ref. 12/101

There are two minor surface water features within the proposed extension area consisting of:

- A drainage ditch feature that flows along the southern boundary of the extension area in an easterly direction where it joins the stream that flows along the eastern boundary and into the Mullymagowan stream; and
- A drainage ditch feature that flows adjacent to the northern boundary of the extension area and joins the stream that flows along the eastern boundary at the northern-most corner of the extension area.

When extraction operations commence, it is proposed that waters from within the proposed extension area will be diverted to a sump within the quarry floor of the extension area for settlement of any suspended solids and then pumped to the discharge point D1, which is controlled by a discharge license issued by Cavan County Council (see below).

Existing Discharge Licence

The applicant currently holds a discharge licence (Ref. **SS/W005/11**) from Cavan County Council in relation to discharges from the existing quarry operations (P. Ref. 07/827) and the proposed extension area (as previously permitted under P. Ref. 12/101).

A hydrological / hydrogeological assessment has been carried out taking into consideration the existing water regime at the quarry and plant area and to determine what the requirements are for the proposed development. It addresses mitigation measures to eliminate and/or minimise the potential impacts, if any, on surface water and groundwater. These measures are/will be incorporated into the quarry design and operation (refer to **EIAR Chapter 7** –Water).

3.2.7 Method of Extraction and Processing

It is proposed that the method of rock extraction to be implemented at the site will be as follows:

- topsoil and overburden will be stripped and placed in landscape screening mounds along the boundaries of the proposed quarry extension area in advance of rock drilling and blasting;
- rock material will be extracted using conventional blasting techniques. Prior to drilling, the quarry face will be surveyed in order to ensure safe and efficient blasting. Drilling will be carried out in accordance with the blast design. Finally, the holes will be filled with bulk emulsion explosives and the blast carried

out. All blasting will be carried out in accordance with the health & safety regulations, and environmental guidelines for the sector;

- the fragmented rock will be loaded from a tracked excavator into rock dump trucks for transport to the existing processing plant via an internal haul route;
- At the processing plant, the material will be broken down through a series of crushing and screening equipment until the specific final products (blinding, clean stone 30mm-70mm, dust, 6mm dust, 6mm chip, 10mm chip, 14mm chip, 18mm chip) are collected in end bins;
- the aggregate products will be temporarily stored in stockpiles located within the central processing area to await use in the onsite concrete plant or dispatch off-site.

The proposed extraction plan sees the quarry extension area being developed over a duration of 15 years (based on a maximum annual extraction rate of c. 250,000 tonnes per annum). **Figure NTS-5** shows the proposed final quarry development layout plan.

The proposed design as previously permitted by P. Ref. 12/101 will see the quarry faces progressed in a westerly direction to give a final extraction footprint of c. 4.0 hectares and a final depth of c. 110m AOD.

3.2.8 Phasing of Development

It is proposed that the quarry extension area will be developed in 4 no. phases. Phases 1-4 will consist of extraction operations and Phase 5 will consist of final restoration works.

Phase 1

Vegetation will be cleared on a progressive basis in advance of overburden stripping. The overburden will be stripped from the extension area (approximately 0.4m thickness of soils assumed) and placed into dedicated storage bunds along boundaries where they will provide the most benefit in terms of acoustic and visual screening.

Extraction of the underlying rock will be carried out to a depth of c. 155m AOD. This is referred to as Bench 1 on **Figure NTS-5**. Extraction operations will commence in the southeast corner closest to the internal access track that leads to the central aggregate processing area. As extraction continues the quarry face will gradually advance in a mainly westerly direction until the full extent of the extraction footprint is achieved. The typical quarry face height will be c. 15m.

Phase 2

A standoff of 5m from the toe of Bench 1 will be maintained. During Phase 2, extraction of the underlying rock will be carried out to a depth of c. 140m AOD and the working quarry face will typically be c. 15m high. This is referred to as Bench 2 on **Figure NTS-5**. Extraction operations will again commence in the southeast corner closest to the internal access track that leads to the central aggregate processing area and will gradually advance in a mainly westerly direction until the full extent of the extraction footprint is achieved.

Phase 3

A standoff of 5m from the toe of Bench 2 will be maintained. During Phase 3, extraction of the underlying rock will be carried out to a depth of c. 125m AOD and the working quarry face will typically be c. 15m high. This is referred to as Bench 3 on **Figure NTS-5**. Extraction operations will again commence in the southeast corner closest to the internal access track that leads to the central aggregate processing area and will gradually advance in a mainly westerly direction until the full extent of the extraction footprint is achieved.

Phase 4

A standoff of 5m from the toe of Bench 3 will be maintained. During Phase 4, extraction of the underlying rock will be carried out to a final depth of c. 110m AOD and the working quarry face will typically be c. 15m high. This

is referred to as Bench 4 (final floor) on **Figure NTS-5**. Extraction operations will again commence in the southeast corner closest to the internal access track that leads to the central aggregate processing area and will gradually advance in a mainly westerly direction until the full extent of the extraction footprint is achieved.

Phase 5 (Cessation of extraction activities and final restoration)

Final restoration works will consist of removal of any plant and machinery from the quarry void, ensuring the external site boundaries are adequately secured and reinforced and allowing the natural groundwater level beneath the site to rebound to create a permanent waterbody.

3.2.9 Equipment and Plant

Equipment and plant involved at all stages will typically include 1 no. tracked excavator, 1 no. loading shovel, 2 no. rock dumpers, as well as the fixed processing plant that already exists and operates within the permitted quarry operations (P. Ref. 07/827).

HGV movements will be required to / from and within the application site to transport excavated materials. **EIAR Chapter 14** – Traffic sets out the volume of quarry traffic at the proposed development. It is assumed that there will be c. 45 HGV trips per day associated with the proposed development.

3.2.10 Extraction and Blasting

As set out above, rock material will be extracted using conventional, industry standard blasting techniques. There is no proposed change in the blast design and blast methods to what has previously been carried out during extraction operations at the existing quarry. These have been undertaken using highly trained shot blasters and blasting engineers without incident or disturbance.

Future blast monitoring will be carried out at this location in order to ensure ongoing compliance with the industry threshold and provide for blast design modification if required.

3.2.11 Processing Methods

The processing methods to be used at the quarry will consist of industry standard methods which constitute size reduction through crushing and sizing by screening using fixed plant.

Dump trucks will transport excavated material from the quarry face to feed the primary crusher within the existing fixed processing plant to the east of the quarry extension area.

The primary crusher is stationary and breaks the material down to below 200mm in size. A primary screener then divides the material products, which are temporarily stockpiled prior to further crushing and screening to create end products, which are stored in end bins prior to being transported off site using identified haul routes as set out in **EIAR Chapter 14** – Traffic.

The 6mm dust product requires a washing process to allow for its use as sand for sports pitches / arenas, as well as its use in the manufacture of concrete products at the processing plant in the existing quarry. The silt produced from the washing process is pumped to the site's settlement lagoon system and dried for its ultimate use in restoration of the overall site.

It is proposed that the same processing methods will be utilised going forward. There is no requirement for any additional processing plant as part of this planning application.

3.2.12 Stockpiling and Dispatch of Aggregate Product

Excavated aggregate will be stored in temporary segregated stockpiles prior to being loaded by means of a mechanical loading shovel directly to incoming road trucks (HGV's). Trucks will then leave the stockpile area and travel to the weighbridge on the exit route out of the site where loads dispatched off-site will be weighed and

recorded. The dispatch office will monitor the movement of incoming and outgoing HGV's and will also be responsible for the issuing of dispatch dockets.

Prior to leaving the site, all HGV's will pass through the wheelwash facility to minimise dust / mud carry onto the public carriageway.

3.3 Working Hours

It is intended that the proposed development will be operated during the hours of 07:00 to 18:00 hours from Monday to Friday (excluding Bank Holidays) and from 07:00 to 14:00 hrs on Saturday. with no extraction, processing or associated activities being permitted on Sundays or public holidays.

The proposed working hours are consistent with Section 4.7(b) of the DoEHLG Quarries and Ancillary Activities Guidelines for Planning Authorities (2004).

It is anticipated that a planning condition will be attached to any planning permission that would be granted for the proposed works.

3.4 Employment

It is anticipated that when extraction and processing operations recommence at the site, the development will secure employment for the duration of the extraction period of 15 years for c. 10 people directly on-site.

The development will also provide indirect employment for local people, such as sub-contractors, contract hauliers, maintenance contractors, material suppliers, etc. as well as service providers in the local area.

It is considered that the proposed development will contribute to the objectives of national, regional and local policy in terms of assisting the provision of a local supply of aggregates to facilitate continued economic growth and international competitiveness, and in the promotion of rural diversification through development of alternative economic opportunities within a rural area.

3.5 Site Access

Access to the application site will be through the existing permitted quarry site, which is gained by taking the R165 regional road southbound off the N3 National Primary route. A dedicated access to the existing quarry site is provided off the R165, which traverses a local road (L3500) which connects the local rural communities with the R165.

The entrance gates to the quarry site are set-back from the L3500 but are approached at an angle almost perpendicular to the local road. There is a large area of hardstanding (c. 10m width) immediately outside the entrance gates, which allows HGV vehicles to pull in off the public road should the entrance gates be locked. Either side of the metal entrance gates is a decorative cut-stone wall set-back from the western edge of the carriageway which allow for adequate sightline visibility in both directions for vehicles exiting the site. The eastern side of the L3500 carriageway also has stone walls and an angled entrance to the dedicated R165 link road to allow for sightline visibility and positioning of HGVs for entrance to the quarry.

The gates at the site entrance will be closed at all times outside permitted working hours. The application site itself is located well within the interior of the applicant's landholding and will be approached by internal haul routes within the access described above. There is currently a gate access to the application site, along its western boundary from the L7503. That access will not be used for routine access to the proposed development but will be retained for occasional maintenance tasks. The remainder of the perimeter of the landholding is closed off by hedgerows and/or post and wire fencing.

The route for most vehicles/trucks leaving and entering the site is northwest along the R165 until it meets the N3, from where the national primary road network can be utilised.

3.6 Site Security

The boundaries of the application site that are not open to the existing quarry operations are fenced with a combination of post and wire fencing, treelines and mature hedgerows along the L7503. The site boundary will continue to be inspected on a regular basis and maintained as required under the Mines and Quarries Legislation.

The existing entrance to the applicant's landholding, through which the site will be accessed, has lockable gates to prevent unauthorised access outside of the working hours.

3.7 Site Roads, Parking and Hardstanding Areas

Internal access roads are provided within the entire landholding and extend into the application site. The main route runs from the main quarry entrance past the existing weighbridge and wheelwash within the northeast of the landholding, and there are spurs towards the processing plant, the existing quarry void within the southeast of the landholding, and into the application site at the centre of the landholding.

Within the existing quarry, HGV traffic movements are kept left along the internals road as they access / egress the separate areas of activity.

Adequate provision for car parking by existing employees and visitors is currently provided within a dedicated hardstanding area at the existing quarry office which is situated external to the weighbridge / wheelwash, which are accessed further within the site.

3.8 Wheelwash

There is currently a wheelwash present at the existing quarry site, located within the main site entrance gates and adjacent to the weighbridge. The area leading to the wheelwash and beyond towards the site entrance is hard surfaced.

In addition, the existing quarry has a dust suppression system which will be utilised, and all processing equipment has inbuilt dust suppression systems.

The above measures have proven to be effective and acceptable to-date and will be maintained in the future. The applicant will continue to regularly monitor the situation and will notify the Local Authority of any change in circumstances.

3.9 Weighbridge

All heavy goods vehicles (HGVs) exiting the site are required to pass over the existing weighbridge which is in line with the wheelwash and adjacent to the site entrance.

The weighbridge is utilised to establish a weight for each truck used for hauling products from the site. All loaded trucks will pass over the weighbridge before exiting the quarry so that a record of each load can be made. Apart from keeping a record of the quarry's productivity, the weighbridge is also used to ensure all loads exiting the site do not exceed the legal weight limit.

3.10 Offices and Ancillary Facilities

All existing offices and employee facilities at the quarry are permitted under the existing planning permissions within the overall landholding.

The existing facilities will be utilised for the duration of the development. There is no requirement for any additional buildings, structures or ancillary facilities as part of this planning application.

3.11 Utilities and Services

The site is served by mains electricity. An ESB power line feeds directly into the quarry site to service the office, weighbridge and processing plant.

The potable (drinking water) originates from the Lavey-Billis Group Water Scheme. There are two existing on-site abstraction wells, located within the general processing plant area, to the southwest of the main quarry entrance gates and therefore located northeast of the application site itself. Water from one of these wells (Well A) is used for processing activities at the existing quarry, as the other (Well B) has insufficient yield.

No utilities or services cross the operational quarry site area. There is no proposed change to the existing services supplying and servicing the site as part of this planning application.

3.12 Fuel and Oil Storage

There are no 'dangerous' substances or technologies used at the quarry.

The only chemicals stored on site that have the potential to cause water pollution are lubricating oil, hydraulic oils and diesel fuel.

Fuel is required on site for plant and machinery. No vehicles will be fuelled on the quarry floor, with the exception of one mobile machine, as a designated fuelling area is located in the central processing area of the quarry. All staff are trained in the use of spill kits which are available at the quarry in the case of an accidental discharge.

Oils and lubricants stored in drums including waste oils will be kept on spill trays inside the existing storage area. Spill kits are to be provided in the unlikely event of a spillage occurring.

Oils and other wastes will not be permitted to accumulate on site in large quantities. The waste oils will be stored for collection and recycling off site by an approved contractor.

3.13 Sewerage and Surface Water Drainage

Site staff will use existing toilet, hand washing, and welfare facilities provided at the existing site. Wastewater from these facilities is currently managed through a dedicated wastewater treatment system.

The wastewater from the administration building is diverted to an existing septic tank and percolation area which are located near the carpark at the quarry entrance. Details of an assessment were previously submitted to the Planning Authority with the Further Information response (Appendix D) in relation to the previous planning permission (P. Ref/ 12/101). There continues to be no issues with this system to date.

3.14 Waste Management

3.14.1 Extractive Waste Management

No extractive waste will be generated by the proposed development. As previously indicated, any excavated soils or overburden still in-situ will be stored on site for use in restoration works.

Almost all products and by-products arising from the aggregate processing have commercial value. Any waste materials from the site will be stored, collected, recycled and/or disposed of in accordance with any requirements of Cavan County Council.

3.14.2 General Waste Management

Any waste materials will be stored, collected, recycled and/or disposed of in accordance with the requirements of Cavan County Council.

Potential waste produced and the measures used to control it are described as follows: -

- **Scrap metal** – these materials are chiefly produced from the maintenance of the processing plants and can cause a nuisance if allowed to build up in an uncontrolled manner. There is a designated scrap metal area on the existing permitted site and the build-up of scrap is controlled by the regular removal by licensed scrap metal dealers.
- **Used Oil and Oil Filters** – any waste oil/oil filters that may arise from servicing of mobile plant will be collected by a licensed waste contractor for disposal / recycling.
- **Used Batteries** – similarly all used batteries will be removed from site by a licensed waste contractor. This is in accordance with Waste Management Regulations.
- **Drums / Barrels, Pallets** – removed from site by a licensed waste contractor for disposal / recycling.
- **Domestic Style Waste (Canteen Waste)** – domestic waste generated at the office and employee's existing facility will be collected by a licensed waste collection contractor.
- **Sewage Effluent** – this is collected and treated by the existing on-site wastewater treatment tank and percolation area
- **Note**: overburden stripped from above the in-situ rock is not considered waste. It is an essential component of the restoration programme.

3.15 Restoration (Reinstatement to an ecological after-use)

The principal activity which will be undertaken at the application site is the extraction of the shale rock with ultimate restoration of the overall application site to a combination of natural wildlife and biodiversity diverse habitat, which is a beneficial after use listed in the EPA Guidelines: 'Environmental Management in the Extractive Industry' (2006). The final restoration scheme and detail is shown on the restoration plan in **Figure NTS-6**. A two-year period following completion of all extraction works is being requested to carry out final restoration of the site.

The proposed restoration scheme envisages that the worked-out area will be left to naturally infill with water. All quarry faces / benches which remain above the water level will be left to become naturally vegetated. In time, the rock will weather, and grass and scrub will become established in crevices within the rock, softening the appearance of the quarry face and providing nesting habitat for birds. The perimeter landscape screening that that will have been planted with native species at the onset of the proposed development will be retained.

It is expected that the proposed restoration scheme would integrate into the surrounding landscape. The proposed restoration scheme relates to the overall site and will be achieved by the following measures:

- stockpiles and mobile processing plant to be removed from site;
- the perimeter berms constructed during the construction/operational phase of extraction will be retained;
- all existing boundary fences and hedgerows will be retained to ensure that the site is secure; and
- the entrance gates at the site entrance will be retained and kept locked at all times, except for maintenance access.

Restoration works will be carried out on completion of extraction activities.

Ecological advice will also be incorporated into the restoration process to facilitate future habitat value in the area for biodiversity.

3.15.1 Site Management and Supervision

The Applicant will clearly define the management responsibility for the site restoration work and will ensure that this person has the necessary information (from the planning application) and authority to manage the whole restoration process (both ongoing phased and final). Relevant staff will be briefed on the scheme and will be adequately supervised / controlled. A system of record keeping for the key restoration activities will be put in place.

3.15.2 Long Term Safety and Security of Site

All components of the barrier system of the site consisting of existing mature boundary hedgerows, treelines and fences will remain in place after extractive/ processing operations have ceased.

As the lands will be restored in part to natural habitat use with a body of open water, secure fencing will be provided around the perimeter of the extraction area. Existing hedges surrounding the development will be gapped up and thickened where required. These combined with the secure and locked entrance gates to the development will prevent unauthorised third-party access.

3.15.3 Long Term Surface Water and Groundwater

The surface water will percolate to ground. There will be no requirement for any active long-term surface water or groundwater management at the site.

3.15.4 Aftercare and Monitoring

There will be no on-going requirement for monitoring noise or dust after extraction and processing and manufacturing operations have ceased.

Establishment maintenance will be carried out for 2 years following the restoration works on a (minimum) quarterly basis. This will include weed control, replacement planting, watering (if required) and the adjustment of spiral guards, ties, and stakes.

4.0 THE EXISTING ENVIRONMENT, EFFECTS AND MITIGATION MEASURES

4.1 Population and Human Health

The Environmental Protection Agency guidelines in relation to environmental impact assessment (2022) indicate that the consideration of human health and population relates to employment, human health and amenity. For the purposes of environmental impact assessment, human health is considered in the light of the relevant topics or 'pathways' addressed by the EIAR, such as noise, air and water, and in the light of established, acceptable limits for exposure. Guidelines specifically relating to human health in environmental impact assessment have been issued by the Institute of Environmental Management and Assessment and identify a range of 'wider determinants of health' that should be considered in determining the acceptability of the project in public health terms and refers also to the potential of projects to impact or enhance overall wellbeing.

The application area is situated entirely within the townland of Mullymagowan and is a proposed extension to the existing quarry operated by the applicant, which straddles the three townlands of Mullymagowan, Drummuck and Tirlahode Lower in a rural part of east County Cavan. The nearest small settlement is Lavey, which is situated c. 2km to the northwest of the application site. Larger settlements in the wider area include Stradone village, c. 4.5km to the north and Cavan town, c. 10km northwest, refer to **Figure NTS-1**.

The general area is rural and agricultural in nature and characterised by a gently undulating topography associated with the indigenous drumlin landscape. Small-scale residential buildings and farmsteads are scattered throughout the surrounding area. There are c. 46 dwellings within a 1km radius of the application site boundary, although this includes some unoccupied buildings. Residences within the general area are confined to along the public roads.

The closest third-party residence is located 180m northwest, with another residence located 235m to the south (indicated as vacant on myplan.ie). **EIAR Figure 4-1** identifies these residential properties as R2 and R3, and it also shows land uses, more distant dwellings and buildings on the public road network within 100m, 250m, 500m, 750m and 1km offsets from the application boundary.

An assessment of the socio-economic profile of the area has been based on a review of census data at the Electoral Division (ED) level that covers the application site (Waterloo), the adjacent ED of Stradone within which some of the applicants landholding also falls, and census data at the county and state level. Employment trends have been analysed through figures released from the closest Social Welfare Office at Cavan town.

Mitigation measures to be adopted during the proposed extraction/processing development will relate primarily to minimising any impacts of the project on surrounding sensitive receptors (primarily associated with noise, dust and traffic). These measures are discussed in the following chapters of the EIAR:

- Chapter 6 – Land Soils and Geology
- Chapter 7 – Water
- Chapter 8 – Air Quality
- Chapter 10 – Noise & Vibration
- Chapter 11 – Material Assets
- Chapter 13 – Landscape
- Chapter 14 – Traffic

It is considered that with the implementation of the mitigation measures outlined in Chapters 6, 7, 8, 10, 11, 13 and 14 of the EIAR, there will not be any significant impact on population and human health of the surrounding area.

4.2 Biodiversity

The potential effects of the proposed development on habitats and species have been assessed.

A desk study was undertaken to collate the available existing ecological information on the application site. The site and the surrounding area were viewed using existing available satellite imagery and online resources were consulted to identify the potential for features of ecological importance. A habitat survey was carried out at the application site in October 2022, the purpose of which was to record and classify the habitat-types and assess the likely presence/absence of protected and invasive species.

The habitats present within the site are commonly occurring throughout Ireland or have limited value for biodiversity and are evaluated to be either important at the site level or not important. The only potential ecological feature likely to be affected by the proposed quarry extension is the breeding sand martins which use aggregate stockpiles at the application site. Should sand martins start to build nests in stockpiles in the site, they cannot be removed or touched during the bird breeding season. Where the presence of sand martin species is confirmed, aggregate stockpiles should be retained or created to allow them to breed each year.

All existing external hedgerows, treelines, existing planting along the application site boundaries will be protected and retained as far as possible. This will retain ecological corridors along the boundaries of the site to the surrounding habitats and will provide suitable bird nesting habitat.

The proposed development will not result in any significant effects on the biodiversity of the application site. The ultimate restoration of the overall application site to a naturally regenerated wildlife area is expected to enhance the ecological value of the application site in the long term.

4.3 Land, Soils and Geology

The assessment is based on a desk study of the site / surrounding area using published geological data, a site inspection of the lands and previous investigations undertaken within the landholding. This section describes the land, soil and geology attributes within a study area of 2km of the application site boundary. Existing exposures at the existing quarry adjoining the application site provided additional information on the local subsoils and bedrock geology at the proposed development site. The site is not a designated County Geological Site (CGS), nor is one located within a 2 km radius of it.

Land can be considered to be a resource with a beneficial use to society, for example agricultural land-use, extractive industry land-use or urban residential land-use; unnecessary land take may result in the loss of this resource which has the potential to have adverse social and economic consequences for society. Soil is the top layer of the earth's crust and is formed by mineral particles, organic matter, water, air and living organisms and its formation is an extremely slow process, which can take thousands of years to evolve.

The proposed extension area of the site is characterised by scrub land / trees with some areas of more open land for grazing and an area of stockpiled processed aggregate material. The proposed extraction of rock materials at the site is a tied land-use activity as it is dependent on the location and suitability of the rock that is used to produce a range of construction aggregates including high polished stone value (PSV) chippings, which are recognised as a premium aggregate product.

Subsoils mapping indicates that rock is close to the surface across parts of the area and therefore the soils and subsoils are thin or absent in the application site. As the soils are poorly draining, they can't be used for agriculture without the requirement for drainage improvement works. According to Teagasc mapping, there are three types of subsoils present at the site and the immediate surrounding area. A small central part of the application site is mapped as bedrock at or close to surface, the majority of application area is underlined by Till

and a small area to the southeast of the application site is mapped as Cutover Raised Peat. Bedrock is a source of high PSV aggregate, which is high importance at the local and regional scale.

The agricultural land and soils to be lost is not considered to be significant given its small area and low quality.

Operations at the site will adhere to the appropriate Health and Safety Authority guidelines and this will limit the potential for unplanned events such as instability of pit faces or instability in adjacent lands.

Soils will be managed on site in line with best practice national guidelines. A specific Soil Management Plan will be developed for the site which will ensure best practice measures are implemented at the site with regard to the stripping and placing of materials in landscaping bunds.

Following the restoration of the site initial monitoring will be required over a period of three years to ensure that the restored soil and land-use is successful and that the remaining quarry faces are stable.

4.4 Water (Hydrology and Hydrogeology)

On a regional scale, the overall landholding area its environs are located in the Erne River Catchment area and Laragh Sub-Catchment (ID 36_9). Under the Water Framework Directive (WFD) 2013-2018 River Water Quality, the rivers within the Laragh Sub-catchment are all good status based on their physio-chemical and biological quality. All are listed by the EPA as being not at risk of not meeting their objectives by 2027 (WFD).

EPA water quality monitoring stations on the Stradone River report Q value ratings of Q4 at both stations, which indicates “unpolluted” status. The surface water samples collected on site in both the Mullymagowan Stream, and flooded quarry void produced results showing generally good quality.

The applicant currently holds a discharge licence (Ref. SS/W005/11) from Cavan County Council in relation to surface water discharges from the existing quarry operations (P. Ref. 07/827) and the proposed extension area which was previously permitted (P. Ref. 12/101).

There are no recorded flood events at or near the site, nor is there any potential flooding.

The application area is underlain by a poor bedrock aquifer which is generally unproductive except for local zone (Pl). The groundwater vulnerability at the application area is classed as “Extreme”.

The Cavan Groundwater Body (GWB) underlies the site and includes the poorly productive bedrock aquifer and extends further southwest and north/northeast from the site boundary. The Cavan GWB is good status under the WFD 2016-2021 Groundwater Quality. The GWB is listed by the EPA as not being at risk of not meeting its objectives by 2027 (WFD).

The site is not located within a source protection area. The potable (drinking water) for the site originates from the Billis-Lavey Group Water Scheme, which is also the closest group water scheme to the site and is supplied by surface water. The source protection area for this supply is located c. 1.1 km southwest of the application area. There are no other surface water or groundwater source protections areas within a 5km radius of the site.

According to the GSI well database, there are no wells within a 2km radius of the site. There are three wells in total within a 5km radius of the site, all located within the Cavan GWB. Two water supply wells are included within the existing processing area (Well A and Well B). It is expected that groundwater will be breached close to the current ground surface on the commencement of extraction operations in the new quarry area, at approx. 5.5 - 15 mbgl where inflows were noted during drilling.

When extraction operations commence, it is proposed that water inflows to the extraction area will be diverted to a sump within the quarry floor of the extension area and then pumped to the discharge point as licenced by Ref. SS/W005/11. This will ensure the quarry area remains dry for the duration of extraction operations.

Measures that have been implemented within the permitted quarry (P. Ref. 07/827) will be continued and updated to ensure that there will be no significant residual impacts with respect to groundwater and/or surface water associated with the proposed development.

Groundwater and surface water monitoring points will be sampled regularly and in agreement with Cavan County Council to ensure that the quality of the water environment is protected.

4.5 Air Quality

An assessment of potential air quality impacts from the proposed development has been undertaken. The national limit values for air pollutants in relation to human health and vegetation are set out within the assessment. The assessment takes into consideration the potential sources, surrounding receptors, and the pathway between source and receptor in order to assess the magnitude of risk of impact without mitigation measures in place.

The main focus of the assessment is the potential impact on sensitive receptors from fugitive dust emissions and particulate matter from the following activities:

- trafficking by onsite machinery and heavy goods vehicles (HGVs) over paved / unpaved surfaces;
- end-tipping, handling, and processing of materials;
- stockpiling of aggregates;
- continuation of related aggregates processing; and
- landscaping and final restoration activities.

The existing air quality baseline of the is described based on site specific surveys and EPA data. Air emissions arising from the activities at the quarry have been projected and applied to these baseline conditions and the resulting air quality impacts assessed. Mitigation measures are identified where required, to eliminate and reduce these impacts insofar as practical.

All residential receptors within the 1km of the study area of the application site were identified. As residences are clustered in some areas, the most sensitive receptors have been identified as those nearest to the application site boundary.

The assessment of dust impacts arising from soils stripping, placement and restoration works has determined that the dust risk category is considered 'low risk' to 'negligible', given that they will be confined the limited extent of earthworks and the separation distance to receptors. Mitigation measures will be required to ensure that nuisance dust does not arise during dry and windy conditions.

In the absence of any mitigation measures, the assessment of potential dust from material extraction and ancillary activities concludes that the risk to all except the closest residential receptor is 'insignificant' to 'acceptable'. The predicted impact at the closest receptor (R1, a property owned by the applicant) is 'Slight Adverse'. It is considered that the assessment is a worst-case, conservative assessment based on high wind speeds of 2m/s.

Dust deposition levels of dust generated from quarrying operations are anticipated to be well below the level of 1000 mg/m^2/day, where it is considered that dust could be likely to have a significant effect on sensitive ecosystems.

There will be no changes to road alignment or speed on the existing road network, therefore, the potential air quality impact of the scheme arising from traffic are considered to be negligible.

The potential impacts in relation to increase in ambient PM_{10} concentrations has been classified as negligible, given the low annual mean background concentrations at the closest EPA monitoring station, and the predicted changes and duration to be brought about by the proposed development.

A number of mitigation measures are proposed to further minimise the generation / migration of fugitive dust and to ensure that the proposed development complies with the threshold values. These mitigation measures

are in accordance with the 'best practice / mitigation' measures for the sector and are described within **EIAR Chapter 8** – Air Quality.

Dust monitoring programme will continue to be implemented at the site to confirm that the site will operate within the recommended dust deposition emission limit values set out in best practice guidelines for the sector. Dust monitoring locations shall be reviewed and revised where and as/when necessary. The results of the dust monitoring shall be submitted to Cavan County Council on a regular basis for review and record purposes.

4.6 Climate

An assessment of Climate has been undertaken. The assessment takes into consideration the evolving baseline, climate hazards, project vulnerability, and GHG emissions.

The following issues are addressed separately:

- climate change legislative framework/policy context;
- analysis of evolving environmental baseline trends;
- identifying climate change concerns in relation to proposed development;
- assessing effects;
- identifying mitigation measures; and
- identifying monitoring and adaptive management.

The following analysis was carried out:

- likelihood analysis of a climate hazards;
- climate hazard impact analysis;
- sensitivity of project to climate hazards;
- exposure of the project to current and future climate hazards; and
- vulnerability analysis of project to climate hazards.

Based on the project vulnerability assessment, measures to improve the resilience of the project to extreme rainfall, flood, flash flood, storms, and winds are required. Specific mitigation measures for the proposed development relating to climate change adaptation in response to these potential events are suggested within **EIAR Chapter 9** - Climate. These include reviewing opportunities for flexibility in operations that provide for increased run-off across paved areas, ensuring that activities / production can proceed safety during high winds and storms, ensuring that the choice of equipment deployed on the project is weather efficient and securing insurance for damage of assets / site incidences.

An estimate of the likely greenhouse gas emissions of the proposed development has been made and it has been estimated that it is assessed that the proposed operations would represent a maximum of 0.000308% of Ireland's annual CO_2e emissions annually. The EIAR provides suggested measures to reduce these emissions as part of a wider greenhouse gas monitoring programme.

4.7 Noise & Vibration

The existing noise baseline noise environment of the local area surrounding the application site has been surveyed in order to provide a measure against which the predicted changes resulting from the proposed development can be quantified.

17 no. sensitive noise receptors were identified within the 1km study area of the application site, and these are shown on **EIAR Figure 10-1**. The selection of noise monitoring locations for the baseline noise surveys was chosen in order to provide representative scenarios.

To predict the noise impact, SLR Consulting Ireland carried out a noise prediction assessment, whereby the expected levels of noise were calculated at the nearest noise sensitive receptors, based on industry accepted assumptions regarding noise of plant and machinery to be used as part of the proposals.

The predicted noise levels for the overburden stripping and extraction works, and pit restoration are comfortably within EPA criterion limits for temporary works at all noise sensitive receptors. Mitigation measures including the planting of screening berms around the application site and careful management of plant and machinery will ensure that the noise impacts from operation of the proposed development will not be significant. Noise monitoring will continue to be undertaken around the application site. The results of the noise monitoring will be submitted to Cavan County Council on a regular basis for review and record purposes.

There are no ecologically designated sites within 2km of the application site, therefore no noise impacts on ecologically sensitive receptors have been identified.

The potential for vibration impacts from blasting activities has been assessed. Historical blast monitoring results at the existing quarry confirm that the blasting operations there have complied with national government and EPA limits. It is concluded that blasting operations within the application site will not have a significant impact on any sensitive receptors from vibrations. A number of measures have been proposed to further reduce the potential for vibration impacts, such as restricting the hours within which blasting can be undertaken and notifying residents in advance of blasting operations. Blast monitoring will continue to be carried out and results will continue to be submitted on a regular basis to Cavan County Council for record purposes.

4.8 Material Assets

Material Assets include the built services such as electricity, telecommunications, gas, water supply infrastructure and sewerage. Material assets also cover and roads and traffic and cultural heritage, which have been dealt with in their own respective chapters of the EIAR.

There is an existing mains electricity supply to the established quarry within the applicant's landholding. There is no mains gas supply within the vicinity of the site. The potable water supply to the existing quarry canteen is provided by the Lavey-Billis Group Water Scheme. Effluent from toilet facilities is treated using the existing effluent treatment system which is already in place in the established quarry. The existing site-based staff are contactable via fixed land-line and mobile phones.

EIAR Chapter 11 – Material Assets shows maps of the utilities infrastructure in and around the application site and these will be safeguarded during operations at the application site. Details of the how waste generated at the site is to be removed is set out in Chapter 11 of the EIAR.

The proposed development will not require any changes to utility provision and will not have an impact on the capacity of material assets of the surrounding area.

4.9 Cultural Heritage

The archaeological, architectural, and cultural heritage component of an environmental impact assessment report of the proposed development at Mullymagowan townland, Co. Cavan consisting of a paper and fieldwork study was carried out by specialist Dr Charles Mount during November 2022. The application site has been divided into 9 areas for the purposes of identifying potential resources within it and these are identified within **EIAR Figure 12-1**.

There are no items of archaeological, architectural, and cultural heritage known from the application site or its vicinity. There are no direct or indirect impacts on any known items archaeological, cultural heritage or buildings

of heritage interest in the application site or the vicinity. In the worst case, soil-stripping associated with the proposed development may have a significant, irreversible negative/adverse impact on unknown subsurface archaeological material in any of the areas without preservation by record taking place.

Due to the possibility of the survival of previously unknown sub-surface archaeological deposits or finds within the application site, all topsoil-stripping in these areas should be monitored by a qualified archaeologist. Any archaeological material identified during archaeological monitoring should be preserved by record under licence from the National Monuments Service.

EIAR **Appendix 12-1** includes details of SMRs within the study area and **EIAR Chapter 12** – Cultural Heritage should be read in conjunction with that appendix.

4.10 Landscape

A landscape and visual impact assessment (LVIA) of the proposed development was completed in accordance with accepted industry guidance. The application site, which is 4.9ha in size, comprises is irregularly shaped with a number of undulating pasture fields and woodland areas, covering approximately the north-western two thirds of the site. The remaining third comprises a previously stripped elongated area, along the south-eastern site boundary. The landscape surrounding the site is dominated by fields under pasture, which mostly have straight boundaries but are often irregularly shaped. Field boundaries are marked by hedgerows, many of which contain mature trees. The application area is complex, due to the combination of the undulating topography and different types / density of vegetation (i.e. pasture fields, individual trees, treelines, hedgerows, woodland areas and areas of scrub), as well as the area of bare ground along the south-eastern boundary.

The actual visibility of the application area from the (publicly accessible) areas of visibility were mapped using Zone of Theoretical Visibility mapping. This confirmed that existing roadside and intervening vegetation blocks views towards the application area from the vast majority of locations within these areas.

The proposed development has the potential for impacts through introducing changes to the landform, planting of native woodland along screening berms and ultimate restoration of the site to a natural habitat. The main mitigating factor reducing the landscape and visual effects associated with the proposed development, is the low visibility of the application area, due to the undulating topography combined with many treelines, hedgerows, small woodlands and scrub areas. The retention of all existing boundary vegetation, as well as the proposed woodland planting along the south-western boundary, also contribute to the low levels of landscape and visual effects. Following restoration, the vegetation surrounding the quarry void resulting from the proposed development would continue to mature and locally occurring grass and scrub species would colonise the quarry benches and fissures in the quarry faces. Also, the rock faces would weather, softening their appearance. As a result, the site would more and more integrate into the surrounding landscape and views.

Overall, the assessment has found that the proposed development would not have significant effects on landscape or views within the study area.

4.11 Traffic

Traffic & Transportation Planning Consultants, Jennings O'Donovan & Partners Ltd. have prepared Chapter 14 of the Environmental Impact Assessment Report (EIAR) which provides an assessment of the existing, baseline and forecast impact on the receiving environment and assesses the ability of the transportation network to accommodate the traffic arising from the proposed development public road network for a period of 15 years between 2023 and 2038.

The N3 is currently reaching capacity in the Lavey area, however no significant delays were observed during the traffic counts which were carried out in Lavey village at the R165 Bailieborough junction in October 2022. The R165 is currently operating at approximately 55% capacity and has capacity to accommodate additional traffic. The L3500 local road is a lightly trafficked road with low traffic volumes.

Trip rates associated with the proposed development have been predicted based on the classified traffic counts taken at the N3/R165 and R165/L75001/site entrance junctions on 18 October 2022 and information supplied by the applicant.

The results of the traffic analysis show that the existing N3/R165 junction will continue to operate within capacity with the development operating in 2023 and 2038 with forecast increases in public road traffic volumes.

The results of the traffic analysis show that the existing R165/L75001/Quarry Haul Road junction will continue to operate within capacity with the development operating in 2023 and 2038 with forecast increases in public road traffic volumes.

The existing junctions will continue to operate within capacity with future traffic growth on the public road network beyond 2038.

Sightlines are achievable in both directions at the development entrances on the R165 and L3500 and at the N3/R165 Junction in accordance with TII standards.

No junction improvements are proposed at the N3 / R165 junction. Junction maintenance will be required at the site entrances on the R165 and L3500. Existing vegetation on verges, line markings, signage and surfacing should be maintained to increase safety at the development junctions.

4.12 Interaction of the Foregoing

The potential for interactions of the various potential impacts and mitigation measures is assessed within a dedicated chapter of the EIAR. The purpose of this is to ensure that there is no potential for additional interactions further to those identified within the preceding sections.

FIGURES