Inspector's Report ABP-313909-22

Development	Application for substitute consent for previous development at the site to regularise the planning status of the rewilding area of the former quarry lands.
Location	Ballysheedy, Gort, Co. Galway.
Planning Authority	Galway County Council.
Applicant(s)	John Madden & Sons.
Date of Site Inspection	27th day of October 2023.
Inspector	Fergal Ó Bric.

1.0 Site Location and Background to Quarry Operation

1.1. The appeal site is located within a quarry in the townland of Ballysheedy, approximately 2.5km to the south-west of Gort, Co. Galway. The wider area in the vicinity of the site is rural in nature with a small number of one-off houses and agricultural structures noted along the access roads. The site is located approximately 580m to the west of the M18 motorway. Access to the site is from a county road, the L8500 which runs to the south of the site.

1.2. The entrance to the site is set back from the public road, adjacent to an existing house with stables to the rear and is accessed via a right of way which extends to approximately 530m in length before the wider quarry site is accessed. The area, the subject of this application lies to the west of the wider landholding and is substantially hidden from public view through planting and fencing. The area of the quarry for which Substitute Consent (hereafter referred to as SC) is being sought comprises a stated area of approximately 8.782 hectares within a wider landholding of 12.6894 hectares. The quarry was not operational on the date of my site inspection.

1.3. The Board referred the Substitute Consent appeal to The Department of Housing, Local Government and Heritage, the Commission for Railway Regulation, Irish Water, Transport Infrastructure Ireland (TII), the Health Service Executive, the Department of Agriculture, Food and the Marine, the Commission for the Regulation of Utilities, the Irish Aviation Authority (IAA), the Department of Communications, Climate Action and the Environment, An Taisce, Fisheries Ireland, the Arts Council, The Heritage Council, the Environmental Protection Agency and Udarás na Gaeltachta for comment. The Department of Housing, Local Government and Heritage issued a response in relation to archaeological heritage which will be refenced later within the assessment. TII and the IAA both responded and set out that they had no particular observations to make.

2.0 Planning History

- An Bord Pleanála reference 310605-21-In March 2022, the Board granted the current applicant permission for leave to apply for substitute consent.

- Planning Authority reference number 15/724: In 2015, Galway County Council granted planning permission for an extension of duration to the planning permission granted under reference number 09/415.
- Planning Authority reference number QR/046. Under Section 261A of the Planning and Development Act 2000, (as amended). A review of the planning status of the quarry was undertaken in 2012 in accordance with the requirements of Section 261A. The review determined that no further action was required in order to regularise the planning status of extraction related activities at the facility and/or to ensure compliance with the European Union Environmental Impact Assessment and Habitats Directives.
- Planning Authority reference number 09/415. In 2009**,** planning permission was granted by Galway County Council to Goode Concrete Ltd to further develop its established operations at Gort with a 9.9 hectare eastern extension to the quarry. The application was accompanied by an EIS.
- Planning Authority reference number QY46. Under Section 261 of the Planning and Development Act 2000, (as amended). In 2005, an application to register the quarry was made to the Planning Authority. The Council reviewed the planning permission and decided to amend / modify the original conditions imposed on the quarry operations. This decision issued in March 2007.

3.0 Policy and Context

3.1 Development Plan

3.1.1. The Galway County Development Plan (GCDP) 2022 – 2028, is the relevant policy document relating to the subject site. The site is located within a rural area and Chapter 4 of the Plan pertains to rural activities. Section 4.14 specifically deals with Mineral Extraction and Quarries and sets out a number of specific policy objectives relating to mineral extraction and quarries. Section 4.14 of the Plan set out the following:

‘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 Plan further 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.’

3.1.2. Section 4.14 sets out the specific policy objectives for quarrying and include MEQ 2 relating to the protection of the environment, MEQ 3 relating to the sustainable management of exhausted quarries and MEQ 4 relating to the preparation of landscaping plans.

3.1.3. Section 15.3.5 includes Development Standards relating to Extractive Development and includes standards in relation to rehabilitation, Environmental Impact Assessment, screening, landscaping and security at quarry sites.

4.0 **Natural Heritage Designations**

The site is not located within any designated site. The closest Natura 2000 site is the East Burren SAC (Site Code: 001926) which is located approximately 560m to the west and south-west of the appeal site. The Termon Lough SAC (site code 001321) lies approximately 650 metres south-west of the quarry site. The Coole Garryland Complex SAC (Site Code: 000252) is located approximately 1.1 kilometres north of the SC area and the Coole Garryland Complex SPA (Site Code: 004107) is located approximately 1.6 kilometres north of the quarry area. Caherglassaun Turlough SAC (Site Code: 00*02*38) lies approximately 5.6 kilometres north-west of the quarry site.

Other European sites within a 15 kilometre radius of the quarry site include as follows:

- Lough Cultra SAC (Site Code: 000299) (4.1km east)
- Lough Cultra SPA (Site Code: 004056) (4.1km east)
- Slieve Aughty Mountains SPA (Site Code: 004168) (6.1km east)
- Carrowbaun, Newhall & Ballylee Turloughs SAC (Site Code: 002293) (6.9km north-east)

- Cahermore Turlough SAC (Site Code: 002294) (7.1km north)
- Ballinduff Turlough SAC (Site Code: 002295) (7.3km north)
- Gortacarnaun Wood SAC (Site Code: 002180) (7.3km east)
- Lough Coy SAC (Site Code: 002117) (7.7km north-east)
- Drummin Wood SAC (Site Code: 002181) (7.7km east)
- Ballyogan Lough SAC (Site Code: 000019) (8.1km south-west)
- Moyree River System SAC (Site Code: 000057) (8.4km south)
- Peterswell Turlough SAC (Site Code: 000318) (9.8km north-east)
- Inner Galway Bay SPA (Site Code: 004031) (11.1km north-west)
- Galway Bay Complex SAC (Site Code: 000268) (11.1km north-west)
- Ardrahan Grassland SAC (Site Code: 002244) (11.5km north)
- Dromore Woods & Loughs SAC (Site Code: 000032) (12.5km south-west)
- Lough Fingall Complex SAC (Site Code: 000606) (12.9km north)
- Gleendree Bog SAC (Site Code: 001912) (13km south-east)
- Corofin Wetlands SPA (Site Code: 004220) (13km south-west)
- Kiltiernan Turlough SAC (Site Code: 001285) (13.4km north)
- Castletaylor Complex SAC (Site Code: 000242) (12 km north)

5.0 **Legislative Context**

5.1 The basis for substitute consent is set out in Part XA (Section 177A – Q) of the Planning and Development Act, 2000, as amended.

5.1.1 The Planning and Development, Maritime and Valuation (Amendment) Act 2022 (Commencement of Certain Provisions) (No.2) Order 2023 (S.I. 645 of 2023) came into effect on the 16th day of December 2023.

Section 30 of the 2022 Act amends Section 177K of the 2000 Act as follows:

(a) by the insertion of the following subsection after subsection (1) (i):

"(1J) In considering whether exceptional circumstances exist under subsection (1A)
(a) the Board shall have regard to the following matters:
(a) whether regularisation of the development concerned would circumvent the purpose and objectives of the Environmental Impact Assessment Directive or the Habitats Directive.
(b) whether the applicant had or could reasonably have had a belief that the development was not unauthorised.
(c) whether the ability to carry out an assessment of the environmental impacts of the development for the purpose of an environmental impact assessment or an appropriate assessment and to provide for public participation in such an assessment has been substantially impaired.
(d) the actual or likely significant effects on the environment or adverse effects on the integrity of a European site resulting from the carrying out or continuation of the development.
(e) the extent to which significant effects on the environment or adverse effects on the integrity of a European site can be remediated.
(f) whether the applicant has complied with previous planning permissions granted or has previously carried out an unauthorised development.

(g) such other matters as the Board considers relevant."

5.1.2 Planning and Development Regulations 2001 as amended, SCHEDULE 7 –

Criteria for determining whether a development would or would not be likely to have significant effects on the environment[1].

- Location of proposed development.
- The environmental sensitivity of geographical areas likely to be affected by proposed development, having regard in particular to:

  the absorption capacity of the natural environment, paying particular attention to the following areas.

  (e) areas classified or protected under legislation, including special protection areas designated pursuant to Directives 79/409/EEC and 92/43/EEC[2].

6.0 Exceptional Circumstances

6.1 Section 177K(1)(J) of the Planning and Development Act 2000 as amended, provides that the Board may grant leave to apply for substitute consent where exceptional circumstances apply. In considering whether exceptional circumstances exist, the Board is required to have regard to the matters set out under the criteria as set out within this part of the Act as follows:

(a) whether regularisation of the development concerned would circumvent the purpose and objectives of the Environmental Impact Assessment Directive or the Habitats Directive.

6.1.1 The EIA Directive seeks to provide for an assessment of the likely significant effects of a development on the environment prior to decision making, and to take account of these effects in the decision making process. The Habitats Directive seeks to

[1] To determine if EIA is required
[2] Birds Directive & Habitat Directive

ensure the conservation of a wide range of rare, threatened or endemic animal and plant species and the conservation of rare and characteristic habitat types.

6.1.2 The SC quarry site comprises an area which was granted planning permission for a quarry in 1994, planning reference 70/238 refers. An application to register the quarry under Section 261 of the Planning and Development Act 2000, as amended, was made to the Planning Authority in 2005, which stated that the area of the site to be registered was 12.9 hectares. The application set out that the area of extraction comprised 2.9 hectares. Following a request for further information, the applicant advised that the area already extracted amounted to 1.9 hectares and that part of this area extended beyond that permitted under planning reference 70238. The modified consent, was ultimately permitted in March 2007, amounting to approximately 4.8 hectares, allowing the quarry to be registered. The registered quarry area was below the five hectare threshold for Environmental Impact Assessment (EIA). Condition 1 of the consent restricted the extraction area to within the boundaries of the 1994 permission. The area of the current Substitute Consent (SC) application site extends to 8.782 hectares and includes areas to the north and east of the originally permitted quarry area.

6.1.3 The Board will note that the 2009 application to Galway County Council for an extension to the quarry (to the east of the Substitute Consent area) included an Environmental Impact Statement. A review of the Section 261 registration in 2012 concluded that Substitute Consent was not required for the subject area. I consider that this decision was likely incorrect given the extent of quarrying noted at the site at this time.

6.1.4 Any decision by the Board to grant or refuse permission for substitute consent for development carried outside the previously permitted areas of the site would be made on the basis of an assessment of the likely effects of the development on the environment and the likelihood of any significant effects on European sites, as a result of past works. Hence, the applicants have submitted a remedial Environmental

Impact Assessment Report (rEIAR) and a remedial Natura Impact Statement (rNIS) as part of their planning documentation.

6.1.5 As such, I am satisfied that the regularisation of the development concerned would not circumvent the purposes and objectives of the EIA Directive nor the Habitats Directive.

(b) whether the applicant had or could reasonably have had a belief that the development was not unauthorised.

6.2.1 The current quarry owners state that they had a reasonable belief that the SC area was accepted by the Planning Authority under planning reference 09/415 as being dormant, and so was not unauthorised. I also note the applicants set out within their submission that the valid planning permission permitted in 2009 under planning reference 09/415 formed the basis of their quarry purchase in 2014**.**

6.2.2 In terms of the reasonable assertion that the current owners had a belief that the quarry development was not unauthorised, this is supported by the grant of planning permission under 09/415, and indeed, the extension of duration of that permission permitted under planning reference 15/724. I also note that in 2012, Galway County Council determined under Section 261A of the Planning and Development Act 2000, as amended, that Substitute Consent was not required, and that no further action under this section of the Act was required (planning authority reference QSP46 refers).

6.2.3 Therefore, I am satisfied that the current quarry owners had a reasonable basis to believe that there was a valid registration of the site under Section 261 of the Act, and that the quarry operated in accordance with the Section 261 decision. It is also noted that there has been no history of planning enforcement or noted unauthorised

development at the site up to the point of quarry registration by the Planning Authority.

6.2.4 I am, therefore, of the opinion that the applicant could reasonably have had a belief that the development was not unauthorised.

(c) whether the ability to carry out an assessment of the environmental impacts of the development for the purpose of an environmental impact assessment or an appropriate assessment and to provide for public participation in such an assessment has been substantially impaired.

6.3.1 In the context of the substitute consent site, I note that planning applications were made to Galway County Council for permission to extract and process limestone at the quarry in 1994 and 2009, with a 2015 application extending the duration of the 2009 permission. These applications involved statutory public participation and resulted in the submission of observations from third parties. I note that the 2009 planning application included the submission of a mandatory Environmental Impact Statement as part of the planning documentation. I further note that there were conditions attached to the above permissions relating to monitoring, emissions, water protection, waste management and rehabilitation of the site. I further note that the S261A process in 2012 also provided an opportunity for public participation.

6.3.2 Under the current process, where the applicant is seeking substitute consent and includes the submission of both an rEIAR and rNIS as part of the planning documentation, there is provision for prescribed bodies and interested third parties to make submissions and to become formally involved in the process. The assessment of same would not be substantially impaired in such an event.

(d) the actual or likely significant effects on the environment or adverse effects on the integrity of a European site resulting from the carrying out or continuation of the development.

6.4.1 It is acknowledged that quarrying at the site has occurred outside the original boundaries permitted by the planning authority, I note that the site is not located

within, or immediately adjacent to any designated European site. The closest Natura 2000 site is the East Burren SAC (Site Code: 001926) which is located approximately 560m to the west and south-west of the quarry site. Termon Lough SAC (Site Code: 001321) lies approximately 650m to the south-west of the site.

6.4.2 I am satisfied that the quarrying which has occurred in this area has been managed and subject to certain control/mitigation measures to protect the water environment including groundwater monitoring, which will be addressed in detail later within this assessment.

6.4.3 In the event of a decision to grant substitute consent in this instance, such a decision would be made having regard to the information contained within the rNIS, in addition to data from the websites of the National Parks and Wildlife Service (NPWS), the Geological Survey of Ireland (GSI) and the Environmental Protection Agency (EPA). All of this information will assist in informing the Board of any potential for adverse impacts to arise upon protected habitats. species and/or water quality.

(e) the extent to which significant effects on the environment or adverse effects on the integrity of a European site can be remediated.

6.5.1 I note the applicants' commitment in allowing the site to continue to revegetate and rewild, and that as the site is not located within a Natura 2000 site, no remediation of a European Site is required. In the event of a decision to grant substitute consent in this instance, any mitigation measures that are included within the rNIS could be included as part of the planning conditions of the decision, if the Board deem appropriate.

(f) whether the applicant has complied with previous planning permissions granted or has previously carried out an unauthorised development.

6.6.1 I note the planning history pertaining to the quarry site, and the change in ownership of the site in 2014 and I would accept, based on the information available to me, that the current applicants do not appear to have carried out an unauthorised

development. The SC area was purchased in 2014 and it is stated that their reasonable belief was that the lands were quarried in accordance with the planning permission permitted under planning reference 09/415, and extended under planning reference 15/724, and I would accept that since the expiration of these planning permissions in 2020, no quarrying activity within the SC quarry area has taken place.

(g) such other matters as the Board considers relevant.

6.7.1 I consider it reasonable to note that the current applicant, since acquiring the subject quarry site, has moved to secure access to the quarry face with the erection of protective fencing around the full perimeter of the excavated area. I also accept the commitment of the applicant to implement an agreed post closure and rewilding plan to ensure the biodiversity potential and safety of the site.

7.0 **Planning Authority Submission**

7.1 The Planning Authority submitted a planning report in relation to the Substitute consent application. They set out the following:

- That surveying has been conducted on site, but that significant gaps in the surveying of protected species exist including the absence of trail cameras or static detectors for birds/bats. No detail relating to the locations of on-site lighting have been submitted and in the absence of these details, it is not possible to deduce if quarrying activities resulted in adverse impacts arising within European sites.
- In terms of the rNIS, it lacks detail, including the absence of detailed bird/bat surveys or with clear dates/times or outcomes or identification of location where sightings were recorded.
- The dust, noise and traffic impacts arising from the quarrying activities on site would have adversely impacted upon the local receiving environment, it the mitigation measures outlined had been implemented in the unauthorised areas, they would have mitigated against significant impact on the local environment.

- The principal impacts identified are through hydrological connections and disturbance of foraging areas for protected species.
- No details of mitigation to protect water quality have been submitted.
- Adopting the precautionary approach, one could not lead to conclusions of no adverse impacts upon European sites, beyond scientific doubt.
- The Caherglassaun Turlough SAC is hydrologically linked to the Coole Garryland SAC and, therefore, water quality within the SAC could potentially have been adversely impacted as a result of the development.
- The appeal site is located within the central Galway Complex landscape which has a sensitivity value of low.
- A recorded monument GA128-021 (Ringfort-Cashel) was located to the north within the SC area and was subsequently impacted by the quarry works.
- The Planning Authority set out that it would not be possible to make a determination in this instance until all of this information (set out within the bullet points above) is provided by the applicants.

8.0 **Assessment**

8.1 **Introduction**

8.1.1 The basis for substitute consent is set out in Part XA (Section 177K (1J)) of the Planning and Development Act 2000 (as amended). This section of the Act states that when making its decision in relation to an application for substitute consent, the Board shall consider the proper planning and sustainable development of the area having regard to a number of matters**,** listed as (a) to (g), within Section 177K(1J), regarding exceptional circumstances.

8.1.2 In the current application documentation, it is stated that the quarry commenced operations in 1994 with the working pit had been most active within the period 2005 - 2012, which coincided with the construction of the M18 Motorway (linking Tuam with Ennis) which was completed in 2010. A direct temporary internal eastern access track was developed between the quarry site and the M18 during its

construction. They state that the SC area has generally been unused since 2012. The Board's determination of this case can only be made in respect of the development that has already been carried out. i.e., the determination must be confined solely to the works undertaken on site, and for which substitute consent is being sought. The Board is required to restrict its deliberations to the works undertaken and whether or not it is appropriate to grant substitute consent for the past works.

8.1.3 I have proceeded with my assessment taking into consideration all of the information available to me, including the information submitted as part of the planning documentation. This assessment is set out in three parts, under the following headings:

- Section 9.0 - Planning Assessment
- Section 10.0 - Environmental Impact Assessment
- Section 11.0 - Appropriate Assessment

9.0 **Planning Assessment**

9.1 Within the National Planning Framework (NPF), National Policy Objective 23 seeks to facilitate the development of the rural economy through supporting, amongst other sectors, a sustainable and economically efficient extractive industry sector, whilst at the same time noting the importance of maintaining and protecting the natural landscape and built heritage, which are recognised as being vital to rural tourism. The Regional Spatial & Economic Strategy for the northern and western region, supports the implementation of the NPF, for the future physical, economic and social developments for the western and northern regions.

9.2 Guidelines for Planning Authorities on Quarries and Ancillary Activities (DoEHLG,2004) acknowledge that extractive industries make an important contribution to economic development in Ireland and the guidelines emphasise the continued need for aggregates. The guidelines note that such operations can give rise to land use and environmental issues which require mitigation and control through the planning system. Corresponding policies of the Galway County Development Plan 2022-2028 support, in principle, the exploitation of aggregate

resources in the county, where it can be demonstrated that the development would not result in a reduction of the visual amenity of a designated scenic area, to residential amenities or give rise to potential damage to areas of scientific, geological, botanical, zoological and other natural significance including all designated European Sites.

9.3 The report of the Planning Authority sets out that the Authority considers the principle of the development to be acceptable in the context of the Galway County Development Plan 2022-2028 and in the event of a grant of permission a number of conditions are recommended. However, as outlined previously within this report within Section 8**,** the Planning Authority did outline a number of issues. These specifically related to: Gaps in the type of mammal and bird surveys conducted, details of when and how surveys were conducted and details of results of surveys as well as the potential for the development have impacted upon habitats, species and water quality by reason of dust, traffic and noise emanating from quarrying activities on site.

9.4. Submissions were invited from prescribed bodies including Transport Infrastructure Ireland (TII), the Irish Aviation Authority (IAA) and the Department of Housing Local Government and Heritage (DHLG & H). TII and the IFI raised no objections to the retention of the SC quarrying area. The DHLG & H requested that a revised archaeological assessment be submitted having regard to the existing of archaeological remains within the site. These will be addressed later within Section 10.12 of this assessment, regarding archaeological and cultural heritage.

9.5. Having regard to the above, the previous quarrying development is clearly supported within the current planning policy context. It is, therefore, reasonable to conclude that the consequences for proper planning and sustainable development in the area are largely positive. This is contingent on ensuring that the effects on the environment of the development which took place, by itself and in combination with other development in the vicinity, was, and is acceptable, and that the integrity of European Site(s) were not adversely affected, in view of the relevant sites' conservation objectives. I have set out my considerations of these and other relevant matters in the following sections of my assessment, under the headings of Environmental Impact Assessment and Appropriate Assessment respectively.

10.0 **Environmental Impact Assessment**

10.1 **Introduction and Statutory Provisions**

10.1.1 This application was submitted to the Board on the 24th day of June 2022. A Remedial Environmental Impact Assessment Report (rEIAR) accompanied the application. It is laid out in two volumes including the main volume including the appendices and a separate volume containing a non-technical summary.

10.1.2. Chapter 1 provides an introduction and sets out the format of the report, its methodology and an overview of the various subject chapters. It includes a table setting out the names of the rEIAR study team and details of their competencies and expertise. This chapter provides information on screening and scoping which were conducted by the applicants. It is submitted that no alternative designs or processes were considered which I am satisfied is acceptable in relation to an application for substitute consent for development already carried out. Chapter 2 provides a description of the site and development carried out on site to date, which I have referenced under Section 9 of this report above**.** Chapter 3 sets out the applicable planning and legislative framework. Chapters 4 to 13 (inclusive) provide a description of the current state of the environment for each relevant environmental factor, together with an outline of the characteristics of the development, an assessment of predicted impacts and details of the measures used to mitigate such impacts. Chapter 14 provides consideration of the interactions and provides a summary of the remedial measures used.

10.1.3. Directive 2014/52/EU requires that the development is assessed in terms of vulnerability to the risks of major accidents and/or disasters which are relevant to the project. Having regard to the nature and scale of the past development which took place and the nature of the receiving environment, while unplanned events and accidents cannot be ruled out, these, if they occurred would have been dealt with in their own right outside of the planning process, including adherence to Health and Safety requirements and emergency response planning. Otherwise, within the meaning of the Directive, and considering the effects on the environment, the project is not of a nature which would have resulted in it generating a risk of major accidents and/or natural disasters and no such major

accidents and/or natural disasters have been referenced, so it is reasonable to assume none have occurred as a result of the past quarrying activities.

10.1.4. A number of appendices are included to the rear of the main volume of the rEIAR. The appendices include the following details: Land registry folios for the quarry area, setting out that the applicants purchased the quarry site in 2014. Mapping of the SC quarry area and the additional quarry lands immediately east of the SC site within their ownership; Site sections, details of river and lake waterbodies in the vicinity; Laboratory certificates of dust and water analysis, ambient air quality standards, emission factors and dust monitoring results; Analysis of vibration, noise and blast impacts; Photographic images of long views towards the quarry from a number of locations and an image illustrating the views outwards from the quarry**.**

10.1.5. Data limitations and any technical difficulties encountered in preparation of the rEIAR are detailed in the relevant chapters of the rEIAR. For an application of this nature, the main difficulty which I note is the limited baseline information available from which to assess the likely impacts of the past development and as stated above, clarity around the extent of activities which took place on site and the exact period of operations**.**

10.1.6. I have carried out an examination of the information presented by the applicant, including the rEIAR. I note the content of the report received from the Planning Authority. The issues raised by them are set out within Section 7 of this report above and are considered in the assessment below. The main issue relating to EIA related to the carrying out of bird/bat and mammal surveys and the protection of habitats, species and potential for adverse impact upon groundwater quality. Issues in relation to potential for adverse impacts upon habitats and species arising from the development on European sites and the local receiving environment were raised. The applicant sets out details of the environmental protection measures which were employed during the course of the historical quarrying activities on site.

10.1.7 I am satisfied that the information provided in the rEIAR (including the revised archaeological chapter) is sufficiently complete and up to date and that the rEIAR has been prepared by competent experts to ensure its completeness and quality. I

am also satisfied that the information contained in the rEIAR and supplementary information provided by the developer is generally adequate identifying and describing the direct, indirect and cumulative effects of the proposed development on the environment and complies with Section 177F (1) of the Act and Article 227 of the Planning and Development Regulations 2001 (as amended).

10.2 **Likely significant direct and indirect effects on the environment**

10.2.1 The likely significant indirect effects of the development are considered under the headings below which collectively consider the factors set out in Article 3 of the EIA Directive 2014/52/EU.

- Human health and Population.
- Biodiversity, with particular attention to species and habitats protected under Directive 92/43/EEC and Directive 2009/147/EC.
- Soils and Geology.
- Water Quality.
- Climate.
- Air Quality.
- Noise and Vibration.
- Traffic.
- Landscape and Visual.
- Archaeological and Cultural Heritage.
- Cumulative Impacts and interactions.

10.3 **Human Health and Population**

10.3.1 Chapter 4 of the rEIAR considers the potential effects of the proposed development on human health and population. The application site is located in the Electoral Division (ED) of Beagh with a population of 705 persons (CSO, 2016), populations that had potential to be impacted upon by the quarry development are identified as including persons residing and engaging in recreational/tourism, economic and cultural activities in close proximity to the site.

10.3.2. It is stated under Section 2.2.(Working Hours and Employment) that John Madden and Sons Ltd (the applicants) employed six persons directly at the Ballysheedy quarry with a number of others employed indirectly in transporting aggregates and stone from the quarry**.** However, I am satisfied that employees would most likely have resided locally and as such no increase in population as a result of the quarry development would have resulted.

10.3.3. I would agree with the assertion as submitted that the development would have resulted in minimal or potentially no impact on tourism and amenities in the area, having regard to the findings of the traffic assessment (as set out in Section 13 of the rEIAR) and that the site is naturally screened and, therefore, no further mitigation measures would have been required to address any impacts on population. No specific instances of adverse impact on the wider community are known to have arisen from the development of the substitute consent area itself.

10.3.4. Air and noise emissions, emissions to water and from traffic associated with day to day activities will be addressed later within this assessment, Given the scientific information provided in Chapter 7 (Water quality), Chapter 9 (Air quality) and Chapter 11 (Noise and Vibration), together with that contained in Chapter 4 (Human Health and Population), I am satisfied with the conclusion reached that the significance of effects on human health which would have arisen from negative impacts to water quality and as a result of air and noise emissions would have been no greater than 'negligible'.

10.3.5**.** In relation to traffic, it is stated that there were approximately two Heavy Good Vehicles (HGV) movements in and out of the quarry site per hour per day at the height of quarrying activities on site, between 1994 and 2010. A higher volume of traffic movement occurred during the construction of the M18 Motorway; However, this traffic was all off-road and directly to the Motorway site via the temporary internal quarry track, permitted within the 2009 planning permission. It is concluded that this level of traffic (less than two movements per hour) would have had a 'minor to negligible' impact on the carrying capacity and a slight impact on the pavement condition of the external local roads used to transport materials from the quarry site, particularly the L8500 which is 2.5 kilometres in length before it reaches the R458, a regional route linking Gort with the west. While not concluded

in the rEIAR, with this relatively low level of traffic and noting that dust levels were predominantly below the compliance threshold limit of 350 mg (m2 *day), no impact on human health above 'negligible' would likely have arisen as a result of traffic generated by the quarrying activities**.** No remedial measures are stated to be required outside of those specified in their respective chapters.

10.3.6. Conclusion – Human Health and Population; In my opinion the quarrying has not adversely impacted in human health or population and subject to compliance with certain planning conditions of the consent will have a beneficial impact upon human health and population. Overall, the development has had a positive impact in terms of supporting the local community and benefited local employment and aided the economic recovery of the Western region and the wider national economy. Having regard to the above, I would agree with the conclusion reached in Chapter 4 of the rEIAR that the previous quarrying operations did not give rise to direct nor indirect adverse impacts on any tourism and amenity sites and would have assisted in boosting local employment at a time of record unemployment (2008-2012, due to the weak state of the national economy at that time) significant adverse impacts on population or human health can be ruled out. .

10.4 **Biodiversity**

10.4.1 Biodiversity is examined in Chapter 5 of the rEIAR. Ecological receptors and justification for their respective survey area extents are presented in Section 5.7.

10.4.2. The applicant's retrospective assessment included a collection of baseline ecological data, habitat and vegetation surveys, bird and bat surveys, mammal, amphibian and reptile surveys as well as site walkovers. These surveys and walkovers occurred between the years 2007 and 2022. Ecological features which existed pre-quarrying activities are evaluated based on a geographical reference of importance including international, national, county, local (higher value) and local (lower value) importance. The zone of influence included all designated sites for national and EU nature conservation located within a 15 kilometre radius of the site. The site walkover survey confirms that the site predominantly comprises bare ground, with a flooded quarry floor area to the west of the application area. No protected flora were recorded during the site visit, but areas of scrub have

developed to the north and north-west of the site. An area of fringe vegetation is colonising slowly within the quarry floor lagoon area.

10.4.3. Table 5.1 details the NRA evaluation criteria (2009) that were used to assist in highlighting key ecological receptors.

Figure 5.2 comprises a habitat map and outlines the habitat classes and their extent within the site. The main habitat within the SC area is described as artificial lakes and ponds. The water in the quarry floor has a depth ranging from half a metre to three metres. The water is clear with no significant inflows with the exception of minor seepages from the exposed quarry face above the quarry floor. There are small areas of Willow, Common Reed and Bullrush on the fringes of the quarry lagoon.

The main quarry area comprises a deep depression with a sheer rock face on three sides (north, south and west). The floor of the depression comprises disturbed ground with heaps of quarried material within a flooded lagoon. Surrounding the quarry void is range of habitats including spoil and bare ground, re-colonising bare ground (covered in vegetation), scrub, planted screening and hedgerows and treelines along the quarry boundary.

Table 5.3 presents a summary of rare or protected species which would have been recorded in the 2 x 2 square kilometre (reference M40) of the appeal site and includes the quarry area. Only one species (Alder Buckthorn) is designated as being vulnerable and the habitat within the quarry is deemed unsuitable to support this particular species. A number of habitats, eight in total, are stated to be present within the quarry site. These habitats are classified by reference to the Fossit Code and include ED1 (active quarry), BL3 (building and artificial surfaces), ED2 (spoil and bare ground), ED3 recolonising bare ground and FL8 (artificial lakes and ponds. While not stated, hedgerows (WL1), a habitat of local importance (higher value) were also present.

10.4.4. The mammal survey found evidence of the Pine Marten within the site on two occasions in 2020, which are protected under the Irish Wildlife Acts 1976-2013. The Irish Hare was also noted within grasslands throughout the quarry area. Mammals thought likely to use the quarry area for at least foraging purposes

include rodents (pygmy shrew), badger, hedgehog, stoat and foxes, although they were not specifically recorded on site during the field surveys.

10.4.5 It is stated that no rare or protected plant or flora species are likely to occur within the SC quarry area. A number of habitats have developed in the SC area as a result of quarrying activities, including the lagoon area and bare ground, and are highly disturbed. No invasive plant species were recorded within the quarry site.

10.4.6 The appeal site supports a pair of Peregrine Falcons who are known to nest on the southern and western quarry faces and these nesting areas have been retained and are undisturbed. The Peregrine Falcon is a protected species under Annex 1 of the Birds Directive and are on the amber list of species of moderate concern. The pair of Peregrine Falcons were observed by an ecologist during the 2020 and 2022 bird surveys. A number of common bird species were recorded within the site boundaries during the bird surveys and included: The Robin, the Coal tit, the Rook, the Wood Pigeon, the Linnet, the Sand Martin, the Chaffinch, the Wren, Goldcrest and Moorhen. Birds which were recorded were generally all common countryside species. All birds and their nesting places are protected the Irish wildlife Act 1976.

10.4.7 Daytime bat surveys as well as an assessment of suitable bat roost sites/habitats within the SC quarry area were conducted. A nocturnal bat survey was conducted in June 2020 and again in June 2022. The East Burren Special Area of Conservation (SAC) includes the Lesser Horseshoe Bat (LHB) as one of its Qualifying Interests. This particular SAC has two known nursery roosts, a transition roost and four known winter sites, the latter ones all in natural limestone caves. The nearest LHB roost within the East Burren SAC to the quarry site is located approximately 5.5 kilometres south-west of the appeal site as denoted within Map number 10 (Roost number 216) of the Conservation objectives for the East Burren SAC, available at (www.npws.ie)**.** There are no known LHB roosts within the SC site area. The core foraging range for the LHB is approximately 2.5 kilometres from their roosts. Therefore, I am satisfied that the LHB associated with the East Burren SAC has not been adversely impacted by quarrying activities within the Ballysheedy SC quarry area.

10.4.8 Summer roosts for the LHB were identified within two kilometres and south of the SC quarry site area. These particular roosts outside of the East Burren SAC and,

therefore, fall outside of the Appropriate Assessment process. I also note that the habitat within the SC quarry area would have been sub-optimal for the LHB species, in terms of there being no tall trees nor suitable structures within the SC area for roosting purposes and the noise generated within a quarry environment would not be conducive to attracting the bat species for roosting or foraging purposes. I note that the applicants conducted bat surveys within the site and in its vicinity and results show that the LHB was not detected within any of these surveys. Therefore, I am satisfied that the SC quarry area would not have represented a suitable habitat for the LHB species.

10.4.9 The Substitute Consent area has been revegetating since the quarrying activities ceased on site, stated to be in 2012. This is considered to be a permanent slight impact to a locally important, higher value habitat. The key ecological receptors (Peregrine Falcons) occur on site as a result of the quarrying activities which created the rock faces which the Falcons use as their nesting/resting place, and this is proposed to be permanently maintained under the rewilding proposals.

10.4.10 The breeding Peregrine Falcons are considered to be the key ecological receptors within the SC application site area. These are known to the quarry owner and are left to breed in an undisturbed state both during the quarry activities and since activity ceased on site. The gravel islands on the quarry floor could be retained as nesting sites for the Falcons which is considered io represent a positive impact.

The habitat present within Ballyheedy quarry depend on current management activity and hence are disturbed habitats of low negligible ecological value.

The quarrying activities on site have resulted in a loss of ash-hazel scrub/woodland in the SC area, although some of this area has since revegetated. This is considered to be a permanent slight impact to locally important (higher value) habitat.

The quarry allows for the retention of a number of locally important ecological features including lagoons and woodland/scrub, in particular within the area to the north of the site.

The existing management which provides for a suitable post operation rewilding and revegetation plan, recognises developing habitats, supports the retention of

key ecological receptors, monitors and protects water quality and has the potential to improve local biodiversity within the SC area.

Potential Retrospective Effects on European Designated Sites

10.4.11 In total, three European designated sites were examined including the East Burren SAC (Site Code: 001926), the Coole Garryland SAC (Site Code: 000252) and Caherglassaun Turlough SAC (Site Code: 000238, the closest which is the East Burren SAC located approximately.0.56 km west and south-west of the quarry site. A potential groundwater hydrological connection exists between the Coole Garryland SAC and the Caherglassaun SAC and the quarry site**.** The separation distance between the SC quarry site and the Coole Garryland SAC is approximately 1.1 kilometres and the separation distance between the SC quarry site and the Caherglassaun SAC is approximately 5.7 kilometres. The matter of Appropriate Assessment is addressed in detail below within this assessment.

Potential Retrospective Effects on existing habitats

10.4.12 Potential effects on pre-quarrying habitats as a result of land take are evaluated as imperceptible in the long term having regard to their generally low ecological value and the large availability of alternative habitats in the wider landscape. Potential effects from fugitive dust leaving the site and becoming deposited on adjoining habitats is stated would be low as dust would only have affected habitats within 25 metres of the quarry site and would have been minimised by the existence of the quarry faces and the vegetation around the perimeter of the quarry site which would have assisted in reducing the airborne emissions leaving the site.

Potential Retrospective Effects on birds

10.4.13 Reference to the existence of a pair of Peregrine Falcons has been made above and these have arrived onto the SC quarry area since the quarrying activities ceased. However, it is also noted that the falcons only arrived as a result of the quarrying activities on site and therefore, represent a positive impact arising from quarrying within the SC site. Bird surveys were conducted in 2020 and again in 2022 and common birds noted were those referenced in Section 10.4.6, above. All birds and their nesting places are protected under the Irish Wildlife Act 1976, and the Irish Wildlife Amendment Act 2012. It is submitted that birds which were

present prior to quarrying activities were limited to general passerine species classified as being of local importance (higher value).

Potential Retrospective Effects on Mammals

10.4.14 There was evidence of the existence of the Pine Marten along the western site boundary in 2020, which are protected under the Irish Wildlife Acts 1976-2012. The Irish Hare was also observed within the quarry site boundary. Other mammals likely to use the site would include rodents, badgers, hedgehogs, stoats and foxes. It is submitted that given the site's limited ecological value, potential for impacts on disturbance or displacement of mammals arising from historical quarrying activities would have been no greater than imperceptible in the long-term.

Potential Retrospective Effects on Bats

10.4.15 Habitats within the site area are stated to have been of limited ecological value to bats and the availability of suitable habitat within European sites, including the East Burren SAC and Termon Lough, located in excess of 560 metres west and south-west of the quarry site. Accordingly, potential for impacts from disturbance / displacement as a result of the operations are rated as having been imperceptible in the long-term, due to the separation distances from roosts and due to the existence of sub-optimal habitat for the bat species within the SC quarry site area.

10.4.16. Conclusion - Biodiversity

Mitigation measures implemented, including the management of the rewilding areas and the protection of water quality and the key ecological receptors (Peregrine Falcons) on site. The implementation of a suitable post landscape plan which recognises developing habitats, and the continued non-disturbance key ecological receptors has the potential to improve local diversity. While quarrying and related activities will have inevitably impacted directly on ecological habitats, with the adoption of mitigation measures outlined and taking into account the revegetation and planting measures proposed, a finding of no significant adverse ecological impacts are evident from works to date within the Substitute Consent application area at Ballysheedy Quarry.

10.5 **Soils and Geology**

10.5.1 The land, soil and geological environmental factors are considered in Chapter 6 of the rEIAR. Figure 6.1 includes the soils map for the area as published by the Geological Survey of Ireland (GSI). The soils in the area are identified as being shallow well drained mineral ones. Within the SC area, the quarry has been worked for the extraction of limestone rock and aggregates. There are shallow soils remaining, including the unquarried area to the north of the site, where soil depths of 0.5 metres to 1.5 metres deep exist.

The GSI mapping identifies subsoils in the area as comprising karstified bedrock outcrop and subcrop and till derived from limestone parent material. In terms of bedrock, the GSI indicates that the SC area overlies the Tubber formation which comprises Crinoidal, cherry limestone and dolomite.

10.5.2. Previous operations on the existing quarry site involved extraction of limestone aggregate and rock. It is stated that extraction has taken place below the water table during quarrying activities. The applicants state that the water table on site varies marginally by no more than 0.6 metres between the winter water level (30.1 AoD) and the water levels in Summer (stated to be 29.5 AoD).

10.5.3. The aquifer underlying the Ballysheedy quarry is classified as a regionally important karstified aquifer as per the GSI website**.** Groundwater flow is stated to be in a north westerly direction towards the Coole Garryland lakes and turloughs which are located approximately 1.1 kilometres north of the quarry area, and these water features are potentially interconnected. Groundwater flow to Coole Lough in turn flows to Garryland and Caherglassaun Loughs via the epikarst, a shallow flow system. A number of turloughs occur in the area surrounding the Ballysheedy quarry site. Typically, groundwater flows in the upper 2-5 metres in karst areas which are often characterised by fluted clints, grikes, small deflation structures, solution open joints and fissures. These systems can carry volumes of water from minor to very large flows. There is no surface water outlet to Galway Bay from the SC quarry site.

10.5.4. The site is not located within a geological heritage area and the closest such area is the Beagh-Ballymoon Esker, approximately two kilometres east of the site.

10.5.5. In terms of land use, the development involved quarrying activities on an area which was suitable for agricultural use. The quarrying has resulted in a permanent

loss of land, removing its availability potential for crop production or other agricultural use. However, I am satisfied that the loss is small by comparison to the available land in the area locally and the wider county area for similar uses.

10.5.6. The extraction of limestone has also resulted in the loss of a geological resource. However, this resource is used as a raw aggregate for road construction, house building and agricultural development. I am of the opinion that these represented a beneficial impact to the local and regional economy and is supported by national and local planning policy, as outlined under the Planning Policy section, included within this report above.

10.5.7. Previous potential for contamination of exposed subsoil from spillages or leakages from machinery would have been likely with a resultant moderate significant impact. It is submitted that laboratory analysis of the water within the lagoon on site has revealed that groundwater quality at the site has not been adversely impacted by previous operations (though slightly elevated levels of ammonia were recorded). However, these are likely to be associated with agricultural activities or as a result of domestic wastewater run-off.

10.5.8. It is stated that mitigation measures were implemented during the quarrying activities and included bunded fuel tanks within designated buildings, no chemicals were stored on site, emergency spill kits were made available. It is also stated that there were no reported incidents during the operational period of the quarry. Remedial mitigation measures are set out with the primary one being the natural revegetation/rewilding of the site including planting of woodland, post-remedial mitigation measures outlined above, residual impacts are assessed as being long-term and negligible.

10.5.9. Conclusion – Land, Soils and Geology

The previous quarrying activities within the substitute consent area has resulted in the loss of a geological resource and the loss of land for agricultural purposes. However, such losses are not unacceptable, having regard to the primary function of the quarrying activities to harness the natural resource which led to benefits within the construction and agricultural sectors and also noting the wide availability of agricultural land in the vicinity. Beyond these identified impacts, the quarrying activities are unlikely to have resulted in significant impacts on land, soils and

geological environmental factors. The natural revegetation on site will allow for the biodiversity that has developed on site to remain undisturbed which is considered to represent a suitable and positive rehabilitation of the former quarry site.

10.6 **Water**

10.6.1 Surface water and groundwater are considered together in Chapter 7 of the applicants rEIAR. The site is underlain by a regionally important karstified aquifer. The vulnerability within the quarry is assigned a rating of extreme vulnerability due to the exposure of bedrock at the surface or near the surface within a karstified area, which are often recognised as being areas of high vulnerability. In karstified areas, groundwater is likely to circulate and have previously circulated predominately through faults, fissures and fractures.

10.6.2 Under the EU Water Framework Directive (2000/60/EC) (WFD) risk classification, the quality of surface water at the monitoring station closest to Ballysheedy quarry is classified as moderate at two different water quality stations within two kilometres of the site (to the west and south-east) with the water quality deteriorating from moderate to poor further south-east of the quarry. The surface water in the area of the quarry has an overall risk rating of 1b-probably at risk of not achieving good status, with the overall catchment water quality described as being poor. The objective for the catchment is to restore the River Drumminacloghaun catchment to good status by 2027. I refer to the Memorandum (SU-07) in relation to water quality and groundwater, prepared by An Bord Pleanála Scientist, Mr . Emmet Smyth which has been appended to my Planning Report

10.6.3. In 2014 and 2020 and 2022, surface water quality monitoring was conducted by the applicant. It is stated that no surface water discharge occurred on site during the quarry operations, some pumping of water from the lagoon area occurred when the pit within the SC was being excavated. The water was discharged to ground at the northern part of the site. Water samples were taken from the lagoon area and analysis would indicate that previous extraction activities within the SC area did not adversely impact groundwater quality. The water samples were clear and there was no evidence of turbidity and water visibility exceeded one metre in depth. Concentrations of nitrate were recorded as being within acceptable

standards. Concentrations of ammonia were recorded as being slightly elevated, however these are considered to be indicative of inputs from agricultural activities and/or run off from wastewater treatment systems.

10.6.4. Given the high permeability of gravels underlying the application site and information available on the OPW flood maps, I am satisfied that there is or was no real risk of pluvial flooding as a result of the historic activities on site. In addition, OPW Flood maps do not contain any recorded historical flood events on or in the vicinity of the site.

10.6.5 Groundwater monitoring has also occurred on site and water levels within the lagoon area of the quarry floor are recorded as being stable and varying between 29.5 metres AoD during the autumn period at 30.1 metres AoD during the winter period. The applicants set out that it is unlikely that there is a connection to the groundwater from within the quarry site, even though the site overlies a karstified aquifer. The EPA data indicates that ground and surface water levels within the regional Gort lowland area varies between 4 metres and 15 metres Ordnance Datum to the east and north of the quarry site. Groundwater flow direction is stated as being in a north-westerly direction towards a wetland/marsh area and ultimately towards the Coole Garryland SAC. Given the relatively low level average throughflow of water at the quarry, stated to be 0.002 cubic metres per second and the good water quality recorded within the quarry lagoon, the potential for adverse impact upon water quality within the Coole Garryland complex is considered to be negligible.

10.6.6 Groundwater status in the quarry area is of a higher quality that the groundwater status of the region which is classified within the WFD as being poor. It is stated that the groundwater quality in this region is unlikely to achieve the recommended good status within the period to 2029. This higher water quality standard achieved within the quarry lagoon would indicate that the previous quarrying activities did not adversely impact water quality within the site or within the groundwater underlying it. Water sampling was carried out within ten groundwater wells within the site. From these sample wells, it is apparent that groundwater flow is in a north-easterly direction. The groundwater vulnerability within the quarry area is primarily assigned a rating of extreme vulnerability due to the exposure of bedrock

at the surface or where rock is near the surface within a karstified area, and due to the particular sensitivities associated with karstified areas. The water quality results submitted (Appendix 7.1 within the rEIAR) indicate that water quality on site has been deemed as good. Water levels within the quarry are recorded as being stable and do not show a large variation in levels which would be typical of both surrounding turlough areas.

10.6.7 These observations would indicate that the groundwater environment within the SC area has not been adversely impacted by the quarrying activities as there are no requirements for the pumping of water from the quarry floor area. This would also indicate that there are no significant inflows of groundwater to the site. Some small seepage from the quarry faces into the lagoon was evident**.**

10.6.8. In summary, it is submitted that results indicate previous activities which occurred on site did not have a detrimental impact on groundwater quality.

10.6.9. Potential impacts that may have arisen from proposed quarrying activities on the hydrological and hydrogeological environment are presented in Section 7.10 and are rated moderate or imperceptible and these include:

- increased silt-laden runoff from the quarry floor and stockpiles had potential to degrade local surface water quality and potentially impacting groundwater within the regional aquifer.
- runoff /recharge containing hydrocarbons could have impacted on the groundwater system.
- increase in vulnerability of underlying aquifer arising from soil stripping to access rock and aggregate could have impacted on the groundwater system.

10.6.10. Mitigation measures stated to have been adopted are set out within Section 7.11 and are stated to have included: No storage of potentially contaminating substances on site. Water for dust suppression was sourced from the on-site lagoon, settlement of suspended material occurs within the onsite lagoon and impact upon the groundwater has been minimal. No known adverse impact on groundwater levels and no karstic connections to the regional groundwater aquifer were identified**.**

10.6.11. Conclusion - Water

Based upon the observations and findings set out above including the mitigation measures put in place, I consider that it is reasonable to conclude that the historic quarrying activities are unlikely to have resulted in adverse impacts on surface waters and/or groundwater. Results from water analysis support the assertion that there is no evidence to suggest that quarrying activity gave rise to significant adverse impacts on the receiving water environment.

10.7 **Climate**

10.7.1 Climate is addressed in Chapter 8 of the rEIAR. A profile of the climate by reference to the closest Met Eireann synoptic weather station at Gort, located approximately 3 kilometres north-east of the site is set out. Monthly average rainfall at the Gort Meteorological rain station is provided as well as at Ballysheedy quarry and the results are identified as being identical.

10.7.2. Emissions associated with the historic development arising from plant generated exhaust emissions (e.g., Sulphur dioxide and Nitrous oxides) are assessed as having had a slight impact over the long term operational phase.

10.7.3. Conclusion - Climate

It is not likely that the works at Ballysheedy quarry had any impact upon the local or global climate. Mitigation measures have been implemented on site and are stated to have included adherence to good practice to minimise emissions including regular maintenance of plant, the switching off of plant and machinery when not in use to avoid unnecessary dust generation and emissions and the plant and equipment on site was operated in accordance with Best available technique (BAT) guidance. Post mitigation, no residual impacts on climate have been identified.

10.8 **Air Quality**

10.8.1. Air quality is addressed in Chapter 9 of the rEIAR. There are no statutory limits for deposition or official air quality criterion for dust annoyance set in Ireland. The TA Luft (German Government 'Technical Instructions on Air Quality') sets a guideline of 350 mg (m2 *day) as measured using Bergerhoff type dust deposit gauges for

the deposition of non-hazardous dusts. Below these thresholds dust problems are considered less likely. Recommendations outlined in 'Quarries & Ancillary Activities: Guidelines for Planning Authorities (DOELG 2004), also apply the limit of 350 mg/ (m2 *day) to the land ownership boundary of quarries. The Air Quality Standards Regulations 2011, as amended, set certain limits for pollutants and of relevance to the quarry site, include PM10 and PM2.5.

10.8.2. The applicants conducted dust monitoring at three locations along the southern, western and eastern boundaries of the quarry site and results/details are illustrated within Table 9.3**.** Results are recorded as being below the threshold limit of 350 mg (m2 *day) as measured using the Bergerhoff method at all three dust monitoring locations. Therefore, on the basis of the dust results gathered at Ballysheedy, the impact of dust deposition is considered to have been slight, adverse and localised.

10.8.3. The nature and particle size of the aggregates being handled on a quarry site have a fundamental influence on their tendency to be broken down and to generate dust emissions. Other relevant factors include material density and particle shape. Mechanical activity is the most significant factor in the generation of dust. The effect of wind and high ambient temperatures are also important factors in dust generation and migration. Problems may arise within quarry sites when all of these factors arise simultaneously. As dust travels downwind from the source it initially disperses outwards and upwards and then progressively falls to the surface. Larger particles fall first and, therefore, do not migrate as far as smaller particles. The concentration of dust, therefore, reduces very quickly from the emissions source. Most emitted dust is deposited close to its source, generally within a distance of a few tens of metres. Only one recorded complaint of dust was received, this was in 2007, as part of a submission received during the Section 261 registration process.

10.8.4 The amount of dust capable of being dispersed to a particular location during windy conditions relates to a number of factors including the distance between the source and receptor, prevailing weather conditions and intervening topography between the source and receptor. The concentration of dust, therefore, reduces very quickly from the emission source.

10.8.5 Mitigation measures, all of a standard nature, are stated to have been implemented. The primary measures included: Operating vehicles at a reduced speed; Road sweeping to reduce dust; Spraying surfaces and stockpiled material with water during dry periods; Material management to minimise exposure to wind; Maintaining a complaints register was maintained: Crushers were covered; Dust monitoring was and is conducted and records are retained as part of the environmental monitoring system in place on the quarry site, No significant dust will be generated on site with the maintenance of the vegetation on site, providing ground cover and the retention of the lagoon within the quarry floor.

10.8.6. Conclusion – Air quality

Based upon the observations and findings set out above, I consider that it is reasonable to conclude that the previous quarrying activities within the substitute consent area, the subject of this application were unlikely to have resulted in significant impacts on air quality.

10.9 **Noise and Vibration**

10.9.1 Noise and Vibration are examined in Chapter 11 of the rEIAR. At the outset, reference is made to the Environmental Management Guidelines (EPA, 2006). In relation to quarry developments and ancillary activities, it is recommended that noise from the quarrying activities on site would not have exceeded the following noise limits at the nearest noise-sensitive receptors:

- LAeq (1 hour) - 55dBA (daytime) and LAeq (1 hour) - 45dBA (night time).

10.9.2 The hours of operation at the quarry are stated to have been Monday and Friday 7:00 to 18:00 and Saturdays from 7:00 to 14:00.

10.9.3. The assessment presents the predicted noise level for three different activities, which they refer to as scenarios. These activities included the removal of overburden, the extraction of rock from the SC area by blasting and excavation, the transfer of rock to a mobile crushing unit, aggregates were subsequently stockpiled and loaded onto trucks for export off-site. Noise levels at each of the noise sensitive locations are presented in Table 10-1 of the rEIAR. In 2007, the main noise source was identified as being passing road traffic. In 2014, the main

noise source was again identified as being passing road traffic on the M18 Motorway, located east of the quarry site and in 2022 noise levels at all of the monitoring stations were recorded as being below the daytime limit of 55dB LAeq (1 hour).

10.9.4. Noise associated with HGV movement to and from the site was also assessed. Up to 105 HGV movements per hour were associated with the construction of the M18 road scheme at its peak. The noise associated at the nearest noise associated sensitive receptor to the east of the site was calculated at 41dB (A), LAeq, 1 hour. The maximum predicted noise associated with the quarry operation was stated to be 54dB (A), LAeq, 1 hour, which does not exceed the 55dB (A), LAeq, 1 hour threshold, accepted as the recommended noise threshold by the EPA, ICF and the Department of Housing, Local Government and Heritage.

10.9.5 There is no published national guidance relating to the maximum permissible noise level that may be generated for a project of this nature. By reference to BS 5228: Code of Practice for Noise Control on Construction and Open Sites (Part 1: Noise) and NRA/TII limit values, which I am satisfied are relevant guidance for the enabling/construction stage of the project, noise generated during soil stripping and overburden removal would not likely have exceeded the limits set out.

10.9.6. During quarry operations it is stated that blasting occurred within the quarry site between two and four times a month during the peak extraction period of 2009-2010. The result of the blasting resulted in the generation of noise and vibration. Advance notification of blasts was provided to local residents. It is stated that the blasts were managed in accordance with best practice standards to ensure that any potential impacts associated with this activity were minimised. The blasting would typically last for 1-2 seconds and the noise level associated with the blasting reduces with distance. Due to the separation distance between the quarry and nearest noise sensitive receptors, while the blasts would have been audible, their impacts would not have exceeded the thresholds set out within best practice standards as set out by the EPA and the Construction Federation Guidelines in respect of vibration and air overpressure limits at sensitive receptors in the vicinity of the development. The impact of blasting has been further reduced with the

presence of planting around the perimeter of the quarry site and through the implementation of best practice blasting procedures.

10.9.7 Mitigation measures are stated to have included Good environmental management: Maintenance and operation of plant and vehicles: Turning off plant and vehicles when not in use; Maintenance of haul roads to a good standard and low gradient: Limiting of crushing until after 8am: Use of acoustic enclosures on crushers and screening plant and the natural screening provided by quarry faces. Best practice blasting methods were used by professionally trained blast engineers, laser profiling was used to ensure optimum blast ratio was maintained, no blasting at weekends or on Bank holidays and a log of blasting on site was maintained.

10.9.8. Noise monitoring has been conducted at three noise sensitive locations since 2007 and results of the monitoring between the years 2007 and 2022 have been submitted. Results of the noise monitoring at the nearest noise sensitive receptors was recorded as being within the recommended guideline values.

10.9.9. It is not considered that there would have been an adverse impact on noise quality in the vicinity of the application site provided that various measures and best practice standards were applied.

10.9.10. Conclusion – Noise and Vibration

Overall, I am of the opinion that it is reasonable to conclude that the previous activities within the substitute consent quarry site did not result in any significant noise, blasting and/or vibration impacts and that no significant adverse impact arose for sensitive receptors from the operations within the substitute consent area in relation to noise and vibration.

10.10 **Traffic**

10.10.1 The applicant's examination of the retrospective traffic impacts as a result of the development is set out in Chapter 13 of the rEIAR. It is submitted that there would have been approximately 2 HGV movements (in and out of the quarry site) per hour per working day. It was also estimated that approximately four light vehicles arrived at the quarry site each working day and, therefore, four departures each evening, resulting in a total of 8 light vehicle movements per day to/from the

Ballysheedy quarry. It is stated that 75% of the HGV traffic was directly to/from the M18 Motorway construction project and, therefore, the local road infrastructure would not have been impacted by this traffic. It is stated that 25% of the HGV traffic would have used the 2.5 kilometres of local road infrastructure prior to connecting to the R458, the main regional route linking Gort with the west. It is stated that the quarry was using approximately 1% of the capacity of the L8500 during an average year, due to the high volume of HGV traffic directly accessing the M18 via the internal access track from the quarry area. An assessment of the junction capacity between the quarry access road and the L8500 was not deemed necessary as the capacity of the traffic is less than the 10% threshold set out by the National Road Authority, regarding junction capacity assessment within its Transport Assessment Guidelines.

10.10.2 Notwithstanding this, it is acknowledged by the applicants that HGV traffic would have had some impact upon the pavement quality on the local roads south of the quarry site, however this impact would have been modest given that much of the HGV movement occurred internally between the quarry site and the M18 motorway during its construction. The operators state that they contributed financially towards the resurfacing of sections of the L8500 over the lifetime of the quarry operations. Having reviewed the Road Safety Authority collision database, there were no recorded collisions at the junction of the L8500 and the quarry access road, which would indicate that the entrance has been operating within capacity and safely.

10.10.3. In terms of mitigation, the applicants kept the local roads cleaned when dirt or debris soiled the road surface and parking occurred within the site and not on the adjoining public road (L8500).

10.10.4. Conclusion - Traffic

The local road network appears to have accommodated the minor to negligible increase in HGV and other traffic generated without significant incidents, including insignificant impact on the carrying capacity of the road network, interference with traffic flows, creation of hazard and direct contribution to accidents. In light of this, I consider that it is reasonable to conclude that the impact, in traffic and transportation terms, of the quarrying and associated activities, the subject of this

substitute consent application were not likely to have resulted in any significant environmental impact.

10.11 **Landscape and Visual**

10.11.1 Chapter 12 of the rEIAR deals with the associated landscape and visual impact factors. In relation to the landscape, the assessment considers the National Landscape Strategy 2015-2025 together with the Galway County Landscape Character Assessment, set out within Appendix 4 of the Development Plan. The application site is located within the Central Galway Complex Landscape, 'Gort to Clarinbridge Lowlands. Ballysheedy is categorised as a working landscape and these areas are within settled landscapes and contain pockets of concentrated development or a unique natural resource. The main characteristics of this landscape include low drumlin fields spread across the area. Improved grassland is the dominant land use and when further detailed is located within a landscape type categorised as 'Farmed Lowland'. Within the land use capacity matrix contained within the Landscape Character Assessment referred to above, central lowlands are shown as having a moderate capacity to absorb extractive industry. As set out earlier in my assessment, the site is located in a rural area where agriculture is the predominant land use. The landscape sensitivity in this area is designated as being low. There are a small number of single houses and agricultural structures within the local landscape in the vicinity of the SC site.

10.11.2. The magnitude of change in the landscape as a result of the historic quarrying activities has been assessed as 'Medium' and the significance of landscape impacts of the development is assessed as localised and 'Moderate'. The loss of previous vegetation as a result of extraction of limestone aggregates undoubtably resulted in a change to the landscape at a local level. However, given the available natural screening from hedgerows and additional screening which has resulted from the perimeter revegetation, and noting the purpose of the development, which was to extract sand and gravel resources, on balance I consider the change to the landscape at a local level as acceptable.

10.11.3. In terms of visibility, the quarrying activity has had an impact on the visual and landscape character of the surrounding area. These impacts have arisen from: visibility of the abstraction area and plant, removal of vegetation and the final state

of the quarry. The quarry is fully or partially concealed in views from north-west, west and south-west and the impact upon the landscape character is significant, but localised. The SC area will remain concealed from many viewpoints due to the nature of the topography and existing vegetation in the area. The development has had localised moderate impact on the landscape character. However, the regeneration of the quarry, including habitat regeneration and scrub growth will ameliorate this impact in the medium term. The greatest impact on the landscape character are the exposed quarry faces of the excavation area and the stockpile of aggregates visible from close to medium distances to the north, north-east and east of the site. The impact is somewhat mitigated by hedgerows, trees and vegetation in the adjoining fields. The site is insufficiently screened at its most vulnerable northern boundary, resulting in high landscape and significant visual impacts. The SC area is also visible from areas along public roads in the vicinity of the site and there may be intermittent views of the quarry from the east, along the M18 Motorway route**.** Further impact reduction will be achieved with regeneration of grass, scrub and native woodland growth at the site. The impact arising from the quarry development is long term and slight in nature. The regeneration of vegetation on the site reduces the permanent negative impact on landscape character.

10.11.4 The site is located within an area of low population concentration. There are no protected viewpoints or scenic routes in the immediate vicinity of the site. A zone of visual influence (ZVI) was established and the key visual receptors within the ZVI were residential properties, local roads infrastructure, (including the M18), junctions and crossroads and sites of cultural or historic significance. A number of key viewpoints were selected within the ZVI and were considered to be representative of the main visual receptors within the study area. Due to the intervening vegetation, undulating topography of the site itself, the exposed quarry faces can only be seen from some locations, within approximately 2.5 kilometres to the north of the SC area, Visibility at distances beyond 2.5 kilometres would depend on weather conditions, intervening vegetation and topography. The views are from the R460 to the north, and other local roads to the north, east and south of the site.

10.11.5 The visual impact assessment submitted includes seven viewpoints. On inspection of the site and surrounding environs and noting the enclosed nature of the application site due to the local topography and the available screening by mature and semi-mature deciduous trees and hedgerows, the views were deemed to be of moderate sensitivity to the workings of the quarry. The greatest levels of visual impact arising from the SC area are confined to those experienced on a restricted number of views from a 100 metre stretch of the M18 motorway approximately two kilometres north-east of the site. The impact of the development on these views is considered to be long term and slight if no mitigation was to be put in place. The impact reduces considerably with natural regeneration and screening within the SC area. Due to a lack of intervisibility between the SC area and the nearest European sites, the development is considered to have neutral visual effects of these particular sites. I would agree with the findings of the visual impact assessment that the significance of impact would be neutral or result in 'no change' at all viewpoints. There are no protected viewpoints or scenic routes located within the SC area or in its immediate vicinity.

10.11.6 Mitigation measures reduce the visual effects of the quarry site. The mitigation measures include the retention of existing vegetation, introduction of screening including mixed woodland planting to the north within the SC area, regeneration of mixed woodland and areas of scrub and the establishment of biodiversity and wildlife amenity within the quarry faces and the lagoon feature on the quarry floor.

10.11.7 I am of the opinion that the mitigation measures would further reduce the visibility of the application site from the receiving environment and offset the impact associated with limestone abstraction activities.

10.11.8. Conclusion – Landscape and Visual

While the quarrying activities altered the landscape locally resulting in moderate impacts at a local level, given the enclosed nature of the site which is well screened, and noting the purpose of the activity and the revegetation plans in place, including a requirement for additional planting of woodland, such an impact is considered acceptable.

10.12 **Archaeological & Cultural Heritage**

10.12.1 Archaeological and Cultural Heritage is considered in Chapter 10 of the rEIAR. A revised Archaeological and Cultural Heritage assessment was submitted to the Board following the archaeological issue raised the submission received from the Department of Housing, Local Government and Heritage. Fifteen recorded monuments were identified within a one kilometre radius of the appeal site. One recorded monument was recorded within the SC site area, to the north. This Recorded Monument GA128-021 is described as a Cashel/enclosure area and in a 1982 survey showed little or no visible surface trace. Similarly, Aerial photography in 1995, 1999, 2004 and 2005 recorded no visible trace of the monument. A Cashel is depicted within the 6 inch Ordnance Survey (OS), the mapping of 1838 and within the later 25 inch 20th century OS mapping and again within the 1921 edition. The Consultant Archaeologist recorded no features of archaeological significance within, or in the immediate vicinity of the SC area during his field survey. In 2005 only two small sections of the recorded monument survived, one to the south of the enclosure which has been subsequently removed as a result of quarrying activities and another section of modern field boundary to the north appears to be extant. It is stated that the quarrying operations had a direct, permanent and negative impact on much of the national monument. It is stated that the 14 other national monuments within one kilometre of the SC area have not been impacted by the quarry operations.

10.12.2 No additional quarrying works are proposed within of the SC area. The red line SC boundary area has been shown removed from the national monument to ensure that no further impact upon the monument will arise on its remains in the future. I am, therefore, satisfied that no additional adverse impact upon archaeological remains will arise. The maintenance track along the perimeter of the quarry stops short on both sides of the recorded monument to ensure that any future maintenance will not further impact the remains of the recorded national monument.

10.12.3. There are no structures identified on either the Record of Protected Structures as set out within the current Galway County Development Plan or in the National Inventory of Architectural Heritage (NIAH) that are so close as to result in any adverse impact as a result of the historic quarrying activities.

10.12.4. Conclusion – Archaeological and Cultural Heritage

I am satisfied that the quarrying operations had a direct, permanent and significant negative impact upon the recorded monument GA128-021 as a result of the historic quarrying activities on-site. The remaining remnants of the archaeological enclosure are outside of the redline SAC boundary area and are stated to remain undisturbed. I am satisfied that there are no other features of archaeological significance within the site or in its immediate vicinity.

10.13 **Cumulative Impacts and Interactions**

10.13.1 Chapter 14 addresses the main interactions between the various aspects of the environment that may have been affected as a result of the quarry development. Cumulative impacts have been covered, where applicable, under the relevant chapters within the rEIAR. Quarrying can give rise to inevitable and unavoidable impacts on the environment and many of these impacts interact with each other. The main area of concern relates to the effects of the extraction and processing works which may have impacted on population and human health, hydrology and hydrogeology and the interaction with soils and geology and surface water processes, ecology, archaeology and on the landscape.

10.13.2. As the development is unlikely to have had a significant effect on the environmental factors assessed above, there are no other significant effects on the environment that are likely to arise from the development due to the interaction between those factors.

10.13.3. Cumulative impacts have been covered, where applicable, under the relevant chapters within the rEIAR. The SC quarry area is located within a rural landscape which has seen only relatively small scale development including rural one off dwellings and some agricultural development. The most significant development that occurred in the recent past was the construction of the M18 Motorway, located approximately one kilometre east of the appeal site, which itself was subject to both environmental and appropriate assessments prior to it being granted planning permission. I am satisfied that given the separation distances to other developments, which would be regulated such that no significant effects as a result of cumulative impacts with these or any other developments are likely to have arisen.

10.13.4. Conclusion on Cumulative Impacts and Interactions

In light of the assessment above, it can be concluded that no significant effects are envisaged from interactions between the historic quarrying and any associated activities and any of the environmental factors or as a result of cumulative impacts.

10.14 **Reasoned Conclusion**

10.14.1 Having regard to the examination of environmental information contained above, in particular to the rEIAR and supplementary information provided by the applicant, the report received from the Planning Authority and the submissions received from prescribed bodies in the course of the application, it is considered that the main significant direct and indirect effects of the historic development on the environment and measures to avoid, prevent or reduce such effects are likely to have been as follows:

- **Ecology and Water:** Impacts on aquatic ecology, including the underlying regionally important karstic aquifer, through ground water containing sediment and/or hydrocarbons, with potential for degradation of habitats, species and water quality. Such impacts are stated to have been mitigated by adherence to good environmental management during the quarry operation and rewilding phases. The mitigation measures include the natural revegetation of the site, the maintenance of the quarry faces including the Peregrine Falcon's habitat, the carrying out of water monitoring quality within the SC site boundaries, refuelling within designated bunded areas, the retention of the lagoon feature and the proposals for woodland planting to the northern part of the site. Nonetheless, having regard to all of the information on file, there is no evidence that adverse impacts of this nature arose on the receiving environment.
- **Land, soil and geology**: The quarrying activities within the application site have resulted in a permanent loss of a geological resource and loss of land for agricultural purposes**.** However, such losses are not unacceptable, having regard to

the primary function of the quarrying activities to extract the resource which itself brings benefits to the construction and agricultural sectors and would be imperceptible in size and scale when taken in context with the available agricultural lands in the area. Mitigation measures are stated to have included ensuring proper refuelling within a designated hardstand area, ensuring bunding of mobile fuel bowsers/tanks, ensuring stockpiled overburden was made stable through establishing vegetation.

- **Landscape:** While the quarrying activities altered the landscape locally resulting in moderate impacts at a local level, given the enclosed nature of the site, which is well screened, and noting the purpose of the activity and the rewilding proposals, such an impact is considered acceptable.
- **Archaeology:** I consider the quarrying operations had a direct, permanent and significant negative impact upon the recorded monument GA128-021 as a result of the historic quarrying activities on-site. The remaining remnants of the archaeological enclosure (comprising a field boundary) are located outside of the redline SC boundary area and will be retained.

11.0 Appropriate Assessment

11.1 Appropriate Assessment Stage 1-Screening

11.1.1 The project was subject to an Appropriate Assessment (AA) screening, and I have examined the Stage 1 screening report for Appropriate Assessment. Three European sites are deemed to be located within the zone of influence of the quarry site and are listed in Table 1 below.

Table 1:

European sites with the designated Zone of Influence and their Conservation objectives

European Site	Conservation Objective(s)
East Burren SAC (site code 001926) Located approximately 560 metres west and south-west of the site	• To maintain or restore the favourable conservation status of habitats and species of the East Burren SAC,
Coole Garryland Complex SAC (site codes 000252) Located approximately 1.1 kilometres to the north of the site.	• To maintain or restore the favourable conservation status of habitats and species of the Coole Garryland Complex SAC,
Caherglassaun Complex SAC (Side Code 000238) Located approximately. 5.6 kilometres to the north of the site.	• To maintain or restore the favourable conservation status of habitats and species of the Caherglassaun Complex SAC,

11.1.2. I am satisfied that other European sites outside of this potential zone of influence can be discounted as having potential for significant effects on the basis of separation distance and the lack of any complete source-pathway-receptor connectivity. The substitute consent site is not located within any European site and, therefore, I would agree with the applicants finding of no significant effects as a result of direct impacts as a result of the quarrying activities.

11.1.3 The quarry site is underlain by an aquifer classified as regionally important and karstified. Similarly, the groundwater vulnerability across the site, as mapped by the Geological Survey of Ireland, is reported as extreme with rock outcrop and subcrop or karst at or near the surface. Soils across the site can be described as Karstified bedrock outcrop or subcrop. Ground water flow across the site can be inferred from topography and as stated by the applicants to be in a northerly to north-westerly direction. Therefore, given the vulnerable karstified nature of the area, and that soil stripping occurred on site in order to allow for the extraction of

limestone aggregates to occur, there is potential that the quarrying activities on site to have impacted upon the underlying groundwater regime. Therefore, groundwater hydrological connectivity from the quarry site to nearby European sites will be considered in greater detail.

11.1.4 Given the karstified nature of the underlying rock which is highly sensitive to contamination through the cracks, faults and fissures that lie beneath the ground I consider that there is potential groundwater for the existence of hydrological pathways exists between the SC quarry site and the three SAC European sites as identified in table 1 above, via groundwater. A number of the Qualifying interests within these SAC, s are water dependant and require that water levels are maintained to a high standard of ecological status.

11.1.5 Given the potential groundwater source-pathway-receptor connection between the source and the receptors in this instance and the fact that the quarry site overlies a regionally important karstified aquifer which has a rating of extreme vulnerability, I would concur with the applicants that the water quality within the three European sites was potentially vulnerable to indirect adverse effects which had the potential to resulting in a deterioration in water quality within the SAC, s. Therefore, I consider that the potential for significant adverse effects on water dependant habitats and species cannot be screened out. Given the nature of the quarrying activities that were conducted on site, other potential indirect impacts that would need to be considered include noise, vibration and dust and how they may have adversely impacted upon the QI's within the three SAC's. Therefore, these European sites require further consideration at Appropriate Assessment – Stage 2.

11.1.6. Lighting within the site was another factor that could have adversely impacted protected species within the three European sites. However, there would have been limited use of lights during the evening hours at the quarry site, as the site closed at 6pm and any light used on site is stated to have been directed directly onto the site and not onto the wider landscape. The areas outside of the quarry footprint would have been unilluminated. Light cowls, hoods and louvres were used for the direction of light downward and inwards towards the quarrying workings area. Therefore, it is not considered that birds and more particularly bat

species were adversely impacted by light pollution from the substitute consent quarrying area.

11.1.7 In terms of consideration of Bats, daytime bat surveys as well as an assessment of suitable bat roost sites/habitats within the SC quarry area were conducted. A nocturnal bat survey was conducted in June 2020 and again in June 2022. The East Burren Special Area of Conservation (SAC) includes the Lesser Horseshoe Bat (LHB) as one of its Qualifying Interests. This particular SAC has two known nursery roosts, a transition roost and four known winter sites, the latter ones all in natural limestone caves. The nearest LHB roost within the East Burren SAC to the quarry site is located approximately 5.5 kilometres south-west of the appeal site as denoted within Map number 10 (Roost number 216) of the Conservation objectives for the East Burren SAC, available at (www.npws.ie)**.** There are no known LHB roosts within the SC site area. The core foraging range for the LHB is approximately 2.5 kilometres from their roosts. Therefore, I am satisfied that the LHB associated with the East Burren SAC has not been adversely impacted as a result of quarrying activities within the Ballysheedy SC quarry area.

11.1.8. **Appropriate Assessment Stage 1- Screening Conclusion**

Potential for significant effects on the East Burren SAC (Site Code: 002162), the Coole Garryland SAC (Site Code: 002162) and the Caherglassaun Complex SAC (Site Code: 002162) noting the sites' conservation objectives cannot be screened out for the reasons outlined above. Accordingly, a Stage 2 Appropriate Assessment is required to determine if the historic development was likely to have affected the integrity of these sites.

11.2 **Appropriate Assessment-Stage 2**

11.2.1 The planning documentation included a remedial Natura Impact Statement (rNIS) for the quarry development located in the south-west of Gort. The rNIS examines and assesses the potential for adverse effects of the quarry development on three European sites, namely the East Burren SAC, the Coole Garryland Complex SAC and the Caherglassauun SAC. Section 5.3 of the rNIS outlines the characteristics of the SAC. Section 5.4 sets out the potential impacts that arose from the operational phases of the development on the European sites, and Section 6 includes details of

mitigation measures that have been incorporated as part of the management of the quarry site.

11.2.2 The rNIS concludes that with the implementation of the mitigation measures and the implementation of preventative measures during the operational phase, adverse effects on the site integrity of the European site(s) alone, or in combination with other plans and projects can be excluded.

Appropriate Assessment of implications of quarrying activities on the European Sites

11.2.3 The following is an assessment of the implications of the project on the qualifying interest features of the three European sites, using the best scientific knowledge in the field as provided in the rNIS. All aspects of the quarrying activities which could have resulted in significant effects are assessed and details of mitigation measures used to avoid or reduce any adverse effects are considered and assessed. Given the nature of quarrying activities, it is considered that the main environmental issues that need to be assessed in further detail in tis particular instance, given the attributes of the local environment include groundwater, noise and vibration and dust.

Groundwater:

11.2.4 The majority of the site is located within the Water Framework Directive (WFD) catchment 29, Galway Bay Southeast. Due west of the subject site, approximately 560 metres to the nearest boundary of the East Burren SAC, the sub catchment 8 Kilchreest SC_010 which is located within the East Burren Complex SAC is in good status, with the Cannahowna SC_010 to the east in moderate status and deemed to be at risk of not meeting the objectives of the Water Framework Directive, arising from Nitrogen inputs, largely attributable to agricultural activities and outfall from domestic wastewater treatment systems, although. Its WFD status has improved since cycle 2 from poor to moderate.

11.2.5 The boundary of the SC quarry site is located within the Caherglassaun Turlough groundwater body (IE_EA_G_008) with an overall status designated as poor

chemically, for upwards trending phosphorus, however far from exceedance of threshold levels. This input is often attributable to agricultural activities and/or outfall from domestic wastewater treatment systems in the vicinity. This ground waterbody is at risk of not meeting the objectives of the Water Framework Directive. Groundwater flow is likely to be in a northerly to north-western direction inferring from pre-existing topography and the surrounding topography. Given the analysis of the waters taken within the quarry floor there is nothing of note to suggest that the activities at the site heretofore have had any adverse impact on the condition of groundwaters. Marginal elevation of Ammonia of 0.071mg/l or 71 μg/l would marginally breach the lower threshold of 65 μg/l of the Groundwater Regulations 2016, where assessment of adverse impacts of chemical inputs from groundwater on associated waterbodies would be recommended.

11.2.6 Groundwater flow in a north to north-westerly direction and away from the East Burren SAC. The groundwater flow is in the direction of the Coole Garryland SAC. The water sampling indicates normal levels of nitrates and slightly elevated levels of Ammonia. However, elevated levels of Ammonia are not typically associated with quarrying activities, but are typically associated with agricultural activities, such as run off from fertilisers and/or discharges from domestic wastewater treatment systems/septic tanks. On balance, based on the water sampling results submitted and the data available from the EPA website, I am of the opinion that the quarrying activities have not adversely impacted groundwater water quality and, therefore, are unlikely to have adversely impacted the water dependent qualifying interests associated with the three European sites, by reason of degradation of groundwater quality.

11.2.7 A number of Qualifying Interests (QI's) within the three European sites have been removed from further assessment as the potential for significant adverse effects on these particular QI's has been ruled out due largely to the absence of ground water hydrological connectivity between the appeal site and these particular QI's and due to the separation distances between the quarry site and the location of some of the specific QI's within the SAC boundaries. These Qi's include: Water courses of plain to montane levels; Alpine and Boreal heaths; Juniperus communis formations on

heaths or calcareous grasslands; Semi-natural dry grasslands and scrubland facies on calcareous substrates; Lowland hay meadows; Calcareous fens; Petrifying springs with tufa formation; Alkaline fens; Limestone pavements; Caves not open to the public; Alluvial forests; Marsh Fritillary, and the Otter relating to the East Burren SAC and the Juniperus communis formations on heaths or calcareous grasslands; Semi-natural dry grasslands and scrubland facies on calcareous substrates; Limestone pavements; Taxus Baccata Woods relating to the Coole Garryland Complex SAC and the Leser Horseshoe relating to the Caheerglassaun Turlough Complex SAC.

11.2.8 In terms of mitigation, the applicants have conducted water monitoring on the site as part of the environmental monitoring programme. Water sampling upstream and downstream of the quarry site is also carried out by the EPA. Given that the aggregate materials within the SC area are largely exhausted, there are no quarrying activities occurring on site at present, and there are no further extractions planned within the SC area, it is not envisaged that the revegetation of the site as proposed, would adversely impact water quality within the site, or indeed upstream or downstream of the site.

Noise and Vibration:

11.2.6 The main sources of noise associated with the quarrying activities related to traffic movements to and from the site, the movement of rock and aggregates within the site, the crushing of rock and the blasting of rock within the quarry pit areas. Noise monitoring was conducted on site and the noise results established that the main source of noise was from passing traffic on local roads and from the M18 Motorway post its construction. The noise monitoring conducted on site all indicate that the results were all within best practice noise standards of 55dBA as set out by the EPA, the Construction Federation, the EPA and the Department of the Environment. The maximum predicted noise associated with the quarry operation was shown to be 54dB (A), LAeq, 1 hour, which does not exceed the 55dB (A), LAeq, 1 hour,

established as the recommended noise threshold by the relevant environmental authorities.

11.2.9 Noise from the quarry site was monitored and the level of noise can be impacted by weather conditions, specifically wind direction. The prevailing winds re from the south-west and, therefore, I am satisfied that due to the separation distances from the nearest European sites that the protected species, including the Lesser Horseshoe Bat would not have been adversely impacted by noise activity from the site.

11.2.10 It is stated within Section 11.7.3 of the rEIAR that blasting of rock occurred on site on average once or twice a month. The blasting was conducted by competent professionals and in accordance with best practice methods. The noise monitoring results indicate that the noise from the quarrying activities on site, including rock blasting and/or the crushing of rock did not adversely impact the nearest nose sensitive receptors. Therefore, I am satisfied that no European sites would have been adversely impacted arising from blasting of rock within the quarry site and that the noise generated on site was acceptable in that best practice noise thresholds as set out by the EPA were not exceeded and the nearest noise sensitive receptors.

11.2.11 Mitigation measures are stated to have included; Good environmental management: Maintenance and operation of plant and vehicles: Turning off plant and vehicles when not in use; Maintenance of haul roads to a good standard and low gradient: Limiting of crushing until after 8am: Use of acoustic enclosures on crushers and screening plant and the natural screening provided by quarry faces. Best practice blasting methods were used by professionally trained blast engineers, laser profiling was used to ensure optimum blast ratio was maintained, no blasting at weekends or on Bank holidays and a log of blasting on site was maintained.

11.2.12 Noise monitoring has been conducted at three noise sensitive locations since 2007 and results of the monitoring between the years 2007 and 2022 at the nearest noise sensitive receptors were recorded as being within the recommended guideline values.

11.2.13 It is not considered that there would have been an adverse impact on the three European sites as a result of quarrying activities, including blasting within the SC site provided that various mitigation measures and best practice standards were applied.

11.2.14 I am of the opinion that it is reasonable to conclude that the previous activities within the substitute consent quarry site did not result in any adverse noise, blasting and/or vibration impacts within any of the three European sites.

Dust:

11.2.15 Dust is another environmental factor that had the potential to adversely impact upon European sites. The issue of dust was specifically addressed within Section 9.6 of the rEIAR. Dust monitoring was conducted at three locations in the on the perimeter of the quarry site. The results are set out within Table 9.3 and are recorded as being below the threshold limit of 350 mg (m2 *day) as measured using the Bergerhoff method at all three dust monitoring locations. Therefore, on the basis of the dust results gathered at Ballysheedy, the impact of dust deposition is considered to have been slight adverse and localised.

11.2.16 The nature and particle size of the aggregates being handled on a quarry site have a fundamental influence on their tendency to be broken down and to generate dust emissions. Most emitted dust is deposited close to its source, generally within a distance of a few tens of metres. Only one recorded complaint of dust was received, this was in 2007, as part of a submission received during the Section 261 registration process.

11.2.17 The amount of dust capable of being dispersed to a particular location during windy conditions relates to a number of factors including the distance between the source and receptor, prevailing weather conditions and intervening topography

between the source and receptor. Most emitted dust is deposited close to its source, generally within a distance of a few tens of metres.

11.2.18 The generation of dust arising from the crushing of rock is addressed in the noise and vibration sections within the EIAR are also to be considered. I am satisfied that habitats and species within the three SAC's and those located within the identified zone of influence would not have been impacted by dust emissions from the SC area by virtue of the separation distances between the source and receptors, where effects from dust emissions can extend up to two hundred metres (as per NRA guidance 2011) and Department of Environment, Heritage and Local Government guidance in 2004 regarding quarry development. I am similarly satisfied that noise from quarry excavation and crushing of aggregates on site would similarly not have adversely impacted upon protected species within the East Burren SAC, due to the separation distances between the source and receptor in this instance.

11.2.19 Mitigation measures, all of a standard nature, are stated to have been implemented. The primary measures included: Operating vehicles at a reduced speed, road sweeping to reduce dust: Spraying surfaces and stockpiled material with water during dry periods: Material management to minimise exposure to wind: Am on-site complaints register was maintained: Rock crushers were covered: Dust monitoring was and is conducted as records retained as part of the environmental monitoring system in place on the quarry site. I consider that no significant dust will be generated on site with the maintenance of the vegetation on site, providing ground cover is retained and expanded and the retention of the lagoon area within the quarry floor. I am satisfied that habitats and species within the SAC, s and those located most proximate to the appeal site would not have been impacted by dust emissions from the SC quarry area by virtue of the separation distances involved, where effects from dust emissions can extend up to two hundred metres (as per NRA guidance 2011) and Department of Environment, Heritage and Local Government guidance in 2004 regarding quarry development.

11.2.20 A description of the three SAC, s, Conservation Objectives and Qualifying Interests are available at (www.npws.ie). The relevant water dependent habitats and

species have been identified based on the consideration of the key environmental parameters identified and assessed in the Stage 2-Appropriate assessment above are set out in the tables below.

Potential Impacts on identified European Sites

Table 2

Site 1:

Name of European Site, Designation, site code: East Burren Complex SAC, 001926

Summary of Key issues that could give rise to adverse effects.

- Water Quality and water dependant habitats
- Noise, vibration and dust
- Habitat/species degradation/loss

Conservation Objective**:** To maintain or restore the favourable conservation status of habitats.

and species within the East Burren SAC.

		Summary of Appropriate Assessment			
Qualifying Interest feature	**Conservation Objectives Targets and attributes**	**Potential adverse effects**	**Mitigation measures**	**In-combination effects**	**Can adverse effects on integrity be excluded?**
Hard oligo-mesotrophic waters with benthic vegetation of Chara spp.	**T**o restore the favourable conservation status of the Hard oligo-mesotrophic waters with benthic	Deterioration in water quality arising from sedimentation and release of hydrocarbons to	Storage of fuels within a designated bunded area, no storage of contaminating	No significant in-combination adverse effects	Yes

	vegetation of Chara spp. within the East Burren Complex SAC	groundwater arising from quarrying activities on site and potentially adversely impacting upon protected habitat.	substances within the site, settlement of suspended solids within the quarry lagoon and no identified connectivity between site and the undergroun d aquifer.		
Turloughs	To restore the favourable conservation status of the turloughs within the East Burren Complex SAC	Deterioratio n in water quality arising from sedimentati on and release of hydrocarbon s to surface and/or groundwater arising from quarrying activities on	Storage of fuels within a designated bunded area, no storage of contaminati ng substances within the site, settlement of	No significant in-combinatio n adverse effects	Yes

		site and potentially adversely impacting upon protected habitat	suspended solids within the quarry lagoon and no identified connectivity between site and the undergroun d aquifer.		
Otter	**T**o maintain the favourable conservation condition of the Otter species within the east Burren SAC	Deterioratio n in water quality arising from sedimentati on and release of hydrocarbon s to surface and/or groundwater arising from quarrying activities on site and potentially resulting in species	Storage of fuels within a designated bunded area, no storage of contaminati ng substances within the site, settlement of suspended solids within the quarry lagoon and no identified	No significant in-combinatio n adverse effects	Yes

		degradation and/or loss.	connectivity between site and the underground aquifer.		

Overall conclusion: Integrity test

Following the implementation of mitigation, the operation of the quarrying activities did not adversely affect the integrity of this European site and no reasonable doubt remains as to the absence of such effects.

Table 3

Site 2:

Name of European Site, Designation, site code: Caherglassaun Turlough Complex SAC (site code 000238

Summary of Key issues that could give rise to adverse effects.

- Water Quality and water dependant habitats
- Habitat Loss/degradation

Conservation Objectives*: To maintain or restore the favourable conservation condition of the protected habitats and species within the Caherglassaun SAC.*

		Summary of Appropriate Assessment			
Qualifying Interest feature	**Conservation Objectives Targets and attributes**	**Potential adverse effects**	**Mitigation measures**	**In-combination effects**	**Can adverse effects on integrity be excluded?**

Turloughs	To maintain the favourable conservation condition turloughs within the Caherglassaun Complex SAC.	Deterioration in water quality arising from sedimentation and release of hydrocarbons to surface water channels and/or groundwater arising from quarrying activities on site and potentially adversely impacting upon protected habitat	Storage of fuels within a designated bunded area, no storage of contaminating substances within the site, settlement of suspended solids within the quarry lagoon and no identified connectivity between site and the underground aquifer.	No significant in-combination adverse effects	Yes
Rivers with Muddy Banks	To restore the favourable conservation condition of the rivers	Deterioration in water quality arising from sedimentation and	Storage of fuels within a designated bunded area, no	No significant in-combination adverse effects	Yes

	with nuddy banks within the Caherglassaun Complex SAC.	release of hydrocarbons to surface water channels and/or groundwater arising from quarrying activities on site and potentially adversely impacting upon protected habitat	storage of contaminating substances within the site, settlement of suspended solids within the quarry lagoon and no identified connectivity between site and the underground aquifer.		

Overall conclusion: Integrity test

Following the implementation of mitigation, the construction and operation of this quarrying activities did not adversely affect the integrity of this European site and no reasonable doubt remains as to the absence of such effects.

Table 4

Site 3:

Name of European Site, Designation, site code: Coole Garryland Complex SAC, (site code 000252).

Summary of Key issues that could give rise to adverse effects.

- *Water Quality and water dependant habitats*
- *Habitat Loss/degradation*

***Conservation Objectives**: To maintain or restore the favourable conservation condition of the protected habitats and species within the Coole Garryland Complex SAC.*					
		Summary of Appropriate Assessment			
Qualifying Interest feature	**Conservation Objectives Targets and attributes**	**Potential adverse effects**	**Mitigation measures**	**In-combination effects**	**Can adverse effects on integrity be excluded?**
Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation	To maintain the favourable conservation condition of the Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation within the Coole Garryland Complex SAC.	Deterioration in water quality arising from sedimentation and release of hydrocarbons to surface water channels and/or groundwater arising from quarrying activities on	Storage of fuels within a designated bunded area, no storage of contaminating substances within the site, settlement of suspended solids within the quarry	No significant in-combination adverse effects	Yes

		site and potentially adversely impacting upon protected habitat	lagoon and no identified connectivity between site and the underground aquifer.		
Turloughs	To restore the favourable conservation condition of turloughs within the Coole Garryland Complex SAC.	Deterioration in water quality arising from sedimentation and release of hydrocarbons to surface water channels and/or groundwater arising from quarrying activities on site and potentially adversely	Storage of fuels within a designated bunded area, no storage of contaminating substances within the site, settlement of suspended solids within the quarry lagoon and no identified connectivity between site and the underground aquifer.	No significant in-combination adverse effects	Yes

		impacting upon protected habitat			
Rivers with muddy banks.	To restore the favourable conservation condition of rivers with muddy banks within the Coole Garryland Complex SAC.	Deterioration in water quality arising from sedimentation and release of hydrocarbons to surface water channels and/or groundwater arising from quarrying activities on site and potentially adversely impacting upon protected habitat	Storage of fuels within a designated bunded area, no storage of contaminating substances within the site, settlement of suspended solids within the quarry lagoon and no identified connectivity between site and the	No significant in-combination adverse effects	Yes

			undergroun d aquifer.		
Otter	To restore the favourable conservation condition of Otter in Galway Bay.	Deterioratio n in water quality arising from sedimentati on and release of hydrocarbo ns to surface water channels and/or groundwate r arising from quarrying activities on site and potentially adversely impacting adversely impacting upon protected species.	Storage of fuels within a designated bunded area, no storage of contaminati ng substances within the site, settlement of suspended solids within the quarry lagoon and no identified connectivity between site and the undergroun d aquifer.	No significant in-combinatio n adverse effects	Yes

Overall conclusion: Integrity test

Following the implementation of mitigation, the construction and operation of this proposed development will not adversely affect the integrity of this European site and no reasonable doubt remains as to the absence of such effects.

11.2.21 The conservation objectives for the three SAC,s are to maintain or restore the favourable conservation condition of Annex 1 Habitats and Annex 2 species for which the SAC, s have been selected. The key water dependent species and habitats of qualifying interest of these SAC's which could potentially be impacted by the existing quarry development are set out in the Tables 2, 3 and 4 above. As the development is not located within any of the SAC,s, there is no potential for direct impacts on the habitats and species of qualifying interest.

11.2.22 In combination effects have also been considered as part of this assessment. I have considered the effects of the development in the vicinity of the quarry site, which mainly comprises of one-off rural dwellings and agricultural development and the M18 Motorway, approximately one kilometre east of the SC area. However, with the incorporation of best practice quarrying methods and the fact that many/all of these developments would have been subjected to their own individual Appropriate Assessments, Strategic Environmental Assessment and an Appropriate Assessment determination under the preparation of the Galway County Development Plans of 2016 and 2022, therefore, the cumulative environmental impact of development within the appeal site and within the adjacent lands have been considered, and deemed acceptable.

11.2.23 Following the Appropriate Assessment and the consideration of mitigation measures, I can ascertain with confidence that the quarry project has not adversely affected the integrity of the East Burren SAC, the Coole Garryland SAC, and the Caherglassaun Turlough SAC in view of the Conservation Objectives of these sites.

This conclusion has been based on a complete assessment of the implications of the project alone, and in combination with plans and projects.

Appropriate Assessment Conclusion

11.2.24 Having carried out screening for Appropriate Assessment of the project, it was concluded that in the absence of mitigation measures, that the quarrying activities had the potential to indirectly and adversely impact a number of the Qualifying Interests within the East Burre SAC, the Lough Coole and Garryland Complex SAC and the Caherglassaun Complex SAC, Consequently, an Appropriate Assessment was required of the implications of the project on the qualifying features of the European sites, in light of their conservation objectives.

11.2.25 Following the Appropriate Assessment and the consideration of mitigation measures, I can ascertain with confidence that the quarrying activities did not adversely affect the integrity of the East Burren SAC, the Coole Garryland Complex SAC, and the Caherglassaun Complex SAC, in view of their Conservation Objectives of these sites. This conclusion has been based on a complete assessment of all implications of the project alone and in combination with plans and projects.

This conclusion is based on:

- A full and detailed assessment of all aspects of the quarrying activities including mitigation measures in relation to the Conservation Objectives of the aforementioned designated sites.
- Detailed assessment of in combination effects with other plans and projects including historical projects, current proposals, and future plans.
- No reasonable scientific doubt as to the absence of adverse effects on the integrity of the. East Burren SAC, the Coole Garryland SAC and the Caherglassaun turlough SAC

13.0 Recommendation

13.1 Having regard to the provisions of Section 177 K(1)(J) of the Planning and Development Act 2000, (as amended) , which provides that the Board shall only

grant for substitute consent where AA is required and that it is satisfied that exceptional circumstances exist such that the Board considers it appropriate to permit the regularisation of development by permitting an application for substitute consent, I am satisfied that such exceptional circumstances exist in this case, and therefore recommend that substitute consent be permitted.

13.2 I recommend that the Board grant substitute consent subject to the following conditions:

1 (a) This grant of substitute consent shall be in accordance with the plans and particulars submitted to An Bord Pleanála on the 24th day of June April 2022 and relates solely to the area as outlined in red on the drawings submitted with the application, except as may otherwise be required to comply with the following conditions.

(b) The grant of substitute consent relates only to past quarrying activities that have been undertaken as described in the application and does not authorise any structures or any future development, including any further quarrying or any further excavation on site. Where such conditions require details to be agreed with the planning authority, the developer shall agree such details in writing with the planning authority and the development shall be in accordance with the agreed particulars.

Reason: In the interest of clarity and conservation of the environment.

2 A detailed plan for the revegetation and rewilding of the subject site, based solely on the extent of quarry extraction that has taken place to date, shall be submitted to, and agreed in writing with, the planning authority within twelve months of the date of this Order, unless, prior to that time, a planning permission has been granted for the further quarry development within the area covered by this grant of substitute consent.

Reason: In the interest of visual amenity and in order to enhance ecological value and to ensure public safety.

3 Unless permission is granted for the further quarry development within the area covered by this grant of substitute consent has been granted prior to that date, the developer shall lodge with the planning authority, within 12 months of the date of this Order, a cash deposit, a bond of an insurance company, or other security to secure the provision and satisfactory restoration/revegetation of the site, coupled with an agreement empowering the local authority to apply such security or part thereof to the satisfactory restoration/revegetation of any part of the development. The form and amount of the security shall be as agreed between the planning authority and the developer or, in default of agreement, shall be referred to An Bord Pleanála for determination.

Reason: To ensure the satisfactory restoration of the site.

4 A programme and timescale for ongoing monitoring of water quality shall be submitted to and agreed in writing with the Planning Authority. It shall include proposals for monitoring to be undertaken to establish a baseline and for the period during the restoration/revegetation works and that reports on the findings should be submitted to the Planning Authority.

Reason: To ensure protection of water quality.

Fergal Ó Bric
Planning Inspectorate
22nd day of February 2024

An Bord Pleanála

Memorandum
SU07- 313909

To: **Fergal O'Bric.**

From: **Emmet Smyth.**

Re: **John Madden and Sons Limited- Application for Substitute Consent, Ballysheedy, Gort, Co. Galway.**

Date: **9th February 2024.**

The bedrock formation underlying the subject site is the Tubber Formation, which is described as a Crinoidal and cherty limestone and dolomite. The site underlain by an aquifer classified as regionally important and karstified. Similarly, the groundwater vulnerability across the site, as mapped by the Geological survey of Ireland, reports extreme with rock outcrop and subcrop or karst at or near the surface. Soils across the site can be described Karstified bedrock outcrop or subcrop. Ground water flow across the site can be inferred from topography and an expected groundwater flow will be in a northerly, north-westerly direction.

The majority of the site is located within the WFD catchment 29, Galway Bay Southeast. Due west of the subject site, c.600m to the boundary of the SAC, the sub catchment 8 Kilchreest SC_010 which is located within the East Burren Complex SAC is in good status, with the Cannahowna SC_010 to the east in moderate status and deemed to be at risk of not meeting the objectives of the Water framework development largely from Nitrogen inputs largely attributable to regional agriculture. Its status has improved since cycle 2 from poor to moderate.

The redline boundary of the site is located within the Caherglassaun Turlough groundwater body (IE_EA_G_008) with overall status designated poor, chemically for upwards trending phosphorus, however far from the threshold level. This input is attributable to agriculture within the region. This

ground waterbody is at risk of not meeting the objectives of the Water Framework directive. Groundwater flow is likely to be in a northerly to north-western direction inferring from pre-existing topography and the surrounding topography. Given the analysis of the waters taken within the quarry floor there is nothing of note to suggest that the activities at the site heretofore have had any impact on the condition of groundwaters. Marginal elevation of Ammonia of 0.071mg/l or 71 μg/l would marginally breach the lower threshold of 65 μg/l in the Groundwater Regulations 2016, where assessment of adverse impacts of chemical inputs from groundwater on associated waterbodies would be recommended. Significantly elevated ammonia levels in groundwaters would be indicative of significant inputs from agricultural run-off's, i.e., fertilisers and or domestic wastewaters.

Presently there is no surface waters from the site with captured rainfall discharging to ground across the site. With recharge rates across the site of 601-700mm per annum.

In my opinion it is accurate to conclude that there is no obvious impact on groundwaters or surface waters from previous site activities.