An Bord Pleanála

Inspector's Report ABP-307944-20.

Development	Permission is sought for rock extraction by means of blasting to minus 5mOD and ancillary works in an area of 4.35 hectares.
Location	Ardgaineen, Claregalway, Co. Galway.
Planning Authority	Galway County Council
Planning Authority Reg. Ref.	20/651
Applicant(s)	Harrington Concrete & Quarries
Type of Application	Permission
Planning Authority Decision	Refuse permission
Type of Appeal	First Party
Appellant(s)	Harrington Concrete & Quarries
Observer(s)	14 observations submitted.
Date of Site Inspection	26th November 2020
Inspector	A. Considine

Contents

1.0 Introduction

1.1. Planning permission is sought to extract rock from an area of 4.35ha which was previously subject to rock extraction and located within an existing working quarry which covers a total area of 14.9ha. The extraction, to a level of minus 5mOD, will be undertaken by blasting. The site comprises part of a larger quarry and the subject areas was previously approved by ABP in February 2017 by way of Substitute Consent, Ref SU0053. Permission is sought to authorise future extraction of material in an area which was previously quarried, which is deemed to be the most sustainable option as it is located adjacent to the existing plant and infrastructure. In addition, it is submitted that the lowering of the quarry floor will allow the extraction of approximately 1.2 million tonnes of rock without any requirement to disturb any green field site.

2.0 Site Location and Description

2.1. The subject site is located approximately 4km to the north of the village of Claregalway and approximately 13km to the north east of Galway City, in Co. Galway. The site lies approximately 1.3km to the west of the M17 motorway and access to the site is over a number of local roads, and ultimately the L6182. The access to the site comprises a gated entrance and a roadway of approximately 200m, with the quarry site located at this distance from the public road to the south. The wider area comprises a high density of one-off housing, with the nearest houses located approximately 200m from boundary of the site. Immediately adjacent to the quarry site, there are agricultural fields.

2.2. The access to the site is very well established and I note that a permitted quarry has been in operation at this location for many decades. The full quarry area covers a stated 14.9ha and the excavation on the wider site has been to a depth of between 20-50m bgl. The existing quarry site is well established, and the facilities associated with the operation include offices, weighbridge, at the entrance to the main site, with other associated manufacturing facilities including a concrete batching plant, block making plan and an asphalt/bitumen plant located towards the south and western areas of the wider quarry site. Processing of materials on site also takes place including crushing, screening and washing of aggregate.

3.0 **Proposed Development**

3.1. Permission is sought for Permission for:

a) extraction of rock from an area consisting of 4.35 hectares which was previously subject to rock extraction and all associated facilities / works.

b) extraction of rock will be undertaken by blasting means down to minus 5m Ordnance Datum with material transported to the existing fixed crushing and screening plant for processing with occasional processing at the application site using mobile plant

c) storage of quarry aggregate on completion of extraction

d) landscaping and restoration of the site and associated ancillary facilities/ works

e) the applicant is seeking a 5 year permission as part of the planning application.

This planning application is accompanied by an Environmental Impact Assessment Report and a Natura Impact Statement. Area of site to which the application relates: 4.35 hectares, all at Ardgaineen, Claregalway, Co. Galway.

3.2. The planning application was accompanied by the following documents:

- Application form and relevant plans and particulars
- Cover Letter
- Environmental Impact Assessment Report
- Appropriate Assessment Screening Report and Natural Impact Statement

4.0 **Planning Authority Decision**

4.1. **Decision**

The Planning Authority decided refuse permission for the proposed quarry for 2 stated reasons as follows:

1. Having regard to the following:

- The infrastructure network in the immediate vicinity of the development site, particularly local road (L6182), and irrespective of attempted remedial road works carried out recently outside of the subject planning unit which appear to be unauthorised and in any case which are considered insufficient, being deficient in terms of its width, composition, alignment and overall carrying capacity to serve a development of the nature and scale proposed,
- The potential for intensification of vehicular movements (anticipated 400,000 ton/pa over a five year period) and the overall extraction phasing programme not meeting with the satisfaction of the planning authority,

To permit the proposed development would be contrary to Objective TI 6 and T10 and DM Standard 20 & 24 of the Galway County Development Plan 2015 – 2021. Accordingly, to grant the proposed development would endanger public safety by reason of traffic hazard and obstruction of road users, would have a detrimental impact on the capacity, safety or operational efficiency of the local and national road network in the vicinity of the site, seriously injure the amenities of property in the vicinity and therefore, would be contrary to the proper planning and sustainable development of the area.

2. Having regard to the significant extent and magnitude of material extraction (anticipated 400,000 ton/pa over a five year period), associated intensification of dust and noise emissions, blasting / vibration and vehicular movements, including HGV movements, the unsatisfactory perimeter boundary arrangement associated with the quarry verge, the planning authority is not satisfied based on submissions received that the proposed development would not endanger the health and safety of persons occupying or adjoining the site and immediate surrounds and seriously injure the amenities of property in the vicinity.

4.2. Planning Authority Reports

4.2.1. Planning Reports

The planning report provides a full description of the development and details of the site location as well as the policy context. The report summarises all of the third-

party submissions as well as technical reports submitted in relation to the proposed development and includes a planning assessment of the proposed development. The report concludes that the development should be refused on grounds of road safety and residential / general amenity.

The Planning report includes an Appropriate Assessment Report and an Environmental Impact Assessment (EIA). The Board will note that Galway County Council concluded recommending that the Competent Authority accept the findings of the submitted NIS and that a Stage 3 Assessment is not required.

With regard to the EIAR, the Planning Report concludes that the document did not sufficiently identify, describe and assess the direct and indirect effects of the project on the factors set out in Article 3(1)(a) to (e) of the 2014 Directive to facilitate a fulsome EIA to be carried out.

The Senior Executive Planner and Director of Planning countersigned the Planning Officers reports, supporting the recommendation for refusal. This report informed the decision of the Planning Authority to refuse planning permission for the proposed quarry.

4.2.2. Other Technical Reports

Environment Section: The report notes that the proposed activity has many environmental impacts including surface and groundwater quality, noise, vibration and dust. It is noted that the Environment Section has previously received complaints concerning noise and dust from this and other quarries. Concerns is also raised as to which section / authority is going to enforce any regulations concerning these impacts. The report requires, in the event of a grant of planning permission, that the applicant contact the Environment Section in order to apply for a discharge to groundwater licence under the Water Pollution Act 1977 (as amended).

Roads & Transportation Department: The report notes the content of the EIAR Section 12 and Appendix 12.1 which deals with traffic. It is noted that the works to widen the carriageway of the L6182, together with pavement strengthening works were undertaken by the applicant without consent from Galway Co. Co. The Department requires further information be submitted in relation to roads issues. The report states that the adequacy of the L6182 local road to serve the proposed development is integral to the application and it is therefore recommended that

permission be refused on the basis that the applicant would benefit from these unauthorised works.

4.2.3. **Prescribed Bodies**

Transport Infrastructure Ireland: It is requested that the Council has regard to the provisions of Chapter 3 of the DoECLG Spatial Planning and National Roads Guidelines in the assessment and determination of the subject planning application.

4.2.4. **Third Party Submissions**

There are 44 third party observers, including a submission with 70 signatures, noted on the planning authority file as detailed in the Planning Officers report. The issues raised are summarised as follows:

- Negative impacts on the community
- Current activities cause house to shake from the intense blasting – impact on house structure.
- Noise comparable to a 'war zone' in this residential area.
- Roads and traffic issues, including air pollution and congestion on what are essentially county lanes and minor roads.
- Moved to the area in search of peace and are good neighbours, coping with the quarry. It is requested that no further extensions be permitted.
- The re-submission of the application after a comprehensive refusal 2 years ago is an affront to the community. They want the quarry closed down and not extended.
- Dust, noise and light pollution issues.
- Visual impact of the quarry in the landscape.
- The surrounding land supports a variety of animals. While the quarry was closed during lockdown, wildlife flourished.
- The quarry is unauthorised.
- Health and safety concerns.

- Having grown up in the area with the quarry in the background, it is submitted that it is definitely a busier and more dangerous quarry. Safety is not a priority for the operators.
- Significant impact on visual, residential and general amenities of the area.
- The quarry is detrimental to human health and safety and has a negative impact on the environment.
- There is no mention of the school in any of the documentation submitted by the applicant. Risk to children raised as a serious concern.
- The area surrounding the quarry is host to several wildlife including the protected Irish Stoat.
- The proposal is a repeat application which has been refused twice. The EIAR is effectively a reproduction of the documentation submitted with the previous applications.
- Issues raised in relation to the information in the EIAR – discrepancies and inaccuracies not clarified.
- The application represents a significant intensification of activities.
- Further information is required in relation to the 1.2 million tonnes of rock estimated to exist within the area and clarification on the reason why the applicant is now only seeking permission for 5 years as opposed to the 25 years previously sought.
- It does not appear that the applicant has complied with the conditions attached to the Substitute Consent permission. The extent of development undertaken within the application site since the SC decision should be clarified to confirm if it was / is authorised.
- It is submitted that the SC decision is null and void as there were no exceptional circumstances for the Council to permit the applicant to apply for SC. The current proposal has not addressed the previous reasons for refusal of PA ref 18/1149.
- No up-to-date information on dust has been presented.

- No recent noise surveys or blast monitoring results have been presented in the EIAR.
- The site visits carried out in conjunction with the preparation of the ecology section of the EIAR were completed in November ’17 and May ’18. No up-to-date information has been provided.
- No information is submitted as to whether the discharging of surplus water to a wetland area and to ground is an activity authorised by way of a discharge licence. There does not appear to be any treatment of water before discharge.
- The road is not capable of accommodating the proposed development in terms of the proposed volume of HGVs. The speed of vehicles on the road is a hazard for other road users including children going to school.
- Recent road works undertaken by the applicant has eradicated the school bus drop off and collection point and students are now expected to stand on the road waiting for their bus.
- The works have also impacted on private residents and their property.
- There is a high-pressure gas pipe running through the fields close to the quarry. What is the potential impact of additional blasting on this pipeline?
- Residential development in the area has grown enormously since 2000 and having a large quarry in the middle of such an area is at odds with family life and ecological sustainability.
- There has not been a fair opportunity for the community to be informed, meet or discuss the planning application due to Covid restrictions.
- There has been no local community gain in terms of employment or socio-economic activities.
- Impact on daily life and harmful effects on health of residents. There are vulnerable residents living in the area.
- Issues raised in relation to the operation of the tarmacadam plant.
- Impacts on the Lesser Horseshoe Bat.

- The loss of a Souterrain – referred to in ABP Inspectors Report ref SU07.SU0053 Substitute Consent. It is referred to in Chapter 13 of the EIS[1] and objector is horrified to learn that it no longer exists and so is no longer a factor.
- Security of the quarry is raised as a concern due to the lack of proper securing of the perimeter of the site.
- No prior notice of blasting has been given in the past.
- The quarry should be closed, and the site rehabilitated.
- The number of mitigation measures required demonstrates the poor action taken to eliminate the risks identified.
- The description of the development is misleading as the site also manufacturers asphalt, blocks, screens and crushes material and manufactures concrete. The land is not zoned for manufacturing activities.
- It is questionable that a member of the applicants' staff undertook the site safety audit.
- No road safety audit is included in the application.
- Blasting has occurred during the Peregrine Falcon breeding season.
- The applicant is seeking an extension to the operating hours and they do not adhere to current operating hours. This will be a disaster for residents.
- There has been a significant increase in material being imported to the site. Question raised as to whether GCC are aware of this practice.
- Discrepancies in the EIAR raised. The EIAR is considered a pro-development document, lacks detail and the sound survey submitted is considered irrelevant as it does not give a clear picture if the quarry is complying with the noise action plan Galway 2019-2023 and other standards for sound insulation.
- The area is served by a local group water scheme, sourced from a well in Corrandrum on the Tuam Road and adjacent to the Corrandrum National School. The EIAR states that all GWS are now supplied by water by GCC and

[1] EIAR

that there are no GWS abstractions within the radius of influence of the quarry operations. The Corrandrum/Anbally GWS is operating within 1.5km (by road) of the quarry.

- The development will devalue property and reduce the development potential of land.

5.0 Planning History

5.1. Subject site:

Section 4.3, Table 4.1, of the submitted EIAR provides details of the planning history associated with the subject site. I would also refer the Board to the previous Board Inspector reports associated with the subject site which summarises the planning history of the site. The following is considered relevant in this regard:

PA Reg. Ref. 24002: Permission granted by Galway County Council (22/07/77) to Mr. Thomas Hernon to open and operate a rock quarry in the townland of Ardgaineen. The site area is not stated but measures between 3.7 hectares to 4 hectares based on the site location plan.

ABP ref PL7/5/088562 (PA Reg. Ref. 65041): Permission granted on appeal (30/11/92) for retention of stone crushing and screening plant and stock piling areas at Ardgaineen. The site area measured c.1.58 hectares.

ABP ref PL7/5/088665 (PA Reg. Ref. 65141): Permission granted on appeal (30/11/92) for the erection of a macadam/asphalt plant, office building and a septic tank at Ardgaineen.

ABP ref PL7/5/088667 (PA Reg. Ref. 65144): Permission granted on appeal (30/11/92) for the erection of a concrete batching plant for production of readymix concrete, concrete blocks and stock piling area at Ardgaineen. The site measured c.3.25 hectares.

PA Reg. Ref. 65913: Permission granted by Galway County Council (18/05/92) to Frank Harrington Ltd for retention of existing aggregate stockpiling area in the townland of Ardgaineen. The site area is stated as 0.86 hectares.

PA Reg. Ref.13/575: Permission granted by Galway County Council (11/11/13) to Harrington Concrete & Quarries for the erection of an aggregate storage shed and all associated ancillary facilities (1,104 square metres GFA).

ABP ref QD07.QD0014: Permission sought under the provisions of Section 37L of the Planning and Development Acts, as amended for further development of an existing quarry and related ancillary site works at Ardgaineen, Claregalway, Co. Galway. The Board refused permission on the basis that the submitted EIS failed to adequately identify and describe the impacts of the proposed development on the environment in relation to a number of aspects.

5.2. Enforcement:

PA ref EN19/214: An enforcement file was opened with regard to alleged unauthorised widening of the public road (L6182-4) at various intervals for a distance of 1,200m. It is indicated that a warning letter issued on the matter.

5.3. Quarry Registration:

QV0056/QC2193: The quarry was registered under section 261 of the Act, as amended, and the planning authority decided to impose conditions on the quarry under section 261. The quarry owner/operator appealed conditions Nos. 2 and 6 but subsequently withdrew the appeal. The total landholding area was stated as 31.8 hectares, the area extracted as 7.7 hectares and the total extraction area as 22 hectares in further information response received 21/09/05.

5.4. Quarry Review:

QSP55: A notice issued from Galway County Planning Authority on 03/08/12 under section 261A(3)(a). It was determined that section 261A(2)(a)(i) applies and it was decided that section 261(3)(a)(i) and (ii) were fulfilled. The owner / operator was directed to apply to An Bord Pleanála for substitute consent under 177E accompanied by a remedial environmental impact assessment. The determination and decision were confirmed by the Board on review (02/05/13).

5.5. Substitute Consent Application:

ABP ref. SU0053: This comprised an application for substitute consent under Part XA, Section 177E of the Planning and Development Act 2000, as amended. The planning authority issued a direction under section 261A(3)(c) contained in a notice

issued by the planning authority under section 261A(3)(a)2 on 03/08/12 in respect of the quarry located in the townlands of Ardgaineen, Co. Galway, which was subsequently confirmed by the Board on review. The notice required that the owner / operator apply to the Bord for substitute consent in respect of the 'quarry' under section 177E of the Act accompanied by a remedial Environmental Impact Statement. The Board granted substitute consent in February 2017.

6.0 Policy and Context

6.1. National Guidelines

6.1.1. Quarry and Ancillary Activities, Guidelines for Planning Authorities, DoEHLG, 2004:

These guidelines note the economic importance of quarries and the demand for aggregates arising from the needs of the construction industry with particular reference to house building and infrastructure provision. It is further noted that aggregates can only be worked where they occur and that many pits and quarries tend to be located within 25km of urban areas where most construction takes place.

Chapter 2 identifies appropriate development plan policies and objectives with regard to the development of quarries.

Chapter 3 identifies the potential environmental issues associated with the development of the extractive industry / quarries and recommends best practice / possible mitigation measures in respect of:

- Noise and vibration
- Dust deposition / air quality
- Water supplies and groundwater
- Natural heritage
- Landscape
- Traffic impact
- Cultural heritage
- Waste management

The Guidelines also recommend Environmental Management Systems (EMS) as a quality assurance system to measure a company's operations against environmental performance indicators.

Chapter 4 refers to the assessment of planning applications and Environmental Impact Statements. It provides guidance on the information to accompany an application and the inclusion of possible planning conditions.

Chapter 5 refers to the implementation of the registration procedures set out in Section 261 of the Act.

6.1.2. **Environmental Management Guidelines, Environmental Management in the Extractive Industry (Non-Scheduled Minerals), EPA, 2006:**

These guidelines are intended to complement existing national guidance and to be of assistance to operators, regulatory authorities, and the general public (They are also complemented by the 'Environmental Management in the Extractive Industry – Guidelines for Regulators'). The guidelines provide general advice and guidance in relation to environmental issues to practitioners involved in the regulation, planning, design, development, operation and restoration of quarry developments and ancillary facilities.

These environmental management guidelines also represent a summary of current environmental management practices for quarries and ancillary facilities (including manufacturing of concrete and bituminous mixes/asphalt products, and processing of dimension stone). They are based on a review of current environmental management practice in Ireland, the UK and Europe. Under each of the key environmental issues, good environmental practice is summarised together with recommendations for the use of environmental management systems (EMSs), and emission limit values (ELVs), where appropriate.

6.1.3. **Guidelines on the Information to be contained in Environmental Impact Statements' EPA, 2002:**

These guidelines provide developers, competent authorities and the public at large with a basis for determining the adequacy of Environmental Impact Statements within the context of established development consent procedures and also serve to address a wide range of project types and potential environmental issues. The

accompanying 'Advice Notes on Current Practice (in the preparation of Environmental Impact Statements, 2003') subsequently provide further detail on many of the topics covered by the Guidelines and offer guidance on current practice for the structure and content of Environmental Impact Statements. The Board will note that the subject site is a sub-threshold development.

6.1.4. **Guidelines for Planning Authorities and An Bord Pleanala on carrying out Environmental Impact Assessment, August 2018**

These guidelines coincide with the making of the European Union (Planning & Development) (Environmental Impact Assessment) Regulations 2018 (S.I. No. 296 of 2018) and the coming into operation of the Regulations on 1st September, 2018 in order to transpose the Directive into Irish law. The Guidelines replace *Guidelines for Planning Authorities and An Bord Pleanala on carrying out environmental impact assessment* issued by the DoECLG in 2013. The purpose of the guidelines is to give practical guidance on procedural issues and the EIA process arising from the requirements of Directive 2014/52/EU.

6.2. Development Plan

6.2.1. The Galway County Development Plan 2015 - 2021 is the relevant policy document. Chapter 6 of the Plan relates to Water, Wastewater, Waste Management & Extractive Industry with Sections 6.20 and 6.21 dealing with mineral extraction in quarries. Quarrying and other extractive industries are recognised as important to the local rural economic development of the County in terms of generating employment and providing raw material to the construction industry. The geology of the County produces aggregate resources in terms of sand, limestone and gravel, which are currently exploited at quarries throughout the County and the Council recognises this resource as a significant economic asset. The plan states that the Council will facilitate harnessing the potential of the area's natural resources while ensuring that the environment and rural and residential amenities are appropriately protected. The Council would take full account of the DECLG Guidelines in respect of quarrying and ancillary activities.

6.2.2. Section 6.21 of the CDP deals with Quarry Policies and Objectives and the following are considered relevant in this instance:

- Policy EQ 1 – Environmental Management Practice:
  Have regard to evolving best environmental management practice as set out in Environmental Protection Agency (EPA) Guidelines Environmental Management in the Extractive Industry: Non-Scheduled Minerals and to the recommendations of the EU guidance document Undertaking Non-Energy Extractive Activities in Accordance with Natura 2000 Requirements.

- Policy EQ 2 – Adequate Supply of Aggregate Resources:
  Ensure adequate supplies of aggregate resources to meet future growth needs within County Galway, facilitate the exploitation of such resources where there is a proven need and market opportunity for such minerals or aggregates, and ensure that this exploitation of resources does not adversely affect the environment or adjoining existing land uses.

- Objective EQ1 – Protection of Natural Assets:
  Protect areas of geo-morphological interest, groundwater and important aquifers, important archaeological features Natural Heritage Areas and European Sites from inappropriate development.

- Objective EQ 2 – Management of Aggregate Extraction:
  The Council shall require the following in relation to the management of authorised aggregate extraction -

  (a) All quarries shall comply with the requirements of the EU Habitats Directive, the Planning and Development (Amendment) Act 2010 and by the guidance as contained within the DoEHLG Quarries and Ancillary Facilities Guidelines 2004, the EPA Guidelines 'Environmental Management in the Extractive Industry: Non Scheduled Minerals 2006 (including any updated/superseding documents) and to DM Standard 37 of this Development Plan;

  (b) Require development proposals on or in the proximity of quarry sites, to carry out appropriate investigations into the nature and extent of old quarries (where applicable). Such proposals shall also investigate the

nature and extent of soil and groundwater contamination and the risks associated with site development works together with appropriate mitigation;

(c) Have regard to the Landscape Character Assessment of the County and its recommendations including the provision of special recognition to the Esker areas as referenced in Galway County Council Galway's Living Landscapes – Part 1: Eskers;

(d) Ensure that any quarry activity has minimal adverse impact on the road network;

(e) Ensure that the extraction of minerals or aggregates does not adversely impact on residential or environmental amenity;

(f) Protect all known un-worked deposits from development that might limit their scope for extraction.

- Objective EQ 3 – Sustainable Reuse of Quarries:
  Encourage the use of quarries and pits for sustainable management of post recovery stage construction and demolition waste, as an alternative to using agricultural land, subject to normal planning and environmental considerations.
- Objective EQ 4 – Compliance with Article 6(3) of the EU Habitats Directive:
  Ensure that all projects associated with the mineral extractive industry carry out screening for Appropriate Assessment in accordance with Article 6(3) of the Habitats Directive, where required.

6.2.3. Development Management Standard 37 relates to Extractive Development and states as follows:

The extraction of sand, gravel, stone etc. is fundamental to the continuing economic and physical development of the county. It is desirable that such materials will be sourced close to the location of a new development to minimise the need for long haul routes and potential interference with traffic flows and amenity. The following details shall be considered central to the

determination of any application for planning permission for the extractive industry.

7.5.2. Guidelines

Compliance with section 261 of the Planning and Development Act, the DOEHLG Quarry and Ancillary Facility Guidelines 2004 and the EPA Guidelines for Environmental Management of the Extractive Industry 2006. Where extractive developments may impact on archaeological or architectural heritage, regard should be had to the DOEHLG Architectural Conservation Guidelines and the Archaeological Code of Practice (2002) in its assessment of planning applications. Reference should be made to the Geological Heritage Guidelines for the Extractive Industry 2008.

7.5.3. Landownership

Details should be submitted showing the proposed site in relation to all lands in the vicinity in which the applicant has an interest.

7.5.4. Deposits

Details to be submitted to include the depths of topsoil, subsoil and overburden and material at various points on the site. An indication of the type of minerals which it is intended to extract, a statement as to whether the parent rock from which the mineral is extracted is suitable for other uses, and the estimated total quantity of rock and material which can be extracted commercially on site.

7.5.5. Methods

The methods of excavation and machinery to be used on site should be submitted. Details to be submitted to include all proposed site development works, including the proposed method of working, any existing or proposed areas of excavation, stages of work proposed, location of any settlement ponds, waste material and/or stock piling of materials, methods for the removal and storing topsoil, subsoil and overburden etc.

7.5.6. Production

Details should be submitted to include the proposed production process to be employed, all requirements for water, electricity and/or other impacts to the production process and any proposals for chemical or other treatments.

7.5.7. Mitigation Measures

Details should be submitted to include the assessment of potential impacts on water resources, residential and visual amenity (including noise, dust and vibration impacts) biodiversity and any other relevant considerations together with appropriate proposals for mitigation.

7.5.8. Access

Vehicle routes from the site to major traffic routes and the impact on the adjoining road networks. Details should be included on the mode, number and weight of trucks or other vehicles being used to transport materials and any truck sheeting or washing proposals.

7.5.9. Rehabilitation

Details should be submitted should include reported plans and sections detailing the anticipated finished landform and surface/landscape treatments, both of each phase and whole excavation, quality and condition of topsoil and overburden, rehabilitation works proposed, the type and location of any vegetation proposed, the proposed method of funding and delivery of restoration reinstatement works etc.

7.5.10. EIS

Any environmental impact study required by statute should be submitted. An EIS should ensure that all impacts in relation to heritage, environment biodiversity, groundwater protection etc. are clearly addressed and appropriate mitigation measures are included.

7.5.11. Proximity

Details to be submitted should include the location of all existing developments in the vicinity of the site that may be affected by the site

development works, extractive operations and/or traffic movements generated.

7.5.12. Landscape and Screening

Details should be submitted to include an indication of existing trees or other screening to be retained or removed or any proposed screening, grassing or planting of trees or shrubs and proposals for their maintenance.

7.5.13. Heritage and Biodiversity

Details would include any recommendations for the site to be considered as part of the geological heritage of the county and any proposed measures with regard to the protection and promotion of environment and biodiversity including any proposals for rehabilitation.

6.3. Natural Heritage Designations

There is no designated site within the proposed development site. The site is located approximately 2.5km to the west of the Lough Corrib SAC (Site Code 000297) and 6.7km to the east of Lough Corrib SPA (Site Code 004042).

7.0 The Appeal

7.1. Grounds of Appeal

This is a first party appeal against the decision of the Planning Authority to refuse planning permission for the proposed development. The grounds of appeal are presented in response to each reason for refusal and are summarised as follows:

7.1.1. Reason 1: public safety and roads issues

- The reason for refusal does not take into consideration the findings of the Councils Roads and Transportation Department who recognise that the road has been improved and is not inadequate in any way.
- Tobin Consulting Engineers have prepared a response to the reason for refusal relating to traffic and road infrastructure.

- The remedial works to the public road have addressed the concerns of the PA in terms of width, composition, alignment, overall carrying capacity and submits that the intensification of vehicular movements is negligible at 4%.
- It is submitted that the 400,000 tonne per annum extraction rate has been acknowledged and accepted as being the authorised extraction rate by way of the Section 261 and Section 261A processes. This rate will include the existing operational quarry and the application site, subject to a grant of permission.
- In terms of extraction rate, reserve of material and duration of planning permission it is submitted that there is a reserve of approximately 1.2 million tonnes at the site, with a maximum extraction rate of 400,000 tonnes per annum. The duration of planning permission sought is 5 years in order to give sufficient time to extract the available material at the application site.
- The use of the area for the storage of aggregate is referenced in the planning description and there will be 4 phases of extraction.
- The development complies with the requirements of the County Development plan and the Traffic assessments have demonstrated that the road network will remain at free flow. There are no known major issues with the road.
- The entrance to the quarry has been upgraded in accordance with planning permission by Galway Co. Co (P17/403) and ABP on appeal (07.300740).
- The reasons for refusal can be addressed by allowing the completion of the works carried out on the L6182 as per the proposals submitted to Galway Co. Co. as they address capacity and safety issues raised.

7.1.2. Reason 2: details a number of broad areas for refusal.

- It is submitted that administrative issues within the local authority should not be a reason for refusal.
- Environmental monitoring including noise, dust and water monitoring is undertaken at the quarry to ensure compliance with recommended guideline

values and conditions in relation to each element and reports are submitted to Galway Co. Co.

- Various assessments were undertaken as part of the EIAR which accompanied the planning application which included air, noise & vibration and traffic.
- It is considered that the level of detail provided in Chapter 10 of the EIAR and related appendix provides sufficient information to conclude the impact of the proposed development on local air quality will result in a minor or imperceptible change in the existing impact within the locality.
- No significant effect on the health of the local community is likely as a consequence of the planned quarry deepening programme.
- The Noise & Vibration section of the EIAR, together with the report prepared in response to the refusal, concludes that the existing quarry operates in line with the existing noise limits and within the EPA guidelines.
- The predicted noise levels from the use of a semi-mobile crusher / screener on the quarry floor will have a negligible noise impact at all receptors.
- Ground vibrations and air-overpressure will be kept below the guidelines recommended and below the regulatory limits. Historical measurements confirm good control.
- All works proposed for the quarry boundary have been undertaken. An independent Health & Safety Assessment has been undertaken, confirming that security fencing is erected throughout the boundary at all locations where the property extends to the public.

7.1.3. The first-party appeal includes a number of enclosures and reports as follows:

- Tobin Traffic Report:
  - Proposals have been prepared which address each of the issues raised in the refusal of permission.
  - The proposal seeks to complete the remedial works commenced at this location to provide for uniform width, improved sight distances, improved

alignment, line marking, signage, facilities for pedestrians, safety measures at the school and removal of existing roadside hazards.

- The proposals were developed in consultation with the TII safety inspector and an independent road safety audit has been carried out.
- Prior to remedial works, the carriageway was undefined and varied in width between 5m and 7m.
- The proposed alignment defines the road width at a constant 5.5m by applying road markings. The restrictive road width encourages slower speeds.
- The restricted width improves visibility at private entrances by defining the edge of the road away from boundary walls.
- A full structural analysis was carried out on the remedial works which show that the remedial works were sufficient to carry the proposed development traffic for a minimum of 20 years.
- The existing alignment of the road will be retained.
- The local road is most closely aligned with the characteristics of a Type 3 single carriageway as outlined in the TII publication DN-GEO-03031, allowing for a recommended average annual daily traffic of 5,000 vehicles. The levels at the peak of the proposed development will be less than half of that figure.
- There is no evidence to suggest that there is an impact in the overall carrying capacity of the L6182.
- The impact on the capacity of both the junctions and the link road L6182 is negligible at 4% and there will be no detrimental impact on capacity.

- The report concludes that the reasons for refusal can be addressed by allowing the completion of the works carried out to the L6182 as per the proposals submitted to the Council.
- The Tobin Traffic Report also includes 6 appendices as follows:
  - Appendix 1: Proposed Improvement Works to L6182

- Appendix 2: Schedule to Planning Reference No. 20/651
- Appendix 3: Pavement Management Services Ltd. Report
- Appendix 4: TA 46/97 Capacity Check
- Appendix 5: Traffic and Pavement Assessment Report
- Appendix 6: Stage 1/2 Road Safety Audit.

- Michael Bailey Report - Air:
  - It is submitted that Chapter 10 of the EIAR provides sections on –
    i. Existing environment including dust deposition results for 2018 and 2019. The existing air quality impact of the quarry activities is shown to be low at the nearest houses from dust deposition monitoring at the site boundary. Results indicate that the monthly average rates were below the monthly standard of 350mg/m².day.
    ii. Characteristics of the proposed development including emissions source characteristics and potential fugitive emissions. Section 10.5 of the EIAR assesses the characteristics of the planned quarry deepening programme and provides details on fugitive dust and PM emissions, the potential of dust emissions from blasting and rock recovery, potential fugitive dust emissions from trucks and other traffic at the quarry site and rock processing for aggregate production.
    iii. Section 10.6 of the EIAR is a summary of the air quality impact assessment carried out. An air modelling study, approved by the EPA, was undertaken to predict the impact of dust and PM emissions on air quality beyond the quarry site boundary and at the nearest houses.
    The air impact modelling study that was carried out represents a 'worst case' or maximum emission impact scenario based on activity at the quarry in 2017 and also for a maximum production scenario – production in 2007.

iv. The mitigation measures that would be implemented at the site to control and reduce atmospheric emissions from the quarrying activity are given in Section 10.8 of the EIAR. The measures relate to the control and reduction of fugitive dust and PM emissions and are part of the current EMP at the quarry site.

- It is submitted that the level of detail provided for in the assessment of impact on air quality due to the proposed quarry deepening programme provides sufficient information to conclude the impact will result in a minor or imperceptible change in the existing impact within the locality.
- No significant effect on the health of the local community is likely as a consequence of the development.

- Brendan O'Reilly Report – Noise & Vibration:
  - 2 noise monitoring surveys were previously undertaken at the quarry as part of planning application GCC ref P18/1149.
  - 4 noise monitoring meters were set up to run continuously between 13.30 and 18.00 hrs on the 24th April 2018 and on the 30th October 2018, with a fifth monitor used to assess the noise emission levels of individual plant at the working quarry. It is submitted that the summary of noise levels recorded during the surveys compare noise levels for when the quarry was operating and not operating.
  - The assessment notes that plant such as the blast drilling rig, block making machine and fork-lift were not operational on the day of the noise survey. As such, a predicted noise level based on these items of plat operating cumulatively was calculated at the 5 NSLs.
  - Table 3 of the report gives the predicted noise levels when the quarry is at maximum operational capacity for both monitoring events.
  - As the proposed site falls outside the categories of 'Quiet Area' and of 'Area of Low Background Noise' the noise limits given EPA Guidelines – NG4 January 2016, are deemed appropriate for the site.

- It is submitted that the existing facility operates within the recommended EPA noise limits and Condition 2 of the Section 261 conditions. The current proposal will have a negligible noise impact at all receptors and will be within the current noise conditions and EPA guidelines.
- The proposed development will not increase the traffic flow on the local road network. There will be no increase in noise levels by the continued operation of the quarry.
- The level of vibration generated by traffic movement is mainly related to speed of traffic, load of traffic, distance to receptor and the quality of the road surface. The level of ground vibration at 5m from the quarry traffic will be imperceptible at less than 0.2mm/s.
- Ameliorative measures are proposed, and measures have recently been put in place for existing development in the wider quarry.
- Ground vibration from quarries is in-audible being usually less than 30Hz, however air vibrations (air overpressure) both audible and sub-audible accompany it. The impacts of blasting vibration are characterised as being impulsive and of short duration, usually less than 2 seconds.
- Predicting ground vibration is site specific and continuous vibration monitoring will ensure that blast vibration limits are being complied with. A significant amount of data is available at this site to ensure compliance with ground vibration levels.
- There have been a number of blasts carried out in the excavation area and it is not envisaged that blasting will come any closer to property.
- Condition 4 of the Section 261 Order deals with blasting and blast monitoring results shows compliance with no exceedances.
- It is concluded that keeping within the statutory limits in terms of blast vibration or air overpressure will ensure that the likelihood of damage (or superficial damage) to property approaches zero.

- Boundary Assessment Report:
    - The report includes proof of the quarry's Compliance to Part 2 section 6 of the Safety Health and Welfare at Work (Quarries) Regulations 2008.
    - Records of quarterly inspections of the quarry are also included.
    - The report includes photographs of the existing access and fencing around the site, which includes a concrete post fence with 5 strands of barbed wire to a height of approximately 1.5m and sheep wire from the ground to approx. 1.0m on certain boundaries.
    - The boundary includes signage.
    - Other features in the site include the erection of a 1.5m berm around sump holes and lagoons within the quarry.
    - While the quarry water is not a swimming pool, and the water is cold, there are life buoys strategically located in areas where water is present.
    - Geotechnical assessments have been carried out on all of the quarry faces, stockpiles and lagoons.
    - Based on a site inspection, the report concludes that the quarry site boundary is in good order, with 3 areas around the quarry with 2.1-2.4m high security chain link fencing with barbed wire on top to prevent unauthorised access.
    - It is further noted that the quarry is fitted with CCTV units and the security system is monitored during out of hours by Netwatch for trespassers and intruders.
- The report concludes that the quarry meets all the criteria as set out by the Health & Safety Authority in the Quarry Regulations.

7.2. **Planning Authority Response**

None.

7.3. Observations

7.3.1. There are 14 observations noted in relation to this appeal from the following people:

1. Seamus & Teresa Duke
2. Claire & Brian McMahon
3. Thomas & Fidelma Kearney
4. Corrandrum District & Residents Assoc.
5. John Tighe
6. Dympna & Michael Curley
7. Wayne Messin
8. Mark Skerritt
9. Geraldine Lawless
10. John & Evelyn Lynch
11. Karen Skerritt
12. Patrick & Josephine Fitzgerald
13. Michelle Gavin
14. Thomas Carr

7.3.2. I have read in full, all submissions. The issues raised reflect those presented to the Planning Authority during its assessment of the proposed development and are summarised as follows:

- The applicant is not adhering to conditions attached to previous planning permission in terms of working hours.
- GCC / Enforcement have been slow to respond to complaints and questions asked in this regard.
- Health and safety issues are raised, and it is submitted that the applicant and GCC have ignored these issues in relation to inadequate fencing, internal roads are unsurfaced and creates a lot of dust contrary to conditions of permission and inadequate landscaping / berms and screening.
- Remedial measures set out in the Remedial EIS have not been implemented.
- Works to the L6182 local road carried out by the applicant who went beyond the scope of the GCC authorised works. It is submitted that this may have been an attempt to overcome a previous reason for refusal for the current proposed development under a previous application.

- The private side works to the road, using residents' driveways / recessed areas as pull in areas for trucks are unauthorised and contravenes planning conditions granted to the homeowners.
- Proposals for a footpath are unacceptable and dangerous and the road surfacing remains incomplete with defects. It took the assistance of the Ombudsman to get answers.
- The applicant has a history of non-compliance and the Substitute Consent granted in 2017 did not allow for intensification of quarrying works. It is evident that quarrying has occurred on the north eastern area of the current application area since SC was granted.
- The roads and traffic issues raised remain a concern and the local road is extremely dangerous due to the volume and speed of trucks travelling to and from the quarry.
- Residential amenity impacts remain in relation to dust, noise and blasting. Structural impacts are evident to existing houses.
- The decision to refuse permission by GCC is pleasing, but the decision did not address how the development will affect water supply, impact on wildlife, further toxins being released into the atmosphere, number of trucks travelling the road with increased material, increased noise levels and what is going to be left in the area in the future.
- The quarry is located in a rural area with 150 houses and a primary school within a 2-mile radius.
- The site also includes a tarmac plant, concrete plant, crusher and blockmaking plant.
- The development contradicts the County Development Plan and does not comply with national guidelines. The planning status of the quarry is questioned.
- A grant of permission will facilitate an unauthorised and illegal operation.

- Restoration of the site should have commenced immediately after the rejection by ABP in Feb 2017.
- Issues raised in relation to the importation of aggregate to the quarry site. These traffic movements have not been accounted for in reports.
- No monitoring of impacts has occurred within the residential properties so it is difficult to understand how it can be concluded that there is no adverse impact on the local environment or residents.
- The proposed extraction of up to 400,000 tonnes of material per annum will result in an estimated 161 lorry journeys daily. There is no reference to lorries transporting material to the quarry, which happens daily.
- The quality of the noise survey is questioned, and the results do not reflect the reality of the development.
- The applicant has not complied with EU Habitats Directive by way of the removal or destruction of annex 1 habitats either located within the application area or adjacent to it. They have failed to properly document this removal or destruction so as to correctly assess the impact on flora and fauna, and especially in regard to the Lesser Horseshoe Bat and other bat species.
- The destruction of limestone pavement on a lands adjacent to the site (within the applicants landholding) is not mentioned in any survey.
- The Souterrain, which was identified as a potential roost for the Lesser Horseshoe Bat and / or other bat species has also been removed.
- Concerns raised in terms of the impacts of the development on the group water scheme and local water supply.
- The quarry pit already has a considerable amount of water. Concerns raised in relation to the present system of discharging ground and surface water runoff into a wetland area. The system is not fit for purpose and the quarry does not have a discharge licence in place.
- Impact of the quarry on climate targets questioned.

Many of the observations include photographs and other supporting material.

7.4. Further Responses

An Taisce submitted a response to the first party appeal following a request for comments by ABP on the potential impact on a souterrain and a ring barrow. The email advises that the onus is on the Board to consider the impact on archaeology as additional grounds of refusal in this case.

8.0 Planning Assessment

8.1. Introduction

8.1.1. I have read the entire contents of the file including the EIS and NIS submitted with the application and have had regard to the issues raised in the observations submitted. I have also had regard to the planning history associated with this site, including the application for further development of a quarry and related ancillary site works submitted under S37L of the Planning and Development Acts, as amended, ABP ref QD07.QD0014 refers, and the permitted Substitute Consent application, ABP ref SU07.SU0053 refers.

8.1.2. Having regard to the nature of the proposed development, the details submitted with the planning application and appeal documents, together with my site inspection, I conclude that issues arising for consideration should be addressed under the following headings:

- The principle of the proposed development & compliance with policy
- Roads & traffic
- Residential & general amenity issues
    - Residential amenity
    - Noise
    - Vibration
    - Air Quality

- Visual Impacts and landscape

- Other issues
  - Biodiversity
  - Impacts on Archaeology & Heritage
  - Hydrology & Hydrogeology
  - Hours of operation
  - Health & Safety
  - Development Contributions

8.1.3. The Board will note that Environmental Impact Assessment and Appropriate Assessment are presented in separated sections.

8.2. **The principle of the proposed development & compliance with policy:**

8.2.1. At the outset, I wish to note the submissions of third parties, during the PAs assessment of the proposed development, and including in the 14 third party observations received by the Board. All of these submissions have raised concerns in terms of the issue of unauthorised extraction on the site. It is contended that a grant of planning permission in this instance will facilitate an unauthorised and illegal operation and that the applicant is not adhering to conditions attached to previous planning permission. It is further contented that Galway County Council has been slow to respond in terms of complaints and enforcement.

8.2.2. In response to the above, I note that the applicant submits that all current activities at the quarry are authorised. I also note correspondence from the Enforcement Section of Galway County Council, from 2nd February 2018, advising that the planning authority would not be taking any further action following the issuing of a warning letter.

8.2.3. In terms of this issue, and acknowledging the frustrations of the third parties, I refer the Board to Section 10.1 of the 2007 Development Management Guidelines which state as follows:

> "Enforcement of planning control is the responsibility of the planning authority and this is the case, of course, whether the planning decision, including conditions, was made by the planning authority or the Board."

As such, it is not within the remit of the Board to determine whether or not unauthorised activity is taking place on the appeal site. The Board has no role in enforcement matters, and it appears that the Planning Authority is satisfied that no enforcement is necessary at the site. The matter of road works undertaken by the applicant will be address further below in this report. As such, I propose to restrict my assessment to the merits, or otherwise, of the development proposed which are the subject of this appeal, ie. 'rock extraction by means of blasting to minus 5mOD and ancillary works in an area of 4.35 hectares'.

8.2.4. National and Regional Guidance, and the Quarries and Ancillary Activities, Guidelines for Planning Authorities, DoEHLG, 2004, recommend that local authorities identify and protect important strategic mineral reserves in development plans while also acknowledging the economic importance of the quarry industry in supplying the construction sector with aggregates and stone. It is accepted that major infrastructure projects will create a demand for aggregates that will support the continuing economic and social development of the country and maintain Ireland's international competitiveness.

8.2.5. In terms of compliance with the current Galway County Development Plan, 2015-2021, the Board will note that the Plan recognises the importance of the extractive industry to the local rural economic development of the County in terms of generating employment and providing raw material to the construction industry. The geology of the County produces aggregate resources in terms of sand, limestone and gravel, which are currently exploited at quarries throughout the County and the Council recognises this resource as a significant economic asset. The plan states that the Council will facilitate harnessing the potential of the area's natural resources while ensuring that the environment and rural and residential amenities are appropriately protected.

8.2.6. The policies and objectives relating to the extractive industry seek to ensure that the extractive industry has regard to the evolving best environmental practices as set out

in the EPA Guidelines Environment Management in the Extractive Industry (Non-scheduled minerals) (2006) and to the recommendations of the EU guidance document Undertaking Non-Energy Extractive Activities in Accordance with Natura 2000 Requirements (Policy EQ 1). Policy EQ 2 seeks to ensure adequate supplies of aggregate resources to meet future growth needs within the County while ensuring that the exploitation of resources does not adversely affect the environment or adjoining existing land uses. Objective EQ 1 seeks to protect natural assets from inappropriate development and Objective EQ 2 sets out the requirements for the management of authorised aggregate extraction. This policy requires consideration of soil and groundwater contamination, landscape character, impact on the road network, protection of residential and environmental amenity and the protection of known unworked deposits. Objective EQ 3 deals with the sustainable reuse of quarries and Objective EQ 4 seeks compliance with Article 6(3) of the EU Habitats Directive. In addition to the above, Development Standard 37 of the County Development Plan sets out detailed requirements for the extractive industry.

8.2.7. The subject site is located within a semi-rural area of Co. Galway and the Board will note that the quarry at this location is longstanding. The wider area is characterised by a high number of one-off houses on large sites and farm holdings on the local road network in the vicinity and I note the presence of a primary school approximately 1.2km to the east (and in proximity to the junction of the L6182 and the N83). The public road in the immediate vicinity of the access to the site comprises a network of local roads which are narrow but can accommodate two cars passing. The speed limit of the road is 80km/p/h, and I note that road markings and verges have been installed in the vicinity of the site.

8.2.8. The subject site is located within an area which is identified as a Class 1 – Low Sensitivity area. Such areas are considered to have the capacity to generally accommodate a wide range of uses without significant adverse effects on the appearance or character of the area. I would also note that the CDP does not seek to preclude quarry activities in such areas.

8.2.9. In principle, therefore, it can be concluded that the proposed development would not contravene the wider policies or objectives in the development plan, as they relate to

the extractive industry and generally complies with the main objectives of the plan in seeking to support and encourage the development of quarries in order to benefit the economic development of the county of Galway and the wider region.

8.2.10. In terms of the above, I am satisfied that in principle, the proposed development can be considered as being acceptable and in general compliance with national, regional and local policies. There are a number of site-specific issues however, which will require to be addressed further in terms of the proposed quarry development. In particular, the Board will note the details of the reasons for refusal by the Planning Authority in terms of the impact of the development on the local road infrastructure network, that the development would not endanger the health and safety of persons occupying or adjoining the site and immediate surrounds and would seriously injure the amenities of property in the vicinity. These, and other site-specific issues will be dealt with further below in this assessment.

8.3. **Roads & Traffic:**

8.3.1. The Board will note that the primary reason for refusal by Galway County Council for the proposed development relates specifically to the impact of the development on the local road infrastructure in the immediate vicinity of the site. In addition to considering the attempted remedial road works carried out being unauthorised and insufficient, the PA considers that the proposed development would be contrary to Objectives TI 6 and T10, and to DM Standard 20 and 24 of the County Development Plan. The cited objectives relate to the protection of National Routes and Strategically important Regional Road networks and Traffic & Transportation Assessment and Road Safety Audits.

8.3.2. The Board will note that an enforcement file, ref. PA ref EN19/214, was opened with regards to alleged unauthorised widening of the public road (L6182-4) at various intervals for a distance of 1,200m. It is indicated that a warning letter issued on the matter. I also note that the Transportation Department of Galway County Council has raised concerns on the basis that the the adequacy of the L6182 local road to serve the proposed development is integral to the application and “it is therefore

recommended that permission be refused on the basis that the applicant would benefit from these unauthorised works". It is difficult to argue against this logic.

8.3.3. I note the submission in the appeal whereby the appellant suggests that the Roads and Transportation Department did not stated that the improved road was inadequate in any way. However, in the absence of any permission from the local authority to regularise the works to the public road carried out to date, and no permission to carry out the needed road works to support the proposed development, I consider that a grant of permission in this instance would be inappropriate. In the event that the Board disagrees, I propose to continue my assessment of the proposed development below.

8.3.4. I note that the permission to upgrade the existing quarry entrance, permitted under ABP ref PL.ABP-300740-18, has been implemented at the site. The submitted information indicates that at peak production, the quarry resulted in between 161.3 and 172.3 traffic movements per day (2006 – 2007 data), while the low production years of 2011 – 2012 resulted in between 26.5 and 35.6 traffic movements per day. The EIAR further provides that the 400,000 tonnes / per annum extraction rate has been acknowledged and accepted as being the authorised extraction rate by way of the Section 261 and Section 261A processes. It is submitted that this is the extraction rate for the entire quarry, including existing operations and the proposed extraction area, the subject of this appeal.

8.3.5. Chapter 12 of the EIAR, and indeed, the appeal, suggests that the reserve at the subject appeal site is approximately 1.2 million tonnes. It is proposed to extract the material at a maximum rate of 400,000 tonnes/p/a. If this figure is achieved, the site will be fully extracted in 3 years and after this time, the site would be used for storage of aggregate for the remainder of the planning period. The information submitted suggests that the development will not result in an intensification of vehicle movements above those experienced in the past as the maximum extraction rate of 400,000 tonnes/pa was used for the purposes of the traffic assessment.

8.3.6. The EIAR, at various points thought the chapters, provides that it is envisaged that the proposal will not increase the intensity of production at the quarry, but will extend the life of the quarry over a longer period. It is also indicated that in the event of a

refusal of permission in this instance, the authorised quarry will continue to operate, and extract permitted material. It is also indicated that further planning applications for permission to extend the quarry into the greenfield areas of the landholding may be submitted in the future.

8.3.7. The EIAR seems to consider the full operations at the site as part of the traffic impact assessment and provides 3 scenarios including:

- Scenario 1 - Do Nothing, Existing Baseflow Traffic (no quarry traffic)
- Scenario 2 – Do Nothing, Existing Development Traffic
- Scenario 3 – Do Something, Proposed Development Traffic

8.3.8. With the proposed development, Scenario 3, the results indicate that at the quarry entrance will operate below the maximum desirable RFC of 0.85 up to and including the design year of 2036, for both the morning and evening peak hours, with a maximum RFC of 0.05. The Junction of the L6182 and the N83 suggest that with the proposed development, it will have a junction level of service 'A' or free flow for both the morning and evening peak hours. In the morning, the maximum RFC value is 0.59 and, in the evening, the maximum RFC is 0.53. The EIAR submits that the large volume of vehicles turning onto the L6182 from the N83 southbound lane are assumed to be 'rat-running' to the N84 as there is no development in the area generating the flow patterns.

8.3.9. In terms of link capacity, the EIAR submits that the L6182 is most similar to a Type 3 Single (6.0m) carriageway and the recommended average annual daily traffic (AADT) is 5,000. The calculated AADT for the peak operations in the design year is 1,828 with no quarry traffic and will operate with 63% capacity. The AADT rises to 2,209 with the quarry giving a 4% impact on the capacity of the local road. In terms of the N83, is a Type 1 Single (7.3m) carriageway with 2.5m wide hard shoulders and the recommended AADT is 11,600. The calculated AADT for the peak operations in the design year is 11,052 with no quarry traffic and will operate with 5% spare capacity. The AADT rises to 11,253 with the quarry having a 2% impact on the capacity of the national road. The EIAR concludes that there is capacity in the road network to accommodate the proposed development.

8.3.10. Having undertaken a site inspection, I note the permitted works which have been carried out at the entrance to the quarry, and other works to the public road were undertaken without the correct consents. I also note the location of the quarry in proximity to the national road network. In terms of the works carried out on the public roadway, I note the third party submissions which suggest that the facilities for the primary school located to the east of the site and the bus collection and drop off for secondary school children have been removed. This has created significant concern for the safety of the school children.

8.3.11. The Roads Safety Audit identifies, at section 2.2.1, the problem with the existing roadway leading to the N17 which narrows to the north east of the quarry access junction. It is considered that vehicles are likely to drag mud onto the carriageway surface and reduce surface friction for following vehicles, which in extreme circumstances, may lead to loss of control. The RSA recommends that the carriageway should be widened at the identified pinch points. The RSA also identifies area of the local road which require resurfacing and to be maintained in good condition. At the junction of the local road and the N83, the RSA recommends that the applicant seeks permission to amend the junction markings to become a single lane exit only. This would remove the risk of high sided vehicles exiting the offside lane shielding visibility to the right for vehicles exiting the nearside lane.

8.3.12. In terms of the third-party submissions, I accept the concerns and objections raised. There is no mention of the primary school in any of the traffic related reports submitted in support of the proposed development. As such, I am not satisfied that the application has adequately considered the impact of the development on existing residential properties in the vicinity of the site or that the Road Safety Audit adequately considered the effect of the development on the local primary school children travelling to and from Corrandrum National School.

8.3.13. The development requires third-party landowner agreement to carry out the extensive works to the roads, as well as permission from Galway County Council. It is considered that the infrastructural proposals presented are inadequate to justify a grant of planning permission and I have concerns in relation to the works carried out to date in the public realm, without the benefit of consent from the appropriate

parties. As such, the ability of the existing road network to accommodate the scale of the development proposed within such a small timeframe, the impact the development would have on the local road network, as well as on the amenity of the wider rural area, and current vulnerable road users is questionable.

8.4. Residential & general amenity issues

Residential Amenity:

8.4.1. There are a number of residential properties located in proximity to the subject appeal site. The third-party observations submitted against the proposed development, cite the impact on residential amenity as a significant concern. Impacts on residential amenity including noise and vibration, dust, visual impacts, devaluation of property as well as impacts on the local road network.

8.4.2. I refer the Board to policy EQ 2 of the CDP which states that it is the policy of the Council to 'ensure adequate supplies of aggregate resources to meet future growth needs within County Galway, facilitate the exploitation of such resources where there is a proven need and market opportunity for such minerals or aggregates, and ensure that this exploitation of resources does not adversely affect the environment or adjoining existing land uses.'

8.4.3. The operation of a quarry presents a difficulty in that it is a necessary and vital resource for the future development of the area but where that operation gives rise to concerns, residential, environmental, and visual considerations have to be weighed against economic, employment and development considerations. It is required that the Board consider whether or not the operation of the quarry results in significant adverse effects on the local community.

8.4.4. While there are a number of elements of the proposed development which have the potential to negatively impact the existing residential and general amenities of the area, I note and accept the historical presence and ongoing quarrying at the wider site over many decades. I have discussed the potential impacts to the road network above. In terms of the visual impacts associated with the proposed development, I would accept that given that the proposal is to further reduce the existing quarry floor, the visual impacts associated with the development from publicly accessible

locations in the vicinity are minimal. Operational impacts in terms of noise, vibration and dust, as well as impacts on archaeology, groundwater, property values, visual amenity and landscape are issues which require to be considered.

Noise

8.4.5. The subject site is located in a rural area of Co. Galway with the predominant uses including one-off low-density housing, agriculture and the existing quarry. The process of quarrying generates a variety of noises which have the potential to impact on the residential amenity of local residents. The closest residential properties lie approximately 200m from boundary of the site. The Board will note the submissions in relation to blasting which occurs at the quarry as well as other activities associated with quarry operations including mobile crushing, screening and processing of aggregate and the use of other machinery. All of these elements have the potential to generate noise.

8.4.6. Chapter 11 of the EIAR deals with noise and vibration and the grounds of appeal submission notes that environmental monitoring is undertaken at the quarry to ensure compliance with the recommended guideline values and conditions. It is submitted that the records show that emissions from the quarry are within said guideline values. Third party submissions would suggest otherwise.

8.4.7. In terms of predicted noise levels, I note that 2 no. noise monitoring surveys were carried out in 2018, with the second survey covering a full week, and the monitors measuring continuously during this period in November 2018. I also note that there was a blast at the site during this survey. Table 11.8 of the EIAR presents the cumulative predicted noise levels which includes the monitoring data and the predicted noise levels from plant which was not operational during the surveys. I note that the EIAR concludes that 95% of all noise levels comply with the EPA 'Environmental Management in the Extractive Industry (Non-Scheduled Minerals) 2006' and 'A Guidance Note for Noise in Relation to Scheduled Activities, EPA 1996', which recommend that noise from quarrying activities do not exceed the following noise limits at the nearest noise-sensitive receptor:

Daytime	0800 – 20.00 hrs	LAeq(1h) = 55dBA

Night-time 20.00 – 08.00 hrs LAeq(1h) = 45dBA.

8.4.8. It is also submitted that the quarry operates in accordance with Condition 2 of the Galway County Council Section 261 decision which sets the noise limits for the quarry. I am generally satisfied that in the event of a grant of planning permission, a condition requiring compliance with the guidelines in terms of noise should be included.

Vibration

8.4.9. In terms of vibration, I note that the EIAR has had regard to historical blast measurements at the site. Vibration is described in terms of ground vibration, which occurs due to the explosive energy released from the fragmentation of rock during blasting operations and air vibration (air overpressure). In terms of minimising the impact of blast vibration, the applicant notes that the most up to date technology in blasting operation is used and will continue to be used at the quarry. Continuous monitoring also occurs for each blast which demonstrates that compliance with blast vibration limits is being met.

8.4.10. It is submitted that the quarry operates in accordance with Condition 4 of the Galway County Council Section 261 decision which sets the vibration limits for the quarry arising from any blasts carried out at the site. I also note that having regard to the location of the subject site, it does not appear that the blasting will occur closer to the existing houses in the vicinity of the site than have occurred previously. I am generally satisfied that in the event of a grant of planning permission, a condition requiring compliance with the guidelines in terms of vibration should be included.

8.4.11. Overall, and while I am generally satisfied that the proposed development will not have a significant adverse impact on residential properties arising from vibration, I note that the EIAR does not address the issue of vibration from traffic arising from the proposed development. I do however note the submission of the applicant that if permitted, the proposed development will not give rise to additional traffic movements on the public roads.

Air Quality

8.4.12. Chapter 10 of the EIAR deals with air, including the effects of dust and other atmospheric emissions associated with the proposed development. In terms of air pollution, the major potential impact arising from the proposed development is fugitive dust. I note that the proposed development relates to the deepening of the quarry floor rather than encroachment into the green field sites adjacent and would accept that this assists in containing fugitive dust and particulate matter within the confines of the quarry due to extraction.

8.4.13. In addition to the above, significant levels of dust can be generated due to the transportation of materials on and off site. In this regard, I note that there are no proposals to amend the existing, and permitted, access to and from the quarry. I also note the mitigation measures in place in relation to dust suppression and as such, it may be reasonable to conclude that the proposed works will not give rise to any further fugitive dust or air pollution at the existing residences in the vicinity.

8.4.14. I note the submission of the applicant in terms of traffic movements arising from the proposed development. It would suggest that a grant of planning permission will not result in additional traffic movements to and from the quarry which could give rise to excessive dust levels for houses along the access road leading to the quarry. Permission is sought to extract approximately 400,000 tonnes of material per year for a period of 5 years, but the applicant indicates that this will not be in addition to the existing or future quarrying of other permitted areas of the quarry. In other words, if the subject application area is being extracted, no other area of the quarry will be worked at the same time. The proposed development seeks to supplement the existing permitted quarry and the 400,000 tonne/annum extraction rate is submitted as being the authorised extraction rate for the whole quarry by way of the Section 261 and Section 261A processes.

8.4.15. I note that the predicted maximum monthly dust deposition rates outside the site are indicated as being comparable to the rates predicted based on 2017 and peak production scenarios. In these scenarios, fugitive dust emissions are predicted to be below 100mg/m².day, <29% of the monthly dust deposition, German TA Luft limit value of 350mg/m².day. On the date of my inspection, I did not observe any

significant levels of dust on the public roads or areas outside the boundary of the wider quarry area.

8.4.16. Having regard to all of the information presented, I am inclined to accept the findings of the EIAR and subject to the implementation of mitigation measures as presented in Section 10.8 of the EIAR, the impact of dust and air quality in general can be considered acceptable in terms of residential amenity.

Visual Impact & Landscape

8.4.17. The Board will note that the subject appeal site lies within an existing quarry. Chapter 13 of the EIAR assesses the landscape and visual impacts associated with the proposed development and a detailed landscape assessment was undertaken. The subject site lies within a Landscape Character Area which is rated Class 1 and as having low sensitivity to change. The CDP does not seek to preclude quarry activities in such areas.

8.4.18. While elements of the wider developments within the quarry, outside the area of the subject appeal site, are visible in the landscape, given that the current proposal seeks to deepen the existing quarry floor, the site is already screened from the majority of viewpoints from public roads. As such, I consider that in principle, the visual impacts associated with the proposed development are low.

8.4.19. In addition, the Board will note that Section 13.5 of the EIAR deals with landscaping and restoration measures. The plan proposes the creation of berms around the boundary of the quarry, some of which have been constructed and will be reshaped as necessary. The berms will be planted using native species to support biodiversity. The restoration plan follows the previously permitted restoration plan as presented in support of the Substitute Consent application and will comprise 3 phases as follows:

- Phase 1: Permanent restoration of side slopes during rock excavation.
- Phase 2: The final restoration of areas will commence prior to the expiration of the authorised duration in the event that no future permission is applied for and granted.
- Phase 3: Decommissioning

8.4.20. Once implemented, and all of the existing quarrying plant and machinery are removed from the wider site, the final restoration plan includes natural flooding of the quarry floor as a lagoon habitat for aquatic and birds species, allowing nature reclaim the site and restoring ecological balance. I also note that the site currently supports a breeding pair of Peregrine Falcons. The steep quarry faces are an ideal nesting site for Peregrine Falcons.

8.4.21. I am satisfied that the proposed development will not represent any additional visual impacts in the event of a grant of planning permission. Should the Board be minded to grant planning permission in this instance, a condition requiring the implementation of the restoration plan as previously approved, should be included.

8.5. Other Issues

8.5.1. Biodiversity

I note that Chapter 6 of the EIAR deals with biodiversity, and the Board will note that a Natura Impact Statement (NIS) was also submitted in support of the proposed development. The EIAR is considered further in Section 9.0 and the NIS in Section 10.0 of this report. There will be an element of overlap on the issue of biodiversity in terms of the EIAR and the NIS. Of particular note, the Board will note that there is a pair of Peregrine Falcon who are known to breed at the quarry site.

The site comprises the floor of a previously quarried area but given the successful annual onsite breeding of the Peregrine Falcon, the site is considered to be of national importance for this Annex I Species. Habitats in the wider area are considered to be locally important. In terms of Annex I habitats or protected plant species, none were recorded within the study area during the site survey. I note the references to limestone pavement by third parties and have considered this issue as part of the EIA section of this report. It has been determined that there is no evidence of the habitat in the wider area and it cannot be definitively concluded that the limestone habitat occurred within the current proposed development site.

With regard to fauna, the EIAR notes the presence of a number of common bird species. The bat survey found the greatest level of activity was at the broadleaf

woodland to the south east of the wider landholding. There was a high level of activity along some mature hedgerows to the north west and along the edge of the quarry by Leisler's bats, as well as within the deeper sections of the quarry. The survey found that while the proposed development site is used on a near constant basis by Leisler's bats as a feeding area, the existing features in the quarry and in the vicinity of the site were considered unsuitable for roosting bats. While this is the case, it is noted that the quarry has a regular programme of blasting which would generate significant noise and vibration which would displace most bats from the interior of the quarry. It is noted that no Lesser Horseshoe Bats were recorded during the bat surveys.

The Board will note that the EIAR presents a suite of mitigation measures which have been devised and included in order to minimise the potential effects of the proposed development on biodiversity. A particular set of mitigation measures are identified specifically for the protection of the Peregrine Falcons. In terms of designated sites, I am generally satisfied that the proposed development is located at a remove from Lough Corrib SAC and other designated sites so as not to have a significant impact.

In terms of the Peregrine Falcon, and while I acknowledge the mitigation measures detailed in Chapter 6 of the EIAR, having regard to the information submitted in relation to the Noise & Vibration chapter of the EIAR, I note that blasting occurred on 4 occasions between March and July in both 2016 and 2017. There is no indication that these events may have impacted on the breeding of these birds during those seasons, but should the Board be minded to grant permission in this instance, a ban on blasting during the nesting season should be included as a specific condition of permission in order to protect this Annex I species.

I have considered all of the written submissions made in relation to biodiversity, and I am satisfied that any potential impacts would be avoided, managed and mitigated by the measures which form part of the proposed scheme, the proposed mitigation measures and through suitable conditions including monitoring conditions. I am, therefore, satisfied that the proposed development would not have any unacceptable

direct, indirect or cumulative effects in terms of biodiversity, subject to appropriate conditions.

8.5.2. Impacts on Archaeology & Heritage

The EIAR includes an assessment on the impact of the development on cultural heritage, including archaeology. It is noted that there are no undesignated structures of heritage interest in the vicinity of the site and the closest Recorded Monument, GA057-016---, a cashel in Ardgaineen townland, is located over 960m to the south west of the application area. It is considered that this RM is too far distant to be impacted by the proposal.

An undesignated monument listed in the SMR within the application area was identified in 2005, a souterrain (GA057-165---). An archaeological assessment was carried out under licence (Licence No 05E0560) in 2005. The souterrain was recorded and found not to extend any further north into the quarry face and no features were found associated with it. There are no remains of the souterrain surviving in the application area, it having been preserved by record with the permission of the National Monuments Service.

Two possible monuments in the vicinity of the site were found, after archaeological excavation, to be of no archaeological significance. A letter from the DAU dated 31st October 2019 accepts this assessment. I am generally satisfied that the development is unlikely to have significant adverse archaeological impacts.

8.5.3. Hydrology & Hydrogeology

Chapter 8 of the EIAR relates to impacts on the hydrological and hydrogeological environments. Having undertaken a site inspection, I did not note any surface water bodies, drains, streams or rivers in the vicinity of the quarry, other than the water in the quarry floor. It is noted that the nearest river is the River Cregg is located approximately 1.5km to the south west of the quarry while the Clare River lies approximately 2.5km to the east. Both rivers ultimately discharge to the Lough Corrib SAC. The site is located within the Corrib surface water catchment, within Hydrometric Area 30, of the Western River Basin District.

The site is also underlain by a Regionally Important Karst Conduit aquifer with groundwater vulnerability for the area indicated as X – E (rock at or near surface) or extreme. The EIAR notes that site surveys and investigations were carried out on multiple occasions between 2017 and 2019. Eleven boreholes were drilled, and water levels were monitored and in 2018, hydraulic conductivity response tests were completed on each of these boreholes. It is also noted that extraction below the watertable has already taken place within the wider quarry. As such, there has been a requirement to abstract water from a sump in the quarry floor and this water has been used in the manufacturing plant and for dust suppression. The quality of the water is deemed to be good.

The main threat to water quality in the wider area is identified as increased nutrient loads associated with farming, including animal waste, as well as human waste arising due to the presence of wastewater treatment systems. These forms of threat do not generally arise in terms of the quarry. Threats to water quality from the quarry include the potential for increased suspended solids in any discharge and the potential for accidental spillages of fuels and other hydrocarbons used in the operation of the plant and machinery within the quarry.

In terms of suspended solids, monitoring results indicate that the content has been consistently below 2mg/l. Excess water in the sump is discharged to a wetland located to the south west of the office building associated with the wider quarry. The discharge is allowed to percolate through the soil and ultimately into the groundwater over time.

The EIAR also considers the potential impact of blasting on the water environment and in particular, the potential for blasting to present nitrogen residues into the discharge waters, which in turn, has the potential to impact groundwater quality. The risk to groundwater and surface water is assessed by quantifying the resultant concentrations for the potential residual nitrogen compounds Nitrate (NO_3), Ammonia (NH^4) and Nitrate (NO_2). It is concluded that the residual N species concentrations are small and are below all relevant Regulatory EQS values – as detailed in Table 8.13 of the EIAR. Further, it is concluded that even if the masses are added, the background concentration in groundwater, which is currently baseline

at ~5mg/l NO_3, there is no expected exceedance of any EQS value for N species for either groundwater or surface water regulatory limits. The risk of impact to local water quality arising from the use of explosives at the site is deemed to be non-existent based on industry standard method of calculation.

Having regard to the information presented, I am generally satisfied that the use of explosives as part of the blasting regime at the quarry, will not result in any significant groundwater pollution in terms of material increases in ammonia, nitrate or nitrite. I also note the mitigation measures proposed to be employed, as set out in Table 8.18 of the EIS, to ensure that all hydrocarbon, oil and fuel spills are appropriately contained on site. I consider that the impact arising from the proposed development on the surface water and groundwater regime in the vicinity is acceptable.

8.5.4. **Hours of operation:**

The current hours of operation at the quarry are submitted by the first party as being 08:00 hours to 18:00 hours Monday to Friday and 08:00 hours to 14:00 hours on Saturdays. No operations occur on Sundays and it is submitted that occasionally there may be a requirement to undertake works outside of these hours to facilitate projects in built up areas where traffic issues may arise during normal day time hours. With regard to the proposed development, the applicant is seeking to extend these operating hours to 07:00 hours to 19:00 hours Monday to Friday and 07:00 to 14:00 hours on Saturdays.

In terms of hours of operation, the Board is referred to Section 4.7 of the 'Quarries and Ancillary Activities, Guidelines for Planning Authorities, 2004' which states the following:

> 'It is recommended that normal operations should be confined to the hours between 07:00 and 18:00, Monday to Friday inclusive (excluding Bank Holidays) or as may be agreed with the planning authority, and between 07:00 and 14:00 on Saturdays, with no quarrying, processing or associated activities being permitted on Sundays or public holidays. Where market conditions to the nature of particular ancillary processes (such as concrete batch

manufacture) would require greater flexibility of working hours, it is imperative that such flexibility be discussed with the planning authority at the pre-application stage and addressed in the planning application'.

In terms of the above, given the level of complaints to the Environment Section of Galway County Council with regard to noise issues, and notwithstanding Section 4.7 of the 'Quarries and Ancillary Activities, Guidelines for Planning Authorities, 2004', I consider that the earlier start time would, and appears to have already had, an impact on existing residential amenities. I would also suggest that to permit the earlier opening hour may result in a conflict in terms of complying with conditions of planning permission relating to noise which require that daytime noise levels (0800 – 20.00 hrs) do not exceed 55dBA and of note, night-time noise levels (20.00 – 08.00 hrs) do not exceed 45dBA. Should the quarry be permitted to operate fully from 07.00 hrs, the 45dBA could reasonably, and consistently, be exceeded. This would represent a significant impact on residential amenity in the area.

As such, should the Board be minded to grant permission in this instance, I am satisfied that the hours of operation should be retained from 08.00 hours to 18.00 hours Monday to Friday and 08:00 to 14:00 hours on Saturdays. This matter can be dealt with by way of condition.

8.5.5. Planning Authority Reasons for Refusal:

I have addressed the PAs first reason for refusal above in section 8.3 above.

The Board will note that the Planning Authority's reason for refusal no. 2, in addition to other concerns, also cited health and safety concerns of persons occupying or adjoining the site and immediate surrounds. Section 5.5.1.5 of the EIAR deals with Site Safety. The Board will note that third parties in their observations to the Board, have raised concerns in relation to the safety of the site. The EIAR acknowledges that the quarry face poses a potential danger to members of the public who may gain access to the site.

In order to address this, the applicant notes that security fencing, screening and landscaping around the perimeter has secured the site from unauthorised access. In addition, a report prepared by the applicants Health & Safety Officer, dated 25th

March 2020, noted two areas of the boundary fencing which required attention, one to the west of the quarry and a second area along the easterly face. It is submitted that these elements are to be addressed as a priority to meet the Health & Safety Regulation Standards.

I note that these works appear to have been completed since the submission of the report. I also note that signage is provided at various locations throughout the site. In addition, an independent Health & Safety Assessment has been undertaken of the existing perimeter boundary. The inspection confirms that security fencing is erected at all locations where the property extends to the public and there is a 1.5m stock proof fence around all of the agricultural lands. Access gates are controlled by lock and key. The report, submitted in Appendix F of the appeal submission, concludes that the site boundary meets all of the criteria set out by the Health and Safety Authority in the Quarry Regulations.

I am satisfied that the applicant has addressed health and safety matters as required by the relevant regulations.

8.5.6. **Development Contributions:**

The development is a class of development which is identified in the Development Contribution Scheme, 2016 of Galway County Council. The Development Contribution Scheme with regard to waste landfill, Quarries and Gravel Pits, provides that:

> ‘Quarries and Gravel pits to be levied at 10c per m3 to be extracted or €17,000 per hectare, of extraction area, whichever is the greater.
>
> Additional special contributions for waste/land fill; quarries and gravel pits may be applied under Section 48 of the Planning and Development Acts and shall be based on the following criteria:
>
> (i) The scale of the proposed development i.e. in the case of landfills the volume of material that it is proposed to deposit at the site or in the case of Quarries and Gravel Pits: the volume of material it is proposed to supply from and deliver to the site
>
> (ii) The condition of the road serving the development.

(iii) The length of the road or roads from the development to the nearest Class 1 local roads which is in good condition.

(iv) The cost of bringing the road or roads up to a standard necessary to facilitate the development and not cause an adverse impact on other road users.

(v) The cost of traffic control measures.

(vi) Buildings provided as part of a Waste Landfill/ Quarries and gravel pits development will be subject to the provisions of the general contribution scheme for applicable development.

In this regard, should the Board be minded to grant planning permission, a condition requiring the payment of a development contribution under the development contribution scheme, should be included.

8.6. Conclusion

8.6.1. Overall, I consider that the principle of the proposed development is acceptable at this location. I have recommended specific conditions be included in the event of a grant of planning permission in terms of noise limits, vibration limits, hours of operation, extraction rates, landscaping and restoration. In addition, the Board will note my comments in terms of limiting blasting to occur outside of the breeding season of the Peregrine Falcon as provided for in the mitigation measures specified for this species and contradicted elsewhere in the EIAR. I am generally satisfied that the proposal does not seek to intensify extraction at the quarry, over that facilitated in the Section 261 order and would not significantly impact on existing residential amenity in the area. Health and safety matters have also been addressed.

8.6.2. However, I find it impossible to consider recommending a grant planning permission given the status of the works carried out by the applicant on the public road. I agree with the Transportation Department of Galway County Council that permission should be refused on the basis that the applicant would benefit from unauthorised works, which would be inappropriate.

8.6.3. As such, the ability of the existing road network to accommodate the scale of the development proposed within such a small timeframe, the impact the development would have on the local road network, as well as on the amenity of the wider rural area, and current vulnerable road users is questionable.

9.0 Environmental Impact Assessment

9.1. Introduction

9.1.1. This application was submitted after the 1st September 2018, the date that Directive 2014/52/EU amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment was transposed into Irish legislation as part of the provisions of the European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 (S.I. No. 296 of 2018). These Regulations transpose the requirements of the EIA Directive into planning law, providing a clear definition of EIA, further clarity regarding the process and the need to identify, describe and assess the direct and indirect significant effects of the project on specified environmental factors. The Minister for Housing, Planning and Local Government has published updated 'Guidelines for Planning Authorities and An Bord Pleanála on carrying out environmental impact assessments (EIA)', replacing the 2013 Guidelines.

9.1.2. The new legislation did not make any changes to Annex I or II of Directive 2011/92/EU, which identifies projects for the purposes of EIA. Therefore, Schedule 5 of the Planning and Development Regulations 2001-2019, for the purposes of EIA, still applies. The proposed development falls within the category of prescribed development for the purposes of Part 10 under Schedule 5. Part 2(2) of Schedule 5 of the Planning and Development Regulations 2001 relates to 'Extractive Industry' and part (b) states as follows:

> (b) Extraction of stone, gravel, sand or clay, where the area of extraction would be greater than 5 hectares.

9.1.3. I note that the development relates to an area of an existing working quarry which has a total area of 14.9ha. The area the subject of this appeal, which is included in

the total working quarry area, is 4.35ha. The development will involve the extraction of rock by blasting down to minus 5m OD level from the existing quarry floor, over a period of five years. The proposed development, therefore, does not comprise a development which requires the submission of a mandatory EIAR in terms of Part 1(19) or Part 2(2)(b) of Part 2 of Schedule 5 of the Planning and Development Regulations 2001-2019.

9.1.4. The development does, however, comprise a development which requires the submission of a mandatory EIAR in terms of Part 2(13)(a) as it relates to an extension to a development which would:

(i) result in the development being of a class listed in Part 1 or paragraphs 1 to 12 of Part 2 of this Schedule, and

(ii) result in an increase in size greater than

- 25 per cent or
- an amount equal to 50 percent of the appropriate threshold, whichever is greater.

9.2. **Environmental Impact Assessment Report:**

9.2.1. The EIAR submitted with the planning application is presented in one volume as well as a non-technical summary. The main report of the EIAR provides 17 chapters and seeks to address all environmental matters associated with the proposed development in a grouped format. The EIAR is advertised in the public notices and I have read this EIAR in its entirety.

9.2.2. The EIAR seeks to:

- Describe the proposal, including the site, and its surroundings, as well as the development's design and size;
- Describe the likely significant effects of the project on the environment;
- Describe the features of the project and measures envisaged to avoid, reduce and, if possible, remedy significant adverse effects;

- Describe the main alternatives studied and the main reasons for the choice of site and development, taking into account the effects on the environment.
- A non-technical summary is also provided.
- The EIAR also includes, at Section 1.9, details of the EIAR Project Team Contributors involved in the preparation of the document.

9.2.3. The Non-Technical Summary in presented in a separate volume, provides an introduction and seeks to describe the proposed development, as well as provide a summary of the findings about each of the environmental topics that are examined in the EIAR. While I have raised concerns in terms of the detail of the EIAR, the information in the NTS is presented is in clear and non-technical language. I am satisfied that the NTS is generally acceptable.

9.2.4. The main EIAR report is presented under the following chapter headings:

1. Introduction
2. Screening, Scoping & Alternatives
3. Project Description
4. Planning & Legislative Framework
5. Population & Human Health
6. Biodiversity
7. Land, Soils & Geology
8. Water
9. Climate
10. Air
11. Noise & Vibration
12. Traffic
13. Landscape & Restoration
14. Material Assets
15. Cultural Heritage
16. Interactions / Inter-Relationships
17. Mitigation & Monitoring Summary

9.2.5. **Chapter 1** of the EIAR deals provides an introduction to the proposed development, provides information in relation to the application site, working quarry, the applicant, EIAR methodology and the EIAR Team. The Board will note that Figure 1.2 of the EIAR identifies the total quarry area registered under Section 261 at 31.8ha. I note that this figure does not correlate with the land holding submitted in the planning maps in support of the proposed development. I also note that the applicant

previously indicated that a 14.9ha extraction area, within a 31.8ha quarry, was registered under the section 261 registration process. However, the extraction area was clarified as 7.7ha and the total extraction area as 22ha in further information received 21/09/05 to that application and was confirmed by the Board's Inspector on review (QV07.0056). I note the working quarry area includes a storage area for extracted and / or processed materials, in addition to a processing area, a manufacturing area and drying area for concrete products. The site also includes the relevant weigh bridge and office.

9.2.6. **Chapter 2** deals with screening, scoping and alternatives considered. The screening determination concluded that EIAR was required. In addition, it was concluded that AA was required. A Natura Impact Statement was prepared under a separate document. This chapter identifies the consultations undertaken in the scoping exercise for the EIAR. The EIAR also identifies alternatives considered in terms of locations and layouts and alternative processes. The EIAR sets out the key environmental considerations and constraints which influenced the selection of the final preferred option.

9.2.7. **Chapter 3 to 17** of the EIAR provides a description of the development and sets out the need for the development. The chapters seek to address the main likely significant direct and indirect effects arising from the proposed development, and the interaction of the environmental aspects in accordance with the requirements of Schedule 6 of the Planning & Development Regulations, 2001 as amended. Chapter 16 considers the interactions by means of cross referencing each environmental aspect against all other aspects considered and Chapter 17 sets out the mitigation measures and monitoring proposals.

9.2.8. The requirements of Article 3(2) of the Directive require a consideration of the vulnerability of the project to risks of major accidents and/or disaster that are relevant to the project concerned. The EIAR does not appear to specifically address this issue under a single heading but I note reference to the Emergency response Plan in the event of unplanned events. In the context of the proposed development, and the scale of the proposed project, as well as the environmental controls in place and those proposed to be implemented, the risk of disasters, for example associated with severe weather events or natural catastrophes, or accidents for example in terms of fuel spills, traffic accidents, is considered low.

9.2.9. The quarry site is not regulated or connected to or lies in proximity to any SEVESO site which is regulated under the Control of Major Accident Hazards Involving Dangerous Substances Regulations. Therefore, there is no potential effects in this context. I note that there is a 600mm diameter high pressure Gas Networks Ireland Gas Line located approximately 360m to the west of the subject site. This infrastructure may be vulnerable to blast vibrations associated with the quarry. Monitoring in proximity to the gas pipeline indicate that blast vibration measurement are in the region of 1.6mm/s, where the limit where damage is likely is 12mm/s. It is considered that having regard to the nature and scale of the development itself, it is unlikely that any major accident will arise. There are unlikely to be any effects deriving from major accidents and or disasters.

9.3. **Alternatives**

9.3.1. In terms of the requirements to consider alternatives, the following is relevant:

- Article 5 (1) (d) of the 2014 EIA Directive requires:

  "(d) a description of the reasonable alternatives studied by the developer, which are relevant to the project and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the project on the environment;"

- Annex (iv) (Information for the EIAR) provides more detail on 'reasonable alternatives':

  "2. A description of the reasonable alternatives (for example in terms of project design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for electing the chosen option, including a comparison of the environmental effects."

9.3.2. Chapter 2 of the EIAR seeks to address the matter of alternatives considered. Five alternatives were considered in terms of location and layout which included areas in the existing land holding and off-site locations. Option B, the current proposal, was deemed the preferred option as it was considered to have a number of advantages over the other options including available deposits in an area which was previously subject to quarrying, will not disturb greenfield areas, the quarry floor is below

ground level and will provide visual screening and aid in screening potential noise and dust emissions and the area adjoins the existing working quarry.

9.3.3. In terms of alternative processes, the consideration is confined to alternative processing of the aggregate products that will be produced at the site. The existing method of extraction used at the site is blasting and it is considered that this is the most suitable. Extracted material will be transported to the manufacturing area of the working quarry for processing into various grades of aggregate using dump trucks. The applicant considered using a hydraulic impact breaker attached to an excavator to extract the resource but deemed this to be more time consuming with elevated noise levels. Conveyers were also considered in terms of the transportation of aggregate to the manufacturing area but was deemed unsuitable due to the depth below ground level of the proposed excavation area. It is further submitted that processing will be undertaken on limited occasions at the application site using mobile processing plant approximately 6 to 8 weeks on an annual basis.

9.3.4. The EIAR concludes that the proposed development would supplement the reserve of material at the existing quarry for 1 – 5 years. The proposed development will not increase the total output per annum or increase the traffic associated with the existing development.

9.3.5. I am generally satisfied that the EIAR has been prepared by competent experts, is generally complete and of acceptable quality, and that the information contained in the EIAR and supplementary information provided by the developer, adequately identifies and describes the direct and indirect effects of the proposed development on the environment and complies with article 94 of the Planning and Development Regulations 2001-2019 for the majority of environmental aspects considered.

9.4. Environmental Impact Assessment

9.4.1. This assessment has had regard to the application documentation, including the Environmental Impact Assessment Report, and all other supporting reports submitted, as well as all written submissions. In accordance with the requirements of Article 3 of the EIA Directive and Section 171A of the Planning and Development Act, 2000 (as amended), the environmental assessment is carried out against the following factors:

(*a*) population and human health,

(*b*) biodiversity, with particular attention to protected species and habitats protected under the Habitats Directive and the Birds Directive,

(*c*) land, soil, water, air and climate,

(*d*) material assets, cultural heritage and the landscape,

(e) the interaction between the above factors.

9.5. Population and Human Health

9.5.1. The Board will note the concerns of the third parties with regard to the impact of the proposed development, and the negative associated impacts, on human health in terms of environmental impacts, quality of life, increased stress, noise and air quality impacts due to traffic. The EIAR, Chapter 5, seeks to address impacts associated with the development on population & human health. It is advised that impacts on population and human health, as a result of the proposed development, have also been considered in other chapters of the EIAR including in relation to water, air, noise & vibration, traffic and landscape & restoration.

9.5.2. The EIAR notes that the site is located in the Annaghdown DED which experienced an 11% increase in population between 2006 and 2011, 137 people, similar to Co. Galway figures, and slightly higher than national figures. The EIAR presents information with regard to the age profile and home ownership, as well as socio-economic groups in the area of the site. In terms of housing demand, the EIAR notes that 48.9% of houses in the DED were built between 1991 and 2016, 31.5% between 2001 and 2010. It is noted that the quarry was operating during this period. It is also extrapolated from census figures that the highest percentage of people travel between 30 and 45 minutes to work or college, most likely Galway City.

9.5.3. The EIAR also seeks to set out the baseline conditions of the local areas noting that the data gathered and predictions of future emissions in relation to air, noise, vibration, water etc associated with the day to day operations of the existing and proposed development have been used as part of the assessment. These are compared to various thresholds relevant to each element. The EIAR submits that no detrimental health effects are expected below the thresholds as they relate to

emissions to air including dust, noise and vibrations, emissions to water and traffic associated with the development.

9.5.4. Section 5.5 of the EIAR presents the impact assessment.

- **Population Impact Assessment**
  - In terms of impacts on **population**, it is noted that the quarry has been in operation at the site for many years, and that a number of houses have been constructed in the study area over the last number of years. Noise, vibration, air and water monitoring will be undertaken during the operational phase to ensure emission levels are within recommended guidelines.
  - The existing quarry employs 12 people and while the proposed development won't provide additional direct jobs, it will secure the existing employment going forward. Indirect jobs arising from the quarry include jobs associated with haulage companies and the construction sector in the area.
  - The proposed development will not result in the loss of greenfield areas. The EIAR does not consider that the development will create any adverse housing impacts and will not have a negative impact on land use or housing in the vicinity.
  - With regard to tourism, it is submitted that there are no tourist or amenity areas in the vicinity of the site which would be impacted on by the existing and proposed development. While Chapter 12 of the EIAR deals with Traffic, in terms of population and human health, it is submitted that traffic associated with the existing development could potentially impact on recreational walkers who use the adjoining road network, but it is submitted that the proposed development will not result in an increase in traffic above that experienced in the past.
  - Section 5.5.1.5 of the EIAR deals with Site Safety. The Board will note that this has been raised as an issue by third parties in their observations to the Board. A report prepared by the applicants Health & Safety Officer, noted two areas of the boundary fencing which required attention, one to the west of the quarry and a second area along the easterly face. It is submitted that these

elements are to be addressed as a priority to meet the Health & Safety Regulation Standards.

- **Human Health Impact Assessment**
  - The EIAR states 'it can be assumed that provided the predicted changes do not result in exceedances of the thresholds for each element that there will be no significant risk or impact'.
  - In terms of impacts associated with **emissions to water**, it is noted that water is pumped from the attenuation sump on the quarry floor in order to control the groundwater level at the quarry. Excess water is discharged off-site to a wetland area. I also note that Chapter 8 of the EIAR considers the potential impacts of the existing and proposed development on the water environment and mitigation measures are proposed to safeguard the water environment. It is concluded that as there will be no effect on water quality standards, the effects on human health from water are imperceptible.
  - Impacts associated with **noise & vibration** are considered in Section 11 of the full EIAR, with section 5.5.2.2 considering the impacts associated with noise and vibration in the context of human health. It is submitted that 95% of all noise levels shall comply with the specific limit values and no noise level shall exceed the limit value by more than 2dBA. An assessment of noise associated with the existing and proposed development concluded that the operation of the development will be in line with the recommended noise limits at noise sensitive receptors. With regard to vibration, it is submitted that ground vibration and air-overpressure will be kept below the guidelines recommended, and below the regulatory limits and historical measurements. The location of blasting will not be any closer to receptors and controls will be in place to limit vibration as a component of good management procedures. It is concluded that the human health effect for all receptors arising from noise and vibration will be imperceptible.
  - With regard to impacts associated with **emissions to air,** the main potential sources of emissions will be associated with plant and machinery undertaking day to day activities such as extraction, processing and transportation of material, dust blow during dry windy conditions and the operation of the

asphalt plant. The gaseous emissions associated with the asphalt plant, located within the manufacturing area of the quarry, and outside the subject application site, include sulpher dioxide (SO_2), nitrogen oxides (NOx), carbon monoxide (CO) and volatile organic compounds (VOC). Based on the air assessment of the proposed quarry, the cumulative impact of all air emission sources within the quarry site coupled with current levels of air quality and dust deposition rates will result in an imperceptible change in ambient air quality at the nearest sensitive receptors. No significant effects on the health of local residents are likely.

- In terms of impacts associated with **traffic,** it is noted that the existing quarry generates a number of traffic movements associated with the transport of material to and from the quarry to market. It is submitted that the proposed development will not result in an increase in traffic on the public road. Therefore, the impact associated with the proposed development is assessed to be imperceptible.
- The **do-nothing** scenario indicates that the existing quarry would extract the remaining materials located within the working quarry. Emissions levels from the quarry and the impact on population and human health is unlikely to change if this scenario is adopted.
- With regard to **unplanned events**, the EIAR advises that should one occur, emergency response plans and procedures in place will be implemented. Such events are also addressed in other sections of the EIAR.

- **Cumulative Impacts**
  - Environmental monitoring undertaken to date at the existing quarry show that it is compliant with recommended guideline values for elements monitored. It is concluded that there will be no cumulative impact.
- **Mitigation Measures**
  - Section 5.5.4 of the EIAR notes a number of mitigation measures which should be implemented and/or continuously practiced at the application site. These include environmental monitoring, security fencing and warning signs, landscaping and restoration, daily inspections of the quarry and daily

inspection of the public roads in the vicinity of the entrance to ensure the road is free of dirt and debris.

- Mitigation measures are proposed in terms of air, noise & vibration, water, landscape & restoration and material assets are addressed in the relevant chapters of the EIAR.

- **Monitoring**
  - Environmental monitoring will be carried out with the requirements of the conditions attached to a grant of planning permission, air emissions licence and any future permissions and licences.

Conclusion

9.5.5. The Board will note the third-party concerns raised in relation to the impact of the existing facility on population and human health, and in particular to residential amenity. While acknowledging the third-party submissions, it appears that the quarry operates in accordance with Condition 2 and Condition 4 of the Galway County Council Section 261 decision which sets the noise limits and the vibration limits for the quarry arising from any blasts carried out at the site. The applicant submits that the development the subject of this appeal will not increase approved extraction rates at the wider quarry and traffic movements will reflect those as approved by way of the Section 261 and Section 261A processes. Dust monitoring suggests that fugitive dust emissions will be below 100mg/m².day, <29% of the monthly dust deposition, German TA Luft limit value of 350mg/m².day.

9.5.6. Overall, I am generally satisfied that the EIAR has adequately considered the impacts of the development on population, human health and residential amenity. Having regard to the information submitted, I consider that the EIAR is adequate to allow for an evaluation of impacts to be completed. I have considered all of the written submissions made in relation to population, human health and residential amenity, and I am satisfied that any potential impacts would be avoided, managed and mitigated by the measures which form part of the proposed scheme, the proposed mitigation measures and through suitable conditions including monitoring conditions. I am, therefore, satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative effects in terms of population, human health and residential amenity.

9.6. Biodiversity

9.6.1. Chapter 6 of the EIAR deals with biodiversity and the Board will note that a Natura Impact Statement (NIS) was submitted in support of the proposed development application. The NIS is dealt with in section 9 of this report below but there will also be a degree of overlap. This section of the EIAR sets out the qualifications of the professionals who completed this chapter.

9.6.2. The methodology employed to prepare this chapter of the EIAR is set out and included a desk top review to identify features of ecological importance within the receiving environment of the proposed vertical extension of the existing quarry site. The assessment also includes a review of previous scientific reports and appraisals carried out for the wider quarry and consultations with the Development Applicants Unit (DAU) on 11th April 2018, relating specifically to the Annex I species, Peregrine Falcon, which is known to breed at the site. Site surveys were carried out over two days, 9th November 2017 and 4th May 2018. Surveys were carried out in relation to the following ecological receptors:

- Designated sites
- Habitats
- Birds
- Non-volant mammals
- Bats
- Amphibians
- Invertebrates
- Water quality & aquatic ecology

9.6.3. The value of the ecological receptors was determined using the ecological evaluation guidance in the NRA Ecological Assessment Guidelines. The significance of impacts is also assessed using the stated guideline criteria.

Receiving Environment

9.6.4. The existing environment is set out in section 6.3 of the EIAR. There is no designated site within the proposed development site and the site is located

approximately 2.4km to the west of the Lough Corrib SAC (Site Code 000297), 6.8km to the east of the Lough Corrib SPA (Site Code 004042) and 14.4km to the east of the Galway Bay Complex SPA (Site Code 000268). Table 6.3.2 includes details of the 11 pNHAs located within 15km of the site also, and figure 6.3.3 identifies all sites on a map.

9.6.5. Habitats present on the site comprise an active quarry and mines, Fossitt Code ED4. The EIAR submits that the habitat evaluation is of national importance and notes 'given the successful annual onsite breeding of Peregrin Falcon, this site is deemed to be of national importance for this Annex I species'. Habitats present on the adjacent lands include stone walls and other stonework, earth banks, buildings and artificial surfaces, recolonising bare ground, active quarries and mines, reed and large sedge swamps (percolation area), improved agricultural grassland, hedgerows, treelines and scrub. All of these habitats are deemed to be locally important with a mix of lower and higher values. With regard to the scrub area, which has a locally important (higher value), it is submitted that given the absence of heath and calcareous grassland, there is no potential correspondence with the EU Annex I habitat *Juniperus communis* formations on heaths or calcareous grasslands [5130]. In terms of flora, the EIAR notes that no protected plant or invasive species were recorded during the site survey.

9.6.6. With regard to fauna within the study area, the EIAR notes the presence of a number of common bird species. The presence of hedgerows and pockets of scrub make for suitable nesting and roosting sites for a range of these species. The rock faces and ledges on the extraction faces of the quarry provide attractive roosting ledges for a number of corvid species. Of the species identified within the study area, 3 were identified within the application site area, in addition to the Annex I species Peregrine Falcon. Confirmation of the presence of a pair of Peregrine Falcons was made during the site visit on 4th May 2018. It is concluded that the 2018 nesting attempt may have failed as the female was observed away from the nest location of a period greater than 1hour. A survey for bats and nesting Barn owls found that a derelict stone walled shed located approximately 130m to the west of the application site was not capable of supporting a nesting Barn owl.

9.6.7. No protected mammals, or signs, were recorded during the site survey either within the application site or on the adjacent lands. It is considered likely, however, that a

number of species including badger, fox, Irish hare, Irish stoat, pine martin, rabbit, hedgehog and wood mouse are present on the site given the habitats present within the green fields. Given the absence of watercourses within and surrounding the proposed site, it is considered unlikely that otter use the area.

9.6.8. With regard to bats, a bat activity report was prepared. A specific survey was carried out at the site and the greatest level of activity was recorded at the broadleaf woodland to the south east of the wider landholding. There was near constant common and soprano pipistrelle activity, with occasional passes by Leisler's bats and a single *Myotis* pass. There was a high level of activity along some mature hedgerows to the north west and along the edge of the quarry by Leisler's bats. There was negligible activity noted along the roads within the quarry but there was regular activity by Leisler's bats within the deeper sections of the quarry. The survey results indicate that the proposed development site is used on a near constant basis by Leisler's bats as a feeding area.

9.6.9. In terms of potential roosts, the stone shed to the west of the application site is considered to have moderate suitability for roosing bats. However, given that all joints are tightly sealed providing no crevices suitable for bats, it is considered that it is not suitable for crevice roosting bats, but may provide temporary night roosts / feeding perches during periods of bad weather. Most of the trees within the landholding are immature, small and do not have cracks or crevices suitable for roosting bats other than a line of semi-mature ash trees to the north west of the broadleaf woodland, which is considered to have low suitability for roosting bats. The crevices and cracks in the quarry face are considered to be of moderate suitability for roosting bats. However, the quarry has a regular programme of blasting to extract material which would generate significant noise and vibration which would displace most bats from the interior of the quarry.

9.6.10. The former souterrain, previously removed and preserved by record under licence is no longer considered as a potential roost for lesser horseshoe bats, or any other bat species. No lesser horseshoe bats were recorded during the bat surveys. Overall, the applicants landholding is considered to be of low ecological value as a feeding area for bats.

9.6.11. With regard to amphibians and reptiles, the EIAR notes that frogs and smooth newts are likely to be present within the adjacent greenfield lands but are unlikely to occur within the proposed application site. In terms of invertebrates, it is submitted, given the season in which the field survey was undertaken, such species were not recorded within the lands adjacent to the proposed application site. Devils Bit Scabious, the larval food plant of the Marsh Fritillary was not recorded within or adjacent to the site.

9.6.12. Section 6.3.4 of the EIAR deals with hydrology and aquatic ecology in the receiving environment. It is noted that the subject site lies within the Cregg River sub-basin, which is located within the Clare River sub catchment. There are no surface water features located in the immediate vicinity of the proposed application and the Cregg River and Clare River are located approximately 1.6km to the south west and 3.2km to the east of the site respectively. While the Clare River is designated within the boundaries of the Lough Corrib SAC, there is no surface water hydrological connection between the application site or either watercourse.

9.6.13. Precipitation is percolated through the underlying geology and flows to a shallow depression where it evaporates off the surface. Water is pumped from the quarry sump on a permanent basis to ensure that groundwater levels are maintained at safe working levels. Water collected in the quarry floor is not discharged to any surface water network. Collected groundwater is used in manufacturing processes on site or is pumped to a wetland area to the immediate west of the quarry, where it percolates back to the water table. It is submitted that the quarry essentially operates a closed water management system. I note the Board has accepted this opinion in previous assessments for development at the site, including the application for substitute consent.

Likely Significant Impacts

9.6.14. The submitted EIAR uses the Source-Pathway-Receptor model to evaluate the likely significant effects of the proposed development, in the absence of mitigation, on the sensitive ecological aspects of the receiving environment. In this regard, table 6.4.1 of the EIAR is relevant.

In terms of **designated sites**, I refer the Board to Section 10 of this report which deals with the Natura Impact Statement and deals with impacts to SACs and SPAs.

The EIAR addresses the potential impact to other designated sites, NHAs and pNHAs noting that there are no NHAs and 11 pNHAs within 15km of the site. it is noted that there are no hydrological or ecological connections between the pNHAs and the proposed application site. It is concluded that no NHA or pNHA are likely to be significantly affected due to the proposed development due to the distance and the absence of said connectivity.

9.6.15. In terms of impacts on habitats and flora, it is submitted that the proposed development, due to the vertical nature of the excavation, will not involve additional land take. As such, the potential direct effect on existing habitats within the application area with regard to land take is imperceptible in the long term. While the modelling identifies that there is potential for indirect effects on habitats within the greenfield lands adjacent to the site through groundwater contamination, given the considerable depth of the existing quarry, the potential for effects by virtue of ground contamination is evaluated as imperceptible in the long term. With regard to the potential introduction of invasive plant species to the quarry site as a result of moving vehicles, it is noted that there is currently no invasive species in the application area or the immediate environs. The potential for indirect effects in this regard is evaluated as short term imperceptible. Fugitive dust arising from additional quarrying activities, bare ground and stockpiles / overburden from the processing plant has the potential to become deposited on adjacent habitats, particularly those within 25m of the site. Berms around the border of the active quarry will assist in filtering and containing air borne emissions and will ensure that operational activity is kept well below the surrounding ground levels.

9.6.16. In terms of **fauna**, the following is relevant:

Birds: There is potential for indirect effects on the Annex I species, Peregrine Falcon by virtue of noise and vibration from additional quarrying activities. The activity has the potential to disturb and / or displace nesting Peregrines, which are known to breed in the quarry. Following consultation with the NPWS Conservation Ranger and Peregrine Specialist, I note that Ms. O'Brien does 'not see any threat to this breeding pair in this quarry from the proposed development. The proposed work is some distance away from where the birds breed, and I do not see them moving to another part of the quarry as the ledge they are currently using is very good……' 'Blasting close to the nest site

during breeding season i.e. from March to July could cause damage to the eggs or cause the birds to abandon the nest. However, guidelines and restrictions in accordance with best practice can be put in place to prevent this from happening'.

In the absence of mitigation, the potential for indirect effects on Peregrines breeding within the proposed application area between March and July each year by virtue of disturbance from noise and vibrational emissions is likely to be moderately adverse in the long-term.

Non-Volant Mammals: Given that the proposed works will occur within an existing operational quarry, the potential for indirect effects on non-volant mammals using the adjacent green field area, by reason of noise and vibration resulting in disturbance / displacement is evaluated as imperceptible in the long term.

Bats: The proposed development involves blasting and extraction of rock from the base of the existing quarry, and it is noted that there are some cracks and crevices on the vertical face which may be suitable for roosting bats. However, it is submitted that existing quarrying activities is likely to have displaced bats from the area and it is unlikely that the proposed development will have any direct impact on roosting bats within the quarry. Rock blasting and the operation of machinery will generate some noise and vibration in the surrounding area but given the existing operation at the site, it is likely that roosting bats in the surrounding area have become habituated to these forms of disturbance. The risk of indirect impacts is considered to be imperceptible. With regard to potential impacts on foraging area or commuting routes, the EIAR notes that the vertical rock faces within the quarry appear to be used by Leisler's bats as a feeding are, and to a lesser extent by pipistrelle bats. The proposed works will not substantially change the vertical faces and it is expected that the Leisler's bat will continue to feed in the area.

There is no lighting currently within the quarry and no permanent lighting is proposed. It is submitted that it may be necessary to use some temporary lighting rigs to facilitate works at night, for example during winter months. This may potentially displace bats from the affected area but is considered to be temporary and localised and would likely only be required outside the peak

activity season for bats (April to October). It is therefore considered to have no more than a slight negative impact on bats.

The development will not affect undeveloped farmland to the east and there will be no change to the foraging area / community routes around the broadleaved woodland and mature hedgerows.

Amphibians & Reptiles: The absence of suitable breeding and foraging habitat, and that no species were recorded during the ecology walk over survey, indicates that the development will have an imperceptible impact in the long term.

Invertebrates: The application site is within an existing quarry. The potential for indirect effects on invertebrate species using the adjacent farmland is evaluated as imperceptible in the long term.

Water Quality & Aquatic Ecology: Given the absence of surface water hydrological connectivity, effects on water quality and aquatic ecology will be neutral in the long term.

In the absence of mitigation, there is potential for contamination of the groundwater environment due to accidental emissions of hydrocarbons from the plant and machinery operating at the application site resulting in significantly adverse medium-term effects.

In-combination Effects

9.6.17. The closest quarry to the subject site is at Lackagh (QEY 104), approximately 4-5km south of the application site. There are four other quarries within 7km. Given the absence of hydrological or ecological connectivity, it is concluded that the proposed project will not act in combination with these other quarries to result in significant cumulative effects. No other significant development was found in proximity to the proposed application site. It is therefore considered that the risk of cumulative impact is no significant.

Summary of Significance of Likely Effects

9.6.18. In light of the above, the EIAR concludes that the significance of likely effects on ecological receptors arises in relation to water quality in groundwater and breeding Peregrine falcons. Mitigation measures are proposed.

Mitigation Measures

9.6.19. Section 6.5 of the EIAR sets out the mitigation measures as they relate to biodiversity. Mitigation measures have been devised and included in order to minimise the potential effects on both groundwater quality and Peregrine falcons as a result of the proposed increase in quarry extraction depth.

9.6.20. In terms of the protection of water quality, the following mitigation measures are proposed:

- The addition of hydraulic oils or lubricants to vehicles will take place in a designated area, away from surface water gullies or drains.
- No hydraulic oils or lubricants will be stored within the proposed application site.
- An Emergency Response Kit will be kept onsite to prevent any leaks of petroleum-based products from leaching to groundwater.
- A groundwater level and quality monitoring programme will be implemented in order to obtain accurate groundwater monitoring levels and quality results.
- Groundwater wells will be installed at locations around the boundary of the application site and working quarry in order to undertake groundwater monitoring programme.
- Monitoring of surface water and groundwater in the vicinity of the application site will be undertaken on a biannual basis to assess if the existing activities are having an adverse effect on the water environment.

9.6.21. In terms of the protection of Peregrine Falcon, the following mitigation measures are proposed:

- Annual blasting programme will be planned in advance and in accordance with the parameters as laid down in the quarry permit.
- The blasting programme will be limited to periods outside the Peregrine nesting season.
- Should blasting during the temporal window of March to July be unavoidable for legitimate operational reasons, an onsite breeding raptor vantage point survey will be required prior to any blasting taking place.

- This survey will also make reference to species of conservation concern but not listed under Annex I of the Birds Directive.
- Should an active Peregrine (or other raptor species) nest be detected during the survey, a minimum buffer distance of 125m between the blast point and the nest must be strictly adhered to.
- It is also recommended that the quarry face within which the existing nest ledge which has been used by peregrines for the past number of years remains in place.

Residual Effect

9.6.22. The significance of residual impacts is considered to be imperceptible subject to the appropriate mitigation measures.

Conclusion

9.6.23. The Board will note the third-party concerns raised in relation to the impact of the proposed development on biodiversity, including a number of bird species as well as other fauna and flora. Of note, third-party submissions suggests that the applicant has 'not complied with EU Habitats Directive by way of the removal or destruction of annex 1 habitats either located within the application area or adjacent to it'. It is submitted that the applicant has 'failed to properly document this removal or destruction so as to correctly assess the impact on flora and fauna, and especially in regard to the Lesser Horseshoe Bat and other bat species'. In addition, I note that third parties have raised concerns in terms of the removal of limestone pavement on adjacent lands, which has not been referred to in any survey.

9.6.24. In the context of the exposed limestone pavement referred to, the Board will note the comments of the previous Inspector. It is noted that it cannot be definitively determined from the arial photographs whether or not such exposed limestone pavement existed on the site. A limestone habitat in the area of the site was not deemed to be of sufficient quality to merit its inclusion for designation as a European Site under the Habitats Directive. There is no evidence of a wider area of the habitat in the vicinity of the site. I also note that the area referred to is not located within the proposed development site, and it has been determined that there is no evidence to

definitively conclude that the limestone habitat occurred within the current proposed application site and was removed.

9.6.25. In terms of the souterrain, which in the past was identified as a potential roost for the Lesser Horseshoe Bat and / or other species of bat, I note that third parties have voiced their horror to learn that it no longer exists and as such, cannot be considered as a factor. Again, I note that the souterrain has not been present on the site for a number of years and while it is referred to in Chapter 13 of the previous EIS submitted in support of the Substitute Consent application, ABP ref SU07.SU0053 refers, the Board will note that the former souterrain was removed and preserved by record under licence.

9.6.26. I note that the EIAR recommends that a qualified ecologist periodically monitor the operational works, particularly during the bird breeding season to ensure that mitigation measures proposed are being implemented and that the conservation interests at the site are protected. I would advise the Board that while I acknowledge the mitigation measures presented in relation to Peregrine falcon, having regard to the information submitted in relation to the Noise & Vibration chapter of the EIAR, I note that blasting occurred on 4 occasions between March and July in both 2016 and 2017. There is no indication that these events may have impacted on the breeding of these birds during those seasons, but should the Board be minded to grant permission in this instance, a ban on blasting during the nesting season should be included as a specific condition of permission. I note that the NPWS stated that 2019 was a successful breeding year for the Peregrine Falcon at the site.

9.6.27. Overall, I am generally satisfied that the EIAR has adequately considered the development site and surrounding area for biodiversity, including habitats, flora and fauna. Having regard to the information submitted, I consider that the EIAR is adequate to allow for an evaluation of impacts to be completed. I have considered all of the written submissions made in relation to biodiversity, and I am satisfied that any potential impacts would be avoided, managed and mitigated by the measures which form part of the proposed scheme, the proposed mitigation measures and through suitable conditions including monitoring conditions. I am, therefore, satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative effects in terms of biodiversity.

9.7. Land, Soils, Geology & Hydrogeology

9.7.1. In terms of likely significant impacts arising with regard to soils and geology, I refer the Board to Chapter 7 of the submitted the EIAR. The assessment is based on a desk top study and site visits. The existing environment is described, noting that the site comprises part of a working quarry which was previously quarried resulting in the creation of a void. The EIAR discusses the topography and drainage as well as describes the land uses associated with the surrounding area. There is no EPA or LA Licenced facility located in the immediate vicinity of the development and the closest WWTP is approximately 7km to the south of the quarry. In terms of soils, it is noted that the overburden has long since been removed from the subject site as a result of quarrying activity. The soil has been used in the construction of berms around the boundary of the quarry.

9.7.2. The bedrock geology in the area is predominantly Dinantian Pure Bedded Limestones of the Visean Limestones (undifferentiated) formation. To the north of the study area, the bedrock is described as Knockmaa Formation which consists of thick-bedded pale grey clean limestone similar to those of the underlying Corranellistrum Formation. There are no karst features recorded within the application site, while a number are located to the east and south of the quarry consisting of caves, springs, turloughs and enclosed depressions. In terms of economic geology, the quarry area is considered to have a 'Very High potential' for quarry of crushed rock aggregate. There is one Geological Heritage site located approximately 7km to the north west of the site – Pollnahallia.

9.7.3. The proposed development seeks to further extract material in an area which has been subject to quarrying in the past, to a level of minus 5mOD. This is above the lowest level of the existing extraction area of the working quarry to the south of the subject application site. It is submitted that the application area consists of approximately 1.2 million tonnes of material and the maximum extraction rate at the quarry is 400,000 tonnes per annum, as previously authorised.

Impact Assessment

9.7.4. In terms of the likely significant impacts on land and soils, I note that the existing environment is already modified due to the presence of the existing quarry, which

has changed the natural topography of the area. The following are considered relevant:

Loss of Land: The development will not result in the loss of additional land use to quarrying as the application site has already been subject to quarrying activity. It is submitted that the proposed landscape and restoration of the quarry will offset the impact to a certain extent with the creation of new habitats, which will increase biodiversity in the longer term.

Stability of Quarry Faces: It is submitted that rock will be extracted in line with Guidelines to the Safety, Health and Welfare at Work (Quarries) Regulations 2008 (S.I. No. 28 of 2008). A buffer will be maintained around the external boundary of the application area which will ensure the stability of the external quarry faces. Geotechnical Assessments of quarry faces will be undertaken on an annual basis and recommendations will be implemented.

Waste Generation: Waste generation at the site will be negligible as all overburden has been removed from the site. No additional facilities are proposed, and the existing quarry already has a canteen and office facilities. All oil and hydrocarbon products are stored at the garage / workshop.

Accidental Spillages or Emissions: It is acknowledged that there is potential for accidental spillages from plant and machinery operating at the site, with the degree of impact depending on the nature of the emission. Plant and machinery are serviced regularly reducing the likelihood of accidental emissions occurring. Procedures are also in place for dispensing fuel and servicing plant and machinery at the quarry.

Geological Heritage Sites: Due to the distance between the application site and the nearest site of geological interest, no impact is envisaged.

Cumulative Impact

9.7.5. Cumulative impacts are considered in associated with the existing working quarry and manufacturing area. It is noted that there are no other developments in the vicinity of the quarry which would result in a significant cumulative impact. No in-combination impacts of the quarry and agricultural practices are identified.

9.7.6. It is noted that if permission for the proposed development to deepen the existing quarry void is not granted, the applicant will extract from the reserves at the existing working quarry. Further planning permission would be sought to extract from additional lands that extend to the east of the existing quarry void. If the quarry was to close, it would result in a significant loss of jobs and employment and supply of quarry products to the local and regional market.

Mitigation Measures

9.7.7. Section 7.6 of the EIAR sets out the mitigation measures proposed to limit the effects of quarrying activity on the overburden and rock environment. The measures relate to the use of unsuitable quarry material, limited handling of material, fuel source and storge, the use of spill trays during refuelling and procedures are in place for dispensing fuel, dealing with accidental spillages should they occur, berm construction and landscaping.

9.7.8. In addition, and by way of monitoring, an inspection of the geological environment will be undertaken by a competent geologist on a regular basis to assess quarry faces and geotechnical assessment of the quarry face and stockpiles will be undertaken on an annual basis. A landscape and restoration plan will be implemented at the site in accordance with Section 13.0 of the EIAR.

Residual Impacts

9.7.9. No significant negative residual impacts are envisaged in terms of land and soils following the landscape and restoration of the site.

Conclusion

9.7.10. have read and considered all of the submissions made in relation to land and soils. The EIAR has presented adequate information in relation to the proposed development in terms of land, soils, geology and hydrogeology, including mitigation and monitoring proposals. I am satisfied that the proposed development would not have any unacceptable direct or indirect impacts in terms of land and soil. I am also satisfied that cumulative effects are not likely to arise and no significant residual impacts are anticipated.

9.8. Water

9.8.1. Chapter 8 of the EIAR addresses the impacts on the hydrological and hydrogeological environment of the proposed development. This chapter presents baseline conditions within the footprint of the site and updates previous assessments on additional drilling, monitoring information and assessments. In addition, the EIAR seeks to assess the potential impact of the proposed development on the underlying groundwater aquifer and associated surface water bodies, to identify potential risks and impacts and to provide appropriate mitigation measures where necessary and to consider and address hydrological and hydrogeological issues raised in scoping consultations and previous items identified by the NPWS and ABP.

9.8.2. The methodology employed included an examination of the existing hydrological regime and an assessment of the potential impacts was carried out through a desktop review in combination with site surveys and investigations carried out on the site on 'multiple occasions' between 2017 and 2019. Consultations with Galway County Council also took place in 2018. In December 2017, 11 boreholes were drilled in the site and water levels were monitored. In February 2018 hydraulic conductivity response tests were completed on each of the 11 boreholes. A flowmeter was installed on the discharge pipe in order to quantify waters arising in the void in December 2017 and this information was used to assess the water balance in the context of regional groundwater flow and the quarry's interception component. Water samples at the site were collected in 2015, 2017 and 2018 and the site has an ongoing monthly monitoring regime in which surface water runoff and groundwaters are sampled at the point of discharge, after settlement in the pump.

9.8.3. In terms of existing services on the site, it is noted that the there is a metered connection to Irish Water and that an onsite wastewater treatment system is in place serving the toilet facilities. This WWTP system includes a percolation area and has been implemented to EPA (2009) Code of Practice to ensure that there is no potential for contamination.

9.8.4. The EIAR notes that extraction has proceeded below the groundwater table in the existing quarry extraction area. Therefore, there has been a requirement to abstract water from a sump at the extraction area of the working quarry. Abstracted water is used to supply the manufacturing plant and for dust suppression. Storage tanks

located at the manufacturing plant and at locations around the quarry are topped up on an as required basis. Water is also pumped to a wetland where water is retained and percolates to ground.

9.8.5. On a regional level, the site is located within the Corrib surface water catchment within Hydrometric Area 30 of the Western River Basis District. At local level, the site lies within the Cregg River sub catchment with some of the quarry site within the Clare River sub catchment. The River Clare is the largest tributary of Lough Corrib and is located approximately 2.5km to the east of the subject site. The site is underlain by a Regionally Important Karst Conduit aquifer and groundwater vulnerability for the area is indicated by the GSI as X – E (Rock at or near surface) or extreme.

9.8.6. The natural groundwater level is identified as that which is the elevation of water in the sump in the quarry floor. It is also noted that there is no constant dewatering on site. The quarry manager switches on and off the sump pump as necessary and this can pump a maximum of 2,500m^3/d. The daily volumes, measured by the flow meter, range between 221m^3/d in summer and almost 1,500m^3/d in wet weather. The EIAR submits that the % of waters intercepted at the quarry is below the 5% threshold value of the Water Framework Directive Working Group (GW5) and is therefore deemed low potential impact and not at significant risk to regional groundwater hydrogeology.

9.8.7. The EIAR notes that the subject site is significantly downstream of the listed the large springs and known abstractions for the Clare Corrib GWB and interaction between the quarry, groundwater and those springs is not likely at all. Section 8.5.7 notes that there are no mapped wells on the GSI database within 2.5km of the site. I note that the subject site lies approximately 2.3km to the south west of the Anbally Group Water Scheme Preliminary Source Protection Area for the abstraction point for this scheme. I also note the presence of two boreholes in the vicinity of Corrandrum National School, at 1km and 1.1km from the site, which are associated with the Anbally GWS. That said, I do acknowledge that these are not downstream of the site.

Impacts of Blasting at the Site

9.8.8. The EIAR demonstrates the potential for effects of blasting to present nitrogen residues in the discharge waters, which has potential to impact groundwater quality. The risk to groundwater and surface water is assessed by quantifying the resultant concentrations for the potential residual nitrogen compounds Nitrate (NO_3), Ammonia (NH^4) and Nitrate (NO_2). The EIAR provides details of the explosives used in the quarry and uses the Technical Data Sheets and Material Safety Data Sheets for explosives, primers and detonators used at the site to calculate the potential residues.

9.8.9. In determining the concentration of N species in discharge water, the highest residual for nitrate, 99% is used to determine the concentration of N species in pumped water. The resultant concentrations in waters within the quarry, if impacted by explosives within the entire quarry site are calculated as follows:

- 0.36mg/l NO_3,
- 0.04mg/l NH_4 and
- 0.01mg/l NO_2.

9.8.10. In terms of the above, it is concluded that the residual N species concentrations are small and are below all relevant Regulatory EQS values – as detailed in Table 8.13 of the EIAR. It is concluded that even if the masses are added, the background concentration in groundwater, which is currently baseline at ~5mg/l NO_3, there is no expected exceedance of any EQS value for N species for either groundwater or surface water regulatory limits.

9.8.11. The risk of impact to local water quality arising from the use of explosives at the site is deemed to be non-existent based on industry standard method of calculation.

Impact Assessment

9.8.12. The potential impacts arising in the receiving hydrological and hydrogeological environments are considered in the EIAR. The potential impacts arise in terms of the following activity on the site and in the absence of any mitigation measures:

Fuel storage / usage on site gives rise to potential accidental spillage of contaminants during site operations may cause short to long term, moderate to significant impact to soils, groundwater and the surface water environments.

Procedures are in place for dispensing fuel with drip trays used during refuelling. Accidental spillages and leakages from the hydrocarbon interceptor could occur if the interceptor is not correctly maintained. The importance of the receiving environment attributes are considered to be extremely high with the magnitude of the potential impact deemed to be moderate adverse. The significance of the potential impact is deemed to be profound.

Excavation works and vehicle movement on site will result in the same vulnerability of groundwater at the site as is currently experienced by the same area of open bedrock. Procedures are noted as being in place for dealing with accidental spillages. The importance of the receiving environment attributes are considered to be extremely high with the magnitude of the potential impact deemed to be moderate adverse. The significance of the potential impact is deemed to be profound.

Surface water runoff from road surface or drainage systems have the potential to result in contamination of surface waters and groundwaters. Accidental spillages could contaminate the aquifer by direct percolation or via the superficial water network. Monitoring results and existing system evaluation suggest that this is not the case. The importance of the receiving environment attributes are considered to be extremely high with the magnitude of the potential impact deemed to be moderate adverse. The significance of the potential impact is deemed to be profound.

Increase de-watering - Lowering the quarry bench could lead to a small increase of groundwater component in the sump which will need to be dewatered. This will lead to an increase of water being discharged to the discharge zone. The importance of the receiving environment attributes are considered to be extremely high with the magnitude of the potential impact deemed to be large adverse. The significance of the potential impact is deemed to be profound.

Mitigation Measures

9.8.13. A suite of mitigation measures are presented in Table 8.18 of the EIAR to address the predicted impact to the water environment. Mitigation measures are proposed in relation to fuel storage / usage on site, excavation works and vehicle movement on site, surface water runoff and increased dewatering.

9.8.14. The EIAR also applied EA Hydrogeological Risk Assessment methodology for the site following Galway County Councils response to the applicants scoping required

on the proposed development. Section 8.13 of the EIAR presents each step in the risk assessment. in terms of Lough Corrib SAC, the EIAR concludes that as the dewatering volumes are relatively low and GSI classifications on groundwater recharge suggest that the sites potential interference in the wider groundwater catchments water balance is insignificant.

Residual Impacts

9.8.15. On implementation, residual impacts are considered to be neutral. The bedrock at depth has little porosity and this has been proven by field measurements. Not much new groundwater will be encountered at the site because the conduit and epikarst rainfall transit zones are not at depth. They are at a higher elevation than the current floor level.

Conclusion

9.8.16. In terms of the water environment, overall, I am generally satisfied that the EIAR has comprehensively considered the impact of the proposed development. The primary question posed by competent authorities in response to the scoping request specifically relates to the fact that the site is located within a Regionally Important Karst Conduit Aquifer, and if the deepening of the quarry presents a risk of adverse effects on groundwater flow, local wells or the downstream Lough Corrib SAC. The EIAR concludes that there is no potential for impact. It is submitted that this finding has been supported by a variety of monitoring and metering of discharge as well as evidence derived from the eleven site investigation boreholes at the site.

9.8.17. It is noted that there is one active Karst Conduit at the site which contributes the majority of groundwater to the sump in the quarry floor. It is also noted that there is transitional zone ingress during inclement recharge conditions but keeping the sump at a site manageable working floor level requires pumping of 1,500m^3/day, on average, and will not exceed 2,500m^3/d in the future. In terms of the scale of the site on the wider Lough Corrib catchment, the quarry accounts for <0.1% of the regional groundwater flow component.

9.8.18. Overall, I am satisfied that any potential impacts would be avoided, managed and mitigated by the measures proposed as part of the project, the proposed mitigation measures and through suitable conditions including monitoring conditions. I am,

therefore, satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative effects in terms of water environment.

9.9. Climate

9.9.1. Chapter 9 of the EIAR deals with Climate and Climate Change. The EIAR indicated that the methodology for the description of the current climate in the region of the development included a desk study review of data available from Met Eireann, EPA and other bodies. In terms of Climate Change, the document refers to the 1997 Kyoto Protocol, amended in 2012 – Doha Amendment to the Kyoto Protocol, and the 2015 Paris Agreement. The subject site lies in a semi-rural area with one off housing developments and farms located along local and regional roads.

Impact Assessment

9.9.2. The assessment of impacts relates to the day-to-day activities at the site. The movement of vehicles and operation of plant will generate exhaust emissions which cannot be eliminated as they are necessary for the operation of the quarry. No new plant or machinery will be required for the proposed development and it is not proposed to increase the level of extraction and production above that experienced in the past. As such, there will be no increase in emissions to the local and regional climate above that which are currently associated with the existing development. Emissions are assessed to be not significant.

9.9.3. With regard to unplanned events, it is noted that the proposed development could potentially be vulnerable to the following:

Flooding: Extreme rainfall events can potentially lead to flooding of low-lying areas. Should such an event occur, the quarry floor will be allowed to flood to attenuate the water associated with the storm event. The water will be used for production or will be discharged off site.

Storm Events: Extreme windy conditions could potentially lead to damage to buildings and infrastructure if not structurally sound. The existing structures and buildings in the existing quarry are inspected on a regular basis and no loose items are located on infrastructure or stored in areas around the quarry that could be carried by winds. Where repairs are required, they are carried out immediately.

Extreme Temperatures: Extreme temperatures, particularly freezing temperatures, increase the potential for accidental collisions or slips. Walkways adjacent to office infrastructure are gritted and vehicles operating in the quarry adhere to lower speed limits. The quarry does not operate when 'red warning alerts' are issued.

Cumulative Impact

9.9.4. In terms of cumulative impacts, the application area is considered in association with the wider working quarry and manufacturing area. As noted above, there is no change predicted to the number of vehicles that will arrive and depart at the quarry as a result of this application. The operation of plant and machinery in the area contributes to greenhouse gas emissions and are assessed as having a slight localised impact over a long-term period. It is not proposed to increase production or to introduce any new processes or plant to the quarry and extraction will only be undertaken from one area of the quarry at any one time.

9.9.5. In terms of other developments contributing CO_2 emissions within the study area, the EIAR notes vehicles using the local roads, agricultural activity and the existing manufacturing facility located to the south of the application side. It is considered that due to the low level of activity, no cumulative impact is envisaged.

Do-Nothing Effect

9.9.6. It is submitted that if permission to deepen the existing quarry is not granted, the operator will extract the reserve from the working quarry. If no further planning permissions was secured the quarry would cease to operate. Materials would then have to be sourced from an alternative quarry which would mean that a reduction in greenhouse emissions at the subject site may result in an increase in emissions at an alternative quarry.

Mitigation Measures

9.9.7. Mitigation measures are proposed in order to limit the effects of the development on the local and regional climate. Measures include strict adherence to 'good site / engineering practices', servicing of plant, consideration of energy consumption and emissions when purchasing new plant or vehicles and it is proposed to implement energy audits.

Residual Impacts

9.9.8. No significant negative residual impacts are predicted.

Conclusion

9.9.9. I have read and considered all of the submissions made in relation to climate. I am satisfied that the EIAR has identified impacts and that they can be managed through specific mitigation proposals identified in the EIAR. I am, therefore, satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative impacts in terms of climate.

9.10. Air

9.10.1. Chapter 10 of the EIAR deals with air, including the effects of dust and other atmospheric emissions associated with the proposed deepening of the quarry floor. The EIAR notes that existing information relating to the operation of the quarry, the processing and production plant along with vehicle movements in the site also formed the basis of the assessment. An air quality modelling study was also carried out to determine the predicted monthly dust deposition rates and PM_{10} concentrations (particles with a mean diameter of <10µm) downwind of the quarry site.

9.10.2. The EIAR notes that the subject site lies within 'Zone D' category based on the EPA Clean Air for Europe Directive and the area of the subject site is within the AQIH index of 1 or 2 for NO_2, SO_2, PM_{10} and $PM_{2.5}$. The ambient air quality is described as good with very low exposure risk to individuals within the community. Ambient levels for NO_2, NO_X and SO_2 in the Ardgaineen area are well below the short term and annual NAQS. The main source of SO_2 is from burning fossil fuels and NO_2 and NO_X is exhaust pipe emissions from traffic.

9.10.3. Dust monitoring at the existing quarry has been in place for over 10 years and the EIAR includes the monthly results from surveys carried out for 2018 and 2019. The results indicate that the monthly dust fall at all of the locations was less than the German TA Luft limit value of 350mg/m².day. A number of houses are identified as being within the category of sensitive receptors due to the proximity to the quarry boundary or the quarry entrance. It is also noted that there is a school 1.2km to the east of the site, at the junction of the L6182 with the N83 at Corrandrum.

9.10.4. In terms of the proposed development, it is noted that the proposal seeks to deepen the existing quarry floor. Atmospheric emissions will be similar to existing emissions and the primary emission being fugitive dust and PM emissions from the trucks, aggregate production and other various activities. There will also be minor emissions of sulphur oxides, nitrogen oxides and hydrocarbons from diesel engines of plant machinery and trucks, as well as from the asphalt plant exhaust stack. Modelling demonstrates that the predicted emissions will be below the NAQS limit values. Drilling and rock blasting is of very short duration and with the dust abatement controls in place, this activity is considered unlikely to result in a significant short-term ambient air quality impact beyond the boundary. The Board will note that the EIAR also details emissions from the various elements of the existing operation in the wider quarry site including the concrete batching plant and block yard and the macadam/asphalt plant.

Impact Assessment

9.10.5. The EIAR notes that the results of the detailed ADMS-R software modelling study are shown as ground level deposition and concentration contours based on the maximum or 'worst case' emissions for 2 production scenarios, the existing and peak quarry production levels. Predicted monthly dust deposition rates at the nearest houses and school demonstrate that the impact of dust emissions from the quarry operational area and also from the access road is minor or not significant. The range in the predicted monthly dust-fall rates are from <5 to 13m².day, with the deposition at the school <2mg/m².day. It is submitted that this is imperceptible compared to the dust-fall impact due to road emissions occurring at the nearby junction.

9.10.6. In terms of PM_{10} impacts, the EIAR predicts that the short term annual average concentration due to fugitive emissions from the main area of the quarry site and access road, will have maximum levels of 5-15 µg/m^3 beyond the quarry site. At the nearest houses to the access road and entrance, the predicted levels due to PM_{10} emissions from the quarry site and access road are below 11µg/m^3. The annual average PM_{10} concentrations near the entrance and along the public road are below 4µg/m^3 for both quarry site production scenarios.

9.10.7. In terms of the proposed quarry deepening, it is advised that there will be no change in existing traffic movements along the access road and haul roads. Dust

suppression systems and wheel wash will continue to operate as present. The predicted maximum monthly dust deposition rates beyond the site will be comparable to the rates predicted based on the 2017 and peak production scenarios and fugitive dust emissions are predicted to be below 100mg/m².day, <29% of the monthly dust deposition limit value. Predicted annual PM_{10} concentrations beyond the quarry boundary and at the nearest houses will also be similar to the predicated values based on the two operational scenarios modelled for the existing quarry activities.

Cumulative Impacts

9.10.8. In terms of cumulative impacts, the proposed quarry deepening programme is predicted to result in an imperceptible change in the existing air quality within the locality from fugitive dust and PM emissions. Truck movements will be comparable to present movements and at the quarry entrance, the change in air quality impact is likely to be neutral. The volume of truck movements is likely to remain similar to the 2017 hourly pattern observed at the quarry entrance. In terms of SO_2 and NO_2 concentrations, it is submitted that the annual average levels of these pollutants will be below 15% of the NASQ limit values. The change in ambient concentrations will be imperceptible compared to existing air quality beyond the quarry site boundary.

9.10.9. No significant effect on the health of local residents due to quarry emissions is likely as a consequence of the planned quarry development.

Do-Nothing Scenario

9.10.10. It is submitted that if permission to deepen the existing quarry is not permitted, the operator will extract the reserve from the working quarry. Emissions of dust and PM are likely to be comparable to current levels during this phase of the quarry operation.

Mitigation Measures

9.10.11. Dust mitigation measures form part of the current Environmental Management Plan in operation at the quarry site. These measures mainly relate to the control and reduction of fugitive dust and PM emissions from truck movements along the access road and on internal haul roads, quarry machinery, aggregate production plant and from the activities associated with the concrete batching plant, block yard and asphalt plant. Section 10.8 of the EIAR sets out the measures to be implemented.

Residual Impacts

9.10.12. Subject to the implementation of the stated mitigation measures, no significant negative residual impacts are predicted.

Conclusion

9.10.13. I have read and considered all of the submissions made in relation to air. It is also noted that the current dust deposition monitoring will be continued with a network of 4 sampling sites, which will be agreed with the local authority. I am generally satisfied that the grounds of appeal have sought to deal with the matter of air quality.

9.11. Noise & Vibration

Noise

9.11.1. The issue of noise and vibration are considered in Chapter 11 of the EIAR. The nature of the proposed development gives rise to a variety of noise sources on an ongoing basis and the level of emissions will depend on the nature of the activity being undertaken. It is noted that 2 noise monitoring surveys were previously undertaken at the quarry as part of a previous planning application, one between 13.30 and 18.00 hours on the 24th April 2018 and the second, between the 30th October and 8th November 2018, at four locations. The noise monitors measured continuously over the period of the second survey. It is noted that the quarry operations commenced at 08.00hrs and stopped at 16.30hrs Monday to Thursday and stopped at 13.00hrs on the Friday. I also note that the second survey included a blast at the site.

9.11.2. The predicted noise levels, indicated in Table 11.8 of the EIAR, are cumulative levels which includes the monitoring data and the predicted noise level from plant that was not in operation during the surveys. The cumulative noise levels based on the single day monitoring in April and the cumulative levels based on the weeks monitoring in October/ November 2018 are presented in Table 11-9 of the EIAR. The EIAR also note the ameliorative measures proposed and those recently put in place with regards to existing developments on the wider quarry site. The relevant guidelines, the EPA 'Environmental Management in the Extractive Industry (Non-Scheduled Minerals) 2006' and 'A Guidance Note for Noise in Relation to Scheduled Activities,

EPA 1996' recommend that noise from quarrying activities do not exceed the following noise limits at the nearest noise-sensitive receptor:

Daytime	0800 – 20.00 hrs	LAeq(1h) = 55dBA
Night-time	20.00 – 08.00 hrs	LAeq(1h) = 45dBA.

9.11.3. The EIAR notes that 95% of all noise levels shall comply with the specified limit values and that no noise level shall exceed the limit value by 2dBA. Reference to Condition 2 attached to Galway County Councils Section 261 decision sets out the noise level limits for the quarry. It is suggested that the proposed development operate under conditions similar to this condition.

Vibration

9.11.4. In terms of blast vibration, the EIAR considers ground vibration, ground vibration control and historical blast measurements.

Ground vibration is caused by the imperfect utilisation of the explosive energy released from the fragmentation of rock during blasting operations. Blasting vibration is a surface wave type, which incorporates components of both body and surface motion. Ground vibration itself is in-audible, however air vibrations (air overpressure) both audible and in-audible usually accompany it. It is difficult to differentiate between the various types of vibrations and people commonly associated the level of vibration with the 'loudness' of a blast.

Ground vibration from blasting at any receptor is influenced by:

- The maximum instantaneous charge of explosives used (MIC)
- The medium between blast source and receptor point and
- The distance between the receptor points and the blast source.

Ground vibration control is based on reducing and controlling the weight of explosives detonated per delay. Continuous vibration monitoring will ensure that blast vibration limits are being complied with and it also allows the development and adjustments to the 'scale distance' regression line for the proposed site. As the site is located within an established blasting site, a significant amount of data is available to ensure compliance with ground vibration levels.

As blasting operations move in a north to north east direction blast vibration levels can be reduced by lowering the MIC. Lowering the MIC can be obtained by a number of means including a combination of the following:

- Reducing the shot hole diameter
- Reducing the bench height, thereby reducing the shot hole
- Decking charges-dividing the charge with the shot hole by using a minimum of 1.5m of stemming.

The most up to date technology in blasting operation is used and will continue to be used in the quarry. Ground vibration and air overpressure will be recorded for each blast at monitoring stations and monitoring can demonstrate that compliance with blast vibration limits is being met.

In terms of **historical blast measurements,** it is noted that there have been a number of blasts carried out in the excavation area. It is not envisaged that blasting will come any closer to property with the lowering of the quarry floor. Compliance with vibration limits in the years 2016 and 2017 are provided in Table 11.7 of the EIAR.

9.11.5. The EIAR submits that for the proposed development, the vibration limits will be similar to those already in place by Galway County Council and within the EPA Guidance Note. In terms of blast vibration limit for the current operations at the quarry, condition 4 of the local authoritys Section 261 Order states that 'ground vibration arising from any blasts carried out site shall not exceed a peak particle velocity of 12mmls in any of the three mutually octagonal planes at the threshold of any house in the vicinity of the site'. In addition, the air overpressure arising from the blasts shall not exceed 125dB (lin) max peak with a 95% confidence limit when measured outside the nearest house to the blast.

9.11.6. It is proposed to limit the air blast (air overpressure) noise level to 125dB (lin peak) with a 95% confidence limit when measured with instrumentation that has a linear response down to 2Hz as is given in Condition 4 of the existing permission. It is submitted that this proposed limit is well below the safe level of 133dB for air blasts given by Siskind *et al*, 1980, and is within the limit recommended by the EPA.

9.11.7. In terms of flyrock, it is submitted that this can occur due to incorrect design and poor management of blasting rounds where there is inadequate stemming or inadequate burden. The measures taken to control ground vibration and air overpressure will also control and counteract the possibility of flyrock.

9.11.8. It is noted that there is a Gas Networks Ireland Gas Line located to the west of the subject site. It is noted that GNI have taken cognisance of the quarry and blasting and GNI should be consulted if undertaking blasting within 400m. The 600mm diameter high pressure pipeline is located approximately 360m from the nearest point of the blasting area. Blast vibration monitoring measurements indicate that the PPV at location V5 (close to the gas pipeline) was 1.6mm/s at a level of orders of magnitude below which damage is likely. The limit is 12mm/s.

Mitigation Measures

9.11.9. In terms of mitigation measures, the EIAR submits a number of controls that will be put in place so that ground vibration, air overpressure and noise is minimised and kept within regulatory limits. Measures include the implementation of proper management procedures, a blasting plan will be issued for agreement, monitoring locations will be agreed prior to blasting and monitoring data will be used to allow for future adjustments to the maximum instantaneous charge of the blast if required, all seismographs will have a certificate of calibration, advanced warning of blasts will be given to residents, amongst other specific proposals relating to the blasting. In terms of monitoring, it is submitted that ground vibration monitoring will be carried out at existing locations and where appropriate, other locations can be considered.

Do-Nothing Scenario

9.11.10. It is submitted that if permission to deepen the existing quarry is not permitted, the operator will continue to operate within the authorised area of the quarry until a further planning permission was granted.

Unplanned Events

9.11.11. In the event of an emergency such as a fire to plant or equipment, the emergency response plan will be implemented, and the relevant emergency services contacted should they be required. In the event of an increase in noise levels associated with plant or machinery breakdown, an assessment in relation to the

cause of the emission will be undertaken and the activity will not recommence until the problem has been rectified.

Decommissioning

9.11.12. Noise effects during decommissioning are likely to be of a similar nature to that during the operation of the quarry.

Residual Impacts

9.11.13. No adverse residual impacts are identified in terms of noise or vibration.

Conclusion

9.11.14. Having regard to the information available and based on the analysis undertaken, the Board will note that the applicant concludes that the predicted noise levels from the proposed development will have a negligible noise impact at all receptors. All noise levels will operate within the existing noise limits and within the EPA guidelines. Vibrations and air overpressure will also be kept below the guidelines recommended and below the regulatory limits and historic measurements confirm good control in this regard. Overall, I am generally satisfied that the proposed development will not have a significant adverse impact on residential properties arising from noise or vibration. I am further satisfied that the information submitted in the EIAR is acceptable.

9.11.15. The Board will note the PAs second reason for refusal which states as follows:

> Having regard to the significant extent and magnitude of material extraction (anticipated 400,000 ton/pa over a five year period), associated intensification of dust and noise emissions, blasting / vibration and vehicular movements, including HGV movements, the unsatisfactory perimeter boundary arrangement associated with the quarry verge, the planning authority is not satisfied based on submissions received that the proposed development would not endanger the health and safety of persons occupying or adjoining the site and immediate surrounds and seriously injure the amenities of property in the vicinity.

9.11.16. I have addressed this issue above in Section 8.4 of this report under the Planning Assessment and Residential & General Amenity Issues. I also

acknowledge the appellants submission in terms of the extraction rate at the quarry. In the event of a grant of planning permission in this instance, it is submitted that the material will be extracted from one area of the quarry at a time. As such, there appears to be no proposal to intensify the operation. In the context of the information presented in the EIAR, together with the submissions made with regard to the proposed development, I am satisfied that the impacts identified can be avoided, managed or mitigated by measures identified as part of the project and through appropriate conditions. I am, therefore, satisfied that the proposed development would not have any unacceptable direct or indirect impacts in terms of noise and vibration. I am further satisfied that issues of cumulative effect are unlikely to arise.

9.12. **Traffic**

9.12.1. Chapter 18 of the EIAR deals with Traffic. The EIAR provides details of traffic surveys carried out in the vicinity of the site, with the survey reports presented in Appendix 12.1 of the document. In addition, a pavement condition survey and a Stage 1 Road Safety Audit were undertaken of the local roads. The Board will also note that permitted works have been carried out at the entrance to the quarry, and other works to the public road were undertaken without the correct consents. I have considered all these issues above in Section 8.3 of this report and don't propose to repeat my assessment of the information presented in support of the development again here.

9.12.2. The EIAR submits that there is capacity in the existing road network to accommodate the development. It is further submitted that the structural condition of the recently overlaid road indicates that the pavement conditions is suitable to accommodate a design life of 20 years. I also refer the Board to the third-party observations in relation to roads and traffic issues.

9.12.3. The Road Safety Audit identifies, at section 2.2.1, the problem with the existing roadway leading to the N17 which narrows to the north east of the quarry access junction. The RSA recommends that the carriageway should be widened at the identified pinch points and also identifies areas of the local road which require resurfacing and to be maintained in good condition. At the junction of the local road and the N83, the RSA recommends that the applicant seeks permission to amend the junction markings to become a single lane exit only. This would remove the risk

of high sided vehicles exiting the offside lane shielding visibility to the right for vehicles exiting the nearside lane.

Conclusion

9.12.4. The Board will note that unauthorised works to the public road as described above, have been undertaken by the applicant, without the appropriate consents. The development requires third-party landowner agreement to carry out the extensive works to the roads, as well as permission from Galway County Council. Having considered all of the information presented in support of the proposed development, I am satisfied that impacts on traffic arising from the proposed development in conjunction with existing, planned or proposed developments, are likely to arise. I also note the concerns of the Planning Authority in terms of roads and traffic issues.

9.12.5. While I accept that the road network serving the site currently supports a certain volume of HGVs, it is considered that the infrastructural proposals presented are inadequate to justify a grant of planning permission. I have already raised concerns in relation to the works carried out to date in the public realm, without the benefit of consent from the appropriate parties. As such, the ability of the existing road network to accommodate the scale of the development proposed within such a small timeframe, the impact the development would have on the local road network, as well as on the amenity of the wider rural area, and current vulnerable road users is questionable.

9.13. Landscape & Restoration

9.13.1. Chapter 13 of the EIAR deals with landscape and Restoration and assesses the landscape and visual impact associated with the proposed development. A detailed landscaping assessment was undertaken to assess the impact of the existing development on the surrounding landscape. The subject site is located within the Landscape Area 5 – Northeast Galway (Tuam environs). This Landscape Character Area is described as ‘consisting of 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’. The area is identified as a Class 1 and rated as having low sensitivity to change. There are no focal points or views, as identified in the Galway County Development Plan in the vicinity of the site.

9.13.2. In the context of visual impact assessment carried out, it is noted that the subject site is not visible from any of the selected viewpoints. Elements of the wider quarry are visible in the landscape, but it is concluded that the field survey confirmed that the application site is well screened from the majority of viewpoints doe to the existing vegetation growing along field boundaries. Also, the majority of the activity will take place below ground level.

Impact Assessment

9.13.3. In terms of **Landscape Impact,** it is submitted that rock extraction to date has altered the landform and vegetation cover. The magnitude of additional change as a result of the proposed development is assessed as low.

9.13.4. In terms of **visual impact,** the EIAR notes that the subject site is screened from the majority of viewpoints due to topography of the application site and study area. Plant located within the working quarry is visible from a number of locations. The significance of the visual impacts is considered low. The proposed development will not result in a significant increase in visibility of the quarry.

Landscaping & Restoration Measures

9.13.5. Section 13.5 of the EIAR deals with landscaping and restoration measures associated with the site. I would note that the proposal includes a combination of berms, which have been constructed around the boundary of the quarry and will be reshaped where required and further supplemented with new berms where possible. The berms will be planted using native species to support a wider range of insects and animals and will contribute to the ecology of the region. The planting mix will include hazel, ash, gorse, blackthorn, sessile oak, birch and hawthorn. The EIAR provides detail of both top planting and side planting.

9.13.6. The restoration plan for the quarry appears to follow the previously permitted restoration plan presented in support of the Substitute Consent application. It will comprise 3 phases as follows:

- Phase 1: This phase will include the permanent restoration of side slopes during rock excavation.
- Phase 2: The final restoration of areas.
  This phase will commence prior to the expiration of the authorised

duration in the event that no future permission is applied for and granted. This phase will include:

- Removal of all plant and machinery
- Secure site boundaries
- Area of quarry above the water table will be covered with subsoil, topsoil and allowed to regenerate. Additional planting of trees and shrubs may be necessary in some areas.
- The existing berms and planting will be retained.
- No pesticides will be used to allow the seed back to regenerate and to re-establish native grasses and plant.
- Prior to flooding of the quarry, the natural groundwater level of the quarry will be established.
- The main feature of the worked-out area will be a new quarry lake. When production at the quarry ceases and pumping no longer takes place, the water in the quarry will rise to a level of approximately 25mOD.

- Phase 3: Decommissioning.

Mitigation Measures & Monitoring

9.13.7. In terms of mitigation, the EIAR indicates that existing perimeter vegetation will be retained and landscaping work and planting as part of the restoration process will serve to reduce the long-term visual impact of the development. Mitigation measures will reduce as much as possible, any visual impact resulting from ongoing development of the site.

9.13.8. In terms of after use, the EIAR submits that the greatest potential for biodiversity in relation to the site is after the operation has ceased and when nature reclaims the quarry and restores ecological balance.

Residual Impacts

9.13.9. The proposed works will reduce the impact associated with quarrying to date with the formation of new habitats which will increase the biodiversity of the area.

Conclusion

9.13.10. I would accept that the EIAR has adequately addressed the issue of landscape and restoration.

9.14. Material assets

9.14.1. Chapter 14 of the EIAR deals with Material Assets. The description of Material Assets in the EPA Guidelines, 2002, include architectural, archaeological and cultural heritage, designed landscapes, natural resources of economic value, buildings and structures and infrastructure. Having regard to the format of the EIS submitted, these aspects of the environment are covered under a number of chapters as follows:

Chapter 7: Land, Soils & Geology

Chapter 13: Landscape & Restoration

Chapter 15: Cultural Heritage

9.14.2. Chapter 14 of the EIAR deals with material asset issues and the impact assessment associated with the proposed development as follows:

- **Residential Buildings:** There are approximately 45 detached houses within 500m of the quarry. Corrandrum National School is located approximately 1km from the eastern boundary of the site at the junction of the N83 and the L6182.
  The main potential impacts on residences are associated with landscape and potential noise, vibration and air emissions as a result of day-to-day activities. The EIAR notes that a number of new houses have been constructed in the area in recent years which illustrates that quarrying activity has not deterred people from living in the general locality. The proposed development will not result in an increase in quarry related traffic as the application site will form an extension of the authorised extraction area. Traffic levels will not increase above that experienced in the past. Noise and air emissions from traffic constitute the main source of nuisance to the school.
  Existing and proposed management measures in relation to quarrying activities are listed in various sections of the EIAR which will aid in reducing

the impact of quarrying activity. Monitoring will be undertaken to ensure compliance with set levels.

- **Geological Resource:** The site and surrounding areas are dominated by carboniferous rocks. There is one geological heritage site within 10km of the quarry, Pollnahallia located between Headford and Tuam.
  The EIAR notes that the development will result in the loss of the geological resource which cannot be replaced. However, it is submitted that the extracted material will contribute to the local and regional economy.
  With regard to Pollnahallia geological heritage site, given the distance between the site, it is considered unlikely that the existing and proposed development will impact on the integrity of the site.

- **Land Resource:** The area the subject of the proposed development consists of an area which was subject to quarrying activity resulting in the lowering of the natural topography and the creation of the quarry void. The site is located within 15km of three designated sites, Lough Corrib SAC, Lough Corrib SPA and Galway Bay Complex SAC.
  It is submitted that the development will maximise the available resource without exploiting new ground.
  An assessment of the Natura 2000 sites and the related conservation objectives found that the proposed development will not impact on the designated sites.

- **Roads & Traffic:** I refer the Board to section 8.3 and 9.12 of this report which deals with matters relating to roads and traffic.
  The transportation section of the EIAR concludes that the quarry access will operate below capacity for the current operations and has operated below the historical peak traffic of 2007. There is adequate capacity on the L6182 based on the assessment.

- **Public Utilities:** There is no requirement for connection to public utilities as the existing quarry has a connection to all necessary utilities.

- **Groundwater & Water Supplies:** The quarry extracts groundwater and surface water from a quarry attenuation sump in order to allow extraction of rock below the water table. Water which is not required for

the day to day running of the quarry is pumped to a wetland area.
It is considered unlikely that the proposed development will impact on water supplies to users in the vicinity.

- **Scenic Routes:** The EIAR notes that there are no focal points of views located within the vicinity of the application site and quarry.
There is no impact predicted.
- **Tourism:** There are no tourist attractions located in the immediate vicinity of the quarry. The local roads are used by recreational walkers as traffic levels are relatively minor. There is no impact predicted.
- **Archaeology:** A previously unknown and undesignated souterrain (GA057-165---) was identified in the application area in 2005. This was subsequently preserved by record under licence from the National Monuments Service. There are no other items of cultural heritage, monuments or buildings of heritage interest known in the application area. There will be no direct or indirect impacts on any known items of cultural heritage, archaeology or buildings of heritage interest in the application area or the vicinity. No mitigation measures are recommended.

Mitigation Measures

9.14.3. Mitigation measures are addressed in the relevant sections of the EIAR where required to ameliorate impacts to material assets.

Residual Impacts

9.14.4. There are no predicted significant residual impacts on material assets as a result of the proposed development.

Conclusion

Other than my concerns in relation to roads and traffic I would generally agree that the development is acceptable in terms of material assets.

9.15. Cultural Heritage

9.15.1. Chapter 15 of the EIAR deals with cultural heritage. The chapter sets out the methodology employed in the preparation of the study, noting that a field

assessment was carried out on the 8th March 2013 to identify and assess any known archaeological monuments. Archaeological impact assessments were carried out in 2008 and 2017, including a geophysical survey, test excavation and full excavation of two potential monuments included in the Sites and Monuments Record. Details of consultation carried out with the Development Applications Unit of the Department of Culture, Heritage and the Gaeltacht in Sept 2019 is also noted.

9.15.2. In terms of the fieldwork undertaken, it was established that there are no undesignated structures of heritage interest in the vicinity of the application site. The closest Recorded Monument, GA057-016---, a cashel in Ardgaineen townland, is located over 960m to the south west of the application area and is deemed to be too far distant to be impacted by the proposal. An undesignated monument listed in the SMR within the application area was identified in 2005, a souterrain (GA057-165---). An archaeological assessment was carried out under licence (Licence No 05E0560) in 2005. The souterrain was recorded and found not to extend any further north into the quarry face and no features were found associated with it. There are no remains of the souterrain surviving in the application area. Two possible monuments in the vicinity of the site were found, after archaeological excavation, to be of no archaeological significance. A letter from the DAU dated 31st October 2019 accepts this assessment.

Impacts of Development

9.15.3. There are no direct or indirect impacts on any known items of cultural heritage, archaeology or buildings of heritage interest in the application area or its vicinity.

Mitigation Measures

9.15.4. No mitigation measures are warranted.

Conclusion

9.15.5. I am generally satisfied that the conclusions of the EIAR in terms of impacts on cultural heritage and archaeology are acceptable. I also note that the Department of Culture, Heritage & the Gaeltacht are satisfied that no impacts on cultural heritage arise as a result of the proposed development. I have considered all of the written submission made in relation to Cultural Heritage and I am satisfied that the development would not have any significant adverse archaeological impacts and no significant residual impacts are likely to arise.

9.16. Interaction of the Foregoing

9.16.1. Chapter 16 of EIAR seeks to set out the interactions of the environmental aspects considered in the various chapters of the EIAR. The matrix presented in Table 16.1 notes that there is potential for interactions to occur between the following aspects:

- Population & Human Health and Water, Climate, Air, Noise & Vibration, Traffic, Landscape & Restoration and Material Assets:
  It is submitted that the development has the potential to impact the population and human health by reason of changes to the above environmental aspects.
    - Water: Contaminants or leakages from plant and vehicles can potentially leak into surface waters and groundwater which could potentially impact on water quality. Subject to mitigation measures, no potential impact on water as a result of the proposed development are envisaged.
    - Climate: In particular, the EIAR submits that provided emission limits applied to the quarry are adhered to, no residual impacts to air quality by reason of dust are envisaged.
    - Noise & Vibration: Various measures are in place to ensure noise levels are not elevated. Following an assessment undertaken at the quarry, together with regular monitoring, the existing and proposed development will not result in an increase in noise. Blasts will be undertaken to ensure levels at sensitive locations are below recommended guideline values.
    - Traffic: The development will not result in an increase in quarry traffic as the proposal seeks to authorise areas for future extraction.
    - Landscape & Restoration: It is submitted that the restoration plan will serve to reduce the impact associated with quarrying activity. The restoration of the quarry on completion of extraction will aid in increasing the biodiversity of the area.
    - Material Assets: The development will result in the loss of a geological resource which cannot be replaced.

- Biodiversity and Land, Soils & Geology, Water, Air, Noise & Vibration and Landscape & Restoration:
  Negative environmental impacts to the above factors have the potential to result in adverse effects to biodiversity.
    - Land, Soil & Geology: The development will not result in the loss of greenfield areas. Mitigation measures are proposed to protect peregrine falcon which occasionally nest at the quarry. The restoration plan will offset the impact of quarrying activity and increase the biodiversity of the site.
    - Water: Water pumped from the quarry attenuation sum that is not required for production and dust suppression is discharged off-site to a wetland area, consisting of a reed bed lagoon area. The discharged water is of good quality and will not impact on the biodiversity of the wetland area.
    - Air: Wind-blown dust can impact on flora and fauna. Mitigation and management measures are in place to prevent dust blow. No significant impacts were identified during survey work and monitoring is undertaken on a regular basis to ensure levels of dust deposition are within recommended guideline values.
    - Noise & Vibration: Noise levels at quarry sites may affect some birds and mammals. No significant impact was identified by the project ecologist. Mitigation measures are proposed to protect peregrine falcon which occasionally nest at the site. No negative impact on flora and fauna are envisaged and noise and vibration emissions will be monitored and maintained within parameters specified.
    - Landscape & Restoration: A plan has been compiled to offset the impact associated with quarrying activity.
- Land, Soils & Geology and Air, Landscape & Restoration and Material Assets:
    - Air: No overburden is present on the site as the site has been previously quarried. Dust suppression will be undertaken where required in order to avoid windblown dust.

- Landscape & Restoration: Landscaping works to date include the construction of berms and planting of side slopes which will be extended along the eastern boundary of the quarry. The impact on the geology and landscape will be mitigated in the longer term by the proposed landscape and restoration plan.
- Material Assets: The geological resource will be extracted and will result in a quarry void. The raw material is used in the construction industry and the quarry has created significant employment in the area both directly and indirectly. The restoration plan will mitigate to an extent the impact associated with quarrying.

- Air and Water, Climate and Traffic:
  - Water: Dust associate with quarrying has potential to contaminate surface water and groundwater. Management measures are in place.
  - Climate: Plant and machinery operating at the quarry will result in emissions to air and climate. It is difficult to mitigate against these emissions. Energy conservation measures and good management practices will serve to reduce the emissions as far as possible.
  - Traffic: There will be no increase in levels of traffic and air emissions as it is not proposed to increase traffic levels above those experienced in the past.
- Noise & Vibration and Traffic:
  The EIAR notes that traffic associated with the development generates noise and a minor source of vibration. The development will not result in an increase in traffic on the local road infrastructure therefore noise levels are not anticipated to increase.
- Material Assets and Landscape & Restoration and Cultural Heritage:
  - Landscape & Restoration: There are no scenic views or routes in the vicinity of the site. The proposed landscape and restoration plan will offset the impact associated with quarrying activity.

- Cultural Heritage: There are no items of cultural heritage, monuments or buildings of interest know from the application area. Licenced archaeological investigations at two Recorded Monuments have demonstrated that both Recorded Monuments are remnants of modern agricultural activities and are not of archaeological significance.

9.16.2. In terms of a do-nothing scenario, it is submitted that if the proposed development does not proceed, the quarry will continue to operate in the authorised area until a further planning permission is granted.

Conclusion

9.16.3. The conclusions regarding the acceptability of the likely cumulative and main residual effects of this proposal are identified and assessed under the various headings of the main assessment above. I am generally satisfied that the significant environmental effects arising as a consequence of the development, including the residual and cumulative impacts have been identified. I have outstanding concerns however, particularly in relation to impacts on human health and population with regard to traffic.

9.16.4. In addition, I am concerned regarding the introduction at this point of the EIAR of the word 'occasionally' in terms of the nesting peregrine falcon in the quarry area. Chapter 6 of the EIAR deals with biodiversity and explicitly submits that 'given the successful annual onsite breeding of Peregrine Falcon, this site is deemed to be of national importance for this Annex I species'. In addition, confirmation of the presence of a pair of Peregrine Falcons was made during the site visit on 4th May 2018, and the NPWS Conservation Ranger and Peregrine Specialist, notes that peregrines are known to breed in the quarry, noting a successful 2019 season.

9.16.5. Chapter 6 of the EIAR also includes specific mitigation measures to protect the Peregrine Falcon, which includes limiting the blasting programme to periods outside the nesting season. In the absence of mitigation, the potential for indirect effects on Peregrines breeding within the proposed application area between March and July each year by virtue of disturbance from noise and vibrational emissions is likely to be moderately adverse in the long-term. As discussed in Section 9.6 of this report and having regard to the information submitted in relation to the Noise & Vibration

chapter of the EIAR, I note that blasting occurred on 4 occasions between March and July in both 2016 and 2017. Should the Board be minded to grant permission in this instance, I recommend that a condition be included explicitly precluding blasting during the nesting season for the Annex I species.

9.17. Mitigation & Monitoring Summary

9.17.1. Chapter 17 of the EIAR presents a summary of the mitigation measures proposed in order to avoid, reduce or remedy the potential impact identified and monitoring proposed to ensure that mitigation measures are effective. Mitigation measures are proposed in terms of:

- Population & Human Health
- Biodiversity – including measures for the protection of water quality and measures for the protection of the Peregrine Falcon.
- Land, Soils & Geology
- Water
- Climate
- Air
- Noise & Vibration
- Landscape & Restoration

9.17.2. Monitoring is proposed in terms of

- Population & Human Health
- Biodiversity – including measures for the protection of water quality and measures for the protection of the Peregrine Falcon.
- Land, Soils & Geology
- Water
- Air
- Noise & Vibration
- Landscape & Restoration

9.18. Reasoned Conclusion on Significant Effects

Having regard to the examination of environmental information contained above, and in particular to the EIAR and supplementary information provided by the applicant, and the submission from the Planning Authority, prescribed bodies and observers in the course of the application and appeal, it is considered that the main significant direct and indirect effects of the proposed development on the environment are, and would be mitigated, as follows:

- Impact on **population and human health** arising from roads and traffic issues as well as dust, noise and vibration arising from the operational phase of the development affecting air quality. Mitigation measures are proposed. Having regard to the context of the site, being located within an existing operating quarry, together with the indication that the development will not result in an increase of traffic or extraction rate from the overall site, the impacts associated with these aspects are considered acceptable in the context of population and human health and residential amenity.
- In terms of **biodiversity**, the development will not give rise to the loss of greenfield areas, hedgerows of trees. It is also noted that the existing quarry floor is used by foraging bats. The existing quarry face is also known to accommodate a pair of breeding Peregrine Falcons, Annex I species. It is noted that noise levels at quarry sites may affect some birds and mammals, but no significant impacts were identified by the project ecologist. Mitigation measures are proposed to protect the Peregrine Falcon, which include that the blasting programme will be limited to periods outside their nesting season, March to July. In the event that blasting is unavoidable during this period, an onsite breeding raptor vantage point survey will be required. Should an active nest be detected, a minimum buffer distance of 125m between the blast point and the nest will be strictly adhered to. Should the Board be minded to grant permission in this instance, a condition preventing blasting in the nesting season should be include.

  The restoration plans for the site are noted, and I would accept that the plans would promote wider biodiversity at the site which may have a positive impact.

- Effects on the receiving **land, soil, geology** and **air** environments may arise during the operational and restoration phases of the quarry. Given that the site is located within an existing quarry, no overburden is present. Dust suppression will be undertaken where required. The proposed restoration of the quarry as an ecological resource will not involve infilling of the pit void, rather, it will be allowed to flood and works will focus on the banks and berms.
- In terms of **air** and traffic, plant and machinery operating at the quarry will give rise to emissions to air and climate. The development will not result in an increase in the levels of traffic on the local roads above those experienced in the past. The sites dust management plan will be in line with industry guidelines and mitigation measures are presented and are standard for the prevention of dust nuisance.
- In terms of **noise** and **vibration,** noise monitoring was carried out at locations within and in the vicinity of the site. Potential noise sources on the site include a variety of mobile and fixed plant. There will be no increase in traffic and noise levels are not anticipated to increase. I consider that the development if permitted would not represent a significant impact on existing residential amenities of properties in the vicinity of the site by reason of noise.
  The issue of vibration arises due to blasting at the site. Historical blast measurements at the site note compliance with vibration limits in the years 2016 and 2017, and it is indicated that the existing quarry is operating within the limits of the conditions applied as a result of the Section 261 Order. Mitigation measures are identified so that ground vibration, air overpressure and noise is minimised and kept within regulatory limits.
- In terms of **Visual and Landscape Impacts,** the proposed development will, if permitted, result in minimal changes to the existing landscape, as the site has already been subject to quarrying in the past. The restoration plans for the site are noted, and I would accept that the plans would promote wider biodiversity at the site which may have a positive impact. The site is located within a landscape character area which has the capacity to absorb a development of this scale in landscape and visual terms. There will be no impact arising at residential properties in the immediate vicinity of the site.

- In terms of **Roads & Traffic** impacts, the proposed development will not result in the creation of a new entrance onto the Local Road and will not result in an increase in traffic. The existing road is indicated as having capacity to accommodate the development, but I note the comments of the Transportation Department of Galway County Council who raise concerns as to the capacity of the road. The Transportation Department recommended refusal of permission on the basis that unauthorised works to the public road have been undertaken by the applicant without the benefit of appropriate consent. I also note that the applicant has suggested that the road network is capable of accommodating the development, if the Council allow them to complete the road works as proposed. I consider this to be inappropriate and would agree with the PA that a grant of permission would legitimise the unauthorised road works. As such, the ability of the existing road network to accommodate the scale of the development proposed within such a small timeframe, the impact the development would have on the local road network, as well as on the amenity of the wider rural area, and current vulnerable road users is questionable. I conclude that the existing road network is not suitable to accommodate the proposed development.
- In terms of **Cultural Heritage,** having regard to the planning history associated with the site and the submission of the Department of Culture, Heritage & the Gaeltacht, I am satisfied that the development would not have any significant adverse archaeological impacts and no significant residual impacts are likely to arise.
- In conclusion, having regard to the above, I am generally satisfied that in principle, and subject to the mitigation measures proposed, the proposed project might be considered acceptable and would be unlikely to have unacceptable direct or indirect impacts on the environment as it relates to a number of environmental aspects. However, given that the development is dependent upon unauthorised road works, it is considered inappropriate for the Board to consider a grant of planning permission.

10.0 Appropriate Assessment

10.1. Introduction:

10.1.1. The EU Habitats Directive 92/43/EEC provides legal protection for habitats and species of European importance through the establishment of a network of designated conservation areas collectively referred to as Natura 2000 (or 'European') sites.

10.1.2. Under Article 6(3) of the Habitats Directive, an Appropriate Assessment must be undertaken for any plan or programme not directly connected with or necessary to the management of a European site but likely to have a significant effect on the site in view of its conservation objectives. The proposed development is not directly connected with or necessary to the management of a European site. The Board will note that a Natura Impact Statement (NIS) was submitted as part of documentation for permission for the proposed development to assess the likely or possible significant effects, if any, arising from the proposed development on any European site.

10.1.3. In accordance with these requirements the Board, as the competent authority, prior to granting a consent must be satisfied that the proposal individually or in combination with other plans or projects, is either not likely to have a significant effect on any European Site or adversely affect the integrity of such a site, in view of the site(s) conservation objectives.

10.1.4. Guidance on Appropriate Assessment is provided by the EU and the NPWS in the following documents:

- Assessment of plans and projects significantly affecting Natura 2000 sites – methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC (EC, 2001).
- Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities (DoEHLG), 2009.

Both documents provide guidance on Screening for Appropriate Assessment and the process of Appropriate Assessment itself.

10.2. Natura Impact Statement

10.2.1. The application was accompanied by a Natura Impact Statement (NIS, dated May 2020) which scientifically examined the potential impacts of the proposed development on the following European Sites:

- Lough Corrib SAC (Site Code: 000297)
- Lough Corrib SPA (Site Code: 004042)
- Galway Bay Complex SAC (Site Code: 000268)

10.2.2. The NIS identifies the relevant Natura 2000 sites that have the potential to be affected by the proposed development, presents a description of the proposed development and sought to identify other projects or plans or activities in the vicinity. The NIS outlines the assessment methodology employed to identify and assess the potential impacts on habitats and species identified as qualifying interests of a number of European Sites and their conservation objectives, including cumulative / in-combination impacts. The NIS sets out mitigation measures and addresses potential residual impacts on the European sites.

10.2.3. Having reviewed the revised NIS and the supporting documentation, I am satisfied that it provides adequate information in respect of the baseline conditions, clearly identifies the potential impacts, and uses best scientific information and knowledge. Details of mitigation measures are summarised in Section 6.5 of the NIS. The NIS concludes that, provided the mitigation measures are implemented in full, it is considered that the proposal will not adversely affect the integrity of any of the European Sites considered in the report including:

- Lough Corrib SAC (Site Code: 000297)

10.2.4. I am satisfied that the information is sufficient to allow for Appropriate Assessment of the proposed development.

10.3. Consultations and Observations

10.3.1. In the course of the assessment of the proposed development, the Board will note that the NIS indicates that a consultation / scoping document was prepared and sent to the Department Applications Unit (DAU), and forwarded to the NPWS, in April of

2018, relating specifically to the Annex 1 species Peregrine Falcon, which is known to breed at the site. The consultation response included a number of observations, which were advised as being 'not exhaustive', in an effort to assist the applicant in meeting the obligations arising in relation to European Sites, protected species, biodiversity and environmental protection in general.

10.3.2. Third Party Submissions:

A number of third-party submissions were made to the Planning Authority in the course of its assessment of the proposed development. These submissions are summarised above in Section 4.4 of this report. In terms of concerns raised in relation to nature conservation and environment, the following is relevant:

- Impacts associated with the removal or destruction of Annex 1 habitats either located within the application area or adjacent to it.
- The loss of a Souterrain.
- Impacts on flora and fauna, and in particular to the Lesser Horseshoe Bat and other bat species.
- Destruction of limestone pavement on adjacent lands – within applicants landholding – is not mentioned in any survey.
- The area surrounding the quarry is host to several wildlife including the protected Irish Stoat.
- Impacts associated with the current system of discharging ground and surface water runoff into a wetland. The system is not fit for purpose and the quarry does not have a discharge licence in place.
- With regard to third party submissions made to An Bord Pleanala, the Board will note that similar issues were raised. All of the observations, submissions, appeal submissions and technical reports from departments of Galway County Council and prescribed bodies are considered as part of this appropriate assessment.

10.4. **Screening for Appropriate Assessment:**

10.4.1. The purpose of AA screening, is to determine whether appropriate assessment is necessary by examining:

a) whether a plan or project can be excluded from AA requirements because it is directly connected with or necessary to the management of the site, and

b) the likely effects of a project or plan, either alone or in combination with other projects or plans, on a Natura 2000 site in view of its conservation objectives and considering whether these effects will be significant.

10.4.2. The Screening Report considered Natura 2000 sites within 15km, the likely zone of impact, of the subject site. As indicated above, just 1 European site is considered within the Stage 1 Screening. The Screening Report notes that there are no surface water features located in the immediate vicinity of the proposed application area. The site is located within the Cregg River sub-basin (CREGG_10 EU_CD_IE_WE_ 30C030150), which is located within the Clare River sub catchment (Clare [Galway]_SC_060_30_31). The existing quarry is also located above a Regionally Important Karstified aquifer with groundwater vulnerability rating of extreme (bedrock at surface) in the Corrib catchment. Given the proximity of the Cregg River to the subject site and its hydrological connection to the Lough Corrib SAC, hydrological connectivity between the Cregg and the application area via ground water exists.

10.4.3. Table 4.1 of the AA Screening Report identifies 3 Natura 2000 sites within 15km of the subject site. The table also includes the qualifying features of conservation interest for which the site is designated. Each site was examined in the context of location in terms of the zone of Influence of effect from the proposed development and the distribution of the qualifying interests and Special Conservation Interests in relation to the ZoI.

10.4.4. Chapter 4 of the NIS deals with the receiving environment with Section 4.1.1 presenting the Identification of Natura 2000 sites identified during the desk study as being located within 15km of the site. Table 4.1 identifies the pathways for potential effects and concludes that given that two of the three Natura 2000 sites identified in the scoping study are neither hydrologically nor ecologically connected with the proposed application area, no pathways for direct or indicate likely significant effects exist. As such, the following sites have been excluded at scoping stage:

- Lough Corrib SPA (Site Code: 004042)
- Galway Bay Complex SAC (Site Code: 000268)

10.4.5. AA Screening for the Lough Corrib SAC (Site Code: 000297) is proposed. I concur with the applicants' determination in relation to the above Natura 2000 sites:

Site Name	Site Code	Distance to Site	Assessment
Special Areas of Conservation (SAC)			
Galway Bay Complex SAC	000268	14.4km to south of proposed site	No habitat loss arising from the proposed development. There is no surface water, groundwater or underground features connecting the sites. Significant distance between the sites. **Screened Out**
Special Protection Areas (SPA)			
Lough Corrib SPA	000297	6.8km to the south of the site	No habitat loss / alteration arising from the proposed development. No known migration routes of Species of Special Conservation Concern over the site or wider study area. Lack of / low number of observation of species protected within this SPA at study area. **Screened Out**

10.4.6. The Screening for AA report, Section 4.1.2, deals with the designated site within the zone of potential impact, being the Lough Corrib SAC (Site Code: 000297). An 'evaluation of potential risks and their level of potential effect on features of qualifying interest' for the SAC is presented in Section 5.3 of the AA Screening report (Table 5.1). The following table summarises the potential significant effects in view of the conservation objectives of Lough Corrib SAC.

AA SCREENING: European Sites for which there is a possibility of significant effects				
Site Code	**Site name / Distance to site**	**Habitat Loss / Modification**	**Water quality and water dependant habitats**	**Disturbance**
000297	**Lough Corrib SAC** 2.4km to the east of the proposed development site	Yes No habitat loss as the subject site is not located within the SAC. The site occurs within the catchment area for the SAC, and therefore, there is a potential risk of alteration of habitats which are groundwater and surface dependent.	Yes Potential impairment of water quality within watercourses could lead to poor water quality impacts in the SAC. Habitats potentially affected include: Oligotrophic Waters containing very few minerals Hard water lakes Cladium Fens* Petrifying Springs* Alkaline Fens Oligotrophic to Mesotrophic Standing Waters Floating River Vegetation	Yes Potential disturbance or displacement impacts on species of Conservation Interest due to potential changes in water quality. Species potentially affected include: White-clawed Crayfish Sea Lamprey Brook Lamprey Atlantic Salmon Otter

10.5. Conclusion on Stage 1 Screening:

10.5.1. It is reasonable to conclude, on the basis of the information on the file, which I consider adequate in order to issue a screening determination, that the proposed development, either individually or in combination with other plans or projects would not be likely to have a significant effect on the following European sites, in view of the sites' conservation Objectives and that a Stage 2 Appropriate Assessment is not required in respect of these sites:

- Lough Corrib SPA (Site Code: 004042)
- Galway Bay Complex SAC (Site Code: 000268)

10.5.2. Through an assessment of the source-pathway-receptor model, which considered the ZoI of effects from the proposed development and the potential in-combination effects with other plans or projects, the following findings were reported in the NIS:

- Owing to the proximity of the proposed application area to the Cregg River, which has surface water hydrological connection to the Lough Corrib SAC, pathways for potentially significant indirect effects as a result of the proposed works on the qualifying interests of the SAC have been identified via groundwater connectivity between the proposed application area and the Cregg River.
- In the absence of mitigation measures, proposed extraction works have the potential to result in significant indirect effects through the release of groundwater pollutants from onsite machinery and vehicles reaching the water table and groundwater dependent habitats associated with Lough Corrib.

10.5.3. In light of the above, a stage 2 AA was carried out. The potential impacts (direct / indirect and in-combination effects) of the development on the site are examined in light of each of the site's conservation objectives.

10.6. Stage 2 Appropriate Assessment

10.6.1. The Qualifying Interests for the relevant European Sites are set out below.

European Site	Qualifying Interests
Lough Corrib SAC **(Site Code: 000297)**	1029 Freshwater Pearl Mussel *Margaritifera margaritifera* 1092 White-clawed Crayfish *Austropotamobius pallipes* 1095 Sea Lamprey *Petromyzon marinus* 1096 Brook Lamprey *Lampetra planeri* 1106 Salmon *Salmo salar* 1303 Lesser Horseshoe Bat *Rhinolophus hipposideros* 1355 Otter *Lutra lutra* 1393 Slender Green Feather-moss *Drepanocladus vernicosus* 1833 Slender Naiad *Najas flexilis* 3110 Oligotrophic waters containing very few minerals of sandy plains (*Littorelletalia uniflorae*) 3130 Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and/or *Isoeto-Nanojuncetea* 3140 Hard oligo-mesotrophic waters with benthic vegetation of Chara spp. 3260 Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation 6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (* important orchid sites)

	6410 *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*) 7110 Active raised bogs 7120 Degraded raised bogs still capable of natural regeneration 7150 Depressions on peat substrates of the Rhynchosporion 7210 Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae* 7220 Petrifying springs with tufa formation (*Cratoneurion*) 7230 Alkaline fens 8240 Limestone pavements 91A0 Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles 91D0 Bog woodland

Lough Corrib Special Area of Conservation (Site Code 000297)

10.6.2. The Lough Corrib SAC is located approximately 2.4km to the east of proposed site. I note that no part of the subject development site lies within the catchment area for the SAC. The NPWS Site Synopsis for the SAC notes that Lough Corrib is situated to the north of Galway city and is the second largest lake in Ireland, with an area of approximately 18,240 ha (the entire site is 20,556 ha). The lake can be divided into two parts: a relatively shallow basin, underlain by Carboniferous limestone, in the south, and a larger, deeper basin, underlain by more acidic granite, schists, shales and sandstones to the north. A number of rivers are included within the SAC as they are important for Atlantic Salmon. In addition to the rivers and lake basin, adjoining areas of conservation interest, including raised bog, woodland, grassland and limestone pavement, have been incorporated into the site.

10.6.3. The site supports a wide range of habitats, including 15 habitats which are listed as Annex I habitats in the EU Habitats Directive of which 6 are priority habitats. The site is also designated for 9 Annex II species, including the Freshwater Pearl Mussel, White-clawed Crayfish, Sea and Brook Lamprey, Atlantic Salmon, otter and Lesser Horseshoe Bat. The lake is also rated as an internationally important site for waterfowl, including Annex I Species of the EU Birds Directive. Lough Corrib is also considered one of the best sites in the country for Otter due to the size of the lake and the associated rivers and streams as well as the generally high quality of the habitats. Atlantic Salmon use the lake and rivers as spawning grounds and the lake supports a population of Sea Lamprey. A summer roost of Lesser Horseshoe Bat, another Annex II species, occurs within the site - approximately 100 animals were recorded here in 1999.

10.6.4. The main threats to the quality of this site are from water polluting activities resulting from intensification of agricultural activities on the eastern side of the lake, uncontrolled discharge of sewage which is causing localised eutrophication of the lake, and housing and boating development, which is causing the loss of native lakeshore vegetation. The raised bog habitats are susceptible to further degradation and drying out due to drainage and peat cutting and, on occasions, burning. The bat roost is susceptible to disturbance or development. Despite these ongoing issues, however, Lough Corrib is one the best examples of a large lacustrine catchment system in Ireland, with a range of habitats and species still well represented.

10.6.5. Detailed Conservation Objectives for the Lough Corrib SAC (Site Code 000297) are included in the NPWS Conservation Objectives Series for the site, dated April 2017, with the overall objective being to maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been designated.

- To restore the favourable conservation condition of Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae), Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or Isoëto-Nanojuncetea; Hard oligo-mesotrophic waters with benthic vegetation of Chara spp; Active raised bogs*; Freshwater Pearl Mussel; Sea Lamprey; Lesser Horseshoe Bat; Slender Naiad in Lough Corrib SAC.

- To maintain the favourable conservation condition of Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation; Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites); Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae); Calcareous fens with Cladium mariscus and species of the Caricion davallianae; Petrifying springs with tufa formation (Cratoneurion)*; Alkaline fens; Limestone pavements*; Old sessile oak woods with Ilex and Blechnum in the British Isles; Bog woodland*; White-clawed Crayfish; Brook Lamprey; Atlantic Salmon; Otter; Slender Green Feather-moss in Lough Corrib SAC.
- The long-term aim for Degraded raised bogs still capable of natural regeneration is that its peat-forming capability is re-established; therefore, the conservation objective for this habitat is inherently linked to that of Active raised bogs (7110) and a separate conservation objective has not been set in Lough Corrib SAC.
- Depressions on peat substrates of the Rhynchosporion: is an integral part of good quality Active raised bogs (7110) and thus a separate conservation objective has not been set for the habitat in Lough Corrib SAC

10.7. Potential Significant Effects

10.7.1. Potential impacts of the proposed development on qualifying features are considered in section 6.3 of the NIS. The significance of the potential effects was considered through an assessment of activities on the site as follows:

- Impact of a release of hydrocarbons
- Excavation works and vehicle movement
- Surface water run-off
- Increased dewatering

10.7.2. In the context of the above, the attributes likely impacted in all cases are:

- Groundwater
- Subsoils
- River Clare
- Cregg River
- Lough Corrib

The importance of the attributes is deemed to be extremely high for all. The magnitude of potential impacts is deemed to be moderate adverse to large adverse (in the context of dewatering) and the significance of potential impacts in all cases is deemed to be profound.

10.7.3. In terms of the character of the potential impact, the following is relevant:

Fuel Storage / usage on site - Fuel is stored at a number of locations around the quarry site but all are bunded. Plant and equipment which operate at the quarry are also refuelled using bunded site bowsers or competent fuel companies which dispense fuel directly into plant and equipment. Procedures are in place for dispensing fuel with drip trays uses during refuelling. Accidental spillage of contaminants during site operations may cause short to long term, moderate to significant impacts to soils, ground water, and the surface water environment if not stored and used in an environmentally safe manner.

Excavation works and vehicle movements on site – Excavation works will result in the same vulnerability of groundwater at the site as is now experienced by the same area of open bedrock. Procedures are in place for dealing with accidental spillages.

Surface water runoff – Road surface runoff or drainage systems have potential if not correctly designed, to result in contamination of surface waters and groundwater. Accidental spillage could contaminate the aquifer by direct percolation or via the superficial water network. Monitoring results and existing system evaluation suggest that this is not the case at the site.

Increased dewatering – Lowering the quarry bench could lead to a small increase of groundwater component in the sump, which will need to be dewatered. This will lead to an increase of water being discharged to the discharge zone.

10.8. Mitigation Measures

10.8.1. Mitigation measures are proposed to address the potential adverse effects of the development to ensure that the development will not adversely affect the identified SAC, or the conservation status of protected habitats and species is supports. The following mitigation measures are proposed to be implemented at the site in order to reduce or avoid adverse effects:

- **Fuel Storage / usage on site -**
    - Waste and fuel materials will be stored in designated areas that are isolated from surface water drains or open waters – eg excavations. Hazardous wastes such as waste oil, chemicals and preservatives, will be stored in sealed containers. Fuelling, lubrication and storage areas will not be located within 30m of drainage ditches or the settlement sumps.
    - All waste containers (including all ancillary equipment such as vent pipes and refuelling hoses) will be stored within a secondary containment system – eg a bund for static tanks or drip tray for mobile stores and drums. The bunds will be capable of storing 110% of the tank capacity.
    - There will be regular monitoring of water levels within drip trays and bunds due to rainfall.
    - A wheel wash facility exists near the site office and the roads have a sprinkler system.
    - Regular monitoring and maintenance of silt traps will be undertaken.
    - Oil which accumulates within the hydrocarbon interceptor shall be regularly removed by an appropriately licenced contractor. The hydrocarbon interceptor shall be appropriately maintained.
    - Regular visual monitoring of the attenuation sump and wetland area will be undertaken.
    - And oil interceptor will be fitted with the capacity to deal with 2,500m^3/d.
- **Excavation works and vehicle movements on site** –
    - No storage of unbunded fuel tanks or other site activities will be permitted.
    - Excavation of rock will follow best management practices for maintenance of machinery.

- **Surface water runoff –**
    - The settlement sumps and the floor of the quarry have volumetric capacity to accommodate all waters for the required residence time.
    - Drainage is to a vegetated system that can remove additional solids and contaminants by virtue of interception and subsoil infiltration.
- **Increased dewatering –**
    - The quarry floor and its sump settlement system is to be adequately sized to handle the water volumes they will receive.
    - Drainage is to a vegetated system that merely intercepts <0.1% of the regional groundwater flow volume.
    - There will be no significant net loss or gain in the GWB system because what is intercepted and managed at the site represents, by calculated water balance, <0.1% of the regional groundwater flow volume.

10.8.2. The main risk associated with the proposed extension in depth to the quarry is the perceived impact it could have on the Lough Corrib SAC. The NIS submits that the dewatering volumes are relatively low, at <2,500m^3/d and that the competent solid nature of the rock and GSI classification on groundwater recharge suggest that the site's potential interference in the wider groundwater catchment's water balance is insignificant. It is noted that groundwater enters the quarry primarily through one conduit in the face of one wall on the southern face. This groundwater settles in the sump at the lowest level of the quarry and is pumped to a natural vegetated area. Monitoring results suggest that water quality has no potential to negatively affect ground or surface water. The Board will note that the area of the wetland referred to lies outside the wider quarry boundary and is used by agreement with the landowner.

10.8.3. With the lowering of the quarry floor, there could be a small increase in the volume of water in the quarry. The current observed maximum discharge volume of 1,500m^3/d and the assimilation capacity simulations were carried out for a maximum discharge volume of 2,500m^3/d. It is concluded that if properly implemented, the proposed mitigation measures will be successful in ensuring that the European site is preserved at a favourable conservation status. As such, no reasonable scientific

doubt remains as to the absence of any adverse effects caused by the proposed development on the integrity of the European site. It is submitted that it is more likely that domestic wastewater treatment systems and interflow runoff from land surface is the cause of moderate status of fish and macroinvertebrate life in Lough Corrib, rather than quarrying.

10.9. In Combination Effects

10.9.1. Cumulative impacts from plans and projects in the area which may result in potential in-combination effects are considered in section 5.5 of the NIS. This section seeks notes that there are five active quarries within 7km of the subject site, with the closest quarry at Lackagh, approximately 4-5km to the south. It is noted that there is no hydrological or ecological connectivity between the proposed development site and other existing quarries and as such, there are no other quarries or other developments in the vicinity that could result in in-combination effects.

10.9.2. It is concluded that no significant in-combination effects are predicted to affect the Lough Corrib SAC, having regard to the legal protection for the SAC as a European Site. Taking into account the mitigation measures, no residual effects will arise.

10.10. Conclusion

10.10.1. I have read the submitted Natura Impact Statement in its entirety, together with all other environmental reports submitted with the planning application in support of the proposed development, and I am satisfied that it generally assesses the likely significant impacts arising from the proposed development on the integrity of the Lough Corrib SAC (Site Code: 000297).

10.10.2. In terms of surface water bodies, the Cregg River ultimately flows into the SAC approximately 8km to the south west of the current site. In addition, the Clare River, which forms part of the Lough Corrib SAC and is located approximately 3km to the east. The qualifying interests associated with the SAC are detailed above in Section 10.6 of this report and include the Freshwater Pearl Mussel and other lake and river species (including Crayfish, Lamprey and Otter) as well as a host of river and lakeside vegetation. Having regard to the information submitted and acknowledging the wide range of qualifying interests associated with the SAC, I am

generally satisfied that there is no direct hydrological connection between the quarry site and the SAC. In this regard, I am satisfied that there is no potential for any impact to arise as a result of the quarrying activities at the site, on the SAC.

10.10.3. Having regard to the nature of the subject development site, the nature of the proposed development and its location at a remove from existing Natura 2000 sites, together with the details presented in the Environmental Impact Statement and Natura Impact Statement, which I consider adequate in order to carry out a Stage 2 Appropriate Assessment, I consider reasonable to conclude on the basis of the information on the file, that the proposed development, individually or in combination with other plans or projects would not adversely affect the integrity of the European site, the Lough Corrib SAC (Site Code: 000297), or any other European site, in view of the site's Conservation Objectives.

11.0 **Recommendation**

Arising from my assessment of this appeal case I recommend that planning permission should be refused for the proposed development for the reasons and considerations set down below.

12.0 **Reasons and Considerations**

Notwithstanding, and having regard to:

- the nature and scale of the development as set out in planning application documentation and the pattern of development in the area;
- the current nature of the site being located within an existing operating quarry;
- the planning history of the site;
- the applicable legislative and policy context, including in particular the provisions of the Galway County Development Plan 2015 – 2021
- the Environmental Impact Assessment Report, Natura Impact Statement and all other information in support of the application;
- the contents of the appeal, the observation and the responses to the appeal;

- the report and recommendations of the Planning Inspector including the examination, analysis and evaluation undertaken in relation to the proper planning and sustainable development, appropriate assessment and environmental impact assessment;

Proper Planning and Sustainable Development

On the basis of the submissions made in connection with the planning application and appeal, it appears to the Board that the proposed development relates to a development which is dependent upon unauthorised road works to the public road infrastructure in the vicinity of the site, particularly local road (L6182). As such, the Board considers that the proposed development would facilitate the consolidation and intensification of the unauthorised road works. Accordingly, it is considered that it would be inappropriate for the Board to consider the grant of a permission for the proposed development in such circumstances.

In addition, it is considered that the attempted remedial road works are considered insufficient, being deficient in terms of its width, composition, alignment and overall carrying capacity to serve a development of the nature and scale proposed.

Notwithstanding the submissions in support of the proposed development, the Board considered that the development would endanger public safety by reason of traffic hazard and would result in an obstruction to road users. The proposed development would, therefore, be contrary to the proper planning and sustainable development of the area.

Appropriate Assessment

The Board considered the Screening Report for Appropriate Assessment, the Natura Impact Statement and all other relevant submissions and carried out an appropriate assessment screening exercise and an appropriate assessment in relation to the potential effects of the proposed development on designated European Sites. The Board considered that the information before it was adequate to allow the carrying out of an Appropriate Assessment. In completing the Appropriate Assessment, the Board considered, in particular, the following:

i. the likely direct and indirect impacts arising from the proposed development both individually or in combination with other plans or projects,

ii. the mitigation measures which are included as part of the current proposal, and

iii. the conservation objectives for the European Sites.

The Board noted that the proposed development is not directly connected with or necessary for the management of a European Site and considered the nature, scale and location of the proposed development, as well as the report of the Inspector.

In completing the appropriate assessment, the Board adopted the report of the Inspector and concluded that, by itself or in-combination with other plans and projects in the vicinity, the proposed development would not be likely to have an adverse effect on any European site in view of the sites' conservation objectives.

In completing the Appropriate Assessment, the Board accepted and adopted the Appropriate Assessment carried out by the Inspector and concluded that, by itself or in-combination with other plans and projects in the vicinity, the proposed development would not be likely to have an adverse affect the integrity of the Lough Corrib SAC or any other European site, in view of the sites Conservation Objectives. No reasonable scientific doubt remains as to the absence of such effects.

Environmental Impact Assessment

The Board, in accordance with the requirements of Section 172 of the Planning and Development Act 2000, as amended, completed an environmental impact assessment of the proposed development taking account of:

(a) the nature, scale, location and extent of the proposed development on the site,

(b) the Environmental Impact Assessment Report (EIAR) and associated documentation submitted in support of the application,

(c) the planning history associated with the site and the Board's previous Environmental Impact Assessment (EIA) relating to the site,

(d) the submissions received from the appellants and prescribed bodies, and

(e) the Inspector's report.

The Board considered that the environmental impact assessment report, supported by the documentation submitted by the applicant, adequately considers alternatives to the proposed development and identifies and describes adequately the direct, indirect, secondary and cumulative effects of the proposed development on the environment. The Board is satisfied that the information contained in the EIAR complies with the provisions of EU Directive 2014/52/EU amending Directive 2011/92/EU.

The Board agreed with the summary and examination, set out in the Inspector's report, of the information contained in the Environmental Impact Assessment report and associated documentation submitted by the applicant and submissions made in the course of the application and appeal. The Board considered, and agreed with the Inspector's reasoned conclusions that, the main significant direct and indirect effects of the proposed development on the environment are, and would be mitigated, as follows:

- The proposed development will not result in increased operations at the site as the proposed development seeks to supplement, and not intensify, extraction at the site. The total extraction rate for the full quarry will not increase. The impacts on residential amenity reflect the current operational impacts with regard to roads and traffic issues as well as dust and noise. Potential noise sources on the site include a variety of mobile and fixed plant and historical blast measurements at the site note compliance with vibration limits in previous years. The EIAR indicates that the existing quarry is operating within the limits of the conditions applied as a result of the Section 261 Order. Mitigation measures are identified so that ground vibration, air overpressure and noise is minimised and kept within regulatory limits and monitoring plans are in place.
- The impacts on biodiversity relate to disturbance to birds, particularly the pair of Peregrine Falcon Annex I species, who are known to nest at the quarry, due to noise and vibration associated with blasting. Leisler's Bats are also

known to forage in the deeper quarry void. Impacts will be mitigated by the implementation of the measures set out in the Environmental Impact Assessment Report (EIAR) which include specific provisions relating to Peregrine Falcon and bat protection measures and appointment of an Ecological Clerk of Works. Proposals also include ongoing monitoring in terms of noise and dust emissions.

- The risk of pollution of ground and surface waters during the operational phase would be mitigated by the implementation of measures set out in the Environmental Impact Assessment Report (EIAR). The measures include a fuel management plan as well as specific provisions relating to groundwater, surface water and drainage and monitoring.

- In terms of visual and landscape Impacts, the proposed development will, if permitted, be located within an existing quarry void and will have limited localised visual impacts. The site is located within a landscape character area which has the capacity to absorb a development of this scale in landscape and visual terms. The restoration plans for the site promote wider biodiversity at the site which may have a positive impact.

- In terms of Roads & Traffic impacts, the comments of the Transportation Department of Galway County Council who raise concerns as to the capacity of the road are noted. The ability of the existing road network to accommodate the scale of the development proposed within such a small timeframe, the impact the development would have on the local road network, as well as on the amenity of the wider rural area, and current vulnerable road users is questionable. As it stands, the development is dependent upon unauthorised works to the public road which the applicant undertook without the relevant consents. Mitigation measures proposed do not address the impacts on the public roads associated with the proposed development and in the absence of consent for the road works, it is concluded that the existing road network is not suitable to accommodate the proposed development.

The Board completed an environmental impact assessment in relation to the proposed development and concluded that, notwithstanding the implementation of the mitigation measures proposed in the Environmental Impact Assessment Report,

the effects of the proposed development on the environment, by itself and in combination with other plans and projects in the vicinity, would be unacceptable, in regard to roads and traffic.

In doing so, the Board adopted the report and conclusions of the Inspector.

The Board is satisfied that this reasoned conclusion is up to date at the time of taking the decision.

A. Considine
Planning Inspector

27th January 2021