



An
Bord
Pleanála

Inspector's Report ABP-304209-19.

Development	Quarry.
Location	Roscat, Tullow, County Carlow.
Planning Authority	Carlow County Council.
Applicant(s)	Kilcarrig Quarries Ltd.
Type of Application	Application under section 37L of the Planning and Development Act 2000, as amended, for further extension of quarry.
Observer(s)	None.
Date of Site Inspection	28 th June 2019.
Inspector	Patricia Calleary.

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1.0 Introduction

- 1.1. This report provides an assessment of the application for the further development of an existing sand and gravel quarry at Roscat, Tullow in County Carlow, in accordance with section 37L of the Planning and Development Act, 2000, as amended, hereinafter referred to as 'the Act'. The application is lodged by Kilcarrig Quarries Ltd. (c/o Earth Science Partnership (Ire) Ltd.) who are stated to have recently acquired the quarry. The application has been lodged in parallel with an application for Substitute Consent (File Reference: ABP-304207-19) which was received by An Bord Pleanála under section 177E of the Act in respect of past quarrying activities. The Substitute Consent application followed a direction by Carlow County Council in 2018 to the current owner and applicant in respect of both applications. It is stated by the applicant that the lands had previously been in receivership for a period and that on gaining title to the land, they requested the Section 261A (10) notice.

2.0 Site Location and Description

- 2.1. The application site, with a stated area of 14.7 hectares, is located in the townland of Roscat approximately 3km south west of Tullow and 2km east of Rathtoe in County Carlow. The site incorporates part of an existing worked sand and gravel quarry including an area, 4.7 hectares in size, which is the subject matter of the parallel substitute consent application as well as an area approximately 1.3 hectares which is stated was authorised by a previous planning permission (Carlow Co. Co. Planning No. CW7850). The remainder of the site incorporates adjoining agricultural lands currently used for moderate to high intensity tillage and grassland agriculture.
- 2.2. Access to the existing quarry site and the adjoining agricultural lands that are proposed to be used for quarrying, is from an established entrance off a local road, through a c.1km long gated laneway.
- 2.3. Existing ground levels on the worked area of quarry floor are between 63 and 64 metres (m) above ordnance datum (OD) and the greenfield area to its northwest has contours of between 70 and 72m above OD.

2.4. A dwellinghouse with an accompanying farmyard is located 68m northeast of the application site. Within a 500m radius of the site there is a relatively low density of dwellings and farmyards. The wider area is characterised by agricultural land uses, including tillage and grassland agriculture.

3.0 Project Description

3.1. As set out on the site notice, the development would comprise the following:

- removal of overburden, where present, and construction of screening berms;
- extraction of sand and gravel material down to 63 mOD which coincides with the level of the existing quarry;
- processing of extracted material using mobile plant;
- stockpiling of material;
- landscaping and restoration of the site;
- associated ancillary works.

3.2. It is submitted that the site has a reserve of c. 610,000 m³ which equates to 1.2 million tonnes. Permission is sought for a period of 25 years.

3.3. In addition to the drawings and documents received, the application is accompanied by an Environmental Impact Assessment Report and a Natura Impact Statement.

4.0 Planning History

4.1. As stated above, this application was lodged in parallel with an application seeking substitute consent (**Ref: ABP-304207-19**) on a 4.7 hectares area, which forms part of the current application site.

4.2. The relevant planning history for the site, which I have been made aware of, is set out in summary form below.

- **Reg. Ref. 6889:** Permission was refused (8th March 1984) by Carlow County Council for the development of a quarry at Roscat, Tullow, County Carlow.
- **PL1/5/71951:** Following third party appeals which followed a decision by Carlow County Council to grant permission (PA Ref: CW:7850), An Bord

Pleanála granted permission (23rd April 1987) for the development of a gravel pit and screening and batching plant with office and septic tank at Roscat, Co. Carlow.

- **PL.99.545:** Permission was granted by Carlow County Council (11th October 1999) for a new entrance to an existing sand and gravel pit subject to 11 conditions.
- **Section 261 Registration (QY/28):** The quarry was registered with Carlow County Council in 2007 subject to 15 conditions.
- **261A process: An Bord Pleanála Ref: 01.QV.0270/Planning Authority Register Ref: QY12/28:** On the 22nd day of August 2012, Carlow County Council decided that the quarry commenced operation after the 1st day of October 1964 and that no permission was granted under the Act. The Planning Authority also determined that an environmental impact assessment and appropriate assessment were required, but were not carried out. Following a review of the Section 261A (2)(a) Determination and Section 261A (4)(a) Decision, An Bord Pleanála confirmed the determination of the Planning Authority (10th October 2013) that the quarry development was carried out after the 1st day of February, 1990, that it required an environmental impact assessment, and that such an assessment was not carried out. Furthermore, having regard to the Habitats Directive, the Board decided that development at this quarry which was carried out after the 26th day of February 1997 required an appropriate assessment. The Board also set aside the decision of the Planning Authority, in respect of the development made under section 261A(4)(a) of the Act, noting that permission was granted in respect of this quarry (planning register reference CW7850) and the requirements in relation to registration under Section 261 of the Act, were fulfilled and in doing so noted that the requirements of Section 261A(3)(a)(i) and Section 261A(3)(a)(ii) of the Act have been met.
- **Notice Pursuant to Section 261A(10) of the Act:** On 25th October 2018, Carlow County Council directed the new owner, Kilcarrig Quarries Ltd. to apply to An Bord Pleanála for substitute consent in respect of the quarry and

that the application be accompanied by a remedial Environmental Impact Assessment report and a remedial Natura Impact Statement.

- **ABP-303084-18:** On the 7th day of January 2019, An Bord Pleanála granted Kilcarrig Quarries Ltd. an extension of the period for the making of an application for substitute consent under section 177E (4) of the Act for a further period of 12 weeks from the end of the original 12 week period that commenced on the 25th day of October, 2018.

5.0 Policy and Context

5.1. National Policy

5.1.1. National Planning Framework (Project Ireland 2040) (NPF)

- The NPF sets out a vision for the future development of the country and, in particular, to support the sustainable development of rural areas by encouraging growth. National Policy Objective 23 seeks to facilitate the development of the rural economy.

5.1.2. Quarries & Ancillary Activities: Guidelines for Planning Authorities

- These Guidelines, issued by the Department of Environment, Heritage and Local Government in April 2004, provide guidance to planning authorities on planning applications and development plan policy as well as section 261 of Act.

5.2. Regional Policy

5.2.1. Draft Regional Spatial and Economic Strategy (RSES) for the Southern region. Carlow is part of the South-East Region. The Southern Regional Assembly has prepared a Draft Regional Spatial and Economic Strategy (RSES) for the Southern region.

5.2.2. Regional Planning Guidelines for the South-East Region 2010-2022

Pending the finalising of the RSES for the Southern region, The current 'Regional Planning Guidelines for the South-East Region 2010-2022' apply.

5.3. Local Policy

5.3.1. Carlow County Development Plan 2015-2021 (and associated appendices)

- **Section 3.5.7 - Aggregate Resources, Mining and Extractive Industry:** Carlow County Council recognises the importance of sand and gravel extractions in the economic life of the county and its importance as a valuable source of employment in parts of the county. However, it is also recognised that exploitation of deposits or mining (open cast or underground) can have significant environmental impacts on the amenities of surrounding areas. The Planning Authority will have regard to the provisions of the 'Quarries and Ancillary Activities; Guidelines for Planning Authorities' document in the assessment and determination of development proposals.
- **SDO 8 Extractive Industries:** The County has a rich base of mineral resources which are of strategic importance to the local and regional economy.
- **E.D. Policy 13:** Provide for quarry and extractive development where it can be demonstrated that certain criteria are met.
- **Section 9.1: Natural Heritage**
Heritage – Policy 2 aims to protect and maintain the favourable conservation status and conservation value of all natural heritage sites designated or proposed for designation in accordance with European and National legislation and in other relevant international conventions, agreements and processes.
Heritage - Objective 3 requires the protection of water resources.
- **Section 11.16** deals with 'Extractive Industries' and the factors that will be considered in assessing any applications for quarry development.
- **Appendix 6** deals with Landscape Character Assessment.

5.3.2. County Carlow 2021 - Local Economic and Community Plan 2016-2021

- Under 'Economic Overview', it is noted that the County Development Plan recognises the following broad economic objectives for the County including providing for quarry and extractive development where certain criteria are met.

5.3.3. Natural Heritage Designations

- The southwest of the existing worked area is located in the Ardristan Fen proposed National Heritage Area pNHA (Site Code 000788);
- The River Barrow and River Nore Special Area of Conservation (SAC) (Site Code 002162) is located 12.7km west of the site;
- The Slaney River Valley SAC (Site Code 000781) is c. 1.8km east of the site;
- The Blackstairs Mountain SAC (Site Code: 000770) is located 14.2km south of the site.

5.4. **Observers**

5.4.1. No submissions were received from observers.

5.5. **Planning Authority Report**

5.5.1. Carlow County Council provided a report in which details of planning history and extracts of the current County Development Plan are set out. In addition, the following is noted:

- the southwest end of the existing pit area is located in the Ardristan Fen pNHA (Site Code: 000788);
- there is a watercourse c. 515m to the southwest of the existing pit with hydrological connectivity to the River Barrow and River Nore SAC (Site Code 002162);
- Environment Section recommend a grant of permission subject to conditions;
- Water Services Section raised no objection;
- Municipal District Office raised no objection to the proposed development, subject to conditions;
- Irish Water Submission to the Planning Authority states that there has been no impact on Irish Water Infrastructure;
- the Planning Authority has no objection to the development subject to adherence to a number of requirements, including landscape proposals to be sufficiently detailed, a groundwater monitoring programme and aquifer protection plan, extraction depths to remain above the water table. Other

requirements around environmental factors including noise, vibration and dust, water quality and traffic and transportation are also set out;

- notes the proposal would bring quarrying activities closer to dwelling houses in the area and that appropriate measures would be put in place to protect residential amenities;
- recommends that a progressive restoration plan is required.

5.6. Prescribed Bodies

5.6.1. The application was referred by An Bord Pleanála to a number of Prescribed Bodies for comment and the following responses were received.

Transport Infrastructure Ireland (TII)

- the access is onto the N81 national road at a location where a 100kph speed limit applies;
- any recommendations arising out of the traffic analysis contained in the EIAR should be included as conditions.

Irish Water (IW)

- Notes the area is served by public water, that no impact on IW infrastructure would arise and that IW have no objection.

5.6.2. In addition to the above, I note the submissions received in respect of the parallel substitute consent application. In that application, which is also before the Board, the submission from Inland Fisheries Ireland (IFI), in addition to referring to past operations, also provides comments relating to further development which are relevant to the current application, including the following:

- systems should be put in place to ensure that there will be no suspended solids or other deleterious matter to watercourses during any phase of the works;
- all surface water should be channelled through adequately sized petrol/oil interceptors and be subject to attenuation prior to discharge to surface waters;
- threat from concrete / cement washings on receiving watercourses and their habitats and fisheries would be significant;

- wash water from any wheel wash should be directed a suitable treatment facility;
- concerned that the access route between the site and the N81 has not been included on the site layout plan;
- request that road be paved or finished in hard-core or clay and practical steps taken to minimise dust arising from the use of this road.

5.7. Applicant's response to Planning Authority's report

- details of landscaping and restoration are set out in the EIAR, and the visual impact assessment shows the site is well screened;
- regarding the proximity of the Ardristan Fen pNHA, a hydrological and hydrogeological assessment was carried out;
- predicted noise levels would fall below regulatory noise limits;
- proposed to install and monitor groundwater points on site to protect underlying aquifer;
- measures to protect residential amenity are proposed, including planted berms;
- access to the site has been previously permitted and the proposed traffic volume would be low.

5.8. Applicant's response to submissions

5.8.1. Irish Water's response was not circulated as no new issues were raised and hence no responses were received from the applicant. The applicant's response to IFIs comments regarding past operations are set out in the assessment report for the parallel Substitute Consent application (ABP-304209-19) and the following comments are considered relevant for the current application for future quarrying activities:

- all run-off from the site either percolates to ground or is directed through a water treatment system before leaving the site;
- it is proposed to install a self-contained wheel wash;

- if a Discharge Licence is required for the current proposals, this requirement would be complied with;
- road is paved in accordance with the conditions attached to a previous planning permission (Ref: PL99.545).

6.0 Assessment

6.1. This assessment on the application for further quarrying, as made under section 37L of the Act, should be read in association with the parallel application for substitute consent (ref. ABP-304207-19). The assessment below is set out in three sections under the following headings.

Section 7.0 - Planning Assessment

Section 8.0 - Environmental Impact Assessment

Section 9.0 - Appropriate Assessment

7.0 Planning Assessment

- 7.1. Within the 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, currently at draft stage, supports the implementation of the NPF, for the future physical, economic and social developments for the Southern Region.
- 7.2. 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 Carlow County Development Plan 2015-2021 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.

- 7.3. The report of the Planning Authority sets out that the Authority does not object to the development subject to adherence to the relevant provisions of the Carlow County Development Plan 2015-2021 and a number of conditions. Equally internal reports received from Environment, Water services and the Municipal District office express no objection to the development subject to conditions. Submissions were invited from prescribed bodies and two responses were received. The response from Irish Water notes that the area is served by public water and states that the development would not give rise to impacts on Irish Water's Infrastructure. The response from TII notes the access is onto the N81 and requires that recommendations arising out of the traffic analysis contained in the EIAR should be included as conditions.
- 7.4. IFI did not respond to the Board's request for submissions/observations on the current application, however, their submission received on the parallel Substitute Consent application (ABP-304207-19) is relevant as it includes comments on future quarrying development. The details of the IFI submission relating to further quarrying activities as received on that application are considered in detail under the heading of 'Water' within Section 8.0 - Environmental Impact Assessment of this report.
- 7.5. Having regard to the above, the 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 proposed development, by itself and in combination with other development in the vicinity, would be acceptable and that the integrity of European Sites would not be 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.
- 7.6. In the event of granting planning permission, the Board should attach a condition requiring payment of a development contribution in accordance with the Development Contribution Scheme for County Carlow. The current Carlow County Development Contribution Scheme 2017-2021 refers to a contribution for

extraction/quarrying of €1,500 per 0.1ha. There are no exemptions or reductions for a development of this nature.

- 7.7. Permission is sought to continue extraction into the extended area for a period of 25 years. It is submitted that based on the available reserve of 1.2 million tonnes, this would supply demand for approximately 25 years. This is above the upper end of what is recommended in the Quarry and Ancillary Activities Guidelines, 2004, which sets out that it is appropriate to grant permission for a period in excess of five years such as 10 to 20 years. In light of the nature of the development, the available reserves, the possibility for changing economic circumstances and noting the provisions of the guidelines, in the event of a grant of permission, it would be appropriate to grant permission for a 20-year period, which would be consistent with the approach taken by the Board in its consideration of other quarry applications.

8.0 Environmental Impact Assessment

8.1. Introduction and Statutory Provisions

- 8.1.1. This application was submitted to the Board after 16th May 2017, the date for transposition of Directive 2014/52/EU amending the 2011 EIA Directive. An Environmental Impact Assessment Report (EIAR) accompanied the application. It is laid out in three volumes including the main volume, a non-technical summary and a separate volume containing appendices.
- 8.1.2. Chapter 1 of the main volume provides an introduction and sets out the EIAR format, methodology and an overview of the EIAR chapters. It also includes a table setting out the names of the EIAR study team and details of their competencies and expertise.
- 8.1.3. Chapter 2 provides information on screening, scoping and alternatives which were studied by the developer. Four alternatives including alternative locations and layouts were examined and following examination of environmental considerations and constraints, the current proposal emerged as the preferred option. Having reviewed the matter of alternatives, I am satisfied that the applicant has adequately identified and described reasonable alternatives which are relevant to the project and the main reasons for the option chosen are clear.

- 8.1.4. Chapter 3 provides a description of the project which I have summarised under Section 3 of this report above. Chapter 4 sets out the planning and legislative framework. Chapters 5 to 15 (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 intended to mitigate such impacts. Chapter 16 provides consideration of the interactions and Chapter 17 provides a summary of the mitigation measures and monitoring proposed.
- 8.1.5. 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 development and the nature of the receiving environment, while unplanned events and accidents cannot be ruled out, these would be 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 result in it generating a risk of major accidents and/or natural disasters.
- 8.1.6. A separate volume containing appendices includes copies of consultation submissions. It also includes comments from the planning authority and prescribed bodies on the applicant's EIA Screening and Scoping Document in respect of both the substitute consent application (ABP-304207-19) made to the Board under Section 177E of the Act and the current application for further quarrying development under Section 37L of the Act. In addition it contains details of borehole logs, laboratory certificates of analysis, air quality and dust monitoring results, noise data, traffic assessment supporting photographs, TII manual and automatic count data, RSA collision data, the junction analysis programme PICADY output and a summary details of Recorded Monuments within the study area. Data limitations and any technical difficulties encountered in preparation of the EIAR are detailed in the relevant chapters.
- 8.1.7. I have carried out an examination of the information presented by the applicant, including the EIAR, and the submissions made during the course of the application. The issues raised are listed under Section 5 of this report above and are considered in the assessment below, together with the contents of the Planning Authority's

report and the applicant's response. The main issues raised relating to EIA are contained in the IFI submission on the parallel substitute consent application (File reference: ABP-304207-14). In that submission, comments are also made in relation to further quarrying activities which are relevant to consideration of this application and include concerns around the discharge of silt-laden waters to fisheries streams and the potential for adverse impacts on salmonid spawning beds and juvenile salmonid, as well as impacts on macro-invertebrate communities and degradation of habitats. The applicant has responded to this submission in the substitute consent application outlining environmental measures which were included in the past quarrying activities. I have considered the IFI submission insofar as it relates to further quarrying in greater detail below under the heading which considers and assesses the water environment. Impacts which might occur on the Ardristan Fen pNHA and the underlying aquifer are also prominent issues requiring assessment.

- 8.1.8. I am satisfied that the information provided in the EIAR is sufficiently complete and up to date and that the EIAR has been prepared by competent experts to ensure its completeness and quality. I am also satisfied that the information contained in the EIAR and supplementary information provided by the developer, adequately identifies and describes the direct, indirect and cumulative effects of the proposed development on the environment and complies with Articles 94 and 111 of the Planning and Development Regulations 2000-2019.

8.2. **Likely Significant Direct and Indirect Effects on the Environment**

The likely significant indirect effects of the development are considered below under specific headings, which collectively address the factors set out in Article 3 of the EIA Directive 2014/52/EU, including the following:

- Population and human health;
- Biodiversity, with particular attention to species and habitats protected under Directive 92/43/EEC and Directive 2009/147/EC;
- Land, soil, water, air and climate;
- Material assets, cultural heritage and the landscape; and
- The interaction between those factors

8.3. Population and Human Health

- 8.3.1. Chapter 5 of the EIAR considers the potential effects of the proposed development on population and human health. The application site is located in the Electoral Division (ED) of Tullowbeg with a population of 622 persons (CSO, 2016). Key populations that have the potential to be impacted upon by the development are identified as including persons residing and engaging in recreational, economic and cultural activities in close proximity to the site.
- 8.3.2. It is submitted under Section 5.2.4.3 (Economic Activity) that the applicant's quarry development at Bagnelstown, Co. Carlow provides employment for approximately 15 people directly, with a further 5 people employed indirectly and that the current proposal would provide additional employment in the Roscat/Tullow area with a positive impact on the local community as a result. I note that it is stated that the quarry would directly employ one part time employee and while I consider this is a very low estimate, I am satisfied that no increase in people moving to live in the area or change in population as a result of the quarrying activities is likely and the effects on the economy would be imperceptible.
- 8.3.3. I am satisfied that the development would have minimal or potentially no impact on tourism, recreational and amenities in the area having regard to the results of the traffic assessment and also noting that the site is naturally screened and the proposals for storage of excavated topsoil in perimeter berms. I would also agree that there has been no evidence that any future quarrying activity would deter people from living in the area.
- 8.3.4. Air and noise emissions, emissions to water and traffic associated with day to day activities are addressed in separate sections, but insofar as they relate to health, they are also addressed in a Human Health Assessment contained in Chapter 5. The methodology used in the assessment is stated to have had regard to that provided by the US Environmental Protection Agency (US EPA) and Draft Guidelines for Preparing Environmental Impact Assessment Reports (EPA, August 2017). Given the scientific information provided in Chapter 8 (Water), Chapter 10 (Air) and Section 11 (Noise and Vibration), together with that contained in Chapter 5 (Population and Human Health), I am satisfied with the conclusion reached that the significance of

effects on human health which would arise from negative impacts to water quality and as a result of air and noise emissions would be no greater than 'imperceptible'.

8.3.5. I am satisfied with the applicant's assessment that no mitigation measures to specifically address population and human health are required outside of those specified in other chapters which deal with factors which could interact with population and human health.

8.3.6. Conclusion – Population and Human Health

Overall and having regard to the above, I would agree with the conclusion reached in Chapter 5 of the EIAR that the proposal for further quarrying activities would not give rise to significant effects on the environment as a result of impacts on population or human health.

8.4. **Biodiversity**

8.4.1. Biodiversity is examined in Chapter 6 of the EIAR. Ecological receptors and justification for their respective survey area extents are presented in Table 6-1. The applicant's assessment included the collection of baseline ecological data, a phase one habitat survey and a fauna survey. Ecological features are evaluated based on a geographical frame of 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 15km radius.

8.4.2. Table 6.10 presents a summary of current habitats recorded on and adjacent to the application site, all of which are found to be of local importance in terms of habitat evaluation by reference to the Fossit Code of classification. Four habitats are rated 'higher value' within the 'local importance' category. These include ED1 (Exposed sand, gravel or till), FL8 (artificial lakes and ponds/settlement lagoons), WL1 (hedgerows) and WS1 (scrub). No rare or protected fauna were found during the habitat survey and it is noted that there are no Flora Protection order records within the site. Similarly, no invasive plant species was found, though records of Japanese Knotweed (*Fallopia japonica*) and Rhododendron (*Rhododendron ponticum*) were stated to have been registered in 2010 and 2007 in hectad S87 within which the application site is located. Birds which were recorded were generally all common countryside species. A colony of breeding Sand Martin (*Riparia riparia*), which is an

Amber-listed species under the Birds of Conservation Concern in Ireland was noted to be nesting in an onsite stockpile of sand in 2018. The colony is stated to contain c.50 nest entrances. During the applicant's ecological walk-over survey, two Goldcrest (*Regulus regulus*) and three Robin (*Erithacus rubecula*) which are also Amber-listed species were observed. The proposed application area is considered to be of 'lower value' within the 'local importance' category in relation to non-volant mammals, bats, amphibian, reptile and invertebrate species. Given the proximity of the application area to the Roscat Stream, it is considered to be of 'higher value' within the 'local importance' category in terms of aquatic ecology.

8.4.3. The proposed application area is located within the Barrow *Margaritifera* Sensitive Area (MSA), which is categorised as a catchment with previous records of *Margaritifera* but the current status is unknown (National Parks and Wildlife Service) (NPWS) 2017. It is stated that a data request from NPWS for this catchment revealed no records for Freshwater Pearl Mussel. The Slaney Upper and Slaney Dereen MSAs are also examined and it is stated that the proposed application area is not hydrologically connected with either of these two sites.

8.4.4. Table 6.14 sets out a Source-Pathway-Receptor-Effect (consequence) conceptual model for all potential effects of individual elements (sources) of the proposed project on sensitive ecological receptors and their respective potential for significant effects. Potential effects are then set out and I consider these directly below.

Potential Effects on European Designated Sites

8.4.5. In total, three European designated sites were examined including the Slaney River Valley SAC (Site Code: 000781), River Barrow and River Nore SAC (Site Code: 002162) and Blackstairs Mountain SAC (Site Code: 000770), the closest of which is the Slaney River Valley SAC located c.1.8km east of the site. A hydrological connection exists between the River Barrow and River Nore SAC and the application site via the Roscat Stream which is located approximately 520m to the west of the site. The hydrological distance between the site and this SAC is 15.5km. The matter of appropriate assessment is dealt with under separate heading below.

Potential Effects on National Designated Sites

8.4.6. No national heritage areas (NHAs) lie within the 15km potential zone of influence. Eight proposed Natural Heritage Areas (pNHAs) lie within the 15km radius of the site

area and are listed in Table 6.9 contained in Chapter 6 of the EIAR. The closest is the Ardristan Fen pNHA (Site Code: 000788) located largely due south of the site, as defined by the redline boundary. The area occupied by the Fen lies outside of the application site as defined by the redline boundary, however, a small portion extends into the area within the control of the applicant, as marked by a blueline boundary (Figure 6.2 and Figure 6.5 of the EIAR). Ardristan Fen pNHA is fed by springs around its periphery. It is stated in the EIAR that the site survey carried out in summer 2018 did not reveal springs, a matter which is attributed to the drought conditions during that particular summer.

- 8.4.7. It is stated that surface water currently passes and would continue to pass through an established series of five settlement ponds on site and would leave the final settlement pond via a 400mm culvert delivering clarified water to an open ditch situated on the southern site boundary, and thereafter continue to the Ardristan Fen pNHA and through drains within the Fen leading to the Roscat stream. In Chapter 8 (Water), it is stated that some of the clarified surface water would be harvested from the final pond for re-use on site for dust suppression.
- 8.4.8. It is stated that the Ardristan Fen has contracted considerably through land reclamation over the years since 1975 rather than from historical activities at the quarry when it was in operation. Figure 8.3 presents an aerial image with the reduced / working Fen area outlined in a green polygon. The area outlined is considerably smaller than the Fen as marked on the NPWS maps. The applicant asserts that on the basis of the reduced area that the application site is not upgradient of the Fen in terms of groundwater flow. Having reviewed the mapping and considered the above, it would appear that the hydrological connection between the site and the Fen may be broken at this point in time. It is not possible to be more conclusive on this matter in the absence of historical baseline information.
- 8.4.9. It is evident from a review of historic OSi mapping that this area which overlaps the applicant's landholding was previously a natural part of the pNHA and cannot be readily isolated from the current site. Impacts on the Fen from past quarrying activities cannot therefore be ruled out. However, I recognise, as stated above that

this area has been excluded from the current application site¹ and impacts which could arise in future quarrying activities are assessed below.

8.4.10. I am satisfied that based on information on file, there are no hydrological surface or groundwater pathways between the application site and any other pHNAs.

Potential Effects on Existing Habitats

8.4.11. Potential effects on existing habitats as a result of landtake 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 affect habitats within 25m and would be minimised by the perimeter berms which would reduce the airbourne emissions leaving the site.

Potential Effects on Birds

8.4.12. No removal of hedgerows would take place onsite. Impacts on general breeding birds species are evaluated as moderate in the short term and imperceptible in the long-term. As there is an active Sand Martin (*Riparia riparia*) breeding colony onsite, impacts on this bird species is evaluated as moderate in the long term.

Potential Effects on Non-volant Mammals

8.4.13. It is submitted that given the absence of protected mammal species onsite and the site's limited ecological value, potential for impacts on disturbance or displacement of non-volant mammals arising from future quarrying activities would be no greater than imperceptible in the long-term.

Potential Effects on Bats

8.4.14. In relation to bats, habitats within the site area are stated to be of limited ecological value to bats and there is stated to be no suitable habitat within 150m of the site. Accordingly, potential for impacts from disturbance / displacement as a result of the operations are rated as imperceptible in the long-term.

Potential Effects on Amphibians and Reptiles

¹ It is set out under Section 6.4.2.2 of the applicants EIAR that there is a slight overlap between the Ardristan Fen pNHA and the application area, though this is inconsistent with the drawings submitted which show the pNHA overlaps the landholding boundary, marked by a blue line, but lies outside of the planning application site, as defined by the redline boundary.

8.4.15. It is submitted that there is no suitable breeding and foraging habitat for amphibians and reptiles on the site and accordingly imperceptible long-term effects on amphibians and reptiles are anticipated.

Potential Effects on Invertebrates

8.4.16. It is stated that the settlement ponds are in place and would not be disturbed by the development and that displacement of the invertebrates using this habitat is evaluated as imperceptible in the long term. I would be of the view that they would be inevitable disturbance as a necessary impact in bringing those ponds back into use.

Potential Effects on Aquatic Ecology

8.4.17. Table 6.15 of the EIAR sets out a summary of potential impacts of water quality deterioration on aquatic ecology. It evaluates the following impacts on the Roscat Stream, Ardristan Fen and Aquifer:

- Silt has potential to clog salmonid spawning bed, juvenile salmonids and can blanket plant and macro-invertebrate communities resulting in a loss or degradation of valuable habitats within the Roscat Stream;
- Surface water containing hydrocarbons has potential to impact on salmonid and plant species within the Roscat Stream;
- Removal of overburden has potential to increase the vulnerability of the underlying aquifer;
- While Otters were not recorded, they may be present in the Roscat Stream and could be indirectly affected by a reduction in water quality;
- Increased run-off from the site has potential to result in direct degradation of the adjoining fen habitat and floral species dependent on it.

8.4.18. It has been evaluated that if unmitigated, the impacts outlined above would be 'moderate' significant.

8.4.19. Table 6.16 sets out proposed mitigation measures for the protection of water quality and aquatic ecology. Measures outlined include ensuring runoff passes through a series of settlement ponds, ensuring stockpiled overburden is stable through its vegetation, proper storage of fuel including a mobile bunded bowser, runoff from the

hardstand area, where refuelling and parking would take place, would pass through a hydrocarbon interceptor, mechanical ripping of the pit floor to a depth of 0.5m to restore original permeability to ground and spreading of overburden on the pit floor as part of the restoration plan.

8.4.20. Mitigation measures for the protection of birds are also set out. For example, should Sand Martins be found nesting in any of the stockpiles, no excavations would take place within that stockpile during the Sand Martin breeding season. In relation to protection of birds generally, no vegetation clearance is proposed to be undertaken onsite between 1st March and 31st August.

8.4.21. Following the adoption of mitigation measures, the predicted residual impact arising from proposed quarrying activities is anticipated to be imperceptible in the case of the majority of impacts, and slight in relation to the Ardristan Fen and the aquifer as a result of increased runoff to the Fen from the hardstand area pad and the quarry floor.

8.4.22. I note the recommendation put forward that the proposed operational works would be monitored periodically, particularly during the bird breeding season, to ensure that the mitigation proposed is implemented and effective. It is stated that ongoing monitoring of water quality would also be undertaken on a biannual basis during the quarrying operations.

8.4.23. Conclusion - Biodiversity

While quarrying activities can clearly impact on ecological habitats, with the adoption of mitigation measures outlined, I am satisfied that the proposed quarrying development would not have any significant residual effects provided the mitigation measures outlined are strictly adhered to.

8.5. Land, Soils and Geology

8.5.1. The land, soil and geological environmental factors are examined in Chapter 7 of the EIAR. Reference is made to 'Soil associations of Ireland and their land use potential. National Soil Survey of Ireland' by Gardiner and Radford (1980) and to Teagasc soil maps, and that the agricultural soils which originally overlaid the existing working pit and which currently overlie the proposed extension area, consist principally of shallow, well-drained mineral soils with alkaline signature.

- 8.5.2. In-situ soils in exposed faces have been stripped to facilitate previous quarrying activities. These soils have been stockpiled and formed into earthen berms and will be made available for site restoration.
- 8.5.3. The parent material of fluvio-glacial outwash and esker gravels, comprising mainly limestone with an admixture of mica-schist, granite and sandstone. Overburden on more elevated ridges comprise granite-derived tills. Peats have developed in topographically depressed grounds, including those south of the site which are denoted as fen type peats in the Ardristan Fen pNHA. According to GSI mapping, the site is underlain by Tullow Type 2 sparsely porphyritic granite formation.
- 8.5.4. Previous operations on the existing quarry site, which forms part of the overall application site, have involved extraction of the sands and gravel to a depth of between 7 and 8 metres. No extraction has evidently taken place below the water table. It was particularly noticeable on the day of my site inspection that the quarry floor was dry throughout.
- 8.5.5. The GSI well database includes information ascertained from two wells previously drilled for Carlow County Council in the Roscat area and show the depth to bedrock at 6.1m and 7m respectively. On the day of my inspection, there was no evidence of exposed bedrock within the existing working pit or in the general vicinity of the site.
- 8.5.6. The site is not located within a geological heritage area and the closest such area is the Ballymoon Esker, c.15km southeast of the site, close to Bagnelstown in County Carlow. Four excavated trial pits were excavated and no bedrock was encountered in any of the trial pits. Three monitoring wells (MWs) were installed in June 2018. Bedrock was encountered between 12.25m in Monitoring Well No.1 (MW1) and 13m in Monitoring Well No. 2 (MW2) below ground level.
- 8.5.7. In terms of landuse, the development would involve initiating quarrying activities on an area which is currently used for tillage purposes. This would result in a permanent loss of land, removing it's availability for crop production. However, I am satisfied that the area removed is small by comparison to the available land for similar uses in the area locally and in the wider county area. In addition it is relevant to note that it is intended to restore the land and bring it back to agricultural use, though as is normal in an exhausted quarry, it is reasonable to assume that the site would not facilitate tillage / crop production akin to the current use on the greenfield area.

8.5.8. The further extraction of sand and gravel would also result in the loss of a geological resource. However the extraction of this resource for onward supply to the construction and agricultural industry would bring a beneficial impact to the local and regional economy and the extraction of the sand and gravel resource is strongly supported by planning policy, as outlined under the heading of Planning Assessment above.

8.5.9. Potential also arises for impacts due to contamination of exposed subsoil from spillages or leakages from plant with a resultant moderate significant impact. Impacts from loss of soil and subsoils due to erosion and dust generation are also considered.

8.5.10. Mitigation measures have been outlined and would primarily include protection of soil structure, dust suppression and protection from contaminants. Soils retained on site are proposed to be utilised in the restoration process. Post mitigation, impacts are assessed to be long-term and negligible. No mitigation is proposed or necessary to alleviate the permanent loss of sands and gravels or of agricultural land.

8.5.11. It is stated that a designated person from the project management team would have overall responsibility for ensuring that operations are carried out in such a manner as to limit the impacts to soils and geological receptors. A project specific Construction and Environmental Management Plan (CEMP) is also proposed to be established and maintained by the appointed contractor during all phases of works.

8.5.12. Conclusion – Land, Soils and Geology

The quarrying activities in the site would result in a loss of a geological resource and the loss of land for use in agricultural use for arable crop growing / tillage purposes however, such losses are not unacceptable, having regard to the primary function of the quarrying activities to harness the natural resource which would lead to benefits to the construction and agricultural industries and also noting the availability of agricultural land in the vicinity. Beyond these identified impacts, the quarrying activities are unlikely to result in significant impacts on land, soils and geological environmental factors.

8.6. **Water**

8.6.1. Surface and groundwater are considered together in Chapter 8 of the EIAR. The site is underlain by a poor bedrock aquifer, comprising bedrock which is generally

unproductive, except for local zones (PI). According to GSI mapping, gravel deposits which overlie the bedrock are classified as a locally important gravel aquifer (Lg). The GSI has also assigned the site as having a 'high' vulnerability classification'. The depth of overburden decreases on elevated ground with the resultant vulnerability classification of 'Extreme'. There are no groundwater source protection zones within 18km of the site. It is stated that there are no drinking water supply wells downgradient of the site.

- 8.6.2. The site lies within the surface water local catchment of the Roscat Stream, which flows in a southeast to northwest direction, passing the site 520m to the southwest. The stream has a catchment of 5.9km² as it passes adjacent to the site and outfalls to the Burren River just north of Rathtoe, after which it joins the River Barrow at Carlow Town.
- 8.6.3. The EU Water Framework Directive (2000/60/EC) (WFD) Risk Classification of the Roscat Stream is 'not at risk' and the WFD Status is 'unassigned' for the Roscat Stream and 'good' for the Burren River. The Slaney River Valley SAC (Site Code 000781) passes 1.4km to the northeast of the site and, as stated, is in a separate catchment area. As stated above, the Ardristan Fen pNHA, lies adjacent to and slightly overlaps with the southern boundary of the application site.
- 8.6.4. Given the high permeability of sands and gravels underlying the application site and information available on the OPW flood maps, available on floodinfo.ie, I am satisfied that there is no risk of pluvial flooding. OPW Flood maps do not contain any recorded historical flood events on or in the vicinity of the site.
- 8.6.5. Groundwater levels surveyed by the applicant in both the application site and wider area are stated to have revealed a relatively low hydraulic gradient. Groundwater vulnerability was found to be 'Extreme' in the existing pit and high in the agricultural lands to the east in which the new quarrying area is proposed. Groundwater flow direction is stated as being in a general northeast to southwest direction.
- 8.6.6. Groundwater sampling was carried out in June 2018 across two monitoring wells (MW1 and MW2), two Trial Pits (TP1 and TP3) and in the Ardristan Fen. Sampling was carried out at the final settlement pond outfall and in the Ardristan Fen in February 2019. The sampling results are presented in Table 8.5 of the EIAR. The majority of parameters were found to fall below the values required to meet the

Groundwater Regulations 2010, as amended. Groundwater collected from TP1 revealed similar results to those collected from two monitoring wells at MW1 and MW2. Some exceedances were noted including elevated suspended solids, which the applicant attributes to the natural substrate, elevated nitrates attributed to agricultural pressures and slight evidence of faecal contamination alleged to be from a septic tank upgradient. Groundwater from Trial Pit TP3 revealed elevated nitrites which is attributed in the EIAR to denitrification, elevated manganese which is attributed to a suggestion of anaerobic conditions and elevated faecal and non-faecal coliforms which is attributed to exposed water in Settlement Pond number 5 which is stated to be prone to faecal contamination from birds, wildfowl and sheep. On the day of my site inspection, there were no sheep on site.

- 8.6.7. Elevated suspended solids were detected in the Ardristan Fen pNHA, in the summer samples, which it is stated to be attributed to mobilising of sediment while retrieving the sample. Elevated ammonia and nitrite detected in the Fen in summer conditions is stated to be as a result of denitrification of the Fen and elevated orthophosphate in the Fen in summer conditions. Moderately elevated microbial contamination in the Fen was attributed by the applicant to sheep grazing.
- 8.6.8. No hydrocarbons were detected in downgradient groundwater during sampling in June 2018. It is stated that minor detections reported in February 2019 are attributed to laboratory error.
- 8.6.9. Potential impacts that may arise from proposed quarrying activities on the hydrological and hydrogeological environment are presented in Table 8.7 and are rated moderate or imperceptible and these include:
- increased silt-laden runoff from the quarry floor and stockpiles has potential to degrade local surface water quality impacting Ardristan Fen and Roscat Stream;
 - runoff /recharge containing hydrocarbons could impact on the Ardristan Fen, Roscat Stream and Aquifer;
 - increase in vulnerability of underlying aquifer could impact on Ardristan Fen and Aquifer;
 - increase in surface water flow could impact on the Ardristan Fen;

- increased runoff rates from hardstand area could cause an increase in flood risk to local watercourses;
- decrease in yield could impact third party wells.

8.6.10. Mitigation measures are presented in Table 8.8 and include runoff passing through a series of settlement ponds, vegetation of stockpiles to enhance stability, no storage of potentially contaminating substances on site, runoff from the hardstand area would pass through a hydrocarbon interceptor, compacted quarry floor would be mechanically ripped to a depth of 0.5m to restore original permeability which in turn would reduce the runoff to the Ardristan Fen and attenuation would be provided by settlement ponds and the Artristan Fen. It is also submitted that excavation of sand and gravels would not come within 1m of the groundwater. The only third party well in the vicinity is stated to be upgradient of the site and hence no decrease on yield or water quality is anticipated. It is stated that a project-specific CEMP would be established and maintained by the contractor during all phases of the enabling work phase.

8.6.11. Overall, post mitigation, residual impacts have been rated as 'imperceptible' in the majority of cases. In relation to increase in surface water flow input to the Ardristan Fen and decrease in infiltration to the underlying aquifer, a residual Impact of 'slight' has been rated.

8.6.12. As stated under Section 8.3 (Biodiversity) above, the IFI raised concerns in the parallel substitute consent application around discharge of silt-laden waters to fisheries streams and the potential for adverse impacts on salmonid spawning beds and juvenile salmonid, as well as impacts on macro-invertebrate communities and degradation of habitats. They also set out recommendations for future quarrying activities including that systems should be put in place to ensure that there would be no suspended solids or other deleterious matter to watercourses during any phase of the works and that all surface water would be channelled through adequately sized petrol/oil interceptors and be subject to attenuation prior to discharge to surface waters. It is noted that during the construction phase, these measures would form part of the proposed CEMP and insofar as they are relevant to operational quarrying activities they are included as mitigation measures outlined.

8.6.13. It is stated that a designated person from the project management team would have overall responsibility for ensuring that all operations are carried out in such a way as to minimise potential impacts on hydrological and hydrogeological receptors and that this person would have responsibility for monitoring the performances of any pollution control measures adopted.

8.6.14. Conclusion - Water

Based upon the observations and findings set out above, I consider that it is reasonable to conclude that with the mitigation measures outlined in place, the proposed quarrying activities are unlikely to result in significant impacts on surface waters and/or groundwater.

8.7. **Climate and Air Quality**

- 8.7.1. Climate is addressed in Chapter 9 of the EIAR and Air quality is addressed in Chapter 10. A profile of the climate by reference to the closest Met Éireann synoptic weather station at Oak Park, 15km northwest of the site is included.
- 8.7.2. It is not proposed to increase the annual rate of extraction and production above that experienced in the past when the existing quarry area operated. Emissions associated with the development arising from plant generated exhaust emissions (e.g. CO₂ and N₂O) are stated as having an imperceptible effect over a temporary period for the enabling/construction phase and a slight impact over the long term operational phase.
- 8.7.3. Mitigation measures are stated to include adherence to good practice to minimise energy and air emissions including regular servicing of plant, carrying out energy audits and purchasing plant with low emissions. Post mitigation, no residual impacts on climate are predicted.
- 8.7.4. In relation to air quality, in addition to desk studies, air dispersion modelling was carried out using the United States Environmental Protection Agency (USEPA) dispersion model AERMOD (USEPA 2017). 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 PM_{2.5}.

- 8.7.5. The applicant's modelling examined the potential for deposition and concentrations of dust, PM₁₀ and PM_{2.5}. The applicant stated that they gained control of the quarry in recent times and they also state that no environmental monitoring results were available for review at the offices of Carlow County Council. There is one house located within 500m of the site and 56 in total within 1km of the application site. Dust levels at the site boundary are expected to peak at 233mg/(m²*day), which I am satisfied lies well within the aforementioned limits. It is stated that based on a worst case background dust deposition of 191 mg/(m²*day), the quarrying operations would contribute a maximum of 12% of the TA-Luft Limit Value. On that basis, the impact of dust deposition is considered slight adverse, localised and long-term.
- 8.7.6. Based on a review of the applicant's scientific evidence, I am satisfied that the PM₁₀ concentration levels would lie well below both the annual mean limit for protection of human health, which is 40 µg/m³ and the 24-hour limit value of 50 µg/m³ (measured as a 90.4th percentile). Equally it is evident that the annual target concentration level for PM_{2.5} of 25 µg/m³ would not be breached. The impacts in relation to PM₁₀ and PM_{2.5} have been rated as negligible and localised. While traffic-related air emissions may generate quantities of air pollutants such as NO₂, CO, Benzene, PM₁₀ and PM_{2.5}, it has been assessed that due to the low volumes of HGVs (20 in and out movements per day) no increase in such emissions would likely arise and impacts on air quality generated from traffic are predicted to be neutral in the short and long term.
- 8.7.7. Mitigation measures are put forward, which are all of a standard nature. The primary measures include 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 and inspections of work area. Dust monitoring is proposed and where such monitoring reveals issue with dust deposition, additional measures are stated to be implemented to ensure specified limits outside of the quarry boundary are not exceeded.

8.7.8. Post mitigation, it is not anticipated that there would be any adverse impact on air quality in the vicinity of the application site. Neither would the proposal result in any direct or indirect impacts on local or wider climatic conditions.

8.7.9. Conclusion – Air quality and climate

Based upon the observations and findings set out above, I consider that it is reasonable to conclude that the proposed further quarrying activities are unlikely to result in significant impacts on air quality or climate.

8.8. Noise and Vibration

8.8.1. Noise and vibration are examined in Chapter 11 of the EIAR. At the outset, reference is made to Environmental Management Guidelines (EPA, 2006). In relation to quarry developments and ancillary activities, it is recommended that noise from the activities on site shall not exceed the following noise limits at the nearest noise-sensitive receptor:

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

8.8.2. The assessment presents the predicted noise level for four different activities which they refer to as scenarios. These include removal of overburden at locations closest to receptors, extraction of sand and gravel at the boundary of the site assuming mobile processing being carried out at the concrete laydown area, extraction of sand and gravel in the middle of the site assuming mobile processing being carried out at the concrete laydown area and extraction of sand and gravel at the boundary of the site assuming mobile processing being carried out alongside excavation.

8.8.3. Predicted noise levels for each of the aforementioned scenarios are presented in Table 11-5 of the EIAR.

8.8.4. 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 overburden removal and berm construction would not exceed the limits set out.

8.8.5. During operation, predicted noise levels for all such activities are stated as falling within the limits set out in the EPA Environmental Management Guidelines for

Quarries referred to above. Noise from traffic is predicted to be no greater than 1dBA which I accept would result in no effect greater than negligible on neighbouring properties. Given the separation distance to structures or sensitive receptors, vibration is not an issue.

- 8.8.6. It is stated in Section 3.3.3.10 (Working Hours and Employment) that the proposed times of operation are between 0700 hours and 1900 hours Monday to Friday and 0700 to 1700 hour on Saturdays and that no quarrying would take place operate outside these hours or on Sundays or Public Holidays. Different hours of operation, i.e. 0700 hours and 1800 hours Monday to Friday and 0700 to 1400 hours on Saturdays are set out in the noise assessment chapter of the EIAR (Section 11.6). I recommend that in the event of a grant of permission by the Board, the latter hours which formed the basis for the noise assessment included in the EIAR be permitted and this matter can be addressed by way of a planning condition.
- 8.8.7. Outside of regulating the times of operations, proposed mitigation measures are set out and include good site management, maintenance and operation of plant and vehicles and formation of an acoustic berm of a minimum height of 3m, along the north-east site boundary.
- 8.8.8. It is stated that the duration of the decommissioning phase would comply with applicable legislation and guidance. Noise monitoring is proposed to be carried out at locations annually. Four such locations are presented in Figure 11.1 (Noise Monitoring Location Map). It is not anticipated that there would be any adverse impact on noise quality in the vicinity of the application site once mitigation measures and best practice is applied.

8.8.9. **Conclusion – Noise and Vibration**

Overall, it is reasonable to conclude that the proposed quarrying activities would not result in any significant noise and/or vibration impacts and no significant adverse impact on sensitive receptors would result from the proposed operations.

8.9. Traffic

- 8.9.1. The applicant's examination of the traffic impacts is set out in Chapter 12. It is submitted that there would be approximately 20 heavy Goods Vehicle (HGV) movements in and out of the site per working day, similar to traffic movements which occurred during past quarrying activities. One car is also predicted to arrive and

leave the site, based on one part-time employee working at the site, which appears an overly conservative estimate.

- 8.9.2. It is stated that the most likely route for HGV trips to and from the existing development would be from the direction of Tullow via the N81, and would involve a right turn at the existing priority junction with the L6026, travelling west for c.80m and then south towards the site access onto an unnamed local road. The haul route proposed is presented on Figure 12.1, included in Chapter 12 of the EIAR. This junction from the L6026 to the N81 is a standard priority junction with a right turn facility for vehicles turning right off the N81. Clear visibility is available in both directions. The L6026/unnamed road junction has an acceptable visibility splay to the east. Visibility to the west is more restricted but as stated could be improved by trimming of roadside hedges.
- 8.9.3. A route assessment was carried out supported by an autotrack assessment. It has been demonstrated that HGVs can negotiate the N81/L6026 junction and the L6026 / unnamed local road junction. The existing site access requires some improvements.
- 8.9.4. Traffic likely to be generated from the proposed development is based on 50,000 tonnes of material extracted per annum, with 20 tonnes per truck load resulting in 2,500 truck movements per annum, in total over 255 working days in any year.
- 8.9.5. The impact that the proposed development is forecast to have on link flows on the surrounding road network during the AM and PM peak hours, and all day, for both the opening year 2019, and future year 2034, is set out in Tables 12.4 to 12.6 of the applicant's EIAR assessment. The maximum increase in traffic volumes on the N81 due to the proposed development is forecast to be +2.1%, which is stated to apply to the N81 northern arm during the AM peak hour. Regarding all day traffic flows, the proposed development is forecast to increase traffic volumes on the N81 by a maximum of 0.5%. The proposed development is forecast to increase traffic volumes by a maximum of 28.2% on the L6026 during the AM peak hour, and by 5.8% all day. The impact on the L6026 and local road leading to the site is predicted to be slight.
- 8.9.6. A junction capacity assessment was undertaken on the N81 Tullow Road / L6026 junction using PICADY. By the future year 2034, the worst case scenario presented is that of the right turn onto the N81 at PM periods. Without the development, the

junction is forecast to operate with a maximum ratio of flow to capacity (RFC) of 7.4%, increasing to 8.0% with the proposed development in place. As this RFC is well below 85% standard capacity threshold, it can be readily concluded that the junction would operate within capacity. I accept that the traffic generated by the proposed development would have a negligible impact on the capacity of this junction.

8.9.7. Having reviewed the RSA collision database, there were no recorded collisions at the N81 / L6026 junction, or on the local road leading to the site during the years 2005 to 2014 inclusive.

8.9.8. Mitigation measures include carrying out improvements to the existing junction which provides access to the site including road markings and signage, trimming existing hedgerows at the access to provide improved visibility, vehicle washing facilities to prevent debris on the local road network and road sweeping equipment in the event material is transported and deposited on the public road.

8.9.9. Conclusion - Traffic

It can be concluded that given the relatively low volumes of traffic that would likely be generated, the proposed development would have a slight impact on the existing local road network in terms of traffic flow, junctions are forecast to operate well within capacity during operation. The road network in the area is capable of carrying the traffic generated.

8.10. **Landscape and Visual**

8.10.1. Chapter 13 of the EIAR 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 Carlow County Landscape Character Assessment and Schedule of Protected Views (CAAS, 2015). The application site is located within the 'Central Lowlands' Landscape Character Area (LCA) and when further detailed is located within a landscape type categorised as 'Farmed Lowland'. Within the landuse 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. There are a number of single houses within the local landscape.

- 8.10.2. The magnitude of change in the landscape as a result of the proposed development has been assessed as 'Medium' and the significance of landscape impacts of the development is assessed as 'Moderate'. The losses of existing vegetation as a result of extraction of sand and gravel would undoubtedly result in a change at a local level, however, given the available natural screening and additional screening with added berms, and noting the purpose of the development which is to extract sand and gravel resources, on balance the change to the landscape at a local level is acceptable.
- 8.10.3. The visual impact assessment includes six 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 deciduous trees and hedgerows, 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.
- 8.10.4. The proposed landscaping and restoration works would further reduce the visibility of the application site from the receiving environment and offset the impact associated with sand and gravel extraction activities. This would be fully achieved only in the long term, post extraction. Throughout the operational lifetime of the sand and gravel pit, the side slopes of the pit are proposed to be restored such that they would remain in position permanently following decommissioning of the pit. Should the Board be minded to grant permission, a phased or progressive restoration plan as suggested by the Planning Authority should be sought by way of a planning condition.
- 8.10.5. Conclusion – Landscape and Visual

While the quarrying activities would alter 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 restoration plan proposed, including a requirement for phased restoration, such an impact is considered acceptable.

8.11. **Material Assets**

- 8.11.1. Material assets are examined in Chapter 14. The material assets that have been identified include residential buildings, geological resource, land resource, roads and traffic, public utilities, groundwater and water supplies, scenic routes, tourism, archaeology and waste. The application site has no electricity, telecommunications

connection or public water supply on site. In a submission received by the Board, Irish Water have stated that the development would not impact on their water services infrastructure.

8.11.2. Traffic increase is not envisaged to be significant onto the road network and it is stated that inspections would be carried out to ensure roads are clean and tidy of any debris. It is stated that drinking water was previously supplied from a water bowser and that bottled water would be used as a potable water supply in future planned quarrying operations. No mitigation beyond that put forward in other chapters has been set out which I consider to be acceptable. It is of relevance to note that many of the above assets referenced by the applicant under the heading of Material Assets have been assessed elsewhere under other headings.

8.11.3. In terms of waste, it is stated that all material designated as waste would be collected by an appropriately licenced contractor and recycled or disposed of at an appropriate facility. I am satisfied that no significant impacts on the environment are likely to result from waste generated from the proposed development.

8.11.4. Conclusion – Material Assets

Having regard to the above assessment, it can reasonably be concluded that quarrying activities within the site would not result in significant effects on the environment as a result of material assets.

8.12. Cultural Heritage

8.12.1. Cultural Heritage is considered in Chapter 15. There are no Recorded Monuments situated within the application area. The closest Recorded Monument externally, CW013-012, a standing stone in Ardristan townland just east of the N81, is situated 0.97km to the north-east of the application area and is considered too distant to be impacted by the proposed development.

8.12.2. There is one additional feature within the study area, CW013-123, a cropmark of a curvilinear enclosure defined by a fosse (bank) in Rathtoe townland. This site is situated 0.78km to the south-west of the application area and is also considered too distant to be impacted by the proposed development.

8.12.3. There are no buildings on the application site which are listed in the Record of Protected Structures for Carlow County Council. One protected structure, a five-bay,

single-storey, gable-ended cottage (farmhouse) with a record no. CW470 is situated in the study area. It is located c. 1km north-east of the application area and is considered too far distant to have been impacted on by the development. No other structures listed on either the record of protected structures or in the National Inventory of Architectural Heritage (NIAH) are so close as to result in any impact as a result of the quarrying activities.

8.12.4. Due to the possibility of the survival of previously unknown sub-surface archaeological deposits or finds within the area in which the quarrying is proposed to be extended, I would agree as is set out that all topsoil-stripping in this area should be monitored by a qualified archaeologist and I recommend that this is secured by way of an archaeological planning condition.

8.12.5. Conclusion – Cultural Heritage

I am satisfied that no direct or indirect impacts on any known items of cultural heritage, archaeology or buildings of heritage interest in or proximate to the application site would arise as a result of the proposed development.

8.13. **Cumulative Impacts and Interactions**

8.13.1. Chapter 16 addresses the main interactions between different aspects of the environment that may have been affected as a result of the existing development. Cumulative impacts have been covered, where applicable, under the relevant chapters within the EIAR. A summary of interactions is provided in Table 16-1 - Interactions of potential effects assessed for this project. 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 on population and human health, hydrology and hydrogeology and the interaction with soils and geology and surface water processes, ecology, and on the landscape. The proposed mitigation measures and suggested conditions which relate to the management of surface water on-site and site restoration should ensure that adverse impacts are not significant.

8.13.2. As the development is unlikely to have 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.

8.13.3. Cumulative impacts have been covered, where applicable, under the relevant chapters within the EIAR. Existing projects that could lead to potential cumulative effects include an unauthorised capped landfill site of c. 1.6 Hectares in area, located 1.2km to the south of the site, an existing sand and gravel pit (Ardristan Sand and Gravel Pit) c.1.5km to the south of the site and more recently a proposal for importing inert waste at this Ardristan sand and gravel quarry, where permission was granted by Carlow County Council under Ref 07/769 followed by amendment of conditions by An Bord Pleanála (Ref: 01.232014) in 2009 and more recently a proposal for importing inert waste at this Ardristan sand and gravel quarry where permission was granted by Carlow County Council under Ref: 18220. 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 arise.

8.13.4. I am satisfied that given the separation distances to other developments, which would also be regulated such that no significant effects would arise, no significant effects as a result of cumulative impacts with these or any other developments are likely to arise.

8.13.5. Conclusion on Cumulative Impacts and Interactions

In light of the assessment above, it can be concluded that no significant effects are likely to arise from interactions between any of the various environmental factors or as a result of cumulative impacts.

8.14. Reasoned Conclusion

8.14.1. Having regard to the examination of environmental information contained above, and in particular to the EIAR and supplementary information provided by the applicant and the submissions received from the Planning Authority and prescribed bodies in the course of the application, it is considered that the main significant direct and indirect effects of the proposed development on the environment and measures to avoid, prevent or reduce such effects would be as follows:

- **Aquatic Ecology and Water:** Impacts on aquatic ecology, including the Ardristan Fen, Roscat Stream and the aquifer, through surface water containing sediment and/or hydrocarbons, with potential for degradation of aquatic habitats and species. Such impacts would be mitigated by adherence

to a project-specific Construction and Environmental Plan during the enabling/construction phase and through adherence to good environmental management and adherence to mitigation measures and commitments, which will be set out in an Environmental Management System (EMS), during the operation and restoration phases.

- **Birds:** Impacts on the established breeding colony of Sand Martin (*Riparia riparia*) on site which would be mitigated by ensuring that if any Sand Martins are found to be nesting in any of the stockpiles, then no activities would be undertaken within the stockpile during the Sand Martin breeding season (1st March – 31st August) and alternative breeding sites would be created in a disused area within the gravel pit site following standard published best practice guidance.
- **Land, soil and geology:** The proposed quarrying activities within the application site would result in a permanent loss of a geological resource and loss of land for arable crops / tillage purposes. However, such losses are not unacceptable, having regard to the primary function of the quarrying activities to extract the resource itself and in doing so would be beneficial to the construction and agricultural sectors. The loss of land would be imperceptible in size and scale when taken in context with the available agricultural lands in the area. The mitigation measures in place include the storage of stripped topsoil within berms for later re-use in the restoration of the quarry for agricultural use are also noted.
- **Landscape:** While the quarrying activities would alter 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 restoration plan proposed, including a requirement for phased restoration, such an impact is considered acceptable.

9.0 Appropriate Assessment

9.1. Appropriate Assessment Stage 1- Screening

- 9.1.1. The project was subject to Appropriate Assessment (AA) screening and I have examined the Natura Impact Statement including Chapter 5 – Stage 1-Screening for

Appropriate Assessment. Three European sites are located within a 15km radius of the application site and their location relative to the site is listed in Table 1 below.

Table 1 – European sites within the zone of influence of the quarry site

European Site name and site code	Location relative to the application site
Slaney River Valley SAC (Site Code: 000781)	1.8km east
River Barrow and River Nore SAC (Site Code: 002162)	12.7km west (direct distance) and 15.5km (hydrological distance)
Blackstairs Mountains SAC (Site Code: 000770)	14.2km south of the proposed application area.

9.1.2. 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 chain. The application site is not located within any of the European sites and hence I would agree with the applicants finding of no significant effects as a result of direct impacts as a result of the proposed development.

9.1.3. In relation to consideration of the **River Barrow and River Nore SAC (Site Code: 002162)**, a hydrological pathway exists between this site and the application area via the Roscat Stream which is located approximately 520m to the west of the proposed application area. The Roscat Stream flows in a north-westerly direction towards its confluence with the Burren River, which ultimately joins the River Barrow in Carlow town. The total hydrological distance between the application area and the SAC is c.15.5 km, and hence is well separated from the site. However given the source-pathway-receptor link between the two, I would agree as is submitted that the water quality of this site remains vulnerable to potential indirect effects resulting in a reduction in water quality within the SAC and by consequence, the potential for significant effects on water dependant habitats and species cannot be screened out. Therefore this site requires further consideration at Appropriate Assessment – Stage 2.

9.1.4. The application site lies outside the River Slaney catchment area and there are no hydrological or ecological pathways to the **Slaney River Valley SAC (Site Code: 000781)**. Given the separation distance of 1.8km, I would agree as is submitted that this European site would not likely have any measurable significant effects as a result of disturbance because of noise, vibration, dust or human and visual disturbance. Accordingly, I am satisfied that this European site can be screened out from any further evaluation as the proposed development is not likely to give rise to any significant effect on the integrity of the Slaney River Valley SAC during its operation, or on any of the qualifying habitats and/or species for which this site has been designated as being of European importance having regard to the site's conservation objectives.

9.1.5. In relation to the **Blackstairs Mountains SAC (Site Code: 000770)**, noting the considerable separation distance and absence of any hydrological connection between this SAC and the application site, no complete source-pathway-receptor chain could be identified. Therefore I would agree that this site can also be screened out.

9.1.6. Appropriate Assessment Stage 1- Screening Conclusion

Potential for significant effects on the River Barrow and River Nore SAC (Site Code: 002162), noting the site's conservation objectives cannot be screened out for the reasons outlined above. Accordingly, a Stage 2 Appropriate Assessment is required to determine the potential of the proposed development to adversely affect the integrity of this site.

It is reasonable to conclude on the basis of information on the file, which I consider to be adequate in order to issue a screening determination, that the proposed development, individually or in combination with other plans or projects would not be likely to have a significant effect on European sites:-

- Slaney River Valley SAC (Site Code: 000781)
- Blackstairs Mountains SAC (Site Code: 000770)

or any other sites in view of their Conservation Objectives and a Stage 2 Appropriate Assessment is not therefore required in respect of those sites.

9.2. **Appropriate Assessment – Stage 2**

9.2.1. The conservation objectives (NPWS, July 2011) of the River Barrow and River Nore SAC (Site Code: 002162) are to maintain or restore the favourable conservation condition of the Annex I habitats and the Annex II species for which the SAC has been selected. The key surface and groundwater dependent species and habitats of qualifying interest of this SAC and which would potentially be impacted by the proposed development are set out in Table 2 below.

Table 2 – Key surface and groundwater dependant species and habitats of qualifying interest of the River Barrow and River Nore SAC potentially impacted by the proposed development.

Habitats and Species	Natura Code	Qualifying Interests
Annex I Habitats	3260	Floating River Vegetation
Annex II Species	1029 1092 1095 1096 1099 1103 1106 1355 1990	Freshwater Pearl Mussel (<i>Margaritifera margaritifera</i>) White-clawed Crayfish (<i>Austropotamobius pallipes</i>) Sea Lamprey (<i>Petromyzon marinus</i>) Brook Lamprey (<i>Lampetra planeri</i>) River Lamprey (<i>Lampetra fluviatilis</i>) Twaite Shad (<i>Alosa fallax</i>) Atlantic Salmon (<i>Salmo salar</i>) Otter (<i>Lutra lutra</i>) Nore Freshwater Pearl Mussel (<i>Margaritifera durrovensis</i>)

Potential Impacts on Key Species and Key Habitats and Integrity of the River Barrow and River Nore SAC

9.2.2. As the development is not within the SAC, there is no potential for direct impacts on their habitats and species of qualifying interest. In the absence of mitigation, there is potential for indirect impact on water dependent habitats and species of qualifying interest in the form of deterioration of surface water quality resulting from release of hydrocarbons from machinery and stored fuels during operation. Such a reduction in water quality from hydrocarbons has the potential to result in effects on water dependant habitats and species of qualifying interest within the River Barrow and River Nore SAC. A reduction in water quality due to hydrocarbon has potential to result in significant effects on salmonids and plant species within the Roscat stream.

- 9.2.3. Furthermore, the potential for increased silt content in runoff could lead to a degradation in local surface water quality, thus impacting on salmonid spawning beds and juvenile salmonids which are very sensitive to siltation. Similarly, plant and macro-invertebrate communities could be blanketed over and this could lead to loss or degradation of valuable habitat. In the absence of mitigation, these impacts would be moderate or even significant. These concerns were raised by the IFI in their submission on the parallel Substitute Consent application. Given that both applications are so closely related, I have considered the IFI submission together with the applicant's response insofar as it relates to water quality arising out of further quarrying activities under the heading of Water in my environmental impact assessment above.
- 9.2.4. It is stated that although Otter was not recorded during surveys, they are likely to be present in Roscat stream and may also be affected by indirect effects arising from a reduction in water quality, which in turn could lead to a reduction in potential prey should fish be impacted upon as a result of hydrocarbon runoff to groundwater.
- 9.2.5. The integrity of the River Barrow and River Nore SAC could be indirectly affected by the proposed development as a result of reduction in water quality and foraging potential for aquatic species. In turn this could lead to reduced numbers or reduced breeding success of these species which are qualifying interests of the SAC.

Mitigation Measures

- 9.2.6. Measures used to prevent and/or avoid impact have been set out in Table 6.3 of the applicants NIS. Runoff currently passes and as stated would continue to pass through a series of settlement ponds to ensure silt/sediment is settled out before leaving the site. The top compacted areas of the pit floor would be broken up using a mechanical ripper. New stockpiles of overburden removed to facilitate the enabling phase, would be vegetated to ensure stability and restrict surface erosion. This stockpiled material is proposed to be ultimately re-used in the restoration process. Potentially contaminating substances would not normally be stored on site but where they are required, they would be stored in designated areas isolated from surface water drains or open waters. Hazardous wastes such as waste oil, chemicals and preservatives would be stored in sealed containers. Refuelling would take place on a

hardstand pad and all runoff from this hardstand area would be directed through a newly installed hydrocarbon interceptor.

- 9.2.7. It is also submitted that should the above mitigation fail, and that this is considered unlikely, then a filter treatment system would be employed.
- 9.2.8. Overall, I am satisfied that, subject to the adoption of mitigation measures referenced in the NIS, and identified above, the proposed development would not adversely affect the integrity of the aforementioned European designated site, having regard to the conservation objectives for the site as set out above and no reasonable scientific doubt remains as to the absence of such adverse effects on the site as a result of the proposed development.

In-combination effects

- 9.2.9. I note that the NIS examines the potential cumulative/in-combination effects that could arise at the Stage 1 Screening Stage. Existing projects that could lead to potential in-combination effects include: An unauthorised capped landfill site of c. 1.6 Hectares in area, located 1.2km to the south of the site, an existing sand and gravel pit (Ardristan Sand and Gravel Pit) c.1.5km to the south of the site and more recently a proposal for importing inert waste at this Ardristan sand and gravel quarry, where permission was granted by Carlow County Council.
- 9.2.10. I am satisfied that the current site which is the subject matter of the Section 37L application, would not act in-combination with any of the aforementioned projects such as to result in any significant effects on the River Barrow and River Nore SAC or on any of its qualifying features for which they site is designated, having regard to the site's conservation objectives.

Appropriate Assessment – Stage 2 Conclusion

- 9.2.11. On the basis of the information provided with the application, including the Natura Impact Statement, which I consider adequate in order to carry out a Stage 2 Appropriate Assessment, the submissions received and the assessment carried out above, I am satisfied that the proposed development, individually or in combination with other plans or projects would not adversely affect the integrity of the European Site: River Barrow and River Nore SAC (Site Code: 002162) or any other European site, in view of the sites' Conservation Objectives.

10.0 Recommendation

10.1. I recommend that permission is granted for the Reasons and Considerations set out below, and subject to the attached Conditions. I attach a draft order below for consideration by the Board.

11.0 Draft Order

WHEREAS Kilcarrig Quarries Ltd. care of Earth Science Partnership Ire. Ltd of Tonranny, Westport, County Mayo made an application to An Bord Pleanála on the 15th April 2019, pursuant to section 37L of the Planning and Development Act, 2000 as amended, to further develop a sand and gravel quarry at Roscat, Tullow, County Carlow in accordance with plans and particulars lodged with the Board.

AND WHEREAS, the Board has decided, pursuant to section 37N of the of the Planning and Development Act, 2000, as amended, to grant permission, subject to conditions, for the development.

NOW THEREFORE, the Board has decided to grant permission, subject to conditions, based on the Reasons and Considerations set out below.

Reasons and Considerations

In coming to its decision the Board had regard, inter alia, to the following:

(a) the provisions of the Planning and Development Act, 2000, as amended, and in particular Section 37L and the provisions of the Planning and Development Regulations, 2001, as amended;

(b) the 'Quarry and Ancillary Activities, Guidelines for Planning Authorities' issued by the Department of the Environment, Heritage and Local Government in April, 2004;

(c) the applicable national, regional and local planning policy including in particular, the provisions of the Carlow County Development Plan 2015-2021;

(d) the Environmental Impact Assessment Report and the Natura Impact Statement and supporting documentation submitted with the application;

- (e) the report and the opinion of the planning authority and the applicant's response to the report;
- (f) the submissions received from prescribed bodies including the IFI submission on the parallel substitute consent application (Ref: ABP 304209-19) and the applicant's response to IFIs submission on that application;
- (g) the planning history of the subject site and adjoining lands;
- (h) the nature, scale, characteristics and location of the development proposed;
- (i) the Inspector's assessment as set out in the Inspectors Report;
- (j) the mitigation measures outlined and the restoration scheme proposed.

Environmental Impact Assessment

The Board completed an Environmental Impact Assessment in relation to the proposed development, taking account of:

- (a) the nature, scale, location and extent of the proposed further quarrying development,
- (b) the Environmental Impact Assessment Report and associated documentation submitted in support of the application,
- (c) the submissions received from the planning authority, prescribed bodies and the applicants response to submissions,
- (d) the Inspector's assessment on environmental effects as set out in the Inspector's Report;

The Board considered that the environmental impact assessment report, supported by information provided by the applicant during the course of the application, identifies and describes adequately the direct and indirect effects of the proposed development on the environment. The Board is satisfied that the information contained in the EIAR complies with the provisions of EU Directive 2014/52/EU amending Directive 2011/92/EU. The Board concluded that, subject to the implementation of the mitigation measures proposed in the EIAR, and subject to compliance with the conditions set out below, the effects of the proposed development on the environment, by itself and in combination with other plans and

projects in the vicinity, would be acceptable. In doing so, the Board generally adopted the report and conclusions of the Inspector. The Board considered, and agreed with the inspector's reasoned conclusions, that the main significant direct and indirect effects of the proposed development on the environment and measures to avoid, prevent or reduce such effects are as follows:

- **Aquatic Ecology and Water:** Impacts on aquatic ecology, including the Ardristan Fen, Roscat Stream and the aquifer, through surface water containing sediment and/or hydrocarbons, with potential for degradation of aquatic habitats and species. Such impacts would be mitigated by adherence to a project-specific Construction and Environmental Plan during the enabling/construction phase and through adherence to good environmental management and adherence to mitigation measures and commitments, which will be set out in an Environmental Management System (EMS), during the operation and restoration phases
- **Birds:** Impacts on the established breeding colony of Sand Martin (*Riparia riparia*) on site which would be mitigated by ensuring that if any Sand Martins are found to be nesting in any of the stockpiles, then no activities would be undertaken within the stockpile during the Sand Martin breeding season (1st March – 31st August) and alternative breeding sites would be created in a disused area within the gravel pit site following standard published best practice guidance.
- **Land, soil and geology:** The proposed quarrying activities within the application site would result in a permanent loss of a geological resource and loss of land for arable crops / tillage purposes. However, such losses are not unacceptable, having regard to the primary function of the quarrying activities to extract the resource itself and in doing so would be beneficial to the construction and agricultural sectors. The loss of land would be imperceptible in size and scale when taken in context with the available agricultural lands in the area. The mitigation measures in place include the storage of stripped topsoil within berms for later re-use in the restoration of the quarry for agricultural use are also noted.
- **Landscape:** While the quarrying activities would alter 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 restoration plan proposed, including a requirement for phased restoration, such an impact is considered acceptable.

Appropriate Assessment

Appropriate Assessment Stage 1 (Screening)

The Board agreed with the Screening Assessment carried out by the Inspector which concluded that the following European Site is that for which a Stage 2 Appropriate Assessment is required, and that significant effects on any other European Sites can be ruled out:

- River Barrow and River Nore Special Area of Conservation (Site Code: 002162).

Appropriate Assessment Stage 2

The Board considered the Natura Impact Statement and all other relevant submissions and carried out an Appropriate Assessment of the implications of the proposed development for the River Barrow and River Nore Special Area of Conservation (Site Code: 002162) in view of the site's conservation objectives. The Board considered that the information before it was adequate to allow the carrying out of an Appropriate Assessment.

In completing the assessment, the Board considered the likely direct and indirect impacts arising from the development, both individually or in combination with other plans or projects, the mitigation measures set out in the Natura impact statement and the conservation objectives for the European Site.

The Board is satisfied that, subject to the implementation of the identified mitigation measures and on the basis of the information available, the development, either individually or in combination with other plans or projects, would not adversely affect the integrity of this European site or any other such European designated site, in view of the conservation objectives of any such site.

Proper Planning and Sustainable Development

Having regard to the nature, scale and extent of the development and to the acceptability of the environmental effects and noting the integrity of European Sites would not be adversely affected, in view of the relevant sites' conservation objectives, as set out above, and subject to compliance with the conditions set out below, the Board is satisfied that the subject development would make a positive contribution to Ireland's utilisation of sand and gravel resources. The type of development is supported by national, regional and local planning policy and therefore the proposed quarrying development would be in accordance with the proper planning and sustainable development of the area.

12.0 Conditions

1.	<p>The development shall be carried out and completed in accordance with the plans and particulars lodged with the application on the 15th April 2019 except as may otherwise be required in order to comply with the following conditions. Where such conditions require details to be agreed with the planning authority, the developer shall agree such details in writing with the planning authority prior to commencement of development, and the development shall be carried out and completed in accordance with the agreed particulars.</p> <p>Reason: In the interest of clarity.</p>
2.	<p>This grant of permission to further develop the quarry shall be for a period of 20 years from the date of this order.</p> <p>Reason: In the interest of clarity and to enable a review of the appropriateness of the continued operation of the quarry in light of the circumstances prevailing at that time.</p>
3.	<p>a) Mitigation and monitoring measures outlined in the Environmental Impact Assessment Report, the Natura Impact Statement and associated documents submitted with this application, shall be compiled into a single Schedule of Monitoring and Mitigation Measures and</p>

	<p>submitted to the planning authority. These measures shall be carried out in full, except where otherwise required by condition attached to this permission. The Schedule shall be included in an Environmental Management System (EMS) which shall be submitted to and agreed with the Planning Authority prior to commencement of the development.</p> <p>b) The EMS shall include, as a minimum, the following:</p> <ul style="list-style-type: none"> i. proposals for the suppression of on-site noise; ii. proposals for the on-going monitoring of sound emissions at dwellings in the vicinity; iii. proposals for the suppression of dust on site; iv. details of safety measures for the land above the quarry, to include warning signs and stock-proof fencing; v. management of all landscaping; vi. monitoring of ground and surface water quality, levels and discharges; vii. downstream groundwater monitoring point and measures to ensure the final discharges from the settlement lagoons will not impact on the Ardristan Fen proposed natural heritage area and viii. details of site manager, contact numbers (including out of hours) and public information signs at the entrance to the facility. ix. reason: in order to safeguard local amenities. <p>c) The development shall be operated and managed in accordance with the agreed EMS required under a) above.</p> <p>Reason: In the interest of protecting the environment and in the interest of public health.</p>
4.	<p>This grant of planning permission for further extraction of sand and gravel (a) relates only to the 14.7-hectare area outlined in red on drawing number PP-120-00, submitted with the application on the 15th April 2019, and</p>

	<p>(b) Extraction of sand and gravel within this quarry extension, shall not take place below a level of 63 metres above Ordnance Datum or within one metre of the groundwater table whichever is the higher level.</p> <p>Reason: In the interest of clarity.</p>
5.	<p>The enabling/construction phase(s) shall be operated and managed in accordance with a Construction Environmental Management Plan (CEMP), which shall be submitted by the developer to, and agreed in writing with, the planning authority prior to commencement of development.</p> <p>The CEMP shall also include specific proposals as to how the measures outlined in the CEMP will be measured and monitored for effectiveness.</p> <p>Reason: In the interest of protecting the environment, the landscape, the European Sites and sensitive receptors.</p>
6.	<p>The noise level from within the boundaries of the quarry extension area, measured at noise sensitive locations in the vicinity, shall not exceed:</p> <p>(a) an LArT value of 55dB(A) during 0700 hours to 1800 hours Monday to Friday and 0700 hours to 1400 hours on Saturdays. The T-value shall be one hour.</p> <p>(b) an LAeqT value of 45dB(A) at any other time. The T-value shall be fifteen minutes.</p> <p>Reason: To protect the residential amenities of property in the vicinity.</p>
7.	<p>(a) Dust levels at the site boundaries shall not exceed 350 milligrams per square metre per day averaged over a continuous period of 30 days (Bergerhoff Gauge).</p> <p>(b) A monitoring programme of dust and particulate emissions shall be undertaken to provide for compliance with this limit. Details of this programme, including the location of dust monitoring stations, and details of dust suppression measures to be carried out within the entire quarry complex, shall be submitted to, and agreed in writing with, the planning authority prior to commencement of any quarrying works on the site. This programme shall include an annual review of all dust monitoring data, to be</p>

	<p>undertaken by a suitably qualified person acceptable to the planning authority. The results of the reviews shall be submitted to the planning authority within two weeks of completion. The developer shall carry out any amendments to the programme required by the planning authority following this annual review.</p> <p>Reason: To control dust emissions arising from the development and in the interest of the amenities of the area.</p>
8.	<p>All Heavy Goods Vehicles departing the quarry void shall do so via a wheel-wash at a location on the site adjacent to the public road. Prior to commencement of the development, technical details of the wheel-wash design and operation and its location shall be submitted to and agreed in writing with the Planning Authority.</p> <p>Reason: In the interest of ensuring a clean road surface is maintained and in the interest of traffic safety.</p>
9.	<p>The enabling and quarrying activities shall only operate between 0700 hours and 1800 hours, Monday to Friday and between 0700 hours and 1400 hours on Saturdays. No such activity shall take place outside these hours or on Sundays or public holidays without the prior written agreement of the planning authority.</p> <p>Reason: In order to protect the amenities of property in the vicinity.</p>
10.	<p>A detailed plan for the phased restoration of the subject site (including landscape details) and a timescale for implementation, shall be submitted to, and agreed in writing with, the planning authority within 12 months of the date of this Order.</p> <p>Reason: In the interest of visual amenity and in order to enhance ecological value and to ensure public safety.</p>
11.	<p>The developer shall submit, every second year, for the lifetime of the permission to further develop the quarry, a 3D topographical survey carried out by an independent qualified surveyor agreed in writing with the planning authority. This survey shall show all areas excavated and restored and the level of the water table on site. On the basis of this, a full materials balance</p>

	<p>shall be provided to the planning authority. The first such survey report shall be submitted to the planning authority within two years of the date of commencement of works on site.</p> <p>Reason: In order to facilitate monitoring and control of the development by the planning authority.</p>
12.	<p>Any existing surface water drainage elements currently in place on site and which are proposed to be utilised shall be first checked and verified for effectiveness in protecting the surrounding watercourses and Aquifer Fen pNHA and details of these checks and verification backed up by engineering calculations together with any updates required shall be submitted to, and agreed with the planning authority.</p> <p>Reason: To ensure protection of adjoining receiving watercourses and the adjoining Ardristan Fen pNHA.</p>
13.	<p>The developer shall facilitate the archaeological appraisal of the enabling phase of the extension area. In this regard, the developer shall:</p> <p>(a) notify the planning authority in writing at least four weeks prior to the commencement of any site operation (including hydrological and geotechnical investigations) relating to the proposed development,</p> <p>(b) employ a suitably-qualified archaeologist prior to the commencement of development. The archaeologist shall assess the site and monitor all site development works, and</p> <p>(c) provide arrangements, acceptable to the planning authority for the recording and for the removal of any archaeological material which the planning authority considers appropriate to remove. In default of agreement on any of these requirements, the matter shall be referred to An Bord Pleanála for determination.</p> <p>Reason: In order to conserve the archaeological heritage of the area and to secure the preservation (in-situ or by record) and protection of any archaeological remains that may exist within the site.</p>
14.	<p>Prior to commencement of development, details for a phased restoration</p>

	<p>plan shall be submitted to, and agreed in writing with, the planning authority. The plan which shall be based on best practice shall include, inter alia, existing and proposed finished ground levels, landscaping proposals, proposals for the enhancement of the biodiversity of the area post-closure, safety measures proposed for steep faces and areas of deep water and a timescale for implementation. Phased restoration of the site shall be carried out in accordance with this plan.</p> <p>Reason: To ensure the satisfactory restoration of the site and in the interest of visual amenity.</p>
15.	<p>Prior to recommencement of development, the developer shall lodge with the planning authority a cash deposit, a bond of an insurance company, or such other security as may be acceptable to the planning authority, to secure the satisfactory reinstatement of the site coupled with an agreement empowering the planning authority to apply such security or part thereof to such reinstatement. 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 the Board for determination.</p> <p>Reason: To ensure the satisfactory restoration of the site in the interest of visual amenity.</p>
16.	<p>The developer shall pay to the planning authority a financial contribution in respect of public infrastructure and facilities benefiting development in the area of the planning authority that is provided or intended to be provided by or on behalf of the authority in accordance with the terms of the Planning and Development Act 2000, as amended. The contribution shall relate to the greenfield area of the site, which has not, to date, been excavated, and shall be paid prior to recommencement of development or in such phased payments as the planning authority may facilitate and shall be subject to any applicable indexation provisions of the Scheme at the time of payment. Details of the application of the terms of the Scheme shall be agreed between the planning authority and the developer or, in default of such agreement, the matter shall be referred to An Bord Pleanála to determine the proper application of the terms of the Scheme.</p>

	<p>Reason: It is a requirement of the Planning and Development Act 2000, as amended, that a condition requiring a contribution in accordance with the Development Contribution Scheme made under section 48 of the Act be applied to the permission to further develop and extend the quarry.</p>
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Matters Considered

In making its decision, the Board had regard to those matters to which, by virtue of the Planning and Development Acts and Regulations made thereunder, it was required to have regard. Such matters included any submissions and observations received by it in accordance with statutory provisions.

Patricia Calleary
Senior Planning Inspector

20th September 2019