CHAPTER 13

TRAFFIC AND TRANSPORT

QUARRY CONSULTING

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13.1 Introduction

13.1 TOBIN has been appointed by Quarry Consulting to prepare the Traffic and Transport chapter of the Environmental Impact Assessment Report (EIAR) for McGraths Limestone Works Ltd.

13.2 This Chapter considers and assesses the effects of the proposed extraction of material from deepening existing working quarry (hereafter referred to as "the proposed Project") on local traffic, transport networks and Sensitive Receptors anticipated to occur during the Construction, Operational and Decommissioning Phases of the proposed project.

13.3 This Chapter is supported by the stand alone Traffic and Transport Assessment (TTA) submitted with the planning application.

13.1.1 Site Location

13.4 The application site comprises 19 ha. within an existing operational quarry operated by McGraths Limestone Works Ltd in the townland of Cregaree, Cong, Co. Mayo, approximately 1km north of the village of Cong in County Mayo. The overall quarry site is situated approximately 10km south-west of Ballinrobe, Co. Mayo and 15km north-west of Headford, while Galway is approximately 35km south-east of the site. Refer to Figure 13-1.

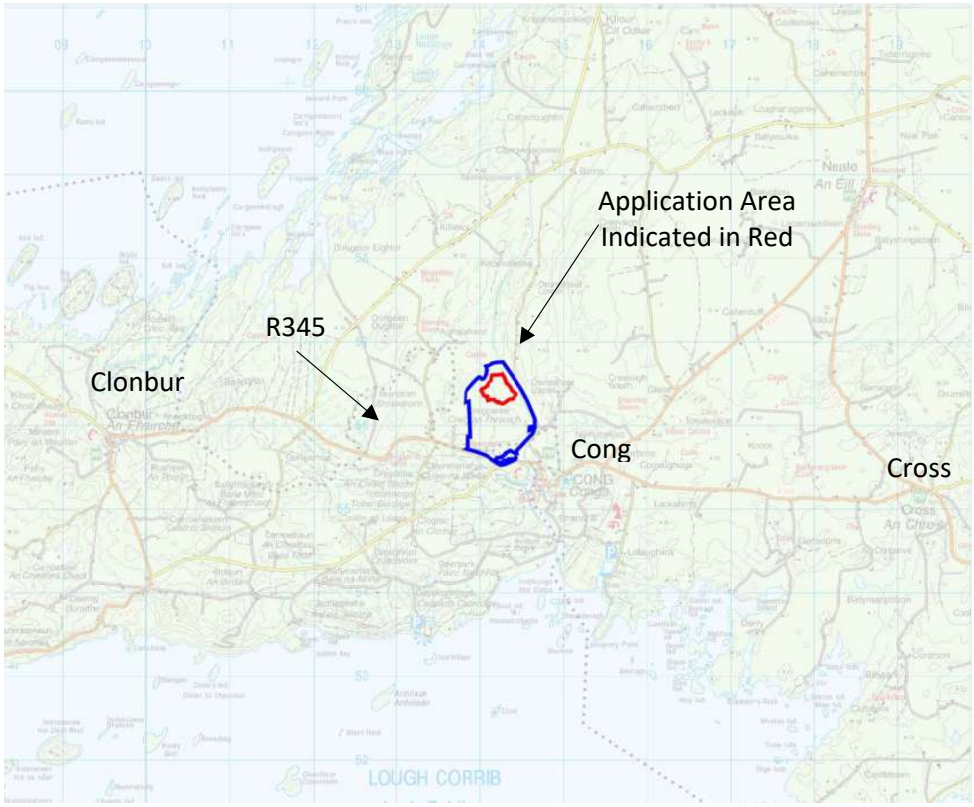

Figure 13-1 Site Location OSi Map

13.1.2 Study Area

13.5 This section provides an overview of the location and environmental setting of the Proposed Project, describing key features of the natural and built environment which fall within, or in proximity to the proposed project.

13.6 The study area comprises the area outlined in Figure 13-2, the existing site access and the existing haul road (R345) during operation. The quarry is situated in a semi-rural area with one

off housing developments and farmsteads located along roads in the vicinity of the quarry particularly along local roads to the east and west. The nearest urban centre is the village of Cong located c. 1 km m to the southeast of the application area. Land-use in the vicinity of the application area and existing quarry consists mainly of agricultural land with livestock farming being the predominant sector practiced. There are also forestry and woodland areas located in the vicinity of the quarry particularly to the south and east.

13.1.3 Existing Condition

13.7 This application is to request for further extraction of a total area of 19.0 hectares. The area which is the subject of this planning application already has permission (Reference ABP-308748-20) to excavate down to a level of +5m OD. The permission was granted under Section 37L permission reference QD16.QD0009 granted by An Bord Pleanala and section 34 planning permission reference: P2077 and granted by ABP on appeal (ABP-308748-20).

13.8 The quarry can be subdivided into three separate sections as illustrated on **Error! Reference source not found.** and described as follows:

- Area A: This is the Southern section of the quarry which consists of an area of 43.5 hectares. This existing working area is authorised by way of a Pre 1963 authorisation and was given planning conditions under Section 261 of the Planning and Development Act.
- Area B: This section of the quarry consists of an area of 10.58 hectares which has been authorised by way of a substitute consent granted by Bord Pleanala (Reference PL 16.SU0132).
- Area C: This section of the quarry consists of an area of 8.4 hectares which has been authorised by Bord Pleanala (Reference ABP-308748-20).

13.9 The current infrastructure associated with the existing quarry includes: the access junction and internal haul roads, wheel wash with sprinkler system, a weighbridge, offices, canteen and W/C facilities and manufacturing facilities.

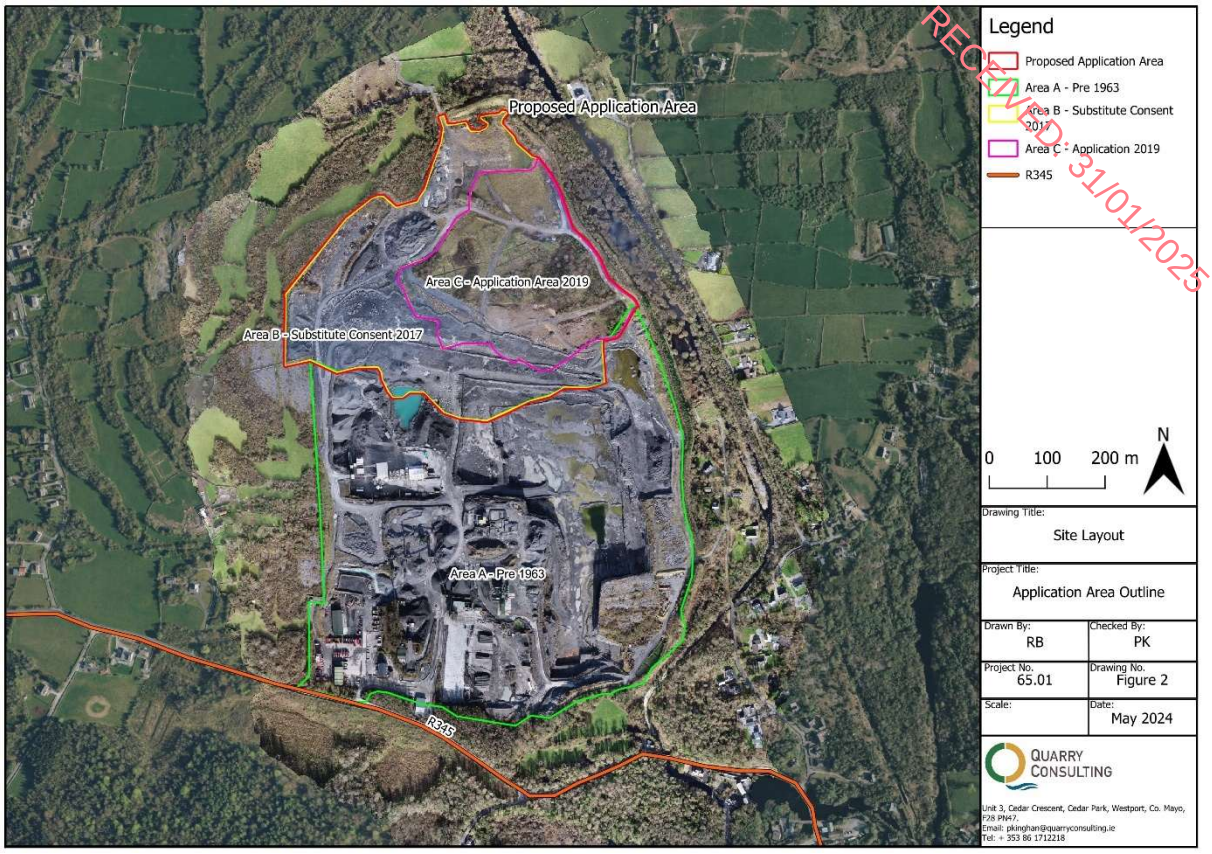

Figure 13-2 Application Area

13.10 There is no construction infrastructure associated with this application. The application is for extraction onsite for use within the quarry. No construction works are envisaged, and no additional construction traffic will be generated.

13.1.4 Proposed Operational Phase

13.11 The application site is approximately 19 hectares in area and will be used to provide material to the existing working quarry. Day to day activities associated with the quarry are summarised in **Error! Reference source not found.**.

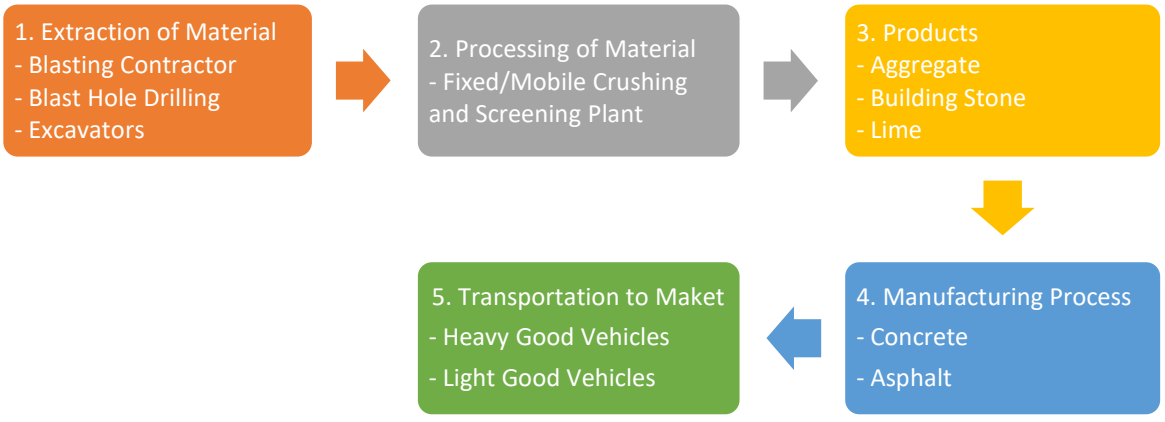

Figure 13-3 Summary of Activities undertaken at the Quarry

13.12 Products produced at the quarry consist of aggregates, lime and manufacturing concrete and asphalt products. Each load is weighed prior to exiting the site, and a weighbridge docket is printed out to accompany the load to the destination. All vehicles exit the quarry via the existing entrance and onto the regional road, R345.

13.1.5 Proposed Decommissioning Phase

13.13 Decommissioning Phase shall involve landscape and restoration, which will include the removal of all plant and machinery, landscaping, and restoration of areas upon completion of extraction. The volume of traffic and its duration during the Decommissioning Phase will be significantly less than the Operational Phase at the quarry.

13.2 Legislative and Policy Context

13.14 The following guidance documents have been utilised in the assessment of the potential traffic and transport related impacts on the regional and local road network:

- Guidelines on the Information to be contained in Environmental Impact Assessment Reports, by the Environmental Protection Agency, May 2022,
- Traffic and Transport Assessment Guidelines, by Traffic Infrastructure Ireland (TII PE-PDV-02045, May 2014),
- Project Appraisal Guidelines for National Roads Unit 16.1 - Expansion Factors for Short Period Traffic Counts (TII PE-PAG-02039, October 2016),
- Project Appraisal Guidelines for National Roads Unit 5.3 - Travel Demand Projections (TII PE-PAG-02017, October 2021),
- Project Appraisal Guidelines Unit 5.2 - Data Collection (TII PE-PAG-02016, December 2023),
- Geometric Design of Junctions (priority junctions, direct accesses, roundabouts, grade separated and compact grade separated junctions) (TII DN-GEO-03060, May 2023), and
- Mayo County Development Plan 2022-2028;
- Galway County Development Plan 2022-2028.

13.3 Assessment Methodology and Significance Criteria

13.15 The significance of potential effects has been evaluated using a systematic approach based on the identification of the importance and value of receptors and their sensitivity to the project activity, together with the predicted magnitude of the impact.

13.16 The terms used to define receptor sensitivity and magnitude of impact are based on:

- A comparison of the traffic volume change from baseline (i.e., baseflow) traffic to the baseflow with the traffic volume on the route. This comparison is the change in Average Daily Traffic (ADT) and HV content (as a percentage);
- The sensitivity of the junction is determined by its operational capacity. For non-signalised junctions (i.e., priority junctions and roundabouts) this is based on the RFC. The magnitude of the impact on the junction is the increase in RFC from the baseline scenario; and
- Importance of the surrounding road network.

13.17 These criteria have been adopted in order to implement a specific methodology for Traffic and Transport.

13.3.1 Sensitivity of Receptor

13.18 For each effect, the assessment identifies receptors sensitivity to that effect and implements a systematic approach to understanding the impact pathways and the level of impacts on given receptors.

13.19 The definitions of receptor sensitivity for the purpose of the Traffic and Transport Assessment are provided in **Error! Reference source not found.**.

13.20 The criteria for determining the receptor sensitivity for priority junctions are the following:

- The queue in vehicles per arm;
- The delay in seconds per arm;
- The RFC per arm;
- The junction delay in seconds; and
- Network Residual Capacity of the junction as a percentage.

13.21 It is considered worthwhile that the sensitivity of the receptors (receiving road network) should also factor in assessing the level of significance of the traffic effects arising from the continued generation of traffic from the development site. The general criteria defining sensitivity in this chapter is set out in **Error! Reference source not found.**.

Table 13-1 Definition of Terms Relating to Sensitivity of Traffic Receptor

Sensitivity	Criteria
Very High	Very high importance and rarity, national scale and limited potential for substitution
High	High importance and rarity, national scale, and limited potential for substitution
Medium	Medium importance and rarity, regional scale, limited potential for substitution
Low	Low importance and rarity, local scale
Very Low	Very low importance and rarity, local scale

13.3.1.1 Magnitude of Impact

13.22 The magnitude of potential impacts (both beneficial and adverse) depends on the degree and extent to which the project activities may change the environment, which usually varies according to the project phase (i.e., construction, operational and decommissioning).

13.23 Factors that have been considered to determine the magnitude of potential impacts include:

- Level of deviation from baseline conditions; and
- Duration of impact.

13.24 The criteria for defining magnitude of impact for the purpose of the Traffic and Transport Assessment are provided in the Table 13-2.

Table 13-2 Criteria for Determination of Magnitude of Impact

Magnitude	Definition
Very High	Either: • change from baseflow traffic ADT above 15%

	• change from baseflow HV content above 10%
High	Either: • change from baseflow traffic ADT by 15% • change from baseflow HV content by 10%
Medium	Either: • change from baseflow traffic ADT by 10% to 14% • change from baseflow HV content by 5% to 9%
Low	Either: • change from baseflow traffic ADT by 5% to 9% • change from baseflow HV content by 2% to 4%
Very Low	Either: • change from baseflow traffic ADT by 0% to 4% • change from baseflow HV content by 0% to 1%

13.3.1.2 Significance of Effect

13.25 An Impact Assessment Matrix (IAM) is used to determine the significance of an effect. In basic terms, the potential significance of an effect is a function of the sensitivity of the receptor and the magnitude of the impact, as shown in **Error! Reference source not found.**.

13.26 The matrix provides a framework for the consistent and transparent assessment of predicted effects across all technical chapters. However, it is important to note that the assessments are based on the application of expert judgement.

13.27 The matrix provides levels of effect significance ranging from Imperceptible to Profound, as defined in the Environmental Protection Agency EIAR Guidelines (EPA, 2022). For the purposes of this assessment, effects rated as being 'Significant / Moderate' or above are considered to be significant in EIA terms. Effects rated as being 'Moderate' are effectively significant / not significant subject to professional judgement, with a rationale provided for this in the main assessment. Effects identified as having less than moderate significance are not considered to be significant in EIA terms.

Table 13-3 Impact Assessment Matrix for Determination of Significance of Effect

Sensitivity of Receptor	Magnitude of Impact				
	Very High	High	Medium	Low	Very Low
Very High	Profound	Very Significant	Significant	Moderate	Slight
High	Very Significant	Significant	Significant/ Moderate	Moderate/ Slight	Not Significant
Medium	Significant	Significant/ Moderate	Moderate	Slight	Imperceptible
Low	Moderate	Moderate/ Slight	Slight	Not Significant	Imperceptible
Very Low	Slight	Not Significant	Imperceptible	Imperceptible	Imperceptible

13.3.1.3 Duration and Frequency of Effects

13.28 The duration of effects is also described in EPA Guidelines as presented in **Error! Reference source not found.**.

Table 13-4 Duration and Frequency of Effects

Duration and Frequency	Criteria
Momentary Effects	Effects lasting from seconds to minutes.
Brief Effects	Effects lasting less than a day.
Temporary Effects	Effects lasting less than a year.
Short-term Effects	Effects lasting one to seven years.
Medium-term Effects	Effects lasting seven to fifteen years.
Long-term Effects	Effects lasting fifteen to sixty years.
Permanent Effects	Effects lasting over sixty years.
Reversible Effects	Effects that can be undone, for example through remediation or restoration.
Frequency of Effects	Describe how often the effect will occur.

13.4 Baseline Conditions

13.4.1 Description of Existing Environment

13.29 The proposed Project's impacts are in the administrative areas of two Local Authorities: Galway County Council and Mayo County Council. The planning Authority for this application is Mayo County Council since the site is located in the northeast part of the existing quarry and is entirely within County Mayo.

13.4.2 Description of Existing Junction

13.30 The site lies on the north side of the Regional Road R345, and for the majority falls within County Mayo. However, the quarry is accessed via a T-junction access on the R345, between Cong and Clonbur, and this T-junction access lies within County Galway, see Figure 13-4.

Figure 13-4 Site Access - Aerial Map (Map data ©2024 Google)

13.4.3 Existing Road Network

13.31 The existing quarry development is bounded to the south by the Regional Road, R345. The speed limit along this section of the R345 is 60 km/h based on the 2014 Speed Limit Bye-Laws (see **Error! Reference source not found.**) with a transition to 80 km/h located approximately 600 metres west of the quarry entrance on the R345.

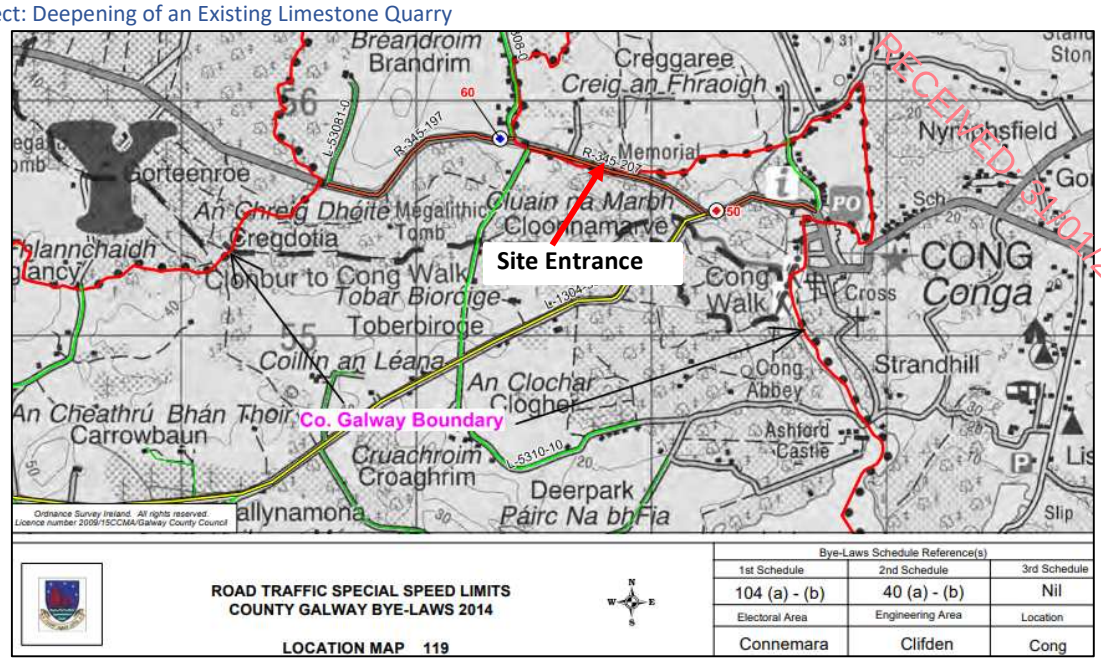

Figure 13-5 Galway County Bye-laws 2014 Speed Limits

13.32 The R345 has an approximate carriageway width of 6.3 m, with a partial hard strip and little to no verge in the vicinity of the quarry entrance. The carriageway width (wall to wall) is approximately 9.0 m in the vicinity of the quarry entrance.

13.4.4 Existing Haul Routes

13.33 The quarry is currently operational and utilises existing Haul Routes on the regional and national road network:

- to the west of the development, the R345 links to the National Secondary Road N59 via Regional Roads (i.e. R300 and R336); and
- to the east, the R345 links to the National Secondary Road N84 and National Road network via Regional Roads (i.e. R346 and R334).

13.4.5 Traffic Survey

13.34 In order to determine the magnitude of the existing traffic flows, Junction Turning Count (JTC) survey was undertaken at the site access. The traffic survey was carried out by IDASO on Tuesday the 21st of May 2024 between 07:00 and 19:00, a neutral day over a 12-hour period, according to TII PE-PAG-02016, December 2023. This survey distinguished between Light Vehicles (LV) and Heavy Vehicles (HV). The results of this survey indicated that the peak traffic levels through the junction occurred between:

- Junction 1: AM Peak 08:45 – 09:45 and PM Peak 16:30 – 17:30

13.4.6 Existing Traffic Volumes at the Site Entrance

13.35 With the traffic survey at Junction 1, it was possible to determine the current operational traffic at the quarry. The traffic count was undertaken on the 21st of May 2024 between the hours 07:00 and 19:00. It is important to highlight that this traffic is seasonal throughout the year.

Table 13-5 Existing Traffic Volumes at the Site Entrance

Time	12-Hour 07:00 - 19:00		AM Peak 08:45 - 09:45		PM Peak 16:30 - 17:30	
	Arrivals	Departures	Arrivals	Departures	Arrivals	Departures
Cars	66	84	4	1	1	27
LV	20	22	2	2	3	6
HV	65	62	5	9	7	3

13.4.7 Assessment Periods

13.4.7.1 Construction Phase

13.36 The assessment years assessed typically include for the construction phase and operational phase. For this proposed project, there is no Construction Phase associated with the application.

13.4.7.2 Operational Phase

13.37 For this application, the Operational Phases as per TII Traffic and Transport Assessment Guidelines (PE-PAV-02045, May 2014) are:

- 2025: Expected Year of Opening,
- 2030: Year of Opening plus 5 years,
- 2040: Year of Opening plus 15 years,
- 2050: Year of Opening plus 25 years.

13.4.7.3 Decommissioning Phase

13.38 The Decommissioning Phase for this development is not envisaged within the opening year plus 25 years and hence has not been assessed.

13.4.8 Traffic Growth

13.39 In order to undertake a robust and comparable traffic assessment, it is necessary for baseline traffic data to be factored based on nationally adopted growth rates detailed in the TII PAG Unit 5.3 Travel Demand Projections (TII PE-PAG-02017, October 2021). This factoring of the traffic data from the year the traffic count was undertaken, to the assessment years for the proposed project, allows quantitative traffic impacts to be determined.

13.40 These factors have been applied to the seasonally adjusted baseline traffic flows on the existing road network.

Table 13-6 Central Sensitivity Growth Rates

County	2016-2030		2030-2040		2040-2050	
	LV	HV	LV	HV	LV	HV
Galway	1.0259	1.0446	1.0109	1.0198	1.0105	1.0236

13.4.9 Sensitive Receptors

13.41 In order to identify potential sensitive receptors, a desktop study was carried out to identify schools, hospitals, nursing homes and settlements. The site visit confirmed the following sensitive receptors identified in the vicinity of the development:

- Town of Cong, Co. Mayo: 1 km east of Site Access,
- Cong National School: 2 km east of Site Access,
- Ashford Castle: 2 km east of Site Access,
- Town of Clonbur, Co. Galway: 4.5 km west of Site Access.

13.4.10 Description of Receiving Environment

13.42 The following sections detail the existing environment with respect to proposed Project related site access junction location and haul routes.

13.4.10.1 Site Access Location

13.43 Access to the proposed project is via the existing operating quarry entrance onto the R345. The existing entrance is an uncontrolled direct access with a width of approximately 9m. On the northwest side of the road the boundary wall of the quarry has been tapered to improve visibility, see **Error! Reference source not found.**.

Plate 13-1 Site Entrance (Map data ©2019 Google)

13.44 The site access to the proposed project is within the reduced speed limit of 60km/h. In accordance with Galway County Development Plan 2022 - 2028, the required visibility splays from the junction are 'y'-distance of 90 metres as per *Table 15.3 Sight Distances required for Access onto National, Regional and Local Roads*.

13.4.10.2 Proposed Haul Routes

13.45 There is no construction phase associated with this project and hence no construction haul route. This application is to utilise lands within the site boundary to maintain existing operations at the existing quarry.

13.46 The Operational Phase haul routes are currently being utilised as part of the normal operations of the quarry, refer to Section 13.4.4 for haul route details. As this application is to facilitate the maintenance of current quarry operations there will be no intensification of activities and hence no increase in traffic on the currently utilised haul routes.

13.47 The Decommissioning Phase shall involve landscape and restoration of areas upon completion of extraction. The Decommissioning Phase will result in internal movements, with no haul

routes associated. The volume of traffic anticipated during the Decommissioning Phase will be minimal and of a shorter duration than the Operational Phase.

13.5 Potential Effects

13.48 The following section outlines the Traffic Impact Assessment undertaken in accordance with the TII Traffic and Transport Assessment Guidelines (TII PE-PDV-02045, May 2014). Reference should be made to the stand alone Traffic and Transport Assessment submitted with the Planning Application.

13.5.1 Construction Phase Assessment

13.49 None envisaged. Refer to Section 13.1.3.

13.5.2 Operational Phase Assessment

13.5.2.1 Operational Phase Traffic Generation

13.50 The Operational Phase of the project has the largest impact. Since no increase is proposed, the proposed project generated traffic is based on the existing traffic in operation at McGraths Limestone obtained from the traffic survey. Operational Phase is based on:

- Cars for the staff numbers at the existing quarry;
- Light Vehicles (LV) for staff and material collections; and
- Operational Heavy Vehicles (HV).

13.51 The Operational Phase traffic numbers obtained from the traffic survey are presented in Table 13-5.

13.5.2.2 Summary of Operational Phase Assessment Results

13.52 The JUNCTION 10 (PICADY) assessment of the existing Site Entrance T-junction (Junction 1) is shown in Table 13-7.

Table 13-7 Junction 1 Existing Quarry Entrance - Results AM & PM peak

	AM						PM					
	Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS
	2024											
Stream B-AC	0	10.19	0.04	B	2.14	A	0.1	6.71	0.07	A	1.99	A
Stream C-AB	0	7.06	0.02	A			0	7.95	0.03	A		
	2025 - No Development											
Stream B-AC	0	10.22	0.04	B	2.1	A	0.1	6.72	0.07	A	1.97	A
Stream C-AB	0	7.07	0.02	A			0	7.96	0.03	A		
	2030 - No Development											
Stream B-AC	0.1	10.59	0.05	B	2.38	A	0.1	6.98	0.08	A	2.07	A
Stream C-AB	0	7.16	0.03	A			0	8.03	0.03	A		
	2040 - No Development											
Stream B-AC	0.1	10.71	0.06	B	2.42	A	0.1	7.17	0.1	A	2.15	A
Stream C-AB	0	7.25	0.03	A			0.1	8.1	0.04	A		
	2050 - No Development											
Stream B-AC	0.1	11.12	0.07	B	2.67	A	0.1	7.51	0.11	A	2.26	A
Stream C-AB	0.1	7.38	0.04	A			0.1	8.22	0.05	A		
	2025 - with Development											
Stream B-AC	0	10.22	0.04	B	2.1	A	0.1	6.72	0.07	A	1.97	A
Stream C-AB	0	7.07	0.02	A			0	7.96	0.03	A		
	2030 - with Development											
Stream B-AC	0.1	10.59	0.05	B	2.38	A	0.1	6.98	0.08	A	2.07	A
Stream C-AB	0	7.16	0.03	A			0	8.03	0.03	A		
	2040 - with Development											
Stream B-AC	0.1	10.71	0.06	B	2.42	A	0.1	7.17	0.1	A	2.15	A
Stream C-AB	0	7.25	0.03	A			0.1	8.1	0.04	A		
	2050 - with Development											
Stream B-AC	0.1	11.12	0.07	B	2.67	A	0.1	7.51	0.11	A	2.26	A
Stream C-AB	0.1	7.38	0.04	A			0.1	8.22	0.05	A		

13.53 The summary of performance analysis in Table 13-7 indicates that Junction 1 will operate within capacity, with max RFC of 0.11 (i.e., with development) encountered at the junction well below the maximum desired RFC of 0.85.

13.54 No increase in traffic has been proposed. Therefore, the two scenarios analysed (i.e. no development and with development) presents the same results. The summary indicates that there will be no queues (0 vehicle) and minimal delays, with a maximum delay of 11.12 seconds on quarry access, and a junction delay of 2.67 seconds during AM peak hours up to the design year of 2050.

13.55 The significance of the effects indicates that the proposed project will have an imperceptible effect on the R345 and on the quarry access since no intensification of operation is proposed and the number of HVs accessing and egressing the site will be the same.

13.5.2.3 Summary of Environmental Impacts

13.56 The impact considered the sensitivity of the junction and the magnitude of the impact on each road within the study area during the Operational Phase.

13.57 The sensitivity of traffic receptor is considered Low due to its local scale. The magnitude of impact was defined based on the HV content in each road analysed (Table 13-2) and the fact that no increase is proposed. The duration of effects is considered Long-term due to the 25-year permission as part of the application.

Table 13-8 Significance of the Effect - Junction Impact

Junction	Road	Sensitivity	Magnitude of Impact	Significance	Duration
Junction 1	R345 W	Low	Very Low	Imperceptible	Long
	Quarry Access	Low	Very Low	Imperceptible	Long
	R345 E	Low	Very Low	Imperceptible	Long

13.5.3 Decommissioning Phase Assessment

13.5.3.1 Decommissioning Phase Traffic Generation

13.58 The traffic associated with the Decommissioning Phase of the proposed Project will be considerably less than the Operational Phase and of shorter duration.

13.5.3.2 Summary of Decommissioning Phase Assessment Results

13.59 As the date of the Decommissioning Phase is not currently know and the traffic associate with the works are anticipated to be minimal. It is assumed that the site access and link capacity will operate well below capacity as per the Operational Phase including growth in baseflow traffic for the year of the decommissioning.

13.5.3.3 Summary of Environmental Impacts

13.60 It is anticipated that the quarry access and R345 link capacity will operate well within their capacities and therefore the proposed Project will have an imperceptible effect on the road network during the Decommissioning Phase.

13.5.4 Unplanned Events

13.61 In order to address unforeseen events, the following incidents have been considered:

- Incident along the Haul Roads;
- Incident at the existing site access; and
- Incident within the quarry.

13.62 The unplanned events that potentially could occur include road collisions, flooding and/or an oil spillage along a Haul Road. In such an event, competent personnel such as the Local Authorities, An Garda Siochána and other emergency services would be involved, setting up designated diversion routes to mitigate the unplanned event.

13.63 In the event of an incident occurring along any of the Haul Roads, the emergency diversion routes provided by An Garda Siochána will be utilised.

13.64 An incident at the site access is similar to the occurrence of an incident along the Haul Roads. An Garda Siochána emergency diversion routes will be utilised and the facility operators will also contact the HV drivers to inform them of the significance of the incident and the necessary protocol.

13.65 Where an incident occurs within the quarry, existing emergency protocols in place at the quarry will be enacted and onsite personnel will respond in accordance with these protocols.

13.66 In order to estimate the likelihood of the above-mentioned incidents, a Safety Risk Assessment has been prepared, see Table 13-9.

Table 13-9 Unplanned Events - Risk Assessment

Hazards and Risks	Personnel at Risk from the Significant Hazards	Risk Control	Responsible Persons
Road Collison	• Public • Drivers of vehicles travelling to/from quarry • Vulnerable Road Users (Pedestrians and Cyclist)	• Maintain hedgerow to maintain optimum visibility • Maintain road signage and add signage where necessary • Maintain road surfacing and improve where necessary • Maintain lighting along road and improve where necessary	Local Authority and Applicant
Pavement Deterioration, e.g. potholes	• Public • Drivers of vehicles travelling to/from quarry • Vulnerable Road Users	• Maintain road pavement and improve where necessary	Local Authority and Applicant
Road Flooding	• Public • Drivers of vehicles travelling to/from quarry • Vulnerable Road Users	• Maintain road drainage and improve where necessary	Local Authority and Applicant
Snow / front on road	• Public • Drivers of vehicles travelling to/from quarry • Vulnerable Road Users	• Maintain a stock of salt and chips and apply prior to snow/frost fall • Apply temporary signage where need to notify public of risk and /or road closures	Local Authority
Injury within the site (i.e. slips / trips or falls)	• Employees of the quarry • Drivers of HVs for deliveries	• Adequate training provided to personnel • Walkways to be maintained and kept clear	Applicant

Collision within the site (i.e. vehicle or personnel struck by vehicle)	• Employees of the quarry • Drivers of HVs for deliveries	• Personnel use internal walkways • Personnel wear high-vis • Supervision of HVs to enforce safety procedures	Applicant

13.6 Mitigation and Management (and/or Monitoring)

13.6.1 Construction Phase

13.67 Not applicable as no construction phase envisaged.

13.6.2 Operational Phase

13.68 The following mitigation measures have been and will be implemented to minimise the impacts of the Proposed Project:

- Sufficient car parking spaces are provided within the quarry for current staff levels. The proposed Project shall not increase staff levels and as such this ensures that parking associated with the Proposed Project does not occur along the public road network;
- Sufficient space has been provided between the R345 carriageway edge and the gates at the existing access to the proposed Project to accommodate 1 LV clear of by-passing traffic on the mainline;
- Pedestrian facilities are provided where required within the existing quarry to facilities safe pedestrian movements in accordance with the quarry Health and Safety Plan;
- Existing visibility splays in accordance with the reduced speed limit are available at the site access;
- The existing "Caution Quarry Entrance Ahead" sign shall be visible at all times and regular clearance of shrubs and the like will be undertaken by the Applicant;
- The quarry products are currently loaded onto open back trucks using wheel loaders, these trucks shall be covered where required to reduce dust impacts; and
- An existing wheel wash is located within the quarry.

13.6.3 Decommissioning Phase

13.69 The following mitigation measures will be implemented at Decommissioning Phase to minimise the impacts of the Proposed Project:

- Sufficient car parking spaces shall be provided within the quarry for staff associated with the decommissioning works; and
- Materials and plant shall be sourced locally to reduce the impact on the road network and environmental impacts.

13.7 'Do-Nothing' Scenario

13.70 In the Do-nothing scenario, the existing quarry operations are to be maintained at existing levels. From a traffic perspective, no increase in traffic is proposed. Therefore, it should be noted that this proposal and current operations are similar in nature.

13.8 Cumulative Effects

13.71 In order to ensure that the cumulative effects of the proposed Project have been considered, it has been assumed that any increase in traffic over the time period considered in this traffic assessment will be accounted for in the baseflow central growth factors.

13.9 Residual Effects

13.72 The mitigation measures outlined in Section 13.6 will minimise any residual impacts. Operational traffic associated with the proposed Project was assessed at the site access onto the R345 and for link capacity on the R345. Traffic arriving and departing for the proposed Project will have a high content of HV movement. The assessments indicate that the site access and the road link capacity are expected to operate well within capacity in all the assessment years, including proposed Project traffic. Therefore, the proposed Project will have an imperceptible effect on the existing site access and on the road network.

13.73 The Decommissioning Phase traffic will be temporary in nature, with traffic volumes lower than the current operation and proposed Project Operational Phase at the quarry.

13.10 Difficulties Encountered

13.74 At the time of the preparation of this report, the date for Decommissioning the quarry was not known. It is envisaged that the extraction will continue at the quarry beyond the date of the final assessment year of 2050 under a new or subsequent application.

13.75 The TII PAG Unit 5.3 currently does not project this far into the future. For this reason, the assessment of the Decommissioning Phase has been compared to the Operational Phase throughout this report.

13.11 References

- Guidelines on the Information to be contained in Environmental Impact Assessment Reports, by the Environmental Protection Agency, May 2022,
- Traffic and Transport Assessment Guidelines, by Traffic Infrastructure Ireland (TII PE-PDV-02045, May 2014),
- Project Appraisal Guidelines for National Roads Unit 16.1 - Expansion Factors for Short Period Traffic Counts (TII PE-PAG-02039, October 2016),
- Project Appraisal Guidelines for National Roads Unit 5.3 - Travel Demand Projections (TII PE-PAG-02017, October 2021),
- Project Appraisal Guidelines Unit 5.2 - Data Collection (TII PE-PAG-02016, December 2023),
- Geometric Design of Junctions (priority junctions, direct accesses, roundabouts, grade separated and compact grade separated junctions) (TII DN-GEO-03060, May 2023), and
- Mayo County Development Plan 2022-2028;
- Galway County Development Plan 2022-2028.