

**McTigue Quarries Ltd
Cartron Quarry, Tuam**



**REMEDIAL ENVIRONMENTAL IMPACT ASSESSMENT
PART 1- NON TECHNICAL SUMMARY**

to accompany a Planning Application for Substitute Consent for the continuation of quarrying operations and associated ancillary development and the unauthorised continued use of buildings, structure, plant and machinery

PART I – NON-TECHNICAL SUMMARY

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INTRODUCTION

A Remedial Environmental Impact Assessment Report (REIAR) has been prepared in accordance with the direction of An Bord Pleanála (the Board) dated the 10 July 2020 to accompany an application for Substitute Consent ('SC'). The order confirmed that the Board was satisfied that an environmental impact assessment (EIA) and Appropriate Assessment (AA) is required in the light of the scale and nature of the quarrying and processing activities that have been carried out.

The Application being submitted to the Board for SC, is for all the winning and working of minerals, processing and associated activities which have occurred within the applicant's lands during the period between the previous grant of SC for the site in January 2015 (Ref 07.SU.0036) and present day ('the SC period'). By order of the Supreme Court dated 12 December 2018, all mineral extraction operations at the site ceased on 11th June 2019 .

The site is located in the Townland of Cartron some 7 kilometres to the south west of Tuam. The site is comprised of a c. 8.46ha L-shaped limestone quarry. The site is bounded to the north, east and south by agricultural fields. Immediately to the west lies another quarry, known Mortimer's Quarry. The location of the site's application area (shown in red), the Applicant's landownership (shown in blue) and the extents of the adjacent quarry, known as Mortimer's Quarry (shown in yellow) can be seen from Figure 1.1 overleaf.

The application seeks the regularisation of buildings and structures that Galway County Council (Galway Co. Co) consider to be unauthorised. The unauthorised structures include an extension to existing garage/workshop approved under planning ref no. 06/3299; and additional workshop/ storage unit; 2 no. oil tanks; a canteen; a pumphouse; and a water tank.

The remainder of the buildings and structures situated in the north eastern part of the site (a Workshop, weighbridge and wheelwash) are authorised by a standalone planning consent granted by Galway Co. Co. in May 2007 (Ref 06/3299).



Figure 1.1 Application Area, landownership and adjacent quarry

It is understood that the Board will only consider an application covering and can only grant substitute consent in terms of the extant operations on site and applied for at the time of submission, therefore precluding future development.

SPECIALIST CONTRIBUTORS

The production of this REIAR has been project managed by Chris Tinsley BA (Hons), DipTP, MRTPI of Quarryplan Limited, who has a proven track record of delivering planning and environmental projects, development plan representations and planning appeals. The REIAR has been reviewed by Andrew Scurfield BSc MRICS, Chartered Mineral Surveyor and Director at Quarryplan. Andrew has 30 years' experience in contributing to and Project Managing Environmental Impact Assessments to accompany Mineral Extractive Projects. Several sub consultants have been appointed by Quarryplan to consider the past and present impacts associated with the quarry, each of the contributors are considered experts in their chosen fields.

The competent contributors include:

Section	Heading	Specialist Contributor
1	Preamble	Chris Tinsley BA (Hons), MRTPI (Senior Town Planning Consultant), Quarryplan
2	Alternative Location and Project Scoping	Chris Tinsley BA (Hons), MRTPI (Senior Town Planning Consultant), Quarryplan
3	Project Description Restoration/Landscaping Planting Proposals	Chris Tinsley BA (Hons), MRTPI (Senior Town Planning Consultant), Quarryplan Pete Mullin, Mullin Design Associates BA (Hons) CMLI
4	Planning Policy Framework	Chris Tinsley BA (Hons), MRTPI (Senior Town Planning Consultant), Quarryplan
5	Geological Setting	Chris Tinsley BA (Hons), MRTPI (Senior Town Planning Consultant), Quarryplan
6	Water Environment	Henry Lister BSc MSc – Hydrogeologist BCL Hydrogeologists Limited
7	Air Quality & Climate	Chris Tinsley BA (Hons), MRTPI (Senior Town Planning Consultant), Quarryplan
8	Noise & Vibration	Mervyn Keegan, AONA B.Sc., M.Sc.
9	Landscape	Pete Mullin, Mullin Design Associates BA (Hons) CMLI
10	Waste Management	Chris Tinsley BA (Hons), MRTPI (Senior Town Planning Consultant), Quarryplan
11	Ecology	Will Woodrow, MSc. MCIEEM, CEcol Woodrow Sustainable Solutions
12	Traffic Impacts	Chris Tinsley BA (Hons), MRTPI (Senior Town Planning Consultant), Quarryplan
13	Natural Resources (Soil Survey)	Chris Tinsley BA (Hons), MRTPI (Senior Town Planning Consultant), Quarryplan
14	Socio-Economic Impacts	Chris Tinsley BA (Hons), MRTPI (Senior Town Planning Consultant), Quarryplan

15	Cultural Heritage	Chris Tinsley BA (Hons), MRTPI (Senior Town Planning Consultant), Quarryplan
16	Interactions	Chris Tinsley BA (Hons), MRTPI (Senior Town Planning Consultant), Quarryplan

Table 1.1 Specialist Contributors to REIAR

SITE LOCATION AND DESCRIPTION

The overall SC application site extends to some 8.46ha and is located within the Townland of Cartron, near Tuam, Co. Galway. The application boundary, incorporates the totality of the Applicant's operations to include areas of mineral extraction and ancillary buildings and structures on-site (see Figure 1.1 previously provided).

The previous REIS for the site describes how Cartron Quarry has been a feature within the landscape since 1954 when quarrying operations were begun at the site. Activity has been carried out at the quarry on a small scale continual basis between 1954 and 1999, when more intensive mechanical extraction of mineral began to take place. The SC for the site granted in January 2015 granted consent for operations which had taken place at the quarry since 1990.

The general approach to operations has not varied substantially since the granting of SC and the unauthorised activities post 15th January 2015 have been confined to the disturbed extent of the quarry.

As per the previous SC, the process adopted to produce blast rock for the purposes of processing has been via the utilisation of a fully mobile air drill rig, with drilling being undertaken on average two days every month. The processing of material within the site continued to be undertaken within the quarry void at the active face.

The primary method of transportation of aggregates off-site over the SC period has been via eight-wheel rigid lorries, each with a capacity of 20 tonnes. The site has extracted on average 100,000 tonnes per annum over the SC period. Based on a 20-

tonne payload and 275 working days per annum, this equates to an average of 19 two way trips per day.

The quarry operated within the hours of 07.00 to 18.00 Monday to Friday and from 08.00-13.00 on Saturdays. The quarry did not operate on Sundays or Bank Holidays.

The quarry directly employed 12 employees, to include truck drivers, machine operators, loader and crusher operators and office staff. The majority of the extraction jobs have been lost at this time.

SCOPE OF REMEDIAL ENVIRONMENTAL IMPACT ASSESSMENT

The REIAR accompanies the planning application submitted to the Board for SC, the Board having granted leave to apply for SC and the baseline and format of the report has been detailed.

The author is aware that the general content of a REIAR must adhere to the legislative requirements as outlined in Schedule 6 of Planning and Development Regulations 2001 (as amended) and also it is appropriate to reflect the European Guidelines and the EPA Guidelines, published on the subject of Environmental Impact Assessment.

Unfortunately, there is no specific guidance in relation to the preparation of a REIAR, however, the Planning and Development Regulations 2001 outline that such a document shall contain:

- a) a statement of the significant effects, if any, on the environment, which **have occurred** or which are occurring or which can **reasonably be expected to occur** because the development, the subject of the substitute consent was carried out;
- b) details of—
 - a. any appropriate remedial measures undertaken or proposed to be undertaken by the applicant for substitute consent to remedy any significant adverse effects on the environment;
 - b. the period of time within which any proposed remedial measures shall be carried out by or on behalf of the applicant;

Furthermore, the Board's evaluation of REIAR will reflect the general requirement under the same legislation that states that:

'The Board shall consider whether a remedial environmental impact assessment report submitted identifies and describes adequately the **direct and indirect significant effects** on the environment of the development.'

The requirement for this SC application has been determined by:

- a. The continuation of unauthorised quarrying operations post the previous granting of SC in January 2015; and
- b. The erection of buildings and unauthorised structures in the north eastern part of the site which the Board were not at liberty to extend the previous SC to due to an administrative error at the point of submission;

and the need to regularise the same.

Post January 2015 (the date of previous grant of SC for the site) forms the period during which the significant effects, if any, on the environment;

- which **have** occurred;
- or which **are** occurring;
- or which can reasonably be expected **to occur** because the development the subject of the substitute consent was carried out;

are assessed within REIAR.

Mineral extraction operations at the site ceased on 11th June 2019 in line with the Supreme Court Order dated 12 December 2018. It is considered that the 5th January 2015 baseline up to the date upon which extraction ceased (11th June 2019) provides for the period of assessment of impacts that **have occurred**.

The period post 11th June 2019 until the present allows for the assessment of impacts **that are occurring**.

The final stage of the assessment will cover the remedial impacts that can **reasonably be expected to occur** in providing restoration and post restoration of the site.

Details of the unauthorised development Chronology are provided within the REIAR.

ALTERNATIVES

The remedial nature of the REIAR and the parameters of the SC process removes the potential to consider either design or locational alternatives. The SC process (including the Leave to Apply process) is site-specific and therefore provides no leeway for alternative developments.

It is considered that the information provided in the accompanying REIAR, demonstrates compliance with the requirements of the EIA Directive, regarding alternatives, as transposed into Irish Planning law.

PLANNING POLICY FRAMEWORK

The full-length planning policy assessment for the development is included in the REIAR.

The subject site is within the Galway County administrative area. The Galway County Development Plan (GCDP, 2015-2021) is the current statutory Development Plan for the area. The policy assessment demonstrates that the development is considered to accord with the policies of the County Development Plan.

The REIAR also considers the other relevant contemporary planning policy sources:

- The National Spatial Strategy (2002-2020);
- Sustainable Development- A Strategy for Ireland (1997);
- National Planning Framework (2018); and

- Regional Planning Guidelines for the West 2010-2022 (2010).

The planning policy section of the REIAR details how the development accords with the extractive industry policies of the GCDP. The development has allowed for the significant economic and social benefits generated by the site in terms of employment, investment and prosperity to be sustained without posing an unacceptable impact upon the environment. The development has complemented the roles of Tuam and Galway as Hub and Gateway settlements.

The development has been demonstrated to accord with the relevant local and national planning policy provisions. The development has maximised the potential of the finite natural resource found at the site without posing an unacceptable impact upon the environment and as such, the development is considered to accord with the three dimensions of sustainable development and therefore is in accordance with the proper planning and sustainable development of the area.

ENVIRONMENTAL ASSESSMENT

SITE GEOLOGY

Quarrying, by definition, requires the excavation and removal of the mineral deposit, thereby producing a permanent impact on the local bedrock environment within the footprint of the quarry.

The mineral is identified on Geological Survey Ireland (GSI) 1-100,000 mapping as thick and medium thick bedded pure limestone, comprising of the Knockmaa and Coranellistrum Limestone formations respectively.

GSI mapping shows that both limestone formations are significant in their lateral extents, with each formation covering areas in excess of 50 square kilometres. By contrast, the SC application area covers just 8.46ha, within mineral extraction contained to localised areas within the site.

Given the scale of operations which have taken place at the quarry over the SC period in comparison to the large extents of the two limestone formations which form the economic mineral at the site, the removal of the mineral is not considered to have resulted in a significant effect upon the formations as a whole.

Given that mineral extraction operations have ceased, no impacts upon the formation are currently being experienced nor are they likely to occur in the future with the SC process unable to grant permission for future development.

WATER ENVIRONMENT

An assessment was undertaken to establish the potential impacts upon the water environment, both hydrogeological and hydrological, of the development, with a baseline start date of post January 2015.

The assessment was undertaken by BCL Hydrogeologists Limited and managed by Henry Lister who holds a Bachelor of Science Honours Degree [Geology] conferred by Plymouth University, 1992; and a Master of Science Degree [Groundwater Engineering] conferred by the University of Newcastle upon Tyne, 1994.

The Site straddles a ridge that extends down from the summit of Knockmaa Hill. The Site does not overlap with the sub-basin area of the Clare River; its catchment area is approximately 200 m to the east of the Site, at closest approach.

There are no surface watercourses in the immediate vicinity of the Site, which demonstrates that incident rainfall is readily lost to groundwater rather than taking an overland (surface water) flow path.

The closest turlough is an un-named feature close to Carrowbeg, about 0.75 km north of the Site boundary. The turlough is encircled by the 30-maOD contour line.

An understanding of groundwater level at the Site has been derived from various sources, including: Mortimer's Well; 3 new piezometers on Site; topographic survey of seasonal ponding in the deepest sections of the quarry complex; ground elevation at the closest approach of local watercourses; and sequential historical imagery from Google Earth and other aerial photographic sources.

This shows that the quarry has been dry for a significant proportion of each year but there can be shallow ponding on the quarry floor i.e. a seasonal/ephemeral occurrence following periods of prolonged rainfall, typically in late winter to early spring.

The quarry operations during the period 16th January 2015 until 11th June 2019 did not involve sub-watertable working or dewatering. Therefore, there would have been no lowering of the watertable as a result of the quarrying activities; and no drawdown-related impact upon groundwater levels / flow. Thus, there would be no secondary impact upon the flow regime at local watercourses or water supplies.

Fuel has been stored in a bunded tank in the north eastern part of the Site. Vehicles have been fuelled from the fully bunded and enclosed double-skin tank within the north eastern part of the Site adjacent to the workshop area.

Having assessed the impacts that have occurred in relation to the unauthorised quarrying operations from 16th January 2015 until 11th June 2019, it is evident that the quarry has continued working without any significant impact upon the water environment. With regards to impacts that are occurring and are reasonably likely to occur, it is clear that the quarry can be operated without any significant effects upon the water environment. In terms of protecting the water environment in a future, a comprehensive programme of hydrometric monitoring would underpin any future application for quarrying.

AIR QUALITY AND CLIMATE

The Quarries and Ancillary Activities, Guidelines for Planning Authorities (DOEHLG, 2004) recommends the following limit when considered dust deposition associated with quarrying activities:

Total dust deposition (soluble and insoluble): 350 mg/m²/day (when averaged over a 30-day period).

In quarries, dust typically becomes airborne due to the action of wind on material stockpiles and other dusty surfaces, or when thrown up by mechanical action, for example the movement of tyres on a dusty road or activities such as blasting, drilling, screening, etc.

Dust emissions can arise as a result of operational activities, and /or wind erosion of exposed surfaces. The amount of dust that is raised is highly dependent upon a number of interrelated factors, which include:

- The nature of the material;
- The prevailing meteorological conditions;
- The activities being undertaken;
- The influence of any on site mitigation measures.

The prevailing meteorological conditions are the most significant issue which will affect the rate of dust deposition outside of the boundary of a quarry and its associated activities.

The previous REIS chapter describes how dust deposition has been undertaken at the site with measurements carried out using the standard Bergerhoff method. Dust deposition ranged between 5 and 23 mg/m²/day, well below the 350 mg/m²/day upper limit.

The application site has not been the subject of any dust deposition monitoring over the course of the SC period. Dust deposition monitoring has been undertaken annually at the adjacent Mortimer's Quarry in compliance with conditions attached to planning permission for mineral extraction.

The available dust deposition data from locations within close proximity of the shared boundary between the application site and the adjacent quarry demonstrates that there have been no exceedances in the industry standard 350 mg/m²/day limit value.

Wind speed and direction have the greatest potential to impact on dust deposition in proximity to the site. The previous REIS describes how the prevailing wind direction is from the south-west. The properties to the north-east of the site, i.e. downwind of the prevailing wind direction, are in excess of 1km away from the site's northern boundary. The nearest property to the north is c. 500m away. A range of dust mitigation measures were employed at the Cartron Quarry site to minimise

operational impacts, as detailed in the REIAR. As such no significant impact is anticipated to have been experienced as a result of operations during the SC period.

The potential for dust generation is considered to have been limited in the period following the cessation of mineral extraction. Given the same, the potential for properties to be impacted by fugitive dust emissions is considered to be negligible.

Any residual dust deposition impacts resulting from the future de-commissioning and restoration of the quarry will be short lived and all potential dust impacts from the Tromman Quarry site are considered to be reversible i.e. the risk of impact will cease on completion of quarrying and restoration of the site. This outcome has been previously assessed and remains valid within the extant restoration concept.

In the event of any grant of planning permission for future quarrying, given that no exceedance in the recognised limit value for dust deposition has been experienced at the site's shared boundary, it is considered unlikely that the nearest properties, located over 500m away from the site would experience any adverse impacts by virtue of dust emissions arising from the site.

NOISE AND VIBRATION

A Noise & Vibration Impact Assessment report has been prepared by Mervyn Keegan. Mervyn Keegan is a Director of the environmental consultancy, AONA Environmental Consulting Ltd.

The Noise & Vibration Impact Assessment has considered the totality of the operational site to include both permitted and unauthorised structures and the unauthorised quarrying, post the 5th January 2015.

On 22nd April 2021, a site noise survey was undertaken with source specific noise level readings taken in close proximity to the nearest sensitive receptors (residential properties) to the north and east of the site.

The noise monitoring data indicates that there is relatively little difference in the noise climate since 2013. Cartron Quarry was not in operation at the time of the survey and therefore, not audible during the noise surveys undertaken on 22nd April 2021.

Based on the noise survey data, it can be deduced that the quarry noise at the nearest residential properties was significantly below the 55 dB(A) noise limit that applies to the Cartron Quarry & Mortimer's Quarry.

A CadnaA noise prediction model has been prepared to predict and assess a worst-case noise level that has occurred due to the specific operations. The highest predicted daytime noise level of 42 dB(A) at NSR 3 indicates that the quarrying noise sources did not have a significant noise impact at properties in proximity to the Cartron Quarry site relative to the quarry noise limits during daytime.

The cumulative noise impacts that have occurred from the operations of Cartron Quarry and Mortimer's Quarry have been outlined in the results of the noise monitoring undertaken at Mortimer's Quarry in recent years. The measured daytime noise levels indicate that the cumulative noise from quarrying in the area of the site has not had a significant noise impact at properties to the north and east of the Cartron Quarry site relative to the quarry noise limits during daytime.

The drill rig operations and blasting to allow for the quarrying process took place very infrequently with blasting occurring once every 2 months and drill rig operations took place for approximately 2-3 days in advance of each blast. Blasting parameters including PPV and Air Overpressure have been set by the EPA for all quarrying proposed operations in Ireland.

Vibration monitoring was undertaken during blasting events in the adjoining Mortimer's Quarry. It is reasonable to assume that vibration impacts from blasting in the Mortimer's Quarry will be similar in terms of impact at the nearest sensitive residential locations as from the adjacent Cartron Quarry site. It is considered that the levels of vibration likely to have been experienced at the receptor properties at

distance in excess of 500m from the quarry will not have been significant in environmental terms. Accordingly it is considered reasonable to assume that the levels were within acceptable parameters and it is considered that any potential vibration impact in relation to blasting was negligible.

No mineral extraction within the application area has taken place since June 2019. Activity at the site during this period has been limited to ancillary activities, generating very limited vehicle movements and/or movement of material. As such, the potential for noise generation is considered to have been limited in the period following the cessation of mineral extraction. Given the same, the potential for properties to be impacted by noise emissions is considered to be negligible.

Activities associated with restoration works has the potential to result in potential noise impacts. Should quarrying and associated operations cease on the site, noise levels from de-commissioning of the structures on the quarry site and / or the regrading of the benches in the extraction area and subsequent infill with groundwater will be short-term noise impacts. Such activities will be subject to a higher noise limit of 70 dB(A) as distinct from normal site operations.

In the event that the alternative scenario is adopted and planning permission is sought under 34 of the Act for future quarrying, given that the noise modelling has predicted that operations at Cartron Quarry have individually and cumulatively operated below the guideline figure provided for in the DOEHLG recommended noise levels, no significant effect is predicted as a result of future working at the quarry. In any event, this would be the subject of a separate environmental assessment in the future.

LANDSCAPE

This Remedial Landscape and Visual Impact Assessment has been prepared by Mullin Design Associates, Chartered Landscape Architects. This study has been drafted and overseen by Pete Mullin, BA (Hons) CMLI, Chartered Landscape Architect and principal of Mullin Design Associates.

The landscape and visual assessment incorporates both desk and field studies and has been compiled and interpreted by an experienced landscape professional. A matrix is used to combine landscape sensitivity with predicted magnitude of change, so that a predicted impact / effect is reached.

The following conclusions have been made based on the above investigation:

- The majority of the 8.46Ha application area is currently permitted and authorised,
- The unauthorised elements relate to 2.1Ha, with a number of ancillary buildings including workshop and canteen.
- The site lies out with any identified landscape designation area.
- It is within the Northeast Galway (Tuam environs) No.5 Landscape Character Area (LCA). The key characteristics of this LCA are as follows:
 - *The landscape is flat, fertile pastoral land bound with field hedgerows.*
 - *There is little or no coniferous forestry or deciduous woodland.*
 - *There are no areas of particular scenic value*
- Population is low in the region, with a low number of properties located within the visual envelope of the development site.
- The most open significant views of the unauthorised development are limited to areas within close proximity of the site - primarily private farm lands.

Landscape Impacts / Effects

- The localised Landscape sensitivity is considered to be **Medium- Low**
- Magnitude of change to the landscape from the unauthorised development is considered **Very Low**.
- Overall landscape impact/effect which have occurred (Jan 2015 – June 2019) are collectively considered **Negligible**

- Overall landscape impact/effect which are occurring (June 2019 to Present) are collectively considered **Negligible /None**
- In a scenario of remediation of the unauthorised development a landscape impact of **Moderate (Beneficial)** would result.
- In the event that a scenario is adopted involving additional extractive works with planning permission sought under s.34 of the Planning and Development Act for future quarrying, without sight of specific proposals, it would be inappropriate to predict potential landscape impacts. However should a scenario of future extraction be limited to the existing works footprint such as the case with potential deepening, it is possible to suggest that such future workings are considered unlikely to result in any significant landscape impact. In any event, any scenario which involves future works would be subject to a separate environmental assessment.

Visual Impacts / Effects

- Visual sensitivity at selected viewpoint is considered **High**
- Magnitude of change from specific key visual receptors are illustrated in Figures 9.3 to 9.7 are collectively considered **Medium to Very Low**
- Overall the visual impacts/significance which have occurred (Jan 2015 – June 2019) are collectively considered **Minor**.
- Overall the visual impacts/significance which are occurring (June 2019 to Present) are collectively considered **Negligible to None**.
- In a scenario of remediation of the unauthorised development visual impacts would range from **Minor (Beneficial)**
- In the event that a scenario is adopted involving additional extractive works with planning permission sought under s.34 of the Planning and Development Act 2000 (as amended) for future quarrying, without sight of specific proposals, it would be inappropriate to predict potential visual impacts. However should a scenario of future extraction be limited to the existing works footprint such as the case with potential deepening, it is possible to suggest that such future workings are considered unlikely to result in any significant

visual impact. In any event, any scenario which involves future works would be subject to a separate environmental assessment.

In conclusion, having considered the above and the impacts that have occurred, are occurring and are reasonably likely to occur as a result of the subject development (including restoration), the effect on the environment from a landscape and visual perspective is not one which is considered to have exceeded the significance threshold.

WASTE MANAGEMENT

Operations within the application area have involved the exposure of the limestone mineral. Given the nature of the development that has taken place at the site, wastes relating to the extraction activities principally have revolved around:

- plant and machinery wastes associated with routine maintenance and repairs and potential accidental fuel and oil spillages; and
- the extractive waste that is an inevitable consequence of quarrying and which is covered by its own regulatory regime in the form of the Extractive Waste Regulations.

No waste related impacts were identified as an environmental concern in the previous assessment of operations at the quarry either in the REIS Chapter or in Board's assessment of the same. The quarrying operations have been undertaken within the footprint of the previously active quarry, therefore waste sources in the form of soils/ overburden have not been encountered as a result of the quarrying operations.

There are no waste generating activities being experienced and therefore no potential for waste related impacts to be experienced at the site.

Any impacts associated with decommissioning/ restoration would be short lived with the restoration works carried out over a limited timeframe. In the event that the planning permission is sought under s34 of the Planning and Development Act 2000 (As amended) for future working, it is considered that with the continued application of the good practice measures employed at the site, it would not give rise to any potential waste management related impacts.

ECOLOGY

Woodrow Sustainable Solutions Ltd (Woodrow) was appointed to compile the Ecology section of the REAIR. The assessment was undertaken by Fionn Murphy BSc, MSc, ACIEEM and overseen by Will Woodrow MSc, MSc (Arch), CEcol, MCIEEM – Company Director, a Chartered Ecologist (CEcol) and full member of the Chartered Institute of Ecology and Environmental Management (MCIEEM).

A standalone remedial Appropriate Assessment Screening Report (RAASR) is also provided as part of the planning application package.

The methodology for the assessment included Identifying and evaluating ecological features within the zone of influence and assessing the significant, residual and cumulative impacts upon them. The assessment was supplemented by field surveys undertaken in 2020 and 2021.

Based on the collation of the above information, it is considered that ecological receptors were likely adversely impacted during the 2015-2019 period, primarily as a result of habitat loss and the resulting impact on breeding bird species. This likely resulted in moderate negative impacts on a breeding bird assemblage of Local (higher) Importance.

Since the cessation of quarrying activities in 2019, impacts on ecological receptors have been largely neutral.

None of the habitats on this site are of significant ecological importance on a national or European scale. The site holds habitats that are likely to be locally important for foraging and commuting species in the wider area such as birds and mammals (including bats).

No significant negative impacts are considered to have occurred or to be occurring since the 2015 baseline.

There are two broad future management options available for the site. The first, which will result in the restoration of the site and the creation of breeding and foraging habitats, would result in positive impacts to ecological receptors.

The second option would result in a return to quarrying operations (subject to planning approval). Under this scenario, there would likely be an ongoing slight negative impact on ecological receptors.

A RAASR has been compiled. This includes the information required to undertake an appropriate assessment with respect to Article 6 of the Habitats Directive in respect to those impacts which are considered to have occurred and those that are considered likely to occur due to the operations that have been undertaken on the site (and the restoration phase).

The concluding statement of the RAASR is as follows:

'The Screening for Appropriate Assessment has identified that, on the basis of best scientific knowledge, there has been and will be no significant effects on any European Sites as a result of this proposal, taking account of the sites' conservation objectives, either individually or in combination with other plans or projects. Consequently, it is considered that there is therefore no requirement to progress to Appropriate Assessment in this case.'

TRAFFIC

The SC application site has been accessed via the approved quarry entrance located on the eastern boundary of the site. Since the previous granting of SC, the applicant has confirmed that the output from the quarry has averaged 100,000 tonnes per annum.

Mineral extraction ceased in June 2019 with activities at the site curtailed to ancillary activities, resulting in a reduction of traffic at the site after this date to negligible rates.

The previous grant of SC confirms that the local highway network has been able to sufficiently accommodate vehicle movements associated with extraction in excess of 200,000 tonnes per annum without resulting in any significant effects on the environment.

Accordingly, it is considered reasonable to assume that if the highway was able to accommodate traffic movements for levels of over 200,000 tonnes per annum and these levels of traffic were authorised by the Board via the grant of SC, in doing so, the board, having considered and assessed the impacts of traffic levels associated with such a production rate, concluded that the development did not have, or did not give rise to, any significant effect on the environment and would not be contrary to the proper planning and sustainable development of the area.

If no significant effects on the environment were experienced at a levels of over 200,000 tonnes per annum output and if the development was authorised via the granting of SC, then annual output levels of less than half of that, as experienced during the 3.5 years of extraction during the SC period would not have resulted in a significant effect upon the environment.

The quarrying operations have been the primary generator of traffic movements at the site. The restoration works will require a small level of traffic movements

associated with staff travelling to the site to undertake the restoration works, the delivery of plants species and removal of structures, machinery etc.

In the event that planning permission is sought under 34 of the Planning and Development Act 2000 (as amended) for future working, given that the scale of traffic impacts associated with previous operations have been found acceptable, any future operations which avoided an intensification over and above that previously considered acceptable, are not considered to result in any significant effect upon the environment. In any event, this matter would be the subject of a separate environmental assessment in the future.

NATURAL RESOURCES

A requirement exists that due regard to the likely significant direct and indirect consequences that a development proposal would have on the environment which might result from the use of natural resources.

The aggregate and limestone products produced at the site are derived from a naturally occurring, finite resource. The excavated material has been processed on site and used in various building material processes.

The working of the limestone resource is not considered to have given rise to any significant reduction in the volume of the resource in Galway or even specifically within the Knockmaa and Coranellistrum Limestone formations, as referenced in earlier in this NTS.

The unauthorised works are not considered to have resulted in a significant effect upon the limestone formations as a whole. Extraction has been within previously despoiled lands and therefore no impacts upon soils have occurred.

No mineral extraction is taking place at the site and as such no impacts upon the limestone formation or soils are occurring.

With the implementation of the restoration scheme for the site, there will be the associated placement of soil making materials as detailed on the accompanying restoration concept. There will be no further removal of soils or limestone resource.

In the event that planning permission is sought under 34 of the Planning and Development Act 2000 for future working, the impact on the limestone resource would be negligible in the context of the formation.

SOCIO-ECONOMIC IMPACTS

Full details of the socio-economic contribution are detailed in the REIAR. The Applicant is an independently owned and family operated business which has provided a valuable resource in terms of employment and altruistic benefits to and within the local community.

The quarry directly employed 12 employees, to include truck drivers, machine operators, loader and crusher operators and office staff, prior to its closure.

Prior to the cessation of extraction at the site in 2019, Cartron Quarry had an average spend of around €200,000 per annum on external suppliers on goods and services over the working period, as well as contributing to the national and local tax base.

The cessation of mineral extraction at the site has led to the termination of the direct, indirect and induced benefits associated with the quarrying of mineral at Cartron Quarry.

The cessation of mineral extraction at the site since 2019 has resulted in reduced market competition in the counties of Galway and Mayo, impacting the cost of local aggregates and the viability of construction projects. The socio-economic impacts that are occurring are therefore considered to be negative.

In the scenario where the site is closed and the quarry restored would have ramifications upon the local economy in terms of employment and expenditure. The alternative, that is to be considered fully under a subsequent s34 application would see a continuation of the supply of the resource and therefore a continuation of the business model as previously experienced up until 2019.

It is considered that the contribution towards the continued prosperity of the local community in rural County Galway should not be understated and the potential, for continued socio-economic contributions in the continuation in the supply of mineral from Cartron Quarry, acknowledged.

CULTURAL HERITAGE

Cultural heritage impacts associated with the quarry have been previously assessed as part of the previous SC application and deemed acceptable by the Board.

Archaeology, like geology in this instance does not alter in the timeframe, as provided for within this REIAR and accordingly there it is considered unnecessary to revisit and update the previously accepted assessment.

Quarrying operations have taken place within previously established footprint/ quarry void. No soils have been removed as a result of the works.

It is therefore concluded that there was no potential for impacts to have occurred to cultural heritage assets or their setting during the timeframe to be considered as there was no removal of in-situ virgin material and works were contained within the previously assessed quarry void during this period.

INTER-RELATIONSHIP OF THE FORE-GOING

It is considered that all of the significant areas have been reviewed in detail and any likely impacts have been recorded and mitigation measures proposed where applicable.

All interactions have been discussed in the relevant Sections and where appropriate in greater detail within the individual Specialist Reports held as Appendices.